LEGEND

- TREE REMOVAL
- MASS TREE AND SHRUB REMOVALS
- R1 — REMOVALS KEY NOTE
- P1 — PROTECTION KEY NOTE
- PROPERTY LINE

NOTES

1. REFER TO SHEET C3.01, GRADING AND DRAINAGE PLAN, FOR GENERAL NOTES.
2. MINIMIZE DISTURBANCE TO SITE AND PROTECT EXISTING VEGETATION AND SITE FEATURES (CURBS, WALKS, PAVEMENTS, OVERHEAD AND UNDERGROUND UTILITIES, SIGNAGE, FENCING, ROADWAYS, ETC.) WHICH ARE TO REMAIN.
3. REPAIR OR REPLACE EXISTING PROPERTY AND SITE FEATURES, INCLUDING GRASS AND VEGETATION, WHICH IS TO REMAIN THAT IS DAMAGED BY THE WORK, TO THE OWNER'S SATISFACTION AND AT NO ADDITIONAL COST TO THE OWNER.
4. VISIT THE SITE PRIOR TO BIDDING; BE FAMILIAR WITH ACTUAL CONDITIONS IN THE FIELD. EXTRA COMPENSATION WILL NOT BE ALLOWED FOR CONDITIONS WHICH COULD HAVE BEEN DETERMINED OR ANTICIPATED BY EXAMINATION OF THE SITE, THE CONTRACT DRAWINGS AND THE INFORMATION AVAILABLE PERTAINING TO EXISTING SOILS, UTILITIES AND OTHER SITE CHARACTERISTICS.
5. HIRE THE SERVICES OF A UTILITY LOCATOR COMPANY TO LOCATE ALL PRIVATELY OWNED UTILITIES THAT MAY BE DISTURBED BY CONSTRUCTION OPERATIONS.

KEY NOTE LEGEND

- P1 — PROTECT WATERMAIN
- P2 — PROTECT GATE VALVE
- P3 — PROTECT UNDERGROUND UTILITY
- P4 — PROTECT STORM SEWER STRUCTURE
- P5 — PROTECT CONCRETE CURB
- R1 — REMOVE CONCRETE CURB
- X1 — REFER TO SHEET C4.01 - UTILITY PLAN, FOR TREATMENT

HORZ. SCALE 0 30 60 FEET

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phone: (612) 746-4260
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PLYMOUTH, MN 55447

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

Matthew J. Isakson

59553

REVISION SCHEDULE

NO.	DESCRIPTION	DATE
A4	ADDENDUM #4	4/14/2025

CITY OF NORTHFIELD
NORTHFIELD ICE ARENA
1900 CANNON RD, NORTHFIELD, MN 55057

DATE: 03/25/2025
PHASE: 100% CD
PROJECT: NORTHFIELD ICE ARENA
SHEET: REMOVALS PLAN

C0.01

LEGEND

- BASELINE FOR DIMENSIONS
- PI — POINT OF INTERSECTION
- PC — POINT OF CURVATURE
- PCC — POINT OF COMPOUND CURVATURE
- PROPOSED BUILDING STOOP - REFER TO ARCHITECTURAL PLANS
- SETBACK LINE
- PROPERTY LINE

NOTES

1. REFER TO SHEET C3.01,GRADING AND DRAINAGE PLAN, FOR GENERAL NOTES.
2. ALL APPLICABLE DIMENSIONS ARE TO FACE OF CURB, EDGE OF PAVEMENT, CENTERLINE OF FENCE, OR PROPERTY LINE UNLESS OTHERWISE NOTED.
3. CHECK ALL PLAN AND DETAIL DIMENSIONS AND VERIFY SAME BEFORE FIELD LAYOUT.
4. TRAFFIC SIGNS SHALL BE INSTALLED 18" BEHIND THE BACK OF CURB OR EDGE OF PAVEMENT.

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CITY OF NORTHFIELD
NORTHFIELD ICE ARENA
1900 CANNON RD, NORTHFIELD, MN 55057

