

Duluth Traverse Trail Construction – Phase IV

Duluth, MN

March 10th, 2016

Project #: 03-2016

Bid #: 16-0278

Bid Opening Date: March 31st, 2016 @ 2:00 PM CST



City of Duluth

Parks & Recreation Division

411 West First Street

Ground Floor City Hall

Duluth, Minnesota 55802

(218)730-4300

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CITY OF DULUTH INVITATION TO BID

PROJECT NAME/DESCRIPTION: Duluth Traverse Trail Construction – Phase IV

BID NUMBER: 16-0278

BID OPENING: March 31st, 2016 AT 2:00 PM

PROJECT DESCRIPTION: Construct approximately ±9.7 miles of new mountain bike-specific natural surface single track trails on public lands in Mission Creek Park located in Duluth, MN.

PRE-BID/WALK-THROUGH: An optional, but highly recommended, pre-bid meeting will be conducted on March 17th, 2016 at 2pm in Duluth City Hall in room 106A or by calling 218-730-5950 for conference call. All interested bidders are highly encouraged to attend.

QUESTIONS: Please submit any questions regarding this project via e-mail to purchasing@duluthmn.gov. Responses will be provided to all interested bidders as an addendum to this solicitation.

The selected contractor will be issued a construction contract (draft attached). Notice to Proceed will be issued once the agreement is fully executed.

Please note that the City of Duluth Supplemental Conditions apply to this project and will be included in the contract. This document can be found online at <http://www.duluthgov.info/engineering/documents/SupplementalGenConditions4-15-11.pdf> . Hard copies may be made available upon request.

Proposal forms, contract documents, plans and specifications are on file at the following offices: Duluth Builder's Exchange, Minnesota Builder's Exchange, BXWI-Fox Valley Plan Room, Blue Book Building and Construction Network, and Meda Construction Connection.

INSTRUCTIONS TO BIDDERS

All bids must be complete, signed, and transmitted in a sealed envelope plainly marked with the bid number, subject matter, and opening date. The City of Duluth reserves the right to split the award where there is a substantial savings to the City, to waive informalities and to reject any and all bids. Bidder must state in their proposal if bid price is based on acceptance of the total order. Do not include sales tax in the unit price. Price may not be the only consideration for bid award. Bids must be firm for a minimum of 60 days.

Bids must be received in Purchasing before 2:00 PM local time on the bid opening date specified on the Invitation for Bids. The City Purchasing Agent or her designee will conduct a public bid opening in Room 100 immediately following receipt of the bids.

No alternatives to the specification will be considered unless specifically requested. Erasures or other changes to the bid must be initialed and dated.

The following documents must be submitted with your bid:

1. **Bid Bond** - A certified check or bank draft, payable to the order of the City of Duluth, negotiable U.S. Government Bonds (at par value), or a satisfactory bid bond executed by the bidder and acceptable surety, in an amount equal to five per cent (5%) of the total bid. Bids may be withdrawn without forfeiture of surety if the request is submitted by the Bidder and received at the Purchasing Office in writing or by telephone prior to the scheduled bid opening.
2. **Acknowledgment of Addendum** (if applicable) – any changes to this solicitation will be announced via Addendum. A signature on the Bid Form acknowledging the Addendum(s) must be submitted with your bid.
3. **Responsible Contractor** - No construction contract in excess of \$50,000 will be awarded unless the Bidder is a "responsible contractor" as defined in Minnesota Statute §16C.285, subdivision 3. All Bidders submitting a proposal for this project must verify that they meet the minimum criteria specified in the statute by submitting a Responsible Contractor Verification and Certification of Compliance form (attached). The owner or officer of the company must sign the form under oath verifying compliance with each of the minimum criteria. Making a false statement under oath will render the Bidder or subcontractor that makes the false statement ineligible to be awarded a construction project and may result in termination of a contract awarded to a Bidder or subcontractor that submits a false statement. Bidders must obtain verification of compliance from all subcontractors. Bidders must submit signed copies of verifications and certifications of compliance from subcontractors at the City's request.

Please note that the following requirements also apply to this project, and any additional required documents must be submitted prior to award/contract execution. Submitting these documents with your bid will assist in expediting the process.

1. **Insurance** – Contractor must provide proof of Public Liability and Automobile Liability Insurance with limits not less than \$1,500,000 Single Limit prior to the commencement of work. The City of Duluth must be named as an additional insured. Please refer to the draft Contract, Section 7.
2. **Affidavit of Non-Collusion** – The successful bidder shall be required to execute the attached affidavit stating that he/she has not entered into a collusive agreement with any other person, firm, or corporation in regard to any bid submitted.
3. **Performance & Payment Bonds** – The awarded contractor will be required to submit performance and payments bonds in the full amount of the project cost prior to award.
4. **Affirmative Action/EEO** - The contractor must take affirmative action to ensure that the employees and applicants for employment are not discriminated against because of their race, color, creed, sex or national origin, and must meet the affirmative action goals. Contractors are encouraged to subcontract with Disadvantaged Business Enterprises (DBEs) when possible. A current list of certified DBEs is available on the Minnesota Unified Certification website at <http://mnucp.metc.state.mn.us> . Contractor will comply with all applicable Equal Employment Opportunity laws and regulations. Awarded contractor will

submit the attached Equal Employment Opportunity (EEO) Affirmative Action Policy Statement & Compliance Certificate.

5. **Project Labor Agreement (PLA)** - A PLA will be required for any bid that is over or could virtually go over \$150,000. A copy of the City standard PLA is included in this package.

6. **Out of State Contractor** - Unless a State of Minnesota Certificate of Exemption is provided, any out-of-state bidder receiving a bid award will have 8% retained from invoice payments on any contracts over \$50,000. Submit a signed copy of the signed exemption form when submitting Payment and Performance Bonds. This form may be found at the following web address: http://www.revenue.state.mn.us/Forms_and_Instructions/sde.pdf

7. **Prevailing Wage** - Not less than the minimum salaries and prevailing wages as set forth in the contract documents must be paid on this project.

The City of Duluth is an Equal Opportunity Employer. Contractor shall comply with all applicable Equal Employment Opportunity laws and regulations.

CITY OF DULUTH

Andrew Field	Amanda Ashbach
Financial Analyst	Purchasing Agent

16-0278 Traverse Trail Phase IV

Acknowledgment of Addendum

Addendum 1:

Addendum 2:

Addendum 3:

Addendum 4:

BID WORKSHEET A

1.1 Duluth Traverse Trail Phase IV – Sargent Creek & Mission Creek Trail Centers

Company name _____

Contact person _____

Contact person's phone number _____

Contact person's email _____

Company address _____

PTBA member _____ Yes _____ No Member since _____

If bidder is not a member of the Professional Trailbuilders Association please provide a separate document that describes why and details equivalent experience and expertise.

Experienced in constructing sustainable bike-specific singletrack trails?
_____ Yes _____ No

Please list similar past projects on a separate sheet along with a brief narrative. Include projects that highlight the Contractor's ability to satisfy the qualifications and requirements listed in section 6.

Please attach one (1) letter of recommendation from a previous client.

Low bid will not be the only consideration for award.

Please provide three (3) references from previous shared use trail construction projects with contact information (phone numbers and email addresses).

1.

2.

3.

Provide a detailed list of proposed project team members, including subcontractors, and their skill sets and relevant experience.

Provide a list of the equipment and tools intended to be used in completing the scope of work.

Provide a recommended schedule/timetable that allows for work completion per the specified schedule.

For each project site provide bid total and information about the intended team, equipment, workflow description, and schedule.

**Project 1 – Sargent Creek Trail (±21,691 LF, ±4.1 MI) – Base Bid
Blue Traditional Singletrack (Spec 2)**

Bid Total:

Team:

Equipment/Tools:

Workflow Description:

Start Date: End Date:

**Project 2 – East Loop (±5,394 LF, ±1.0 MI) – Base Bid
Black Traditional Singletrack (Spec 3)**

Bid Total:

Team:

Equipment/Tools:

Workflow Description:

Start Date: End Date:

**Project 3 – Valley East Trail ($\pm 6,429$ LF, ± 1.2 MI) – Base Bid
Blue Traditional Singletrack (Spec 2)**

Bid Total:

Team:

Equipment/Tools:

Workflow Description:

Start Date: End Date:

**Project 4 – Parkway Trail ($\pm 2,753$ LF, ± 0.5 MI) – Base Bid
Green Traditional (Flow Trail) Singletrack (Spec 1)**

Bid Total:

Team:

Equipment/Tools:

Workflow Description:

Start Date: End Date:

**Project 5 – Ski Jump Loop ($\pm 5,297$ LF, ± 1.0 MI) – Alternate #1
Blue Flow Trail (Bump Pump) Singletrack (Spec 5)**

Bid Total:

Team:

Equipment/Tools:

Workflow Description:

Start Date: End Date:

**Project 6 – Ski Jump Connector ($\pm 3,697$ LF, ± 0.7 MI) – Alternate #2
Black Traditional Singletrack (Spec 3)**

Bid Total:

Team:

Equipment/Tools:

Workflow Description:

Start Date: End Date:

**Project 7 – Saint Louis River Trail ($\pm 2,635$ LF, ± 0.5 MI) – Alternate #3
Green Traditional (Flow Trail) Singletrack (Spec 1)**

Bid Total:

Team:

Equipment/Tools:

Workflow Description:

Start Date: End Date:

**Project 8 – Upper Saint Louis River Trail ($\pm 3,893$ LF, ± 0.7 MI) – Alternate #4
Green Traditional (Flow Trail) Singletrack (Spec 1)**

Bid Total:

Team:

Equipment/Tools:

Workflow Description:

Start Date: End Date:

By signing this, I certify that I have am fully aware of the site locations, their conditions, access restrictions and other constraints. I accept the terms and conditions expressed and contained in the specifications included in and attached to this RFQ.

Sign: _____ Date: _____

BID WORKSHEET B (SUMMARY SHEET)

DULUTH TRAVERSE MOUNTAIN BIKE TRAIL SYSTEM - PHASE IV

Instructions...

initial

- For each project bid, fill in unit price for all items.
- Failure to provide a unit price for any item will invalidate the bid for that project.
- Unit prices made on a per-project basis.
- Quantities for each project are estimated. Final quantities may change, but the unit price is fixed.
- Insert total for each project on summary sheet.
- Provide cost for one roundtrip mobilization on summary sheet.
- Bid tabulation sheets quantities take precedence over quantity discrepancies in the specifications or plans.

Summary Sheet

Project #	Project Name	Total
1	Sargent Creek - Base Bid	
2	East Loop - Base Bid	
3	Valley East - Base Bid	
4	Parkway Trail - Base Bid	
5	Ski Jump Loop - Alternate #1	
6	Ski Jump Connector - Alternate #2	
7	Saint Louis River Trail - Alternate #3	
8	Upper Saint Louis River - Alternate #4	
One Mobilization (r/t)		
GRAND TOTAL		

BID WORKSHEET B

DULUTH TRAVERSE TRAIL SYSTEM - SARGENT CREEK CLUSTER SARGENT CREEK

initial

Instructions...

- For each project bid, fill in unit price for all items.
- Failure to provide a unit price for any item will invalidate the bid for that project.
- Unit prices made on a per-project basis.
- Quantities for each project are estimated. Final quantities may change, but the unit price is fixed.
- Insert total for each project on summary sheet.
- Provide cost for one round-trip mobilization
- Bid tabulation sheets quantities take precedence over quantity discrepancies in the specifications or plans.

Project #:

1

Project Name:

Sargent Creek (±21,691 LF, ±4.1 MI)

Specification Types:

Blue Traditional Singletrack (Spec 2)

Work	Unit measure	Estimated Quantity	UNIT PRICE	TOTALS
TRAIL CONSTRUCTION TYPE 'A'	LIN FT	75		
TRAIL CONSTRUCTION TYPE 'B'	LIN FT	20,852		
TRAIL CONSTRUCTION TYPE 'C'	LIN FT	0		
SWITCHBERM TYPE 'A'	EACH	0		
SWITCHBERM TYPE 'B'	EACH	2		
SWITCHBERM TYPE 'C'	EACH	0		
BERM	LIN FT	485		
PERMANENT SEED (SEE SWPPP FOR SEED MIX)	SQ YD	0		
TEMPORARY SEED (SEE SWPPP FOR SEED MIX)	SQ YD	0		
ROCK ARMORING	SQ YD	50		
36" BOARDWALK	LIN FT	179		
48" BRIDGE W/ RAILINGS BOTH SIDES	LIN FT	0		
TURF BLOCK PAVERS	SQ YD	0		
EROSION CONTROL COIR ROLLS (BIO LOGS)	LIN FT	1,874		
EROSION CONTROL BLANKET & PERMANENT SEED MNDOT CATEGORY 3	SQ YD	300		
TRAIL CAPPING	LIN FT	759		
MAP POST	EACH	3		
PROJECT TOTAL				

BID WORKSHEET B

DULUTH TRAVERSE TRAIL SYSTEM - SARGENT CREEK CLUSTER EAST LOOP

initial

Instructions...

- For each project bid, fill in unit price for all items.
- Failure to provide a unit price for any item will invalidate the bid for that project.
- Unit prices made on a per-project basis.
- Quantities for each project are estimated. Final quantities may change, but the unit price is fixed.
- Insert total for each project on summary sheet.
- Provide cost for one round-trip mobilization
- Bid tabulation sheets quantities take precedence over quantity discrepancies in the specifications or plans.

Project #:

2

Project Name:

East Loop (±5,394 LF, ±1.0 MI)

Specification Types:

Black Traditional Singletrack (Spec 3)

Work	Unit measure	Estimated Quantity	UNIT PRICE	TOTALS
TRAIL CONSTRUCTION TYPE 'A'	LIN FT	624		
TRAIL CONSTRUCTION TYPE 'B'	LIN FT	4,606		
TRAIL CONSTRUCTION TYPE 'C'	LIN FT	0		
SWITCHBERM TYPE 'A'	EACH	1		
SWITCHBERM TYPE 'B'	EACH	1		
SWITCHBERM TYPE 'C'	EACH	0		
BERM	LIN FT	70		
PERMANENT SEED (SEE SWPPP FOR SEED MIX)	SQ YD	0		
TEMPORARY SEED (SEE SWPPP FOR SEED MIX)	SQ YD	0		
ROCK ARMORING	SQ YD	0		
24" BOARDWALK	LIN FT	44		
48" BRIDGE W/ RAILINGS BOTH SIDES	LIN FT	0		
TURF BLOCK PAVERS	SQ YD	0		
EROSION CONTROL COIR ROLLS (BIO LOGS)	LIN FT	248		
EROSION CONTROL BLANKET & PERMANENT SEED MNDOT CATEGORY 3	SQ YD	0		
TRAIL CAPPING	LIN FT	185		
MAP POST	EACH	1		
PROJECT TOTAL				

BID WORKSHEET B

DULUTH TRAVERSE TRAIL SYSTEM - SARGENT CREEK CLUSTER VALLEY EAST

initial

Instructions...

- For each project bid, fill in unit price for all items.
- Failure to provide a unit price for any item will invalidate the bid for that project.
- Unit prices made on a per-project basis.
- Quantities for each project are estimated. Final quantities may change, but the unit price is fixed.
- Insert total for each project on summary sheet.
- Provide cost for one round-trip mobilization
- Bid tabulation sheets quantities take precedence over quantity discrepancies in the specifications or plans.

Project #:

3

Project Name:

Valley East (±6,429 LF, ±1.2 MI)

Specification Types:

Blue Traditional Singletrack (Spec 2)

Work	Unit measure	Estimated Quantity	UNIT PRICE	TOTALS
TRAIL CONSTRUCTION TYPE 'A'	LIN FT	8		
TRAIL CONSTRUCTION TYPE 'B'	LIN FT	6,218		
TRAIL CONSTRUCTION TYPE 'C'	LIN FT	0		
SWITCHBERM TYPE 'A'	EACH	0		
SWITCHBERM TYPE 'B'	EACH	4		
SWITCHBERM TYPE 'C'	EACH	0		
BERM	LIN FT	75		
PERMANENT SEED (SEE SWPPP FOR SEED MIX)	SQ YD	0		
TEMPORARY SEED (SEE SWPPP FOR SEED MIX)	SQ YD	0		
ROCK ARMORING	SQ YD	0		
36" BOARDWALK	LIN FT	28		
48" BRIDGE W/ RAILINGS BOTH SIDES	LIN FT	0		
TURF BLOCK PAVERS	SQ YD	0		
EROSION CONTROL COIR ROLLS (BIO LOGS)	LIN FT	200		
EROSION CONTROL BLANKET & PERMANENT SEED MNDOT CATEGORY 3	SQ YD	150		
TRAIL CAPPING	LIN FT	222		
MAP POST	EACH	1		
PROJECT TOTAL				

BID WORKSHEET B

DULUTH TRAVERSE TRAIL SYSTEM - SARGENT CREEK CLUSTER PARKWAY TRAIL - DULUTH TRAVERSE TRAIL

initial

Instructions...

- For each project bid, fill in unit price for all items.
- Failure to provide a unit price for any item will invalidate the bid for that project.
- Unit prices made on a per-project basis.
- Quantities for each project are estimated. Final quantities may change, but the unit price is fixed.
- Insert total for each project on summary sheet.
- Provide cost for one round-trip mobilization
- Bid tabulation sheets quantities take precedence over quantity discrepancies in the specifications or plans.

Project #:

4

Project Name:

Parkway Trail DT (±2,753 LF, ±0.5 MI)

Specification Types:

Green Traditional Singletrack (Spec 1)

Work	Unit measure	Estimated Quantity	UNIT PRICE	TOTALS
TRAIL CONSTRUCTION TYPE 'A'	LIN FT	0		
TRAIL CONSTRUCTION TYPE 'B'	LIN FT	2,444		
TRAIL CONSTRUCTION TYPE 'C'	LIN FT	245		
SWITCHBERM TYPE 'A'	EACH	0		
SWITCHBERM TYPE 'B'	EACH	8		
SWITCHBERM TYPE 'C'	EACH	0		
BERM	LIN FT	0		
PERMANENT SEED (SEE SWPPP FOR SEED MIX)	SQ YD	0		
TEMPORARY SEED (SEE SWPPP FOR SEED MIX)	SQ YD	0		
ROCK ARMORING	SQ YD	0		
48" BOARDWALK	LIN FT	44		
72" BRIDGE W/ RAILINGS BOTH SIDES	LIN FT	24		
TURF BLOCK PAVERS	SQ YD	0		
EROSION CONTROL COIR ROLLS (BIO LOGS)	LIN FT	1,750		
EROSION CONTROL BLANKET & PERMANENT SEED MNDOT CATEGORY 3	SQ YD	1,200		
TRAIL CAPPING	LIN FT	330		
MAP POST	EACH	2		
PROJECT TOTAL				

BID WORKSHEET B

DULUTH TRAVERSE TRAIL PHASE IV - MISSION CREEK PHASE III SKI JUMP LOOP

initial

Instructions...

- For each project bid, fill in unit price for all items.
- Failure to provide a unit price for any item will invalidate the bid for that project.
- Unit prices made on a per-project basis.
- Quantities for each project are estimated. Final quantities may change, but the unit price is fixed.
- Insert total for each project on summary sheet.
- Provide cost for one round-trip mobilization
- Bid tabulation sheets quantities take precedence over quantity discrepancies in the specifications or plans.

Project #:

5

Project Name:

Ski Jump Loop (±5,297 LF, ±1.0 MI)

Specification Types:

Blue Flow Trail (Bump Pump) Singletrack (Spec 5)

Work	Unit measure	Estimated Quantity	UNIT PRICE	TOTALS
TRAIL CONSTRUCTION TYPE 'A'	LIN FT	0		
TRAIL CONSTRUCTION TYPE 'B'	LIN FT	4,848		
TRAIL CONSTRUCTION TYPE 'C'	LIN FT	44		
SWITCHBERM TYPE 'A'	EACH	0		
SWITCHBERM TYPE 'B'	EACH	7		
SWITCHBERM TYPE 'C'	EACH	0		
BERM	LIN FT	245		
PERMANENT SEED (SEE SWPPP FOR SEED MIX)	SQ YD	0		
TEMPORARY SEED (SEE SWPPP FOR SEED MIX)	SQ YD	0		
ROCK ARMORING	SQ YD	20		
36" BOARDWALK	LIN FT	101		
36" BRIDGE W/ RAILINGS BOTH SIDES	LIN FT	0		
TURF BLOCK PAVERS	SQ YD	0		
EROSION CONTROL COIR ROLLS (BIO LOGS)	LIN FT	228		
EROSION CONTROL BLANKET & PERMANENT SEED MNDOT CATEGORY 3	SQ YD	44		
TRAIL CAPPING	LIN FT	185		
MAP POST	EACH	1		
PROJECT TOTAL				

BID WORKSHEET B

DULUTH TRAVERSE TRAIL PHASE IV - MISSION CREEK PHASE III SKI JUMP CONNECTOR

initial

Instructions...

- For each project bid, fill in unit price for all items.
- Failure to provide a unit price for any item will invalidate the bid for that project.
- Unit prices made on a per-project basis.
- Quantities for each project are estimated. Final quantities may change, but the unit price is fixed.
- Insert total for each project on summary sheet.
- Provide cost for one round-trip mobilization
- Bid tabulation sheets quantities take precedence over quantity discrepancies in the specifications or plans.

Project #:

6

Project Name:

Ski Jump Connector (±3,697 LF, ±0.7 MI)

Specification Types:

Black Traditional Singletrack (Spec 3)

Work	Unit measure	Estimated Quantity	UNIT PRICE	TOTALS
TRAIL CONSTRUCTION TYPE 'A'	LIN FT	27		
TRAIL CONSTRUCTION TYPE 'B'	LIN FT	3,165		
TRAIL CONSTRUCTION TYPE 'C'	LIN FT	505		
SWITCHBERM TYPE 'A'	EACH	0		
SWITCHBERM TYPE 'B'	EACH	8		
SWITCHBERM TYPE 'C'	EACH	0		
BERM	LIN FT	140		
PERMANENT SEED (SEE SWPPP FOR SEED MIX)	SQ YD	0		
TEMPORARY SEED (SEE SWPPP FOR SEED MIX)	SQ YD	0		
ROCK ARMORING	SQ YD	0		
36" BOARDWALK	LIN FT	198		
36" BRIDGE W/ RAILINGS BOTH SIDES	LIN FT	0		
TURF BLOCK PAVERS	SQ YD	0		
EROSION CONTROL COIR ROLLS (BIO LOGS)	LIN FT	540		
EROSION CONTROL BLANKET & PERMANENT SEED MNDOT CATEGORY 3	SQ YD	0		
TRAIL CAPPING	LIN FT	130		
MAP POST	EACH	2		
PROJECT TOTAL				

BID WORKSHEET B

DULUTH TRAVERSE TRAIL PHASE IV - MISSION CREEK PHASE III SIANT LOUIS RIVER TRAIL - DULUTH TRAVERSE TRAIL

initial

Instructions...

- For each project bid, fill in unit price for all items.
- Failure to provide a unit price for any item will invalidate the bid for that project.
- Unit prices made on a per-project basis.
- Quantities for each project are estimated. Final quantities may change, but the unit price is fixed.
- Insert total for each project on summary sheet.
- Provide cost for one round-trip mobilization
- Bid tabulation sheets quantities take precedence over quantity discrepancies in the specifications or plans.

Project #:

7

Project Name:

Saint Louis River Trail ($\pm 2,635$ LF, ± 0.5 MI)

Specification Types:

Green Traditional Singletrack (Spec 1)

Work	Unit measure	Estimated Quantity	UNIT PRICE	TOTALS
EXISTING TRAIL TO BE BRUSHED OUT, GRADED AND DEBURMED TO DRAIN	LIN FT	444		
TRAIL CONSTRUCTION TYPE 'B' - THROUGH LANDSLIDE AREAS	LIN FT	2,001		
PERMANENT SEED (SEE SWPPP FOR SEED MIX)	EACH	0		
TEMPORARY SEED (SEE SWPPP FOR SEED MIX)	EACH	0		
48" BOARDWALK	EACH	98		
72" BRIDGE W/ RAILINGS BOTH SIDES	LIN FT	72		
ROCK ARMORING	SQ YD	20		
ROCK RETAINING WALL	SQ FF	40		
TURF BLOCK PAVERS	SQ YD	0		
EROSION CONTROL COIR ROLLS (BIO LOGS)	LIN FT	2,100		
EROSION CONTROL BLANKET & PERMANENT SEED MNDOT CATEGORY 3	SQ YD	4,000		
TRAIL CAPPING	LIN FT	148		
MAP POST	EACH	1		
PROJECT TOTAL				

BID WORKSHEET B

DULUTH TRAVERSE TRAIL PHASE IV - MISSION CREEK PHASE III UPPER SAINT LOUIS RIVER TRAIL- DULUTH TRAVERSE TRAIL

initial

Instructions...

- For each project bid, fill in unit price for all items.
- Failure to provide a unit price for any item will invalidate the bid for that project.
- Unit prices made on a per-project basis.
- Quantities for each project are estimated. Final quantities may change, but the unit price is fixed.
- Insert total for each project on summary sheet.
- Provide cost for one round-trip mobilization
- Bid tabulation sheets quantities take precedence over quantity discrepancies in the specifications or plans.

Project #:

8

Project Name:

Upper Saint Louis River Trail (±3,893 LF, ±0.7 MI)

Specification Types:

Green Traditional Singletrack (Spec 1)

Work	Unit measure	Estimated Quantity	UNIT PRICE	TOTALS
TRAIL CONSTRUCTION TYPE 'A'	LIN FT	19		
TRAIL CONSTRUCTION TYPE 'B'	LIN FT	3,406		
TRAIL CONSTRUCTION TYPE 'C'	LIN FT	468		
SWITCHBERM TYPE 'A'	EACH	0		
SWITCHBERM TYPE 'B'	EACH	8		
SWITCHBERM TYPE 'C'	EACH	0		
BERM	LIN FT	175		
PERMANENT SEED (SEE SWPPP FOR SEED MIX)	SQ YD	0		
TEMPORARY SEED (SEE SWPPP FOR SEED MIX)	SQ YD	0		
ROCK ARMORING	SQ YD	0		
48" BOARDWALK	LIN FT	146		
72" BRIDGE W/ RAILINGS BOTH SIDES	LIN FT	48		
TURF BLOCK PAVERS	SQ YD	0		
EROSION CONTROL COIR ROLLS (BIO LOGS)	LIN FT	420		
EROSION CONTROL BLANKET & PERMANENT SEED MNDOT CATEGORY 3	SQ YD	100		
TRAIL CAPPING	LIN FT	130		
MAP POST	EACH	1		
PROJECT TOTAL				

**ATTACHMENT A
PRIME CONTRACTOR RESPONSE**

RESPONSIBLE CONTRACTOR VERIFICATION AND CERTIFICATION OF COMPLIANCE

STATE PROJECT NUMBER: _____

This form includes changes by statutory references from the Laws of Minnesota 2015, chapter 64, sections 1-9. This form must be submitted with the response to this solicitation. A response received without this form, will be rejected.

<p>Minn. Stat. § 16C.285, Subd. 7. IMPLEMENTATION. ... any prime contractor or subcontractor or motor carrier that does not meet the minimum criteria in subdivision 3 or fails to verify that it meets those criteria is not a responsible contractor and is not eligible to be awarded a construction contract for the project or to perform work on the project...</p>	
<p>Minn. Stat. § 16C.285, Subd. 3. RESPONSIBLE CONTRACTOR, MINIMUM CRITERIA. "Responsible contractor" means a contractor that conforms to the responsibility requirements in the solicitation document for its portion of the work on the project and verifies that it meets the following minimum criteria:</p>	
(1)	<p>The Contractor:</p> <ul style="list-style-type: none">(i) is in compliance with workers' compensation and unemployment insurance requirements;(ii) is in compliance with Department of Revenue and Department of Employment and Economic Development registration requirements if it has employees;(iii) has a valid federal tax identification number or a valid Social Security number if an individual; and(iv) has filed a certificate of authority to transact business in Minnesota with the Secretary of State if a foreign corporation or cooperative.
(2)	<p>The contractor or related entity is in compliance with and, during the three-year period before submitting the verification, has not violated section 177.24, 177.25, 177.41 to 177.44, 181.13, 181.14, or 181.722, and has not violated United States Code, title 29, sections 201 to 219, or United States Code, title 40, sections 3141 to 3148. For purposes of this clause, a violation occurs when a contractor or related entity:</p> <ul style="list-style-type: none">(i) repeatedly fails to pay statutorily required wages or penalties on one or more separate projects for a total underpayment of \$25,000 or more within the three-year period, provided that a failure to pay is "repeated" only if it involves two or more separate and distinct occurrences of underpayment during the three-year period;(ii) has been issued an order to comply by the commissioner of Labor and Industry that has become final;(iii) has been issued at least two determination letters within the three-year period by the Department of Transportation finding an underpayment by the contractor or related entity to its own employees;(iv) has been found by the commissioner of Labor and Industry to have repeatedly or willfully violated any of the sections referenced in this clause pursuant to section 177.27;(v) has been issued a ruling or findings of underpayment by the administrator of the Wage and Hour Division of the United States Department of Labor that have become final or have been upheld by an administrative law judge or the Administrative Review Board; or(vi) has been found liable for underpayment of wages or penalties or misrepresenting a construction worker as an independent contractor in an action brought in a court having jurisdiction. Provided that, if the contractor or related entity contests a determination of underpayment by the Department of Transportation in a contested case proceeding, a violation does not occur until the contested case proceeding has concluded with a determination that the contractor or related entity underpaid wages or penalties;*

(3)	The contractor or related entity is in compliance with and, during the three-year period before submitting the verification, has not violated section 181.723 or chapter 326B. For purposes of this clause, a violation occurs when a contractor or related entity has been issued a final administrative or licensing order;*
(4)	The contractor or related entity has not, more than twice during the three-year period before submitting the verification, had a certificate of compliance under section 363A.36 revoked or suspended based on the provisions of section 363A.36, with the revocation or suspension becoming final because it was upheld by the Office of Administrative Hearings or was not appealed to the office;*
(5)	The contractor or related entity has not received a final determination assessing a monetary sanction from the Department of Administration or Transportation for failure to meet targeted group business, disadvantaged business enterprise, or veteran-owned business goals, due to a lack of good faith effort, more than once during the three-year period before submitting the verification;*
	* Any violations, suspensions, revocations, or sanctions, as defined in clauses (2) to (5), occurring prior to July 1, 2014, shall not be considered in determining whether a contractor or related entity meets the minimum criteria.
(6)	The contractor or related entity is not currently suspended or debarred by the federal government or the state of Minnesota or any of its departments, commissions, agencies, or political subdivisions that have authority to debar a contractor; and
(7)	All subcontractors and motor carriers that the contractor intends to use to perform project work have verified to the contractor through a signed statement under oath by an owner or officer that they meet the minimum criteria listed in clauses (1) to (6).

Minn. Stat. § 16C.285, Subd. 5. SUBCONTRACTOR VERIFICATION.	
<p>A prime contractor or subcontractor shall include in its verification of compliance under subdivision 4 a list of all of its first-tier subcontractors that it intends to retain for work on the project. Prior to execution of a construction contract, and as a condition precedent to the execution of a construction contract, the apparent successful prime contractor shall submit to the contracting authority a supplemental verification under oath confirming compliance with subdivision 3, clause (7). Each contractor or subcontractor shall obtain from all subcontractors with which it will have a direct contractual relationship a signed statement under oath by an owner or officer verifying that they meet all of the minimum criteria in subdivision 3 prior to execution of a construction contract with each subcontractor.</p> <p>If a prime contractor or any subcontractor retains additional subcontractors on the project after submitting its verification of compliance, the prime contractor or subcontractor shall obtain verifications of compliance from each additional subcontractor with which it has a direct contractual relationship and shall submit a supplemental verification confirming compliance with subdivision 3, clause (7), within 14 days of retaining the additional subcontractors.</p> <p>A prime contractor shall submit to the contracting authority upon request copies of the signed verifications of compliance from all subcontractors of any tier pursuant to subdivision 3, clause (7). A prime contractor and subcontractors shall not be responsible for the false statements of any subcontractor with which they do not have a direct contractual relationship. A prime contractor and subcontractors shall be responsible for false statements by their first-tier subcontractors with which they have a direct contractual relationship only if they accept the verification of compliance with actual knowledge that it contains a false statement.</p> <p>Subd. 5a. Motor carrier verification. A prime contractor or subcontractor shall obtain annually from all motor carriers with which it will have a direct contractual relationship a signed statement under oath by an owner or officer verifying that they meet all of the minimum criteria in subdivision 3 prior to execution of a construction contract with each motor carrier. A prime contractor or subcontractor shall require each such motor carrier to provide it with immediate written notification in the event that the motor carrier no longer meets one or more of the minimum criteria in subdivision 3 after submitting its annual verification. A motor carrier shall be ineligible to perform work on a project covered by this section if it does not meet all the minimum criteria in subdivision 3. Upon request, a prime contractor or subcontractor shall submit to the contracting authority the signed verifications of compliance from all motor carriers providing for-hire transportation of materials, equipment, or supplies for a project.</p>	

Minn. Stat. § 16C.285, Subd. 4. **VERIFICATION OF COMPLIANCE.**

A contractor responding to a solicitation document of a contracting authority shall submit to the contracting authority a signed statement under oath by an owner or officer verifying compliance with each of the minimum criteria in subdivision 3, with the exception of clause (7), at the time that it responds to the solicitation document.

A contracting authority may accept a signed statement under oath as sufficient to demonstrate that a contractor is a responsible contractor and shall not be held liable for awarding a contract in reasonable reliance on that statement. A prime contractor, subcontractor, or motor carrier that fails to verify compliance with any one of the required minimum criteria or makes a false statement under oath in a verification of compliance shall be ineligible to be awarded a construction contract on the project for which the verification was submitted.

A false statement under oath verifying compliance with any of the minimum criteria may result in termination of a construction contract that has already been awarded to a prime contractor or subcontractor or motor carrier that submits a false statement. A contracting authority shall not be liable for declining to award a contract or terminating a contract based on a reasonable determination that the contractor failed to verify compliance with the minimum criteria or falsely stated that it meets the minimum criteria. A verification of compliance need not be notarized. An electronic verification of compliance made and submitted as part of an electronic bid shall be an acceptable verification of compliance under this section provided that it contains an electronic signature as defined in section 325L.02, paragraph (h).

CERTIFICATION

By signing this document I certify that I am an owner or officer of the company, and I swear under oath that:

- 1) My company meets each of the Minimum Criteria to be a responsible contractor as defined herein and is in compliance with Minn. Stat. § 16C.285, and**
- 2) if my company is awarded a contract, I will submit Attachment A-1 prior to contract execution, and**
- 3) if my company is awarded a contract, I will also submit Attachment A-2 as required.**

Authorized Signature of Owner or Officer:

Printed Name:

Title:

Date:

Company Name:

NOTE: Minn. Stat. § 16C.285, Subd. 2, (c) If only one prime contractor responds to a solicitation document, a contracting authority may award a construction contract to the responding prime contractor even if the minimum criteria in subdivision 3 are not met.

ATTACHMENT A-1

FIRST-TIER SUBCONTRACTORS LIST

SUBMIT PRIOR TO EXECUTION OF A CONSTRUCTION CONTRACT

STATE PROJECT NUMBER: _____

Minn. Stat. § 16C.285, Subd. 5. A prime contractor or subcontractor shall include in its verification of compliance under subdivision 4 a list of all of its first-tier subcontractors that it intends to retain for work on the project. Prior to execution of a construction contract, and as a condition precedent to the execution of a construction contract, the apparent successful prime contractor shall submit to the contracting authority a supplemental verification under oath confirming compliance with subdivision 3, clause (7). Each contractor or subcontractor shall obtain from all subcontractors with which it will have a direct contractual relationship a signed statement under oath by an owner or officer verifying that they meet all of the minimum criteria in subdivision 3 prior to execution of a construction contract with each subcontractor.

FIRST TIER SUBCONTRACTOR NAMES* (Legal name of company as registered with the Secretary of State)	Name of city where company home office is located

*Attach additional sheets as needed for submission of all first-tier subcontractors.

SUPPLEMENTAL CERTIFICATION FOR ATTACHMENT A-1	
By signing this document I certify that I am an owner or officer of the company, and I swear under oath that: All first-tier subcontractors listed on attachment A-1 have verified through a signed statement under oath by an owner or officer that they meet the minimum criteria to be a responsible contractor as defined in Minn. Stat. § 16C.285.	
Authorized Signature of Owner or Officer:	Printed Name:
Title:	Date:
Company Name:	

ATTACHMENT A-2

ADDITIONAL SUBCONTRACTORS LIST

PRIME CONTRACTOR TO SUBMIT AS SUBCONTRACTORS ARE ADDED TO THE PROJECT

STATE PROJECT NUMBER: _____

This form must be submitted to the Project Manager or individual as identified in the solicitation document.

Minn. Stat. § 16C.285, Subd. 5. ... If a prime contractor or any subcontractor retains additional subcontractors on the project after submitting its verification of compliance, the prime contractor or subcontractor shall obtain verifications of compliance from each additional subcontractor with which it has a direct contractual relationship and shall submit a supplemental verification confirming compliance with subdivision 3, clause (7), within 14 days of retaining the additional subcontractors. ...

ADDITIONAL SUBCONTRACTOR NAMES* (Legal name of company as registered with the Secretary of State)	Name of city where company home office is located

*Attach additional sheets as needed for submission of all additional subcontractors.

SUPPLEMENTAL CERTIFICATION FOR ATTACHMENT A-2	
By signing this document I certify that I am an owner or officer of the company, and I swear under oath that: All additional subcontractors listed on Attachment A-2 have verified through a signed statement under oath by an owner or officer that they meet the minimum criteria to be a responsible contractor as defined in Minn. Stat. § 16C.285.	
Authorized Signature of Owner or Officer:	Printed Name:
Title:	Date:
Company Name:	

AFFIDAVIT AND INFORMATION REQUIRED OF BIDDERS

Affidavit of Non-Collusion:

I hereby swear (or affirm) under penalty of perjury:

- 1) That I am the bidder (if the bidder is an individual), a partner in the bidder (if the bidder is a partnership), or an officer or employee of the bidding corporation having authority to sign on its behalf (if the bidder is a corporation);
- 2) That the attached bid or bids have been arrived at by the bidder independently and have been submitted without collusion with and without agreement, understanding, or planned common course of action with any other vendor of materials, supplies, equipment or services described in the invitation to bid, designed to limit independent bidding or competition;
- 3) That the contents of the bid or bids have not been communicated by the bidder or its employees or agents to any person not an employee or agent of the bidder or its surety on any bond furnished with the bid or bids and will not be communicated to any such person prior to the official opening of the bid or bids;
- 4) That a family relationship between a City of Duluth employee and bidder/proposer are in non-collusion; and
- 5) That I have fully informed myself regarding the accuracy of the statements made in this affidavit.

Signed: _____

Firm Name: _____

Subscribed and sworn to me before this _____ day of _____, _____

NOTARY PUBLIC _____

My commission expires: _____

Bidder's Federal Identification Number _____

**EQUAL EMPLOYMENT OPPORTUNITY EEO AFFIRMATIVE ACTION
POLICY STATEMENT & COMPLIANCE CERTIFICATE**

TO: City of Duluth, MN PROJECT NUMBER & DESCRIPTION _____

FROM: _____

(Vendor's name, address, telephone number)

A) Employment: It is the policy of the above named FIRM to afford equal opportunity for employment to all individuals regardless of race, color, creed, religion, national origin, ancestry, age, sex, marital status, status with respect to public assistance and/or disability. The FIRM will take affirmative action to ensure that we will: (1) recruit, hire, and promote all job classifications without regard to race, color, creed, religion, national origin, ancestry, age, sex, marital status, status with respect to public assistance, and/or disability, except where sex is a bona fide occupational qualification; (2) base decisions on employment so as to further the principle of equal employment opportunity; (3) ensure that promotion decisions are in accord with the principles of equal employment opportunity by imposing only valid requirements for promotional opportunities; (4) ensure that all personnel actions such as compensation, benefits, transfers, layoffs, return from layoff, FIRM sponsored training, education tuition assistance, social and recreational programs will be administered without regard to race, color, creed, religion, national origin, ancestry, age, sex, marital status, status with respect to public assistance, and/or disability. The FIRM also intends full compliance with Veteran affirmative action requirements. Additionally, minority and female employees shall be encouraged to participate in all FIRM activities and refer applicants.

I have designated (name) _____ to direct the establishment of and to monitor the implementation of personnel procedures to guide the FIRM's affirmative action program. Where PROJECTS exceed \$500,000, this official shall also serve as the liaison officer that administers the FIRM's "Minority Business Enterprise Program." This official is charged with designing and implementing audit and reporting systems that will keep management informed on a monthly basis of the status of the equal opportunity area.

Supervisors have been made to understand that their work performance is being evaluated on the basis of their equal opportunity efforts and results, as well as other criteria. It shall be the responsibility of the FIRM and its supervisors to take actions to prevent harassment of employees placed through affirmative action efforts.

B) Reports: Unless exempted by law and regulation, the FIRM shall make available and file those reports related to equal opportunity as may be required by the City of Duluth and State and Federal compliance agencies. Requirements and Reports are defined in 41CFR60 "Compliance Responsibility for Equal Opportunity" published by the U. S. Department of Labor which is incorporated herein by reference. Additional requirements are defined in various State and Federal Civil Rights Legislation and Rules promulgated thereunder.

C) Nonsegregated Facilities: The FIRM certifies that it does not maintain or provide for its employees any segregated facilities at any of its establishments and that it does not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The FIRM certifies that it will not maintain or provide for its employees any segregated facilities at any of its establishments and that it will not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The FIRM agrees that a breach of this certification is a violation of the Equal Opportunity Clause in this certificate. As used in this Certification, the term "segregated

facilities" means any waiting rooms, work area, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation for entertainment area, transportation, and housing facilities provided for employees which are segregated by explicit directive or are, in fact, segregated on the basis of race, color, religion, or national origin, because of habit, local custom, or otherwise.

- D) Affirmative Action Compliance Program:** Unless exempted by regulation and law, the FIRM—if the FIRM has 50 or more employees and if the value of current contracts with the City of Duluth exceeds \$50,000—shall prepare and maintain a written affirmative action compliance program that meets the requirement as set forth in 41CFR60.
- E) Non-Compliance:** The FIRM certifies that it is not currently in receipt of any outstanding letters of deficiencies, show cause, probable cause, or other such notification of non-compliance with EEO Laws and Regulations.
- F) Employment Goals - "Construction" Projects:** It shall be the goal of the FIRM if the PROJECT is of a construction nature that in all on-site employment generated that no less than 3% of the on-site workforce will be minority employees and that no less than 7% of the on-site workforce will be female employees. Further, it is the goal of the FIRM if the PROJECT is of a construction nature that in all on-site employment generated that no less than 3% of the work hours generated shall be worked by minority employees and that no less than 7% of the work hours generated shall be worked by female employees.
- G) Subcontractors:** The FIRM will for all its PROJECT subcontractors regardless of tier (unless exempted by law and regulation) that received in excess of \$2,500 require that: (1) the subcontractor shall execute an "EEO Statement and Certification" similar in nature to this "Statement and Certification", (2) said documentation to be maintained on file with the FIRM or subcontractor as may be appropriate.

Executed this _____ day of _____, 20__ by:

Printed name and title

Signature

NOTE: In addition to the various remedies prescribed for violation of Equal Opportunity Laws, the penalty for false statements is prescribed in 18 U.S.C. 1001.

CONTRACTOR & CITY OF DULUTH

THIS AGREEMENT, effective as of the date of attestation by the City Clerk, is made by and between the **CITY OF DULUTH**, a municipal corporation, hereinafter referred to as the "CITY," party of the first part, and **Contractor, address**, hereinafter referred to as the "Contractor," party of the second part;

WITNESSETH: That the Contractor and the City agree as follows:

1. The following shall be deemed to be part of this contract:
 - a. The annexed resolution and legal advertisement of the City Council.
 - b. The bid request and specifications, as modified by irreconcilable language in this written contract.
 - c. The bid by Contractor, as modified by irreconcilable language in this written contract.
 - d. The performance bond and payment bond certification.
 - e. All provisions of law applicable to a contract of this nature.
2. The Contractor agrees to furnish and deliver to the **Department** all labor, supervision, material, equipment, supplies, insurance, performance bond, payment bond and everything else necessary for general construction of **Project** at **location**, all in strict accordance with plans and specifications prepared by **design co. or city architect**, your bid of \$ and **resolution no. passed on date**. Contractor shall not commence performance of any work under this contract until Contractor receives authorization from the City's Purchasing Agent in writing and dated.
3. The City agrees to pay progress payments and make final payments to the Contractor as stated in the contract specifications. The total amount payable under this contract shall not exceed **dollar amount spelled out (\$)** unless the contract is modified by formal amendment or change order. Payments under this Agreement shall be made from the following accounts **funding** and **RQ no.**
4. The Contractor shall furnish and maintain in full force and effect until this contract is completely performed by the Contractor, a performance bond and payment bond if and when required by law, or if and when required by the City.
5. Inasmuch as this contract concerns work, materials and equipment needed for the public benefit, the provisions of this contract relating to the time of performance and completion of work and delivery of materials or equipment are of the essence of this contract.
6. The Contractor will defend, indemnify and save the City harmless from all costs, charges, damages, and loss of any kind that may grow out of the matters covered by this contract. Said obligation does not include indemnification of the City for claims of liability arising

out of the sole negligent or intentional acts or omissions of City but shall include but not be limited to the obligation to defend, indemnify and save harmless the City in all cases where claims of liability against the City arise out of acts or omissions of City which are derivative of the negligence or intentional acts or omissions of Contractor such as, and including but not limited to, the failure to supervise, the failure to warn, the failure to prevent such act or omission by Contractor and any other such source of liability. In addition Contractor will comply with all local, state and federal laws, rules and regulations applicable to this contract and to the work to be done and things to be supplied hereunder.

7. Insurance

a. Contractor shall provide the following minimum amounts of insurance from insurance companies authorized to do business in the state of Minnesota, which insurance shall indemnify Contractor and City from all liability described in Paragraph 6 above, subject to provisions below.

- (1) Workers' compensation insurance in accordance with the laws of the State of Minnesota.
- (2) Public Liability and Automobile Liability Insurance with limits not less than **\$1,500,000** Single Limit, and twice the limits provided when a claim arises out of the release or threatened release of a hazardous substance; shall be in a company approved by the city of Duluth; and shall provide for the following: Liability for Premises, Operations, Completed Operations, Independent Contractors, and Contractual Liability.
- (3) City of Duluth shall be named as **Additional Insured** under the Public Liability, Excess/Umbrella Liability* and Automobile Liability, or as an alternate, Contractor may provide Owners-Contractors Protective policy, naming itself and the City of Duluth. Contractor shall also provide evidence of Statutory Minnesota Workers Compensation Insurance. Contractor to provide Certificate of Insurance evidencing such coverage with 30-days notice of cancellation, non-renewal or material change provisions included. The City of Duluth does not represent or guarantee that these types or limits of coverage are adequate to protect the Contractor's interests and liabilities.

**An umbrella policy with a "following form" provision is acceptable if written verification is provided that the underlying policy names the City of Duluth as an additional insured.*

- (4) If a certificate of insurance is provided, the form of the certificate shall contain an unconditional requirement that the insurer notify the City without fail not less than 30 days prior to any cancellation, non-renewal or modification of the policy or coverages evidenced by said certificate and shall further provide that failure to give such notice to City will render any such change or changes in said policy or coverages ineffective as against the City.

- (5) The use of an “ACORD” form as a certificate of insurance shall be accompanied by two forms – 1) ISO Additional Insured Endorsement (CG-2010 pre-2004) and 2) Notice of Cancellation Endorsement (IL 7002) or equivalent, as approved by the Duluth City Attorney’s Office.
- b. The insurance required herein shall be maintained in full force and effect during the life of this Agreement and shall protect Contractor, its employees, agents and representatives from claims and damages including but not limited to personal injury and death and any act or failure to act by Contractor, its employees, agents and representatives in the negligent performance of work covered by this Agreement.
- c. Certificates showing that Contractor is carrying the above described insurance in the specified amounts shall be furnished to the City prior to the execution of this Contract and a certificate showing continued maintenance of such insurance shall be on file with the City during the term of this Contract.
- d. Contractor shall be required to provide insurance meeting the requirements of this Paragraph 7 unless Contractor successfully demonstrates to the satisfaction of the City Attorney, in the exercise of his or her discretion, that such insurance is not reasonably available in the market. If Contractor demonstrates to the satisfaction of the City Attorney that such insurance is not reasonably available, the City Attorney may approve an alternative form of insurance which is reasonably available in the market which he or she deems to provide the highest level of insurance protection to the City which is reasonably available.
8. No claim whatsoever shall be made by the Contractor against any officer, agent or employee of the City for, or on account of, anything done, or omitted to be done, in connection with this contract. If this contract is not made in conformity with mandatory provisions of any statute or of the ordinances and charter of the City of Duluth, the Contractor agrees to raise no defense and make no claim against the City on the basis of ratification, laches, estoppel, or implied contract.
9. The Contractor shall not assign, transfer, convey or otherwise dispose of this contract, or his right to execute it, or his right, title or interest in or to it, or any part thereof, without the consent of the City, evidenced by a resolution duly adopted by the City Council. The prohibition contained in this paragraph shall not be deemed to prevent the contractor from subcontracting. Contractor shall remain primarily responsible for all work performed by any subcontractor.
10. The Contractor agrees that in the hiring of common or skilled labor for the performance of any work under this contract, Contractor will not discriminate by reason of race, creed or color, religion, national origin, sex, marital status, status with regard to public assistance, disability or age.
11. The Contractor agrees that Contractor shall not in any manner discriminate against or intimidate or prevent the employment of any person or persons, or on being hired, prevent or conspire to prevent any person or persons from the performance or work under this contract on account of race, creed or color, religion, national origin, sex, marital status, status with regard to public assistance, disability or age.

12. The contractor agrees that, as provided in Minnesota Statutes 16C.05, Subd. 5, contractor's books, records, documents, and accounting procedures and practices are subject to examination by the City or the state auditor for six years from the date of final payment under this contract.
13. This contract may be cancelled or terminated by the City and all moneys due or to become due hereunder may be forfeited for any failure to perform any terms or conditions of this contract including but not limited to any violation of the terms or conditions of Section 10 or 11 of this contract.
14. Any waiver by any party of any provision of this contract shall not imply a subsequent waiver of that or any other provision.
15. This contract is made in the state of Minnesota and shall be construed and interpreted in accordance with the laws of the State of Minnesota. The appropriate venue and jurisdiction for any litigation hereunder shall be in a court located in St. Louis, County, Minnesota, and the parties to this Agreement waive objection to the jurisdiction of this court, whether based on convenience or otherwise.
16. This Agreement constitutes the entire agreement between the City and the Contractor on the subject matter hereof. It may not be changed, modified, discharged or extended except by written instrument duly executed on behalf of the City and the Contractor. The Contractor agrees that no representations or warranties made by the City shall be binding upon the City unless expressed in writing herein.
17. This Agreement shall not be in force and effect, or in any way binding upon the City until the same shall have been approved by the Department Head, signed by the Mayor, attested by the Clerk, and countersigned by the City Auditor.
18. The Contractor unconditionally guarantees to perform all work pursuant to this contract in a good and workmanlike manner, in strict compliance with the specifications and instructions hereto attached, and to the satisfaction of the City of Duluth.
19. This Agreement may be executed in counterparts, each of which shall be deemed to be original and all of which together shall constitute the binding and enforceable agreement of the parties hereto. This Agreement may be executed and delivered by a party by facsimile or PDF transmission, which transmission copy shall be considered an original and shall be binding and enforceable against such party.

Countersigned:

CITY OF DULUTH-Client

By

City Auditor
Approved this _____ day of _____

Mayor

Attest:

Department Director
Approved this _____ day of _____

City Clerk
Attested this _____ day of _____

Purchasing Agent
Approved this _____ day of _____

Contractor
Consultant (Service Provider)

By

Assistant City Attorney
Approved this _____ day of _____

Company Representative

Its

Title of Representative
Approved this _____ day of _____

GENERAL CONDITIONS 4-15-11

PART I

101. DEFINITIONS

Wherever used in any of the Contract Documents, the following meanings shall be given to the terms herein defined:

- a. The term "Contract" means the Contract executed by the City of Duluth in its capacity as agent for the City of Duluth and the Contractor, of which these GENERAL CONDITIONS form a part.
- b. The term "City" means the City of Duluth, Minnesota, which is authorized to undertake this Contract and within which the Project Area is situated or any employee of the City of Duluth designated by the City of Duluth for the purpose of inspecting, directing, or having in charge the work embraced in this Contract.
- c. The term "Contractor" means the person, firm, or corporation entering into the Contract with the City to construct and install the Improvements embraced in this Contract.
- d. The term "Project Area" means site within which is specified Contract limits of the Improvements contemplated to be constructed in whole or in part under this Contract.
- e. The term "Architect" means the architect or engineer licensed to practice architecture or engineering and serving the City with architectural or engineering services, or his authorized representative or successor.
- f. The term "Change Order" means a written order to the Contractor, signed by the City, issued after execution of the Contract, authorizing and directing a change in the Work or an adjustment in the contract sum or the contract time. The contract sum and the contract time may be changed only by Change Order.
- g. The term "Contract Documents" means and shall include the following: Executed Agreement, Addenda (if any), Invitation for Bids, Instructions to Bidders, Signed Copy of Bid, General Conditions, Special Conditions, Technical Specifications, and Drawings (as listed in the Schedule of Drawings), and all requested submittals such as Certificate of Insurance, performance and payment bonds, EEO Affirmative Action Policy Statement & Compliance Certificate, Certificate of Non-Collusion.
- h. The term "Drawings" means the drawings listed in the Schedule of Drawings.
- i. The term "Field Order" means a written interpretation necessary for the proper execution of the Work, in the form of drawings or otherwise issued to the Contractor by the City or the Architect.
- j. The term "Technical Specifications" means that part of the Contract Documents which describes, outlines and stipulates the quality of the materials to be furnished, the quality of workmanship required, and the methods to be used in carrying out the construction work to be performed under this Contract.
- k. The term "Addenda" or "Addendum" means any changes, revisions or clarifications of the Contract Documents which have been duly issued by the City to prospective Bidders prior to time of receiving Bids.
- l. The term "Work" means all labor necessary to produce the construction required by the Contract Documents, and all materials and equipment incorporated in such construction.

102. SUPERINTENDENCE BY CONTRACTOR

- a. Except where the Contractor is an individual and gives his personal superintendence to the work, the Contractor shall provide a competent superintendent, satisfactory to the City and the Architect, on the work at all times during working hours with full authority to act for him. The Contractor shall also provide an adequate staff for the proper coordination and expediting of his work.
- b. The Contractor shall lay out his own work and he shall be responsible for all work executed by him under the Contract. He shall verify all figures and elevations before proceeding with the work and will be held responsible for any error resulting from his failure to do so.

103. SUBCONTRACTS

- a. The Contractor shall not execute an agreement with any subcontractor, or permit any subcontractor to perform any work included in this contract until he has submitted a noncollusion affidavit from the subcontractor in substantially the form attached and has received written approval of such subcontractor from the City.
- b. No proposed subcontractor shall be disapproved by the City except for cause.
- c. The Contractor shall be as fully responsible to the Owner for the acts and omissions of his subcontractors, and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by him.
- d. The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work to require compliance by each subcontractor with the applicable provisions of this Contract.
- e. Nothing contained in this Contract shall create any contractual relationship between the subcontractor and the City.

104. OTHER CONTRACTS

The City may award, or may have awarded, other contracts for additional work, and the Contractor shall cooperate fully with such other Contractors, by scheduling his own work with that to be performed under other Contracts as may be directed by the City. The Contractor shall not commit or permit any act which will interfere with the performance of work by any other Contractor as scheduled.

105. FITTING AND COORDINATION OF THE WORK

The Contractor shall be responsible for the proper fitting of all work and for the coordination of the operations of all trades, subcontractors, or materialmen engaged upon this Contract. He shall be prepared to guarantee to each of his subcontractors the locations and measurements which they may require for the fitting of their work to all surrounding work.

106. MUTUAL RESPONSIBILITY OF CONTRACTORS

If, through acts or neglect on the part of the Contractor, any other Contractor or any subcontractor shall suffer loss or damage on the work, the Contractor shall settle with such other Contractor or subcontractor by agreement or arbitration, if such other Contractor or subcontractor will so settle. If such other Contractor or subcontractor shall assert any claim against the City on account of damage alleged to have been so sustained, the City shall notify this Contractor, who shall defend at his own expense any suit based upon such claim, and, if any judgment or claims against the City shall be allowed, the Contractor shall pay or satisfy such judgment or claim and pay all costs and expenses in connection therewith.

107. PROGRESS SCHEDULE

The Contractor shall submit for approval immediately after execution of the Agreement, a carefully prepared Progress Schedule, showing the proposed dates of starting and of completing each of the various sections of the work, the anticipated monthly payments to become due the Contractor and the accumulated percent of progress each month.

108. PAYMENTS

1) Partial Payments.

- a. The Contractor shall prepare his requisition of partial payment as of the last day of the month and submit it, with the required number of copies, to the City contracting officer for his approval. The amount of the payment due the Contractor shall be determined by adding to the total value of work completed to date, the value of materials properly stored on the site and deducting (1) five percent (5%) of the total amount, this sum to be retained until final payment and (2) the amount of all previous payments. The total value of the work completed to date shall be based on the estimated quantities of work completed and on the unit prices

contained in the agreement. The value of materials properly stored on site shall be based upon the estimated quantities of such materials and the invoice prices. Copies of all invoices shall be available for the inspection of the Architect and the City.

b. Monthly or partial payments made by the City to the Contractor are moneys advanced for the purpose of assisting the Contractor to expedite the work of construction. The Contractor shall be responsible for the care and protection of all materials and work upon which payments have been made until final acceptance of such work and materials by the City. Such payments shall not constitute a waiver of the right of the City to require the fulfillment of all terms of the Contract and the delivery of all improvements embraced in this Contract complete and satisfactory to the City in all details.