DATE
03/25/2025

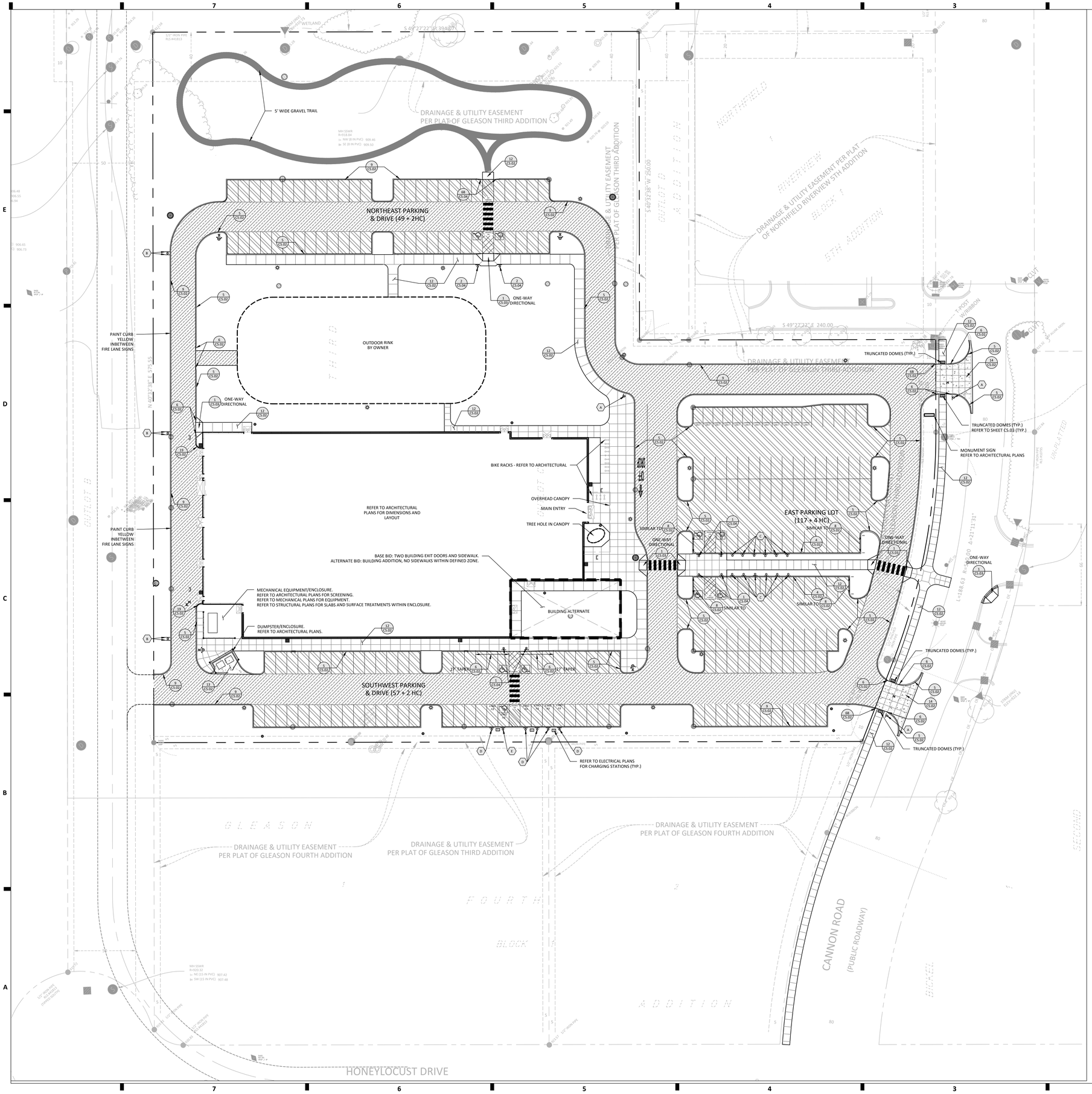
PHASE
100% CD

PROJECT
NORTHFIELD ICE ARENA

SHEET
GEOMETRIC PLAN

C1.01

HORZ. SCALE 0 30 60 FEET



LEGEND

- REFERENCE KEY TO SITE DETAILS (1 C5.01) — DETAIL I.D. NUMBER (TOP), DETAIL SHEET NUMBER (BOTTOM)
- PROPOSED CONCRETE WALK (12 C5.02)
- PROPOSED CONCRETE SLAB (13 C5.02)
- PROPOSED MEDIUM DUTY ASPHALT PAVEMENT (10 C5.02)
- PROPOSED HEAVY DUTY ASPHALT PAVEMENT (11 C5.02)
- PROPOSED GRAVEL SURFACE (18 C5.02)
- PROPOSED TRAFFIC SIGN (1 C5.04, 2 C5.04, 3 C5.04, 4 C5.04)
- SIGNAGE KEY NOTE (A)
- PROPOSED ACCESSIBLE SYMBOL
- PROPOSED MANHOLE (MH)
- PROPOSED CATCH BASIN (CB)
- PROPOSED HYDRANT (HYD)
- PROPOSED GATE VALVE (GV)
- PROPOSED BUILDING STOOP - REFER TO ARCHITECTURAL PLANS
- PROPOSED LIGHT POLE - REFER TO ELECTRICAL PLANS
- EV CHARGING STATION - REFER TO ELECTRICAL PLANS
- PROPERTY LINE

NOTES

1. REFER TO SHEET C3.01, GRADING AND DRAINAGE PLAN, FOR GENERAL NOTES.
2. CHECK ALL PLAN AND DETAIL DIMENSIONS AND VERIFY SAME BEFORE FIELD LAYOUT.
3. TRAFFIC SIGNS SHALL BE INSTALLED 18" BEHIND THE BACK OF CURB OR EDGE OF PAVEMENT.
4. ALL DISTURBED AREAS OUTSIDE THE BUILDING PAD, WHICH ARE NOT DESIGNATED TO BE PAVED, SHALL RECEIVE AT LEAST 6" OF TOPSOIL AND SHALL BE SEEDED. ALL AREAS NOT DESIGNATED FOR A SPECIFIC SEED MIX, WHICH ARE DISTURBED BY CONSTRUCTION, SHALL BE SEEDED WITH SEED MIX #1.
5. FAILURE OF TURF DEVELOPMENT: IN THE EVENT THE CONTRACTOR FAILS TO PROVIDE AN ACCEPTABLE TURF, RE-SEED ALL APPLICABLE AREAS, AT NO ADDITIONAL COST TO THE OWNER, TO THE SATISFACTION OF THE ENGINEER OR LANDSCAPE ARCHITECT.

PARKING STATISTICS

MAXIMUM STALL COUNT (PROPOSED BUILDING AND OUTDOOR RINK): 210 STALLS
MAXIMUM STALL COUNT WITH FUTURE 2ND ICE SHEET BUILDING EXPANSION: 252 STALLS
PROPOSED PARKING COUNTS = 232 STALLS

BICYCLE REQUIRED PARKING = 19 STALLS
PROPOSED BICYCLE PARKING = 26 STALLS

ACCESSIBLE PARKING STALL REQUIREMENTS = 7 STALLS
ACCESSIBLE PARKING STALLS PROVIDED = 8 STALLS

ELECTRIC VEHICLE STALLS REQUIREMENTS (2%) = 4.64 STALLS
ELECTRIC VEHICLE STALLS PROVIDED = 6 STALLS

ELECTRIC VEHICLE PREFERRED PARKING (5%) = 11.6 STALLS
ELECTRIC VEHICLE PREFERRED PARKING PROVIDED = 12 STALLS

COMPACT VEHICLE REQUIRED (5%) = 11.6 STALLS
COMPACT VEHICLE PROVIDED = 12 STALLS

SIGNAGE KEY NOTES

- A — R1-1 (30" X 30") — STOP
- B — SIMILAR TO R7-5 (12"x18") — NO PARKING / FIRE LANE
- C — SIMILAR TO R7-5 (12"x18") — RESERVED PARKING / UNAUTHORIZED VEHICLES WILL BE TOWED AT OWNER'S EXPENSE
- D — SIMILAR TO R7-5 (12"x18") — RESERVED PARKING / ELECTRIC VEHICLES ONLY
- E — SIMILAR TO R7-5 (12"x18") — RESERVED PARKING / ACCESSIBLE ELECTRIC VEHICLES ONLY

HORZ. SCALE 0 30 60 FEET

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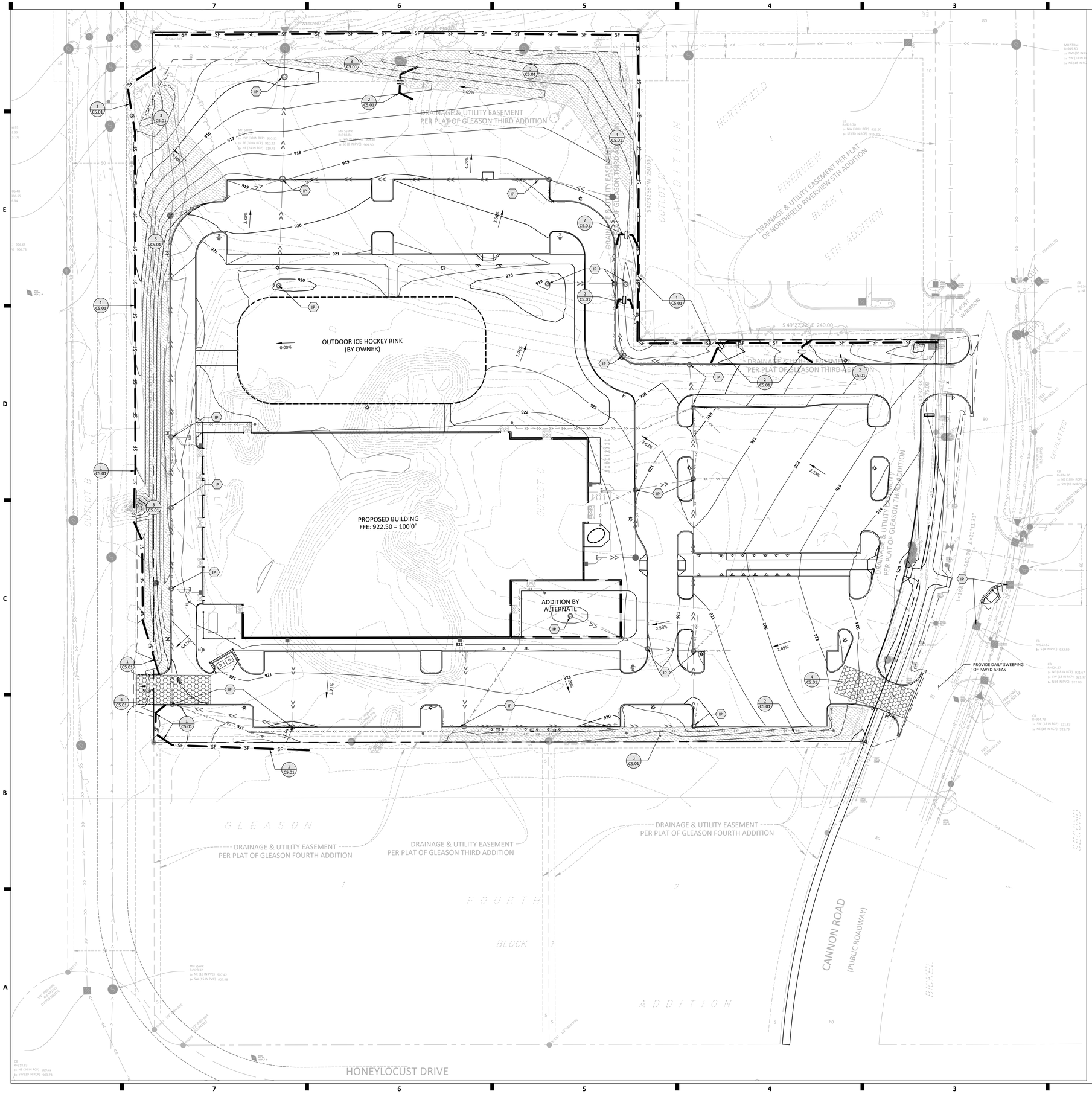
REVISION SCHEDULE

NO.	DESCRIPTION	DATE
A2	ADDENDUM #2	4/4/2025
A4	ADDENDUM #4	4/14/2025

CITY OF NORTHFIELD
NORTHFIELD ICE ARENA
1900 CANNON RD, NORTHFIELD, MN 55057

DATE 03/25/2025
PHASE 100% CD
PROJECT NORTHFIELD ICE ARENA
SHEET FINISHING PLAN

C1.02



LEGEND

- REFERENCE KEY TO SITE DETAILS (1 / C5.01) — DETAIL I.D. NUMBER (TOP), DETAIL SHEET NUMBER (BOTTOM)
- 955 — EXISTING CONTOUR
- 955 — PROPOSED CONTOUR
- PROPOSED GRADING LIMITS
- PROPOSED STORM SEWER
- PROPOSED DRAIN TILE (DT) / SUBSURFACE DRAINS (SD)
- PROPOSED MANHOLE (MH)
- PROPOSED CATCH BASIN (CB)
- IP — INLET PROTECTION DEVICE AT STORM SEWER INLET
- SF SF — PROPOSED SILT FENCE (1 / C5.01)
- PROPOSED SEDIMENT CONTROL LOG (2 / C5.01)
- PROPOSED ROCK CONSTRUCTION ENTRANCE (4 / C5.01)
- PROPOSED EROSION CONTROL BLANKET (3 / C5.01)
- PROPOSED BUILDING STOOP - REFER TO ARCHITECTURAL PLANS
- PROPERTY LINE

NOTES

1. REFER TO SHEET C3.01, GRADING AND DRAINAGE PLAN, FOR GENERAL NOTES.
2. REFER TO SWPPP NARRATIVE, SHEET C2.03, FOR CONSTRUCTION SEQUENCING AND EROSION CONTROL REQUIREMENTS.
3. MAINTAIN ADJACENT PROPERTY AND PUBLIC STREETS CLEAN FROM CONSTRUCTION CAUSED DIRT AND DEBRIS ON A DAILY BASIS. PROTECT DRAINAGE SYSTEMS FROM SEDIMENTATION AS A RESULT OF CONSTRUCTION RELATED DIRT AND DEBRIS.
4. MAINTAIN DUST CONTROL DURING GRADING OPERATIONS.
5. ALL EROSION CONTROL METHODS SHALL COMPLY WITH MPCA AND OTHER LOCAL REGULATIONS.
6. IF EROSION AND SEDIMENT CONTROL MEASURES TAKEN ARE NOT ADEQUATE AND RESULT IN DOWNSTREAM SEDIMENTATION, CLEAN OUT DOWNSTREAM STORM SEWERS AND OTHER CONVEYANCE DEVICES AS NECESSARY, INCLUDING ASSOCIATED RESTORATION.
7. INLET PROTECTION DEVICE AT STORM SEWER INLETS. AT THE INLETS TO ALL STORM SEWER STRUCTURES, PROVIDE A PRODUCT FROM THE FOLLOWING LIST OF APPROVED PRODUCTS:
   a. ROAD DRAIN "TOP SLAB", MANUFACTURED BY WIMCO
   b. ROAD DRAIN "CURB & GUTTER", MANUFACTURED BY WIMCO
   c. INFRASAFE "SEDIMENT CONTROL BARRIER", MANUFACTURED BY ROYAL ENVIRONMENTAL SYSTEMS, INC.
   d. INFRASAFE "DEBRIS COLLECTION DEVICE", MANUFACTURED BY ROYAL ENVIRONMENTAL SYSTEMS, INC.
   e. DANDY SACK, MANUFACTURED BY DANDY PRODUCTS, INC.
   f. DANDY CURB SACK, MANUFACTURED BY DANDY PRODUCTS, INC.
   g. OR APPROVED EQUAL.
8. PRIOR TO CONSTRUCTION, DELINEATE TURF AND VEGETATED AREAS NOT TO BE DISTURBED WITH ORANGE SNOW FENCE. DO NOT ALLOW CONSTRUCTION TRAFFIC, EQUIPMENT, OR MATERIALS TO UTILIZE, ACCESS, OR OTHERWISE ENTER THE DELINEATED AREAS. MINIMIZE SOIL COMPACTION AND DISRUPTION OF TOPSOIL IN AREAS OUTSIDE THE CONSTRUCTION LIMITS TO COMPLY WITH THE MN CONSTRUCTION STORMWATER PERMIT.

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Matthew J. Isakson

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REVISION SCHEDULE

NO.	DESCRIPTION	DATE
A2	ADDENDUM #2	4/4/2025

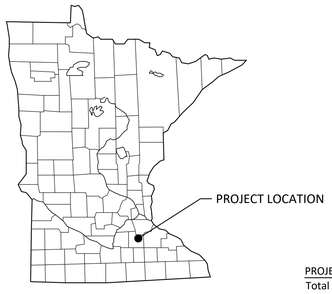
CITY OF NORTHFIELD
NORTHFIELD ICE ARENA
1900 CANNON RD, NORTHFIELD, MN 55057

DATE: 03/25/2025
PHASE: 100% CD
PROJECT: NORTHFIELD ICE ARENA
SHEET: EROSION AND SEDIMENT CONTROL PLAN
C2.01

HORZ. SCALE: 0 30 60 FEET

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

NORTHFIELD ICE ARENA
CITY OF NORTHFIELD
RICE COUNTY, MINNESOTA



LEGEND

- 1-MILE BOUNDARY
- PROJECT BOUNDARY
- OR — IMPAIRED, SPECIAL OR PROTECTED WATERS
- NATIONAL WETLANDS INVENTORY
- RECEIVING WATERS

RESPONSIBLE PARTIES:
The Contractor and Owner will be joint applicants under the MPCA's General Stormwater Permit for Construction Activity as required by the National Pollutant Discharge Elimination System (NPDES) Phase II program.