2) Final Payment.

a. After final inspection and acceptance by the Architect and the City of all work under the Contract, the Contractor shall prepare his requisition for final payment which shall be based upon the carefully measured and computed quantity of each item of work at the applicable unit prices stipulated in the Agreement. The total amount of the final payment due the Contractor under this Contract shall be the amount computed as described above less all previous payments. Final payment to the Contractor shall be made subject to his furnishing the City with a release in satisfactory form of all claims against the City arising under and by virtue of his contract, other than such claims, if any, as may be specifically excepted by the Contractor from the operation of the release as provided under Section 113 hereof.

b. The City, before paying the final estimate, may require the Contractor to furnish releases or receipts from all subcontractors having performed any work and all persons having supplied materials, equipment (installed on the Project) and services to the Contractor, if the City deems the same necessary in order to protect its interest. The City, however, may if it deems such action advisable make payment in part or in full to the Contractor without requiring the furnishing of such releases or receipts and any payments so made shall in no way impair the obligations of any surety or sureties furnished under this Contract.

c. Withholding of any amount due the City under Section 403, entitled "Liquidated Damages," under SPECIAL CONDITIONS, shall be deducted from the final payment due the Contractor.

3) Withholding Payments

The City may withhold from any payment otherwise due the Contractor so much as may be necessary to protect the City and, if it so elects, may also withhold any amounts due from the Contractor to any subcontractors or material dealers for work performed or material furnished by them. The foregoing provisions shall be construed solely for the benefit of the City and will not require the City to determine or adjust any claims or disputes between the Contractor and his subcontractors or material dealers, or to withhold any moneys for their protection unless the City elects to do so. The failure or refusal of the City to withhold any moneys from the Contractor shall in no wise impair the obligations of any surety or sureties under any bond or bonds furnished under this Contract.

4) Payments Subject to Submission of Certificates.

Each payment to the Contractor by the City shall be made subject to submissions by the Contractor of all written certifications required of him and his subcontractors by Section II, Part II Supplementary General Conditions for Federally, State of Minnesota, and/or City Assisted Activities.

109. CHANGES IN THE WORK

a. The City may make changes in the scope of work required to be performed by the Contractor under the Contract by making additions thereto, or by omitting work therefrom, without invalidating the Contract, and without relieving the Contractor from any of his obligations under the Contract or any guarantee given by him pursuant to the Contract provisions, and without affecting the validity of the guaranty bonds, and without

relieving or releasing the surety or sureties of said bonds. All such work shall be executed under the terms of the original Contract unless is expressly provided otherwise.

b. Except for the purpose of affording protection against any emergency endangering health, life, or property, the Contractor shall make no change in the materials used or in the specified manner of constructing and/or installing the Improvements or supply additional labor, services, or materials beyond that actually required for the execution of the Contract, unless in pursuance of a written order from the City authorizing the Contractor to proceed with the change. No claim for an adjustment of the Contract Price will be valid unless so ordered.

c. If applicable unit prices are contained in the Agreement (established as a result of either a unit price bid or a Supplement Schedule of Unit Prices), the City shall order the Contractor to proceed with desired changes in the work, the value of such changes to be determined by the measured quantities involved and the applicable unit prices specified in the Contract; provided that, in case of a unit price contract the net value of all changes does not increase or decrease the original total amount shown in the Agreement by more than twenty-five percent (25%) in accordance with Section entitled Unit Prices, under INSTRUCTIONS TO BIDDERS.

d. If applicable unit prices are not contained in the Agreement or if the total net change increases or decreases the total Contract Price more than twenty-five (25%), the City shall, before ordering the Contractor to proceed with desired changes, request an itemized proposal from him covering the work involved in the change after which the procedure shall be as follows:

(1) If the proposal is acceptable, the City will prepare the change order in accordance therewith for acceptance by the Contractor.

(2) If the proposal is not acceptable and prompt agreement between the two parties cannot be reached, the City may order the Contractor to proceed with the work on a cost-plus limited basis; provided that this basis shall not apply to costs incurred by Contractor for any work done by any subcontractor, which work may proceed under the basis set forth in sub-subparagraph (3) below. A cost-plus-limited basis is defined as the net cost of the Contractor's labor, materials, and insurance plus fifteen percent (15%) of said net cost to cover overhead and profit, the total cost not to exceed a specified limit.

(3) If the proposal of the Contractor is not acceptable in whole or part because of the proposals of one or more of the subcontractors and prompt agreement between the two parties cannot be reached, the City may order the Contractor to proceed with the work and reimburse Contractor for work done by any subcontractor on the basis of that subcontractor's net cost of labor, materials, and insurance plus twenty percent (20%) of said net cost to cover overhead and profit, the total cost not to exceed a specified limit. Contractor shall supply all data to City which is necessary to determine any such subcontractor's net costs.

e. Each change order shall include in its final form:

(1) A detailed description of the change in the work.

(2) The Contractor's proposal (if any) of a confirmed copy thereof.

(3) A definite statement as to the resulting change in the Contract price and/or time.

(4) The statement that all work involved in the change shall be performed in accordance with the Contract requirements except as modified by the change order.

110. CLAIMS FOR EXTRA COST

a. If the Contractor claims that any instructions by Drawings or otherwise involve extra cost or extension of time, he shall, within ten (10) days after the receipt of such instructions, and in any event, before proceeding to execute the work, submit his protest thereto in writing to the City, stating clearly and in detail the basis of his objections. No such claim will be considered unless so made.

b. Claims for additional compensation for extra work, due to alleged errors in ground elevations, contour lines, or bench marks, will not be recognized unless accompanied by certified survey data, made prior to the time the original ground was disturbed, clearly showing that errors exist which resulted, or would result, in handling more material, or performing more work, than would be reasonably estimated from the Drawings and maps issued.

- c. Any discrepancies which may be discovered between actual conditions and those represented by the documents shall at once be reported to the City and work shall not proceed, except at the Contractor's risk, until written instructions have been received by him from the City.
- d. If, on the basis of the available evidence, the City determines that an adjustment of the Contract Price and/or time is justifiable, the procedure shall then be as provided in Section 109 hereof.

111. TERMINATION, DELAYS, AND LIQUIDATED DAMAGES

a. Termination of Contract.

If the Contractor refuses or fails to execute the work with such diligence as will insure its completion within the time specified in these Contract Documents, or as modified as provided in these Contract Documents, the City, by written notice to the Contractor, may terminate the Contractor's right to proceed with the work. Upon such termination, the City may take over the work and prosecute the same to completion, by contract or otherwise, and the Contractor and his sureties shall be liable to the City for any additional cost incurred by the City in its completion of the work and they shall also be liable to the City for liquidated damages for any delay in the completion of the work as provided below. If the Contractor's right to proceed is terminated, the City may take possession of and utilize in completing the work such materials, tools, equipment, and plant as may be on the site of the work and necessary therefore.

b. Liquidated Damages for Delays.

If the work is not completed within the time stipulated in Section 7 (Special Conditions) hereof, including any extensions of time for excusable delays as herein provided, the Contractor shall pay to the City as fixed, agreed, and liquidated damages (it being impossible to determine the actual damages occasioned by the delay) for each calendar day of delay, until the work is completed, the amount as set forth in Section 7 (Special Conditions) hereof and the Contractor and his sureties shall be liable to the City for the amount thereof.

c. Excusable Delays.

The right of the Contractor to proceed shall not be terminated nor shall the Contractor be charged with liquidated damages for any delays in the completion of the work due: (1) To any acts of the Government, including controls or restrictions upon or requisitioning of materials, equipment, tools, or labor by reason of war, National Defense, or any other national emergency;

(2) To any acts of the City;

(3) To causes not reasonably foreseeable by the parties to this Contract at the time of the execution of the Contract which are beyond the control and without the fault or negligence of the Contractor, including, but not restricted to, acts of God or of the public enemy, acts of another Contractor in their performance of some other contract with the City, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and weather of unusual severity such as hurricanes, tornadoes, cyclones, and other extreme weather conditions; and

(4) To any delay of any subcontractor occasioned by any of the causes specified in subparagraphs (1), (2) and (3) of this paragraph "c". Provided, however, that the Contractor promptly notify the City in writing within ten (10) days the cause of the delay. Upon receipt of such notification, the City shall ascertain the facts and the cause of the delay. If, upon the basis of facts and the terms of the Contract, the delay is properly excusable, the City shall extend the time for completing the work for a period of time commensurate with the period of excusable delay.

112. ASSIGNMENT OR NOVATION

The Contractor shall not assign or transfer, whether by an assignment or novation, any of its rights, duties, benefits, obligations, liabilities, or responsibilities under this Contract without the written consent of the City; provided, however, that assignments to banks, trust companies, or other financial institutions may be made without the consent of the City. No assignment or novation expressly provides that the assignment of any of the Contractor's rights or benefits under the Contract is subject to a prior lien for labor performed, services rendered, and materials, tools, and equipment supplied for the performance of the work under this Contract

in favor of all persons, firms, or corporations rendering such labor or services or supplying such materials, tools, or equipment.

113. DISPUTES

a. All disputes arising under this Contract or its interpretation, whether involving law or fact or both, or extra work, and all claims for alleged breach of contract shall, within ten (10) days of the first event giving rise to the dispute, be presented by the Contractor to the City for decision. All papers pertaining to claims shall be filed in quadruplicate. Such notice need not detail the amount of the claim but shall state the facts surrounding the claim in sufficient detail to identify the claim together with its character and scope. In the meantime, the Contractor shall proceed with the work as directed by the City. Any claim not presented within the time limit specified within this paragraph shall be deemed to have been waived, except that if the claim is of a continuing character and notice of the claim is not given within ten (10) days of the first event giving rise to it, the claim will be considered only for a period commencing ten (10) days prior to the receipt by the City of notice thereof.

b. The Contractor shall submit in detail his claim and his proof thereof. Each decision by the City will be in writing and will be mailed to the Contractor by registered or certified mail, return receipt requested, directed to his last known address or actually delivered to Contractor or its managing agent. All interpretations or decisions of the City shall be consistent with the Contract and its intent.

c. If the Contractor does not agree with any decision of the City, he shall in no case allow the dispute to delay the work but shall notify the City promptly that he is proceeding with the work under protest and he may then accept the matter in question from the final release. If the Contractor does not agree with any decision of the City, he may submit the matter to arbitration no later than thirty (30) days after the date on which the Contractor received the City's decision; provided, however, that the City shall not be required to submit to arbitration without its prior written consent; and if the City does consent to arbitration, then the Contractor shall pay all costs of such arbitration.

114. TECHNICAL SPECIFICATIONS AND DRAWINGS

Anything mentioned in the Technical Specifications and not shown on the Drawings or shown on the Drawings and not mentioned in the Technical Specifications, shall be of like effect as if shown on or mentioned in both. In case of difference between Drawings and Technical Specifications, the Technical Specifications shall govern. In case of any discrepancy on Drawings or Technical Specifications, the matter shall be immediately submitted to the City, without whose decision, said discrepancy shall not be adjusted by the Contractor, save only at his own risk and expense.

115. SHOP DRAWINGS

a. All required shop drawings, machinery details, layout drawings, etc. shall be submitted to the Architect or the City, as directed by the City, in two copies for approval sufficiently in advance of requirements to afford ample time for checking, including time for correcting, resubmitting and rechecking if necessary. The Contractor may proceed, only at his own risk, with manufacture or installation of any equipment or work covered by said shop drawings, etc. until they are approved and no claim, by the Contractor, for extension of the Contract time will be granted by reason of his failure in this respect.

b. Any drawing submitted without the Contractor's stamp of approval will not be considered and will be returned to him for proper resubmission. If any drawings show variations from the requirements of the Contract because of standard shop practice or other reason, the Contractor shall make specific mention of such variation in his letter of transmittal in order that, if acceptable, suitable action may be taken for proper adjustment of contract price and/or time, otherwise the Contractor will not be relieved of the responsibility for executing the work in accordance with the Contract even though the drawings have been approved.

c. If a shop drawing with the Contractor involves only a minor adjustment in the interest of the City not involving a change in Contract price or time, the Architect may approve the drawing. The approval shall be

general, shall not relieve the Contractor from his responsibility for adherence to the Contract or for any error in the drawing and shall contain in substance the following: "The modification shown on the attached drawing is approved in the interest of the City to effect an improvement for the Project and is ordered with the understanding that it does not involve any change in the Contract price or time; that it is subject generally to all Contract stipulation and covenants; and that it is without prejudice to any and all rights of the City under the Contract and surety bond or bonds."

116. REQUEST FOR SUPPLEMENTARY INFORMATION

It shall be the responsibility of the Contractor to make timely requests of the City for any additional information not already in his possession which should be furnished by the City under the terms of this Contract, and which he will require in the planning and execution of the work. Such requests may be submitted in writing from time to time as the need is approached, but each shall be filed in ample time to permit appropriate action to be taken by all parties involved so as to avoid delay. Each request shall be in writing, and list the various items and the latest date by which each will be required by the Contractor. The first list shall be submitted within two (2) weeks after Contract award and shall be as complete as possible at that time. The Contractor shall, if requested, furnish promptly any assistance and information the City may require in responding to these requests of the Contractor. The Contractor shall be fully responsible for any delay in his work or to others arising from his failure to comply fully with the provisions of this Section.

117. MATERIALS AND WORKMANSHIP

- a. Unless otherwise specifically provided for in the Technical Specifications, all workmanship, equipment, materials and articles incorporated in the work shall be new and the best grade of the respective kinds for the purpose. Where equipment, materials, articles or workmanship are referred to in the Technical Specifications as an equal to any particular standard, the City shall decide the question of equality.
- b. The Contractor shall furnish to the City for approval the manufacturer's detailed specifications for all machinery, mechanical and other special equipment, which he contemplates installing together with full information as to type, performance characteristics, and all other pertinent information as required, and shall likewise submit for approval as required full information concerning all other materials or articles which he proposes to incorporate in the work. (See Section 118 hereof)
- c. Machinery, mechanical and other equipment, materials or articles installed or used without such prior approval shall be at the risk of subsequent rejection.
- d. Materials specified by reference to the number or symbol of a specific standard, such as A.S.T.M. Standard, a Federal Specification or other similar standard, shall comply with requirements in the latest revision thereof and any amendment or supplement thereto in effect on the date of the Invitation for Bids, except as limited to type, class or grade, or modified in such reference. The Standards referred to, except as modified in the Technical Specifications shall have full force and effect as though printed therein.
- e. The City may require the Contractor to dismiss from the work such employee or employees as the City may deem incompetent, or careless, or insubordinate.

118. SAMPLES, CERTIFICATES AND TESTS

- a. The Contractor shall submit all material or equipment samples, certificates, affidavits, etc. as called for in the Contract Documents or required by the Architect, promptly after award of the Contract and acceptance of the Contractor's Bond. No such material or equipment shall be manufactured or delivered to the site, except at the Contractor's own risk, until the required samples or certificates have been approved in writing by the City or the Architect. Any delay in the work caused by late or improper submission of samples or certificates for approval shall not be considered just cause for an extension of the contract time. Each sample submitted by the Contractor shall carry a label giving the name of the Contractor, the project for which it is intended, and the name of the producer. The accompanying certificate or letter from the Contractor shall state that the sample complies with Contract requirements, shall give the name and brand of the product, its place of origin,

the name and address of the producer and all specifications or other detailed information which will assist the Architect or the City in passing upon the acceptability of the sample promptly. It shall also include the statement that all materials or equipment furnished for use in the project will comply with the samples and/or certified statements.

b. Approval of any materials shall be general only and shall not constitute a waiver of the City's right to demand full compliance with Contract requirements. After actual deliveries, the City or the Architect will have such check tests made as they deem necessary in each instance and may reject materials and equipment and accessories for cause, even though such materials and equipment have been given general approval. If materials, equipment or accessories which fail to meet check tests have been incorporated in the work, the City or the Architect will have the right to cause their removal and replacement by proper materials or to demand and secure such reparation by the Contractor as is equitable.

c. Except as otherwise specifically stated in the Contract, the costs of sampling and testing will be divided as follows:

(1) The Contractor shall furnish without extra cost, including packing and delivery charges, all samples required for testing purposes, except those samples taken on the project by the City or the Architect; (2) The Contractor shall assume all costs of retesting materials which fail to meet Contract requirements;

(3) The Contractor shall assume all costs of testing materials offered in substitution for those found deficient; and

(4) The City will pay for all other testing expenses.

119. CARE OF WORK

a. The Contractor shall be responsible for all damages to persons or property that occur as a result of his fault or negligence in connection with the prosecution of the work and shall be responsible for the proper care and protection of all work performed until completion and final acceptance, whether or not the same has been covered in whole or in part by payments made by the City.

b. In an emergency affecting the safety of life, limb or property, including adjoining property, the Contractor, without special instructions or authorization from the City is authorized to act at his own discretion to prevent such threatened loss or injury, and he shall so act. He shall likewise act if instructed to do so by the City. Any compensation claimed by the Contractor on account of such emergency work will be determined by the City as provided in Section 109 hereof.

c. The Contractor shall avoid damage as a result of his operations to existing sidewalks, streets, curbs, pavements, utilities (except those which are to be replaced or removed), adjoining property, etc., and he shall at his own expense completely repair any damage thereto caused by his operations.

d. The Contractor shall shore up, brace, underpin, secure and protect as may be necessary all foundations and other parts of existing structures adjacent to, adjoining, and in the vicinity of the site, which may be in any way affected by the excavations or other operations connected with the construction of the Improvements embraced in this Contract. The Contractor shall be responsible for the giving of any and all required notices to any adjacent or adjoining property owner or other party before the commencement of any work. The Contractor shall indemnify and save harmless the City from any damages on account of settlements or the loss of lateral support of adjoining property and from all loss or expense and all damages for which the City may become liable in consequence of such injury or damage to adjoining structures and their premises.

120. ACCIDENT PREVENTION

a. The Contractor shall exercise proper precaution at all times for the protection of persons and property and shall be responsible for all damages to persons or property, either on or off the site, which occur as a result of his fault or negligence in connection with the prosecution of the work. The safety provisions of applicable Federal, State and local laws and ordinances and building and construction codes shall be observed and the Contractor shall take or cause to be taken such additional safety and health measures as the City may determine to be reasonably necessary. Machinery, equipment, and all hazards shall be guarded in accordance

with the safety provisions of the A Manual of Accident Prevention in Construction published by the Associated General Contractors of America, Inc., to the extent that such provisions are not in conflict with applicable local laws.

b. The Contractor shall maintain an accurate record of all cases of death, occupational disease, and injury requiring medical attention or causing loss of time from work, arising out of and in the course of employment on work under the Contract. The Contractor shall promptly furnish the Owner with reports concerning these matters.

121. SANITARY FACILITIES

The Contractor shall furnish, install, and maintain ample sanitary facilities for the workmen. As the needs arise a sufficient number of enclosed temporary toilets shall be conveniently placed as required by the sanitary codes of the State and Local Government. Drinking water shall be provided from an approved source, so piped or transported as to keep it safe and fresh and served from single service containers or satisfactory types of sanitary drinking stands or fountains. All such facilities and services shall be furnished in strict accordance with existing and governing health regulations.

122. USE OF PREMISES

a. The Contractor shall confine his equipment, storage of materials, and construction operations to the Contract limits as shown on the Drawings and as prescribed by ordinances or permits, or as may be directed by the City, and shall not unreasonably encumber the site or public rights of way with his materials and construction equipment.

b. The Contractor shall comply with all reasonable instructions of the City and the ordinances and codes of the Local Government regarding signs, advertising, traffic, fires, explosives, danger signals, barricades.

123. REMOVAL OF DEBRIS, CLEANING, ETC.

The Contractor shall, periodically or as directed during the progress of the work, remove and legally dispose of all surplus excavated material and debris, and keep the Project Area and public rights of way reasonably clear. Upon completion of the work, he shall remove all temporary construction facilities, debris and unused materials provided for the work, and put the whole site of the work and public rights of way in a neat and clean condition. Trash burning on the site of the work will be subject to prior approval of the City and existing State and local regulations.

124. INSPECTION

a. All materials and workmanship shall be subject to inspection, examination or test by the City or the Architect at any and all times during manufacture or construction and at any and all places where such manufacture or construction is carried on. The City shall have the right to reject defective or substandard material and workmanship or require its correction. Unacceptable workmanship shall be satisfactorily corrected. Rejected material shall be promptly segregated and removed from the Project Area and replaced with material of specified quality without charge therefor. If the Contractor fails to proceed at once with the correction of rejected workmanship or defective material, the City may contract or otherwise have the defects remedied or rejected materials removed from the Project Area and charge the cost of the same against any moneys which may be due the Contractor, without prejudice to any other rights or remedies of the City.

b. The Contractor shall furnish promptly all materials reasonably necessary for any tests which may be required. (See Section 118 hereof). All tests by the City will be performed in such a manner as not to delay the work unnecessarily and will be made in accordance with the provisions of the Technical Specifications.

c. The Contractor shall notify the City sufficiently in advance of back-filling or concealing any facilities to permit proper inspection. If any facilities are concealed without approval or consent by the City, the Contractor shall uncover for inspection and recover such facilities all at his own expense, when so requested by the City.

Should it be considered necessary or advisable by the City at any time before final acceptance of the entire work to make an examination of work already completed by uncovering the same, the Contractor shall on request promptly furnish all necessary facilities, labor, and material. If such work is found to be defective in any important or essential respect, due to fault of the Contractor or his subcontractors the Contractor shall defray all the expenses of such examination and of satisfactory reconstruction. If, however, such work is found to meet the requirements of the Contract, the actual cost of labor and material necessarily involved in the examination and replacement, plus 15 percent of such costs to cover superintendence, general expenses and profit, shall be allowed the Contractor and he shall, in addition, if completion of the work of the entire Contract has been delayed thereby, be granted a suitable extension of time on account of the additional work involved.

d. Inspection of materials and appurtenances to be incorporated in the Improvements embraced in this Contract may be made at the place of production, manufacture or shipment, whenever the quantity justifies it, and such inspection and acceptance, unless otherwise stated in the Technical Specifications, shall be final, except as regards (1) latent defects, (2) departures from specific requirements of the Contract, (3) damage or loss in transit, or (4) fraud or such gross mistakes as amount to fraud. Subject to the requirements contained in the preceding sentence, the inspection of materials as a whole or in part will be made at the Project Site.

e. Neither inspection, testing, approval nor acceptance of the work in whole or in part, by the City or its agents shall relieve the Contractor or his sureties of full responsibility for materials furnished or work performed not in strict accordance with the Contract.

125. REVIEW BY THE CITY

The City, its authorized representatives and agents, and the Architect, shall, at all times have access to and be permitted to observe and review all work, materials, equipment, payrolls, personnel records, employment conditions, and other relevant data and records pertaining to this Contract; provided, however, that all instructions and approvals with respect to work will be given to the Contractor only by the City through its authorized representative or agents.

126. FINAL INSPECTION

When the work embraced in this Contract is substantially completed, the Contractor shall notify the City in writing that the work will be ready for final inspection on a definite date which shall be stated in such notice. The notice shall bear the signed concurrence of the representative of the City having charge of inspection. If the City determines that the status of the Improvements is as represented, it will make the arrangements necessary to have final inspection commenced on the date stated in such notice, or as soon thereafter as is practicable.

127. DEDUCTION FOR UNCORRECTED WORK

If the City deems it not expedient to require the Contractor to correct work not done in accordance with the Contract Documents, an equitable deduction from the Contract Price will be made by agreement between the Contractor and the City and subject to settlement, in case of dispute, as herein provided.

128. TIME

a. The Contract Time is the period of time allotted in the Contract for completion of the Work. The date of commencement of the Work is the date established in a notice to proceed issued by the City to the Contractor. The Contractor shall begin the Work upon receipt of the notice to proceed.

b. The term "day" as used herein shall mean calendar day.

c. If a date of completion is included in the Contract, it shall be the Date of Substantial Completion of the Work, including authorized extensions thereto. The "Date of Substantial Completion of the Work" is the date certified by the City when construction is sufficiently complete, in accordance with the Contract, so the City may occupy the Work for the use for which it is intended.

129. INSURANCE

The Contractor shall carry the following insurance, at his expense and no direct payment for premiums shall be made by the City. Carriage of such insurance shall in no way alleviate the Contractor of his responsibilities under the contract.

a. The Contractor will be required to carry insurance of the kinds and in the amounts hereinafter specified. The Contractor shall not commence work under the contract until he has obtained all the insurance required by these specifications and until such insurance has been approved by the City Attorney, nor shall the Contractor allow any subcontractor to commence work on his subcontract until all similar insurance required of the subcontractor shall have been so obtained and approved.

b. Insurance

The Contractor shall provide Commercial General Liability in an amount not less than \$1,500,000.00 combined single limit and Automobile Liability Insurance in an amount not less than \$1,500,000.00 combined single limit shall be in a company licensed to do business in Minnesota; and shall provide for the following: Liability for Premises, Operations, Completed Operations, Independent Contractors, and Contractual Liability. Property damage coverage for explosion, collapse, and underground Axcu to be included. City of Duluth shall be named as Additional Insured under the Commercial General Liability policy. Contractor shall also provide evidence of Statutory Worker's Compensation Insurance. Contractor to provide Certificate of Insurance evidencing such coverage with 30-day notice of cancellation, non-renewal, or material change provision included.

c. Subcontractor's Insurance

In the event any work contemplated by the contract is sublet, the Contractor shall have the duty to assure that the subcontractors provide insurance in accord with the minimum requirements hereinabove imposed on the Contractor.

d. Proof of Insurance

The Contractor shall not proceed with the work contemplated in this contract until he has furnished the City Attorney of the City of Duluth with satisfactory proof of the existence and carriage of insurance of the kinds and in the amounts specified.

e. Indemnification

The Contractor shall defend, indemnify and save harmless the City and all of its officers, agents and employees from all suits, actions or claims of any character, name and description brought for on account of any injuries or damages received or sustained by any person, persons or property, by or from the act or acts of said Contractor, or by or in consequence of any negligence in safeguarding the work, or through the use of unacceptable materials in constructing the work, or by or on account of any act or omission, neglect or misconduct of said Contractor, or from any claims or amount arising or recovered under the Workmen's Compensation Law or any other law, by-law, ordinance, order or decree, and so much of the money due the said Contractor under and by virtue of his contract, as shall be considered necessary by the City may be retained for the use of the City or in case no money is due, his surety shall be held until such suit or suits, action or actions, claim or claims, for injuries or damages as aforesaid, shall have been settled and suitable evidence to that effect furnished to the City. The Contractor shall indemnify and save harmless the City from any and all losses caused by or on account of any claims or amounts recovered for any infringement of patent, trademark, or copyright. The unauthorized use by the Contractor of public or private property for any purpose may be considered an injury or damage to the property so used.

130. PATENTS

The Contractor shall hold and save the City, its officers, employees, representatives and agents, and the Architect, harmless from liability of any nature or kind, including costs and expenses, for, or on account of, any patented or unpatented invention, process, article, or appliance manufactured or used in the performance of the Contract, including its use by the City, unless otherwise specifically stipulated in the Technical Specifications.

131. WARRANTY

No material, supplies, or equipment to be installed or furnished under this Contract shall be purchased subject to any chattel mortgage or under a conditional sale, lease-purchase or other agreement by which an interest therein or in any part thereof is retained by the seller or supplier. The Contractor shall warrant good title to all materials, supplies, and equipment installed or incorporated in the work and upon completion of all work, shall deliver the same together with all improvements and appurtenances constructed or placed thereon by him to the City free from any claims, liens, or charges. Neither the Contractor nor any person, firm or corporation furnishing any material or labor for any work covered by this Contract shall have any right to a lien upon any improvement or appurtenance thereon. Nothing contained in this paragraph, however, shall defeat or impair the right of persons furnishing materials or labor to recover under any bond given by the Contractor for their protection or any rights under any law permitting such persons to look to funds due the Contractor in the hands of the City. The provisions of this paragraph shall be inserted in all subcontracts and material contracts and notices for the work when no formal contract is entered into for such materials.

132. GENERAL GUARANTY

- a. Neither the final certificate of payment nor any provisions in the Contract nor partial or entire use of the improvements embraced in this Contract by the City or the public shall constitute an acceptance of liability in respect to any express warranties or responsibility for faulty materials or workmanship. The Contractor shall promptly remedy any defects in the work and pay for any damage to other work resulting therefrom which subsequently appears. The City will give notice of defective materials and work with reasonable promptness.
- b. If, within one year after the Date of Substantial Completion or within such longer period of time as may be prescribed by law or by the terms of any applicable special guarantee required by the Contract, any of the Work is found to be defective or not in accordance with the specifications of the Contract, the Contractor shall correct it promptly upon receipt of a written notice from the City to do so, unless the City has previously given the Contractor a written acceptance of such condition or work.

133. ENVIRONMENTAL CONDITIONS

Waste Disposal: The SUBRECIPIENT shall comply with the most recent Minnesota Pollution Control Agency (MPCA) waste disposal requirements and include said disposal requirements in the project's base bid specifications. Waste material, including but not limited to: construction/demolition debris, asbestos-containing material, residential lead paint waste, hazardous waste, and above- and under-ground tanks, shall be disposed of at MPCA-permitted landfill sites only. Copies of all notification, shipment, and landfill receipt records shall be maintained in the subrecipient's project file.

Minnesota Pollution Control Agency
520 Lafayette Rd., St. Paul, MN 55155
(800) 657-3864

a. Construction/Demolition Waste.

Construction/demolition debris will be disposed of at a Minnesota Pollution Control Agency (MPCA) permitted landfill site only, with copies of all landfill receipts for said debris maintained in the subrecipient's project file.

(Solid Waste Management Rules, Chapter 7001 & 7035)

b. Asbestos-Containing Waste.

All asbestos removal and disposal shall be in strict accordance with all applicable permits. The contract bidder shall include the price of all permits, testing, removal, and disposal in the project base bid.

- Project asbestos-containing material removal pursuant to USEPA 40 CFR 61.145 Standard for Demolition and Renovation.
- All asbestos-containing waste material shall be disposed of pursuant to USEPA 40 CFR 61.150 at a MPCA permitted landfill site only, in accordance with the provisions of USEPA 40 CFR 61.154.

- For all asbestos-containing material, a copy of the MPCA Notification of Demolition and Renovation record and all Waste Shipment records shall be maintained in the subrecipient's project file.

c. Hazardous Waste Material.

The MPCA shall be contacted for instructions on handling and disposing of materials containing Polychlorinated Biphenyls (PCBs) or any other identified/encountered hazardous materials. A copy of all correspondence and disposal records shall be maintained in the subrecipient's project file.

- MPCA Hazardous Waste Compliance Guide -- October 1989, Revised January 1991

- MPCA Hazardous Waste Fact Sheet Checklist -- August 1993

d. Above and Below Ground Storage Tanks.

The MPCA Tanks and Spills Section shall be contacted for instructions on handling or removal of all above- and underground tanks identified/encountered. A copy of all correspondence and disposal records shall be maintained in the subrecipient's project file.

e. Residential Lead Paint Waste.

Projects whose activities produce residential lead paint waste are responsible for the management and proper disposal of the waste at an MPCA permitted landfill site only, pursuant to Minn. Stat. sections 116.87, 116.875, 116.88. A copy of the Residential Lead Abatement Notification and Shipping forms shall be maintained in the subrecipient's project file.

134. CONTRACTOR'S RECORDS

The contractor agrees that, as provided in Minnesota Statutes 16C.05, Subd. 5, contractor's books, records, documents, and accounting procedures and practices are subject to examination by the city or the state auditor for three years from the date of execution of this contract.

(End of Document)

General Decision Number: MN160105 03/04/2016 MN105

Superseded General Decision Number: MN20150105

State: Minnesota

Construction Type: Heavy

County: St Louis County in Minnesota.

HEAVY CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.15 for calendar year 2016 applies to all contracts subject to the Davis-Bacon Act for which the solicitation was issued on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.15 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2016. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/08/2016
1	03/04/2016

BOIL0647-004 01/01/2013

	Rates	Fringes
BOILERMAKER.....	\$ 32.40	25.37

CARP0361-020 05/01/2015		

ST LOUIS COUNTY (Southern 1/3 including Cotton, Floodwood, Fond Du Lac, and Proctor)

	Rates	Fringes
CARPENTER (Including Form Work).....	\$ 34.11	17.08

CARP0361-021 05/01/2015		

ST LOUIS (Duluth)

	Rates	Fringes
CARPENTER (Including Form Work).....	\$ 34.11	17.08

CARP0606-010 05/01/2015		

ST LOUIS COUNTY (Northeast 2/3 including Cook, Cusson, Ely; and Western part including Chisholm, Greaney, and Orr)

	Rates	Fringes
CARPENTER (Including Form Work).....	\$ 34.11	17.08

* ELEC0242-012 05/31/2015		

ST. LOUIS (South part bounded on the north by the north line of Kelsey Township extended east & west)

	Rates	Fringes
ELECTRICIAN.....	\$ 33.90	24.47

ELEC0294-006 05/31/2015		

ST. LOUIS (North part bounded on the south by the south line of

Ellsburg Township, extended east & west)

	Rates	Fringes
ELECTRICIAN.....	\$ 34.68	61.54%

ENGI0049-064 05/01/2015		

	Rates	Fringes
OPERATOR: Power Equipment		
Group 2.....	\$ 33.78	17.90
Group 3.....	\$ 33.23	17.90
Group 4.....	\$ 32.93	17.90
Group 5.....	\$ 29.89	17.90
Group 6.....	\$ 28.68	17.90

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 2: Crane with over 135' Boom, excluding jib; Dragline & Hydraulic Backhoe with shovel-type controls, 3 cubic yards and over; Grader/Blade finishing earthwork and bituminous.

GROUP 3: Dragline & Hydraulic Backhoe with shovel-type controls up to 3 cubic yards; Loader 5 cu yd and over; Mechanic; Tandem Scraper; Truck Crane; Crawler Crane

GROUP 4: Bituminous Roller 8 tons & over; Crusher/Crushing Plant; Drill Rig; Elevating Grader; Loader over 1 cu yd; Grader; Pump; Scraper up; to 32 cu yd; Farm Tractor with Backhoe attachment; Skid Steer Loader over 1 cu yd with Backhoe attachment; Bulldozer over 50 hp.

GROUP 5: Bituminous Roller under 8 tons; Bituminous Rubber Tire Roller; Loader up to 1 cu yd; Bulldozer 50 hp or less.

GROUP 6: Oiler; Self-Propelled Vibrating Packer 35 hp and over.

CRANE OVER 135' BOOM, EXCLUDING JIB - \$.25 PREMIUM;
CRANE OVER 200' BOOM, EXCLUDING JIB - \$.50 PREMIUM

UNDERGROUND WORK:
UNNELS, SHAFTS, ETC. - \$.25 PREMIUM
UNDER AIR PRESSURE - \$.50 PREMIUM

HAZARDOUS WASTE PROJECTS (PPE Required):
LEVEL A - \$1.25 PREMIUM
LEVEL B - \$.90 PREMIUM
LEVEL C - \$.60 PREMIUM

IRON0512-028 05/01/2015

	Rates	Fringes
IRONWORKER, STRUCTURAL AND REINFORCING.....	\$ 31.04	23.45

LABO1091-006 05/01/2014		

ST LOUIS (South of T. 55 N)

	Rates	Fringes
LABORERS		
(1) Common or General.....	\$ 26.97	16.21
(2) Mason Tender		
Cement/Concrete.....	\$ 27.17	16.21
(6) Pipe Layer.....	\$ 29.47	16.21

LABO1091-007 05/01/2014		

SOUTHERN ST. LOUIS COUNTY

	Rates	Fringes
LABORER		
Common or General (Natural		

(weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

=====

END OF GENERAL DECISION

PROJECT LABOR AGREEMENT

NO STRIKE, NO LOCKOUT

PUBLIC SECTOR

CITY OF DULUTH

&

Vendor

Project name

Project No.

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AGREEMENT

This Project Labor Agreement (hereinafter, the “Agreement”), effective as of the date of attestation by the City Clerk, by and between the various contractors engaged in the construction of facilities to be known as the (Project). The parties to this Agreement are the Building and Construction Trades Council, on behalf of its affiliated Local Unions (hereinafter “Union” or “Unions”), the City of Duluth (hereinafter “Owner”) and Contractor (hereinafter “Construction Manager/General Manager,” “Contractor,” and “Contractors”).

It is understood by the parties to this Agreement that it is the policy of the Owner that the construction work covered by this Agreement shall be contracted to Contractors who agree to be bound by the terms of this Agreement. Therefore, the Union agrees that other Contractors may execute the Agreement for the purpose of covering that work. The Construction Manager/General Contractor shall monitor compliance with this Agreement by all Contractors who through their execution of this Agreement, together with their subcontractors, have become bound hereto.

The term “Contractor” shall include all Contractors and subcontractors of whatever tier engaged in on-site construction work within the scope of this Agreement.

The Union and all signatory Contractors agree to abide by the terms and conditions contained in this Agreement with respect to the administration of the Agreement by the Owner and the performance of the construction by the Contractor of the Project. This Agreement represents the complete understanding of the parties, and it is further understood that no Contractor party is required to sign any other agreement as a condition of performing work within the scope of this Agreement. No practice, understanding or agreement between a Contractor and a Union party which is not explicitly set forth in this Agreement shall be binding on any other party unless endorsed in writing by the Project Contractor.

ARTICLE I - PURPOSE

The (Project), an undertaking of the Owner, is a public project which will employ numbers of skilled and unskilled workers. Construction of the Project will entail utilization of the construction industry in an area having multiple labor contracts and employer associations. Consequently, conflicts within labor-management relations could cause delay or disruption of the efficient completion of the .project unless maximum cooperation of all segments of the construction industry is obtained. This Agreement is to establish as the minimum standards on the Project the hours and working conditions as those prevailing for the largest number of workers engaged in the same classes of work within the area.

It is in the public interest that the Project progress and be completed in an expeditious and efficient manner, free of disruption or delay of any kind. Therefore, it is essential to secure optimum productivity and to eliminate any delays in the work. In recognition of the special needs of this Project and to maintain a spirit of harmony, labor-management peace and stability during the term of this Project Labor Agreement, the parties agree to establish effective and binding methods for the settlement of all misunderstandings, disputes or grievances which may arise. Therefore, the Unions agree not to engage in any strike, slowdown or interruption of work and the Contractor agrees not to engage in any lockout.

ARTICLE II - SCOPE OF THE AGREEMENT

Section 1. This Agreement, hereinafter designated as the “Project Labor Agreement” or “Agreement,” shall apply and is limited to all construction work included in all Bid Categories for the (Project), under the direction of the signatory Contractors and performed by those Contractor(s) of whatever tier which have contracts awarded for such work on and after the effective date of this Agreement with regard to the Project.

Such Project is generally described as the construction of: **Project**

Section 2. It is agreed that all direct subcontractors of a Contractor, of whatever tier, who have been awarded contracts for work covered by this Agreement on or after the effective date of this Agreement shall be required to accept and be bound by the terms and conditions of the Project Labor Agreement.

Section 3. The provisions of this Project Labor Agreement shall apply to all craft employees represented by any Union listed in Schedule A hereto attached and shall not apply to other field personnel or managerial or supervisory employees as defined by the National Labor Relations Act.

Section 4. All employees covered by this Agreement shall be classified in accordance with work performed and paid the base hourly wage rates for those classifications as specified in the attached Schedule A.

Section 5. The Contractors agree to pay contributions to the established employee benefit funds in the amounts designated in the appropriate Schedule A.

Contractors that are not signatory to a collective bargaining agreement beyond the scope of this Agreement (“PLA contractor”) may select to participate in the legally established industry health reimbursement arrangement (“HRA”) plan, in lieu of contributing to the respective bona fide benefit funds as designated in Schedule A. The amount of the contribution is based on the difference between the contribution amount of the bona fide Schedule A benefit funds and the cost of the PLA contractor's bona fide non-discretionary plans. Contributions must be made on behalf of named employees. Participating contractors will submit to the Trustees of the HRA trust and plan a copy of their plan, summary plan description, and the premium structure for workers covered under the PLA contractor's bona fide, non-discretionary plans. The value of the PLA contractor's benefit plans are subject to confirmation by the Trustees of the HRA trust and plan. This may include an independent audit according to a policy as established by the Trustees. Contractors are required to submit certified payroll reports to the Trustees or authorized administrator in order to confirm compliance with the terms of the HRA trust and plan.

The Contractors adopt and agree to be bound by the written terms of the legally-established Trust Agreements (or in lieu thereof, the aforementioned HRA plan and trust including any policies) specifying the detailed basis on which payments are to be made into, and benefits paid out of, such Trust Funds. The Contractors authorize the parties to such Trust Agreements to appoint trustees and successor trustees to administer the Trust funds and hereby ratify and accept the Trustees so appointed as if made by the Contractors.

Section 6. In the event of any conflict between any provisions of this Agreement and in the Local Area Agreements, the terms of this Agreement will be applied. In other words, where a subject covered by the provisions of this Project Labor Agreement is also covered by the Local Area Agreement the provisions of this Project Labor Agreement shall prevail. Where a subject is covered by the Local Area Agreement and not covered by this Project Labor Agreement, the Local Area Agreement provisions shall prevail.

Section 7. This Agreement shall only be binding on the signatory parties hereto and shall not apply to the parents, affiliates, subsidiaries, or other ventures of any such party.

Section 8. This Agreement shall be limited to work historically recognized as construction work. Nothing contained herein shall be construed to prohibit, restrict, or interfere with the performance of any other operation, work or function which may occur in or around the Project site or be associated with the development of the Project, or with the ongoing operations of the Owner.

Section 9. It is understood that the liability of any Contractor and the liability of the separate Unions under this Agreement shall be several and not joint. The Union agrees that this Agreement does not have the effect of creating any joint employment status between or among Owner and any Contractor.

Section 10. All workers delivering fill, sand, gravel, crushed rock, transit/concrete mix, asphalt or other similar materials and all workers removing any materials from the construction site as required by the specifications are subject to the provisions of the Minnesota state

prevailing wage law and are entitled to the appropriate area standard wage. For purposes of this contract, such materials are for specified future use and per Minnesota state prevailing wage law delivery and pickup of the above-listed materials constitutes incorporation.

ARTICLE III - UNION RECOGNITION AND REPRESENTATION

Section 1. The Contractor recognizes the Union as the sole and exclusive bargaining representative of all craft employees working on facilities within the scope of this Agreement.

Section 2. Authorized representatives of the Union shall have access to the Project, provided they do not interfere with the work of employees and further provided that such representatives fully comply with the posted visitor and security and safety rules of the Project.

ARTICLE IV - LABOR HARMONY CLAUSE

The contractor shall furnish labor that can work in harmony with all other elements of labor employed on that (Project) and shall submit a labor harmony plan to demonstrate how this will be done. "Harmony" shall include the provision of labor that will not, either directly or indirectly, cause or give rise to any work disruptions, slow downs, picketing, stoppages, or any violence or harm to any person or property while performing any work, or activities incidental thereto at the (project). The labor harmony plan should include the company's labor management policies, collective bargaining agreements if any and their expiration dates, past labor relations history, a listing of activities anticipated under this contract that may potentially cause friction with on-site workers, and procedures the company will undertake to eliminate this friction.

The contractor agrees that it shall require every lower-tier subcontractor to provide labor that will work in harmony with all other elements of labor employed in the work, and will include the provisions contained in the paragraph above, in every lower-tier subcontract let for work under this contract.

The requirement to provide labor that can work in harmony with all other elements of labor employed in the work throughout the contract performance is a material element of this contract. Failure by the contractor or any of its lower tier subcontractors to comply with this requirement shall be deemed a material breach of the contract which will subject the contractor to all rights and remedies the city of Duluth may have, including without limitation the right to terminate the contract.

ARTICLE V - WORK STOPPAGES AND LOCKOUTS

Section 1. There shall be no strike, picketing, work stoppages, slowdowns or other disruptive, activity for any reason by the Union or employees against any Contractor covered under this Agreement, and there shall be no lockout by the Contractor. Failure of any Union or employee to cross any picket line established by any union, signatory or non-signatory, or any other organization, at or in proximity to the Project site is a violation of this Article.

Section 2. Any party alleging a breach of Section 1, of Article IV shall have the right to petition a court for temporary and permanent injunctive relief. The moving party need not show the existence of irreparable harm, and shall be required to post bond only to secure payment of court costs and attorney fees as may be awarded by the court.

ARTICLE VI - DISPUTES AND GRIEVANCES

Section 1. This Agreement is intended to provide close cooperation between management and labor. The Construction Manager/General Contractor and the Building and Construction Trades Council shall each assign a representative to this Project for the purpose of assisting the Local Unions, together with the Contractor, to complete the construction of the Project economically, efficiently, continuously and without interruption, delays or work stoppages.

Each Contractor shall hold a pre-job conference with the Union and Construction Manager/General Contractor to clear up any project question and work assignments in which there is thought to be a difference in opinion. Every effort will be made to hold such conference well in advance of actual work performance.

Section 2. The Contractor, Union, and employees collectively and individually, realize the importance to all parties to maintain continuous and uninterrupted performance of the work of the Project, and agree to resolve disputes over grievances in accordance with the arbitration provisions set forth in the Local Area Agreements in effect with the Unions listed in Schedule A attached hereto.

ARTICLE VII - JURISDICTIONAL DISPUTES

Section 1. There will be no strikes, work stoppages, slowdowns, or other disruptive activity arising out of any jurisdictional dispute. Pending the resolution of the dispute, the work shall continue uninterrupted as assigned by the Contractor.

Section 2. Building construction work shall be assigned by the Contractor in accordance with the procedural rules of the Plan for the Settlement of Jurisdictional Disputes in the Construction Industry (hereinafter the "Plan"). Any jurisdictional dispute over the Contractor's assignment of work shall be settled in accordance with the provisions of the Plan.

Section 3. Where a jurisdictional dispute involves the International Brotherhood of Teamsters, it shall be referred for resolution to that International Union and the disputing International Union. The resolution of the dispute shall be reduced to writing, signed by the authorized representative of the International Unions and the Contractor. The assignments made by the Contractor shall be followed until such time as the dispute is resolved in accordance with this Section.

ARTICLE VIII - NO DISCRIMINATION

Section 1. The Contractor and Union agree that they will not discriminate against any employee or applicant for employment because of his or her membership or nonmembership in a Union or based upon race, color, religion, sex, national origin or age in any manner prohibited by law or regulation.

Section 2. Any complaints regarding application of the provisions of Section 1 should be brought to the immediate attention of the involved Contractor for consideration and resolution.

Section 3. The use of the masculine or feminine gender in this Agreement shall be construed as including both genders.

ARTICLE IX - SAVINGS AND SEPARABILITY

It is not the intention of the parties to violate any laws governing the subject matter of this Agreement. The parties hereto agree that in the event any provisions of the Agreement are finally held determined to be illegal or void as being in contravention of any applicable law, the remainder of the Agreement shall remain in full force and effect unless the part or parts so found to be void are wholly inseparable from the remaining portions of this Agreement. Further, the contractor and Union agree that if and when any and all provisions of this Agreement are finally held or determined to be illegal or void by Court of competent jurisdiction, the parties will promptly enter into negotiations concerning the substance affected by such decision for the purpose of achieving conformity with the requirements of an applicable law and the intent of the parties hereto.

ARTICLE X DURATION OF THE AGREEMENT

The Project Labor Agreement shall be effective as of the date of attestation by the City Clerk, and shall continue in effect for the duration of the Project construction work described in Article II hereof. Construction of any phase, portion, section or segment of the project shall be deemed complete when such phase, portion, section or segment has been turned over to the Owner and has received the final acceptance from the Owner's representative.

Since there are provisions herein for no strikes or lockouts in the event any changes are negotiated and implemented under a Local Area Agreement during the term of this Agreement, the Contractor agrees that, except as specified herein, such changes shall be recognized and shall apply retroactively to the termination date in the particular Local Agreement involved. Each Contractor which has a Local Agreement with a Union at the time that its contract at the project

commences shall continue it in effect with each said Union so long as the Contractor remains on the project. In the event any such Local Area Agreement expires, the Contractor shall abide by all of the terms of the expired Local Agreement until agreement is reached on a new Local Agreement, with any changes being subject to the provisions of this Agreement.

The Union agrees that there will be no strikes, work stoppages, sympathy actions, picketing, slowdowns or other disruptive activity affecting the Project by any Union involved in the negotiation of a Local Area Agreement nor shall there be any lockout on this Project affecting the Union during the course of such negotiations.

IN WITNESS WHEREOF the parties have entered into this Agreement to be effective as of the day and year above written.

DULUTH BUILDING AND
CONSTRUCTION TRADES COUNCIL

VENDOR

By: _____

By: _____

Its _____
(Printed Name/Title)

Its _____
(Printed Name/Title)

Date: _____

Date: _____

CITY OF DULUTH

By: _____
Mayor

Attest:

City Clerk

Date: _____

City Auditor

Date: _____

Assistant City Attorney

Date: _____

Duluth Traverse Phase IV

Special Provisions

SP-1.0 CONSTRUCTION SEASON

In Duluth snow cover typically persists from mid-April to mid-May. All construction that is awarded as part of this contract must be completed by November 1st 2016.

SP-2.0 REBID

The City of Duluth reserves the right to reject any or all bids.

SP-2.1 SITE VISITS

If the contractor wants to see the site they are to contact the Parks Project Coordinator Jim Shoberg jshoberg@duluthmn.gov (218) 730.4316 for a site visit and tour.

SP-2.2 SUBMITTAL CHECKLIST

Be sure to include both Bid Worksheets A and B, the 5% bid bond or check along with any City of Duluth required documentation as part of your submittal to City of Duluth Purchasing Office. It is the responsibility of the contractor to ensure they provide all required documentation and information necessary for a qualified bid.

SP-2.3 BID AWARD

Low bid will not be the only consideration for award.

SP-2.4 GOVERNING SPECIFICATION

Construction Specifications shall be the governing specification

SP-2.5 UNIT BIDS

Contractor must provide price for all units and trail types on bid sheet even if there is a zero quantity noted in the Bid Worksheet. Final quantities may be modified in the field, but unit prices are fixed. Failure to provide a unit bid price for any item will invalidate the bid for that project.

SP-2.6 MOBILIZATION

Contractor is only allowed one mobilization unit item.

SP-2.7 BOARDWALKS / TTFs

There are no permits necessary for the contractor to obtain for the construction of the Boardwalks/TTFs. All necessary permits will be in place by the start of construction. Boardwalks/TTFs are to be built and field fit following the designs in the plans and specifications. Contractor is to provide shop drawings or shop sketch of proposed boardwalk construction for approval by the Landscape Architect for a given segment of TTF boardwalk to verify compliance to construction documents. Upon completion of construction of Boardwalks/TTFs final approval of structures will be done by the Landscape Architect.

Pre-engineered TTF structures must be pre-approved by the Landscape Architect as an approved equal prior to submission of the bid.

SP-2.8 FLAGGING & FINAL DESIGN

See section 5.2 of the specifications for details on flagging and final design.

SP-2.9 TREAD HARDENING / TURF BLOCK PAVERS

Tread hardening using native stone will be implemented where native stone is available. Turf block pavers or approved equal product will be used when there is not any native stone available. Any alternative pre-manufactured armoring products that the contractor would like to use must be pre-approved by the Landscape Architect prior to them being accepted as an approved alternative product. If native stone cannot be found within the 50 foot trail corridor the Owner will approve in writing either; going outside the 50 foot corridor to gather rocks that are visible and easily collected

without significant disturbance, or approve use of turf block pavers or an approved equal product in place of the rock armoring.

SP-2.10 EQUIPMENT WIDTH

The contractor shall perform the required work using hand tools and/or small mechanized equipment that is a maximum of fifty inches (50") in width. Equipment with adjustable width tracks should be able to reduce track width to less than fifty inches (50").

SP-2.11 WET AREAS

Wet areas, drainages and swales are to be avoided in the field by the contractor and left undisturbed.

SP-2.12 WARRANTY PERIOD

The warranty period is one year from the date of acceptance by the Owner.

SP-2.13 TRAIL ACCESS POINTS

Directions to the flag lines and project locations can be found in Section 2 of the Specifications. Refer to the plan set for information on existing ATV trails and road locations that can provide access to the trail construction areas. Any damage caused by the contractors vehicles and/or equipment must be fully restored at the expense of the contractor. Vegetation that is disturbed on these existing trails must be reestablished to prevent erosion.

SCHEDULE “A”

- A1 Asbestos Workers Local 49
- A-2 Boilermakers Local 647
- A-3 BAC Local 1 Chapter 3 Duluth & Iron Range
- A-4 Carpenters Local 361
- A-5 Cements Masons/Plasterers Local 633
- A-6 Elevator Constructors Local 9
- A-7 IBEW Local 242
- A-8 Iron Workers Local 512
- A-9 Laborers Local 1091
- A-10 Millwrights & Machinery Erectors Local 1348
- A-11 Operating Engineers Local 49
- A-12 Painters & Allied Trades Local 106
- A-13 Plumbers & Fitters Local 11
- A-14 Roofers Local 96
- A-15 Sheet Metal Workers Local 10
- A-16 Sprinkler Fitters Local 669
- A-17 Teamsters Local 346



CONSTRUCTION SPECIFICATION

March 9, 2016

City of Duluth Parks Project #: 03-2016

City of Duluth Bid Number: 16-0278

Duluth Traverse Trail Phase IV – Sargent Creek & Mission Creek
Trail Centers

CITY OF DULUTH
Parks & Recreation Division
411 West First Street
Ground Floor City Hall
Duluth, Minnesota 55802
(218)730-4300

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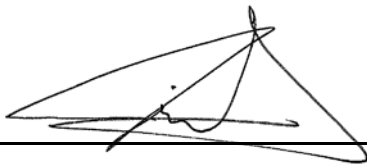
1.0 Certification

DATE: MARCH 9, 2016

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

NAME

REGISTRATION NUMBER

A handwritten signature in black ink, appearing to read 'James M. Shoberg', is written over a horizontal line.

JAMES M. SHOBERG, LANDSCAPE ARCHITECT

45577

SECTION 1: PROJECT DESCRIPTION AND SCOPE

1.1 General Project Description

The City of Duluth, Minnesota (herein referred to as “Owner”) is seeking a contractor to provide an experienced trail crew to construct approximately ±9.7 miles of new mountain bike-specific natural surface singletrack trails on public lands in Mission Creek Park located in Duluth, MN. This is Phase 4 of a multi-year project that seeks to create upwards of 100 miles of singletrack. Duluth, MN is situated at the western most point of the Great Lakes on the north shore of Lake Superior.

The surrounding city park lands demand a high standard-of-care during construction activities due to steep topography and erosive soils with proximity to trout streams. The National Cooperative Soil Survey <http://websoilsurvey.sc.egov.usda.gov/> identifies typical soil profiles within the project boundary as a combination of sandy loam, silt loam and loamy fine sand to clay loam and clay. A low occurrence of rock cobble mixed in with the soil was observed during earlier construction phases in the same area. Refer to the soil survey website for more information.

The contractor will be responsible for implementing and maintaining the Stormwater Pollution Prevention Plan (SWPPP) supplied by the Owner.

The trail alignment corridor has been flagged by COGGS for the Owner. The flag line represents the center line of a 50 foot wide corridor. As part of this project the contractor is responsible for final field alignment and design and must remain within 25 feet on either side of the corridor flag line. It is also the responsibility of the contractor to remain 50’ away from private property where possible as depicted in the plan. If there is a need to go outside the corridor or get closer than 50’ to a private property the contractor must receive written Owner approval.

The area is front country, with many areas of mobile phone coverage, and is located less than one hour from emergency medical service.

1.2 Mountain Bike-Specific Singletrack

It cannot be more strongly emphasized that this project is for purpose-built mountain bike natural surface singletrack trail. Desired characteristics include: cambered trail surfaces, insloped turns, aggressively rolling terrain, incorporation of native rock features, and seamless transitions between trail types. Trail features and flow should *progress* as a user gets deeper into the system; larger, tighter, more narrow examples of similar elements moving from “green” (easier) to “blue” (more difficult) to “black” (most difficult) areas. Along segments intended for more skilled trail users, optional lines available only to more-skilled riders are highly desirable.

In partnership with the Owner, the contractor will be expected to maximize the potential of the landscape hosting the trail corridors. Creativity is encouraged. A portfolio of previous mountain bike-focused work will be heavily weighted in the selection process.

1.3 Project Scope

To satisfy funding requirements for the project, the work outlined in this document shall be completed by November 1st 2016.

Overall, the project's scope of work includes up to approximately ±9.7 gross miles of new trail construction including: berms, switchberms, technical trail feature (TTF) boardwalks, rock armoring and bridges. The Storm Water Pollution Prevention Plan (SWPPP) outlines general construction information and best management practices (BMPs) as they apply to the trail project construction activities.

This project is funded by a grant from the Federal Recreational Trails Grant Program, the State Regional Trails Program, the City of Duluth Tourism Tax as well as private funding from the local mountain bike club Cyclist of Gitchee Gumees Shores (COGGS).

1.4 Additions and Deletions

No extras or additional work outside of the construction documents will be allowed or paid for unless such extras or additional work are ordered in writing by the Owner, and the price fixed and agreed upon before such work is performed. The Owner will not accept any overruns nor will it pay any quantities beyond those specified.

The Owner shall have the right, without invalidating the contract, to make additions to or deductions from the work defined in this document, and in case such deductions or additions are made, an equitable adjustment of the addition to or deduction in cost shall be made between the Owner and the contractor, but must be agreed to in writing.

1.5 Discrepancies

Should the contractor discover discrepancies in this document, the plans or specification, the matter shall at once be brought to the attention of Purchasing at purchasing@duluthmn.gov. The discrepancies will be addressed via addendum to all interested bidders. Bid tabulation sheets' quantities take precedence over quantity discrepancies in the specifications or plans.

SECTION 2: PROJECT LOCATION MAP



2.1 Project Location Descriptions

Primary site access and parking area for the Sargent Creek Trail Center is Old Mission Creek Parkway, an old road turned snowmobile trail, off of Becks Road. The area where the Parkway intersects with Becks Road has a wide gravel shoulder area within the right of way of the Old Mission Creek Parkway. The flag line for the Sargent Creek Trail center starts ¼ mile down the snowmobile trail.