The Contractor shall provide one or more trained Construction SWPPP Manager(s) knowledgeable and experienced in the application of erosion prevention and sediment control BMPs that will oversee the implementation of the SWPPP, and the installation, inspection and maintenance of the erosion prevention and sediment control BMPs.

A Construction SWPPP Manager must be available for an on-site inspection within 72 hours upon request by the MPCA.

	COMPANY	CONTACT PERSON	PHONE
OWNER:	Northfield Hockey Association	Dave Bennett	507-645-3006
SWPPP DESIGNER:	Bolton & Menk, Inc.	Paul Strong	651-247-8789
CONTRACTOR:	TBD	TBD	TBD
CONSTRUCTION SWPPP MANAGER:	TBD	TBD	TBD
PARTY RESPONSIBLE FOR LONG TERM O&M:	City of Northfield	Jayson Dwelle	507-645-3034

The SWPPP Designer, Construction SWPPP Manager, and BMP Installer must have appropriate training. Documentation showing training commensurate with the job duties and responsibilities is required to be included in the SWPPP prior to any work beginning on the site. Training documentation for the SWPPP Designer is included on the Narrative sheet. The Contractor shall attach training documentation to this SWPPP for the Construction SWPPP Manager and BMP Installer prior to the start of construction. This information shall be kept up to date until the project NOT is filed.

ADDITIONAL COMPENSATION
Payment for all work associated with Erosion and Sediment Control shall be as described in the Project Manual. Unless otherwise authorized by the Owner no additional payment shall be made for any work required to administer and maintain the site erosion and sediment control in compliance with the Minnesota Pollution Control Agency (MPCA) - General Stormwater Permit for Construction Activity (MN R100001) including but not limited to inspection, maintenance, and removal of BMPs or addition of BMPs to accommodate Contractor phasing.

DOCUMENT RETENTION
Permittees must make the SWPPP, including all inspection reports, maintenance records, training records and other information required by this permit, available to federal, state, and local officials within three (3) days upon request for the duration of the permit and for three (3) years following the NOT.

GENERAL STORMWATER DISCHARGE REQUIREMENTS
All requirements listed in Section 5.1 of the Permit for the design of the permanent stormwater management system and discharge have been included in the preparation of this SWPPP. These include but are not limited to:

1. The expected amount, frequency, intensity, and duration of precipitation.
2. The nature of stormwater runoff and run-on at the site
3. Peak flow rates and stormwater volumes to minimize erosion at outlets and downstream channel and stream bank erosion.
4. The range of soil particle sizes expected to be present on the site.

Permanent stormwater treatment systems for this project have been designed in accordance with the guidance in the MN Stormwater Manual in place at the time of bidding. Copies of the design information and calculations are part of this SWPPP and will be provided in digital format upon written request to the Engineer.

PROJECT AREAS:

Total Project Size (disturbed area) =	7.0220	ACRES
Existing area of impervious surface =	0.0000	ACRES
Post construction area of impervious surface =	3.1620	ACRES
Total new impervious surface area created =	3.1620	ACRES

Planned Construction Start Date:	5/15/2025
Estimated Construction Completion Date:	9/1/2026

PERMANENT STORMWATER MANAGEMENT SYSTEM:
Type of storm water management used if more than 1 acre of new impervious surface is created:

	Wet Sedimentation Basin
	Infiltration/Filtration
X	Regional Pond
	Permanent Stormwater Management Not Required

PROJECT LOCATION:

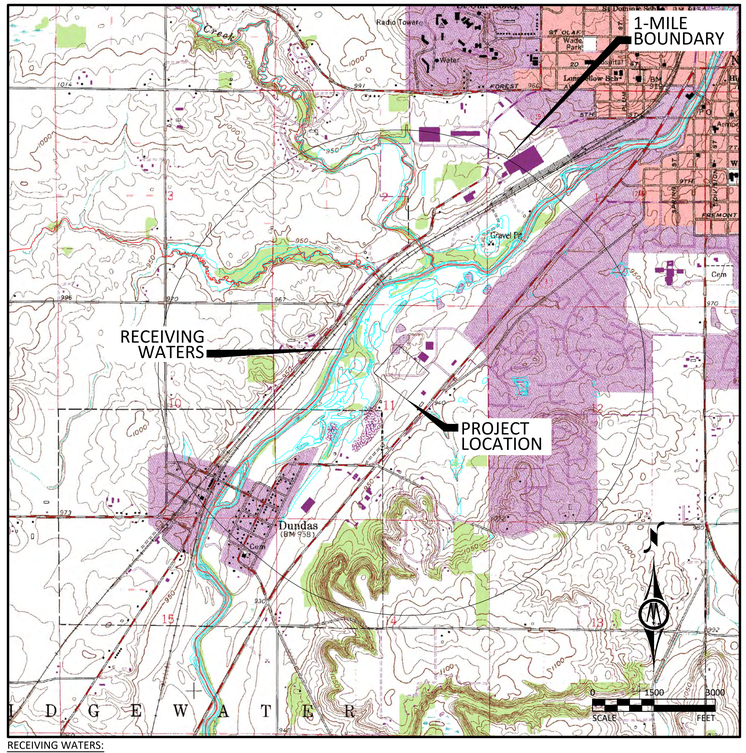
COUNTY	TOWNSHIP	RANGE	SECTION	LATITUDE	LONGITUDE
RICE	T111N	R20W	11	44.4377°	-93.1895°

BMP SUMMARY	QUANTITY	UNIT
INLET PROTECTION	EACH	23
ROCK CONSTRUCTION ENTRANCE	EACH	2
SEDIMENT CONTROL LOG	LF	160
SILT FENCE, TYPE MS	LF	1550
EROSION CONTROL BLANKET	SY	2950

DESCRIPTION OF CONSTRUCTION ACTIVITIES AND STORMWATER MANAGEMENT:
Construction activities include: Reconstructing the site mass grading, temporary erosion and sediment control, utility installation, parking lot and building construction, and permanent stabilization.

Under existing conditions runoff from the site flows overland into the adjacent roadway stormsewer, which outlets to the Cannon River to the west. Under proposed conditions, the drainage patterns will largely match the existing conditions, with onsite stormsewer being installed to convey flows to the adjacent roadway stormsewer.

This project includes the following stormwater management BMPs; none



RECEIVING WATERS:
Receiving waters, including surface water, wetlands, Public Waters, and stormwater ponds, within 1-mile of the project boundary are identified on the USGS 7.5 min quad map above. Receiving waters that are impaired, the impairment, and WLA are listed as follows. All specific BMPs relative to construction activities listed in the permit for special, prohibited, restricted, or impaired have been incorporated into this plan. All specific BMPs listed in approved TMDLs and those BMPs listed for construction related waste load allocations have also been incorporated.

NAME OF WATER BODY	TYPE (ditch, pond, wetland, lake, etc.)	Special, Prohibited, Restricted Water [1]	Flows to Impaired Water Within 1-Mile [2]	USEPA Approved Construction Related TMDL [3]
CANNON RIVER	RIVER	NO	YES	YES

[1] Special, prohibited, and restricted waters are listed in Section 23 of the MN Construction Stormwater General Permit (MNR100001).
[2] Identified as impaired under section 303 (d) of the federal Clean Water Act for phosphorus, turbidity, TSS, dissolved oxygen, and/or aquatic biota.
[3] Construction Related TMDLs include those related to: phosphorus, turbidity, TSS, dissolved oxygen, and/or aquatic biota.