Staging & Laydown Area GPS Coordinates

GPS Coordinates: 46°41'31.72" N and 92°16'26.54" W

Primary site access and parking area for the Mission Creek Trail Center is off of State Highway 210. There are several areas for parking and staging with a wide gravel shoulder along the road. Chamber's Grove Park will be closed and under construction.

Staging & Laydown Area GPS Coordinates

GPS Coordinates: 46°40'15.54" N and 92°16'59.60" W

SECTION 3: PROJECT DETAILS

Below are brief project descriptions and important project details.

3.1 Sargent Creek Trail – Project #1 – Base Bid

Description: [Blue Traditional Two Way]. This trail is part of the Sargent Creek Trail Center and this cluster is envisioned and laid out to give riders an authentic deep woods backcountry experience. This trail is to be traditional narrower singletrack trail with modest bike optimized features.

Specifically longer more natural feeling grade reversals and broader more sweeping flowing turns that blend seamlessly into the surrounding terrain are the goal of this trail. This build is in contrast to the trails on the other side of Mission Creek that are heavily shaped and bike optimization including exaggerated berms, rollers and grade reversals.

There are multiple seasonal ATV trails that intersect this segment of trail that can be used as temporary access from the main trails with primary access off of Old Mission Creek Parkway. Two smaller landslide areas found at the start of this trail alignment will require additional erosion control measures to ensure a sustainable build through them.

Length: Estimated $\pm 21,691$ LF, ± 4.1 MI

3.2 East Loop – Project #2 – Base Bid

Description: [Black Traditional Two Way]. This trail is part of the Sargent Creek Trail Center and this cluster is envisioned and laid out to give riders an authentic deep woods backcountry experience. This trail is to be traditional narrower singletrack trail with modest bike optimized features.

This project is the only one in the cluster where there is the presence of rock of various sizes found at the surface. Where possible these rocks are to be exploited to make this trail as difficult as possible but still maintain a trail that sits naturally in the landscape.

In addition to the rocks this trail is mostly on a modestly steep side slope and affords tighter turns and technical trail features due to varying topography. This build is in contrast to the trails on the other side of Mission Creek that are heavily shaped and bike optimization including exaggerated berms, rollers and grade reversals.

The primary access to this trail is the Sargent Creek Trail at the top of the hill.

Length: Estimated $\pm 5,394$ LF, ± 1.0 MI

3.3 Valley East Trail – Project #3 – Base Bid

Description: [Blue Traditional Two Way]. This trail is part of the Sargent Creek Trail Center and this cluster is envisioned and laid out to give riders an authentic deep woods backcountry experience. This trail is to be traditional narrower singletrack trail with modest bike optimized features.

Specifically longer more natural feeling grade reversals and broader more sweeping flowing turns that blend seamlessly into the surrounding terrain are the goal of this trail. This build is in contrast to the trails on the other side of Mission Creek that are heavily shaped and bike optimization including exaggerated berms, rollers and grade reversals.

The primary access to this trail is the Sargent Creek Trail at the top of the hill or Old Mission Creek Parkway at the bottom. This trail alignment is predominately a downhill section with sweeping switchbacks and steeper terrain. There are a few landslides in the area but the flag line avoids them so they will likely not come into play.

Length: Estimated $\pm 6,429$ LF, ± 1.2 MI

3.4 Parkway Trail – Project #4 – Base Bid

Description: [Green Traditional Two Way]. This section of trail will be part of the “Duluth Traverse Connector Trail” that traverses the entire city. It is within the Sargent Creek Trail Center but does not follow the design or build character as laid out above. This trail parallels an existing snowmobile trail and the Old Mission Creek Parkway Trail.

Unlike the aforementioned trail segments this trail is to be a flow trail and match the character and build of the Duluth Traverse Trail that has already been constructed in Mission Creek Park and other locations across town such as the Lester River and Enger Park Trails.

Length: Estimated $\pm 2,753$ LF, ± 0.5 Miles

3.5 Ski Jump Loop – Project #5 – Alternate #1

Description: [Blue Flow Trail (Bump Pump) Two Way]. This trail is to be a full on flow trail with exaggerated features such as berms and grade reversals. Specific values on these features are enumerated in the “Trail Specifications Matrix” included along with the definition of project units.

Length: Estimated $\pm 5,297$ LF, ± 1.0 Miles

3.6 Ski Jump Connector – Project #6 – Alternate #2

Description: [Black Traditional Two Way]. This trail follows the historic cat track road of the Fond-du-lac ski jump then cascades down a steep slope to the river valley below. We want this trail to exhibit flow features similar to that in the rest of the Mission Creek Trail Center. This trail is also an important hiking connection so the idea of sight lines with two way *multi-use* traffic must be considered in this build.

There are a few landslides in the area but the flag line avoids them so they will likely not come into play.

Length: Estimated $\pm 3,697$ LF, ± 0.7 Miles

3.7 Saint Louis River Trail – Project #7 – Alternate #3

[Green Traditional Two Way]. This section of trail will act as the primary artery into the trail system from the western end of town and will be part of the “Duluth Traverse Connector Trail” that traverses the entire city along the ridge line. It parallels the Saint Louis River and follows an abandoned railroad grade.

Landslides are frequent with exact quantities enumerated in bid Worksheet B. Trail through these zones are to be stabilized with erosion control best practices. The contractor is not responsible for areas of trail that fail due to ongoing movement in the existing landslides. A landslide would be considered an “*act of nature*” and not included in the one-year warranty.

Length: Estimated $\pm 2,635$ LF, ± 0.5 Miles

3.8 Upper Saint Louis River Trail – Project #8 – Alternate #4

[Green Traditional Two Way]. This section of trail will act as the primary artery into the trail system from the western end of town and will be part of the “Duluth Traverse Connector Trail” that traverses the entire city along the ridge line. It starts at the Saint Louis River and climbs the hill toward Highway 210.

This zone unlike the Saint Louis River Trail only has a small landslide at the upper end of the flag line that will require additional erosion control measures to ensure a sustainable build though it.

Length: Estimated $\pm 3,893$ LF, ± 0.7 Miles

SECTION 4: FINISHED TRAIL CONSTRUCTION AND MAINTENANCE GUIDELINES

4.1 Trail Design

Design of any new segments or reroutes must be guided by the sustainable trail principles published by accepted resources such as the current editions of the *Trail Solutions*; *IMBA's Guide to Building Sweet Singletrack*; *Managing Mountain Biking*; *IMBA's Guide to Providing Great Riding*; the USDA's *Trail Construction and Maintenance Notebook* and the *Minnesota Department of Natural Resources' Trail Planning, Design, and Development Guidelines*.

4.2 Bike-Specific Trail Flow

All trails constructed as part of this project shall be natural surface singletrack trail that is purpose-built for mountain bicyclists, sometimes described as *flow trails*. A subset of the larger family of rolling contour trails, flow trails share the following basic characteristics:

- *Synergy with the landscape*: Making the most of what the natural terrain provides by using the trail to explore the topography and features (rocks, trees, waterways) present. Some describe a trail with good flow as one that has been revealed in the landscape, not so much as constructed.
- *Opposition to user forces*: Flow trails maximize the efficiencies afforded by using a bicycle, and are designed to counteract forces that direct a user off the trail. Bermed turns and cambered tread surfaces, for example, promote traction, safety, sustainability, and enjoyment.
- *Conservation of momentum*: The ideal trail avoids “flow killers” such as sharp turns, incongruent features, and disjointed climbs and descents. Instead, it utilizes undulations and cambered turns to reward smooth, deliberate riding and maximizes forward motion. A flow trail encourages a better understanding of the bicyclist/bicycle interface, allowing riders to reach that unique sensation of floating through the landscape.
- *Leading the user forward*: A sense of discovery, combined with a design that maximizes a rider's forward momentum, helps to draw the user forward. The trail is never repetitive or predictable, nor is it “awkward”, with variety and innovation combining to create an intuitive feel.

4.3 Trail Specifications

The trail system is composed of a number of loops and segments design, constructed, and maintained to a defined trail specification as outlined in the “Trail Specification Matrix”. Making use of a range of different specifications results in a *complete* trail system when creating the overall trail system masterplan. This method appeals to a wider range of users, with different fitness, technical proficiency, or preferred modality. It is important that individual segments and loop maintain consistent specification over their length to ensure visitors have the experience they expect.

A project-specific “Trail Specification Matrix” is included along with the definition of project units.

4.4 Erosion and Sedimentation Control

Management of erosion and sediment on this project is defined in the provided Storm Water Pollution Prevention Plan (SWPPP). All construction activities must conform to the requirements of the SWPPP. Any inconsistencies created by the construction specifications do not excuse the contractor violating the procedures and requirements laid out in the SWPPP.

No excavation or fill is permitted in wetlands. Wetlands will not be marked in the field. It is the responsibility of the contractor to consult with Owner prior to doing any work within suspected wetlands areas. The Owner will be responsible for identifying suspected wetlands.

4.5 Trail Construction Best Practices

To satisfy erosion and sediment control requirements, trail must be finished as the project advances. Any roughed-in corridors not being worked for 7 days must be completed trail to reduce the exposure of non-compacted tread to moisture. Any segments requiring delayed finishing must be approved in advance by the Owner. Any disturbed areas not part of active tread must be stabilized within 7 days of not being worked with native duff from within the trail corridor or erosion control blanket and seed as defined in the SWPPP. Wood chips created from the slash as a result of the trail corridor clearing are an acceptable mulch alternative to weed free straw.

4.6 Corridor Clearing

Corridor clearing shall be confined to within four (4) feet of trail and backslope edges. Specific values are identified in the “Trail Specifications Matrix” included with the definition of project units.

4.7 Debris

Cut and scatter all branches, roots and brush to a maximum height of eighteen inches (18”) above grade. No debris shall be left within ten feet (10’) of trail. Butt-ends of any sawed limbs must face away from trail. Cut brush and slash must be disposed of in an upland location and must be kept out of streams, gullies, swales, low areas, and suspected wetlands.

4.8 Tread

All tread should be constructed as full bench whenever possible. If fill is required, it should be supported by a stone retaining wall.

Specific tread widths are based on their difficulty rating and are specified in the “Trail Specifications Matrix” included along with the definition of project units. Narrower gateways through natural obstacles (trees, rock outcrops) are encouraged. Tread widths in areas of dynamic flow, jump landings, and insloped turns, for example, may be wider to accommodate the full range of riding experiences. Significant deviations from these examples require prior written approval from the Owner.

4.9 Trees

These trails are to be built with minimal impact to the over story trees and the surrounding forest. Only brush and small trees should be removed from the trail corridor. Trees larger than 4" DBH require permission from the Owner before they are removed. Removal of healthy trees approaching this size should be avoided and only done when there is not a better option. Dead, dying, and rotted trees can be removed to open up the trail corridor as necessary for grading or if they present a clear hazard to trail builders or trail users.

4.10 Rocks

Maximum size rock material to be left in trail is based on the difficulty rating and defined in the "Trail Specification Matrix". Specific values are enumerated in the "Trail Specifications Matrix" including definition of project units.

Rocks that are unearthed during grading shall be used as anchors or built into trail features and stabilized not more than five feet (5') away from the trail-edge. It is not permitted to allow rocks to roll down the slope. The trail will be routed around or over rocks and fractured stones that cannot be moved with the approved equipment.

These requirements do not apply in areas where rocky tread is integral to the flow goals of a specific segment (e.g., technical rock gardens, slabs that provide jump or "kicker" opportunities). Exceptions also apply in boulder fields or where only a portion of the tread is obstructed. All rock embedded in the trail surface should be stable. When used in structures, care will be taken to match rock to the immediate surroundings; grain patterns, lichen growth, etc. Excess tool marks on rocks shall be avoided as much as possible. Non-native rock may not be imported into a work area without approval of Owner.

4.11 Woody Material

Woody material such as stumps, logs, roots and brush shall be removed from the trail tread. No stumps less than twelve inches (12") in diameter shall be left within four feet (4') of the trail tread. Wood chips created from the slash as a result of the trail corridor clearing are an acceptable mulch alternative to weed free straw. Contractor may ONLY chip woody material that was created as a result of the corridor clearing.

4.12 Fall Zone Clearing

Areas adjacent to dynamic trail segments where visitors have a greater potential to exit the immediate trail corridor will be cleared of impact focusers; butt-end branches, stumps, and rocks under six-inch (6") diameter.

4.13 Backslope

Backslope of trail should be graded to three-to-one (3:1) slope or until it matches the existing slope. In areas where the backslope has the potential to become part of the active tread it must be finished to trail tread specifications.

4.14 Trail, Finished Condition

Hand finish and grading of trail tread, backslope, down slope spoils, and drainage features shall leave a surface that matches the texture of the surrounding forest floor while enabling water to drain off the trail.

4.15 Spoils Stabilization

All excavated materials not used in the trail tread or other constructed trail features must be stabilized within seven (7) days of not being worked. Spoils should be distributed in a thin layer adjacent to the trail tread not more than 4" in depth. Care should be taken to avoid placing spoils in drainages, swales or wetlands. When possible, spoils should be mulched with native materials to discourage erosion while native seed stocks reestablish. In areas without adequate native duff mulch, wood chip mulch may be substituted along with the approved seed mix per the attached seed mix exhibit. In certain circumstances, installation of formal erosion control measures may be required. Estimated quantities of the necessary erosion control measures are enumerated in the bid worksheets and will be paid out per the unit bid price. Any erosion control measures that are in excess of the estimated quantities must be approved by the Owner prior to installation.

4.16 Turns

A turn is defined as a change-of-direction that turns more than 90 degrees across the local landscape. All turns are to be bike optimized insloped turns. Turns that exceed 12" of insloped tread height above the surrounding landscape are defined as constructed features. The bid worksheet identifies constructed turns as either insloped switchbacks also known as switchberms or an insloped bermed turn or berm. If conditions warrant, a traditional rolling crown switchback may be substituted for a switchberm with prior written approval from the Owner. Insloped turns that are less than 12" in height above the surrounding landscape are included in the contractors unit bid price for all trail construction types.

Insloped and off camber tread necessary for trail flow that are less than a 90 degree change in direction are not turns and are included in the contractors unit bid price for all trail construction types.

Acceptable values for turn radius, camber and turnpad grade are identified in the trail specifications. Turns should be constructed to have good flow for wheeled trail users. All turns must include an entrance and exit rolling grade dip. Building through uneven grades, flat areas and undulations local to a specific turn is included in the contractor's unit bid price.

Turns that are less than 12" in insloped height are included in the contractors unit bid price for all trail types. Berms and switchberms that are over 12" in height are quantified in "Bid Worksheet B".

If it is determined in the field that additional turns or an alternative type of turn is necessary than what was specified in the plans, the contractor must request written approval from the Owner prior to construction.

See 5.9 Berm (figure 10) and 5.10 Switchberm (figure 11) for unit turn types.

4.17 Brollers (Bermed Rollers)

A broller is defined as tilted tread surface that is insloped or off camber in excess of the standard tread out slope of 5%. Brollers do not result in a change of direction across the landscape and do not cross the fall line. Brollers are included in the unit bid price for all trail construction types and are not considered berms or turns.

4.18 Grade Reversals

A designed grade reversal or constructed rolling grade dip should occur at least every one hundred feet (100') and preferably more frequently. Any grade reversal must be strongly anchored to discourage short cutting.

In mountain bike-specific trails, grade reversals also double as flow elements, such as rollers, jumps, and pump/rhythm sections. In this context grade reversal shape, size, and placement should reflect the specifications for its location within the system. Specific details will be determined by the contractor in partnership with the Owner.

4.19 Above-Grade Earthen Structures

Any portion of trail rising above the grade of its surroundings must be composed of mineral soil. If soil is scarce, a rock core may be used so long as it provides less than fifty percent (50%) of the total volume of the structure. Use of organic materials, duff, woody materials, etc., is absolutely prohibited.

Fill structures must have a fill slope of at least the angle of repose of the local soil. A retaining wall may be substituted for a fill slope with permission of the Owner. Fill structures must be completely stabilized and compacted in no greater than six-inch (6") lifts. Acceptable techniques include track-packing or compaction via a dedicated tamping unit. Hand tamping is not acceptable. Raw soil faces that do not become tread must be mulched and seeded in the same fashion as spoils and satisfy the terms of the project SWPPP.

Examples of above-grade earthen structures include aggressive grade reversals ("rollers", "brollers", "jumps"), berms, switchberms and turn pads on insloped switchbacks.

4.20 Water Diversions

All tread should be out-sloped at five percent (5%). When not possible or desirable due to purpose-built in-sloping, resource concerns, or obstructions, water can be directed down the trail for up to fifty feet (50') before a water diversion location.

4.21 Invasive Species

To reduce the spread of invasive plant species all hand tools and mechanized equipment should be free of invasive seeds and clean of any dirt and mud when entering a project site. When transferring materials between distinct locations within the project site all tools and equipment must again be cleaned to discourage transport of invasives to the local landscape.

4.22 Filter Strips

Filter strips are vegetated areas downslope of the trail corridor intended to treat sheet flows coming off the tread. Filter strips function by slowing down flow velocities, filtering out sediments, and providing an opportunity for infiltration into the underlying soils. Properly mulched spoils may be designated as part of the filter strip. Filter strips shall not be used as regular travel-ways for equipment and materials. Areas with inadequate filter strip capacity above waterways may require installation of formal erosion control measures to satisfy erosion and sediment control plan requirements.

At all times, filter strip characteristics must satisfy the terms of the project Stormwater Pollution Prevention Plan (SWPPP).

4.23 Environmental and Historic Preservation

The corridors identified in the provided design have been vetted through an assessment process to ensure they respect sensitive environmental and historic areas. The construction shall avoid any disruption or dislocation of sensitive cultural resources found on the site unless expressly authorized in writing by the Owner. Any known sensitive cultural areas will be communicated to the contractor in writing before construction begins. In the event that previously unidentified historical artifacts are found during the construction process, trail construction must be immediately suspended in that area until it can be evaluated and a determination made on how to proceed. The Owner will need to make final determination on how to proceed around sensitive cultural resources after consulting with appropriate archeologist personnel. The trail may be rerouted around the sensitive area or special accommodations may be made such as boardwalk. The decision on how to proceed will depend on the type and sensitivity of the resource and the distance separating it from the planned trail.

4.24 Signage and Wayfinding

Installation of the map itself and other signage is the responsibility of the Owner and its partners. Signage and its installation will comply with all the requirements of the authorized governing unit. Construction documents, (figure 16) and maps will identify the signage requirements, locations, frequency, and physical design plus materials standards.

4.25 Mechanized Equipment Best Practices

All track marks will be raked smooth. Affected area will be finished to have a *nature shape*, e.g., spoils piles rounded, smoothed and cleared of significant brush, blade edges blended. A spill kit suitable for five gallons of fluid will be onsite and within 500 feet of mechanized equipment whenever equipment is being operated. Scarring of trees is to be avoided.

Machine service and fueling is not permitted within 500 feet of a wetland or drainage.

Machine access is restricted to the trail corridor. Separate access routes may only be created and used with prior written permission of the Owner. Any approved access route must be retired and reclaimed back to its original condition upon project completion.

SECTION 5: UNIT DEFINITIONS AND DETAIL DRAWINGS

Any accompanying figures are for illustrative purposes only and do not relieve contractor of the need to satisfy written requirements. All units may not be used in all projects. Additional units may be required. In this case, the Owner will establish their definition via a change order process and the contractor must request in writing additional units if the amount is not sufficient in the bid document prior to construction.

5.1 Trails Specifications (table 1)

A “Trail Specifications Matrix” provides the foundation for the possible trail styles and a starting point for their defining characteristics. Contractor should always start here, whether composing their bid or designing/constructing trail elements. The Owner understands that all trail, and especially bike-specific trail, is an art form strongly driven by local conditions and anticipates a collaborative effort between all parties involved.

Note that all types fit within the sustainable trail guidelines framework. While short specific grades may exceed typical suggested maximums, armoring is suggested in these cases. It is not acceptable to sacrifice “the half rule” or eliminate grade reversals to meet experience driven goals. When creating trails at these upper limits grade reversals are more important than ever.

A top-level summary of the various styles detailed in the matrix:

- *Traditional* – Typical shared-use natural surface singletrack as described in the standard trail texts. May include bike-specific elements, like in-sloped turns, berms, rollers, rollers, and jumps.
- *Bump and Pump* – Natural surface singletrack strongly influenced by pump tracks. Distinguishing feature is the high frequency of roller features. Proper shaping and spacing of rollers is critical, both to increase their utility as a method of propulsion and to match the intended speed and flow style of the segment. All turns are insloped. Tread surface is smoother than average. More difficult Bump and Pump segments may add smaller technical features and tread texture.
- *Jump* – A natural surface trail more focused on jump opportunities. Similar to Bump and Pump but with longer features less frequently placed. Tread is wider than average in recognition of the dynamic riding style likely on these segments. Corridor clearing limits are larger as well for similar reasons. Most Jump segments are directional.
- *Gravity* – An extremely technical downhill-specific trail. More difficult Gravity segments include mandatory drops in the tread. These segments may include structures to manufacture the desired experience when natural terrain is lacking. May include elements of Bump and Pump or Jump. Gravity trails are directional.

5.2 Trail Flagging

In this project, the centerline of a 50' wide trail corridor has been flagged by COGGS for the Owner. The plans and specifications are based on this trail corridor. Final trail design is the responsibility of the Contractor within this corridor.

Final trail design consists of a one-time 300 LF pin flagged trail segment flagged by the Contractor prior to the start of construction for each trail specification type. This project has two trail specification types, Traditional Green Bike Optimized Singletrack and Traditional Blue Bike Optimized Singletrack. Final design pin flagging must reside

within the approved corridor. This is to communicate design intent to the Owner for each trail specification type that is identified in the plans. Upon approval of the pin flagged segment by the Owner and verification that it meets the specification requirements the Contractor can proceed with project construction within the 50' corridor following the requirements of the specifications.

Corridor is marked with pink and/or orange hanging flags. Final trail design should be at least fifty feet (50') from property boundaries unless otherwise authorized by the Owner or identified in the plans.

Contractor shall mark with flagging tape all trees over six inches (6") DBH that are to be removed. Final determination on removal lies with the Owner.

The trail should have a grade reversal a minimum of every one-hundred feet (100'). Trail should follow a rolling contour alignment and abide by the Half Rule. Grades must match the trail type defined by the "Trail Specification Matrix" for a specific segment.

5.3 Trail Construction (figures 1 - 4)

Trail construction unit costs are a combination of trail specification and landscape type. For each project, the specification is constant. But as the landscape changes, different construction units apply, matching the local terrain. Trail construction unit types A, B, and C are identified in the plan set and on the bid worksheets.

Measurement and payment for trail construction is based on landscape averages as depicted in the plan set. Grading through localized uneven grades, flat areas and undulations is included in the contractor's unit bid price for all trail unit construction types.

Creation of typical trail features as enumerated in the specifications (ex. Rollers and Brollers) are included in the trail construction units.

Each linear foot unit shall satisfy the enumerated guidelines for the specification associated with the specific segment. Trail width guidelines apply to active tread only; backslope and any fill slopes are not included. Tread variance will satisfy the guidelines for its location in the system. Note the global design attempts to match trail specifications to the landscape most suited for that type. But in local landscapes where there is a mismatch, the contractor will be expected to modify the area to match the trail specification. Example is creating an easier "green" style trail through a locally rocky area. However in this specific project we are allowing "blue" construction through the rocky areas.

The trail corridor shall be cleared of all woody plants less than four inches (4") DBH. The extent of corridor clearing will meet the requirements for the specific trail type. Any stumps resulting from the clearing should be excavated and removed. Any woody debris not used in trail closure should be removed from sight of the trail or arranged to blend into the landscape.

Limb trimming will be done to open up the trail corridor as defined in specification for the specific segment. Limb trimming and pruning shall be completed using approved trimming techniques that comply with the guidelines for tree care operations from the American National Standards Institute (ANSI) contained in the ANSI A300 Pruning Standards and ANSI Z133.1-2000.

The trail tread shall consist of packed earth or rock. Any stumps and/or roots should be excavated and removed from the trail tread. Backslope dimensions are derived from

surrounding area such that they satisfy the earlier stated three-to-one (3:1) definition. Any stumps and/or roots in the backslope should be flush-cut. In areas where the backslope has the potential to become part of the active tread (ex. naturally formed in-slopes or berms) it must be finished to trail tread specifications.

The trail should contain frequent grade reversals. To encourage self-cleaning the grade of the drains at the bottom of the grade reversals must be at least fifteen percent (15%) and typically not greater than twenty-five percent (25%). If the drain grade exceeds twenty-five percent (25%) then installing Rock Rip-Rap (see Section 5 – Rock Rip-Rap) may be requested by the Owner in the bottom of the drain to prevent head-cutting. If grade reversals result in a fill slope, these slopes and the associated feature(s) will be finished to satisfy the above-grade earthen structure guidelines. Contractor is expected to create frequent grade reversal regardless of the local landscape, this is included in low sideslope Type A trail construction. This may require localized topography modification, borrow pits and raised tread when building through landscapes with low slope angles.

Any downslope spoils must be distributed such that no berm is present. When distributing, care shall be taken to match the local terrain. Spoils must be stabilized within seven (7) days of not being worked with a covering of forest duff. In areas with insufficient duff, sterile wood chips may be substituted for forest materials. Excess soil shall not be distributed into drainages, wetlands or adjacent to streams. Refer to the SWPPP for further details.

If borrow pits are created in the course of trail construction they will be finished to satisfy the requirements of the trail and its surroundings: slopes graded to the local angle of repose, stumps and roots trimmed, spoils stabilized and covered with forest duff. Borrow pit wall must be broken down to blend into the surrounding landscape slopes.

For billing purposes, trail construction is measured along the centerline of the tread.

5.4 Trail Types (figure 4.1)

Trail types are broken into three categories:

- Type "A" (Low Sideslope Trail) 3%-15% Sideslope
- Type "B" (Medium Sideslope Trail) 16%-60% Sideslope
- Type "C" (High Sideslope Trail Trail) 61%+ Sideslope

Measurement and payment for trail construction types is based on the slope averages found in the field.

Grading through low spots, flatter areas, earthen piles, landslides, miscellaneous debris and fallen woody material is included in the contractor's unit bid price for each trail construction type. Builder is expected to create frequent grade reversals regardless of the local landscape. This may require localized topography modification including but not limited to raised tread, borrow pits and sumps when building through landscape with low slope angles such as "Type A Trail".

Contractor cannot invoice for both trail construction and constructed features of a given linear foot of trail.

5.5 Armored Tread/Stone Pitching (figure 5)

Width of armored tread should be at least 1.5 times the width of the local trail specification to permit users to find their line as the trail matures, and at least two (2) times in areas where more variation is likely (e.g., jump landings, insloped turns).

Stone pitching must extend at least ten inches (10") deep with a minimum of two-thirds (2/3) of the rock buried below the surface of the surrounding grade. Stones should be stable and aligned perpendicular to the direction of travel. Each end of a pitched section shall be supported by larger "bookend" stones embedded in the ground. Stones used for armoring should be two inches (2") to twenty-four inches (24") thick and twelve inches (12") to forty-eight inches (48") wide. Voids shall be filled with compacted native soil, crushed rock, and/or crusher fines. Additional guide stones may be necessary along the edges of the trail if the final surface of the trail appears more rugged than the adjacent landscape.

For billing purposes, armoring is measured along the centerline of the tread. This unit includes the construction of the trail as well as armoring. Contractor cannot invoice for both trail construction and armoring of a given linear foot of trail.

5.6 Armored Tread/Turf Block Pavers (figure 6)

Turf block pavers are an alternate armoring technique to stone pitching where it is difficult to source appropriate native stone. As turf block pavers allow a more predictable tread surface, they are particularly appealing for "green"-style trails or for flow elements where excessive tread variance is not desired (e.g., high-speed insloped turns, some constructed jump elements).

Width of armored tread should be at least 1.5 times the width of the local trail specification to permit users to find their line as the trail matures, and at least two (2) times in areas where more variation is likely (e.g., jump landings, insloped turns). Turf blocks pavers must be installed as directed by manufacturer's recommendations. Final installation should be nominally at-grade with the surrounding landscape. Individual paver blocks should be completely supported to reduce the chance of breakage. Height variance and joint spacing should both be less than one-half inch (0.5"). Blocks should be laid in a pattern to minimize joint lines. Paver voids are filled with local materials compacted to reduce settling.

For billing purposes, armoring is measured along the centerline of the tread. This unit includes the construction of the trail as well as armoring. Contractor cannot invoice for both trail construction and armoring of a given linear foot of trail.

5.7 Rolling Grade Dip (figure 7)

A rolling grade dip is a drainage feature added to existing trail.

The minimum length of the drain portion shall be six feet (6') and the rise must be at least ten feet (10') long; the height differential between the bottom of the dip and the top of rise shall be approximately twelve inches (12") to twenty-four inches (24"). The sides of rise must have a fill slope of at least two-to-one (2:1) or the angle of repose of the local soil, whichever is greater.

To encourage self-cleaning the grade of the drains at the bottom of the grade reversals must be at least fifteen percent (15%) and typically not greater than twenty-five percent (25%). If the drain grade exceeds twenty-five percent (25%) then installing

Rock Rip-Rap (see Section 5 – Rock Rip-Rap) in the bottom of the drain to prevent head-cutting may be requested by the Owner. If grade reversals result in a fill slope, these slopes and the associated feature(s) will be finished to satisfy the above-grade earthen structure guidelines.

Rolling grade dips must be sited at least thirty feet (30') uphill from significant turns in order to reduce the effects of unweighting on higher speed users. Exceptions on these dimensions and requirements may be made on a site-by-site basis to accommodate terrain constraints. In certain locations the Owner may determine that smaller structures reinforced with large rocks that fit the character of the trail may be an acceptable substitute.

A rolling grade dip is billed as a “whole” unit.

5.8 Terrace (figure 8)

A terrace is a combination of landing, drain, retaining wall, and step useful for creating sustainable shared-use trail in steeper corridors than would be supported by the natural surface tread alone. Steps are used to accelerate the climb/descent while the use of landings between risers allows continued use by bicycles and equestrians. Terraces may be incorporated in new trail construction or applied as a corrective maintenance measure.

Step risers should be constructed out of stone; rot-resistant wood may be substituted with the approval of the Owner. Maximum riser height is determined from the step height requirements of the trail segment. The riser shall be battered in the direction of uphill travel. A riser may be assembled from multiple stones with the understanding it must withstand the dynamic loading of climbing and descending users.

The landing must have a minimum length of at least 1.5 times the stride or wheelbase of the longest users. Each landing must contain a drain to the downhill side; it is not acceptable for a landing to drain over its riser. Drain differential must be at least six inches (6"). The fill required to create the landing is included in this unit.

The downhill edge of the landing must be supported by a retaining wall of stone; rot resistant wood may be substituted with the approval of the Owner. The landing's retaining wall must satisfy all the requirements of a stand-alone wall (see Section 5 – Rock Retaining Wall).

A terrace is billed per riser. For example, the figure shows parts of three (3) terraces

5.9 Rock Retaining Wall (figure 9)

A rock Crib Wall or Rock Retaining Wall is defined as a row of stones stacked greater than 12" in height specifically designed to hold back soils and raise the tread to meet variations in the running grade of the trail tread. A row of stones placed at the downslope of a tread in order to create a full bench are not considered a retaining/crib wall and are included in the contractors unit price for that specific trail construction type. The bidding unit of a rock retaining wall is square-feet, calculated from the exposed vertical face, Square Face Foot (SQ FF). Rock retaining walls should be stable and battered (inclined back into the slope) a minimum of fifteen percent (15%) from vertical. All walls should have rubble backfill of at least six inches (6") in depth behind the wall to allow for drainage and to prevent damage from frost heaves. The base of the wall should be placed on firm compacted mineral soil or rock outcroppings. Any small

stones used to “chink” larger stones in place should be placed in the back of the wall. The top of the wall shall not be counted in the width of the trail tread. The top layer of stones shall be installed in a manner to avoid being accidentally dislodged by trail users. Deadmen (stones that extend from the wall into the slope) should be used to ensure integrity. There should be one deadman for every five square face foot (5 SQ FF) of wall.

5.10 Insloped Bermed Turn (Berm) (figure 10)

A berm is defined as an insloped change-of-direction that turns more than 90 degrees across the local landscape *not requiring* the trail to cross the fall line and is over 12” in height above the surrounding landscape. Trail tread that uses an existing embankment to change direction is also not a berm and is included in all trail construction unit types.

Acceptable values for berm radius, camber and turnpad grade are identified in the “Trail Specifications Matrix”. Berm radii should be consistent.

Fill structure for a berm will comply with composition, compaction, and fill slope requirements of an above-grade earthen structure.

For billing purposes, a berm is measured along the centerline of the tread by the linear foot at the point where the berm is over 12” in height above the bypass trail grade. This unit includes the construction of the bypass trail as well as the berm. Contractor cannot invoice for both trail construction and creating a berm over a given linear foot of trail. Locations and lengths of berms are identified in the plans.

5.11 Insloped Switchback (Switchberm) (figure 11)

A switchberm is defined as an insloped change-of-direction that turns more than 90 degrees across the local landscape *requiring* the trail to cross the fall line and is over 12” in height above the surrounding landscape. The switchberm unit includes any walls, armoring, setup berm, and drainage features associated with the structure as well as the trail itself.

Switchberm units are broken into three different units based on the sideslope of the surrounding terrain: Type “A” for low sideslopes, Type “B” for medium sideslopes and Type “C” for high sideslopes.

Each switchberm or insloped switchback requires a grade reversal or rolling grade dip before and after; these shall not be counted as separate units for payment purposes. The dips for these drainage features should be a minimum of six feet (6') long. To encourage self-cleaning the grade of the drains at the bottom of the reversal/dip must be at least fifteen percent (15%) and typically not greater than twenty-five percent (25%). If the drain grade exceeds twenty-five percent (25%) then installing Rock Rip-Rap (see Section 5 – Rock Rip-Rap) in the bottom of the drain to prevent head-cutting may be requested by the Owner. The uphill dip should be sited to minimize unweighting effects for higher speed users.

All switchberms or insloped switchbacks will be created with an insloped turnpad. Specifications for radius and cross slopes across the turn are defined in the “Trail Specifications Matrix” for the particular trail segment. Turning radii should be consistent. Turns with a running grade of twenty percent (20%) or greater in the apex should have a rock armored drain two feet (2') wide following the inside of the turn.

Interior of legs shall be anchored by and filled with large rocks and/or woody debris to discourage shortcutting.

If required, the fill structure for the turnpad will comply with composition, compaction, and fill slope requirements of an above-grade earthen structure. Client may require that a retaining wall be employed in place of a fill slope. Any retaining structures will be constructed of stone and comply with all rock retaining wall specifications. If multiple switchbacks are required, they will be sited to minimize “stacking”.

A switchberm is billed as a “whole” unit. The unit starts at the initiation of the uphill and completion of the downhill drainage structures. Quantities, type, and locations are identified in the plans.

5.12 Rock Bench

Rock bench construction is defined as trail tread construction through areas of exposed bedrock and slick rock where rock breaking and or blasting may be required. The rock found in Duluth is weathered at the surface and often fractured lending rock breaking a proven technique to get through these difficult areas. It is not anticipated that any blasting will be required as part of this project.

In order to save on construction costs construction through rocky areas a variation from the Green Trail specification to the Blue Traditional Trail Specification as enumerated in the “Trail specification Matrix” is allowed. However, effort must be made to keep the construction as close to the Green Specification as possible.

Rock bench construction is billed per the linear foot.

5.13 Technical Trail Features and Boardwalks (figure 12)

Placement and detailed design of any Technical Trail Feature (TTF) and Boardwalks will be a collaborative effort between the contractor and the Owner.

Contractor is to provide shop drawings of the actual boardwalk planned to be constructed for approval by the Owner for a given segment of TTF boardwalk based on the engineered construction documents found in the plan set.

TTFs and Boardwalks should have a playful and organic appearance to better match the natural environment. Recommendations include curved structures instead of straight lines or angles and trail deck that pitch, yaw, and vary in width.

Specific guidelines for TTFs and boardwalks are included in the plan set supplied for the project.

General guidelines include the following. Wooden structures must be designed and constructed with the assistance of an experienced professional. Acceptable materials for the riding/deck surface must be rough cut lumber and includes: Cedar, Tamarack and Treated Pine. All other lumber used in the construction can be either rough cut or planed dimensional treated pine lumber. Treated lumber shall be treated in accordance with AWP Standard C2/C9 with ACQ 0.4 LBS/CF Ret. And 0.6 LBS/CF Ret. for 6x6's and wood in contact with the ground. Unapproved treated lumber, creosote soaked railroad ties, or similar lumber cannot be used since these would introduce toxins into the natural environment.

All cuts and drilled holes shall be saturated with 2 coats of copper Napthenate in a 2% solution. Allow treatment to absorb into wood prior to applying second coat. Avoid applying treatment over water and be extra careful whenever applying this treatment

over or near water to prevent contaminating the water. Follow the treatment manufacturer's recommendations.

Hardware shall be corrosion/rust resistant, such as triple dipped hot dip-hot dipped galvanized or stainless steel, intended for outdoor use, and matched to the material to insure long-term integrity. All hardware shall meet ASTM A307. All hardware that is hot dipped galvanized shall meet ASTM A153. Nails are not an acceptable fastener and will be rejected.

Deck materials should be rough-cut or finished with a slip-prevention coating to maximize traction. Approaches and configuration of structures shall be adjusted to reduce the accumulation of organic material on deck surface. A fall zone sufficient to accommodate the likely trajectory of a trail user accidentally leaving the structure shall be cleared of all materials that could focus impact (e.g., stumps, sharp rocks, woody materials).

Pre-engineered TTFs are an acceptable alternative to custom construed wooden features. Deck material on pre-engineered TTF must match the acceptable deck materials as described in this specification section.

To reduce the amount of toxic chips introduced into the landscape, preparatory tasks (primary cutting and drilling, refinishing of cut edges of all treated lumber) shall occur offsite. At the project site, all final drilling, fitting, and retreating will be done in a "temporary workshop" area where a tarp or similar is used to capture chips and any spilled preservatives.

This unit includes design, materials, preparatory tasks, mobilizing materials into the project area, and installation.

For billing purposes, a boardwalk or bridge is measured along the centerline of the tread. This unit includes the construction of the trail as well as the boardwalk. Contractor cannot invoice for both trail construction and boardwalk of a given linear foot of trail.

5.14 Rock Rip-Rap

Rock Rip-Rap is a six inch (6') deep layer of placed stone intended to stabilize slopes with concentrated storm flow. Typically this technique will be used to protect drains of rolling grade dips and drainage channels below an armored crossing. Individual stones should be gabion-class or equivalent. Rock Rip-Rap is measured by the square yard.

5.15 Coir Roll (Bio Log) Installation (figure 13)

Coir Rolls or Bio Logs are formal erosion control measures. They are installed in areas where the existing vegetative filter strip is inadequate to prevent sediment from reaching adjacent water courses. See project SWPPP for additional detail.

Rolls/Logs are placed parallel to trail and/or anticipated concentrated flows, set in a minor indentation excavated approximately two inches (2") deep. They are held in place with one inch-by-one inch (1"x1") or one inch-by-two inch (1"x2") wooden bio degradable stakes driven through the center of the roll/log at least six inches (6") into the ground, stopping about two inches (2") above the roll/log. Use five (5) stakes twenty inches (20") to twenty-four (24") long in the typical roll/log. Set the roll/log with foot-tamped backfill on the uphill side to prevent water from flowing underneath.

This unit includes mobilizing rolls/logs into the project area and installation.

5.16 Causeway or Turnpike Trail Construction (figure 14)

A causeway or turnpike is defined as an elevated trail tread utilizing mineral fill material confined by stable edge materials on both sides such as stone or rot resistant timber and is to be used when constructed through poorly drained areas. This application cannot be used in wetlands. Where suspected wetlands are present a boardwalk must be constructed to avoid disturbance.

A ditch can be dug parallel to and on both sides of the causeway to improve drainage. This variation is often called a turnpike. The material excavated from the ditches can be used to help fill the causeway if they are composed of mineral soil. The interior of the turnpike must be excavated down to mineral soil to create a firm and stable base for the fill material.

Causeway or turnpike trail tread construction is billed per the linear foot.

5.17 Trail Closure (figure 15)

Compacted tread will be scarified to encourage regrowth of native seed stock. Small plants and other nearby growth will be transplanted into scarified treadway. Seed and mulch meeting the mix requirements of the SWPPP may be used in this application. Exposed soils will be covered with local leaf litter. Trail tread will be disguised with woody debris. If trail is incised, check dams will be placed at a minimum of every twenty feet (20') to capture sediment. If trail is actively eroding, grade reversals will be added to stem continued damage. Trail corridor will be erased via the placement of vertical debris. If length of trail to be closed is greater than one hundred (100) linear feet then vertical debris must extend a minimum of fifty feet (50') from each end or until visible sight line is diminished, whichever is greater.

For billing purposes, closure is measured along the centerline.

5.18 Map Post Installation (figure 16)

Install map post according to (figure 16). Treated lumber shall be treated in accordance with AWWPA Standard C2/C9 with ACQ 0.4 LBS/CF Ret. And 0.6 LBS/CF Ret. for 4x4 map posts and wood in contact with the ground. Unapproved treated lumber, creosote soaked railroad ties, or similar lumber cannot be used since these would introduce toxins into the natural environment. Map post locations to be marked in the field by the Owner.

5.19 Trail Capping (figure 17)

Trail capping is for those locations where the underlying native mineral soils do not support usage under normal trail conditions. Typical soils found in these locations include fat clays and water saturated soils not in wetlands. These locations are to be identified at the time of construction in the field by the contractor. Any zones that are to be capped must be quantified by the contractor and submitted to the Owner in writing for approval.

5.20 Culverts

Pipe culverts may be corrugated metal pipe (CMP) or corrugated plastic pipe (CPP). Remove organics in ditch bottom for culvert to sit on solid ground. Place culvert ends flush with the ditch bottom. Place rocks around the culvert's upstream end to armor the bank against erosion.

Install culvert according to manufacturer's specifications, especially those relating to ground cover to prevent collapsing. Generally, the greater of ("half the pipe diameter" or "12 inches") is the minimum cover to ensure that a culvert will not collapse under load or float up over time and become exposed.

5.21 Modifications

Modifications to the specifications may be allowed, however, they must be made to the Owner in writing.

5.22 Tables And Figures

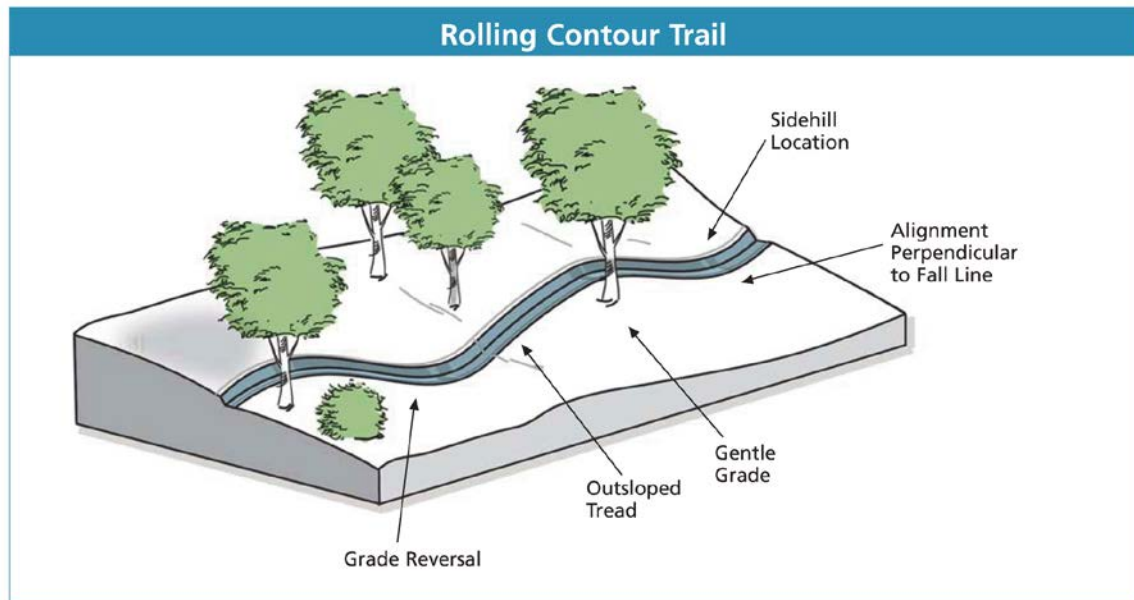


Figure 1: Rolling Contour Trail

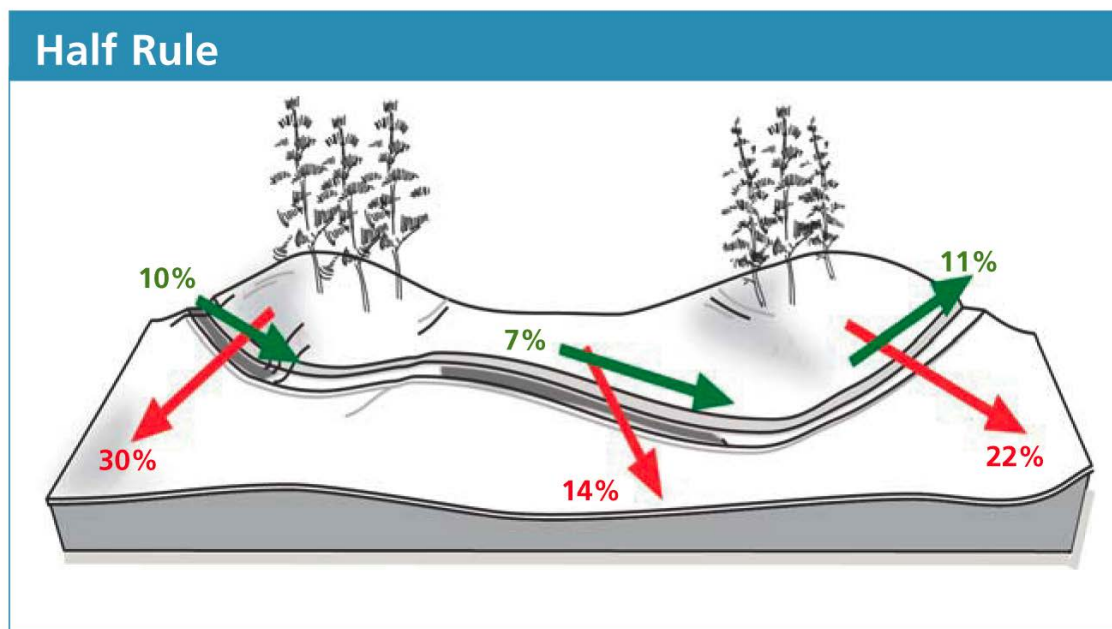


Figure 2: Illustration of The Half Rule

Full Bench Trail

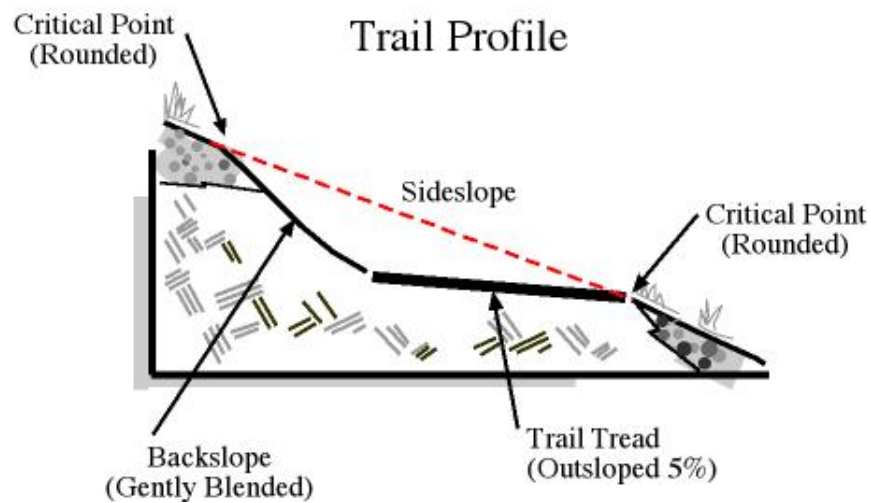
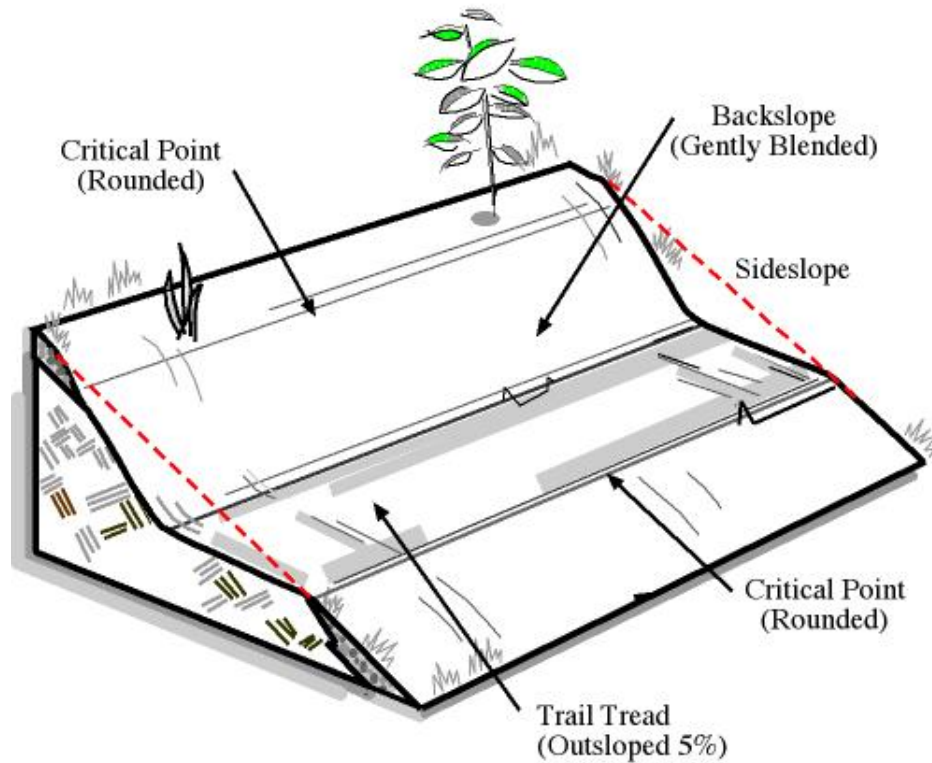


Figure 3: Full Bench Trail

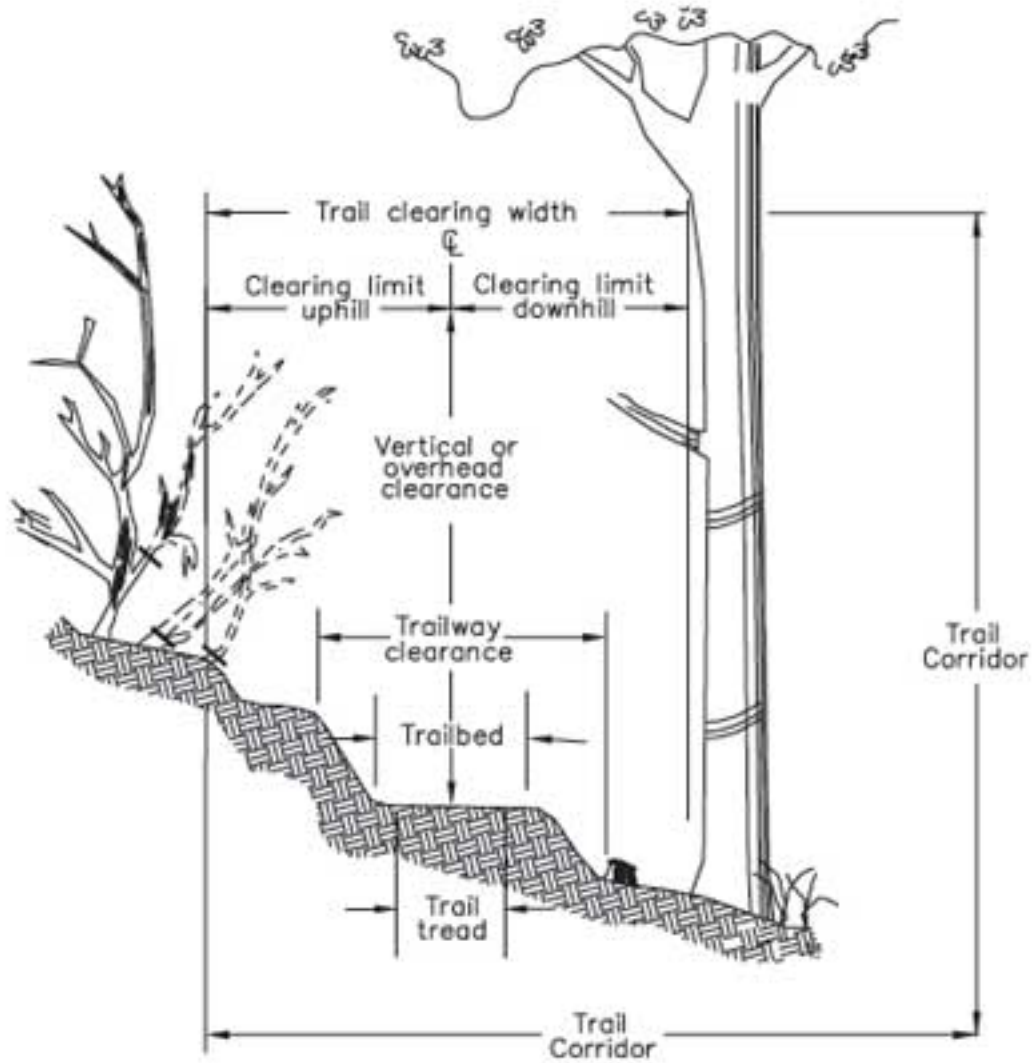
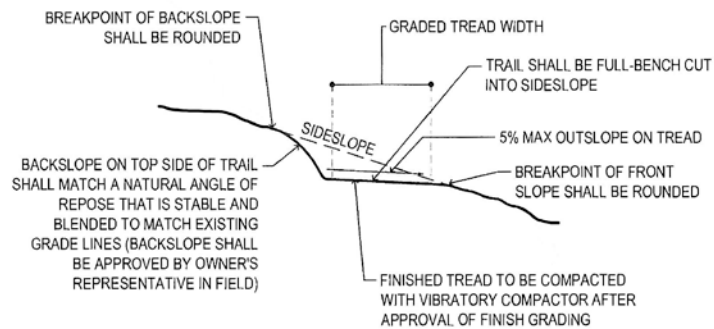
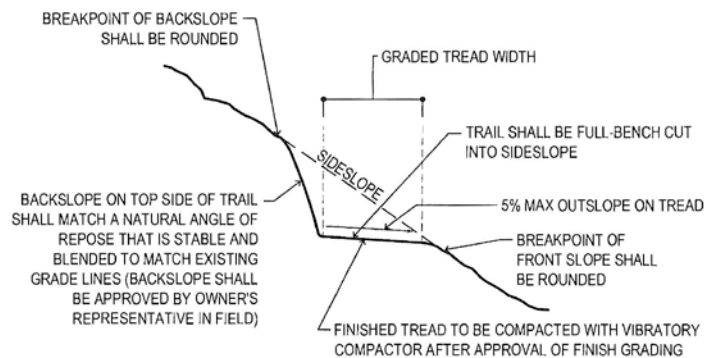