IMPLEMENTATION SCHEDULE AND PHASING: The Contractor is required to provide an updated schedule and site management plan meeting the minimum requirements of Section 1717 of the Minnesota Standard Specifications for Construction.

1) Submit SWPPP Updates to Engineer. Submittal shall include any requested changes to the SWPPP, including but not limited to: Trained Personnel, Locations for Stockpiles, Concrete Washout, Sanitation Facilities, Types and Locations of Erosion & Sediment Control. Failure to submit updates shall be considered acceptance of the SWPPP as designed with no changes.
2) Install perimeter sediment control, inlet protection, and construction exit.
3) Complete removals
4) Install utilities
5) Complete site grading
6) Add additional temporary BMPs as necessary during construction based on inspection reports.
7) Install structure and parking areas
8) Ensure final stabilization measures are complete.
9) Provide digital copy of all Field SWPPP Documentation including Inspection Reports and SWPPP Revisions to the Owner.
10) Submit Notice of Termination (NOT) to MPCA. NOTE: The NOT must be submitted to MPCA before Final Stabilization is considered complete.

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Matthew J. Isakson
59553

REVISION SCHEDULE

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A2	ADDENDUM #2	4/4/2025

CITY OF NORTHFIELD
NORTHFIELD ICE ARENA
1900 CANNON RD, NORTHFIELD, MN 55057

DATE
03/25/2025
PHASE
100% CD
PROJECT
NORTHFIELD ICE ARENA
SHEET
SWPPP PLAN

C2.02

Information contained in this SWPPP narrative sheet summarizes requirements of the GENERAL PERMIT AUTHORIZATION TO DISCHARGE STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM/STATE DISPOSAL SYSTEM PROGRAM - Permit No: MN RI0000I (Permit) as they apply to this project. All provisions of the Permit including those not specifically cited herein shall apply to this project. The Contractor is responsible to be familiar with and comply with all conditions of the permit. The full text of the Permit is available at: https://www.pca.state.mn.us/sites/default/files/wq-strm2-80a.pdf

SWPPP AMENDMENTS AND SUBMITTALS

Contractor must prepare and submit to the Engineer a SWPPP amendment as necessary to include additional Best Management Practices (BMPs) to correct problems identified or address the following situations.

1. Contact information and training documentation for Construction SWPPP Manager and BMP Installer,
2. There is a change in construction method of phasing, operation, maintenance, weather or seasonal conditions not anticipated during the design of the SWPPP including but not limited to:
   a. Types and/or Locations of BMPs
   b. Material Storage and Spill Response
   c. Fueling Plans
   d. Locations for Stockpiles, Concrete Washout, and Sanitation Facilities and
   e. Project Phasing
3. It is determined that the SWPPP is not achieving objectives of minimizing pollutants in stormwater discharges associated with construction activity, or
4. The SWPPP is not consistent with the terms and conditions of the permit.

The Contractor may implement SWPPP amendments immediately and is not required to wait for Engineer review of the submittal. The responsibility for completeness of SWPPP amendments and compliance with the Permit lies with the Contractor. Review, comment, or lack of comment by the Engineer on a SWPPP amendment shall not absolve the responsibilities of the Contractor in any way.

If a change order is issued for a design change the SWPPP amendment will be prepared by the Engineer and included in the change order.

In addition to SWPPP amendments, the Contractor shall submit to the Engineer Weekly Erosion and Sediment Control Schedule meeting the requirements of MnDOT 1717.

The Contractor shall keep copies of all SWPPP amendments, Weekly Erosion and Sediment Control Schedules, inspection logs, and maintenance logs with the field copy of the SWPPP. A PDF copy of these documents will be provided along with a copy of the final Field Copy of the SWPPP to the Engineer along with the signed Notice of Termination when final stabilization is complete.

EROSION PREVENTION PRACTICES

Stormwater conveyance channels shall be routed around unstabilized areas. Erosion controls and velocity dissipation devices shall be used at outlets within and along the length of any constructed conveyance channel.

The normal wetted perimeter of all ditches or swales, including storm water management pond slopes, that drain waters from the site must be stabilized within 200' of any property edge or discharge point, including storm sewer inlets, within 24 hours of connection.

Temporary or permanent ditches or swales used as sediment containment during construction do not need to be stabilized during temporary period of use and shall be stabilized within 24 hours after no longer used as sediment containment.

Mulch, hydromulch, tackifier, or similar practice shall not be used in any portion of the wetted perimeter of a temporary or permanent drainage ditch or swale section with a continuous slope of greater than 2 percent.

Energy dissipation shall be installed at all temporary or permanent pipe outlets within 24 hours of connection to a surface water or permanent stormwater treatment system.

The Contractor shall phase construction and use construction methods to the extent practical to minimize exposed soils. The project phasing shall be documented in the Weekly Erosion and Sediment Control Schedule.

SEDIMENT CONTROL PRACTICES

Down gradient BMPs including perimeter BMPs must be in place before up gradient land- disturbing activities begin and shall remain in place until final stabilization.

All BMPs that have been adjusted or removed to accommodate short-term activities shall be re-installed or replaced the earlier of the end of the work day or before the next precipitation event even if the activity is not complete.

Inlet BMPs may be removed for specific safety concerns. The BMPs shall be replaced as soon as the safety concern is resolved. The removal shall be documented in the SWPPP as a SWPPP amendment.

Temporary stockpiles must have sediment control BMPs. The Contractor shall prepare and submit to the Engineer a SWPPP amendment showing the location of temporary stockpiles and the BMPs for each stockpile. The SWPPP amendment must meet the minimum requirements of Section 9 of the Permit.

Soil compaction shall be minimized and topsoil shall be preserved, unless infeasible or if construction activities dictate soil compaction or topsoil stripping.

The use of polymers, flocculants, or other sedimentation treatment chemicals are not proposed as part of this SWPPP as designed by the Engineer. If methods or phasing of construction require the use of any of these chemicals, the Contractor shall prepare and submit to the Engineer a SWPPP amendment that meets the minimum requirements of Section 9 of the Permit.

TEMPORARY SEDIMENTATION BASINS

A temporary sedimentation basin has not been included in this SWPPP as designed by the Engineer. If a basin is later determined to be desirable or necessary the Contractor shall prepare and submit to the Engineer a SWPPP amendment. Temporary sedimentation basins shall meet or exceed the minimum requirements of Section 14 of the Permit and shall include a basin draining plan meeting or exceeding the minimum requirements of Section 10 of the Permit. Where the site discharges to Special and/or Impaired Waters the SWPPP amendment shall also meet or exceed the minimum requirements of Section 23 of the permit.

DEWATERING

A dewatering plan has not been included in this SWPPP as designed by the Engineer. If dewatering is required for this project, the Contractor shall prepare and submit to the Engineer a SWPPP amendment. All dewatering shall meet or exceed the minimum requirements of Section 10 of the Permit.

POLLUTION PREVENTION

Products and materials that have the potential to leach pollutants that are stored on the site must be stored in a manner designed to minimize contact with stormwater. Materials that are not a source of potential contamination to stormwater or that are designed for exposure to stormwater are not required to be covered.