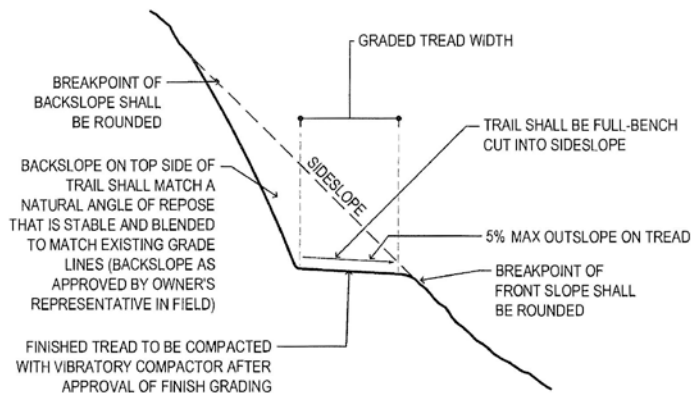
Figure 4: Clearing limits



Type A Type "A" (Low Sideslope Trail) 3%-15% Sideslope



Type "B" (Medium Sideslope Trail) 16%-60% Sideslope



Type "C" (High Sideslope Trail Trail) 61%+ Sideslope

Figure 4.1: Trail Types

Stone Pitching

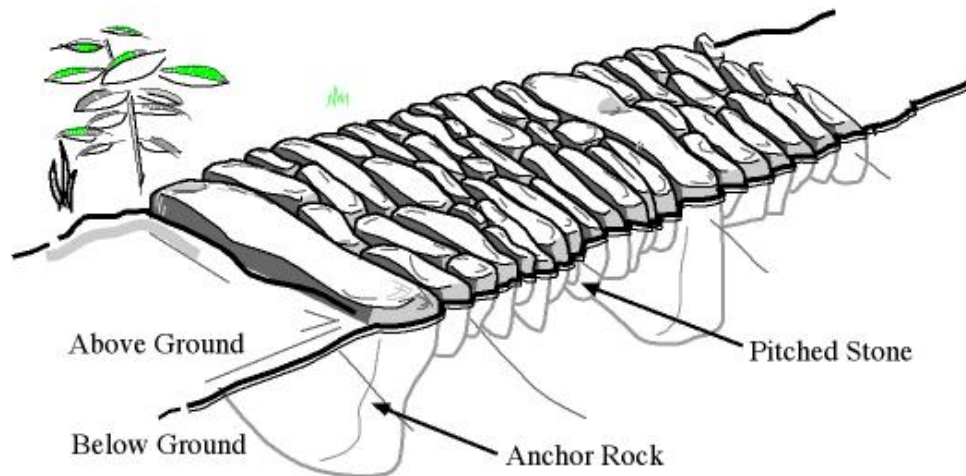


Figure 5: Tread Rock Armoring



Figure 6: Turf Block Pavers

Rolling Grade Dip

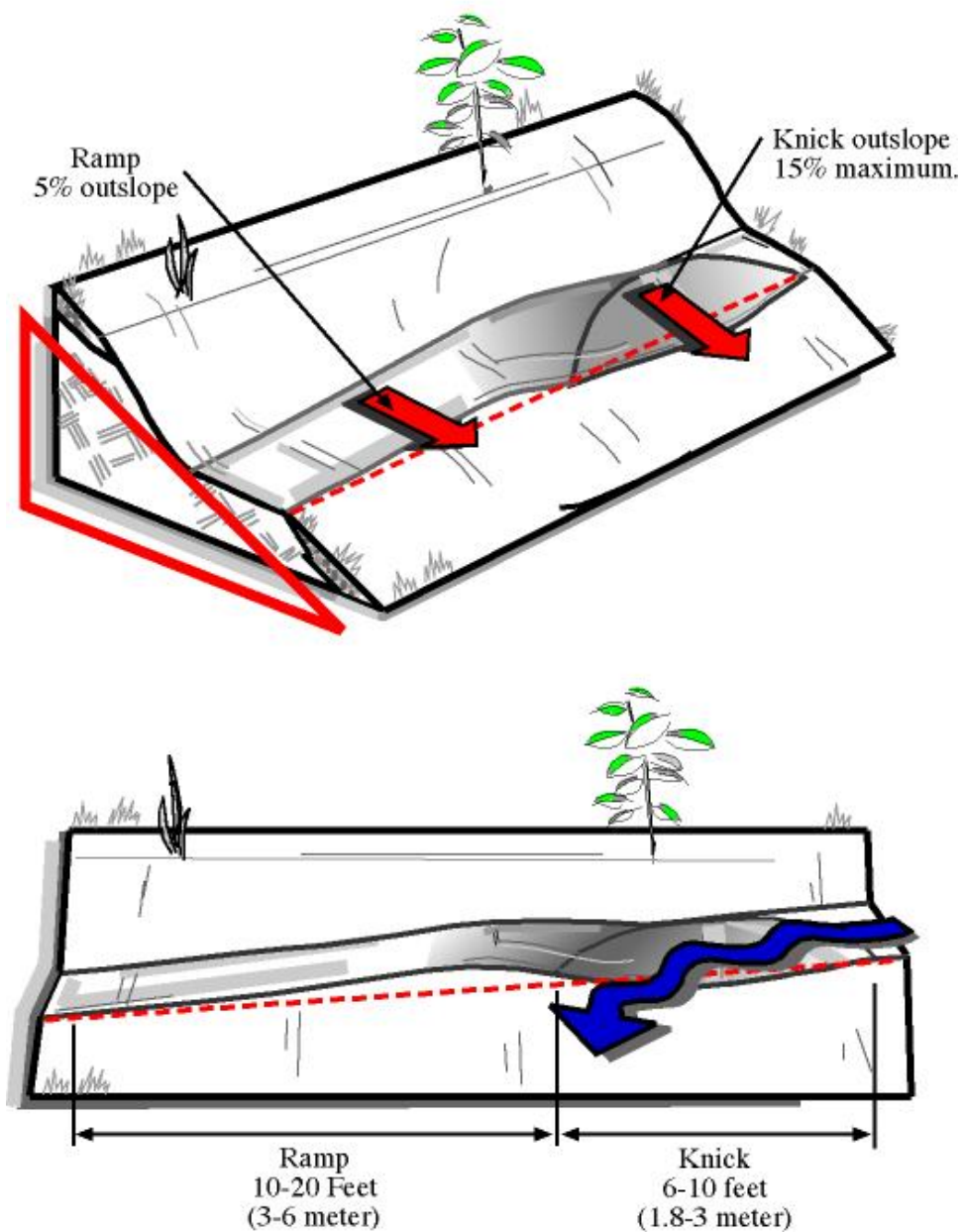


Figure 7: Rolling Grade Dip

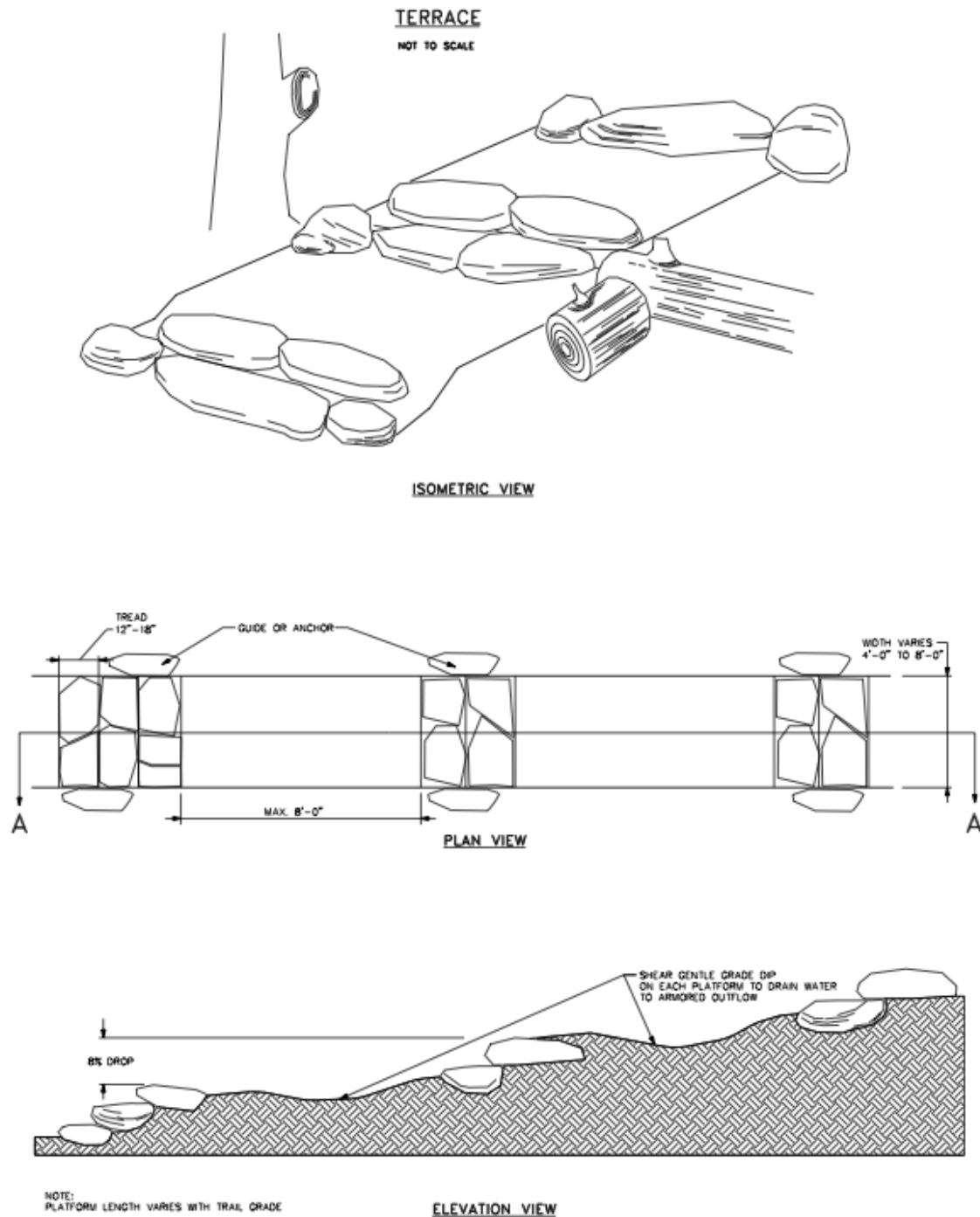


Figure 8: Terrace

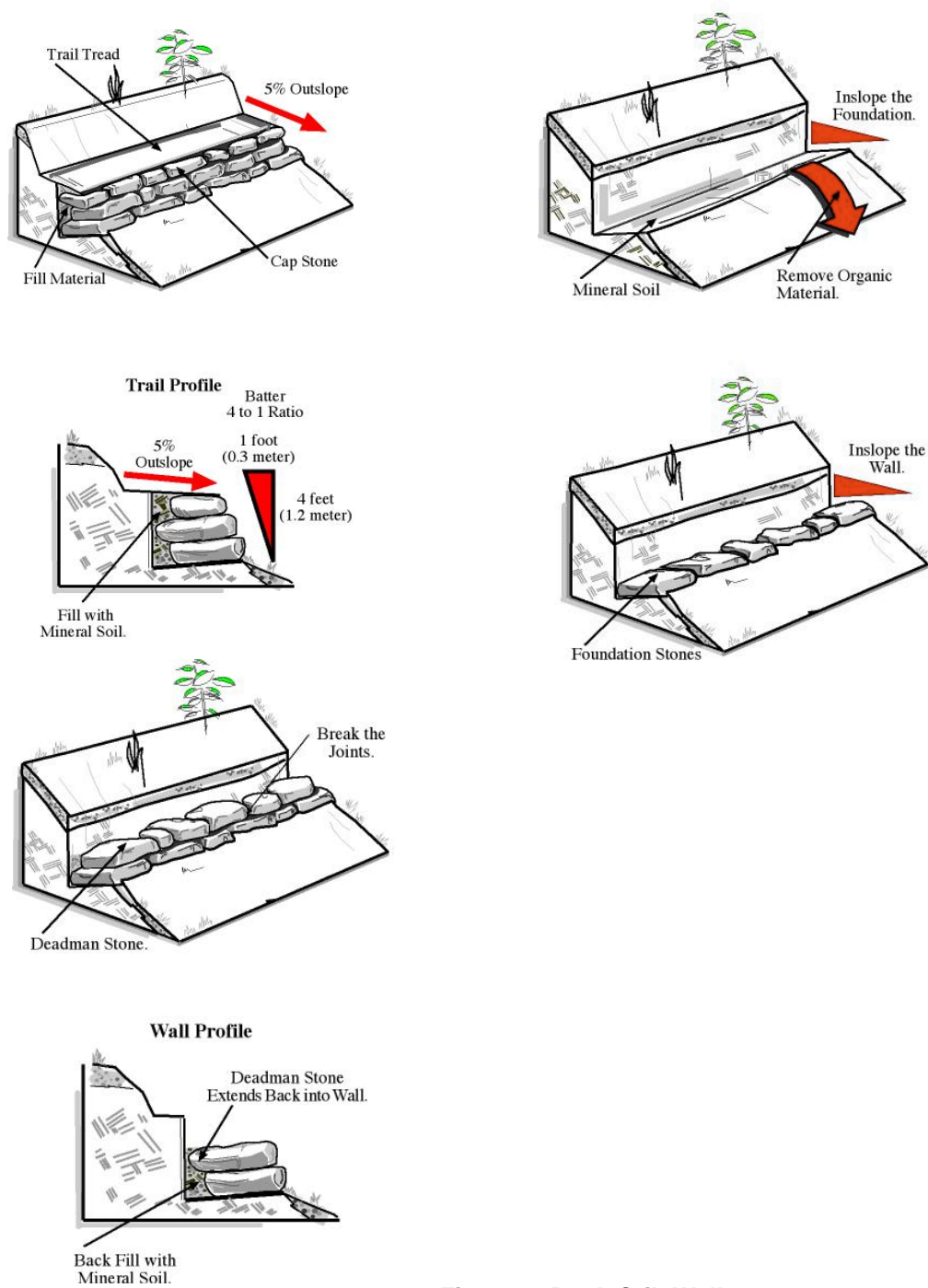


Figure 9: Rock Crib Wall

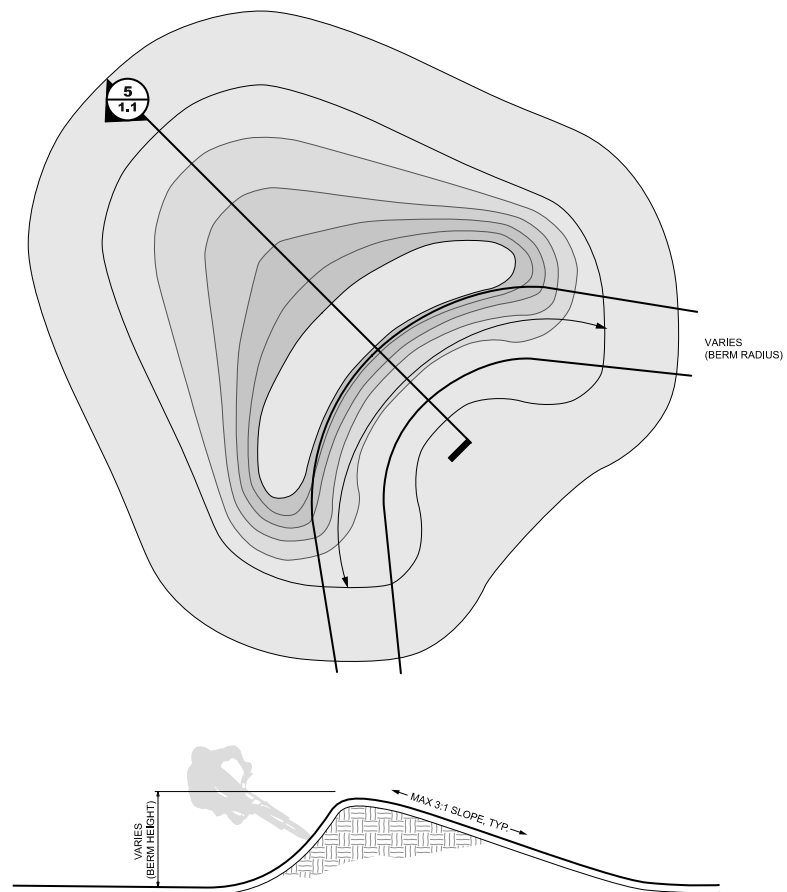


Figure 10: Berm

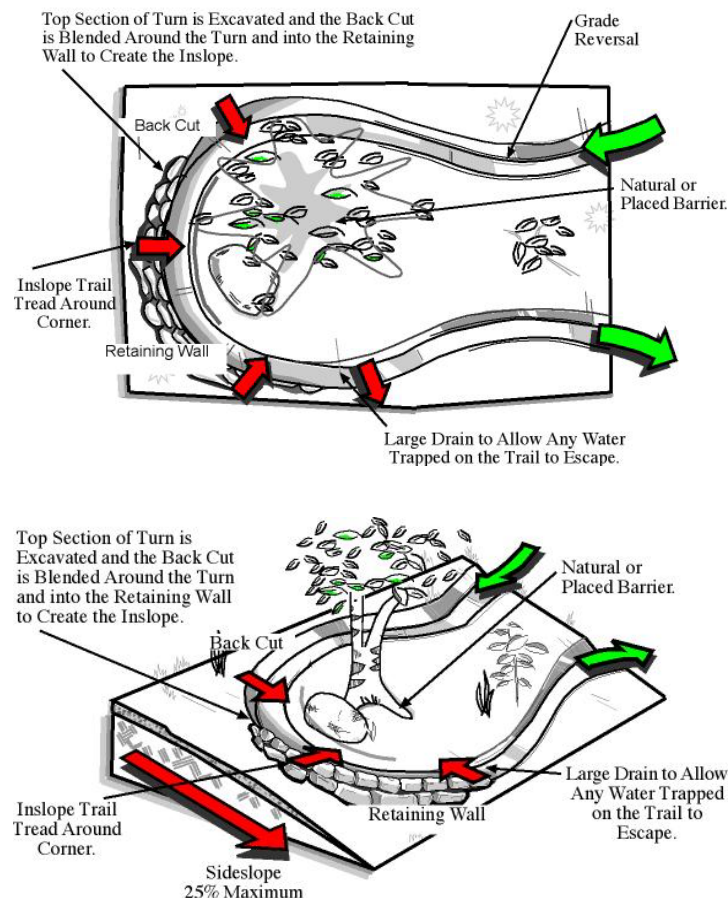


Figure 11: Insloped Switchback (Switchberm)



Figure 12: Technical Trail Feature Boardwalk (TTF)

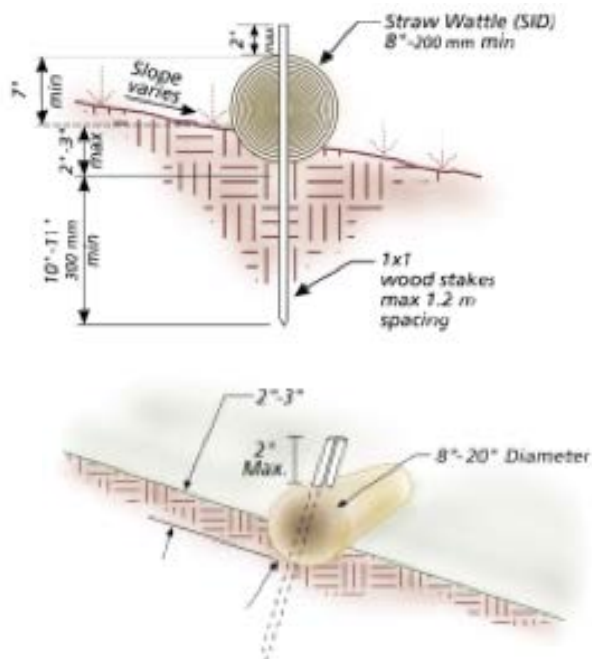


Figure 13: Coir Roll (Bio Log) Installation



Figure 14: Causeway or Turnpike Trail Construction

Trail Closure and Reclamation

Ensure smooth transition
from existing trail to new trail.

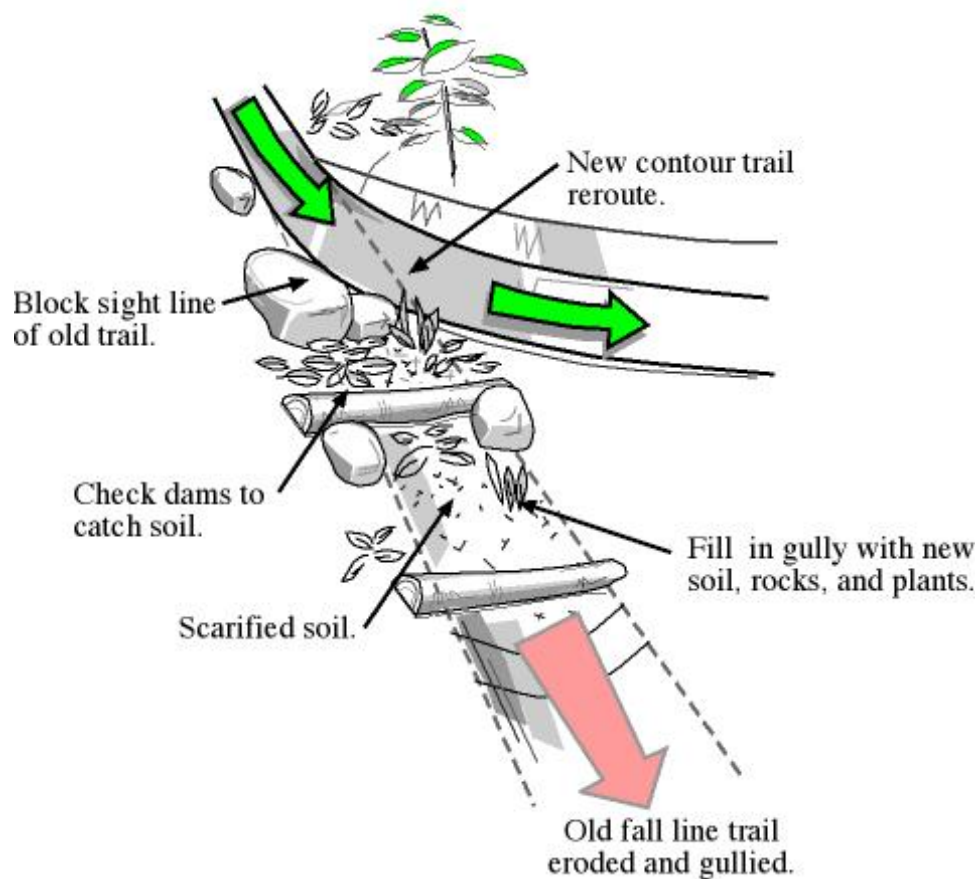


Figure 15: Trail Closure

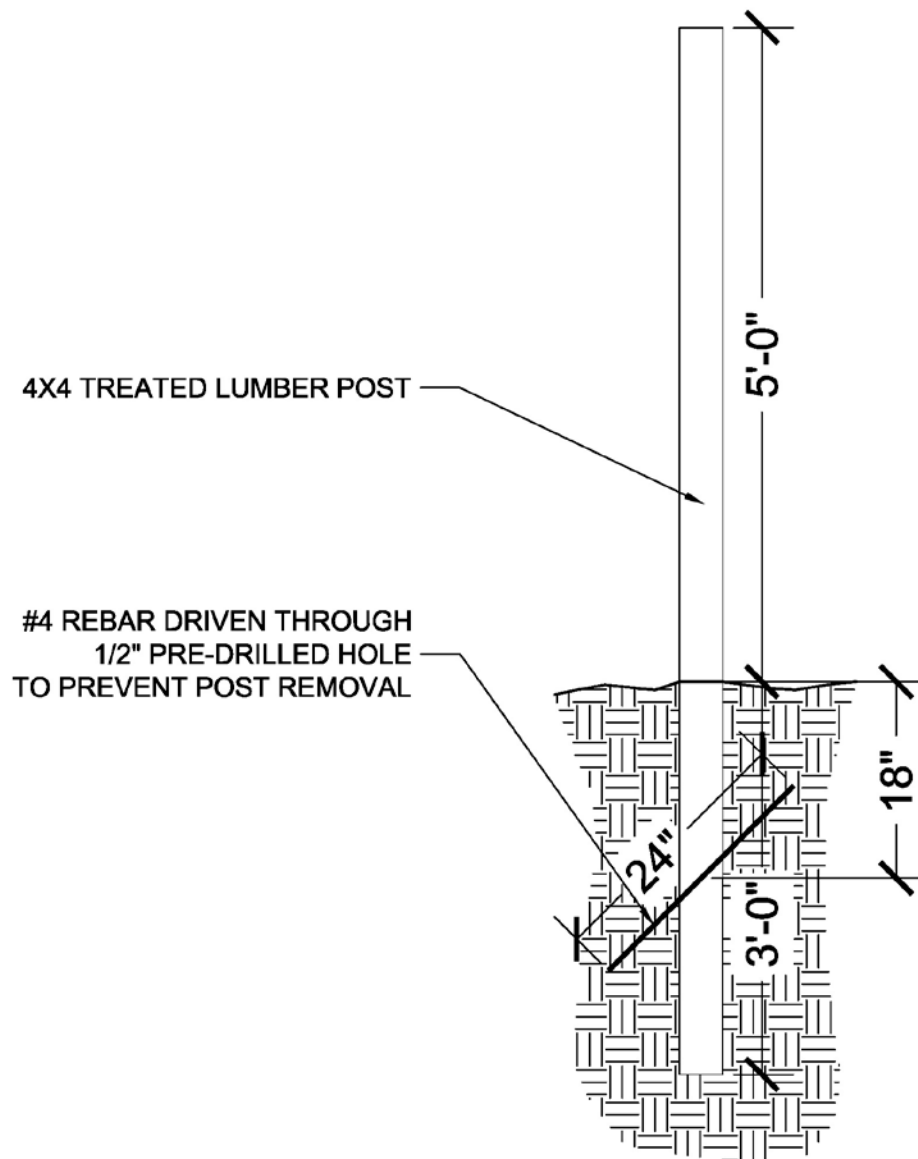


Figure 16: Map Post Installation

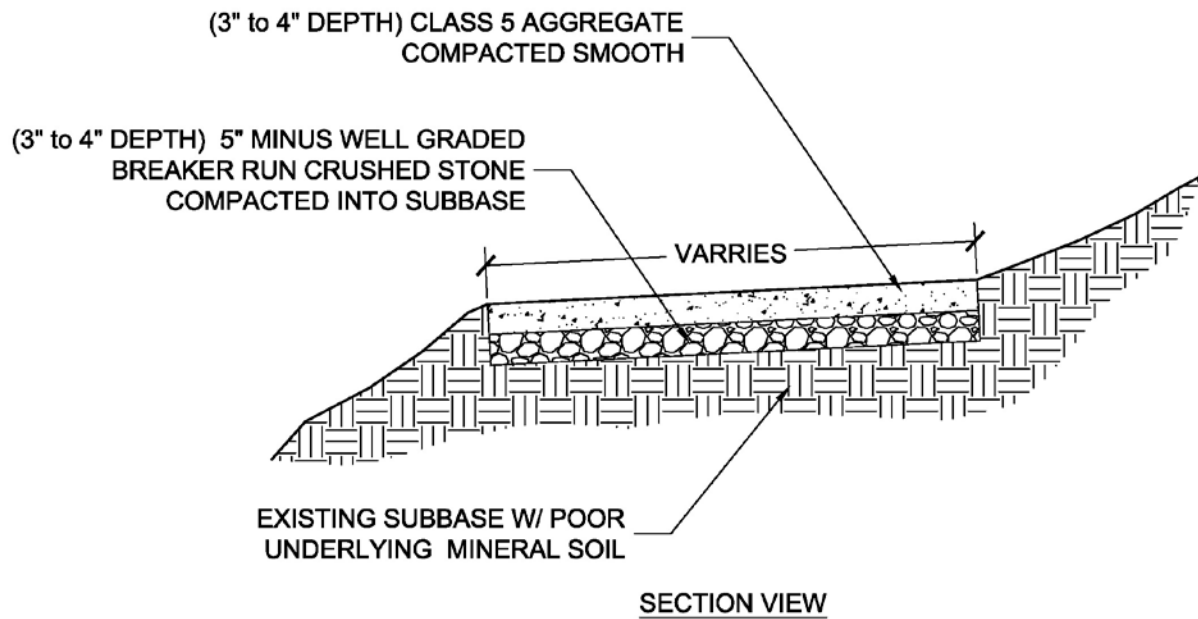


Figure 17: Trail Capping

SECTION 6: CONTRACTOR QUALIFICATIONS, REQUIREMENTS AND RESPONSIBILITIES

6.1 Professional Association

The contractor shall be a Professional Trailbuilders Association (PTBA) member in good standing. Equivalent professional experience and ability, as determined by the Owner, is acceptable.

6.2 Mountain Bike-Optimized Experience

The contractor shall have demonstrable experience in building sustainable mountain bike-optimized singletrack trail in a backcountry environment. Mountain bike-optimized singletrack is that which maximizes the fun and efficiency of the bicycling experience through the provision of trail features and macro and micro design techniques.

6.3 Tools

The contractor shall perform the required work using hand tools and/or small mechanized equipment that is a maximum of fifty inches (50") in width. Equipment with adjustable width tracks should be able to reduce track width to less than fifty inches (50"). Some sites may not be suitable for equipment this large and other sites may not be suitable for any mechanized equipment regardless of size due to terrain constraints. Permanent modification of trail outside the scope of work to accommodate equipment access (e.g., widening of an existing trail) is not desirable and must be specifically approved by in advance by the Owner.

6.4 Mechanized Equipment Best Practices

Using mechanized equipment equipped with tracks is strongly recommended. On project work, tracks are required for heavy equipment (greater than 500 lbs. gross weight).

All equipment will be clean and free of debris before introduced to work site. Equipment is subject to inspection at the start and during the project.

All mechanized equipment shall be in good mechanical condition, free of any fluid leaks and be equipped with spark arrestors if applicable.

Each machine will be equipped with a readily accessible fully charged fire extinguisher. Heavy equipment must have two extinguishers. Mounting locations should be chosen such that at least one fire extinguisher is accessible in the event of a rollover.

A spill kit with appropriate capacity must be mounted on the machine or available within 500 feet whenever equipment is operating.

Any equipment that does not meet these criteria shall be shut down until in compliance. If not correctable it will be removed from the project site at the request of the Owner and at no additional cost to the Owner.

As part of their bid package, the contractor will be asked to supply the expected list of mechanized equipment required to complete the project.

6.5 Backcountry Protocol

The Contractor's crew shall be familiar with backcountry operation and safety protocols as well as be familiar and adept at "leave no trace" practices.

When operating mechanized equipment, at least two workers will be in close proximity to provide assistance in the event of an emergency. Each worker will have a cell phone or radio with them that can be used to summon emergency service personnel. At least one GPS type device should be on hand at each worksite to help give location information to emergency dispatch personnel.

6.6 Personal Protective Equipment

It is the responsibility of the contractor to ensure that all employees working on the project equipped with and are using as appropriate the proper Personnel Protective Equipment (PPE) for the work being done. Helmets, eye protection, hearing protection, protective gloves, steel-toed boots, sunscreen, and protective clothing are considered some of the basic PPE. Face shields, breath protection, insect repellent, knee pads, shin guards and chaps are some of the other PPE that should be deployed where appropriate for the work being performed. The contractor must have at least one OSHA-compliant First Aid Kit readily available at each worksite.

6.7 Timetable

As part of their bid package, the Contractor will provide an approximate timetable and schedule detailing how all project work will be met.

6.8 Meetings and Progress Reviews

The contractor shall meet with the Owner at the beginning of each work week or as otherwise agreed upon by both parties to: review progress, check completed trail and trail features against the construction documents for completeness, tabulate completed work for payment and project expectations for the upcoming week.

6.9 Toilet Facilities

The contractor will be responsible for providing worksite sanitary facilities (ex. Porta-potties) for project staff or make alternate arrangements as appropriate for work areas where restroom facilities are not readily accessible.

The use of Porta-potties will be dependent on the location of the worksite relative to vehicle accessibility and concerns about potential vandalism in remote locations.

6.10 Parking

Construction personnel shall confine parking of private vehicles to within the area of the project limits or to those parking spaces available on public streets or pull off parking areas along skyline parkway and or public parking lots.

6.11 Public Safety

The Contractor shall ensure that reasonable precautions are taken to protect the public at all times where work is being performed.

6.12 Environmental Footprint

Contractor will be expected to institute practices to minimize the environmental footprint of construction activities. Examples are minimizing the running time of idle mechanized equipment, running equipment on bio-fuels such as bio-diesel, or buying carbon credits to offset carbon dioxide emission from the fossil fuels consumed.

6.13 Fees for Licenses, Permits, and Insurance

All costs for required licenses and insurance shall be borne by the contractor. Permits necessary for land access and environmental permits are the responsibility of the Owner and will be in place at the time of construction.

6.14 Employee/Subcontractor Conduct

All of the contractor's employees and subcontractors shall conduct themselves in a proper manner at all times. Intoxication or any unsafe behavior by the contractor's employees while performing duties related to this contract is strictly prohibited. The contractor will be required to remove from the site any individual whose continued employment or retainer is deemed to be contrary to the public interest or inconsistent with the best interests of this trail construction project, and will not use such individual to perform services under this contract.

6.15 Employee Competence

The contractor may be required to immediately remove from the worksite any employee or subcontractor of the contractor who is incompetent or who endangers persons or property or whose physical or mental condition is such that it would impair the employee's ability to satisfactorily perform the work. Notification to the contractor shall be made by voice promptly and confirmed in writing as soon as possible. No such removal shall reduce the contractor's obligation to perform all work required under this contract.

6.16 Compliance with Modern Practices

All work shall be performed and completed in a thoroughly skillful, efficient and professional manner in accordance with best modern practices, regardless of any omissions from the attached specifications and/or drawings.

6.17 Condition of Materials and Equipment

All materials and equipment incorporated into the trail shall be new or otherwise in good working order and shall comply with the applicable standard in every case where such a standard has been established for the particular type of material in question.

6.18 Disposal of Materials and Supplies Not Approved

Materials, supplies, etc., that have been delivered to the job but do not comply with specifications and have not been approved, upon notification, the contractor shall immediately remove from the premises any such condemned material, supplies, etc., and replace them with material, supplies, etc., in full accordance with the specifications.

6.19 Disposal of Materials and Supplies Not Used

Materials, supplies, etc., have been delivered to the job but are not used shall be removed from the site and properly disposed by the contractor. Tossing treated wood scraps into the woods is not acceptable.

6.20 Access Control

The contractor is prohibited from installing gates, cables, chains, fences, and other types of barricades to limit access to the project site without prior written permission from the Owner. It is anticipated that some type of access control will be necessary to control access to the trail that is under construction. It will be up to the Contractor to determine the best access control prescription.

6.21 Use of Premises – Storage

Contractor shall confine its apparatus, storage of materials, and operation of its employees/subcontractors to limits indicated by law, ordinance, permits, and/or directions of the Owner, and shall not unreasonably encumber the premises with project materials. Before any work is undertaken the contractor shall consult with the Owner and secure from Owner the use of such space as may be available for the storage of materials and/or equipment. Contractor will be held responsible for any damage done in connection with the use of this location for storage.

The Owner or Owner is not responsible for any damages that may occur to the contractor's equipment during storage whether it is from natural causes or caused by man from such unlawful acts as theft, vandalism, and arson. The contractor is responsible for providing their own property insurance. The contractor is responsible for providing their own storage and transportation equipment such as trailers, tarps, locks, or other security devices.

6.22 Trail Rehabilitation

The Contractor shall rehabilitate sections of trail that will be closed as a result of trail realignment. Any travel-ways or temporary access routes or trails created as a result of construction and/or ingress/egress will be restored to their original condition.

6.23 Use of Subcontractors

The Contractor shall be able to use subcontractors to complete the work provided the subcontractors meet all qualifications and satisfy all conditions defined in this RFQ. Contractor is responsible for all actions of their subcontractor.

Subcontractor staff must be described in the bid submission. Use of subcontractors not described in the bid submission will only be allowed with written permission from the Owner.

6.24 Indemnity

The contractor shall indemnify, save, and hold harmless the Owner, the land owner, and their employees and agents, against any and all claims, damages, liability and court awards including costs, expenses, and attorney fees and related costs, incurred as a

result of any act or omission by the contractor, or their employees, agents, subcontractors, or assignees pursuant to the terms of this contract.

6.25 Protection of Finished Construction

Contractor shall assume the responsibility for the protection of all finished construction under his Contract and shall repair and restore any and all damage of finished work to its original state.

Where responsibility can be established for damage to finished construction, the cost for repair or replacement shall be charged to the party responsible.

SECTION 7: FINAL INSPECTION, SUBSTANTIAL COMPLETION, RETAINAGE, WARRANTY AND PAYMENT

Upon the substantial completion of the contract work, the Owner shall accompany the contractor on an inspection of the work to create a final punch list. All defects found in the work that do not meet the intent of the construction documents will be corrected before payment will be authorized.

Substantial completion is defined as the point at which the requirements of the construction documents have been met and the Owner issues a letter of acceptance.

Final payment will be made upon substantial completion and approval of work per sub-project minus a 5% retainage. This retainage is held for a one year warranty period and starts on the date of substantial completion as outlined in the letter of acceptance.

Trail Specifications
Duluth Traverse Trail System
Version: 1.5 (3/7/16)

Label	Working title	Difficulty Rating	Symbol ¹	Use	Directional	Feature Frequency ²	Constructed Tread Width ^{3, 4}	Ave Trail Grade per 1000'	Max Trail Grade: climbing ⁵	Max Trail Grade: descending ⁶	Min Turn Radius	Max Turnpad Grade ⁷	Max Berm/Turn Camber ⁸	Corridor Width (4' above tread)	Corridor Height Minimum	Boardwalk Width	Exposure (without railing)	Unavoidable Obstacles	Avoidable Obstacles (over 50% of tread or less)	Rollable Feature Height (jumps, berms, etc.)	Roughasity (surface texture) ⁹	Tread and trail features	Notes
Spec 1	Green Singletrack (Traditional bike optimized shared-use singletrack)	Easier	Green Circle	bike, foot	Two-Way	Low	48"	5%	20%	20%	10'	10%	15%	48"-72"	10-12'	48"	less the 36"	less then 2"	less then 6"	12"	low	Firm trail surface. May include rock armored section.	
Spec 2	Blue Singletrack (Traditional bike-optimized	More Difficult	Blue Square	bike, foot	Two-Way	Medium	36"	7%	25%	50% (armored over 25%)	8'	15%	30%	36"-72"	8-12'	36"	less then 48"	less then 8"	less then 24"	24"	med	Modest rough tread is expected. May include steps and terraces.	May include features similar to those on easier "Bump and Pump" or "Jump" trails.
Spec 3	Black Singletrack (Traditional technical singletrack)	Most Difficult	Black Diamond	bike, foot	Preferred	High	18"	10%	50% (armored over 25%)	100% (armored over 25%)	6'	15%	50%	36"-48"	8-12'	24"	no limit	less then 18"	less then 48"	36"	high, some very high	Significant unavoidable obstacles are expected. May include steps, stairs, rock gardens, loose rock, and significantly exposed sections.	Seek out rocky ridges. Selective machine work to create very organic appearing rock strewn tread. Most rock and tread work is aimed at sustainability rather than ease of passage. Trials-like sections ok.
Spec 4	Green Flow Trail (Bump Pump) Singletrack	Easier	Green Circle	bike, foot	Preferred	High	48"	3-5%	20%	30% (armor as function of flow)	15'	10%	30%	48-72"	8-10'	48"	less the 36"	less then 2"	less then 6"	12"	low	Firm trail surface. Rollers and berms. May include rock surfaced sections.	The Lester River Trail in Lester Park, Enger Park Trail and the Upper Cathedral Trail in Mission Creek are examples of this spectrum
Spec 5	Blue Flow Trail (Bump Pump) Singletrack	More Difficult	Blue Square	bike, foot	Preferred	High	36"	7-10%	30%	100% (armor as function of flow)	10'	15%	50%	36"-72"	10'-12'	36"	less then 60"	less then 2"	less then 24"	24"	low	Firm trail surface. Rollers, roller doubles, berms predominate. May include significant armored sections.	Demonstration trail at Spirit Mtn is an example of the upper end of this spectrum.
Spec 6	Black Flow Trail (Bump Pump) Singletrack	Most Difficult	Black Diamond	bike	One-Way	High	36"	10-12%	n/a	150% (armor as function of flow)	7'	25%	150%	36"-72"	10'-12'	36"	less then 120"	less then 8"	less then 48"	36"	med	Firm trail surface. Rollers, roller doubles, berms predominate. May also include steps, stairs, rock gardens and exposed	
Spec 7	Green Jump	Easier	Green Circle	bike	One-Way	Medium	48"+	3-5%	n/a	30% (armor as function of flow)	20'	10%	150%	48-72"	10-12'	60"	less the 36"	less then 2"	less then 6"	18"	low	Smooth continuously cambered trail surface. Easily rollable jumps.	A green jump trail could fit within a stacked-loop system. Blue and Black are likely best done at a resort.
Spec 8	Blue Jump	More Difficult	Orange Pill, medium	bike	One-Way	Low	48"+	7-10%	n/a	100% (armor as function of flow)	15'	15%	∞%	48-72"	12'-15'	48"	less then 60"	less then 2"	less then 24"	30"	low	Smooth continuously cambered trail surface. May include significant armored sections. More complex jump	Complete berms, plan on extreme drainage solutions - sumps + culverts.
Spec 9	Black Jump	Most Difficult	Orange Pill, large	bike	One-Way	Low	48"+	10-12%	n/a	150% (armor as function of flow)	15'	25%	∞%	48-72"	12'-15'	48"	less then 120"	less then 8"	less then 48"	48"	med	Firm trail surface. May include rock surfaced sections. Some jumps may not be rollable.	Complete berms, plan on extreme drainage solutions - sumps + culverts.
Spec 10	Green Gravity	Easier	Orange Pill, small	bike	One-way	Medium	48"	7-10%	n/a	100% (armor as function of flow)	20'	15%	150%	48-72"	12'	60"	less the 36"	less then 18"	less then 24"	18"	high	Entry level downhill course. Will include rocks, steps, and terraces. Drops will be rollable.	For all DH types, potentially only at Spirit Mtn.
Spec 11	Blue Gravity	More Difficult	Orange Pill, medium	bike	One-way	Medium	36"	10-15%	n/a	∞% (mandatory drops	15'	25%	∞%	36"-72"	12'	48"	less then 60"	less then 48"	n/a	30"	very high	Intermediate level downhill course. Mandatory drops. Will include significant steps, stairs, rock gardens and exposed	
Spec 12	Black Gravity	Most Difficult	Orange Pill, large	bike	One-way	High	24"	15-20%	n/a	∞% (mandatory drops	15'	25%	∞%	36"-72"	12'	48"	less then 120"	less then 72"	n/a	48"	very high	Advanced level downhill course. Significant mandatory drops. Will include extreme terrain that has a high penalty for	
Spec 13	Gateway trail	Easiest	White Circle	bike, foot, horse	Two-Way	low	48"+	3-5%	10%	15%	12'		10%		10-12'	60"							Very front-country, likely connected to a recreation park. Typically under a mile.
Spec 14	Accessible trail	Easiest		bike, foot, horse	Two-Way	none																	ADA, ABA, AASTHO spec trail.

Footnotes...

1. Orange Pill Symbol assumes trails inside controlled-access facilities, like a bike park or resort.

2. Feature Frequency is averaged over long distances. Per 100': "low" = 2-3 features, "med" = 3-5 features, "high" = 5-10 features.

3. Constructed tread width may narrow over short distances to 50% of spec. Examples include rock or tree gateways.

4. Tread width also applies to bridges and boardwalks. Check with local regulations for overriding guidelines on width or any other requirements (height restrictions, railings, etc.).

5 & 6. Max grades climbing and descending refer to extremely short segments, 10 feet or less.

7. Turnpad grade measures the rise/fall across the turning surface at the base of any inslope.

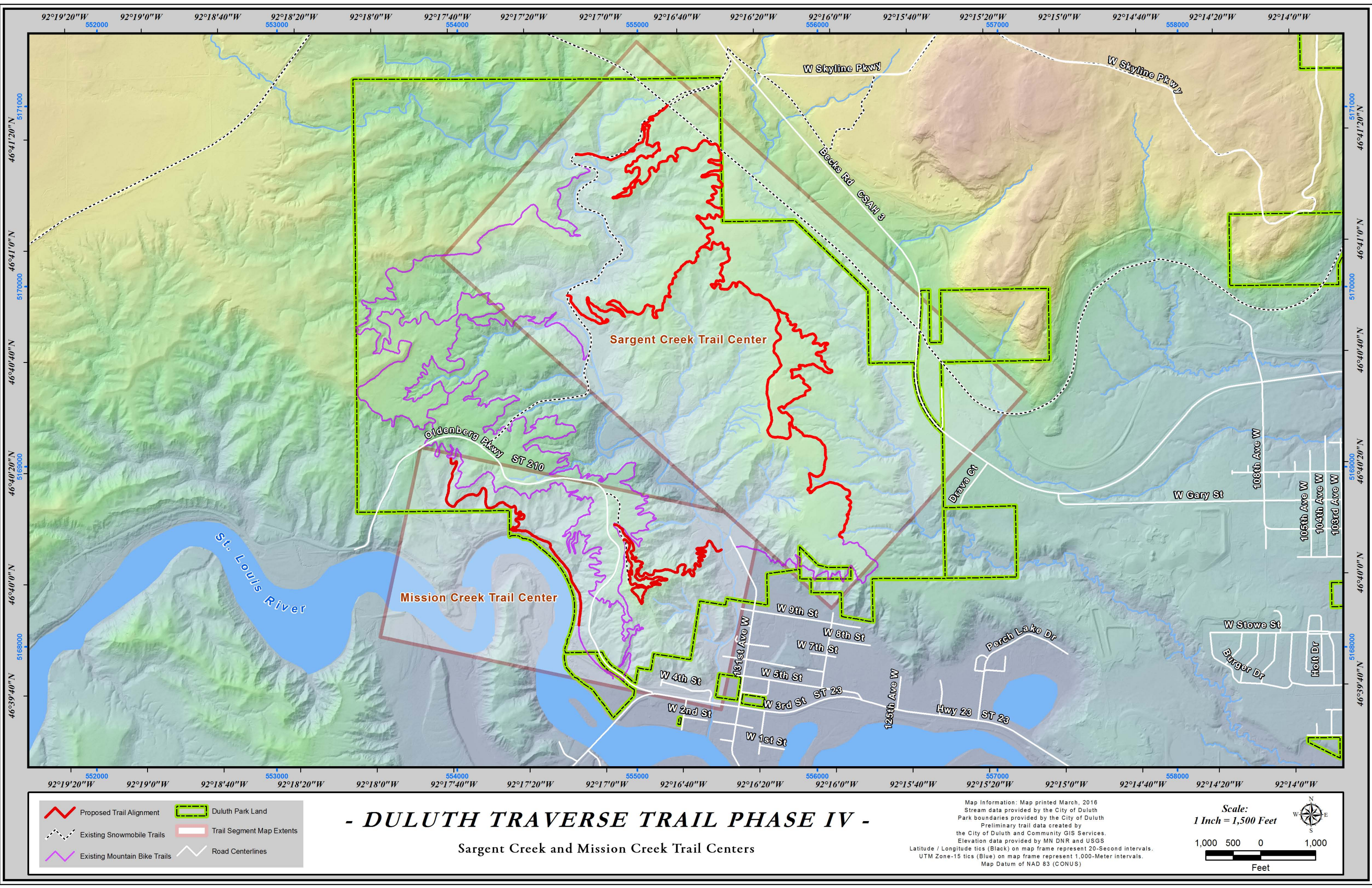
8. Max camber is measured at the top of the inslope. More advanced berms will go to "vertical".

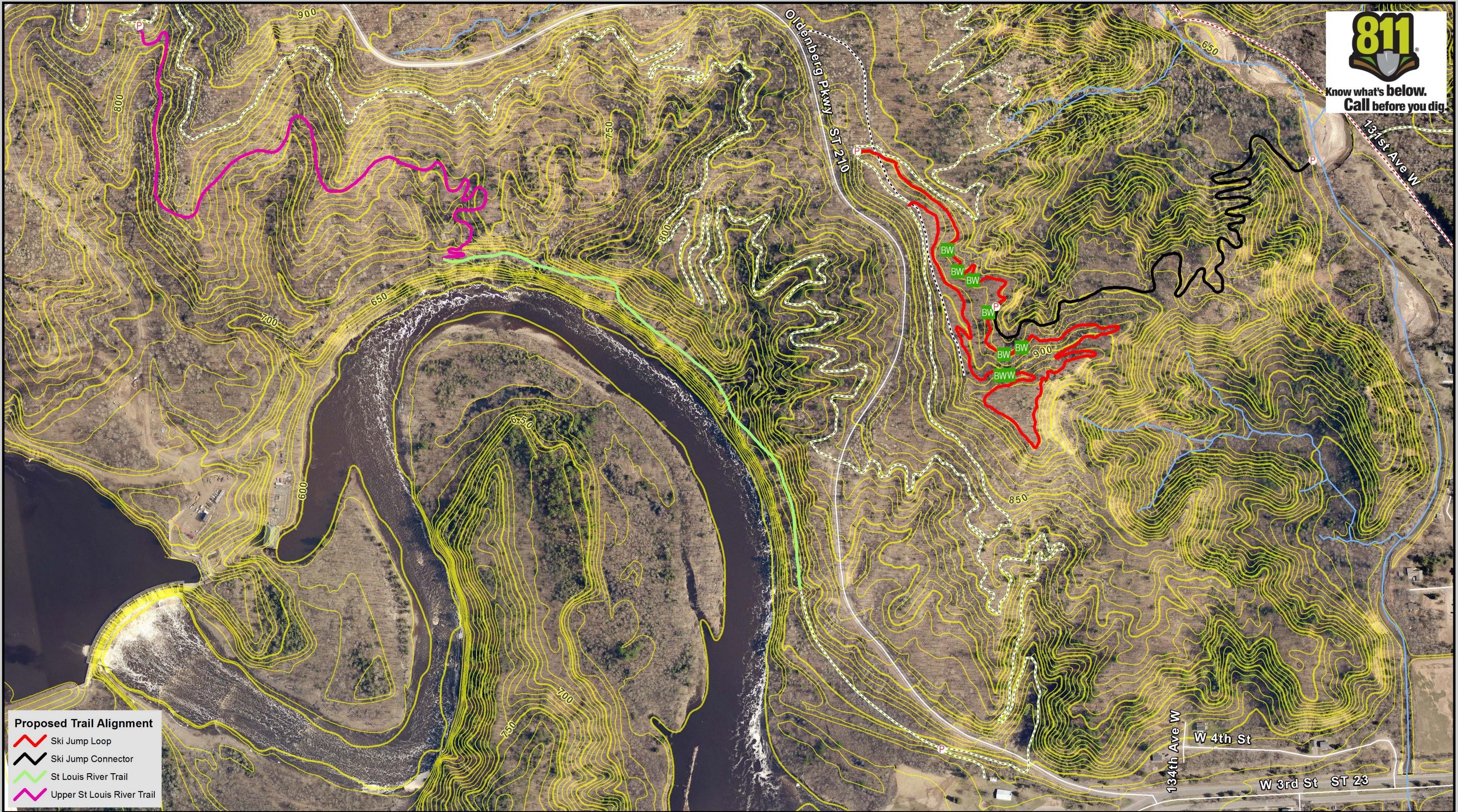
9. Roughasity attempts to capture average tread coarseness. Tread area with obstacles: "low" = less then 5%, "med" = less then 20%, "high" = over 20%, "very high" = over 50%.

General Notes!

Sustainable trails guidelines provide the foundation for all design + construction decisions ("half rule", frequent grade reversals, max grades function of soils + use, etc.).

All trails should have a minimum grade and camber (in/outslope) of 3% to ensure a well-drained tread.





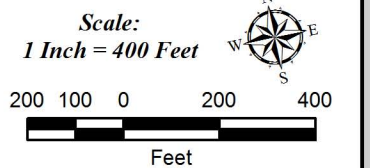
- Proposed Trail Alignment**
- Ski Jump Loop
 - Ski Jump Connector
 - St Louis River Trail
 - Upper St Louis River Trail

- | | | |
|-----------------|-----------------------|-------------------------------|
| Map Post | Boardwalk End | Existing Mountain Bike Trails |
| Bridge | Culvert | Existing Snowmobile Trails |
| Boardwalk | Rock Armor | 10 Foot Contour |
| Boardwalk Begin | Turf Stone Pavers | 50 Foot Contour |
| | Superior Hiking Trail | |

- MISSION CREEK TRAIL CENTER -

Total Segment Length: +/- 15,328 feet (2.9 miles)
Trail Cross Slope (measured in percent rise)
0 - 15% - 147 feet; 16 - 60% - 2,607 feet; GT 60% - 12,574 feet

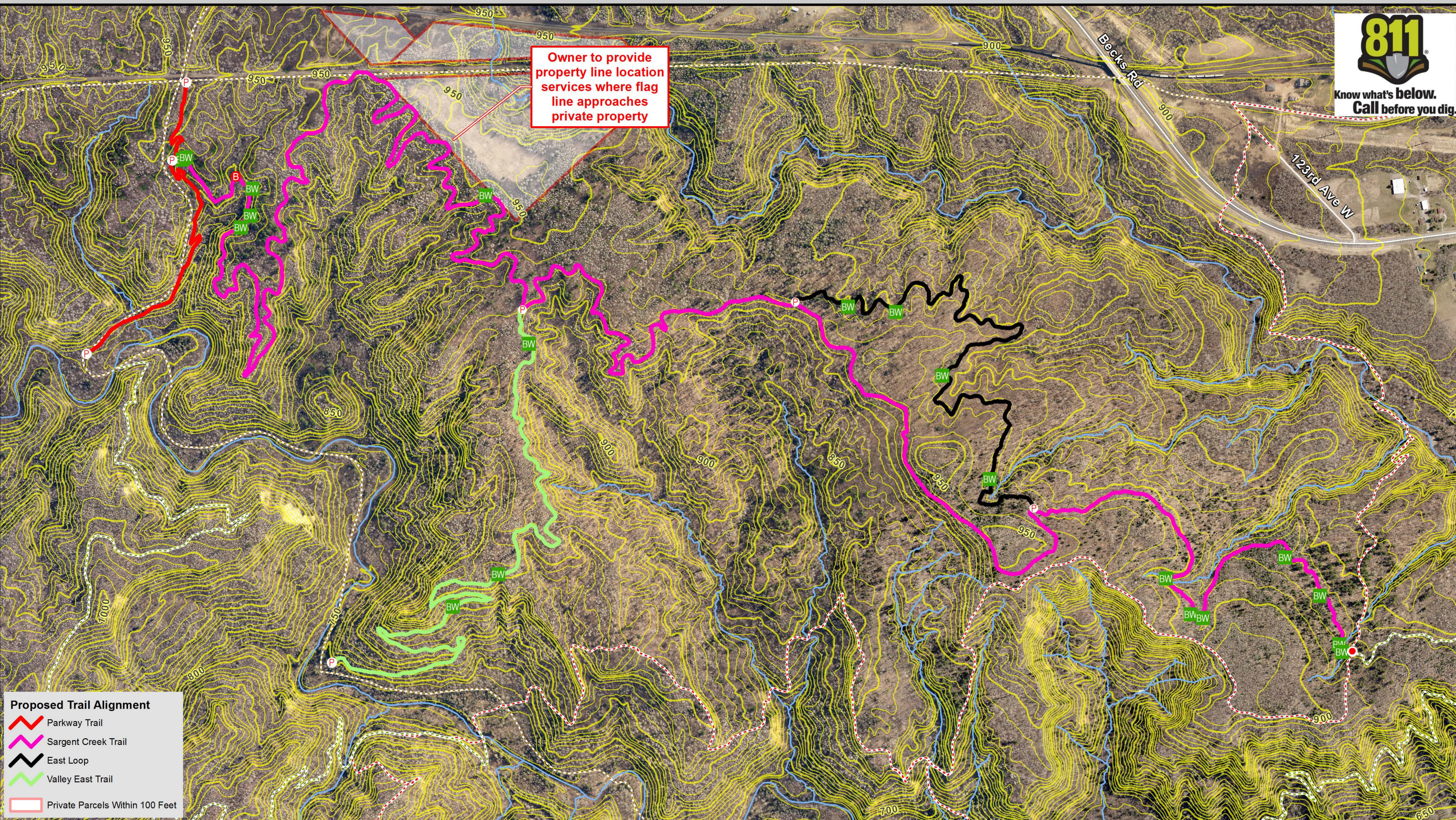
Map Information: Map printed February, 2016
Parcel data provided by St. Louis County.
Stream data provided by the City of Duluth
Preliminary trail and crossing points created by the City of Duluth and Community GIS Services.
St. Louis County true color aerial photography circa Spring, 2013.
Map Datum of NAD 83. (CONUS)





Know what's below.
Call before you dig.