Hazardous materials including but not limited to pesticides, fertilizer, petroleum products, curing compounds and toxic waste must be properly stored and protected from stormwater exposure as recommended by the manufacturer in an access restricted area.

Solid waste must be stored, collected and disposed of in compliance with Minnesota Administrative Rules Chapter 7035.

Portable toilets must be positioned so that they are secure and will not be tipped or knocked over. Sanitary waste must be disposed of properly in accordance with Minn. R. CH 7041.

Exterior vehicle or equipment washing on the project site shall be limited to a defined area of the site. No engine degreasing is allowed on site. A sign must be installed adjacent to each washout facility that requires site personnel to utilize the proper facilities for disposal of concrete and other washout wastes.

The Contractor shall prepare and submit a SWPPP amendment detailing the location and BMPs proposed for storage of materials, solid waste, portable toilets, and exterior vehicle or equipment washing on the site. The SWPPP amendment shall include a spill prevention and response plan that is appropriate for the materials proposed to be on the site. The SWPPP amendment shall meet or exceed the minimum requirements of Section 12 of the Permit.

INSPECTION & MAINTENANCE

A trained person shall routinely inspect the entire construction site at the time interval indicated on this sheet of the SWPPP during active construction and within 24-hours after a rainfall event greater than 0.5 inches in 24 hours. Following an inspection that occurs within 24-hours after a rainfall event, the next inspection must be conducted at the time interval indicated in the Receiving Waters Table found on the SITE PLAN AND INFORMATION SHEET of the SWPPP.

All inspections and maintenance conducted during construction must be recorded on the day it is completed and must be retained with the SWPPP. Inspection report forms are available in the Project Specifications. Inspection report forms other than those provided shall be approved by the engineer.

The Contractor may request a change in inspection schedule for the following conditions:

a. Inspections of areas with permanent cover to be reduced to once per month,
b. Inspections of areas that have permanent cover and have had no construction activity for 12 months to be suspended until construction resumes,
c. Inspections of areas where construction is suspended due to frozen ground conditions, inspections to be suspended until the earlier of within 24 hours of runoff occurring, or upon resuming construction.

No change in inspection schedule shall occur until authorized by the Engineer.

Inspections must include:

1. All erosion prevention and sediment control BMPs and Pollution Prevention Management Measures to ensure integrity and effectiveness.
2. Surface waters, including drainage ditches and conveyance systems for evidence of erosion and sediment deposition.
3. Construction site vehicle exit locations, streets and curb and gutter systems within and adjacent to the project for sedimentation from erosion or tracked sediment from vehicles.
4. Infiltration areas to ensure that no sediment from ongoing construction activity is reaching the infiltration area and that equipment is not being driven across the infiltration area.

All non-functioning BMPs and those BMPs where sediment reaches one-half (1/2) of the depth of the BMP, or in the case of sediment basins one-half (1/2) of the storage volume, must be repaired, replaced, or supplemented by the end of the next business day after discovery, or as soon as field conditions allow.

Permittees must repair, replace or supplement all nonfunctional BMPs with functional BMPs by the end of the next business day after discovery, or as soon as field conditions allow.

Any sediment that escapes the site must be removed and the area stabilized within 7 calendar days of discovery unless precluded by legal, regulatory, or physical access in which case the work shall be completed within 7 calendar days of authorization. Paved surfaces such as streets shall have any escaped or tracked sediment removed by the end of the day that it is discovered. Sediment release, other than paved surfaces that can be cleaned up with street sweeping shall be reported immediately upon discovery to the Engineer.

PUBLIC WATER RESTRICTIONS:

For public waters that have been promulgated "work in water restrictions" during fish spawning time frames, all exposed soil areas that are within 200 feet of the water's edge, and drain to these waters must complete stabilization within 24-hours during the time period. MN DNR permits are not valid for work in waters that are designated as infested waters unless accompanied by an Infested Waters Permit or written notification has been obtained from MN DNR stating that such permit is not required. There is no exception for pre-existing permits. If a MN DNR Permit has been issued for the project and the water is later designated as infested, the Contractor shall halt all work covered by the MN DNR Permit until an Infested Waters Permit is obtained or that written notification is obtained stating that such permit is not required.

FINAL STABILIZATION

Final Stabilization is not complete until all the following requirements have been met:

1. Substantial Completion has been reached and no ground disturbing activities are anticipated.
2. Permanent cover has been installed with an established minimum uniform perennial vegetation density of 70 percent of its expected final growth. Vegetation is not required in areas where no vegetation is proposed by this project such as impervious surfaces or the base of a sand filter.
3. Accumulated sediment has been removed from all permanent stormwater treatment systems as necessary to ensure the system is operating as designed.
4. All sediment has been removed from conveyance systems
5. All temporary synthetic erosion prevention and sediment control BMPs have been removed. BMPs designated on the SWPPP to remain to decompose on-site may remain.
6. For residential construction only, permit coverage terminates on individual lots if the structures are finished and temporary erosion prevention and downgradient perimeter control is complete, the residence sells to the homeowner, and the permittee distributes the MPCA's "Homeowner Fact Sheet" to the homeowner.
7. For agricultural land only (e.g., pipelines across cropland), the disturbed land must be returned to its preconstruction agricultural use prior to submitting the NOT.

SITE STABILIZATION COMPLETION:

Stabilization of exposed soils shall begin immediately and shall be completed after the construction activity has temporarily or permanently ceased no later than:	7 calendar days

SITE INSPECTION INTERVAL:

A trained person shall routinely inspect the entire construction site during active construction at an interval of no more than:	7 calendar days

SPECIAL ENVIRONMENTAL CONSIDERATIONS AND PERMITS:

1)	Was an environmental review required for this project or any part of a common plan of development or sale that includes all or any portion of this project?	NO
2)	Does any portion of the site have the potential to affect threatened or endangered species or their critical habitat?	NO
3)	Does any portion of this site discharge to a Calcareous fen.	NO
4)	Will any portion of the site potentially affect properties listed on the National Register of Historic Places or a known or discovered archeological site?	NO
5)	Have any Karst features have been identified in the project vicinity?	NO
6)	Is compliance with temporary or permanent stormwater management design requirements infeasible for this project?	NO
7)	Has the MN DNR promulgated "work in water restrictions" for any Public Water this site disharges to during fish spawning?	NO

TYPE OF PERMIT	PERMITTING AGENCY	PERMIT STATUS AND CONDITIONS
Construction Stormwater NPDES	MPCA	In Process

SWPPP DESIGNER TRAINING DOCUMENTATION:

UNIVERSITY OF MINNESOTA

Paul Strong

Design Construction of SWPPP (May 31 2026)

JLG architects

710 South 2nd Street, 8th Floor
Minneapolis, MN 55401
phone: (612) 746-4260

www.jlgarchitects.com

BOLTON & MENK

3300 FERNBROOK LANE N, SUITE 300
PLYMOUTH, MN 55447

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Matthew J. Isakson

59553

REVISION SCHEDULE

NO.	DESCRIPTION	DATE

CITY OF NORTHFIELD
NORTHFIELD ICE ARENA
1900 CANNON RD, NORTHFIELD, MN 55057

DATE
03/25/2025

PHASE
100% CD

PROJECT
NORTHFIELD ICE ARENA

SHEET
SWPPP NARRATIVE

C2.03

0 75 150
SCALE FEET

LEGEND

- PROJECT BOUNDARY
- SOIL TYPE
- IMPAIRED, SPECIAL OR PROTECTED WATERS
- NATIONAL WETLANDS INVENTORY
- DWSMA, LOW VULNERABILITY
- STEEP SLOPES (>33.3%)
- RECEIVING WATERS

SOIL TYPE SUMMARY

Map Unit Symbol	Soil Name	Hyd. Soil Group	Erodibility
100A	COPASTON SANDY CLAY LOAM, 0 TO 2 PERCENT SLOPES	D	NHEL
1016	UDORTHENTS, LOAMY (CUT AND FILL LAND)	A	PHEL
1411B	URBAN LAND-HAYDEN-ESTHERVILLE COMPLEX, 1 TO 6 PERCENT SLOPES	-	-
377	MERTON SILT LOAM, 1 TO 3 PERCENT SLOPES	B/D	NHEL
408	FAXON CLAY LOAM, 0 TO 1 PERCENT SLOPES	C/D	NHEL
41B	ESTHERVILLE SANDY LOAM, 2 TO 6 PERCENT SLOPES	A	PHEL

NHEL - Not Highly Erodible Land

PHEL - Potentially Highly Erodible Land

HEL - Highly Erodible Land

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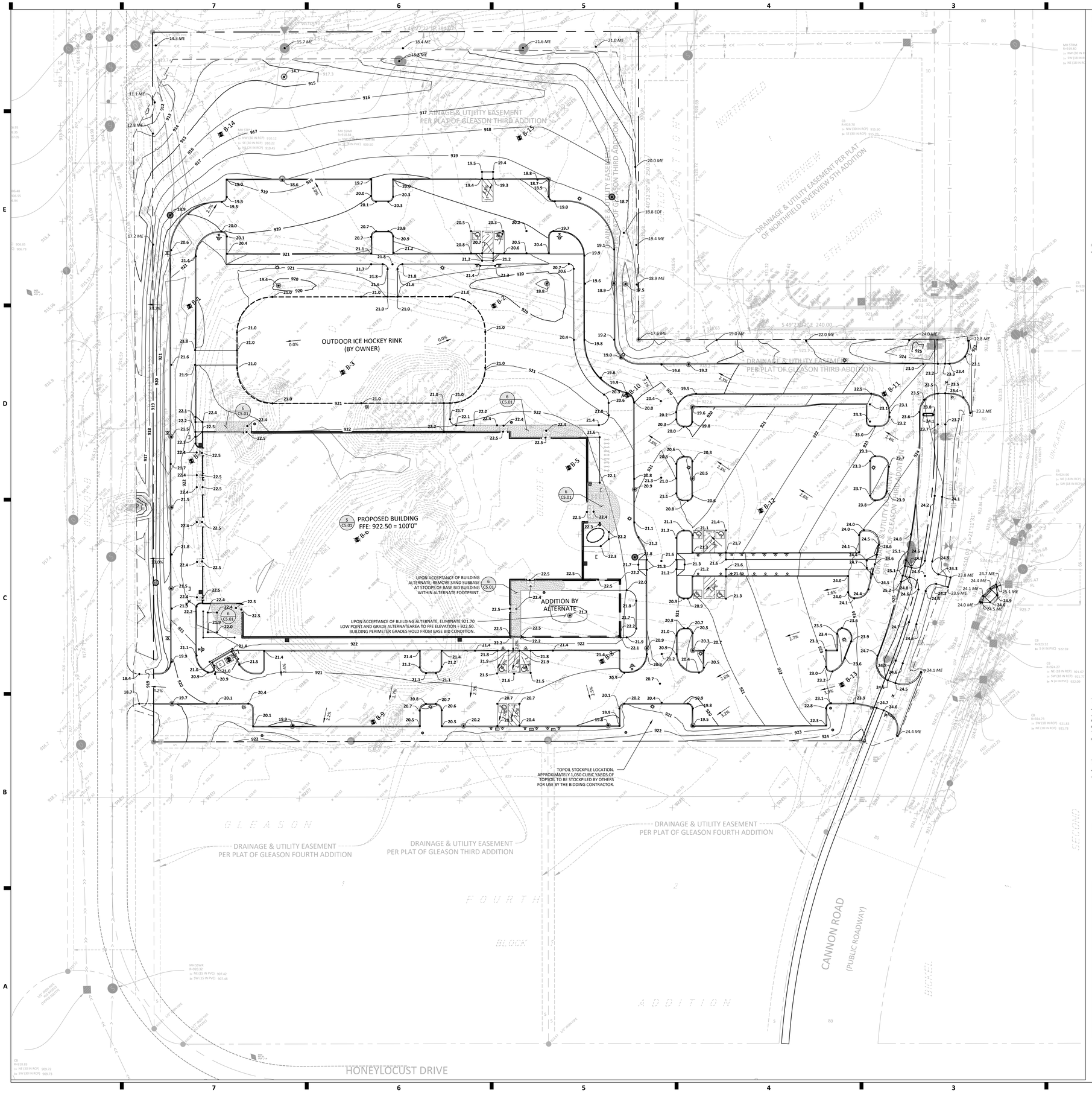
PROJECT
NORTHFIELD ICE ARENA

SHEET
SWPPP SOILS

C2.04



LEGEND

- REFERENCE KEY TO SITE DETAILS (1 / C5.01) — DETAIL I.D. NUMBER (TOP), DETAIL SHEET NUMBER (BOTTOM)
- EXISTING CONTOUR (920)
- EXISTING SPOT ELEVATION (920.44)
- PROPOSED CONTOUR (920)
- PROPOSED SPOT ELEVATION (19.4) — ME = MATCH EXISTING; EOF = EMERGENCY OVERFLOW
- PROPOSED GRADING LIMITS
- PROPOSED SAND SUBBASE AT FROST FOOTED STOOPS (6 / C5.01)
- APPROXIMATE SOIL BORING (B-1)
- PROPOSED MANHOLE (MH)
- PROPOSED CATCH BASIN (CB)
- PROPOSED HYDRANT (HYD)
- PROPOSED GATE VALVE (GV)
- PROPOSED STOOP - REFER TO ARCHITECTURAL PLANS
- PROPERTY LINE