Owner to provide
property line location
services where flag
line approaches
private property



Proposed Trail Alignment

- Parkway Trail
- Sargent Creek Trail
- East Loop
- Valley East Trail
- Private Parcels Within 100 Feet

P	Map Post	B	Boardwalk End	C	Culvert	Existing Mountain Bike Trails
B	Bridge	RA	Rock Armor	Existing Snowmobile Trails	10 Foot Contour	
BW	Boardwalk	T	Turf Stone Pavers	Superior Hiking Trail	50 Foot Contour	
Bb	Boardwalk Begin					

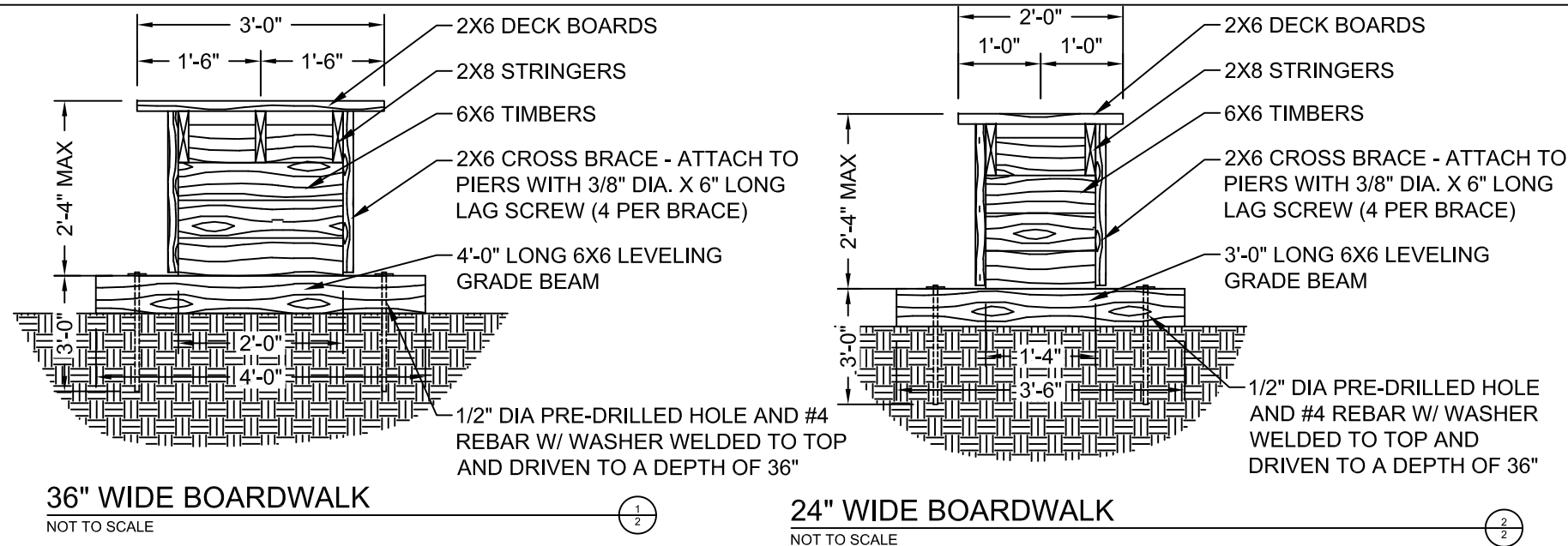
- SARGENT CREEK TRAIL CENTER -

Total Segment Length: +/- 35,551 feet (6.73 miles)
Trail Cross Slope (measured in percent rise)
0 - 15% - 615 feet; 16 - 60% - 8,981 feet; GT 60% - 29,955 feet

Map Information: Map printed February, 2016
Parcel data provided by St. Louis County.
Stream data provided by the City of Duluth
Preliminary trail and crossing points created by the City of Duluth and Community GIS Services.
St. Louis County true color aerial photography circa Spring, 2013.
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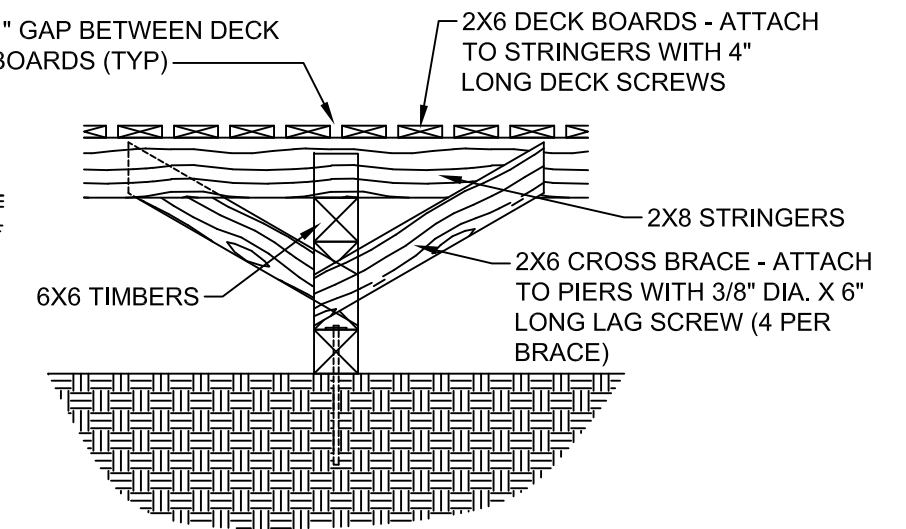
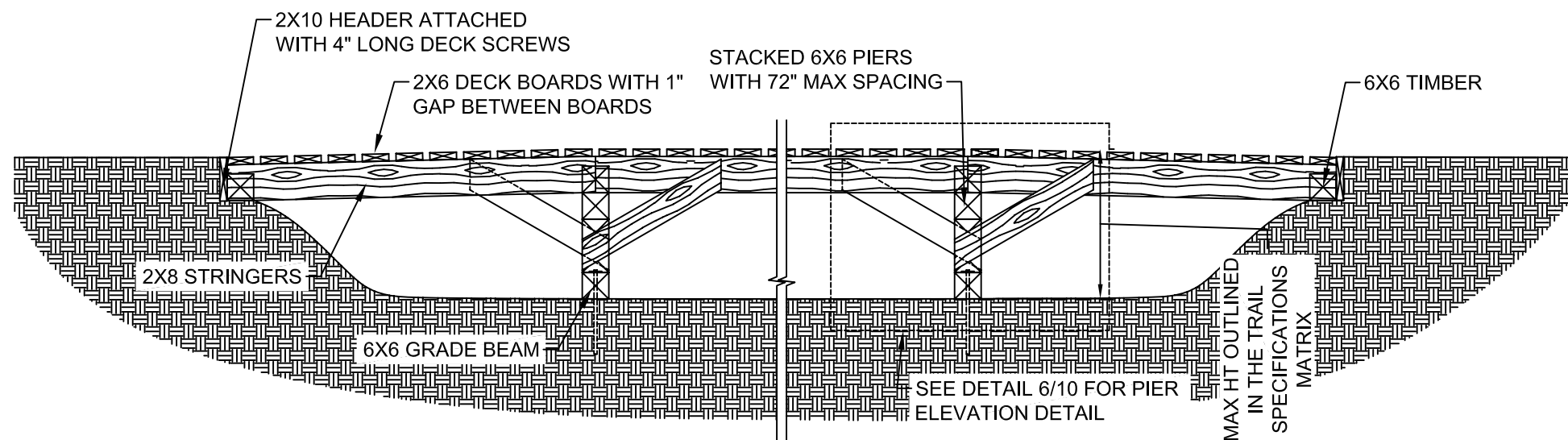
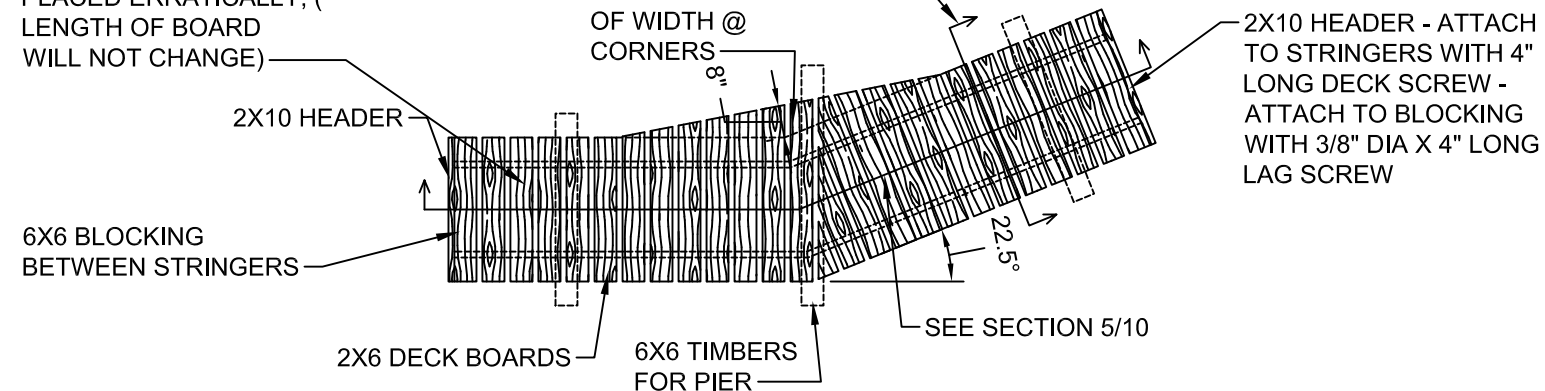
Scale:
1 Inch = 600 Feet

300 150 0 300 600
Feet



EDGE OF BOARDS MAY BE ALIGNED, HAVE SLIGHT CURVE, OR PLACED ERRATICALLY, (LENGTH OF BOARD WILL NOT CHANGE)

SEE SECTION 1/10, 2/10, 3/10 & 2/11
ADDITIONAL 8" OF WIDTH @ CORNERS

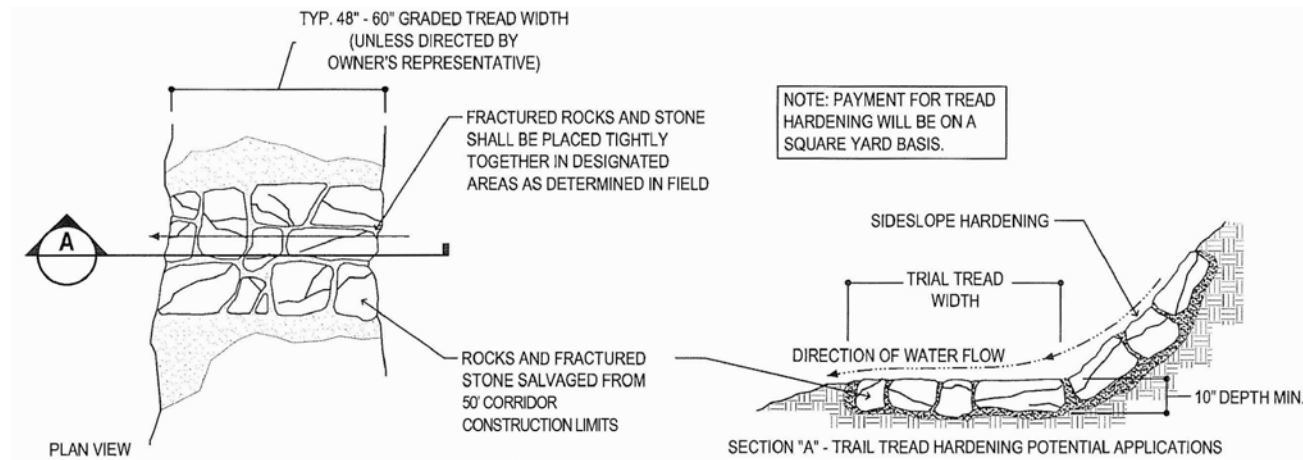


DETAIL NOTES:

1. FINAL BOARDWALK FIELD DESIGN IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE BASE ON THE ENGINEERED CONSTRUCTION DOCUMENTS HEREIN AND IN THE SPECIFICATIONS.
2. CONTRACTOR IS TO PROVIDE A TYPICAL BOARDWALK AND BRIDGE SHOP DRAWING THAT IS PLANNED TO BE CONSTRUCTED IN THE FIELD FOR APPROVAL BY THE LANDSCAPE ARCHITECT.
3. LUMBER SHALL BE SIZED TO THE FULL DIMENSIONS SHOWN ON THE PLANS UNLESS NOTED OTHERWISE. ALL LUMBER SHALL BE A ROT-RESISTANT SPECIES OR TREATED ACCORDING TO THE OPTIONS INDICATED IN THE SPECIFICATIONS.
4. ACCEPTABLE MATERIALS FOR THE DECK RIDING SURFACE MUST BE ROUGH CUT LUMBER AND INCLUDES: CEDAR, TAMARACK AND TREATED PINE. ALL OTHER LUMBER USED IN THE CONSTRUCTION CAN BE EITHER ROUGH CUT OR DIMENSIONAL TREATED PINE LUMBER.
5. ROT-RESISTANT TREATMENTS OTHER THAN THOSE LISTED MUST BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO BIDDING.
6. LEVELING GRADE BEAMS SHALL BE SHIMMED AS NECESSARY TO MEET DESIRED PITCH OF STRUCTURE AND ANCHORED TO THE GROUND WITH A MINIMUM OF 36" LONG #5 REBAR DRIVEN THROUGH A PRE DRILLED HOLE IN THE TIMBER.
7. SELECT FASTENERS AND HARDWARE IN ACCORDANCE WITH THE SPECIFICATIONS
8. SIZES, LENGTHS AND EXTENT OF ALL BOARDWALKS, ROCK HARDENED TREAD, BRIDGES AND BERMS TO BE FIELD FIT AT TIME OF CONSTRUCTION.
9. BOARDWALK & BRIDGE CONSTRUCTION LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE CONTRACTOR AND SUBMITTED TO THE OWNER FOR APPROVAL.
10. CUT BRUSH AND SLASH MUST BE DISPOSED IN AN UPLAND LOCATION AND MUST BE KEPT OUT OF STREAMS, GULLIES, SWALES, WET AREAS, AND LOW AREAS. SEE SPECIFICATIONS FOR DETAILS.
10. NO EXCAVATION OR FILL PERMITTED IN WET AREAS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONSULT WITH THE OWNER PRIOR TO DOING ANY WORK WITHIN SUSPECTED WET AREAS.
11. WOOD RAMPS OR STONE PITCHING MAY BE REQUIRED BEFORE AND AFTER BRIDGES AND BOARDWALKS. APPLICATION WILL BE DETERMINED IN THE FIELD, BY THE CONTRACTOR AND MUST BE APPROVED BY THE OWNER PRIOR TO CONSTRUCTION. PAYMENT FOR RAMPS WILL BE ADDED TO THE TOTAL LENGTH OF THE BOARDWALK AND PAYMENT FOR STONE PITCHING WILL BE PER THE UNIT BID PRICE OF ROCK ARMORING.

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2. CONTRACTOR IS TO PROVIDE A TYPICAL BOARDWALK AND BRIDGE SHOP DRAWING THAT IS PLANNED TO BE CONSTRUCTED IN THE FIELD FOR APPROVAL BY THE LANDSCAPE ARCHITECT.
3. LUMBER SHALL BE SIZED TO THE FULL DIMENSIONS SHOWN ON THE PLANS UNLESS NOTED OTHERWISE. ALL LUMBER SHALL BE A ROT-RESISTANT SPECIES OR TREATED ACCORDING TO THE OPTIONS INDICATED IN THE SPECIFICATIONS.
4. ACCEPTABLE MATERIALS FOR THE DECK RIDING SURFACE MUST BE ROUGH CUT LUMBER AND INCLUDES: CEDAR, TAMARACK AND TREATED PINE. ALL OTHER LUMBER USED IN THE CONSTRUCTION CAN BE EITHER ROUGH CUT OR DIMENSIONAL TREATED PINE LUMBER.
5. ROT-RESISTANT TREATMENTS OTHER THAN THOSE LISTED MUST BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO BIDDING.
6. LEVELING GRADE BEAMS SHALL BE SHIMMED AS NECESSARY TO MEET DESIRED PITCH OF STRUCTURE AND ANCHORED TO THE GROUND WITH A MINIMUM OF 36" LONG #5 REBAR DRIVEN THROUGH A PRE DRILLED HOLE IN THE TIMBER.
7. SELECT FASTENERS AND HARDWARE IN ACCORDANCE WITH THE SPECIFICATIONS
8. SIZES, LENGTHS AND EXTENT OF ALL BOARDWALKS, ROCK HARDENED TREAD, BRIDGES AND BERMS TO BE FIELD FIT AT TIME OF CONSTRUCTION.
9. BOARDWALK & BRIDGE CONSTRUCTION LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE CONTRACTOR AND SUBMITTED TO THE OWNER FOR APPROVAL.
10. CUT BRUSH AND SLASH MUST BE DISPOSED IN AN UPLAND LOCATION AND MUST BE KEPT OUT OF STREAMS, GULLIES, SWALES, WET AREAS, AND LOW AREAS. SEE SPECIFICATIONS FOR DETAILS.
10. NO EXCAVATION OR FILL PERMITTED IN WET AREAS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONSULT WITH THE OWNER PRIOR TO DOING ANY WORK WITHIN SUSPECTED WET AREAS.
11. WOOD RAMPS OR STONE PITCHING MAY BE REQUIRED BEFORE AND AFTER BRIDGES AND BOARDWALKS. APPLICATION WILL BE DETERMINED IN THE FIELD, BY THE CONTRACTOR AND MUST BE APPROVED BY THE OWNER PRIOR TO CONSTRUCTION. PAYMENT FOR RAMPS WILL BE ADDED TO THE TOTAL LENGTH OF THE BOARDWALK AND PAYMENT FOR STONE PITCHING WILL BE PER THE UNIT BID PRICE OF ROCK ARMORING.





CONSTRUCTION NOTE:

BACKFILL BEDDING MATERIAL SHALL BE 3"- 6" OF 3/4" - CRUSHED ROCK. THE SAME CRUSHED ROCK CAN BE UTILIZED FOR FILL BETWEEN THE SET ROCK/STONE.

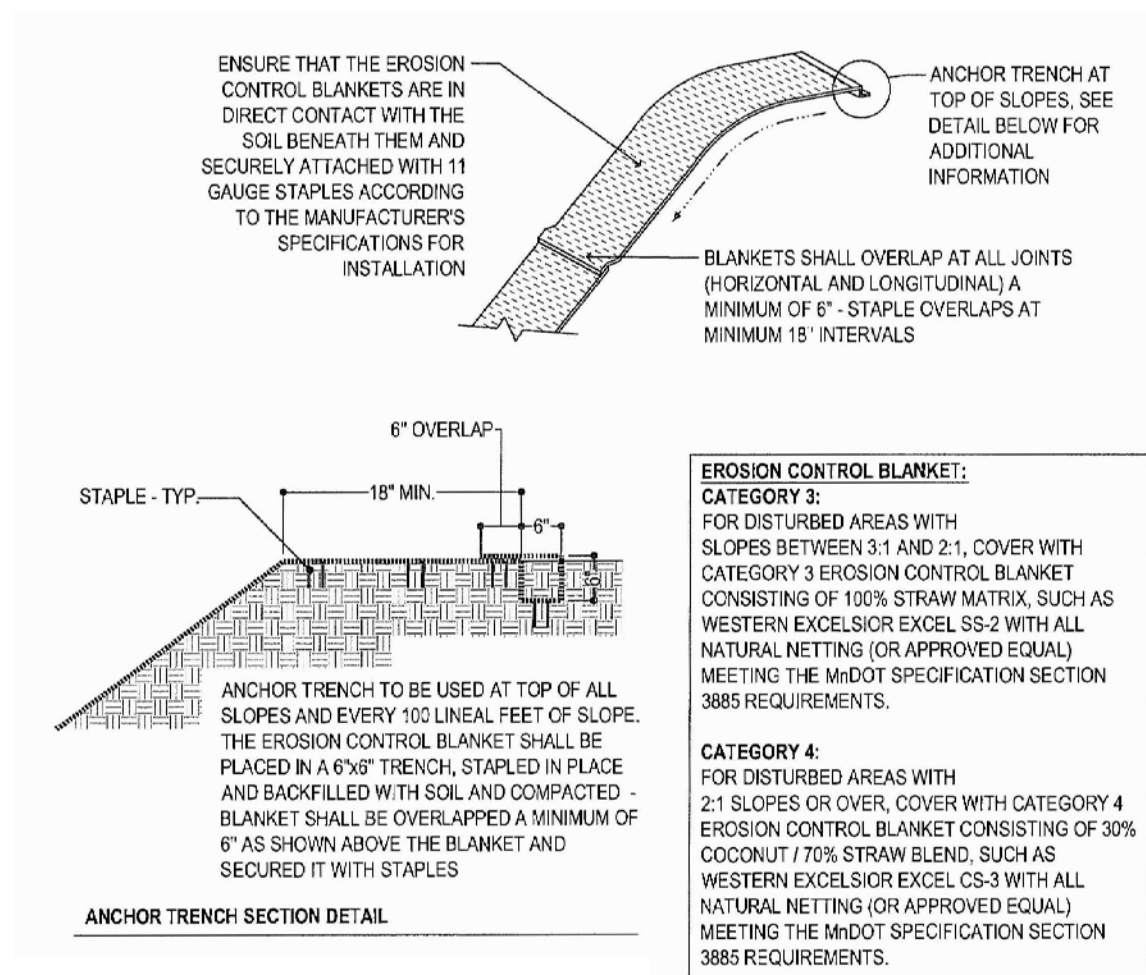
10" MINIMUM ROCK/STONE SET DEPTH.

SEAMS RUNNING IN THE DIRECTION OF TRAVEL SHALL BE MINIMIZED IN BOTH LENGTH AND WIDTH. SEAM WIDTH SHALL BE MINIMIZED AND SEAM STAGGERING SHALL BE USED WHERE POSSIBLE.

TRAIL TREAD ROCK ARMORING AND SIDESLOPE ARMORING DETAIL

NOT TO SCALE

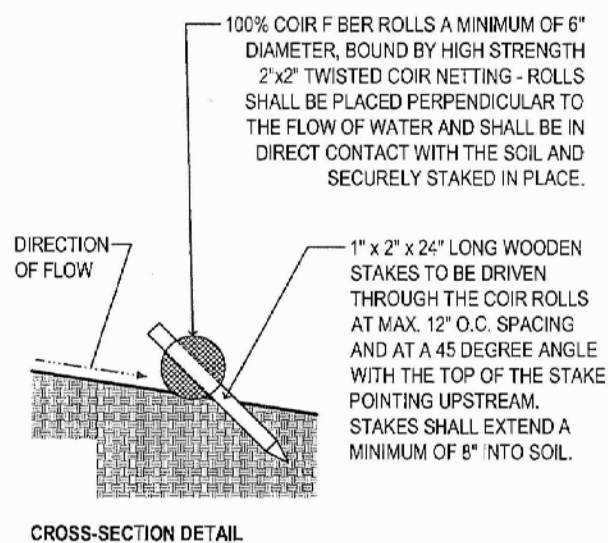
1
3



WOOD FIBER BLANKET DETAIL

NOT TO SCALE

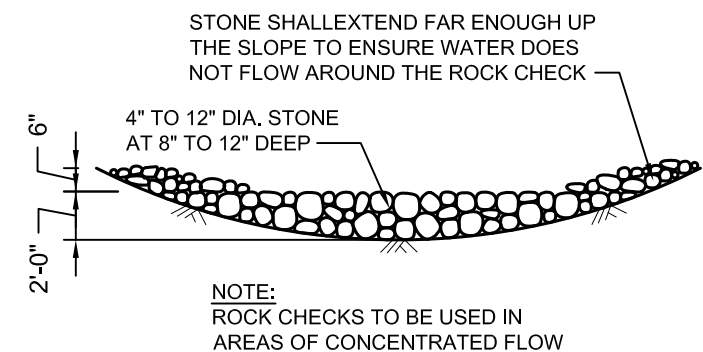
2
3



COIR ROLL DETAIL

NOT TO SCALE

3
3



ROCK CHECK DETAIL

NOT TO SCALE

4
3

SWPPP NOTES:

- ALL DISTURBED AREAS NOT PART OF ACTIVE TREAD TO BE STABILIZED WITHIN 7 DAYS OF NOT BEING WORKED. SEE (SWPPP) STORM WATER POLLUTION PREVENTION PLAN FOR DETAILS.
- WHENEVER POSSIBLE USE NATIVE DUFF MATERIALS FOUND IN THE TRAIL CORRIDOR AS A MULCH FOR COVERING SOIL EXPOSED BY BACKSLOPE AND DOWNSLOPE CUTS. WOOD CHIPS MADE FROM WOODY MATERIAL CLEARED AS A RESULT OF THE CORRIDOR CLEARING ARE AN ACCEPTABLE ALTERNATIVE TO NATIVE DUFF MULCH.
- FOR SLOPE ANGLES UNDER 3:1 USE TEMPORARY EROSION CONTROL SEED MIX AND FOR DISTURBED AREAS THAT ARE LACKING ADEQUATE NATIVE DUFF MATERIAL.
- FOR SLOPE ANGLES 3:1 AND OVER USE PERMANENT EROSION CONTROL SEED MIX AND EROSION CONTROL BLANKET FOR LAND SLIDE AREAS AND AREAS OF HEAVY DISTURBANCE. THESE AREAS MUST BE APPROVED BY THE OWNER.
- SEE SWPPP FOR SEED MIX DETAILS.
- AFTER COMPLETION OF ALL GRADING, THE TRAIL TREAD SHALL BE MECHANICALLY COMPACTED TO ITS SPECIFIED WIDTH USING A VIBRATORY PLATE, SHEEP'S FOOT, OR OTHER APPROVED EQUAL COMPACTOR.
- CUT BRUSH AND SLASH MUST BE DISPOSED IN AN UPLAND LOCATION AND MUST BE KEPT OUT OF STREAMS, GULLIES, SWALES, WETLANDS, AND LOW AREAS. SEE SPECIFICATIONS FOR DETAILS.
- NO EXCAVATION OR FILL PERMITTED IN WET & LOWLAND AREAS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONSULT WITH THE OWNER PRIOR TO DOING ANY WORK WITHIN SUSPECTED WET & LOWLAND AREAS.

Temporary Erosion Control Seed Mix			
		Seeding Rate lb/ac	% of Mix Component
Common Name	Scientific Name		
Canada/Nodding Wild Rye	<i>Elymus canadensis</i>	4	10
Winter Wheat	<i>Triticum</i> spp.	16	40
Oats	<i>Avena sativa</i>	16	40
Virginia Wild Rye	<i>Elymus virginicus</i>	4	10
Cover Crop Totals:		40	100

Temporary Seeding Assumptions: Project will disturb an estimated 2' wide path for removal of topsoil and berm construction across project length less boardwalks and bridges areas. The estimated quantity is for the temporary seeding of 6.0 acres @ 40 lbs. /ac. is 240 lbs.

Mulch – Use certified weed-free straw mulch or approved weed free equivalent @ 2 tons per acre. Temporary seeding estimated @ 6 acres * 2 tons per acre or 12 tons.

Use native duff in place of weed free straw wherever possible. Wood chips made from the woody materials created as a result of the corridor clearing is also an acceptable alternative to weed-free straw.

Permanent Erosion Control Seed Mix			
		Seeding Rate lb/ac	% of Mix Component
Common Name	Scientific Name		
Fringed Brome Grass	<i>Bromus ciliatus</i>	2	6
Bluejoint	<i>Calamagrostis canadensis</i>	0.13	0.4
Poverty Grass	<i>Danthonia spicata</i>	0.5	1.5
Canada Wild Rye	<i>Elymus canadensis</i>	1.25	4
Slender Wheatgrass	<i>Elymus trachycaulus</i>	2	6
Fowl Bluegrass	<i>Poa palustris</i>	1	3
False Melic	<i>Schizachne purpurascens</i>	0.25	1
Total Grasses:		7.13	21.9
Oats	<i>Avena sativa</i>	25.0	78.1
Cover Crop Totals:		32.13	100

Permanent Seeding Assumptions: Project will require have natural seed in duff layer in topsoil with an estimated 20% will need to be permanently seeded. Twenty % of the estimated temporary seed quantity 6.0 acres is 1.2 acres @ 32.13 lbs. /ac. or 38 lbs. for the permanent seed mixture.

Mulch – Use certified weed-free straw mulch or approved weed free equivalent @ 2 tons per acre. Permanent seeding estimated @ 1.2 acres * 2 tons per acre or 2.4 tons

Use native duff in place of weed free straw wherever possible. Wood chips made from the woody materials created as a result of the corridor clearing is also an acceptable alternative to weed-free straw.

Stormwater Pollution Prevention Plan

“Duluth Traverse” Mountain Bike Trail System

***Prepared for
City of Duluth***

February 2013



332 West Superior St.

Duluth, MN 55802

Phone: (218) 529-8200

**“Duluth Traverse”
Construction Stormwater Pollution Prevention Plan**

February 2013

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- Appendix B: Phase 1 Site Plans (Lester River and Mission Creek Areas)
- Appendix C: MPCA Duluth Traverse NPDES Application and General Permit
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Duluth Traverse: Project Construction SWPPP

This SWPPP is based on the Minnesota Pollution Control Agency's SWPPP Template. The General Stormwater Permit for Construction Activity is included as Appendix C to this SWPPP.

A NPDES Construction Stormwater Permit has been applied for the entire Duluth Traverse Mountain Bike Trail System. However, this SWPPP document titled "Duluth Traverse Phase 1 Construction SWPPP" has been designed for the Phase 1 portion of the project. The SWPPP will be amended as needed and for future phases. This SWPPP has been design to be in compliance with the Minnesota Stormwater General Permit for Construction Activity (MNR100001). The main SWPPP outlines general construction information and best management practices (BMPs) as they apply to the overall Duluth Traverse Project construction activities.

Construction Activity Information

Project name: Duluth Traverse Phase 1 Construction:

Project location: (Briefly describe where construction activity occurs. Include address if available.)

Address or describe area: Construction will start in Lester Park in Duluth, MN and also in the Mission Creek watershed located near Fond Du Lac, MN.

City or Township: Duluth **State:** MN **Zip code:** 55802

Latitude/longitude of approximate centroid of project: 46° 45' 39.80" 92° 09' 4.32"

Method of collection of latitude/longitude:

☐ GPS ☒ Online tool ☐ USGS Topographic map

Scale used:

All cities where construction will occur: Duluth

All counties where construction will occur: Carlton, St. Louis

All townships where construction will occur: Midway

Project size (number of acres to be disturbed): 35.53 acres

Project type:

☐ Residential ☐ Commercial/Industrial ☐ Road construction

☐ Residential and road construction

☒ Other (describe):

Construction of natural surface trail

Cumulative impervious surface:

Existing area of impervious surface: 0 (to the nearest quarter acre)

Post construction area of impervious surface: 10.25 (to the nearest quarter acre)

Receiving waters

Water body ID*	Name of water body	Type (ditch, pond, wetland, lake, stream, river)	Special water? (See Stormwater Permit Appendix A)	Impaired Water?** (See Stormwater Permit Appendix A)
	Mission Creek and tributaries	stream	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
	Sargent Creek and tributaries	stream	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
	Lester River and tributary	stream	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
	Associated wetlands	Wetlands	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No

* Water Body identification (ID) might not be available for all water bodies. Use the Special and Impaired Waters Search Tool at: www.pca.state.mn.us/water/stormwater/stormwater-c.html.

** Impaired water for the following pollutant(s) or stressor(s): phosphorus, turbidity, dissolved oxygen, or biotic impairment.

Dates of construction (Briefly describe where construction activity occurs. Include address if available.)

Construction start date: June 2013 **Estimated completion date:** November 2013

Contact Information**Owner of the site**

Business or firm name: City of Duluth

Corporate Authority

(Owner): Cindy Voigt **Title:** City Engineer

Mailing address: City Engineer, 411 West 1st Street 2nd Floor

City: Duluth **State:** MN **Zip code:** 55802

E-mail address: cvoigt@duluthmn.gov **Telephone** (218) 730-5200

Contact name: Matt Decur **Title:** Engineer

Mailing address: City Engineer, 411 West 1st Street 2nd Floor

City: Duluth **State:** MN **Zip code:** 55802

E-mail address: mdecur@duluthmn.gov **Telephone** (218) 730-5104

Contractor (Person who will oversee implementation of the SWPPP)

Business or firm name:

Party responsible for long-term operation and maintenance of the permanent Stormwater Management System

Business or firm name: N/A

**Corporate Authority
(Owner):**

Title:

Mailing address:

City:

State:

Zip code:

E-mail address:

Telephone:

Contact name:

Title:

Mailing address:

City:

State:

Zip code:

E-mail address:

Telephone:

General Construction Project Information

Describe the construction activity (what will be built, general timeline, etc.):

The City of Duluth proposes to construct the Duluth Traverse, a mountain bike trail system over the next five to seven years depending on financing and upon approval of all necessary permits and authorizations. Phase 1 construction is scheduled to take place in the Lester Park (3.64 miles) and Mission Creek (13-21.5 miles) areas of Duluth, Minnesota in 2013 depending on funding.

The project will construct:

- A bike treadway approximately 18-36" wide within a trail corridor approximately 60" wide
- Boardwalks to cross wetlands
- Timber bridges to cross ravines, swales and streams where existing crossings are not available
- Grade reversals and turns to slow stormwater flow

Describe soil types found at the project:

The proposed trail will cross soils that are primarily composed of Duluth glacial till soils that vary from silty to sandy loams with clay and shallow bedrock. Occasional rock outcrops can be viewed along various proposed trail routes. Trail excavation will be avoided, and will be crossed with boardwalks in unavoidable encounters with in peat and mucky soils.

General Site Information (III.A)

1. **Describe the location and type of all temporary and permanent erosion prevention and sediment control Best Management Practices (BMPs). Include the timing for installation**

and procedures used to establish additional temporary BMPs as necessary. (General Permit Part III.A.4.a)

BMPs that will be implemented project-wide where applicable include:

Pre-Construction Protocol

- Soil disturbance will be minimized wherever possible, primarily through a multi-phased construction approach. This will minimize the amount of disturbed areas that are not stabilized at any one time. (General Permit Part IV.B.2)
- All BMPs within 200 feet of site surface water shall be stabilized within 24 hours. Temporary (or permanent) sediment basins are not needed in this project because of the minimal footprint and sheet flow construction design. (Part IV.B.3).
- Contractor will be required to limit soil disturbance area in advance of actively working it, and must have the ability to stabilize and restore prior to forecasted rain events and weekends if not working on weekends.

Pre-Construction Steps

- Before land disturbing work activities begin, the limits of the area to be disturbed will be delineated with flagging, stakes, signs, or other equivalent means. Area(s) not to be disturbed will be clearly labeled (from Part IV.B.1).
- Prior to soil disturbance temporary BMPs will be used downgradient and/or in areas that are anticipated to have concentrated flow. These BMPs may include:
 - Sediment control for sheet flow
 - Vegetated buffer strips (retain existing vegetation where possible)
 - Native material barriers (e.g., topsoil stockpile/berm)

During Construction Protocol

Erosion Prevention

- Existing vegetation will be preserved where possible to limit exposed soil.
- Boardwalks and bridges will be used to cross wetlands and streams respectively minimizing soil disturbance and impact to water resources.
- Trail treadways will be constructed and shape to shed water to provide sheet flow to vegetated areas for filtration and infiltration.
- Berms will be constructed to facilitate turns on the trail treadways to slow erosion potential.
- Diversion berms with downgradient slopes within 200 feet of surface water stabilized within 24 hours.
- Stabilization of exposed soil on the back side of the berms will include seed, mulch, or blankets or similar measures.
- Grade reversals are to be installed concurrent with wattles (biologs, staked in place) to help with erosion.
- Rock hardening (armoring) in concentrated flow areas of the trail tread (not installed in wetland areas)

Sediment Control

- Vehicle tracking of sediment from the site onto nearby streets is not expected, but will be minimized by the use of smaller equipment
- If sediment tracking occurs, then regular street sweeping will be utilized and

installation of rock entrance/exit pad(s) will be considered.

- Stabilization of soils during construction within 7 days of soil being worked.
- The trail tread will be constructed to shed water.
- Grade Reversals are to be installed concurrent with wattles (biologs, staked in place) to help with erosion.
- Ditches are not planned as part of this project, however in the event that they are encountered and disturbed, the normal wetted perimeter of drainage ditches or swales must be stabilized within 24 hours after connecting to surface water (at least the 200 lineal feet closest to the surface water).
- Uninterrupted earthen slopes for grades 3:1 or steeper will be kept to no more than 75 feet in length through the utilization of bio rolls, rock checks, tread drains/grade dips or through other acceptable practices (Part IV.C.1.c.).

Good housekeeping

- Good housekeeping procedures will be implemented to ensure minimization for potential spills and other hazards through:
- Appropriate material handling procedures, labeling of materials, and storage of materials inside when possible or within adequate storage containers
- Any generated solid waste will be properly disposed.

Stormwater Inspections

- Stormwater inspections will be conducted by a trained inspectors within the following time intervals:
 - Once every 7 days during active construction AND
 - Within 24 hours after a rainfall event greater than 0.5 inches in 24 hours, and again within 7 days after such rainfall events. (Part IV.E.1)
 - A stormwater inspection form is available in Appendix E to this SWPPP
- During stormwater inspections the site will be monitored for areas where erosion or sedimentation is occurring and, if necessary, the appropriate actions will be taken and/or additional BMPs will be installed. These actions may include:
 - BMPs will be maintained and repaired.
 - BMPs will be replaced and or cleaned when sediment accumulates up to 1/2 of the device's height no later than 72 hours after discovery (Part IV.E.4.b.).
 - All non-functioning BMPs will be repaired or replaced no later than 24 hours of discovery (Part IV. E.4.a.).
 - Sediment and deltas will be removed that are deposited in surface waters within 7 days of discovery (Part IV.E.4.d.).
 - Sediment will be removed if tracked onto paved roads within 24 hours of discovery (Part IV. E.4.d.).
 - Sediment that has escaped off site will be removed in a manner and at a frequency sufficient to minimize offsite impacts (Part IV.E.4.f.).

Post-Construction Protocol

- Temporary and Final stabilization must occur after construction on a portion of the site has temporarily or permanently ceased as a means to prevent erosion.
 - All disturbed soils (except for the trail treadway) will be stabilized with seed and/or mulch or if necessary by other means. This will be accomplished as soon as possible to limit soil erosion, but in no case later than 7 days after

- the construction activity has temporarily or permanently ceased.
 - All exposed soil will be stabilized with permanent cover (uniform perennial vegetative cover to a density of 70% or constructed to shed water in a manner that minimizes soil erosion.
 - Mulch will be used as part of establishment of permanent vegetative cover.
 - All sediment will be removed from ditches and BMPs.
 - All temporary non-biodegradable BMPs will be removed and appropriately disposed/recycled.
- Stabilization will in no case shall the stabilization occur later than:
 - Within 24 hours for BMPs located within 200 feet of surface water (Part IV.B.3.).
 - Or within 7 days for other construction areas (Part IV.B.3.).
 - After final stabilization is achieved (uniform perennial vegetative cover to a density of 70% or greater over the entire pervious surface) of all originally proposed construction activity has been completed and permanent cover established on those areas a Notice of Termination must be completed and returned to the MPCA (Part IV.G.6.).
- Notice of Termination form is available as Appendix G to this document.

2. Attach to this SWPPP a table with the anticipated quantities for the life of the project for all erosion prevention and sediment control BMPs (III. A. 4.b).

A table with the anticipated quantities of BMPs is included in sub-project SWPPPs available in Appendix A.

3. Site maps that include the following features (General Permit III.A.3.b – f) are located in Appendix B:

- Due to the length of trail and the steep terrain, existing and final grades were not determined within the project limits. However, locations of boardwalks and bridges are shown for reference in the maps.
- Locations of soil types.
- Location of areas of construction

Figures 1-10 shows the Duluth Traverse (including Phase 1) in relation to all surface waters and existing wetlands within one mile from the project boundaries that will receive stormwater runoff from the site (identifiable on maps such as USGS 7.5 minute quadrangle maps or equivalent).

4. Were stormwater mitigation measures required as the result of an environmental, archaeological, or other required local, state, or federal review of the project?

☐ Yes ☒ No

If yes, describe how these measures were addressed in the SWPPP. (III.A.6.)

Not applicable

5. **Is the project located in a karst area such that additional measures would be necessary to protect drinking water supply management areas as described in Minn. R. chapters 7050 and 7060?** ☐ Yes ☒ No

If yes, describe the additional measures to be used. (III.A.7.)

Not applicable

-
6. **Does the site discharge to a calcareous fen listed in Minn. R. 7050.0180, subp. 6. b.?**
☐ Yes ☒ No

If yes, a letter of approval from the Minnesota Department of Natural Resources must be obtained prior to application for this permit. (Part I B.6 and Part III.A.8)

7. **Does the site discharge to water that is listed as impaired for the following pollutant(s) or stressor(s): phosphorus, turbidity, dissolved oxygen or biotic impairment?** Use the Special and Impaired Waters Search Tool at:

www.pca.state.mn.us/water/stormwater/stormwater-c.html. ☒ Yes ☐ No

Unnamed tributaries to Mission Creek, Mission Creek, Unnamed tributaries to Sargent Creek, Sargent Creek, Unnamed tributary to Lester River, Lester River and associated wetlands.

Does the impaired water have an approved Total Maximum Daily Loads (TMDL) with an Approved Waste Load Allocation for construction activity? ☐ Yes ☒ No

If yes:

List the receiving water, the areas of the site discharging to it, and the pollutant(s) identified in the TMDL.

List the BMPs and any other specific construction stormwater related implementation activities identified in the TMDL.

If the site has a discharge point within one mile of the impaired water and the water flows to the impaired water but no specific BMPs for construction are identified in the TMDL, the additional BMPs in Appendix A (C.1 and C.2) must be added to the SWPPP and implemented. (III.A.7). The additional BMPs only apply to those portions of the project that drain to one of the identified discharge point.

Training (III.A)

- In accordance with R10001 Part III.A.2, individuals involved with preparing, reviewing, revising, and amending this SWPPP have been properly trained in erosion prevention, sediment control, and stormwater management. At least one Contractor representative must be trained.
- Appendix D contains certificates of personnel involved with this SWPPP, and includes:
 - the names of the personnel trained that prepared this SWPPP;
 - the dates of the training;
 - name of instructor(s) and entity providing training;
 - and content of training course or workshop (including number of hours of training).

Selection of a Permanent Stormwater Management System (III.C)

1. **Will the project create a new cumulative impervious surface greater than or equal to one acre?** ☒ Yes ☐ No

The issue of impervious surface and permit requirements for the Duluth Traverse was reviewed with the MPCA. There will be 58.3 miles of new trail associated with the Duluth Traverse Mountain Bike Trail. Assuming the driving width will be approximately 18" wide, there will be 10.6 acres of new bike trail driving lane constructed. The soils in the driving lane will get compacted with use, creating a surface that retards infiltration and will result in an increase in rate and volume of stormwater runoff. The trail cross section is designed to shed water. For these reasons, the driving lane portion of the trail cross section is considered impervious. The alignment of the trail has been carefully selected to avoid wet areas and will be constructed with considerable emphasis on sustainability. The compacted trail surface will resist erosion and not be a significant source of sediment. Because of the careful design considerations, minimal sediment load and the lack of opportunity to provide permanent stormwater treatment associated with the trail, the MPCA has decided that it will not, generally, require permanent stormwater treatment for the trail portions of the project.

2. **Describe which method will be used to treat runoff from the new impervious surfaces created by the project (III.C):**

- Infiltration/Filtration

Include all calculations and design information for the method selected. See Part III.C of the permit for specific requirements associated with each method.

Due to the limited impact and the limited space available for basins and ponds, the project has been designed for infiltration and filtration using natural vegetation buffers, and BMPs to produce sheet flow rather than areas that promote concentrated flows.

3. **If it is not feasible to meet the treatment requirement for the water quality volume, describe why. This can include proximity to bedrock or road projects where the lack of right of way precludes the installation of any permanent stormwater management practices. Describe what other treatment, such as grasses swales, smaller ponds, or grit chambers, will be implemented to treat runoff prior to discharge to surface waters. (III.C)**

See item 1 discussion.

4. **If proposing an alternative method to treat runoff from the new impervious surfaces, describe how this alternative will achieve approximately 80 percent removal of total suspended solids on an annual average basis (III.C.5).**

Note: If proposing an alternative method, you must submit your SWPPP to MPCA at least 90 days prior to the starting date of the construction activity.

Not applicable

Erosion Prevention Practices (IV.B)

1. **Describe construction phasing, vegetative buffer strips, horizontal slope grading, and other construction practices to minimize erosion. Delineate areas not to be disturbed (e.g., with flags, stakes, signs, silt fence, etc.) before work begins.**
 - The Duluth Traverse Phase 1 construction activities will be phased, beginning in May 2013 (pending all authorizations). Use of a multi-phased approach will limit the area of soil exposed at one time and allow for greater attention to implementing erosion prevention practices within each defined sub-project area.
 - Duluth Traverse Phase 1 construction activities will be staged to the maximum extent practicable: a) to minimize the amount of disturbed area exposed at any one time; b) to stabilize disturbed areas as soon as possible; c) provide additional BMPs to protect portions of the work that have reached final stabilization.
 - Prior to the start of land disturbing activities, site preparation BMPs shall be implemented along the downgradient perimeter of the sub-project.
 - Erosion prevention practices will commence prior to the start of construction. Areas not to be disturbed will be delineated with flagging, stakes, and/or fencing. To prevent erosion and to control sediment from entering these areas, bio rolls, berms of topsoil or another adequate BMP will be put in place downgradient.
 - During construction native vegetative buffers will be retained wherever possible.
 - However, during the course of construction in some areas it may not be possible to retain native vegetation. Where vegetation interferes with construction activities it may be graded. The non-trail tread area will be stabilized with seed and/or mulch to minimize erosion. The trail tread will be designed to shed water to vegetated areas.
 - All non-trail tread exposed areas will be stabilized as soon as possible to limit soil erosion, but in no case later than 7 days after construction activity in that portion of the site has temporarily or permanently ceased.
2. **Describe temporary erosion protection or permanent cover used for exposed soil. All exposed soil areas must be stabilized as soon as possible but in no case later than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased (part IV.B.2).**
 - Temporary erosion protection may include, but is not limited to: straw, mulch, erosion blanket, geotextiles, rock, and similar methods.
 - Permanent erosion protection may include, but is not limited to: packed trail surface, rock hardening or armoring, permanent vegetation, and other landscaped material that will permanently arrest soil erosion.
3. **For drainage or diversion ditches, describe practices to stabilize the normal wetted perimeter within 200 lineal feet of the property edge or point of discharge to surface water. The remaining portions of the temporary or permanent ditch or swale must be stabilized within 14 days after connecting to surface waters and construction in that portion of the ditch has temporarily or permanently ceased.**
 - In general, excavation in drainage or diversion ditches will be avoided but if construction in ditches is required, it will be stabilized with rip rap, anchored mats, geotextiles, and/or other permanent stabilization methods designed to withstand concentrated flow.

- Application of mulch, hydromulch, tackifier, polyacrylamide, or similar erosion prevention practices are not acceptable temporary or permanent stabilization methods in drainage ditches or areas where concentrated flow occurs.

4. Describe other erosion prevention practices (list and describe).

- See Appendix A for project quantity estimates.

Sediment Control Practices (IV.C)

Describe sediment control practices used to minimize sediments from entering surface waters, including curb and gutter systems and storm drain inlets. Sediment control practices must include:

The sediment control practices utilized to minimize sediment from entering surface waters, curb and gutter systems, and storm drain inlets are described here. The following list comprises the minimum sediment control practices that will be implemented throughout Project Duluth Traverse. Site-specific, detailed sediment control practices are available in Appendix A.

- Unbroken earthen slopes for grades of 3:1 or steeper will be kept to no more than 75 feet in length (Part IV.C1.c.).
- Sediment control practices at all down gradient perimeters will be established before land disturbing activities begin (Part IV.C.1.b). These practices may include:
 - Grade reversals
 - Turns
 - Filter logs (biorolls)
 - Rock checks
- Storm drain inlets will be adequately protected if located nearby and potentially affected by the proposed project (Part IV.C.4).
- Vehicle tracking of sediment from the site and onto paved roads (through the use of mulch, course rock or equivalent systems) will be minimized (Part IV.C.6.).
 - If tracking occurs, street sweeping will be utilized within 24 hours of discovery and installation of a rock entrance/exit pad will be considered.
- Temporary stockpiles will be protected with bio rolls or equivalent and appropriate sediment controls (Part IV.C.5.).
- Sediment control practices will be utilized. These practices may include:
 - Vegetative buffer/filter strips or native vegetation
 - Slash barriers
 - Other native material barriers
 - Bio rolls
 - Grade reversals
 - Turns
 - Check dams
 - Rock dams

Dewatering and Basin Draining (IV.D)

Will the project include dewatering or basin draining? ☐ Yes ☒ No

1. Dewatering is not expected.

2. If yes, describe BMPs used so the discharge does not adversely affect the receiving water or downstream landowners. n/a

Additional BMPs for Special Waters and Discharges to Wetlands (Appendix A, Parts C and D)

1. Special Waters. Does your project discharge to special waters? ☒ Yes ☐ No

2. **If proximity to bedrock or road projects where the lack of right of way precludes the installation of any of the permanent stormwater management practices, then other treatment such as grassed swales, smaller ponds, or grit chambers is required prior to discharge to surface waters. Describe what other treatment will be provided.**

The proposed trail will be constructed to shed water to existing vegetated buffer/filter strips. Tread drains and grade dips will be constructed to direct water to the buffer strips filtered with bio rolls.

3. **Describe erosion and sediment controls for exposed soil areas with a continuous positive slope to a special waters, and temporary sediment basins for areas that drain five or more acres disturbed at one time.**

The project proposes no ditches and is not expected to drain 5 or more acres at one time. The project was reviewed in consultation with the MPCA, and as designed, the Agency has not required the construction of temporary sediment basins.

4. **Describe the undisturbed buffer zone to be used (not less than 100 linear feet from the special water).**

The project will use undisturbed buffer zones within 100 feet of the special waters wherever possible. However, portions of the trail are constructed within this buffer. Within this zone, removal of woody vegetation will be avoided as much as possible. Boardwalks and bridges will be used to maintain the natural buffer and avoid soil disturbance in these areas to the extent practicable.

5. **Describe how the permanent stormwater management system will ensure that the pre and post project runoff rate and volume from the 1, and 2-year 24-hour precipitation events remains the same.**

Wherever possible, the project has been designed to slow the flow of stormwater to sheet flow, to naturally vegetated buffer strips for filtering and infiltration.

6. **Describe how the permanent stormwater management system will minimize any increase in the temperature of trout stream receiving waters resulting in the 1, and 2-year 24-hour precipitation events.**

The project will be designed to minimize the removal of natural vegetation adjacent to trout streams and cross perpendicular to streams to maximize natural shading. Existing bridges will be used wherever possible to minimize new crossings of these resource waters.

7. **Wetlands. Does your project discharge stormwater with the potential for significant adverse impacts to a wetland (e.g., conversion of a natural wetland to a stormwater pond)?** ☐ Yes ☒ No

If Yes, describe the wetland mitigation sequence.

Inspections and Maintenance (IV.E)

Describe procedures to routinely inspect the construction site:

- Inspections must include stabilized areas, erosion prevention and sediment control BMPs, and infiltration areas.
- Stormwater Inspections will be conducted by City Engineering staff, a COGGS member and/or the contractor trained in inspection and installation in accordance with General Permit No. MNR100001. Inspections will be conducted:
 - once every 7 days during active construction, and
 - within 24 hours after a rainfall event greater than 0.5 inches in 24 hours, and within 7 days after such rainfall.
 - Inspections will include monitoring for areas where erosion or sedimentation is occurring. Installation of additional BMPs will be considered to correct erosion and sedimentation.
- BMPs will be maintained and repaired as follows:
 - All non-functioning BMPs will be repaired or replaced within 24 hours of discovery.
 - Sediment deposited in surface waters will be removed within 7 days of discovery.
 - Sediment tracked onto paved roads will be removed within 24 hours of discovery.

Pollution Prevention Management Measures (IV.F)

1. **Describe practices to properly manage and dispose of solid waste, including trash (IV.F.1):**

Care will be taken to prevent wastes from contacting stormwater. Collected sediment, floating debris, paper, plastic, fabric, construction debris, and other wastes will be properly disposed of in appropriate covered waste containers in order to minimize stormwater contact with waste products. All solid wastes will be collected by the contractor and removed from the site.
2. **Described practices to properly manage hazardous materials (IV.F.2):**

Care will be taken to prevent hazardous materials from contacting stormwater. Appropriate materials handling procedures will be implemented on-site. Oil, gasoline, and any other hazardous substances will be properly stored to prevent spills or leaks. The containers will be properly labeled and secured (via padlock when off-site) in appropriate secondary containment whenever possible.
3. **Describe practices for external washing of trucks and other construction vehicles (IV.F.3):**

If vehicle tracking is found to be contributing to the stormwater sediment load, then a vehicle washing station will be set up before the vehicle site exit to facilitate the removal of excess dirt prior to exiting the site. If necessary during muddy conditions, physical cleaning or pressure washing of the undercarriage may be employed. Runoff from the wash area will be contained to settle sediment prior to it leaving the immediate wash area.
4. **Describe how are you going to provide a safe, lake proof, concrete washout on site (IV.F.4):**

Concrete is not planned to be used on this project.
5. **Describe your spill prevention plan:**

Care will be taken to prevent spills, including implementation of good housekeeping measures and minimization of the amount of chemicals, waste-generating products, and hazardous materials brought on site.

Describe measures to address sanitary and septic waste:

6. Portable sanitary facilities may be brought on site. Sanitary waste from the portable facilities will be disposed of, as necessary by a licensed sanitary waste provider in accordance with applicable regulations. Facilities will be secured to prevent spilling waste/chemicals from portable toilets caused by vandalism.

Final Stabilization (IV.G)

Describe how you will achieve final stabilization of the site (IV.G).

All exposed non-trail tread soil will be stabilized with permanent cover (uniform perennial vegetative cover with a density of 70% over the entire pervious surface). The native trail tread designed to shed water will be stabilized through compaction during construction and use.

Records Retention (III.D)

Describe your record retention procedures (must be kept at the site) (III.D). Records must include:

- Copy of SWPPP and any changes
- Training documentation (III.A.2.)
- Inspection and maintenance records
- Permanent operation and maintenance agreements
- Calculations for the design of temporary and permanent stormwater management systems

This SWPPP is a template for the entire Duluth Traverse Mountain Bike Trail System. Specifications are primarily designed for Phase 1 construction of trails in the Lester Park and Mission Creek areas. Future phases of the Traverse are dependent on funding and permitting approvals. This SWPPP will need to be amended as needed by the contractor and City of Duluth for this project and future phases of construction.

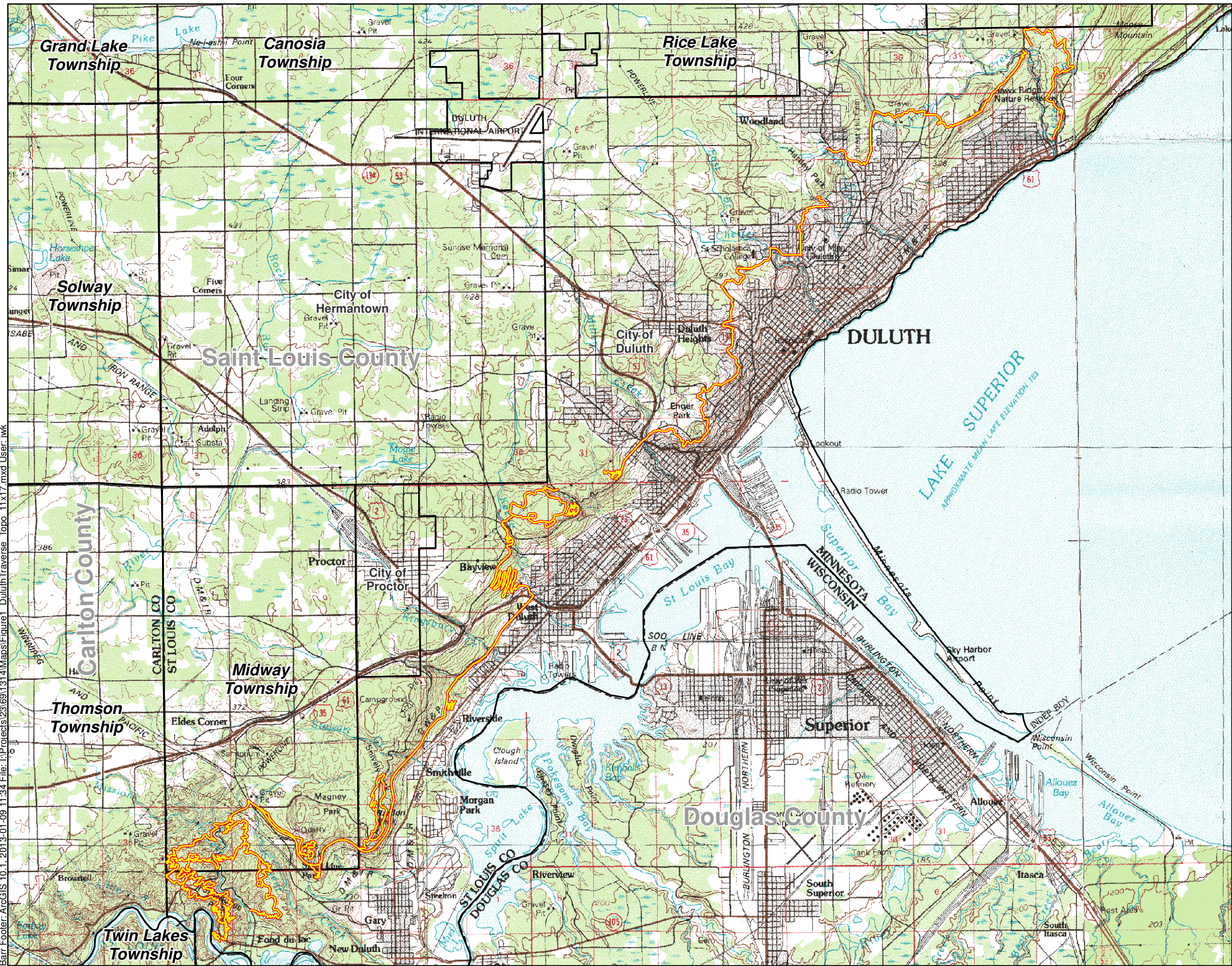
The following records will be retained on-site along with this SWPPP:


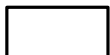
- Training documentation (Appendix D).
- SWPPP Amendments (Appendix F), which will include updates as they apply to Phase 1 and any future phase work.
- Inspection and maintenance records (Appendix E).

If engineered temporary or permanent stormwater controls are installed then long-term operation and maintenance agreements as well as design calculations will be added to this plan as appropriate.

Figures

Barr Footer: ArcGIS 10.1, 2013-01-09 11:34 File: I:\Projects\23\691314\Map\Figure1 Duluth Traverse Topo 11x17.mxd User: jwk



-  Duluth Traverse Trails
-  Minor Civil Divisions

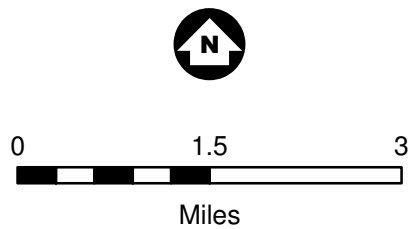


Figure 1

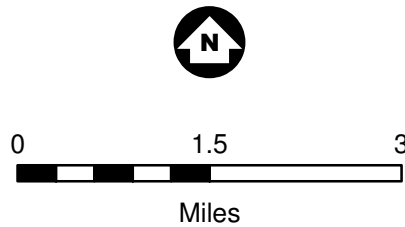
TRAIL LOCATION
Duluth Traverse
Duluth, Minnesota



Barr Footer: ArcGIS 10.1, 2013-01-09 11:53 File: I:\Projects\23\691314\Map\Figure2 Duluth Traverse Phase1 Trails 11x17.mxd User: iwk



- Proposed Lester River Trail - Phase 1
- Proposed Mission Creek Trail - Phase 1
- Other Duluth Traverse Trails
- Minor Civil Divisions

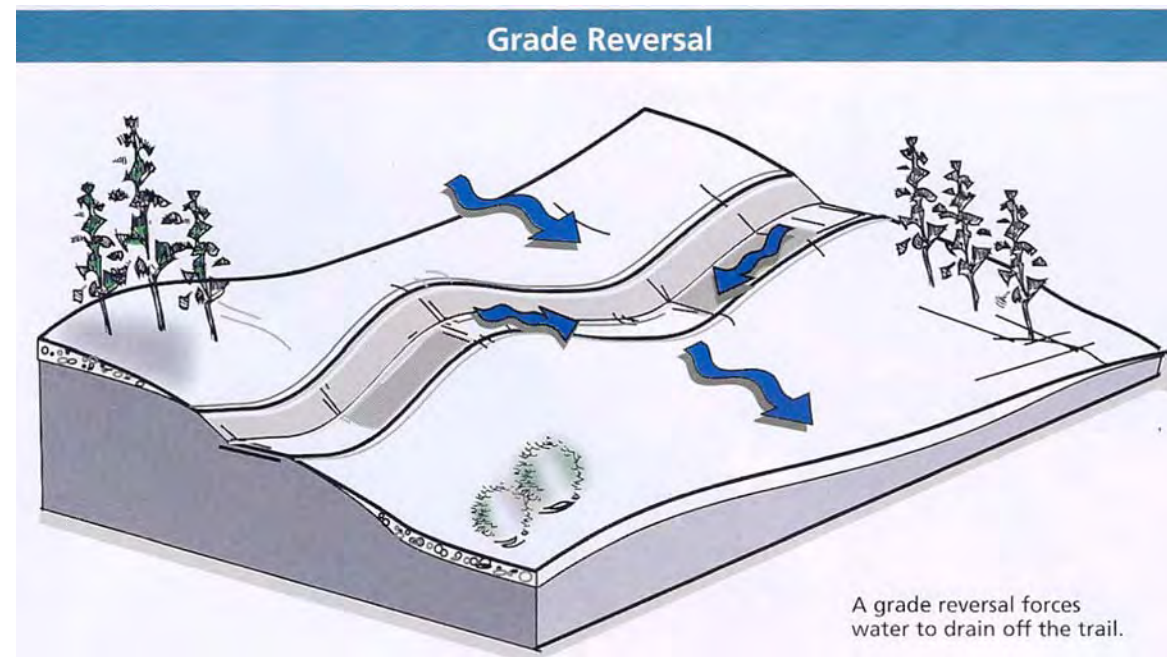
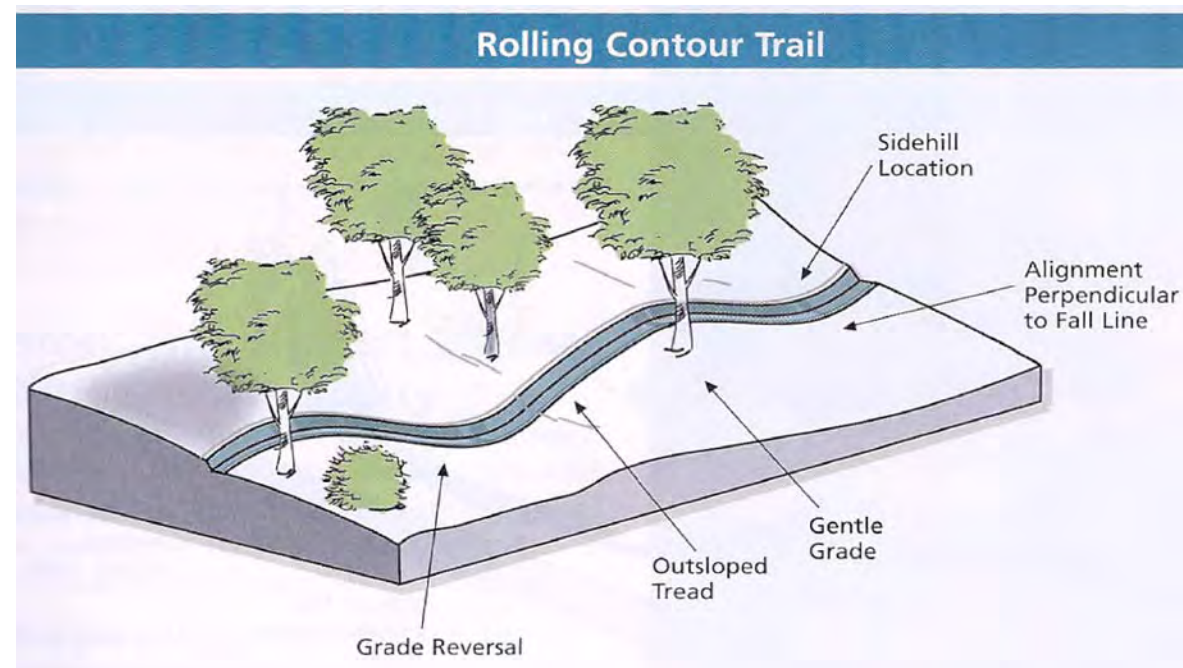
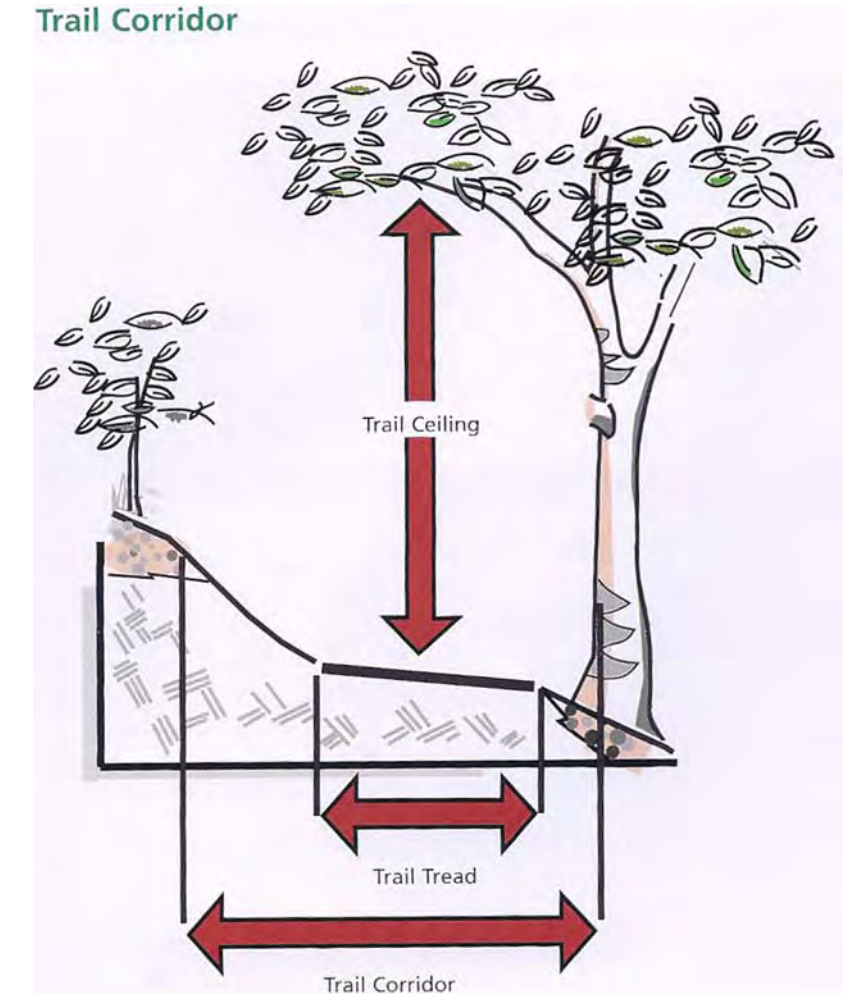
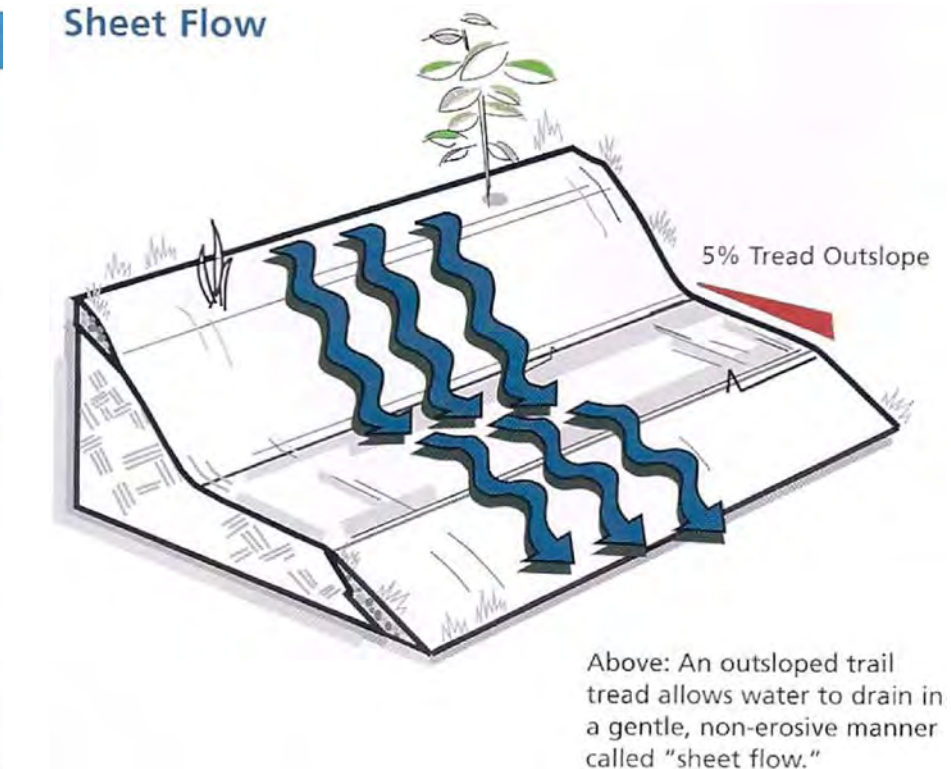
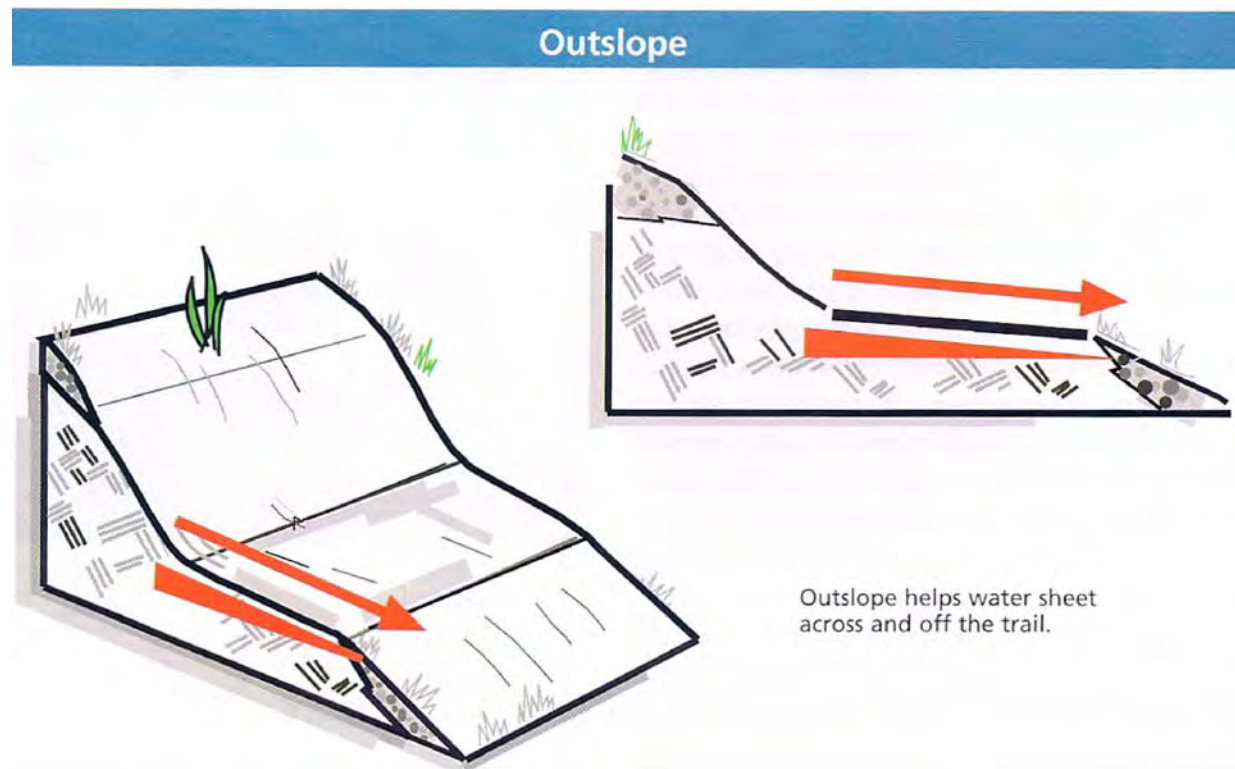


1 Inch = 1.5 Miles

Figure 2

PHASE 1 TRAIL LOCATIONS
Duluth Traverse
Duluth, Minnesota





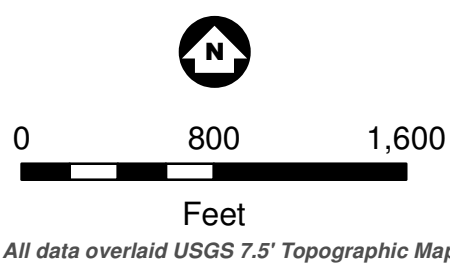
All images provided courtesy of International Mountain Bike Association (IMBA)

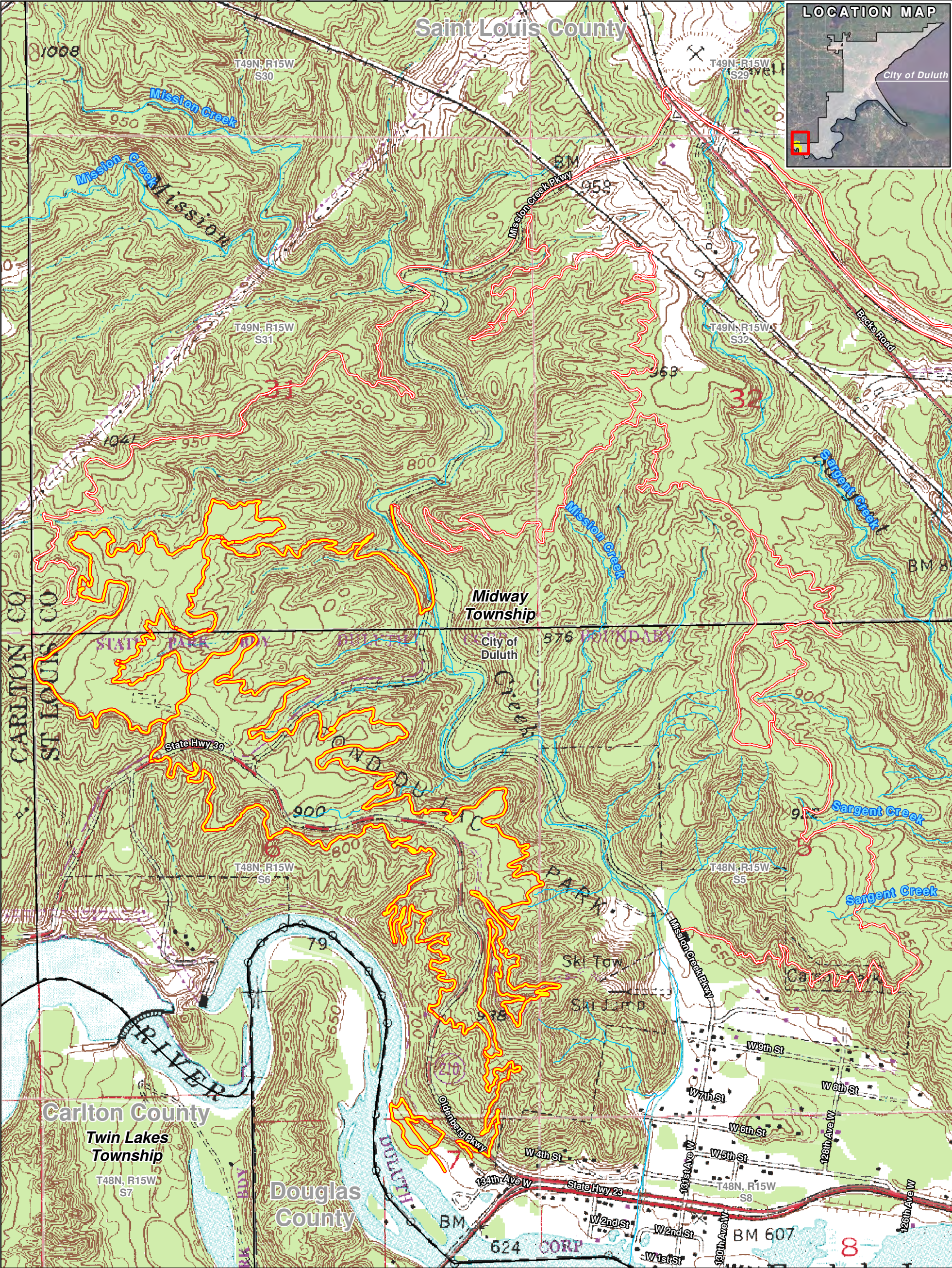
Figure 3
TRAIL CONFIGURATIONS
Duluth Traverse
Duluth, Minnesota





**LESTER RIVER PROPOSED TRAIL
PHASE 1**
Duluth Traverse
Duluth, Minnesota



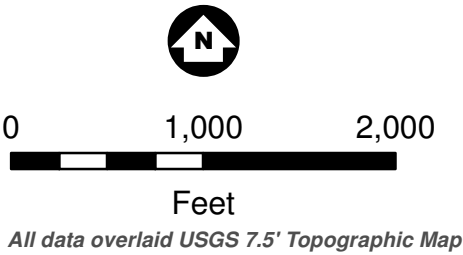


- Mission Creek Proposed Trails
- Duluth Traverse Proposed Trails
- Duluth Streams



Figure 5

**MISSION CREEK PROPOSED TRAIL
PHASE 1**
Duluth Traverse
Duluth, Minnesota





- ARCHITECTURE
- ENGINEERING
- LANDSCAPE ARCHITECTURE
- INTERIOR DESIGN

704 EAST HOWARD STREET
HIBBING, MINNESOTA 55746
PHONE 218-263-6868
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EMAIL: archres@arinn.com

126 EAST SUPERIOR STREET
DULUTH, MINNESOTA 55802
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FAX 218-727-8483
EMAIL: archres@cplinternet.com

**DULUTH
TRAVERSE
TRAIL
LESTER PARK
PHASE 1**

PROJECT NO.: 12-039
DATE: JANUARY-2013
DRAWN BY: TTP
REVISIONS:

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 LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRELIMINARY
DO NOT USE FOR CONSTRUCTION

JAMES M. STANBURY - 2013
LANDSCAPE ARCHITECT REG. NO. 46377

TRAIL DETAILS

Figure 6

MATERIAL NOTES:

A. LUMBER SHALL BE ROUGH SAWN RED PINE #2 OR BETTER, SIZED TO THE FULL DIMENSIONS SHOWN ON THE PLANS UNLESS NOTED OTHERWISE. ALL LUMBER SHALL BE TREATED ACCORDING TO THE OPTIONS INDICATED BELOW.

PRIOR TO BIDDING.

A.1. PRESERVATIVE TREATMENT:

A.1.1. LUMBER SHALL BE TREATED IN ACCORDANCE WITH AWPA STANDARD C2/C9
A.1.1.1. PRESERVATIVES FOR MEMBERS NOT IN GROUND CONTACT SHALL BE ACQ
(0.4 LBS/CF RET.)

A.1.1.2. PRESERVATIVES FOR 6x6's OR OTHER MEMBERS IN GROUND CONTACT SHALL BE ACQ (0.60 LBS/CF RET.)

A.1.2. FIELD TREATMENT: ALL FIELD CUTS AND DRILLED HOLES SHALL BE SATURATED WITH 2 COATS OF COPPER NAPHTHENATE (2% SOLUTION).

ALLOW TREATMENT TO ABSORB INTO WOOD PRIOR TO APPLYING SECOND COAT AS PER TREATMENT MANUFACTURERS RECOMMENDATIONS.

A.1.2.1. WHENEVER POSSIBLE APPLY THIS TREATMENT AWAY FROM WATER. USE EXTRA CARE IN THIS TREATMENT PROCESS NEAR OR OVER WATER. REFER TO MANUFACTURER'S RECOMMENDATIONS.

A.2. HARDWARE

A.2.1. HOT-DIP GALVANIZED (TRIPLE DIPPED): ALL HARDWARE SHALL MEET ASTM A307. HOT DIP GALVANIZE ALL HARDWARE IN ACCORDANCE WITH ASTM A153.

A.2.2. ATTACH DECKING TO STRINGERS WITH 4" X #10 SCREWS. TWO PER DECK BOARD TO EACH STRINGER CONNECTION.

A.2.3. ATTACH STRINGERS TO PIERS WITH 3/8" DIA. LAG SCREWS WITH FLAT WASHER ON HEAD END. TWO LAG SCREWS PER STRINGER TO PIER CONNECTION.

A.2.3. ATTACH 6X6's TOGETHER WITH 10" LONG RING-SHANK SPIKES. STAGGER SPIKES - MINIMUM OF 4 SPIKES FOR EACH 6X6 TO 6X6 CONNECTION.

A.2.4. ATTACH HEADERS TO STRINGERS WITH 4" LONG X #10 SCREWS. THREE PER HEADER TO STRINGER CONNECTION.

A.2.5. ATTACH HEADER AND STRINGER TO 6X6 BLOCKING WITH 4" LONG X #10 SCREWS. TWO PER HEADER TO LEVELING GRADE BEAM OR STRINGER TO LEVELING GRADE BEAM CONNECTION.

3. LEVELING GRADE BEAMS SHALL BE SHIMMED LEVEL WITH 2 X 6 ROUGH SAWN RED PINE #2 OR BETTER SIZED TO THE FULL DIMENSIONS SHOWN ON PLAN.

3.1. PRESERVE LUMBER IN ACCORDANCE TO ABOVE AWPA PRESERVATION TREATMENT.

NO EXCAVATION OR FILL IS PERMITTED IN WETLANDS, CONSULT WITH OWNER'S REPRESENTATIVE

2X10 HEADER - ATTACH TO
STRINGERS WITH 4" LONG DECK
SCREW - ATTACH TO BLOCKING
WITH 3/8" DIA X 4" LONG LAG SCREW

CUSTOM CUT STRINGERS AND END DECK BOARD TO FIT ADJACENT TO EXISTING BOULDER WITH MINIMUM GAP

EXISTING LARGE BOULDER

2-4 MAY 11 UNLESS
APPROVED BY OWNER'S
REPRESENTATIVE

SEE DETAIL 3/8 FOR PIER
ELEVATION DETAIL

GRADE BEAM -

SEE DETAIL 3/8 FOR
ELEVATION DETAIL

TYPICAL ELEVATION DETAIL FOR BOARDWALK (WET AREA CROSSINGS)

NOT TO SCALE

BOARDWALK CROSSING ABUTTING TO BOULDER

NOT TO SCALE

CITY OF DULUTH PROJECT NO. XXXXX

DRAWN BY: TTP

SHEET NO. 9 OF X



ARCHITECTURAL
RESOURCES • INC.

- ARCHITECTURE
- ENGINEERING
- LANDSCAPE ARCHITECTURE
- INTERIOR DESIGN

WEB SITE: www.arfirm.com

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EMAIL: arches@citynet.net

DULUTH
TRAVERSE
TRAIL
LESTER PARK
PHASE 1

DULUTH, MINNESOTA

PROJECT NO.: 12-039

DATE: JANUARY-2013

DRAWN BY: TTP

REVISIONS:

I HEREBY CERTIFY THAT THIS PLAN
SPECIFICATION, OR REPORT WAS
PREPARED BY ME OR UNDER MY
DIRECT SUPERVISION, AND THAT I
AM A DULUTH LICENSED PROFESSIONAL
ENGINEER IN THE STATE OF MINNESOTA.
PRELIMINARY
DO NOT USE FOR
CONSTRUCTION
JAMES M. HANSEN, P.E. 000007
EXPIRATION DATE: JANUARY 2013
PROJECT NUMBER: 12-039

TRAIL
DETAILS

Figure 7

MATERIAL NOTES:
A. LUMBER SHALL BE ROUGH SAWN RED PINE #2 OR BETTER, SIZED TO THE FULL DIMENSIONS SHOWN ON THE PLANS UNLESS NOTED OTHERWISE. ALL LUMBER SHALL BE TREATED ACCORDING TO THE OPTIONS INDICATED BELOW.
TREATMENTS OTHER THAN THOSE LISTED MUST BE APPROVED BY THE ENGINEER PRIOR TO BIDDING.

A.1. PRESERVATIVE TREATMENT:

A.1.1. LUMBER SHALL BE TREATED IN ACCORDANCE WITH

AWPA STANDARD C2/C9.

A.1.1.1. PRESERVATIVES FOR MEMBERS NOT IN GROUND

CONTACT SHALL BE ACQ (0.4 LBS/CF RET.)

A.1.1.2. PRESERVATIVES FOR 6x6's OR OTHER MEMBERS IN

GROUND CONTACT SHALL BE ACQ (0.60 LBS/CF RET.)

A.1.2. FIELD TREATMENT: ALL FIELD CUTS AND DRILLED HOLES

SHALL BE SATURATED WITH 2 COATS OF COPPER

NAPHTHENATE (2% SOLUTION). ALLOW TREATMENT TO

ABSORB INTO WOOD PRIOR TO APPLYING SECOND COAT

AS PER TREATMENT MANUFACTURERS

RECOMMENDATIONS.

A.1.2.1. WHENEVER POSSIBLE APPLY THIS TREATMENT AWAY

FROM WATER. USE EXTRA CARE IN THIS TREATMENT

PROCESS NEAR OR OVER WATER. REFER TO

MANUFACTURER'S RECOMMENDATIONS.

A.2. HARDWARE

A.2.1. HOT-DIP GALVANIZED (TRIPLE DIPPED): ALL HARDWARE

SHALL MEET ASTM A307. HOT DIP GALVANIZE ALL

HARDWARE IN ACCORDANCE WITH ASTM A153.

A.2.2. ATTACH DECKING TO STRINGERS WITH 4" X #10 SCREWS.

A.2.3. ATTACH STRINGERS TO PIERS WITH 3/8" DIA. LAG SCREWS

WITH FLAT WASHER ON HEAD END. TWO LAG SCREWS PER

STRINGER TO PIER CONNECTION.

A.2.3. ATTACH 6x6's TOGETHER WITH 10" LONG RING-SHANK

SPIKES. STAGGER SPIKES - MINIMUM OF 4 SPIKES FOR

EACH 6x6 TO 6x6 CONNECTION.

A.2.4. ATTACH HEADERS TO STRINGERS WITH 4" LONG X #10

SCREWS. THREE PER HEADER TO STRINGER CONNECTION.

A.2.5. ATTACH HEADER AND STRINGER TO 6x6 BLOCKING WITH 4"

LONG X #10 SCREWS. TWO PER HEADER TO LEVELING

GRADE BEAM OR STRINGER TO LEVELING GRADE BEAM

CONNECTION.

A.3. LEVELING GRADE BEAMS SHALL BE SHIMMED LEVEL WITH 2 X 6

ROUGH SAWN RED PINE #2 OR BETTER SIZED TO THE FULL

DIMENSIONS SHOWN ON PLAN.

A.3.1. PRESERVE LUMBER IN ACCORDANCE TO ABOVE AWPA

PRESERVATION TREATMENT.

GENERAL NOTES:

1. SEE SPECIFICATIONS SECTION 3 FOR PROJECT DETAILS
2. SEE SPECIFICATIONS SECTION 4 FOR FINISHED TRAIL CONSTRUCTION DETAILS.
3. SEE SPECIFICATIONS SECTION 5 FOR UNIT DEFINITIONS AND TREAD CONSTRUCTION DETAIL DRAWINGS.
4. ALL DISTURBED AREAS NOT PART OF ACTIVE TREAD TO BE SEEDED AND MULCHED WITHIN 7 DAYS OF NOT BEING WORKED. SEE (SWPPP) STORM WATER POLLUTION PREVENTION PLAN FOR DETAILS.
5. CUT BRUSH AND SLASH MUST BE DISPOSED IN AN UPLAND LOCATION AND MUST BE KEPT OUT OF STREAMS, GULLIES, SWALES, WETLANDS, AND LOW AREAS. SEE SPECIFICATIONS FOR DETAILS.
6. NO EXCAVATION OR FILL PERMITTED IN WETLANDS CONSULT WITH OWNERS REPRESENTATIVE PRIOR TO DOING ANY WORK WITHIN SUSPECTED WETLAND AREAS.

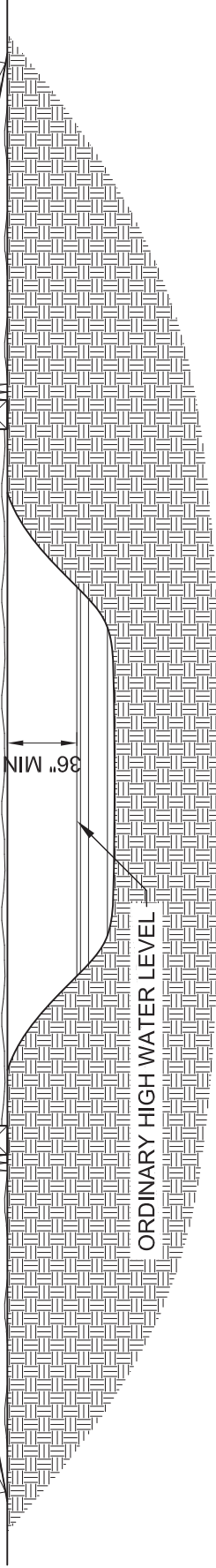
2X12 HEADER ATTACHED
WITH 4" LONG DECK SCREWS

2X12 HEADER AT RAMP AND
BOARDWALK ATTACHED WITH
4" LONG DECK SCREWS

6X6 TIMBER

2X12 STRINGER

RAMP CONSTRUCTED FLUSH WITH
BOARDWALK & ATTACHED WITH 4"
LONG DECK SCREWS



ORDINARY HIGH WATER LEVEL

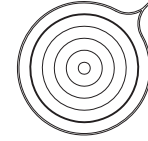
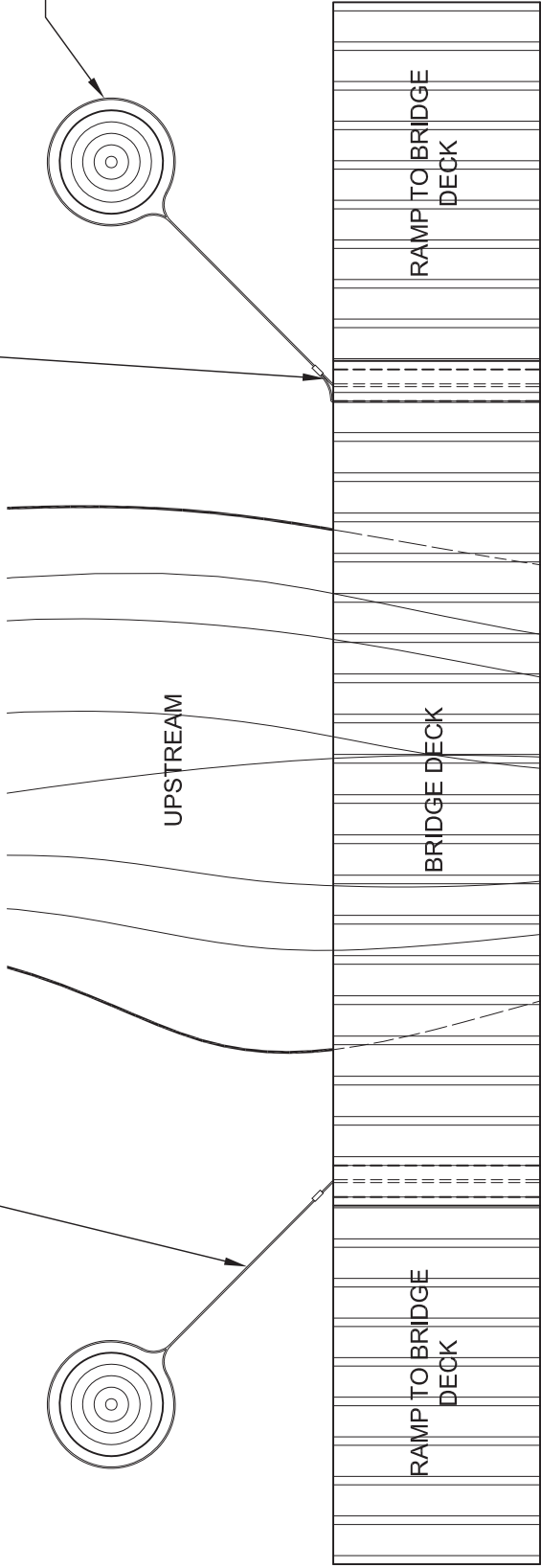
TYPICAL ELEVATION DETAIL FOR BRIDGE (CREEK CROSSINGS)

NOT TO SCALE

1
9

DO NOT PUT TENSION IN CABLE. LAY LOOSELY ON
GROUND AND LOOSELY WRAP AROUND BASE OF
TREE AT GROUND LEVEL TO PREVENT GIRTLING

LOOP 1/4" STAINLESS STEEL CABLE AROUND 2X12
STRINGER ON UP STREAM SIDE OF BRIDGE AND
ATTACH TO CABLE TETHERING TO TREE



LOOP 1/4" STAINLESS
STEEL CABLE AROUND
TREE UPSTREAM OF
BRIDGE. SELECT ONLY
TREES THAT ARE
HEALTHY & FREE OF
DEFECTS OR DYING
BRANCHES.

TYPICAL PLAN DETAIL FOR BRIDGE (CREEK CROSSINGS)

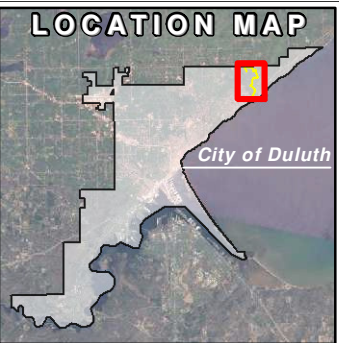
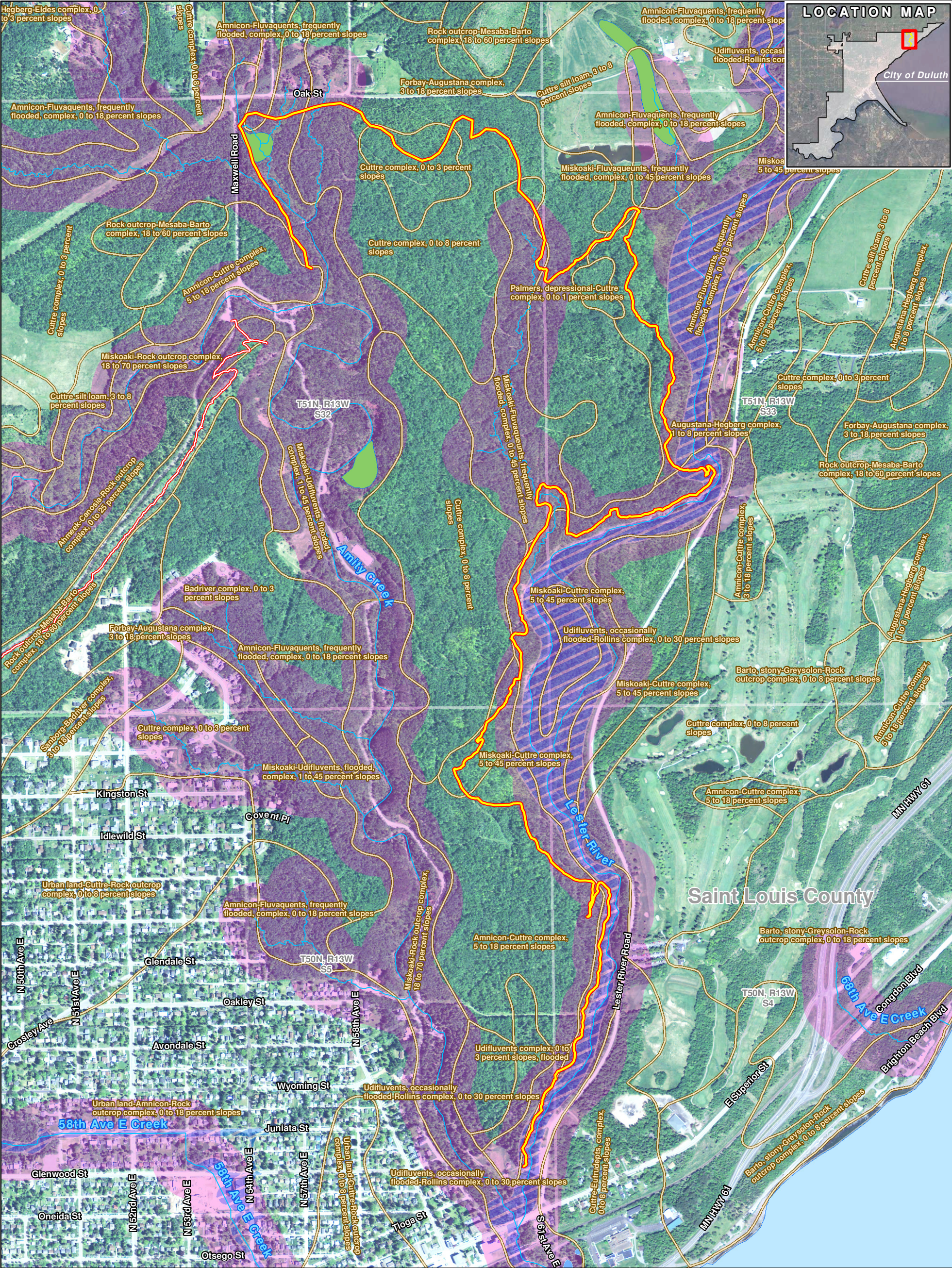
NOT TO SCALE

2
9

CITY OF DULUTH PROJECT NO. XXXX

DRAWN BY: TTP

SHEET NO. 10 OF X

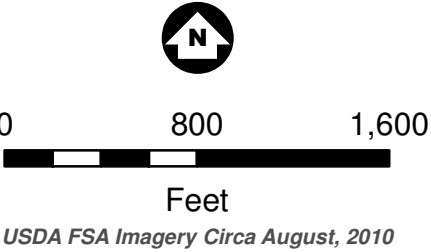


- Lester Proposed Trail
- Duluth Traverse Proposed Trails
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine
- Duluth Streams
- Soils
- City of Duluth Shoreline Zoning Districts
- FEMA Floodplain

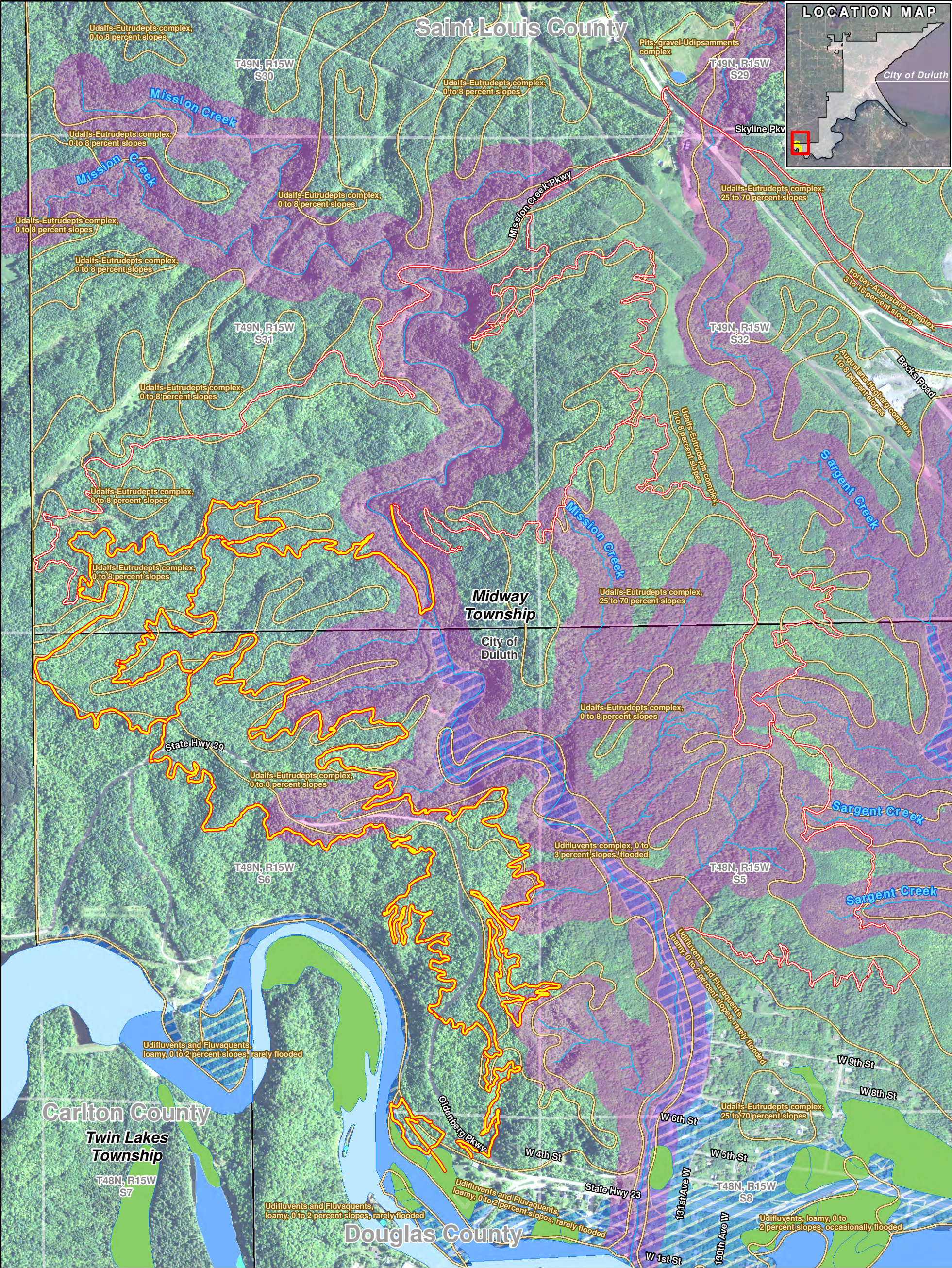


Figure 9

LESTER RIVER PROPOSED TRAIL PHASE 1 Duluth Traverse Duluth, Minnesota



USDA FSA Imagery Circa August, 2010

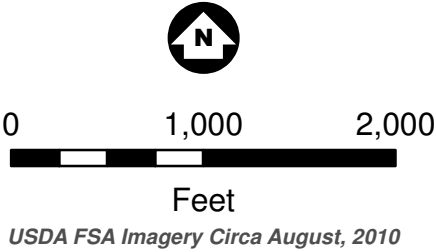


- Mission Creek Proposed Trails
- Duluth Traverse Proposed Trails
- Duluth Streams
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine
- Soils
- City of Duluth Shoreline Zoning Districts
- FEMA Floodplain



Figure 10

**MISSION CREEK PROPOSED TRAIL
PHASE 1**
Duluth Traverse
Duluth, Minnesota



USDA FSA Imagery Circa August, 2010

Appendices

Appendix A

Duluth Traverse Estimated Quantities and Design Computations

Duluth Traverse, Phase 1 - Mission Creek Project.
Trail length including features: 21.6 miles

Estimate of Structures

- Boardwalks: 98 totaling 1,669 ft (crossing flat areas)
- Elevated Boardwalks: 41 totaling 611 ft (crossings over swales or ditches)
- Rock Hardenings: 10 totaling 77.5 ft (concentrated flow areas)
- Bridges: 7 totaling 94 ft (crossings over 3' in height above grade)

Points with no Attributed Lengths

- 149 Berms (turns)
- 9 Switchbacks (turns)

Duluth Traverse, Phase 1 - Lester River Project.
Trail length including features: 3.5 miles

Estimate of Structures

- Boardwalks: 25 totaling 502 ft (crossing flat areas)
- Rock Crib Wall: 1 totaling 10.5 ft
- Rock Hardenings: 1 totaling 14 ft (concentrated flow areas)
- Bridge w/ Railing: 1 totaling 21 ft (crossings over 3' in height above grade)

Points with no Attributed Lengths

- 18 Berms – turns (Estimated total length of 242 ft)

Assumptions: 2 rolling grade dips/drains per turn (berm or switch back)

Install one (1) 6" 4-6' long bio roll per trail rolling grade dip/. Install 1 stake per 2' length of bio roll.

Assume a disturbed area 2' wide adjacent to trail of side cast topsoil to be reseeded based on length of trail less boardwalk and bridge lengths for temporary seeding. Assumptions native seed regenerating in duff layer, and 15-20 % of disturbed area will need permanent seed mix.

Rock hardenings shall be installed in concentrated flow sections of trail tread where needed but not in wetland areas.

Boardwalks / bridges will cross wetlands, swales and ditches / streams respectively.

Temporary Erosion Control Seed Mix			
		Seeding Rate lb/ac	% of Mix Component
Common Name	Scientific Name		
Canada/Nodding Wild Rye	<i>Elymus canadensis</i>	4	10
Winter Wheat	<i>Triticum</i> spp.	16	40
Oats	<i>Avena sativa</i>	16	40
Virginia Wild Rye	<i>Elymus virginicus</i>	4	10
Cover Crop Totals:		40	100

Temporary Seeding Assumptions: Project will disturb an estimated 2' wide path for removal of topsoil and berm construction across project length less boardwalks and bridges areas. The estimated quantity is for the temporary seeding of 6.0 acres @ 40 lbs. /ac. is 240 lbs.

Mulch – Use certified weed-free straw mulch or approved weed free equivalent @ 2 tons per acre. Temporary seeding estimated @ 6 acres * 2 tons per acre or 12 tons.

Permanent Erosion Control Seed Mix			
		Seeding Rate lb/ac	% of Mix Component
Common Name	Scientific Name		
Fringed Brome Grass	<i>Bromus ciliatus</i>	2	6
Bluejoint	<i>Calamagrostis canadensis</i>	0.13	0.4
Poverty Grass	<i>Danthonia spicata</i>	0.5	1.5
Canada Wild Rye	<i>Elymus canadensis</i>	1.25	4
Slender Wheatgrass	<i>Elymus trachycaulus</i>	2	6
Fowl Bluegrass	<i>Poa palustris</i>	1	3
False Melic	<i>Schizachne purpurascens</i>	0.25	1
Total Grasses:		7.13	21.9
Oats	<i>Avena sativa</i>	25.0	78.1
Cover Crop Totals:		32.13	100

Permanent Seeding Assumptions: Project will require have natural seed in duff layer in topsoil with an estimated 20% will need to be permanently seeded. Twenty % of the estimated temporary seed quantity 6.0 acres is 1.2 acres @ 32.13 lbs. /ac. or 38 lbs. for the permanent seed mixture.

Mulch – Use certified weed-free straw mulch or approved weed free equivalent @ 2 tons per acre. Permanent seeding estimated @ 1.2 acres * 2 tons per acre or 2.4 tons

SECTION 31 25 00 EROSION & SEDIMENTATION CONTROLS**PART 1 - GENERAL****1.01 SUMMARY**

- A. The Conditions of the Contract and the Provisions of Division 01 apply to all work of this Section.
- B. Section Includes:
 - 1. Temporary measures to control soil erosion or sediment control devices.
 - 2. Furnishing, installing and maintaining erosion or sediment control devices.
- C. Related Work Specified Elsewhere:
 - 1. None
- D. Method of Measurement
 - 1. Bale Checks
 - a. Measure by number of bales furnished and acceptably installed.
 - 2. Erosion Control Blanket
 - a. Erosion control blanket quantities will be measured by square yard and acceptably installed.
 - 3. Sediment Logs/Coir Logs
 - a. Measured by linear foot accepted and installed.
 - 4. Rock Armoring/Hardening
 - a. Measured on by the square yard accepted and installed.
 - 5. Rock Checks
 - a. Measured on by the square yard accepted and installed.
 - b. Native stone/rock where possible
 - c. Imported stone/rock must be approved by Owner's Representative and from a local source

1.02 REFERENCES

- A. Mn/DOT 1803.5 Erosion Control
- B. Mn/DOT 2573 – Temporary Erosion Control
- C. Protecting Water Quality in Urban Areas- Best Management Practices for Minnesota, published by the Minnesota Pollution Control Agency.
- D. Storm Water Pollution Prevention Plan (SWPPP) as prepared by Barr Engineering.

1.03 DEFINITIONS

- A. For the NPDES permit process, the operator is defined as the Contractor.

1.04 PERMITS

- A. Owner is obtaining SWPPP and NPDES permits as required by State and Federal law. Contractor shall apply and obtain any other additional permits as required by local, State or Federal law.
- B. Secure additional permits for work outside indicated right of way, construction strips, or work limits for County or Municipal sediment control or grading permits, State Waterway Construction, or Wetlands Permits, or other environmental permits as required by Law.
 - 1. Secure arrangements in writing, including statement that requirements and standards of restabilization and restoration for access ways and all other disturbed areas shall meet or exceed

restabilization and restoration standards. Send copy of final access agreement and copy of additionally required State or County permits to Landscape Architect, before beginning work in areas outside work limits.

1.05 UTILITIES

- A. Rules and regulations governing the respective utilities shall be observed in executing all work under this Section.
- B. Active utilities shown on the drawings shall be adequately protected from damage and removed and relocated only as indicated or specified. Where active utilities are encountered but are not shown on the drawings, the Landscape Architect shall be advised; the work shall be adequately protected, supported or relocated as directed by the Landscape Architect; the contract price will be adjusted for such additional work.
- C. This contractor shall contact the local governing utility for assistance in locating utilities.
- D. As per Minnesota Statutes Chapter 216D, this Excavator shall give 48 hours notice (prior to digging) to the Minnesota State Gopher One Call Excavation Hotline 1-800-252-1166.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Bale Checks – shall be in accordance with Erosion Control 1803.5 – 2 Mn/DOT 3822, Type 1.
- B. Erosion Control Blanket – shall be in accordance with MN/DOT 3885.
- C. Sediment Logs/Coir Logs – Curlex Sediment Logs or approved equal.
- D. Rock Armoring/Hardening – shall be in accordance with IMBA Specifications
- E. Rock Checks – shall be in accordance with MN/DOT 3601 Riprap, Type I

2.02 EROSION CONTROL BLANKET

- A. Double Woven 100% Biodegradable Net Straw Fiber Erosion Control Blanket (North American Green **S150BN**)
 - 1. Matrix: 100% agricultural straw, min. wt. 0.50 lbs/yd² (0.27 kg/m²)
 - 2. Netting: Top and bottom woven natural fiber with opening sizes of 0.50 - 1.00 in (1.27 - 2.54 cm)
 - 3. Stitching: Biodegradable thread on 1.50 in (3.81 cm) centers
 - 4. Roll Size: 6.67ft (2.03m) x 108.00ft (32.92m), 80.00yd² (66.89 m²)
 - 5. Roll Weight ± 10%: 52.22 lbs (23.69 kg)

PART 3 - EXECUTION**3.01 GENERAL REQUIREMENTS**

- A. The Contractor shall control drainage and erosion on the Project including: haul roads, temporary construction, waste disposal sites, plant and storage locations, and borrow pits other than commercially operated sources. The Contractor shall clean up the area, shape the area to allow storm runoff with minimum erosion, replace topsoil, and establish vegetative cover to the satisfaction of the Owner on areas where the potential for pollution has been increased due to the Contractors' operations.
1. Before Construction the Contractor shall install temporary erosion control measures in areas tributary to public waters before construction in a drainage area.
 2. During Construction the Contractor shall schedule and install temporary and permanent erosion control measures, construct drainage facilities, finish earthwork operations, place topsoil, establish turf, and conduct other work that will contribute to the control of erosion and sedimentation. Unless precluded by snow cover, all exposed soil areas with a continuous positive slope within 200 feet of surface waters, or from a curb, gutter, storm sewer inlet, temporary or permanent drainage ditch, or other storm water conveyance system, shall have temporary protection or permanent cover for the exposed soil areas within twenty-four (24) hours of discovery. (For the purposes of this provision, exposed soil areas do not include stockpiles or surcharge areas of sand, gravel, aggregate, concrete, or bituminous.)
 3. Vehicle Tracking. The Contractor shall minimize vehicle tracking of sediment or soil off site at locations where vehicles exit the construction site onto paved surfaces. Tracked sediment shall be removed from paved surfaces, which do not drain back into the construction site, within 24 hours of discovery.
 4. Suspension of Grading. The Contractor shall shape exposed soil and incorporate temporary and permanent erosion control measures to the satisfaction of the Owner before suspension of grading operations for any appreciable length of time.
- B. **Erosion Control Schedule.** The Contractor shall prepare and submit a weekly schedule of proposed erosion control activities for the Owner's approval. The Owner may require schedules to be submitted orally or in writing. The schedule shall provide a discussion of:
- 1) Proposed erosion control installations and when they will be installed.
 - 2) Areas ready for permanent turf establishment and when it will be accomplished.
 - 3) Grading operations and how erosion control will be incorporated into the work.
 - 4) Repair or maintenance required on erosion control installations and when it will be accomplished.
 - 5) Proposed erosion control measures during periods of suspension of work. The Owner may also require the Contractor to submit a site plan detailing proposed erosion control and sediment control measure and a chart indicating starting and completion times for each of the construction operations at the site. The Contractor shall not start work in the affected areas until the erosion control schedule and required documents have been accepted by the Owner.
- C. **Compensation.** The Contractor will receive compensation for erosion control as provided for in the Contract. All other expenses incurred in complying with these provisions and Air, Land and Water Pollution (Mn/DOT 1717) shall be borne by the Contractor. The Contractor will not receive compensation for erosion control out of the 50' trail alignment corridor unless so specified in the Contract. Temporary and permanent erosion or pollution control measures ordered by the Owner, which are necessitated by additional Contract work or by unforeseen failure of the original erosion or sediment control work provided for in the Contract, will be paid for at the appropriate Contract prices for like work or as Extra Work in the absence of comparable items of work.

- D. **Withholding of Payment.** When the Contractor fails to install erosion or sediment control measures ordered by the Owner, the Owner may withhold payment from related work until the control measures are undertaken by the Contractor.

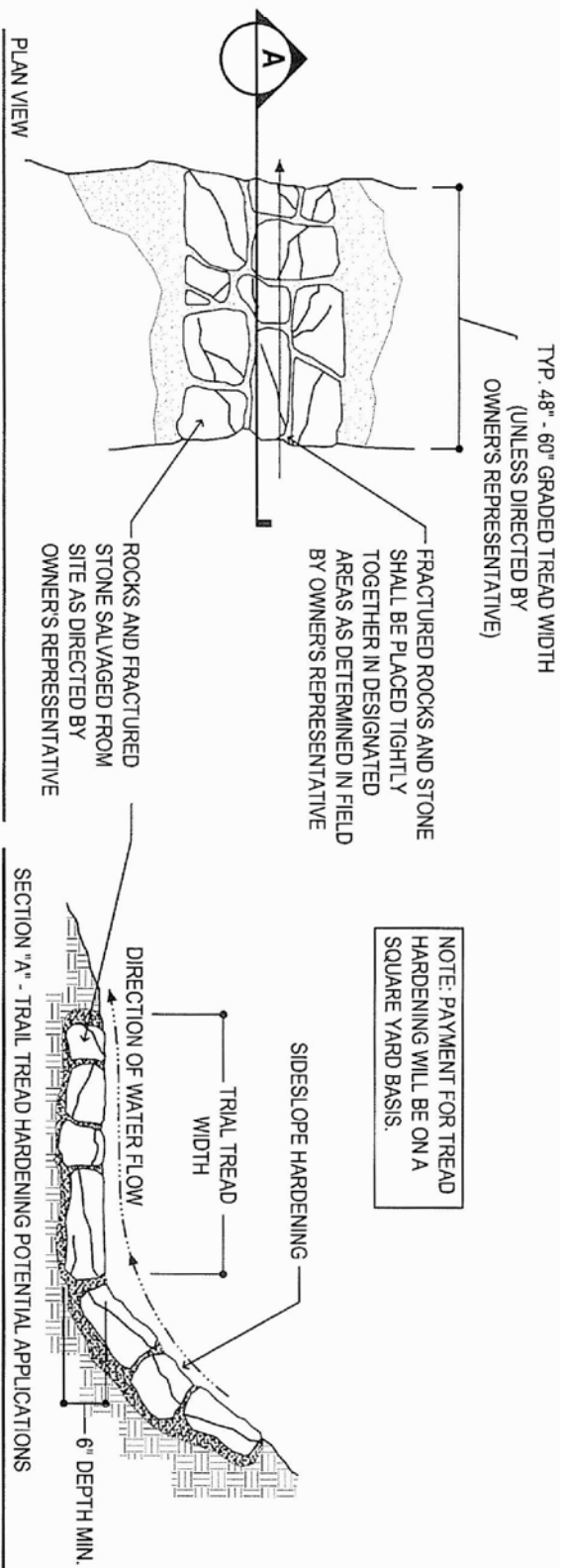
3.02 PLACING TEMPORARY EROSION CONTROL ITEMS

- A. Construct items in conformance with typical sections and elevation controls shown on the plans.
- B. Remove all items upon completion of the contract work.
- C. Spread and shape accumulated sediment to permit natural drainage and provide for turf establishment.

3.03 ACCEPTANCE OF WORK

- A. Maintain and repair erosion control item to ensure proper function.

END OF SECTION

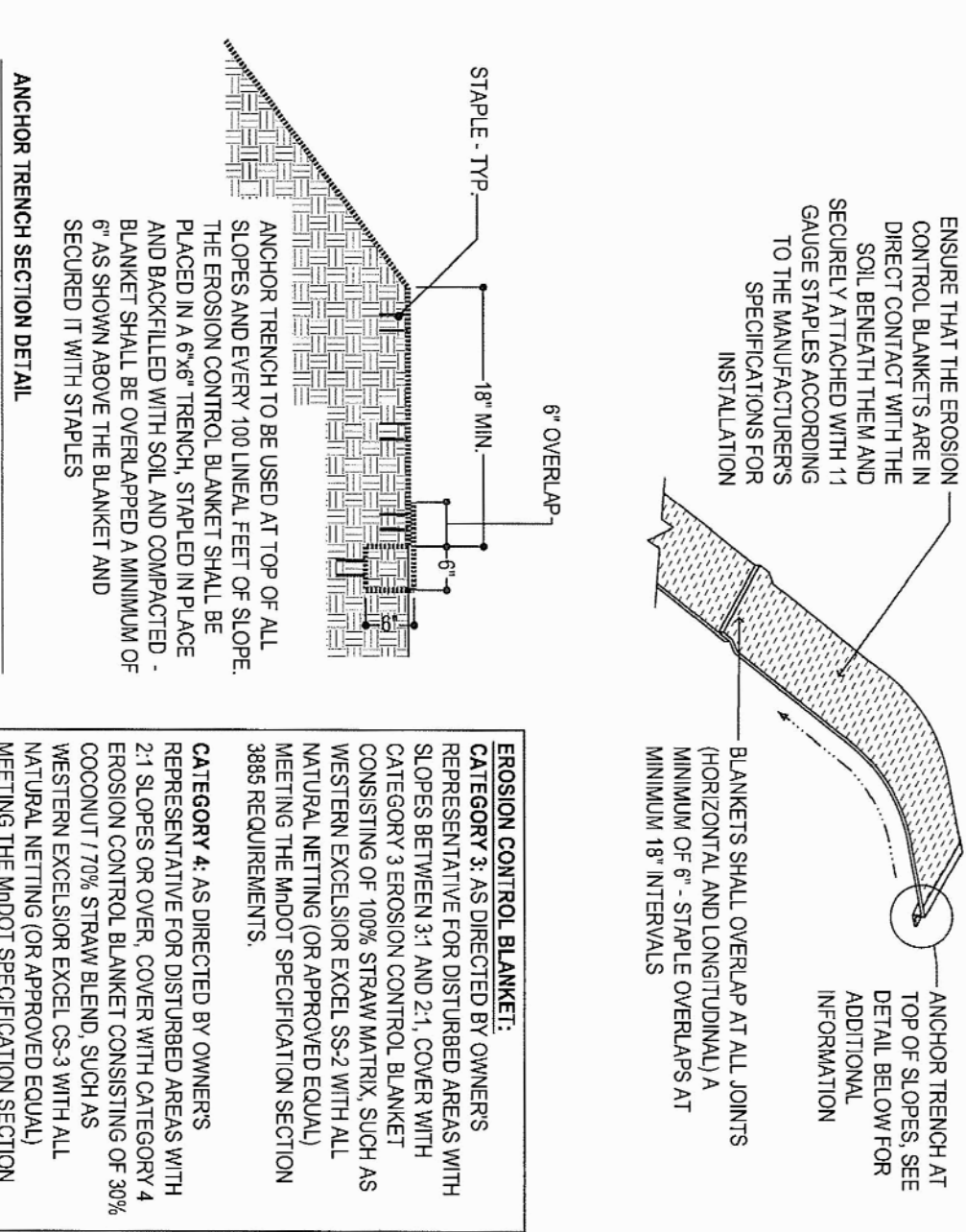


EXAMPLE IMAGE OF TRAIL TREAD HARDENING

TRAIL TREAD HARDENING AND SIDESLOPE HARDENING DETAIL

NOT TO SCALE

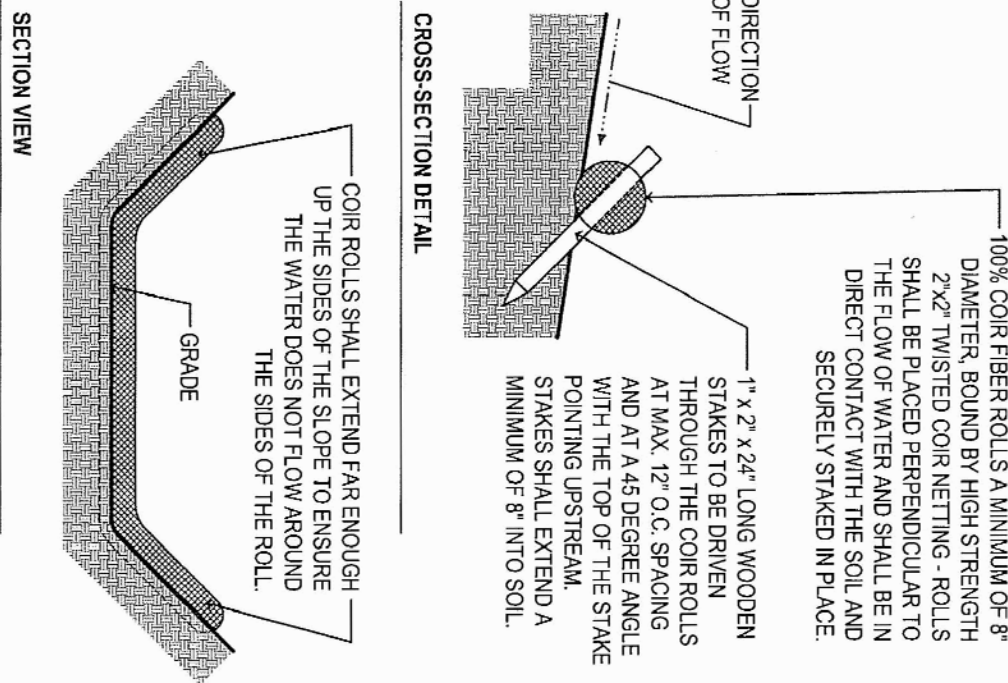
1
10



WOOD FIBER BLANKET DETAIL

NOT TO SCALE

2
10



COIR ROLL DETAIL

NOT TO SCALE

3
10



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- ENGINEERING
- LANDSCAPE ARCHITECTURE
- INTERIOR DESIGN

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FAX 218-727-9483
EMAIL: arches@cphtennel.com

**DULUTH
TRAVERSE
TRAIL
MISSION CREEK
PHASE 1**

DULUTH, MINNESOTA

PROJECT NO.: 12-039

DATE: JANUARY-2013

DRAWN BY: TTP

REVISIONS:

I HEREBY CERTIFY THAT THIS PLAN
SPECIFICATION, OR REPORT WAS
PREPARED BY ME OR UNDER MY
DIRECT SUPERVISION, AND THAT I
AM A DULUTH LICENSED ARCHITECT
OR ENGINEER IN THE STATE OF MINNESOTA.
**PRELIMINARY
DO NOT USE FOR
CONSTRUCTION**
JAMES J. CONNOR-2013
12-039
12-039

**SWPPP
DETAILS**

10

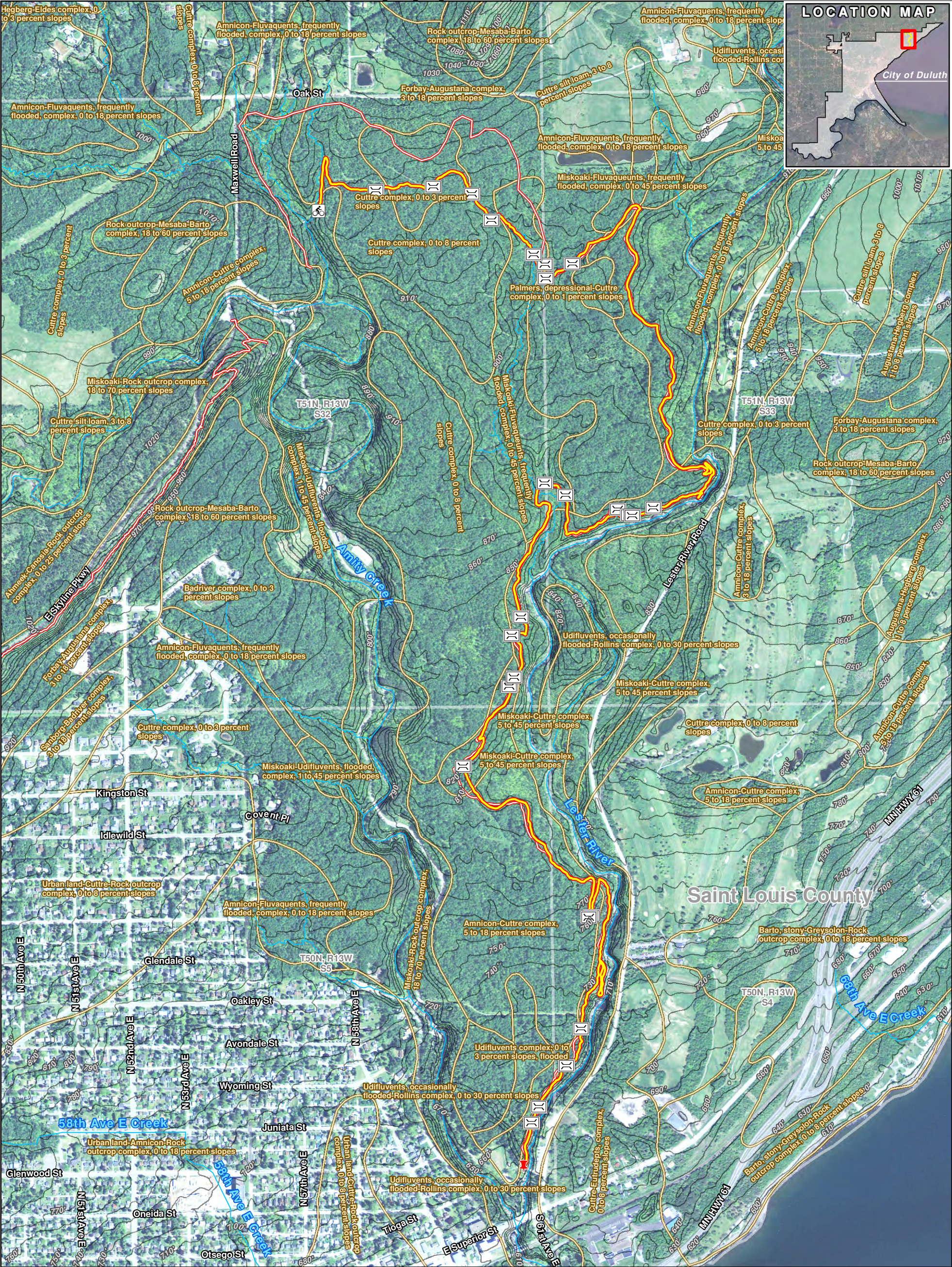
CITY OF DULUTH PROJECT NO. XXXXX

DRAWN BY: TTP

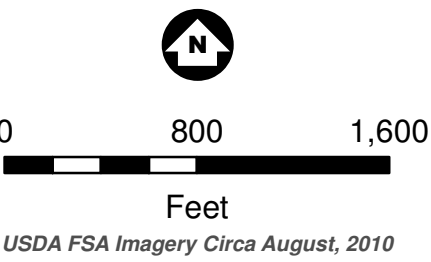
SHEET NO. 8 OF X

Appendix B

Site Plans



- Lester Proposed Trail
- Proposed Boardwalk Locations
- COGGS Loop Connector
- Trail Start
- Duluth Traverse Proposed Trails
- Duluth Streams
- 10-Foot Contours (MNDNR 2009)
- Soils



USDA FSA Imagery Circa August, 2010



Figure 1
**LESTER RIVER PROPOSED TRAIL
PHASE 1**
Duluth Traverse
Duluth, Minnesota

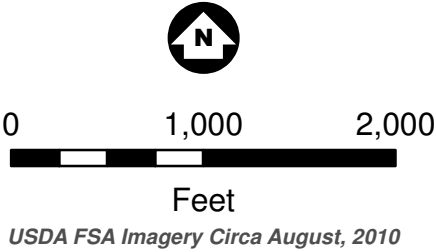


- Mission Creek Proposed Trails
- Proposed Boardwalk Locations
- Duluth Traverse Proposed Trails
- Duluth Streams
- 10-Foot Contours (MNDNR 2009)
- Soils



Figure 2

**MISSION CREEK PROPOSED TRAIL
PHASE 1**
Duluth Traverse
Duluth, Minnesota



USDA FSA Imagery Circa August, 2010

Appendix C

MPCA NPDES Permit Application and Construction Stormwater General Permit



Complete your application [online!](#)

Permit No: MN R100001

Application for General Stormwater Permit for Construction Activity (MN R100001) National Pollutant Discharge Elimination System / State Disposal System (NPDES/SDS)

Please submit to: Minnesota Pollution Control Agency
Construction Stormwater Permit Program
520 Lafayette Road North, St. Paul, MN 55155-

4194

PLEASE READ: This form is for new permit applications only. Use the Notice of Termination/Permit Modification form to transfer permit coverage for a project or a portion of a project to a new owner/contractor. [Forms](#) are available at the MPCA's Construction Stormwater Web site: www.pca.state.mn.us/water/stormwater/stormwater-c.html. Complete your application [online!](#)

Please refer to the application instructions and the NPDES/SDS General Stormwater Permit for Construction Activity (MN R100001) as you complete this form. Brackets '[]' refer to specific parts of the permit. For assistance, call the Stormwater Program at 651-757-2119 or toll-free at 800-657-3804.

Are you ready to apply?

1. Stormwater Pollution Prevention Plan (SWPPP)

- a. Has a Stormwater Pollution Prevention Plan been developed for this project and incorporated into the project's plans and specifications [Part III.A] ☒ Yes ☐ No
- b. If an environmental review was required for this project or a common plan of development or sale that includes this project, has the environmental review been completed and all stormwater mitigative requirements been incorporated in the SWPPP as required in Part III.A.6 of the permit? ☒ Yes ☐ No ☐ NA

2. Discharges to Special or Impaired Waters

- a. If any portion of the project has a discharge point within 1 mile of a special water or a water that is impaired for sediment or a sediment related parameter (see Appendix A.B), does the SWPPP contain the additional requirements found in Appendix A, Part A-C? If the project does not have a discharge point within 1 mile of a special water or a water that is impaired for sediment or a sediment related parameter of the permit indicate "NA" ☒ Yes ☐ No ☐ NA
- b. If this project is discharging to a Calcareous fen, has an approval letter been obtained from the DNR as required in Part III.A.8 of the permit? ☐ Yes ☐ No ☒ NA

STOP if you responded 'No' to any question above. A SWPPP must be developed prior to submitting a permit application. Complete the above requirements and check 'Yes' before submitting this application. Continue if you responded 'Yes' or 'NA' to all questions above.

3. Additional Application Review:

- a. Will the project include alternative treatment methods? [Part III.C.5] If yes, this application and the alternative treatment plans must be submitted a minimum of 90 days before construction starts. ☐ Yes ☒ No
- b. If yes, are the plans attached? ☐ Yes ☐ No
- c. Will the project disturb 50 acres? AND Is there a discharge point within one mile of an impaired or special water whose discharge may reach an impaired or special water listed in Appendix A of the permit? [Part II.B.1.b] If yes, this application and the SWPPP must be submitted a minimum of 30 days before construction starts. ☐ Yes ☒ No
- d. If 'Yes,' is the SWPPP attached? ☐ Yes ☒ No

4. Application Fee:

Is the required \$400 Application Fee (payable to the MPCA) enclosed?

☒ Yes**Construction Activity Information****5. Project name:** Duluth Traverse Mountain Bike Trail**6. Project location:**a. Briefly describe where the construction activity occurs
(For example: "Intersection of 45th St. and Irving Ave.")
Include address if available:From Lester Park to Mission Creek in the City of Duluth.

b. All cities where project will occur:

Duluth.

c. All counties where project will occur:

St. Louis

d. All townships where project will occur:

Midway

e. Project ZIP Code:

Varies

f. Latitude and longitude of approximate centroid of project:

Latitude: . ° N (decimal)
*Preferred*46 ° 45 ' 39 N (degrees,
minutes,
seconds)Longitude: . ° W (decimal) *Preferred*92 ° 09 ' 04 W (degrees, minutes,
seconds)

g. Method used to collect latitude and longitude:

☐ GPS☐ USGS Topographic map — Map scale: GIS☒ Other**7. Project size:**Number of acres to be disturbed to
the nearest quarter acre:35.50 acres**8. Project map:**A map must be included with the application for all projects disturbing 50 acres or more. Is ☒ Yes ☐ No
a project map included?**9. Project type:**☐ Residential☐ Residential / Road construction☒ Other: Natural surface
mountain bike trail☐ Commercial / Industrial☐ Commercial / Road construction☐ Road construction☐ Commercial / Residential / Road construction**10. Cumulative impervious surface:**

a. Existing area of impervious surface in acres:

0.0b. Post-construction area of impervious surface in acres (If additional new impervious
surface created by the project is less than one acre, skip to Question 12):10.25

11. Permanent stormwater management:

- ☐ Wet sedimentation basin
☐ Infiltration / filtration
☐ Regional ponding
☒ Other (Use only if there is no feasible way of installing the treatment systems listed above for reasons such as lack of right-of-way or proximity to bedrock)
☐ Alternative methods (If using alternative methods, construction cannot commence until receiving approval from the MPCA.)

12. Receiving waters:

Identify surface waters within one mile of project boundary that will receive storm water from the site or discharge from permanent Stormwater management system. Include waters shown on USGS 7.5 minute quad or equivalent, all Special Waters and Impaired waters identified in Appendix A of the permit (To find Special or Impaired Waters, use the Special and Impaired Waters Search tool at www.pca.state.mn.us/water/stormwater/stormwater-c.html).

The Impaired Waters* list, also known as the Section 303(d) list can be found at <http://www.pca.state.mn.us/water/tmdl/index.html> Use additional paper if necessary.

* Impaired waters for the purpose of this permit are those identified as impaired for the following pollutant(s) or stressor(s): phosphorus, turbidity, dissolved oxygen, or biotic impairment

Name of water body	Type of water body (Ditch, pond, wetland, stream, river)	Special Water? See Stormwater Permit, Appendix A	Impaired Water? See Stormwater Permit, Appendix A
Mission Creek and unnamed tributaries	stream	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Sargent Creek and unnamed tributaries	stream	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Lester River and unnamed tributary	stream	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Associated wetlands	wetland	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

13. Dates of construction

- a. Start date: 06 / 01 / 13
 b. Estimated Completion date: 11 / 30 / 13

STOP This form will not be accepted if the Owner and Contractor contact information sections, below, are BOTH not completed and signed. If the owner is also the contractor, or a contractor hasn't yet been selected, the owner must also fill out the contractor information section and sign again.

Responsible parties**BOTH PARTIES MUST SIGN****Owner**

City of Duluth

Business or firm name

Voight

Cindy

City Engineer

Last name

cvoight@duluthmn.gov

First name**Title**

218-730-5200

E-mail411 West 1st Street 2nd Floor

Duluth

Phone (include area code)

MN

55802

Mailing address**City****State****ZIP Code**

Matt Decur

mdecur

218-730-5104

Alternate contact name**E-mail****Phone (include area code)**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this system, or the persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I also certify under penalty of law that I have read, understood, and accepted all terms and conditions of the NPDES/SDS General Stormwater Permit Construction Activity (MN R100001) that authorizes stormwater discharges associated with the construction site identified on this form.

X Authorized signature: _____ Date: _____

This Application must be signed by:

- **Corporation:** a principal executive officer of at least the level of vice-president or the duly authorized representative or agent of the executive officer if the representative or agent is responsible for the overall operation of the facility that is the subject of the permit application.
- **Partnership or Sole Proprietorship:** a general partner or the proprietor.
- **Municipality, State, Federal or Other Public Agency:** principal executive officer or ranking elected official.

Contractor**Business or firm name****Last name****First name****Title****E-mail****Phone (include area code)****Mailing address****City****State****ZIP Code****Alternate contact name****E-mail****Phone (include area code)**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this system, or the persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I also certify under penalty of law that I have read, understood, and accepted all terms and conditions of the NPDES/SDS General Stormwater Permit Construction Activity (MN R100001) that authorizes stormwater discharges associated with the construction site identified on this form.

X Authorized signature: _____ Date: _____

This Application must be signed by:

- **Corporation:** a principal executive officer of at least the level of vice-president or the duly authorized representative or agent of the executive officer if the representative or agent is responsible for the overall operation of the facility that is the subject of the permit application.
- **Partnership or Sole Proprietorship:** a general partner or the proprietor.
- **Municipality, State, Federal or Other Public Agency:** principal executive officer or ranking elected official.

- *Municipality, State, Federal or Other Public Agency: principal executive officer or ranking elected official.*



Minnesota
Pollution
Control
Agency

INSTRUCTIONS FOR THE APPLICATION FOR MINNESOTA'S NPDES/SDS GENERAL STORMWATER PERMIT FOR CONSTRUCTION ACTIVITY

Submission of an application is notice that the owner and general contractor identified on the application intend to be authorized by an NPDES/SDS permit issued for Stormwater discharges associated with a construction activity in the State of Minnesota.

Are you ready to apply?

1. Indicate if a **Stormwater Pollution Prevention Plan (SWPPP)** has been prepared and the appropriate sections (a and b of this question) have been addressed by answering “Yes” or “No”. A SWPPP is a plan for Stormwater discharge that includes erosion prevention measures and sediment controls that, when implemented, will decrease soil erosion on a parcel of land and decrease pollution in receiving waters. This plan must be developed prior to submitting a permit application. A sample plan and development tools are available from the U.S. Environmental Protection Agency [Stormwater Pollution Prevention Plans for Construction Activities](#) and from the MPCA “Stormwater Compliance Tool Kit for Small Construction Operators”

For section “b” indicate if an **Environmental Review** has been completed if required, by answering “Yes” or “No” or “NA” (not applicable). Environmental review looks at how a proposed project could potentially affect the environment and looks at ways to avoid or minimize impacts before the project is permitted and built. Examples of categories that may need an environmental review include residential development; industrial, commercial, and institutional facilities; and also highway projects. For certain projects, environmental review is mandatory. For more details see the [Guide to Minnesota Environmental Review Rules, Chapter 6](#).

2. Discharges to Special or Impaired Waters
 - a. Special waters have qualities that warrant extra protection. There are several categories of special waters and the requirements are different for each. A list of these special water categories can be found in Appendix A of the permit. The additional requirements apply only to those portions of a project that drain to a discharge point on the project that is within 1 mile of and flows to the special water. Refer to Appendix A of the permit for the list of special waters and what additional requirements apply to each. The information is also available using the [Special and Impaired Waters Search Tool](#).

Impaired waters are bodies of water that do not meet the water quality standards set up for their designated use as determined by the State. Projects discharging to impaired waters also have additional requirements. The additional requirements apply only to those portions of a project that drain to a discharge point on the project that is within 1 mile of and flows to the impaired water. The specific requirements can be found in Appendix A of the permit. Impaired waters for the purpose of this permit are limited to those identified as impaired pursuant to section 303(d) of the Clean Water Act where the pollutant(s) or stressor(s) are phosphorus (nutrient eutrophication biological indicators), turbidity, dissolved oxygen, or biotic impairment (fish bioassessment, aquatic plant bioassessment and aquatic macroinvertebrate bioassessment). Use the interactive [Special and Impaired Waters Search Tool](#) to determine if your project is required to follow the additional requirements. On the application, indicate if the SWPPP for the project incorporates the additional requirements, if applicable. Consult the web page [General Information about Impaired Waters and Current TMDL List of Impaired Waters](#) for additional information including a list of impaired waters.

- b. An approval letter from the Department of Natural Resources (DNR) is needed to discharge to calcareous fens. If the DNR does not respond to the request for a letter of approval within 30

calendar days, you may apply for permit coverage and check the NA box. Document this process in the SWPPP for the project.

3. Additional Application Review
 - a. Indicate by answering “Yes” or “No” whether the project will include **alternative methods** for the permanent stormwater management system. You have the option of proposing an alternative, innovative, permanent stormwater management system. You must send in the permit application and the additional required information (see Part III.C.5 of the Permit) at least **90** days prior to the start of construction if you choose this approach. You must receive an approval letter from the MPCA for this method before beginning construction.
 - b. Attach the plans for the alternative system.
 - c. If the project disturbs **50 acres or more** and has a discharge point (including sheet flow) that is within one mile of and flows to an impaired or special water listed in Appendix A, the application and SWPPP need to be submitted to the MPCA a minimum of **30** days prior to the start of construction.
4. The application requires a \$400 application **fee**. Indicate that the application fee has been enclosed by answering “Yes”. Please make checks payable to: **Minnesota Pollution Control Agency** and submit the check with the completed application to: MPCA, Construction Stormwater Permit Program, 520 Lafayette Road North, St. Paul, MN 55155-4194. Applications received without the required fee will be returned to the sender.

Construction Activity Information

5. List the construction project’s **name**. Be specific. Examples: “Driveway at 123 Main St, Hudson”, “Highway 169 bridge replacement (#79605) at the Rum River”.
6. Project Location
 - a. Provide an **address** (if available) and **brief description** of the construction activity’s location (**for example**, “North West Corner of the Intersection of 45th Street and Irving Avenue, Minneapolis, MN”). Use any type of description that accurately portrays the project location.
 - b-e. Provide the names of all cities, counties, zip codes, and townships the construction activity takes place in (**for example**, a roadway may cross county, city, or township boundaries).
 - f. Give the latitude and longitude of the centroid of the site. If the centroid of the site is not within the site, give the latitude and longitude of a point within the site that is closest to the centroid of the site. Give these values in degrees and decimal of degrees (preferred) alternatively in degrees, minutes and seconds. To obtain the decimals of a degree, divide the minutes by 60 and the seconds by 360 and add this to the degrees.
 - g. State how the information was gathered, if by GPS, by using a USGS topographic map (give the scale), or an online tool such as the [Toxics Release Inventory Facility Siting Tool](#). To use this tool, type either the zip code or the city/township and the state. Zoom in to obtain the latitude and longitude.
7. List, in acres, the **amount** of area that will be **disturbed** for this project. This is not the size of the property; do not include areas of the project that will not be disturbed.
8. **Add the map** to the SWPPP. United States Geological Survey (USGS) 7.5-minute quad maps or equivalent maps may be used. USGS 7.5-minute quad maps may be printed from the [Special and Impaired Waters Search Tool](#) or ordered at the [USGS store](#). The map does not need to be submitted with the application unless the project is disturbing 50 acres or more. The map should include the project boundaries. The project boundaries can be added to the map electronically using the search tool above.
9. Indicate the type of construction activity by **checking the appropriate box**. Check “Residential and Road Construction” if the road is part of a common plan of development and is developed in association with residential development. If you check “Other”, describe the project.
10. Indicate to the nearest quarter acre, the existing and resulting **areas of impervious surfaces**. Impervious surface means a constructed hard surface that either prevents or retards the entry of water into the soil and causes water to run off the surface in greater quantities and at an increased rate of flow than prior to development. **Examples** include rooftops, sidewalks, patios, driveways, parking lots, storage areas, and concrete, asphalt, or gravel roads. (a.) “Existing” area means the area of impervious surface that is present prior to the start of this construction project. (b.) “Post construction” means the entire area of impervious surface after construction is completed. Subtract (a.) from (b.) to determine the area of new impervious

surface.

11. For projects creating one or more acres of cumulative new impervious surfaces, **check the appropriate box** to indicate which type(s) of **permanent stormwater management practices** will be used. The “Other” box is limited to those situations (such as proximity to bedrock) that are described in Part III.C of the permit. See the permit for a further description. If the “Other” box is checked, describe which situation outlined in Part III. C. fits the project and what other permanent treatment (such as grassed swales, smaller ponds and/or grit chambers) will be used on the project.
12. BRIEFLY describe which **water body(s)** will receive stormwater runoff from the construction site or from the discharge from permanent Stormwater management systems by **completing the table**. To determine which water body(s) will receive stormwater runoff discharges, make a brief survey of the project’s surrounding area. Include the waters identified on a USGS 7.5-minute quad or equivalent map. See Appendix A of this permit to determine if a water body is a special water or visit the website [Special Waters Document](#). Impaired waters for the purpose of this permit are those identified as impaired for the following pollutant(s) or stressor(s) phosphorus (nutrient eutrophication biological indicators), turbidity, dissolved oxygen, or biotic impairment (fish bioassessment, aquatic plant bioassessment and aquatic macroinvertebrate bioassessment). The easiest way to find special or impaired waters in addition to all waterbodies is to use the interactive map tool, [Special and Impaired Waters Search tool](#). Impaired waters are also listed here: <http://www.pca.state.mn.us/water/tmdl/index.html>
13. List the **start** and **estimated completion dates** of the construction project.

Responsible Parties

14. **Owner Information:** Provide the information requested of the owner of the company, organization, or other entity for which this construction project is being done. The **Owner** means the person or party possessing the title of the land on which the construction activities will occur; or if the construction activity is for a lease, easement, or mineral rights license holder, the party or individual identified as the lease, easement or mineral rights license holder; or the contracting government agency responsible for the construction activity. **The owner is the party responsible for the compliance with all terms and conditions of the permit. The alternate contact** should be the owner’s representative in charge of the project.

After completing this application, certify it with a **signature and date** from an individual authorized to sign the application. This application form must be signed by either a principal executive officer, vice president, representative agent responsible for overall operations, general partner, or a proprietor. If the activity is being conducted by a unit of government (state, county, municipality, or township), this application must be signed by a principal executive officer or ranking elected official (**for example**, city or county engineer, administrator, or manager; director of public works; mayor, etc.) For additional information, see Minnesota Rules 7001.0060.

15. **Contractor (Operator) Information:** Provide the information requested of the contractor. The **Contractor** means the party who signs the construction contract with the owner to construct the project described in the final plans and specifications. Where the construction project involves more than one contractor, the general contractor will be the party responsible for managing the project on behalf of the owner. In some cases the owner may be the general contractor. In these cases, the owner may contract an individual as the operator who would be the co-permittee. **The operator (usually the general contractor) is jointly responsible with the owner for compliance with Part II.B., Part II.C., and Part IV of the permit.**

After this application has been completed by the owner, the contractor must certify it with a **signature and date** from an individual authorized to sign the form. The application must be signed by either a principal executive officer, vice president, representative agent responsible for overall operations, general partner, or a proprietor. If the general contractor is a unit of government (state, county, municipality, or township), this application must be signed by a principal executive officer, ranking elected official, administrator, manager, coordinator, or engineer. (For additional information, see Minnesota Rules 7001.0060.) **The alternate contact** should be the contractor’s representative in charge of the project.

<p>Send the completed application and fee to:</p> <p>MPCA Construction Stormwater Permit Program 520 Lafayette Road North St. Paul, MN 55155-4194</p>	<p>Questions? For more information, call the MPCA Stormwater Hotline at 651-757-2119 or 800-657-3804.</p>
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**GENERAL PERMIT
AUTHORIZATION TO DISCHARGE
STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITY
UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION
SYSTEM/STATE DISPOSAL SYSTEM PERMIT PROGRAM**

ISSUANCE DATE: **August 1, 2008**


EXPIRATION DATE: **August 1, 2013**

In compliance with the provisions of the Clean Water Act, as amended, (33 U.S.C. 1251 et seq.), 40 CFR 122, 123, and 124, as amended, et seq.; Minn. Stat. chs. 115 and 116, as amended, Minn. R. chs. 7001 and 7090:

This permit regulates the discharges of **stormwater** to the **waters of the state** of Minnesota associated with **construction activity**. This permit covers the **stormwater** discharges identified in Part I.A. of this permit. The limitations on permit coverage are identified in Part I.B. of this permit.

This permit requires the development and implementation of a **Storm Water Pollution Prevention Plan (SWPPP)**. No person shall commence **construction activity** covered by Part I.A. until permit coverage under this permit is effective or, if applicable, until the Minnesota Pollution Control Agency (MPCA) has issued an individual **National Pollutant Discharge Elimination System (NPDES)/State Disposal System (SDS) construction stormwater** permit for the project. The **SWPPP** must be completed prior to submitting any permit application and prior to conducting any **construction activity** by any required **Permittee**.

Unless notified by the MPCA to the contrary, applicants who submit a complete and accurate application (including permit fee) in accordance with the requirements of this permit are authorized to discharge **stormwater** from construction sites under the terms and conditions of this permit as described in Part II.B.

Signature: 

Brad Moore
Commissioner
Minnesota Pollution Control Agency

If you have questions on this permit, including the specific permit requirements, permit reporting or permit compliance status, please contact the appropriate MPCA offices.

Minnesota Pollution Control Agency
Municipal Division
Construction Stormwater Program
520 Lafayette Road North
St. Paul, MN 55155-4194

Telephone: 651-296-6300
Toll-free in Minnesota: 800-657-3864

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PART I. PERMIT COVERAGE AND LIMITATIONS

A. PERMIT COVERAGE

1. This permit is required for **construction activity** and **small construction activity** as defined in 40 CFR pt. 122.26(b)(14)(x) and (b)(15), respectively.
2. This permit authorizes, subject to the terms and conditions of this permit, the discharge of **stormwater** associated with **construction activity** and **small construction activity**.

Construction activity includes clearing, grading and excavation, that disturbs land of equal to or greater than five (5) acres and includes the disturbance of less than five (5) acres of total land area that is a part of a larger **common plan of development or sale** if the larger common plan will ultimately disturb five (5) acres or more.

Small construction activity includes clearing, grading and excavation, that disturbs land of equal to or greater than one (1) acre, and includes the disturbance of less than one (1) acre of total land area that is part of a larger **common plan of development or sale** if the larger common plan will ultimately disturb equal to or greater than one and less than five (5) acres. **Small construction activity** does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the facility.

3. This permit covers all areas of the State of Minnesota.
4. For Parts I.B through Appendix A of this permit, all reference to **construction activity** includes both **small construction activity** and **construction activity**.
5. Coverage under this permit is not required when all runoff from **construction activity** or **small construction activity** is routed directly to and treated by a “treatment works”, as defined in Minn. Stat. § 115.01, subd. 21, that is operated under an individual NPDES/SDS permit with a Total Suspended Solids effluent limit for all treated runoff.
6. Previously Permitted Ongoing Projects. **Permittee(s)** of ongoing projects covered initially under the previous MPCA-issued NPDES/SDS Construction Stormwater General Permit (issuance date August 1, 2003) must continue coverage under this reissued permit. The **Permittee(s)** of those ongoing projects shall amend the **SWPPP** for the project to meet the requirements of this reissued permit no later than 18 months after the issuance date of this reissued permit if the termination-of-coverage requirements in Part II.C. will not be met within 18 months of the issuance date of this reissued permit. Any additional permanent treatment in Appendix A. Part C.2 is not required for previously permitted projects that have discharges to impaired waters or if the project is located between 2000 feet and one mile of, and discharges to, a special water.
 - a. If the previously permitted ongoing project will meet the termination-of-coverage requirements in Part II.C within 18 months of the issuance date of this reissued permit, the **Permittee(s)** shall comply with the 2003 construction general permit until the project is complete and a **Notice of Termination** consistent with Part II.C. of this reissued permit is submitted.
 - b. If the previously permitted ongoing project will not be able to meet the terms and conditions of this reissued permit, an individual permit will be required in accordance with Minn. R. ch. 7001.

B. LIMITATIONS OF COVERAGE

This permit does not cover the following activities:

1. Discharges or releases that are not **stormwater** except those non-**stormwater** discharges authorized under Part IV.D.
2. The placement of fill into **waters of the state** requiring local, state, or federal authorizations (such as U.S. Army Corps of Engineers Section 404 permits, Minnesota Department of Natural Resources Public Waters Work Permits or Local Governmental Unit Wetland Conservation Act replacement plans or determinations).
3. **Stormwater** discharges associated with industrial activity that originate from the site after construction activities have been completed and the site has undergone **Final Stabilization**. Post-construction, industrial **stormwater** discharges may need to be covered by a separate NPDES/SDS permit.
4. Non-point source agricultural and silvicultural discharges excluded from **NPDES** permit requirements under 40 CFR pt. 122.3(e).
5. Discharges to the waters identified below unless the requirements of Appendix A. are complied with:
 - a. Discharges into **outstanding resource value waters** as listed in Minn. R. 7050.0180, subp. 3, 4, 5, 6 and 6a, except calcareous fens listed in Minn. R. 7050.0180, subp. 6b.
 - b. Discharges into Trout waters as listed in Minn. R. 6264.0050, subp. 2 and 4.
 - c. Discharges into **wetlands** as defined in Minn. R. 7050.0130, item F.
 - d. Discharges from projects that have not met applicable Environmental Review requirements under state or federal laws.
 - e. Discharges that adversely impact or contribute to adverse impacts on a state or federal listed endangered or threatened species or adversely modify a designated critical habitat.
 - f. Discharges which adversely affect properties listed or eligible for listing in the National Register of Historic Places or affecting known or discovered archeological sites.
6. Discharges to calcareous fens listed in Minn. R. 7050.0180, subp. 6b, without a letter of approval from the Minnesota Department of Natural Resources (DNR). If the DNR does not respond to the permittee's request for approval within 30 calendar days, the application can be submitted.
7. Discharges to waters identified as impaired pursuant to section 303 (d) of the federal Clean Water Act (33 U.S.C. § 303(d)) where the identified pollutant(s) or stressor(s) are phosphorus (nutrient eutrophication biological indicators), turbidity, dissolved oxygen, or biotic impairment (fish bioassessment, aquatic plant bioassessment and aquatic macroinvertebrate bioassessment), and with or without a U.S. Environmental Protection Agency (USEPA) approved Total Maximum Daily Load (TMDL) for any of these identified pollutant(s) or stressor(s), unless the applicable requirements of Part III.A.9 are met.

PART II. SUBMITTING THE APPLICATION

A. PREREQUISITE FOR SUBMITTING A PERMIT APPLICATION

The **owner** must develop a **SWPPP** in accordance with Part III (Storm Water Discharge Design Requirements) of this permit. The plans are not to be submitted to the MPCA (unless the project size is 50 acres or more and will discharge to certain waters as described in Part II.B.1.b.) but are to be retained by the **owner** in accordance with Part III.D (Record Retention). The applicants' failure to complete the **SWPPP** prior to submitting the application will result in the application being returned and the **stormwater** discharges associated with **construction activity** will not be authorized by this permit.

B. APPLICATION AND DURATION OF COVERAGE

1. Application Required.

- a. The **owner** and **operator** shall submit a complete and accurate application form (or a photocopy thereof) with the appropriate fee for project size (see application form) to the MPCA for each project which disturbs one (1) or more acres of land. The **owner** and **operator** of a **common plan of development or sale** that will ultimately disturb one (1) or more acres must submit a complete and accurate application to the MPCA.
- b. For certain projects or **common plans of development or sale** disturbing 50 acres or more, the application must be submitted at least 30 days before the start of construction activity. This requirement pertains to projects that have a discharge point on the project that is within one mile of, and flows to, a special water listed in Appendix A, Part B. or waters listed as impaired under section 303(d) of the federal Clean Water Act (see the MPCA's web site) where the identified pollutant(s) or stressor(s) are phosphorus (nutrient eutrophication biological indicators), turbidity, dissolved oxygen, or biotic impairment (fish bioassessment, aquatic plant bioassessment and aquatic macroinvertebrate bioassessment). Applicants must submit a complete and accurate application form and **SWPPP** including all calculations for the Permanent **Stormwater** Management System (see Part III.A – C).

2. The **Owner** and **Operator** are **Permittee(s)**. The **owner** who signs the application is a **Permittee** and is responsible for compliance with all terms and conditions of this permit. The **operator** (usually the **general contractor**) who signs the application is a **Permittee** for Parts II.B., Part II.C., Part IV. and applicable construction activity requirements found in Appendix A. Part C. of this permit and is jointly responsible with the **owner** for compliance with those portions of the permit.
3. Permit Coverage. The commencement of any **construction activity** (e.g., land disturbing activities) covered under Part I.A. of this permit is prohibited until permit coverage under this permit is effective or, if applicable, until the MPCA has issued an individual NPDES/SDS construction **stormwater** permit for the project.
 - a. Except as provided in subp. 3.b., 3.c. and 3.d below, permit coverage will become effective seven (7) calendar days after the postmarked date of the completed application form.

- b. For projects disturbing 50 acres or more, that have a discharge point on the project that is within one mile of, and flows to, a special water listed in Appendix A, Part B. or waters listed as impaired under section 303(d) of the federal Clean Water Act, the applicants must submit a complete application and **SWPPP** to the MPCA at least thirty (30) calendar days prior to the commencement of **construction activity**. MPCA staff will review the **SWPPP** submitted with the complete application and permit coverage will become effective 30 calendar days after the postmarked date or MPCA date stamp (whichever is first) of the complete application or on the effective date identified within a permit coverage letter issued by the MPCA. For incomplete applications (e.g. lack of fees or signature) or incomplete **SWPPPs** (e.g. missing calculations, **Best Management Practice (BMP)** specifications or timing of **BMP** installation narrative), the 30 calendar day review period begins on the date that all required information is submitted.
- c. For proposals to use Alternative Method(s) for the Permanent Stormwater Management System under Part III.C.5, the applicants must submit a complete application and **SWPPP**, including the Alternative Method documentation under Part III.C.5, to MPCA for review and approval at least 90 days prior to the proposed starting date of **construction activity**.
 - i. The MPCA will notify the applicant within the 90-day period, in writing, whether the alternative method is approved or not approved and, if applicable, the basis for denial.
 - ii. The applicant may re-submit the alternative method after addressing the MPCA's basis for denial. The MPCA will respond within 30 days.
 - iii. Permit coverage will become effective upon receipt of an alternative treatment method approval letter from MPCA. Any **construction activity** on the project is not covered under this permit until receiving the alternative treatment approval letter.
- d. Except as provided in parts 3.b. and 3.c., for, projects that apply online, permit coverage will become effective two (2) calendar days after the online application process is complete.
- 4. Coverage Letter. For projects under subpart 3.a. of this part, the **Permittee(s)** will receive a permit letter and certificate acknowledging permit coverage, usually within 30 days of the postmarked date of the complete application.
- 5. Change of Coverage. For construction projects where the **owner** or **operator** changes, (e.g., an original developer sells portions of the property to various homebuilders or sells the entire site to a new owner):
 - a. The original/current **owner** shall provide a copy of the complete notice of termination/permit modification form (as required in Part II.C.2.b) to the new **owner**. The original/current **owner** shall provide a **SWPPP** to the new **owner** and **operator** that specifically addresses the remaining **construction activity**. Note: The notice of termination/permit modification form replaces the subdivision registration, permit transfer/modification and notice of termination forms.
 - b. The new **owner** or **operator** shall submit a complete and signed permit modification portion (permit modifications include subdivision registration or permit transfer) of the notice of termination/permit modification form to the MPCA prior to commencing **construction activity** on site or in no case later than seven (7) days after taking ownership of the property. The new **Permittee(s)** are responsible for compliance with all terms and conditions of this permit as described in Part II.B.2.

- c. If an **operator** or **general contractor** has completed their portion of work on the site, is no longer in operational control of the project, and all contractual obligations between the **owner** and **operator** or **general contractor** relating to compliance with the terms and conditions of this permit have been met, the **operator** or **general contractor**, may transfer permit coverage back to the **owner** or to a new **operator** using the notice of termination/permit modification form. A signature from both the owner and operator is required.

C. TERMINATION OF COVERAGE

1. **Permittee(s)** wishing to terminate coverage under this permit must submit a **Notice of Termination (NOT)** to the MPCA. Compliance with this permit is required until a **NOT** is submitted. The **Permittee(s)** coverage under this permit terminates at midnight on the postmark date of the **NOT**, or on the date an online **NOT** is submitted to the MPCA.
2. Termination of coverage scenarios:
 - a. Termination of coverage for the entire project.
 - i. All **Permittee(s)** must submit a **NOT** within 30 days after **Final Stabilization** (see Part IV.G.) has been completed on all portions of the site for which the **Permittee** is responsible and all **construction activity** has been completed. If the site includes permanent stormwater management systems, the requirements for final cleanout/maintenance must be performed as required in **Final Stabilization**, Part IV.G.2.
 - ii. **Permittee(s)** must submit a **NOT** within 30 days after selling the entire site including roads and stormwater infrastructure, and coverage is transferred to another owner as described in Part II.B.5.
 - b. Termination of coverage for a portion of the entire project.

All **Permittee(s)** must submit a **NOT** within seven (7) days after selling or otherwise legally transferring portions of the site to another party and they are no longer the **owner** or **operator**. The portions of the site being sold to another party must be in compliance with the permit (e.g. all **temporary erosion protection** and **sediment control** measures must be in place). The form must include signatures from the original **Permittee(s)** and contact information for the new **owner** of the property.
 - c. Termination of coverage obtained using a subdivision registration.

If permit coverage was obtained using the subdivision registration process, **Permittee(s)** are required to submit a **NOT** within 30 days after achieving **Final Stabilization** (see Part IV.G.).
3. **Permittee(s)** that use an alternative method for the Permanent **Stormwater** Management System as described in Part III.C.5, are prohibited from terminating this permit until **Final Stabilization** has been achieved on site and either:

- a. The two years of monitoring data required in Part III.C.5 has been submitted to the MPCA and the MPCA has determined that the required treatment has been achieved. The **Permittee** will be notified in writing within 30 days after the monitoring data has been submitted. If the **Permittee** has not heard from the MPCA within 30 days after submitting the required data, the Permittee can submit a **NOT**.
- b. The Permittee can submit a **NOT**, even if the timeframe is less than two years, if the MPCA determines that the alternative method is achieving the required treatment.

During the monitoring and evaluation of the alternative method, the **Permittee** is not responsible for other permit requirements that have been transferred as described in Part II.B.5.

PART III. STORMWATER DISCHARGE DESIGN REQUIREMENTS

A. STORM WATER POLLUTION PREVENTION PLAN

The **owner** must develop a Storm Water Pollution Prevention Plan (**SWPPP**). The **SWPPP** shall be completed prior to submitting any permit application and prior to conducting any **construction activity** by any required **Permittee(s)**. The plan must be a combination of narrative, plan sheets and if appropriate standard detail sheets that address the foreseeable conditions, at any stage in the construction or post construction activities. The plan must include a description of the nature of the **construction activity**. The plan must address the potential for discharge of sediment and/or other potential pollutants from the site. For **stormwater** discharges from **construction activity** where the **owner** or **operator** changes, the new **owner** or **operator** can implement the original **SWPPP** created for the project, modify the original **SWPPP**, or develop and implement their own **SWPPP**. **Permittee(s)** shall ensure either directly or through coordination with other **Permittee(s)** that their **SWPPP** meets all terms and conditions of this permit and that their activities do not render another party's **erosion prevention** and **sediment control BMPs** ineffective.

1. As part of the **SWPPP** the **owner** must identify a person knowledgeable and experienced in the application of **erosion prevention** and **sediment control BMPs** who will oversee the implementation of the **SWPPP**, and the installation, inspection and maintenance of the **erosion prevention** and **sediment control BMPs** before and during construction. The **owner** must identify who will have the responsibility for long term operation and maintenance of the Permanent **Stormwater** Management System (see Part III.C.). The **owner** shall develop a chain of responsibility with all **operators** on the site to ensure that the **SWPPP** will be implemented and stay in effect until the construction project is complete, the entire site has undergone **Final Stabilization**, and a **NOT** has been submitted to the MPCA.
2. Training requirements. **Permittee(s)** must comply with these training requirements no later than 18 months after the issuance date of this permit. The **Permittee(s)** shall ensure the individuals identified in this part have been trained in accordance with this Permit's training requirements. The **Permittee(s)** shall ensure the training is recorded in or with the **SWPPP** before the start of construction or as soon as the personnel for the project have been determined.
 - a. Who must be trained:
 - i. Individual(s) preparing the **SWPPP** for the project.
 - ii. Individual(s) overseeing implementation of, revising, and amending the **SWPPP** and individual(s) performing inspections as required in Part IV.E. One of these individual(s) must be available for an on site inspection within 72 hours upon request by the MPCA.

- iii. Individual(s) performing or supervising the installation, maintenance and repair of **BMPs**. At least one individual on a project must be trained in these job duties.
- b. Training content. The content and extent of training must be commensurate with the individual's job duties and responsibilities with regard to activities covered under this permit for the project. At least one individual present on the permitted project site (or available to the project site in 72 hours) must be trained in the job duties described in Part III.A.2.a.ii and Part III.A.2.a.iii.
- c. Training documentation.
 - i. Documentation must be in or with the **SWPPP** or be available within 72 hours upon request.
 - ii. Names of the personnel associated with this project that are required to be trained per Part III.A.2.a. of this permit.
 - iii. Dates of training and name of instructor(s) and entity providing training.
 - iv. Content of training course or workshop (including number of hours of training).
- d. The **Permittee(s)** shall ensure that the individuals are trained by local, state, federal agencies, professional organizations, or other entities with expertise in **erosion prevention, sediment control** or permanent **stormwater** management such as the University of Minnesota, Minnesota Erosion Control Association, Soil and Water Conservation Districts or the MPCA.
- 3. The **SWPPP** must incorporate the requirements of Part III (Stormwater Discharge Design Requirements), Part IV (Construction Activity Requirements) and Appendix A for the project. A narrative describing the timing for installation of all **erosion prevention** and **sediment control BMPs** required in Part III, Part IV and Appendix A must also be included in the **SWPPP**.
- 4. The **SWPPP** requirements must be incorporated into the project's final plans and specifications and/or project documentation, as appropriate, and must include:
 - a. Location and type of all temporary and permanent **erosion prevention** and **sediment control BMPs** along with procedures to be used to establish additional temporary **BMPs** as necessary for the site conditions during construction. **Standard plates** and/or specifications for the **BMPs** used on the project must be included in the final plans and specifications for the project.
 - b. Estimated preliminary quantities tabulation anticipated at the start of the project for the life of the project must be included for all **erosion prevention** and **sediment control BMPs** in the **SWPPP**.
 - c. The **SWPPP** must include the number of acres of impervious surface for both pre- and post-construction.

- d. A site map with existing and final grades, including dividing lines and direction of flow for all pre-and post-construction **stormwater** runoff drainage areas located within the project limits. The site map must also include **impervious surfaces** and soil types.
 - e. Locations of areas not to be disturbed. Buffer zones, if required in Appendix A. Part C.3, must be described and identified on plan sheets or project maps in the **SWPPP**.
 - f. Location of areas where construction will be phased to minimize duration of exposed soil areas.
 - g. All **surface waters** and existing **wetlands**, which can be identified on maps such as United States Geological Survey 7.5 minute quadrangle maps or equivalent maps within one mile from the project boundaries, which will receive **stormwater** runoff from the construction site, during or after construction. Where **surface waters** receiving runoff associated with **construction activity** will not fit on the plan sheet, they must be identified with an arrow, indicating both direction and distance to the **surface water**. The **SWPPP** must identify if the **surface water** is a special or impaired water.
 - h. Methods to be used for **Final Stabilization** of all exposed soil areas.
5. The **Permittee(s)** must amend the **SWPPP** as necessary to include additional requirements, such as additional or modified **BMPs**, designed to correct problems identified or address situations whenever:
- a. There is a change in design, construction, operation, maintenance, weather or seasonal conditions that has a significant effect on the discharge of pollutants to **surface waters** or **underground waters**;
 - b. Inspections or investigations by site **operators**, local, state or federal officials indicate the **SWPPP** is not effective in eliminating or significantly minimizing the discharge of pollutants to **surface waters** or **underground waters** or that the discharges are causing water quality standard exceedances (e.g. nuisance conditions as defined in Minn. R. 7050.0210, subp. 2); or
 - c. The **SWPPP** is not achieving the general objectives of minimizing pollutants in **stormwater** discharges associated with **construction activity**, or the **SWPPP** is not consistent with the terms and conditions of this permit.
 - d. At any time after permit coverage is effective, the MPCA may determine that the project's **stormwater** discharges may cause, have reasonable potential to cause, or contribute to non-attainment of any applicable water quality standard, or that the **SWPPP** does not incorporate the applicable requirements in Part III.A.9, Discharges to Impaired Waters and TMDLs. If MPCA makes such determination(s) or any of the determinations in Parts III.A.5.a.-c., MPCA will notify the **Permittee(s)** in writing. In response, the **Permittee(s)** must develop a supplemental **BMP** action plan or appropriate **SWPPP** amendments describing **SWPPP** modifications to address the identified concerns and submit information requested by MPCA, which may include an individual permit application. If MPCA's written notification requires a response, failure to respond within the specified timeframe constitutes a permit violation.

6. The **SWPPP** must factor in any findings of and include any **stormwater** mitigation measures required as the result of any environmental, archeological or other required local, state or federal review conducted for the project. For the purposes of this permit provision, mitigation measures mean avoiding, minimizing, rectifying (e.g., repairing, rehabilitating, restoring), reducing, eliminating or compensating for impacts related to: (1) **stormwater** discharges associated with the project's **construction activity**; and (2) **erosion prevention, sediment control** and the Permanent **Stormwater** Management System for the project.
7. The **SWPPP** must provide additional measures as necessary to assure compliance with **surface and ground water** standards in Minn. R. chs. 7050 and 7060 in karst areas and to ensure protection of drinking water supply management areas (see Minn. R. 4725.4450).
8. If runoff from the site discharges to a calcareous fen listed in Minn. R. 7050.0180, subp. 6b, and a letter of approval from the Minnesota Department of Natural Resources (DNR) has been obtained, this must be documented in the **SWPPP** for the project. Any additional **stormwater** mitigation measures contained in the DNR approval letter must be incorporated into the **SWPPP** for the project. If the DNR does not respond to the request for a letter of approval within 30 calendar days, this must be documented in the **SWPPP** for the project.
9. Discharges to Impaired Waters and TMDLs

This part describes the requirements for projects that have a discharge point on the project that is within one mile of, and flows to, an impaired water that is identified on the most recent USEPA approved list of impaired waters. Impaired waters for the purposes of this permit are those waters identified as impaired pursuant to section 303(d) of the Clean Water Act where the identified pollutant(s) or stressor(s) are phosphorus (nutrient eutrophication biological indicators), turbidity, dissolved oxygen, or biotic impairment (fish bioassessment, aquatic plant bioassessment and aquatic macroinvertebrate bioassessment), and a TMDL is either required, or complete and USEPA approved, for any of the identified pollutant(s) or stressor(s).

a. Requirements for Discharges to Impaired Waters

For projects that have a discharge point on the project that is within one mile of, and flows to, an impaired water, the **Permittee(s)** must identify the impaired water(s) in the **SWPPP**, and whether there is a USEPA approved TMDL for the pollutant(s) or stressor(s) identified in this part. Unless otherwise notified by the MPCA in writing, the **Permittee(s)** identification of impaired waters must be based on the most recent USEPA approved section 303(d) Clean Water Act list of impaired waters and USEPA approved TMDLs at the time a complete permit application is submitted. The **Permittee(s)** identification must include those TMDLs applicable to the project's **stormwater** discharge that were approved at any time prior to permit application submittal and are still in effect.

b. Impaired Water Without an Approved TMDL or With an Approved TMDL and No Waste Load Allocation

If runoff from the site discharges to an impaired water, and a TMDL has not been approved by USEPA or there is a USEPA approved TMDL that does not establish a Waste Load Allocation (WLA) for construction **stormwater**, the **Permittee(s)** must incorporate into their **SWPPP**, and implement, the additional **BMPs** in Appendix A, Part C.1 and C.2.

c. Impaired Water With an Approved TMDL and WLA

If runoff from the site discharges to an impaired water for which there is a USEPA approved TMDL that establishes a WLA for construction **stormwater**, and the TMDL does not identify any specific implementation activities that would apply to the site discharges, the **Permittee(s)** must incorporate into their **SWPPP**, and implement, the additional BMPs in Appendix A, Part C.1 and C.2. If the TMDL identifies specific implementation activities regarding construction stormwater that would apply to the site discharges, the Permittee(s) must include the following in the **SWPPP**:

- i. Identify the receiving water, the areas of the site discharging to it, and the pollutant(s) identified in the TMDL; and
- ii. **BMPs** identified in the TMDL and any other specific construction stormwater related implementation activities identified in the TMDL.

B. TEMPORARY SEDIMENT BASINS

Where ten (10) or more acres of disturbed soil drain to a common location, a temporary (or permanent) sediment basin must be provided prior to the runoff leaving the construction site or entering **surface waters**. The **Permittee** is encouraged, but not required, to install temporary sediment basins where appropriate in areas with steep slopes or highly erodible soils even if less than ten (10) acres drains to one area. The basins must be designed and constructed according to the following requirements:

1. The basins must provide storage below the outlet pipe for a calculated volume of runoff from a two (2) year, 24 hour storm from each acre drained to the basin, except that in no case shall the basin provide less than 1800 cubic feet of storage below the outlet pipe from each acre drained to the basin.
2. Where no such calculation has been performed, a temporary (or permanent) sediment basin providing 3,600 cubic feet of storage below the outlet pipe per acre drained to the basin, shall be provided where attainable until **permanent cover** is established for the entire drainage area of the temporary basin.
3. Temporary basin outlets must be designed to prevent short-circuiting and the discharge of floating debris. The basin must be designed with the ability to allow complete basin drawdown (e.g., perforated riser pipe wrapped with filter fabric and covered with crushed gravel, pumps or other means, see Part IV.D.) for maintenance activities, and provide a **stabilized** emergency overflow to prevent failure of pond integrity. **Energy dissipation** must be provided for the basin outlet (see Part IV.B.4).
4. The temporary (or permanent) basins must be constructed and made operational concurrent with the start of soil disturbance that is upgradient of the area and contributes runoff to the pond.
5. Where the temporary sediment basin is not attainable due to site limitations, equivalent **sediment controls** such as smaller sediment basins, and/or sediment traps, silt fences, vegetative buffer strips, or any appropriate combination of measures are required for all down slope boundaries of the construction area and for those side slope boundaries deemed appropriate as dictated by

individual site conditions. In determining whether installing a sediment basin is attainable, the **Permittee** must consider public safety and may consider factors such as site soils, slope, and available area on site. This determination must be documented in the **SWPPP**.

C. PERMANENT STORMWATER MANAGEMENT SYSTEM

All **stormwater** must be discharged in a manner that does not cause nuisance conditions, erosion in receiving channels or on downslope properties, or inundation in **wetlands** causing a significant adverse impact to the **wetlands**.

Where a project's ultimate development replaces vegetation and/or other pervious surfaces with one or more acres of cumulative **impervious surface**, a **water quality volume** of ½ inch of runoff from the new **impervious surfaces** created by the project must be treated by one of the methods outlined in Part III.C.1 through Part III.C.5 prior to the runoff leaving the construction site or entering **surface waters** (excluding man made drainage systems that convey **stormwater** to a constructed permanent **stormwater** management facility designed to treat the **water quality volume** from the project).

For those areas of a project where there is no feasible way to meet the treatment requirement for the **water quality volume**, other treatment such as grassed swales, smaller ponds or grit chambers is required prior to discharge to **surface waters**. A cumulative maximum of three (3) acres or 1% of project size whichever is larger can be treated in this manner.

Where the proximity to bedrock precludes the installation of any of the permanent **stormwater** management practices outlined in Part III.C., other treatment, such as grassed swales, smaller ponds, or grit chambers, is required prior to discharge to **surface waters**.

For work on linear projects where the lack of right of way precludes the installation of any of the permanent **stormwater** management practices outlined in Part III.C., other treatment such as grassed swales, smaller ponds, or grit chambers, is required prior to discharge to **surface waters**. A reasonable attempt must be made to obtain right of way during the project planning process. Documentation of these attempts must be in the **SWPPP** for the project or made available upon request within 72 hours.

1. Wet Sedimentation Basin

- a. The basin must have a permanent volume of 1800 cubic feet of storage below the outlet pipe for each acre that drains to the basin. The basin's permanent volume must reach a minimum depth of at least 3 feet and must have no depth greater than 10 feet. The basin must be configured such that scour or resuspension of solids is minimized.
- b. The basin's **water quality volume** is calculated as ½ inch of runoff from the new **impervious surfaces** created by the project.
- c. Basin outlets shall be designed such that the **water quality volume** is discharged at no more than 5.66 cubic feet per second (cfs) per acre of surface area of the pond.
- d. Basin outlets must be designed to prevent short-circuiting and the discharge of floating debris. Basin outlets must have **energy dissipation**.

- e. The basin must provide a **stabilized** emergency overflow to accommodate storm events in excess of the basin's hydraulic design.
- f. Adequate maintenance access must be provided (typically 8 ft. wide) along with a maintenance plan identifying whom will be performing future maintenance of the basin.

2. Infiltration/Filtration

Infiltration/Filtration options include but are not limited to: infiltration basins, infiltration trenches, rainwater gardens, sand filters, organic filters, bioretention areas, enhanced swales, dry storage ponds with underdrain discharge, off-line retention areas, and natural depressions. Infiltration must be used only as appropriate to the site and land uses. Settleable solids, floating materials, oils and grease should be removed from the runoff to the maximum extent practicable before runoff enters the infiltration/filtration system. Filtration systems must have a reasonable chance of achieving approximately 80% removal of total suspended solids. The **Permittee(s)** must evaluate the impact of constructing an infiltration practice on existing hydrologic features (e.g., existing **wetlands**) and try to maintain pre-existing conditions (e.g., do not breach a perched water table which is supporting a **wetland**). For a discussion of potential stormwater hotspots, ground water warnings, design measures, maintenance considerations or other retention, detention, and treatment devices, see the **Minnesota Stormwater Manual** or MPCA's **Protecting Water Quality in Urban Areas** found on the MPCA's web-site.

- a. Infiltration systems should not be excavated to final grade until the contributing drainage area has been constructed and fully **stabilized**.
- b. During construction of an infiltration system, rigorous **erosion prevention** and **sediment controls** (e.g., diversion berms) should be used to keep sediment and runoff completely away from the infiltration area. The area must be staked off and marked so that heavy construction equipment will not compact the soil in the proposed infiltration area.
- c. To prevent clogging of the infiltration or filtration system, a pretreatment device such as a vegetated filter strip, small sedimentation basin, or water quality inlet (e.g., grit chamber) must be used to settle particulates before the **storm water** discharges into the infiltration or filtration system.
- d. Infiltration or filtration systems shall be sufficient to infiltrate or filter a **water quality volume** of ½ inch of runoff from the new **impervious surfaces** created by the project.
- e. The **water quality volume** shall discharge through the soil surface or filter media in 48 hours or less. Additional flows that cannot be infiltrated or filtered in 48 hours should be routed to bypass the system through a **stabilized** discharge point. A way to visually verify that the system is operating as designed must be provided.
- f. Appropriate on-site testing consistent with the recommendations found in the **Minnesota Stormwater Manual** shall be conducted to ensure a minimum of 3 feet of separation from the seasonally **saturated soils** (or from bedrock) and the bottom of the proposed infiltration system. Calculations or computer model results that demonstrate the design adequacy of the infiltration system must be included as part of the **SWPPP**.
- g. Adequate maintenance access must be provided (typically 8 ft. wide) along with a maintenance plan identifying whom will be performing future maintenance of the infiltration or filtration system.

h. Use of designed infiltration systems receiving runoff from vehicle fueling and maintenance areas is prohibited.

3. Regional Ponds

Regional ponds can be used provided that they are constructed ponds, not a natural **wetland** or water body, (**wetlands** used as regional ponds must be mitigated for, see Appendix A) and designed in accordance with this permit's design requirements (see Part III.C.1) for all water from **impervious surfaces** that reach the pond. **Permittee(s)** shall not construct regional ponds in **wetlands**, regardless of their condition, quality or designation by local plans, unless the mitigative sequence in Appendix A. D. of this permit has been completed. There must be no significant degradation of the waterways between the project and the regional pond. The **owner** must obtain written authorization from the applicable local governmental unit (LGU) or private entity that owns and maintains the regional pond. The LGU's or private entity's written authorization must identify that the regional pond will discharge the **water quality volume** (½ inch of runoff from the impervious watershed area) at no more than 5.66 cfs per acre of surface area of the pond. The **owner** must include the LGU's or private entities' written authorization in the **SWPPP**. The LGU's or private entity's written authorization must be obtained before the **owner** finalizes the **SWPPP** and before any application for this permit is made to the MPCA.

4. Combination of Practices

A combination of practices, including those required by a LGU, which meet the requirements of Part III.C.1, 2 and 3 respectively, (i.e., wet sedimentation basins, infiltration/filtration, and regional ponds) may be used such that the **water quality volume** of ½ inch of runoff from the new **impervious surfaces** created by the project is accounted for in the **owner's** permanent **storm water** management system (e.g., ¼ inch infiltrated and ¼ inch treated through a wet sedimentation basin). If any combination of these practices is used, the **SWPPP** must contain documentation (e.g., LGU or private entity's authorization, infiltration computer model results or calculations, etc.) identifying the volume that each practice addresses.

5. Alternative Method

Where an alternative, innovative treatment system is proposed and demonstrated by calculation, design or other independent methods to achieve approximately 80% removal of total suspended solids on an annual average basis, the **Commissioner** will approve the method if the process outlined in Part II.B.3.c. is completed, and the following information is submitted:

- a. All calculations, drainage areas, plans, and specifications for the proposed alternative method and a graphic representation of the area to be served by the method. These items must be included in the **SWPPP** and submitted to the MPCA at least 90 days prior to the proposed starting date of the **construction activity**.
- b. A two (2) year monitoring plan to sample runoff from the proposed method. The plan must include a discussion of the methods used to collect samples, location where samples will be taken (upstream and downstream of the proposed method), frequency of samples (minimum of six runoff events sampled), identify lab used to analyze the samples and quality assurance and quality control methods to be used. The plan must include a schedule for submitting the monitoring data annually.

- c. A mitigation plan that addresses how the **water quality volume** will be treated in the event that the monitoring data shows the proposed alternative treatment method does not function as designed.
- d. The alternative method must achieve approximately 80% removal of total suspended solids on an average annual basis for the conditions expected at the site. The design must also consider public safety, health and water quality concerns. Proprietary information on effectiveness will not be considered for alternative treatment method review and approval.

No **construction activity** on the project is covered under this permit until the applicant receives an alternative treatment approval letter from the MPCA as described in Part II.B.3.c.

D. RECORD RETENTION

The **SWPPP** (original or copies) including, all changes to it, and inspections and maintenance records must be kept at the site during construction by the **Permittee** who has operational control of that portion of the site. The **SWPPP** can be kept in either the field office or in an on site vehicle during normal working hours.

All **owner(s)** must keep the **SWPPP**, along with the following additional records, on file for three (3) years after submittal of the **NOT** as outlined in Part II.C. This does not include any records after submittal of the **NOT**.

1. Any other permits required for the project;
2. Records of all inspection and maintenance conducted during construction (see Part IV.E. Inspections and Maintenance);
3. All permanent operation and maintenance agreements that have been implemented, including all right of way, contracts, covenants and other binding requirements regarding perpetual maintenance; and
4. All required calculations for design of the temporary and Permanent **Stormwater** Management Systems.

PART IV. CONSTRUCTION ACTIVITY REQUIREMENTS

A. STORM WATER POLLUTION PREVENTION PLAN

The **Permittee(s)** must implement the **SWPPP** and the requirements of this part. The **BMPs** identified in the **SWPPP** and in this permit must be selected, installed, and maintained in an appropriate and functional manner that is in accordance with relevant manufacturer specifications and accepted engineering practices.

B. EROSION PREVENTION PRACTICES

1. The **Permittee(s)** must plan for and implement appropriate construction phasing, vegetative buffer strips, horizontal slope grading, and other construction practices that minimize erosion, so that the inspection and maintenance requirements of Part IV.E. are complied with. The location of areas not to be disturbed must be delineated (e.g. with flags, stakes, signs, silt fence etc.) on the development site before work begins.

2. All exposed soil areas must be **stabilized** as soon as possible to limit soil erosion but in no case later than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased. Temporary stockpiles without significant silt, clay or organic components (e.g., clean aggregate stockpiles, demolition concrete stockpiles, sand stockpiles) and the constructed base components of roads, parking lots and similar surfaces are exempt from this requirement but must comply with Part IV.C.5.
3. The **normal wetted perimeter** of any temporary or permanent drainage ditch or swale that drains water from any portion of the construction site, or diverts water around the site, must be **stabilized** within 200 lineal feet from the property edge, or from the point of discharge into any **surface water**. Stabilization of the last 200 lineal feet must be completed within 24 hours after connecting to a **surface water**.

Stabilization of the remaining portions of any temporary or permanent ditches or swales must be complete within 14 days after connecting to a **surface water** and construction in that portion of the ditch has temporarily or permanently ceased.

Temporary or permanent ditches or swales that are being used as a sediment containment system (with properly designed rock ditch checks, bio rolls, silt dikes etc.) do not need to be **stabilized**. These areas must be **stabilized** within 24 hours after no longer being used as a sediment containment system.

4. Pipe outlets must be provided with temporary or permanent **energy dissipation** within 24 hours after connection to a **surface water**.

C. SEDIMENT CONTROL PRACTICES

1. **Sediment control** practices must minimize sediment from entering **surface waters**, including curb and gutter systems and storm sewer inlets.
 - a. Temporary or permanent drainage ditches and sediment basins that are designed as part of a sediment containment system (e.g., ditches with rock check dams) require **sediment control** practices only as appropriate for site conditions.
 - b. If the down gradient treatment system is overloaded, additional upgradient **sediment control** practices or redundant BMPs must be installed to eliminate the overloading, and the **SWPPP** must be amended to identify these additional practices as required in Part III.A.4, a. through c.
 - c. In order to maintain sheet flow and minimize rills and/or gullies, there shall be no unbroken slope length of greater than 75 feet for slopes with a grade of 3:1 or steeper.
2. **Sediment control** practices must be established on all down gradient perimeters before any upgradient land disturbing activities begin. These practices shall remain in place until **Final Stabilization** has been established in accordance with Part IV.G.
3. The timing of the installation of **sediment control** practices may be adjusted to accommodate short-term activities such as clearing or grubbing, or passage of vehicles. Any short-term activity must be completed as quickly as possible and the **sediment control** practices must be installed immediately after the activity is completed. However, **sediment control** practices must be installed before the next precipitation event even if the activity is not complete.

4. All storm drain inlets must be protected by appropriate **BMPs** during construction until all sources with potential for discharging to the inlet have been **stabilized**. Inlet protection may be removed for a particular inlet if a specific safety concern (street flooding/freezing) has been identified and the **Permittee(s)** have received written correspondence from the jurisdictional authority (e.g. city/county/township/MnDOT engineer) verifying the need for removal. The written correspondence must be documented in the **SWPPP** or available within 72 hours upon request. When written correspondence can not be obtained in a timely manner, the specific inlet protection can be removed to alleviate the immediate safety concern. However, efforts to obtain written correspondence must be documented in the **SWPPP** and available within 72 hours upon request. Permission to remove inlet protection based on a specific safety concern must still be obtained from the jurisdictional authority within 30 days of removal.
5. Temporary soil stockpiles must have silt fence or other effective **sediment controls**, and cannot be placed in **surface waters**, including **stormwater** conveyances such as curb and gutter systems, or conduits and ditches unless there is a bypass in place for the stormwater.
6. Vehicle tracking of sediment from the construction site (or onto streets within the site) must be minimized by **BMPs** such as stone pads, concrete or steel wash racks, or equivalent systems. Street sweeping must be used if such **BMPs** are not adequate to prevent sediment from being tracked onto the street (see Part IV.E.4.d.).
7. The **Permittee** must install temporary sedimentation basins as required in Part III.B. of this permit.

D. DEWATERING AND BASIN DRAINING

1. **Dewatering** or basin draining (e.g., pumped discharges, trench/ditch cuts for drainage) related to the **construction activity** that may have turbid or sediment laden discharge water must be discharged to a temporary or permanent sedimentation basin on the project site whenever possible. Discharge from the temporary or permanent sedimentation basin must be visually checked to ensure adequate treatment is obtained in the basin and that nuisance conditions (see Minn. R. 7050.0210, subp. 2) will not result from the discharge. If the water cannot be discharged to a sedimentation basin prior to entering the **surface water**, it must be treated with the appropriate **BMPs**, such that the discharge does not adversely affect the receiving water or downstream landowners. The **Permittee(s)** must ensure that discharge points are adequately protected from erosion and scour. The discharge must be dispersed over natural rock riprap, sand bags, plastic sheeting, or other accepted **energy dissipation** measures. Adequate sedimentation control measures are required for discharge water that contains suspended solids.
2. All water from **dewatering** or basin draining activities must be discharged in a manner that does not cause nuisance conditions, erosion in receiving channels or on downslope properties, or inundation in **wetlands** causing significant adverse impact to the **wetland**.

E. INSPECTIONS AND MAINTENANCE

1. The **Permittee(s)** (either the **owner** or **operator**, whoever is identified in the **SWPPP**) must routinely inspect the entire construction site at least once every seven (7) days during active construction and within 24 hours after a rainfall event greater than 0.5 inches in 24 hours. Following an inspection which occurs within 24 hours after a rainfall event, the next inspection must be conducted within seven (7) days after that.
2. All inspections and maintenance conducted during construction must be recorded in writing and these records must be retained with the **SWPPP** in accordance with Part III.D. Records of each inspection and maintenance activity shall include:
 - a. Date and time of inspections;
 - b. Name of person(s) conducting inspections;

- c. Findings of inspections, including recommendations for corrective actions;
 - d. Corrective actions taken (including dates, times, and party completing maintenance activities);
 - e. Date and amount of all rainfall events greater than 1/2 inch (0.5 inches) in 24 hours;
 - f. Documentation of changes made to the **SWPPP** as required in Part III.A.4; and
3. Where parts of the construction site have **permanent cover**, but work remains on other parts of the site, inspections of the areas with **permanent cover** may be reduced to once per month. Where construction sites have **permanent cover** on all exposed soil areas and no construction activity is occurring anywhere on the site, the site must be inspected for a period of twelve (12) months (the inspections may be ceased during frozen ground conditions). Following the twelfth month of **permanent cover** and no **construction activity**, inspections may be terminated until construction activity is once again initiated or sooner if notified in writing by the MPCA. Where work has been suspended due to frozen ground conditions, the required inspections and maintenance schedule must begin within 24 hours after runoff occurs at the site or prior to resuming construction, whichever comes first.
 4. All **erosion prevention** and **sediment control BMPs** must be inspected to ensure integrity and effectiveness. All nonfunctional **BMPs** must be repaired, replaced, or supplemented with functional **BMPs** within 24 hours after discovery, or as soon as field conditions allow access unless another time frame is specified below. The **Permittee(s)** must investigate and comply with the following inspection and maintenance requirements:
 - a. All silt fences must be repaired, replaced, or supplemented when they become nonfunctional or the sediment reaches 1/3 of the height of the fence. These repairs must be made within 24 hours of discovery, or as soon as field conditions allow access.
 - b. Temporary and permanent sedimentation basins must be drained and the sediment removed when the depth of sediment collected in the basin reaches 1/2 the storage volume. Drainage and removal must be completed within 72 hours of discovery, or as soon as field conditions allow access (see Part IV.D.).
 - c. **Surface waters**, including drainage ditches and conveyance systems, must be inspected for evidence of erosion and sediment deposition. The **Permittee(s)** must remove all deltas and sediment deposited in **surface waters**, including drainage ways, catch basins, and other drainage systems, and restabilize the areas where sediment removal results in exposed soil. The removal and stabilization must take place within seven (7) days of discovery unless precluded by legal, regulatory, or physical access constraints. The **Permittee** shall use all

reasonable efforts to obtain access. If precluded, removal and stabilization must take place within seven (7) calendar days of obtaining access. The **Permittee** is responsible for contacting all local, regional, state and federal authorities and receiving any applicable permits, prior to conducting any work.

- d. Construction site vehicle exit locations must be inspected for evidence of off-site sediment tracking onto paved surfaces. Tracked sediment must be removed from all paved surfaces, within 24 hours of discovery, or if applicable, within a shorter time to comply with Part IV.C.6.
 - e. The **Permittee(s)** are responsible for the operation and maintenance of temporary and permanent water quality management **BMPs**, as well as all **erosion prevention** and **sediment control BMPs**, for the duration of the construction work at the site. The **Permittee(s)** are responsible until another **Permittee** has assumed control according to Part II.B.5 over all areas of the site that have not been finally **stabilized** or the site has undergone **Final Stabilization**, and a **NOT** has been submitted to the MPCA.
 - f. If sediment escapes the construction site, off-site accumulations of sediment must be removed in a manner and at a frequency sufficient to minimize off-site impacts (e.g., fugitive sediment in streets could be washed into storm sewers by the next rain and/or pose a safety hazard to users of public streets).
5. All infiltration areas must be inspected to ensure that no sediment from ongoing **construction activity** is reaching the infiltration area and these areas are protected from compaction due to construction equipment driving across the infiltration area.

F. POLLUTION PREVENTION MANAGEMENT MEASURES

The **Permittee(s)** shall implement the following pollution prevention management measures on the site:

1. Solid Waste: Collected sediment, asphalt and concrete millings, floating debris, paper, plastic, fabric, construction and demolition debris and other wastes must be disposed of properly and must comply with MPCA disposal requirements.
2. Hazardous Materials: Oil, gasoline, paint and any hazardous substances must be properly stored, including secondary containment, to prevent spills, leaks or other discharge. Restricted access to storage areas must be provided to prevent vandalism. Storage and disposal of hazardous waste must be in compliance with MPCA regulations.
3. External washing of trucks and other construction vehicles must be limited to a defined area of the site. Runoff must be contained and waste properly disposed of. No engine degreasing is allowed on site.
4. Concrete washout onsite: All liquid and solid wastes generated by concrete washout operations must be contained in a leak-proof containment facility or impermeable liner. A compacted clay liner that does not allow washout liquids to enter ground water is considered an impermeable liner. The liquid and solid wastes must not contact the ground, and there must not be runoff from the concrete washout operations or areas. Liquid and solid wastes must be disposed of properly and in compliance with MPCA regulations. A sign must be installed adjacent to each washout facility to inform concrete equipment operators to utilize the proper facilities.

G. FINAL STABILIZATION

The **Permittee(s)** must ensure **Final Stabilization** of the site. **Final Stabilization** requires all of Parts IV.G.1-5 or Part IV.G.6:

1. **Final Stabilization** requires that all soil disturbing activities at the site have been completed and all soils must be **stabilized** by a uniform perennial vegetative cover with a density of 70% over the entire pervious surface area, or other equivalent means necessary to prevent soil failure under erosive conditions.
2. The **Permittee(s)** must ensure that the permanent **stormwater** treatment system meets all requirements in Part III, C. This includes but is not limited to, a final clean out of temporary or permanent sedimentation basins that are to be used as permanent water quality management basins and final construction or maintenance of infiltration basins. All sediment must be removed from conveyance systems and ditches must be **stabilized** with **permanent cover**.
3. Prior to submission of the **NOT**, all temporary synthetic and structural **erosion prevention** and **sediment control BMPs** (such as silt fence) must be removed on the portions of the site for which the **Permittee** is responsible. **BMPs** designed to decompose on site (such as some compost logs) may be left in place.
4. For residential construction only, individual lots are considered finally **stabilized** if the structure(s) are finished & **temporary erosion protection** and downgradient perimeter control has been completed and the residence has been sold to the homeowner. Additionally, the **Permittee** must distribute the MPCA's "**Homeowner Fact Sheet**" to the homeowner to inform the homeowner of the need for, and benefits of, **permanent cover**.
5. For construction projects on land used for agricultural purposes (e.g., pipelines across crop or range land) **Final Stabilization** may be accomplished by returning the disturbed land to its preconstruction agricultural use.
6. A **Permittee** may terminate permit coverage prior to completion of all **construction activity** if all of the following conditions are met in addition to Part IV.G.2 through Part IV.G.3 and where applicable, Part IV.G.4 or Part IV.G.5.
 - a. **Construction activity** has ceased for at least 90 days.
 - b. At least 90% (by area) of all originally proposed **construction activity** has been completed and **permanent cover** established on those areas.
 - c. On areas where **construction activity** is not complete, **permanent cover** has been established.

PART V. GENERAL PROVISIONS

A. APPLICABILITY CRITERIA

1. If the **Commissioner** determines that **stormwater** discharges associated with a **construction activity** are contributing to a violation of a water quality standard or would be more appropriately regulated by an individual permit, the **Commissioner** may require the **owner** to be covered by an individual **stormwater** discharge permit. The **Commissioner** may require the **owner** to develop and implement specific **BMPs** and monitor the discharge from the site. If applicable, upon issuance of an individual permit, this general permit would no longer apply.
2. If the terms and conditions of this general permit cannot be met, an **owner** may request an individual permit, in accordance with Minn. R. 7001.
3. Any interested person may petition the MPCA to require an individual NPDES/SDS permit in accordance with 40 CFR 122.28(b)(3).

B. RESPONSE

The **SWPPP**, including all certificates, reports, records, or other information required by this permit, must be made available to federal, state, and local officials within 72 hours upon request for the duration of the permit and for three years following the **NOT**. This does not include any records after submittal of the **NOT**.

C. PROHIBITIONS

This permit prohibits discharges of any material other than **stormwater**, and discharges from **dewatering** or basin draining activities in accordance with Part IV.D.1 and 2. For example, prohibited discharges include but are not limited to vehicle and equipment washing, maintenance spills, wash water, and discharges of oil and other hazardous substances.

D. TRANSFER OF OWNERSHIP OR CONTROL

This permit may not be assigned or transferred by the permit holder except when transfer occurs in accordance with the applicable requirements of Part II.B.5.

E. CIVIL AND CRIMINAL LIABILITY

Nothing in this permit must be construed to relieve the **Permittee(s)** from civil or criminal penalties for noncompliance with the terms and conditions provided herein. Nothing in this permit must be construed to preclude the initiation of any legal action or relieve the **Permittee(s)** from any responsibilities, liabilities, or penalties to which the **Permittee(s)** is or may be subject to under Section 311 of the Act and Minn. Stat. chs. 115 and 116, as amended. The **Permittee(s)** are not liable for permit requirements for activities occurring on those portions of a site where another party has submitted a notice of termination/permit modification form as described in Part II. B.5.b or the permittee has submitted the notice of termination/permit modification form as described in Part II.C.2.b except for monitoring responsibilities listed under Part III.C.5 if applicable.

F. SEVERABILITY

The provisions of this permit are severable. If any provision of this permit, or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this permit must not be affected thereby.

G. NPDES/SDS RULE STANDARD CONDITIONS

The **Permittee(s)** must comply with the provisions of Minn. R. 7001.0150, subp. 3 and Minn. R. 7001.1090, subp. 1(A), 1(B), 1(C), 1(H), and 1(I). This permit does not require the submittal of a data monitoring report, except where monitoring is required in Part III.C.5.

H. INSPECTION AND ENTRY

The **Permittee(s)** must comply with the provisions of 40 CFR 122.41(i), Minn. Stat. ch. 115.04 and Minn. Stat. ch. 115B.17. The **Permittee(s)** shall allow representatives of the MPCA or any member, employee or agent thereof, when authorized by it, upon presentation of credentials, to enter upon any property, public or private, for the purpose of obtaining information or examination of records or conducting surveys or investigations.

APPENDIX A

A. GENERAL REQUIREMENTS

All requirements in this Appendix are in addition to **BMPs** already specified in the permit. Where provisions of Appendix A conflict with requirements elsewhere in the permit, the provisions in Appendix A take precedence. All **BMPs** used to comply with this Appendix must be documented in the **SWPPP** for the project. If the terms and conditions of this Appendix cannot be met, an individual permit will be required in accordance with Minn. R. ch. 7001.

B. REQUIREMENTS FOR DISCHARGES TO SPECIAL WATERS AND IMPAIRED WATERS

Additional **BMPs** together with enhanced runoff controls are required for discharges to the following special waters (part B.1 through B.8 of Appendix A) and impaired waters (part B.9 of Appendix A). The **BMPs** identified for each special or impaired water are required for those areas of the project draining to a discharge point on the project that is within one mile of a special or impaired water and flows to that special or impaired water.

1. **Wilderness areas:** Boundary Waters Canoe Area Wilderness; Voyageurs National Park; Kettle River from the site of the former dam at Sandstone to its confluence with the Saint Croix River; Rum River from Ogechie Lake spillway to the northernmost confluence with Lake Onamia. Discharges to these waters must incorporate the **BMPs** outlined in C.1, C.2, C.3 and C.4 of this Appendix.
2. **Mississippi River:** Those portions from Lake Itasca to the southerly boundary of Morrison County that are included in the Mississippi Headwaters Board comprehensive plan dated February 12, 1981. Discharges to these waters must incorporate the **BMPs** outlined in C.1, C.2 and C.3 of this Appendix.

3. **Scenic or recreational river segments:** Saint Croix river, entire length; Cannon River from northern city limits of Faribault to its confluence with the Mississippi River; North Fork of the Crow River from Lake Koronis outlet to the Meeker-Wright county line; Kettle River from north Pine County line to the site of the former dam at Sandstone; Minnesota River from Lac qui Parle dam to Redwood County state aid highway 11; Mississippi River from county state aid highway 7 bridge in Saint Cloud to northwestern city limits of Anoka; and Rum River from state aid Highway 27 bridge in Onamia to Madison and Rice streets in Anoka. Discharges to these waters must incorporate the **BMPs** outlined in C.1, C.2 and C.3 of this Appendix.
4. **Lake Superior:** (Prohibited and restricted.) Discharges to Lake Superior must incorporate the **BMPs** outlined in C.1, C.2 and C.3 of this Appendix.
5. **Lake Trout Lakes:** Identified in Minn. R. 7050.0470, including those inside the boundaries of the Boundary Waters Canoe Area Wilderness and Voyageurs National Park. Discharges to these waters must incorporate the **BMPs** outlined in C.1, C.2, C.3 and C.4 of this Appendix.
6. **Trout Lakes:** Identified in Minn. R. 6264.0050, subp. 2. Discharges to these waters must incorporate the **BMPs** outlined in C.1, C.2, C.3, and C.4 of this Appendix.
7. **Scientific and natural areas:** Boot Lake, Anoka County; Kettle River in sections 15, 22, 23, T 41 N, R 20, Pine County; Pennington Bog, Beltrami County; Purvis Lake-Ober Foundation, Saint Louis County; Waters within the borders of Itasca Wilderness Sanctuary, Clearwater County; Iron Springs Bog, Clearwater County; Wolsfeld Woods, Hennepin County; Green Water Lake, Becker County; Blackdog Preserve, Dakota County; Prairie Bush Clover, Jackson County; Black Lake Bog, Pine County; Pembina Trail Preserve, Polk County; and Falls Creek, Washington County. Discharges to these waters must incorporate the **BMPs** outlined in C.1, C.2, C.3 and C.4 of this Appendix.
8. **Trout Streams:** Listed in Minn. R. 6264.0050, subp. 4. Discharges to these waters must incorporate the **BMPs** outlined in C.1, C.2, C.3, and C.5 of this Appendix.
9. **Impaired Waters:** waters identified as impaired under section 303 (d) of the federal Clean Water Act for phosphorus (nutrient eutrophication biological indicators), turbidity, dissolved oxygen or aquatic biota (fish bioassessment, aquatic plant bioassessment and aquatic macroinvertebrate bioassessment). Discharges to these waters must incorporate the **BMPs** outlined in C.1 and C.2 of this Appendix.

Note on impaired waters listing terminology: The terms in parenthesis in Appendix A Part B.9 above are the most current terminology used to list waters as impaired at the time of permit issuance. These terms are subject to change. For example, at one time waters were listed as impaired for phosphorus and now those same waters are listed as impaired for nutrient eutrophication biological indicators. If the terminology changes for one of the pollutant(s) or stressor(s) identified in the permit, the MPCA will keep a list of the new terms on its construction **stormwater** web site.

C. ADDITIONAL BMPS FOR SPECIAL WATERS AND IMPAIRED WATERS

For the BMPs described in C.2, C.4 and C.5 of this Appendix:

Where the proximity to bedrock precludes the installation of any of the permanent **stormwater** management practices outlined in Appendix A, other treatment such as grassed swales, smaller ponds, or grit chambers is required prior to discharge to **surface waters**.

For work on linear projects where the lack of right of way precludes the installation of any of the permanent **stormwater** management practices outlined in Appendix A, other treatment such as grassed swales, smaller ponds, or grit chambers is required prior to discharge to **surface waters**.

1. During construction.
 - a. All exposed soil areas must be **stabilized** as soon as possible to limit soil erosion but in no case later than seven (7) days after the **construction activity** in that portion of the site has temporarily or permanently ceased.
 - b. Temporary sediment basin requirements described in Part III.B.1-5 must be used for common drainage locations that serve an area with five (5) or more acres disturbed at one time.
2. Post construction. The **water quality volume** that must be treated by the project's permanent **stormwater** management system described in Part III.C. shall be one (1) inch of runoff from the new **impervious surfaces** created by the project. Where site conditions allow, at least ½ inch of the **water quality volume** must be infiltrated. See Part III.C.2 for more information on infiltration design and appropriate site conditions. If it is determined that site conditions are not appropriate for infiltration (e.g. lack of 3 ft. of separation to seasonally saturated ground water, proximity to bedrock, contaminated soils) the reasons should be documented in the **SWPPP** for the project. Infiltration is not required in Hydrologic Soil Group D soils.
3. Buffer zone. An undisturbed buffer zone of not less than 100 linear feet from the special water (not including tributaries) shall be maintained at all times. Exceptions from this requirement for areas, such as water crossings, limited water access and restoration of the buffer are allowed if the **Permittee** fully documents in the **SWPPP** the circumstances and reasons that the buffer encroachment is necessary. Replacement of existing impervious surface within the buffer is allowed under this permit. All potential water quality, scenic and other environmental impacts of these exceptions must be minimized by the use of additional or redundant **BMPs** and documented in the **SWPPP** for the project.
4. Enhanced runoff controls. The Permanent **Stormwater** Management System must be designed such that the pre- and post-project runoff rate and volume from the 1 and 2-year 24-hour precipitation events remain the same or are reduced.
5. Temperature Controls. The Permanent **Stormwater** Management System must be designed such that the discharge from the project will minimize any increase in the temperature of trout stream receiving waters resulting from the 1-and 2-year 24-hour precipitation events. This includes all tributaries of designated trout streams within the section that the trout stream is located. Projects that discharge to trout streams must minimize the impact using one or more of the following measures, in order of preference:
 - a. Minimize new **impervious surfaces**.
 - b. Minimize the discharge from connected **impervious surfaces** by discharging to vegetated areas, or grass swales, and through the use of other non-structural controls.
 - c. Infiltration or evapotranspiration of runoff in excess of pre-project conditions (up to the 2-year 24-hour precipitation event).

- d. If ponding is used, the design must include an appropriate combination of measures such as shading, filtered bottom withdrawal, vegetated swale discharges or constructed **wetland** treatment cells that will limit temperature increases. The pond should be designed to draw down in 24 hours or less.
- e. Other methods that will minimize any increase in the temperature of the trout stream.

D. REQUIREMENTS FOR DISCHARGING TO WETLANDS

If the project has any **stormwater** discharges with the potential for significant adverse impacts to a **wetland** (e.g., conversion of a natural **wetland** to a **stormwater** pond), the **Permittee(s)** must demonstrate that the **wetland** mitigative sequence has been followed in accordance with D.1 or D.2 of this appendix.

1. If the potential adverse impacts to a **wetland** on a specific project site have been addressed by permits or other approvals from an official statewide program (U.S. Army Corps of Engineers 404 program, Minnesota DNR, or the State of Minnesota Wetland Conservation Act) that are issued specifically for the project and project site, the **Permittee** may use the permit or other determination issued by these agencies to show that the potential adverse impacts have been addressed. For the purposes of this permit, de minimus actions are determinations by the permitting agency that address the project impacts, whereas a non-jurisdictional determination does not address project impacts.
2. If there are impacts from the project that are not addressed in one of the permits or other determinations discussed in Appendix A, Part D.1 (e.g., permanent inundation or flooding of the **wetland**, significant degradation of water quality, excavation, filling, draining), the **Permittee** must minimize all adverse impacts to **wetlands** by utilizing appropriate measures. Measures used must be based on the nature of the **wetland**, its vegetative community types and the established hydrology. These measures include in order of preference:
 - a. Avoid all significant adverse impacts to **wetlands** from the project and post-project discharge.
 - b. Minimize any unavoidable impacts from the project and post-project discharge.
 - c. Provide compensatory mitigation when the **Permittee** determines that there is no reasonable and practicable alternative to having a significant adverse impact on a **wetland**. For compensatory mitigation, **wetland** restoration or creation shall be of the same type, size and whenever reasonable and practicable in the same watershed as the impacted **wetland**.

E. DISCHARGES REQUIRING ENVIRONMENTAL REVIEW

This permit does not replace or satisfy any environmental review requirements, including those under the Minnesota Environmental Policy Act or the National Environmental Policy Act. The **owner** must verify that any environmental review required by law, including any required Environmental Assessment Work Sheets or Environmental Impact Statements, Federal environmental review, or other required review is complete, and the **owner** must incorporate any **stormwater** mitigation measures required as the result of any environmental review into the **SWPPP** for the project. If any part of your common plan of development or sale requires environmental review, coverage under this permit can not be obtained until such environmental review is complete.

F. DISCHARGES AFFECTING ENDANGERED OR THREATENED SPECIES

This permit does not replace or satisfy any review requirements for endangered or threatened species, from new or expanded discharges that adversely impact or contribute to adverse impacts on a listed endangered or threatened species, or adversely modify a designated critical habitat. The **owner** must conduct any required review and coordinate with appropriate agencies for any project with the potential of affecting threatened or endangered species, or their critical habitat.

G. DISCHARGES AFFECTING HISTORIC PLACES OR ARCHEOLOGICAL SITES

This permit does not replace or satisfy any review requirements for historic places or archeological sites, from new or expanded discharges which adversely affect properties listed or eligible for listing in the National Register of Historic Places or affecting known or discovered archeological sites. The **owner** must be in compliance with National Historic Preservation Act and conduct all required review and coordination related to historic preservation, including significant anthropological sites and any burial sites, with the Minnesota Historic Preservation Officer.

APPENDIX B. - DEFINITIONS

1. "**Best Management Practices (BMPs)**" means **erosion prevention** and **sediment control**, and water quality management practices that are the most effective and practicable means of controlling, preventing, and minimizing degradation of **surface water**, including avoidance of impacts, construction-phasing, minimizing the length of time soil areas are exposed, prohibitions, and other management practices published by state or designated area-wide planning agencies.

Individual **BMPs** found in this permit are described in the current version of **Protecting Water Quality in Urban Areas**, Minnesota Pollution Control Agency 2000. **BMPs** must be adapted to the site and can be adopted from other sources. However, they must be similar in purpose and at least as effective and stringent as MPCA's **BMPs**. (Other sources include manufacturers specifications, **Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices**, U.S. Environmental Protection Agency 1992, and **Erosion Control Design Manual**, Minnesota Department of Transportation, et al, 1993).

2. "**Commissioner**" means the **Commissioner** of the MPCA or the **Commissioner's** designee.
3. "**Common Plan of Development or Sale**" means a contiguous area where multiple separate and distinct land disturbing activities may be taking place at different times, on different schedules, but under one proposed plan. One plan is broadly defined to include design, permit application, advertisement or physical demarcation indicating that land-disturbing activities may occur.
4. "**Construction Activity**" includes **construction activity** as defined in 40 C.F.R. pt. 122.26(b)(14)(x) and **small construction activity** as defined in 40 C.F.R. pt. 122.26(b)(15). This includes a disturbance to the land that results in a change in the topography, existing soil cover (both vegetative and non-vegetative), or the existing soil topography that may result in accelerated **stormwater** runoff, leading to soil erosion and movement of sediment into **surface waters** or drainage systems. Examples of **construction activity** may include clearing, grading, filling, and excavating. **Construction activity** includes the disturbance of less than one acre of total land area that is a part of a larger **common plan of development or sale** if the larger common plan will ultimately disturb one (1) acre or more.

5. **“Dewatering”** means the removal of water for **construction activity**. It can be a discharge of appropriated surface or groundwater to dry and/or solidify a construction site. It may require Minnesota DNR permits to be appropriated and if contaminated may require other MPCA permits to be discharged.
6. **“Energy Dissipation”** means methods employed at pipe outlets to prevent erosion. Examples include, but are not limited to: concrete aprons, riprap, splash pads, and gabions that are designed to prevent erosion.
7. **“Erosion Prevention”** means measures employed to prevent erosion including but not limited to: soil stabilization practices, limited grading, mulch, temporary erosion protection or **permanent cover**, and construction phasing.
8. **“Final Stabilization”** See part IV.G.
9. **“General Contractor”** means the party who signs the construction contract with the **owner** or **operator** to construct the project described in the final plans and specifications. Where the construction project involves more than one contractor, the **general contractor** could be the party responsible for managing the project on behalf of the **owner** or **operator**. In some cases, the **owner** or **operator** may be the **general contractor**. In these cases, the **owner** may contract an individual as the **operator** who would become the Co-Permittee.
10. **“Homeowner Fact Sheet”** means a fact sheet developed by the MPCA to be given to homeowners at the time of sale by a builder to inform the homeowner of the need for, and benefits of, **Final Stabilization**.
11. **“Impervious Surface”** means a constructed hard surface that either prevents or retards the entry of water into the soil and causes water to run off the surface in greater quantities and at an increased rate of flow than prior to development. Examples include rooftops, sidewalks, patios, driveways, parking lots, storage areas, and concrete, asphalt, or gravel roads.
12. **“National Pollutant Discharge Elimination System (NPDES)”** means the program for issuing, modifying, revoking, reissuing, terminating, monitoring, and enforcing permits under the Clean Water Act (Sections 301, 318, 402, and 405) and United States Code of Federal Regulations Title 33, Sections 1317, 1328, 1342, and 1345..
13. **“Normal Wetted Perimeter”** means the area of a conveyance, such as a ditch, channel, or pipe that is in contact with water during flow events that are expected to occur once every year.
14. **“Notice of Termination”** means notice to terminate coverage under this permit after construction is complete, the site has undergone **Final Stabilization**, and maintenance agreements for all permanent facilities have been established, in accordance with all applicable conditions of this permit.
15. **“Operator”** means the person (usually the **general contractor**), designated by the **owner**, who has day to day operational control and/or the ability to modify project plans and specifications related to the **SWPPP**. The person must be knowledgeable in those areas of the permit for which the **operator** is responsible, (Part II.B. and Part IV.) and must perform those responsibilities in a workmanlike manner.

16. "**Owner**" means the person or party possessing the title of the land on which the construction activities will occur; or if the **construction activity** is for a lease, easement, or mineral rights license holder, the party or individual identified as the lease, easement or mineral rights license holder; or the contracting government agency responsible for the **construction activity**.
17. "**Permanent Cover**" means surface types that will prevent soil failure under erosive conditions. Examples include: gravel, asphalt, concrete, rip rap, roof tops, perennial cover, or other landscaped material that will permanently arrest soil erosion. A uniform perennial vegetative cover (e.g., evenly distributed, without large bare areas) with a density of 70% of the native background vegetative cover for the area must be established on all unpaved areas and areas not covered by permanent structures, or equivalent permanent stabilization measures. **Permanent cover** does not include the practices listed under temporary erosion protection.
18. "**Permittee**" means a person or persons, firm, or governmental agency or other institution that signs the application submitted to the MPCA and is responsible for compliance with the terms and conditions of this permit.
19. "**Public Waters**" means all water basins and watercourses that are described in Minn. Stat. 103G.005 subd. 15
20. "**Saturated Soil**" means the highest seasonal elevation in the soil that is in a reduced chemical state because of soil voids being filled with water. **Saturated soil** is evidenced by the presence of redoximorphic features or other information.
21. "**Sediment Control**" means methods employed to prevent sediment from leaving the site. **Sediment control** practices include silt fences, sediment traps, earth dikes, drainage swales, check dams, subsurface drains, pipe slope drains, storm drain inlet protection, and temporary or permanent sedimentation basins.
22. "**Small Construction Activity**" means small construction activity as defined in 40 C.F.R. part 122.26(b)(15) . Small construction activities include clearing, grading and excavating that result in land disturbance of equal to or greater than one acre and less than five acres. **Small construction activity** includes the disturbance of less than one (1) acre of total land area that is part of a larger **common plan of development or sale** if the larger common plan will ultimately disturb equal to or greater than one and less than five (5) acres.
23. "**Stabilized**" means the exposed ground surface has been covered by appropriate materials such as mulch, staked sod, riprap, erosion control blanket, mats or other material that prevents erosion from occurring. Applying mulch, hydromulch, tackifier, polyacrylamide or similar **erosion prevention** practices is not acceptable stabilization in temporary or permanent drainage ditches or areas where concentrated overland flow occurs. Grass seeding is not stabilization.
24. "**Standard Plates**" means general drawings having or showing similar characteristics or qualities that are representative of a **construction activity** or practice.
25. "**Stormwater**" is defined under Minn. R. 7077.0105, subp. 41(b), and includes precipitation runoff, **stormwater** runoff, snowmelt runoff, and any other surface runoff and drainage.

26. **“Storm Water Pollution Prevention Plan”** means a plan for **stormwater** discharge that includes **erosion prevention** measures, **sediment controls** and Permanent **Stormwater** Management Systems that, when implemented, will decrease soil erosion on a parcel of land and decrease off-site nonpoint pollution.
27. **“Surface Water or Waters”** means all streams, lakes, ponds, marshes, **wetlands**, reservoirs, springs, rivers, drainage systems, waterways, watercourses, and irrigation systems whether natural or artificial, public or private.
28. **“Temporary Erosion Protection”** means methods employed to prevent erosion. Examples of temporary erosion protection include; straw, wood fiber blanket, wood chips, and erosion netting.
29. **“Underground Waters”** means water contained below the surface of the earth in the saturated zone including, without limitation, all waters whether under confined, unconfined, or perched conditions, in near surface unconsolidated sediment or regolith, or in rock formations deeper underground. The term ground water shall be synonymous with underground water.
30. **“Waters of the State”** (as defined in Minn. Stat. § 115.01, subd. 22) means all streams, lakes, ponds, marshes, watercourses, waterways, wells, springs, reservoirs, aquifers, irrigation systems, drainage systems and all other bodies or accumulations of water, surface or underground, natural or artificial, public or private, which are contained within, flow through, or border upon the state or any portion thereof.
31. **“Water Quality Volume”** means ½ inch of runoff from the new **impervious surfaces** created by this project and is the volume of water to be treated in the Permanent **Stormwater** Management System, as required by this permit except as provided in Appendix A.C.2.
32. **“Wetland” or “Wetlands”** is defined in Minn. R. 7050.0130, subp. F and includes those areas that are inundated or saturated by **surface water** or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in **saturated soil** conditions. **Wetlands** generally include swamps, marshes, bogs, and similar areas. Constructed **wetlands** designed for wastewater treatment are not **waters of the state**. **Wetlands** must have the following attributes:
 - a. A predominance of hydric soils;
 - b. Inundated or saturated by **surface water** or ground water at a frequency and duration sufficient to support a prevalence of hydrophytic vegetation typically adapted for life in a **saturated soil** condition; and
 - c. Under normal circumstances support a prevalence of such vegetation.

Appendix D

Construction Stormwater Training Documentation

UNIVERSITY OF MINNESOTA

Certificate of Attendance

2004-2005 Erosion/Sediment Control Certification

Professional Development Hours

Tom Tri

Participant

Design of Stormwater Pollution Prevention Plans

Educational Activity

Leo Holm, Dwayne Stenlund, John Chapman

Instructor/Leader

University of Minnesota

Activity Sponsor

January 24-25 2005

Activity Date

12

Professional Development Hours

Please retain any or all of the following for your records: Registration Receipts, Agenda/syllabus, course plan, seminar brochure, and any narrative of the content or expected outcome of the education activity

UNIVERSITY OF MINNESOTA
Erosion and Sediment Control Program
Department of Bioproducts and Biosystems Engineering
1390 Eckles Avenue
St. Paul, MN 55108
612-625-9733 or 800-646-2282
<http://www.erosion.umn.edu>

2/11/2009

TOM TRI
BARR ENGINEERING
332 WEST SUPERIOR STREET
SUITE 600
DULUTH MN 55802

Your test score(s) for all Erosion and Sediment Control Certification workshops that you have attended to date are listed below. A score of 70% or above is required for certification.

If your score is lower, you have not received certification. However, you have the option of re-taking the exam at one of the remaining scheduled courses. Please contact our office at the address or phone above for instructions.

You will receive a wallet-sized certification card in June. Until then, this letter is your proof of certification for all courses.

If you have questions about this program, or if you have received this notice in error, please contact us at the above address or phone number.

UNIVERSITY OF MINNESOTA
Erosion/Sediment Control Certification Program

2/11/2009

TRI, TOM
BARR ENGINEERING
332 WEST SUPERIOR STREET
SUITE 600
DULUTH MN 55802

This letter expires June 30, 2009

	Event	Score	Date	Location	Certification Expires
Certified	Site Mgmt Recert	91%	Mar 23, 2006	Carlton	2009*
Certified	Design of SWPPP Rec	92%	Oct 25, 2007	Arden Hills	2011
Certified	Site Management Rec	92%	Feb 04, 2009	Baxter	2012

An asterisk (*) indicates this certification is about to expire - attend a class this year to continue the certification

**Erosion/Sediment Control
Inspector/Installer**

For those who install or inspect the installation of erosion/sediment control devices and the establishment of vegetation.

**Erosion/Sediment Control Site
Management**

For those who supervise, run, or direct grading work, culvert replacement work, and bridge construction work over rivers and streams.

**Design of Stormwater Pollution
Prevention Plans**

For those who are involved with the design of stormwater pollution prevention plans.

BARR ENGINEERING COMPANY

CERTIFIES THAT

KIT GRAYSON

HAS SUCCESSFULLY COMPLETED

Construction Stormwater Inspector/Installer Training
January 20, 2012

Lead Course Instructor:

Dwayne Stenlund, CPESC

Minnesota Department of Transportation

with assistance from Jacob Thompson and Jennifer Flemming, Barr Engineering



Appendix E

SWPPP Inspection Forms

NPDES/SDS Construction Stormwater Inspection Report

Corrective Actions Needed yes ☐ no ☐

Project Name / Location		
() - ext.	() - ext.	
Owner Name	Telephone	Fax
() - ext.	() - ext.	() - ext.
Contractor Name	Telephone	Fax
() - ext.	() - ext.	() - ext.
Inspector Name	Telephone	Fax
() - ext.	() - ext.	() - ext.
/ /		<input type="checkbox"/> Weekly <input type="checkbox"/> Monthly
Inspection Date /Time	Weather Conditions	Type of Inspection

1) Erosion Control Practices During Construction

check for corrective actions needed

- a) Does the Pond have side slopes **MISSING** temporary protection or permanent cover Separate basin checklist completed? yes ☐ no ☐
- b) Is the normal wetted perimeter of temporary or permanent (connected) ditch that drains water is stabilized within 24 hrs (200' back from surface water) yes ☐ no ☐
- c) Are exposed, erodible soils w/ positive slopes **MISSING** stabilization BMPs (*installed in appropriate or functional manner*) ☐ Localized ☐ Widespread
- d) Is there temporary or permanent energy dissipation (w/ 24 hour) **MISSING** at outlets connected to surface water yes ☐ no ☐

Description of Corrected Action Needed:

2) Sediment Control Practices During Construction *check for corrective actions needed*

- a) Has there been a discharge of sediment? (additional upgradient controls required) If so, is it ☐ Localized ☐ Widespread
- b) Are there **MISSING** temporary sedimentation basins (disturbance > 10 acres, or > 5 acres near special water areas) yes ☐ no ☐
- c) Are the Inlet control BMPs NOT functional or missing? yes ☐ no ☐
- d) Are there Perimeter controls **MISSING** downgradient prior to land disturbing activities yes ☐ no ☐

Description of Corrected Action Needed:

3) Maintenance *check for corrective actions needed*

- a) Do erosion and sediment control BMPs need repair, replacement or enhancement? yes ☐ no ☐
- b) Has temporary sedimentation basin maintenance been performed (collected sediment > 1/2 basin volume) yes ☐ no ☐
- c) **Are there sediment deposits** in ditches or surface waters NOT removed, **describe affected area or water** ☐ Localized ☐ Widespread
- d) Is there sediment tracking on paved surfaces at exits yes ☐ no ☐ Is it ? ☐ Localized ☐ Widespread

Description of Corrected Action Needed:

4) Inspections *check for corrective actions needed*

- a) Stormwater Pollution Prevention Plan (SWPPP): SWPPP ON site ☐ SWPPP NOT on site ☐ SWPPP not reviewed at inspection ☐
- Inspections/maintenance (1 per 7 days or 24 hours of .05 inch precip.) Is there **MISSING** data: date, name, findings, corrective actions, rainfall, changes to SWPPP ☐

Description of Corrected Action Needed:

5) Stormwater Management (site hydrology) 1 acre or more of new impervious surface added yes ☐ no ☐ *check for corrective actions needed*

- a) Wet sedimentation basin ☐ Regional pond ☐ Infiltration/filtration ☐ Alternative method ☐
- b) When required, pretreatment **MISSING** ☐ **c1) Dewatering Activities** **c2) Turbid discharges to surface waters or causing erosion off site** ☐
- d) Project causing wetland impacts ☐ If yes: WCA permit required ☐ DNR **permit** required ☐

Description of Corrected Action Needed:

6) Management Pollution Prevention *check for corrective actions needed Are there:*

- a) Is there Solid waste NOT disposed of properly ☐
- b) Are there Hazardous materials NOT in secondary containment or/and NOT restricted access ☐
- c) Undefined areas for construction vehicles external washing ☐
- d) Undefined concrete washout areas on site and post a sign ☐

Corrected Action Needed:

7) Record Observations for Future Documentation

- ☐ Photographs of site ☐ Document where corrective action is needed ☐ Sample runoff taken

Appendix F

SWPPP Update Form

SWPPP Modification Log

[illegible]

Appendix G

Notice of Termination/Transfer Forms



**Minnesota Pollution
Control Agency**

520 Lafayette Road North
St. Paul, MN 55155-4194

Notice of Termination/ Permit Modification Form

NPDES Construction Stormwater Permit Program

Transfer or terminate your National Pollutant Discharge Elimination System (NPDES) Construction Stormwater Permit. Allowable changes are permit termination and permit transfer for all or a portion of the site. This form replaces the Notice of Termination (NOT), Permit Transfer, Permit Modification, and Subdivision Registration forms used under the former permit.

Instructions for this form are located on the Internet at <http://www.pca.state.mn.us/publications/wq-strm2-60i.pdf>.

Form will be invalid and returned to sender unless the checkbox associated with the applicable actions is checked and the corresponding signature is provided in section A-1, A-2, A-3, and or A-4.

Please submit to: **Construction Stormwater Permit Program**
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

Existing Permit Identification

a. Current permit ID: C000 _ _ _ _ _ or SUB00 _ _ _ _ _

b. Project name: _____
Project location: _____

Briefly describe where the construction activity occurs (for example: Intersection of 45th St. and Irving Ave.). Include address if available.

Select Option 1, 2, or 3

1. Notice of Termination (NOT) for entire site by existing owner

Select this option when a project has achieved final stabilization with existing owner / contractor and no part of the site is being transferred to a new owner and all construction activity is complete.

c. ☐ Notice of Termination for entire existing permitted site or a subdivided site. (Current owner and contractor must sign under the "Current" Owner and "Current" Contractor sections respectively).

Check above box and sign section A-1 and A-2 on page 2.

2. Transfer of entire site to new owner or contractor (Transfer/Modification)

Select this option if the **entire** site (represented by the ID above) has either a new owner and/or new general contractor. Check all the boxes below that apply.

d. ☐ New Owner for entire existing permitted site.

f. ☐ Current Owner for entire existing permitted site.

e. ☒ New Contractor for entire existing permitted site.

g. ☐ Current Contractor for entire existing permitted site.

Check above box(es) and sign section A-3 and A-4 page 3 and or check above box(es) and sign section A-1 and A-2 page 2
Both "Current" and "New" Parties must sign this form (preferred), however, separate forms are acceptable.

3. Transfer of a portion of a site to a new owner or contractor (Subdivision)

Select this option if a **portion** of a site (permitted under the ID above) has either a new owner and/or new general contractor. Check the boxes below that apply.

h. Describe the portion of the site being transferred: Lot _____ Block _____

Project location/address: _____

City, State, and Zip: _____

Example: SW quadrant of 45th Street and Irving Avenue or Lots 1-17 of block 20. Include list of addresses if available or include a map

i. ☐ New Owner for portion of existing site.

k. ☐ Current Owner of the portion to be transferred.

j. ☐ New Contractor for portion of existing site.

l. ☐ Current Contractor of the portion to be transferred.

Check above box(es) and sign section A-3 and A-4 page 3 and or check above box(es) and sign section A-1 and A-2 page 2
Both "Current" and "New" Parties must sign this form (preferred), however, separate forms are acceptable.

Current Owner Authorized Signature (A-1)

Business/Firm name: _____

Last name: _____ First name: _____ Title: _____

E-mail address: _____ Telephone: (____) _____ Ext. _____

Mailing address: _____

City: _____ State: _____ Zip code: _____

Alternate contact:

Last name: _____ First name: _____ Title: _____

E-mail address: _____ Telephone: (____) _____ Ext. _____

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this system, or the persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I also certify under penalty of law that I have read, understood, and accepted all terms and conditions of the National Pollutant Discharge Elimination System (NPDES)/State Disposal System (SDS) General Stormwater Permit Construction Activity (MN R100001) that authorizes stormwater discharges associated with the construction site identified on this form.

Authorized signature: _____ **Date:** _____

*This Application must be signed by: **Corporation:** a principal executive officer of at least the level of vice-president or the duly authorized representative or agent of the executive officer if the representative or agent is responsible for the overall operation of the facility that is the subject of the permit application. **Partnership or Sole Proprietorship:** a general partner or the proprietor. **Municipality, State, Federal or Other Public Agency:** principal executive officer or ranking elected official.*

Current Contractor Authorized Signature (A-2)

Business/Firm name: _____

Last name: _____ First name: _____ Title: _____

E-mail address: _____ Telephone: (____) _____ Ext. _____

Mailing address: _____

City: _____ State: _____ Zip code: _____

Alternate contact:

Last name: _____ First name: _____ Title: _____

E-mail address: _____ Telephone: (____) _____ Ext. _____

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this system, or the persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I also certify under penalty of law that I have read, understood, and accepted all terms and conditions of the National Pollutant Discharge Elimination System (NPDES)/State Disposal System (SDS) General Stormwater Permit Construction Activity (MN R100001) that authorizes stormwater discharges associated with the construction site identified on this form.

Authorized signature: _____ **Date:** _____

*This Application must be signed by: **Corporation:** a principal executive officer of at least the level of vice-president or the duly authorized representative or agent of the executive officer if the representative or agent is responsible for the overall operation of the facility that is the subject of the permit application. **Partnership or Sole Proprietorship:** a general partner or the proprietor. **Municipality, State, Federal or Other Public Agency:** principal executive officer or ranking elected official.*

"New" Owner Authorized Signature (A-3)

Business/Firm name: _____

Last name: _____ First name: _____ Title: _____

E-mail address: _____ Telephone: (____) _____ Ext. _____

Mailing address: _____

City: _____ State: _____ Zip code: _____

Alternate contact:

Last name: _____ First name: _____ Title: _____

E-mail address: _____ Telephone: (____) _____ Ext. _____

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this system, or the persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I also certify under penalty of law that I have read, understood, and accepted all terms and conditions of the National Pollutant Discharge Elimination System (NPDES)/State Disposal System (SDS) General Stormwater Permit Construction Activity (MN R100001) that authorizes stormwater discharges associated with the construction site identified on this form.

Authorized signature: _____ **Date:** _____

*This Application must be signed by: **Corporation:** a principal executive officer of at least the level of vice-president or the duly authorized representative or agent of the executive officer if the representative or agent is responsible for the overall operation of the facility that is the subject of the permit application. **Partnership or Sole Proprietorship:** a general partner or the proprietor. **Municipality, State, Federal or Other Public Agency:** principal executive officer or ranking elected official.*

"New" Contractor Authorized Signature (A-4)

Business/Firm name: _____

Last name: _____ First name: _____ Title: _____

E-mail address: _____ Telephone: (____) _____ Ext. _____

Mailing address: _____

City: _____ State: _____ Zip code: _____

Alternate contact:

Last name: _____ First name: _____ Title: _____

E-mail address: _____ Telephone: (____) _____ Ext. _____

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this system, or the persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I also certify under penalty of law that I have read, understood, and accepted all terms and conditions of the National Pollutant Discharge Elimination System (NPDES)/State Disposal System (SDS) General Stormwater Permit Construction Activity (MN R100001) that authorizes stormwater discharges associated with the construction site identified on this form.

Authorized signature: _____ **Date:** _____

*This Application must be signed by: **Corporation:** a principal executive officer of at least the level of vice-president or the duly authorized representative or agent of the executive officer if the representative or agent is responsible for the overall operation of the facility that is the subject of the permit application. **Partnership or Sole Proprietorship:** a general partner or the proprietor. **Municipality, State, Federal or Other Public Agency:** principal executive officer or ranking elected official.*

If you have questions about the administrative details of the permit process go to: <http://www.pca.state.mn.us/publications/wq-strm2-60i.pdf> or call the Minnesota Pollution Control Agency at 651-296-6300 or 800-657-3864 and ask for "Construction Stormwater." If you have technical questions, ask for the "Stormwater Policy and Technical Assistance Unit."