GENERAL NOTES

1. ALL CONSTRUCTION SHALL COMPLY WITH APPLICABLE STATE AND LOCAL ORDINANCES.
2. THE CONTRACTOR WILL BE RESPONSIBLE FOR AND SHALL PAY FOR ALL CONSTRUCTION STAKING / LAYOUT.
3. OBTAIN AND PAY FOR ALL RELATED CONSTRUCTION PERMITS, INCLUDING THE NPDES PERMIT FROM THE MPCA. SUBMIT A COPY OF ALL PERMITS TO THE CITY.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL SIGNAGE (CONSTRUCTION ZONES) NECESSARY TO CONSTRUCT PROPOSED IMPROVEMENTS. ALL SIGNAGE LAYOUTS MUST BE DESIGNED BY THE CONTRACTOR AND APPROVED BY LOCAL AUTHORITIES.
5. INSTALL CONTROL FENCING AND BARRICADING AS NECESSARY TO PROTECT THE PUBLIC.
6. INSPECT SITE AND REVIEW SOIL BORINGS TO DETERMINE EXTENT OF WORK AND NATURE OF MATERIALS TO BE HANDLED.
7. REFER TO SPECIFICATIONS FOR DEWATERING REQUIREMENTS.
8. CHECK ALL PLAN AND DETAIL DIMENSIONS AND VERIFY SAME BEFORE FIELD LAYOUT.
9. REFER TO ARCHITECTURAL PLANS FOR BUILDING AND STOOP DIMENSIONS AND LAYOUT.
10. REFER TO THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) NARRATIVE, SHEET C2.03, FOR EROSION CONTROL REQUIREMENTS. SECTION 31 00 00 SHALL BE RESPONSIBLE FOR FULL IMPLEMENTATION OF THE SWPPP.
11. MAINTAIN ADJACENT PROPERTY AND PUBLIC STREETS CLEAN FROM CONSTRUCTION CAUSED DIRT AND DEBRIS ON A DAILY BASIS. PROTECT DRAINAGE SYSTEMS FROM SEDIMENTATION AS A RESULT OF CONSTRUCTION RELATED DIRT AND DEBRIS.
12. MAINTAIN DUST CONTROL DURING GRADING OPERATIONS.
13. ALL EROSION CONTROL METHODS SHALL COMPLY WITH MPCA AND LOCAL REGULATIONS.
14. MINIMIZE DISTURBANCE TO SITE AND PROTECT EXISTING SITE FEATURES (INCLUDING TURF AND VEGETATION) WHICH ARE TO REMAIN.
15. PROPOSED CONTOURS AND SPOT ELEVATIONS ARE SHOWN TO FINISH GRADE UNLESS OTHERWISE NOTED.
16. PROPOSED ELEVATIONS SHOWN TYPICALLY AS 15.1 OR 15.0 SHALL BE UNDERSTOOD TO MEAN 915.1 OR 915.0.
17. SPOT ELEVATIONS SHOWN IN PARKING LOTS, DRIVES AND ROADS INDICATE GUTTER GRADES, UNLESS NOTED OTHERWISE. SPOT ELEVATIONS WITH LABELS OUTSIDE THE BUILDING PERIMETER INDICATE PROPOSED GRADES OUTSIDE THE BUILDING. SPOT ELEVATIONS WITH LABELS INSIDE THE BUILDING PERIMETER INDICATE PROPOSED FINISH FLOOR ELEVATIONS.
18. THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR DETERMINING QUANTITIES OF CUT, FILL AND WASTE MATERIALS TO BE HANDLED, AND FOR AMOUNT OF GRADING TO BE DONE IN ORDER TO COMPLETELY PERFORM ALL WORK INDICATED ON THE DRAWINGS. IMPORT SUITABLE MATERIAL AND EXPORT UNSUITABLE / EXCESS / WASTE MATERIAL, AS REQUIRED, AT NO ADDITIONAL COST TO THE OWNER.
19. NO FINISHED SLOPES SHALL EXCEED 3' HORIZONTAL TO 1' VERTICAL (3:1), UNLESS OTHERWISE NOTED.
20. ALL DISTURBED AREAS OUTSIDE THE BUILDING PAD, WHICH ARE NOT DESIGNATED TO BE PAVED, SHALL RECEIVE AT LEAST 6" OF TOPSOIL AND SHALL BE SEEDED. REFER TO LANDSCAPING PLAN FOR SEED LOCATIONS. ALL AREAS NOT DESIGNATED FOR A SPECIFIC SEED MIX, WHICH ARE DISTURBED BY CONSTRUCTION, SHALL BE SEEDED WITH SEED MIX #1.
21. WHERE NEW SOD MEETS EXISTING SOD, CUT A CLEAN, SHARP EDGE TO ALLOW FOR A CONSISTENT, UNIFORM, AND STRAIGHT JOINT BETWEEN NEW SOD AND EXISTING TURFGRASS. JAGGED OR UNEVEN JOINTS WILL NOT BE ACCEPTED. REMOVE TOPSOIL AT THE JOINT BETWEEN NEW SOD AND EXISTING TURFGRASS, AS REQUIRED, TO ALLOW NEW SOD SURFACE TO BE FLUSH WITH EXISTING TURFGRASS SURFACE.
22. FAILURE OF TURF DEVELOPMENT: IN THE EVENT THE CONTRACTOR FAILS TO PROVIDE AN ACCEPTABLE TURF, RE-SEED ALL APPLICABLE AREAS, AT NO ADDITIONAL COST TO THE OWNER, TO THE SATISFACTION OF THE ENGINEER OR LANDSCAPE ARCHITECT.
23. LOCATE ALL EXISTING UTILITIES. VERIFY LOCATION, SIZE AND INVERT ELEVATION OF ALL EXISTING UTILITIES. BEFORE BEGINNING CONSTRUCTION.
24. PRIOR TO CONSTRUCTION OF PROPOSED BUILDING UTILITY SERVICES (STORM, SANITARY SEWER, WATERMAIN), VERIFY ALL PROPOSED BUILDING UTILITY SERVICE PIPE SIZES, LOCATIONS AND ELEVATIONS WITH MECHANICAL PLANS. COORDINATE CONSTRUCTION AND CONNECTIONS WITH MECHANICAL CONTRACTOR.
25. STAKE LIMITS OF WALKS AND CURBING PRIOR TO INSTALLATION OF GATE VALVES, CATCH BASINS, AND MANHOLES. ADJUST GATE VALVE AND MANHOLE LOCATIONS TO AVOID PLACEMENT OF THESE STRUCTURES IN WALKS AND CURB AND GUTTER. STAKE CURB AND GUTTER ALIGNMENTS TO ALLOW CURB INLET TYPE CATCH BASINS TO PROPERLY ALIGN WITH CURB AND GUTTER.

WORK SCOPE BY OTHERS

ALL GRADING WORK UP TO SUBGRADE ELEVATIONS WILL BE COMPLETED BY OTHERS. BIDDING CONTRACTORS SHALL NOT BID ON GRADING SCOPE BELOW SUBGRADE ELEVATIONS ACROSS THE ENTIRETY OF THE SITE. AREAS BEYOND THE OUTSIDE PERIMETER OF THE DRIVES AND PARKING LOTS WILL BE BROUGHT TO FINSIH GRADE BY OTHERS. **STOCKPILE TOPSOIL AT THE LOCATION INDICATED ON PLAN AT A QUANTITY OF APPROXIMATELY 1,050 CUBIC YARDS.**

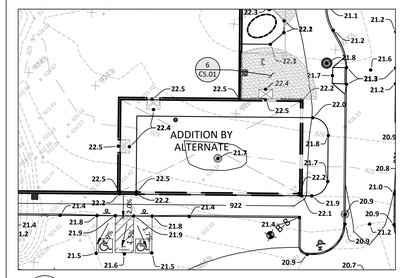
WORK SCOPE BY BIDDING CONTRACTORS

ALL WORK NOT PROVIDED BY OTHERS SHALL BE INCLUDED IN THE SCOPE OF THE BIDDING CONTRACTOR.

BENCHMARKS (FIELD VERIFY BEFORE USING)

1.) BENCHMARK NO. 1-TOP NUT HYD
Elevation = 926.01

2.) BENCHMARK NO. 2 - TOP NUT HYD
Elevation = 923.82



1 / C3.01 ALTERNATE BUILIDNG ADDITION
SAND AT FROST FOOTED STOOP
1" = 30'

HORZ. SCALE 0 30 60 FEET

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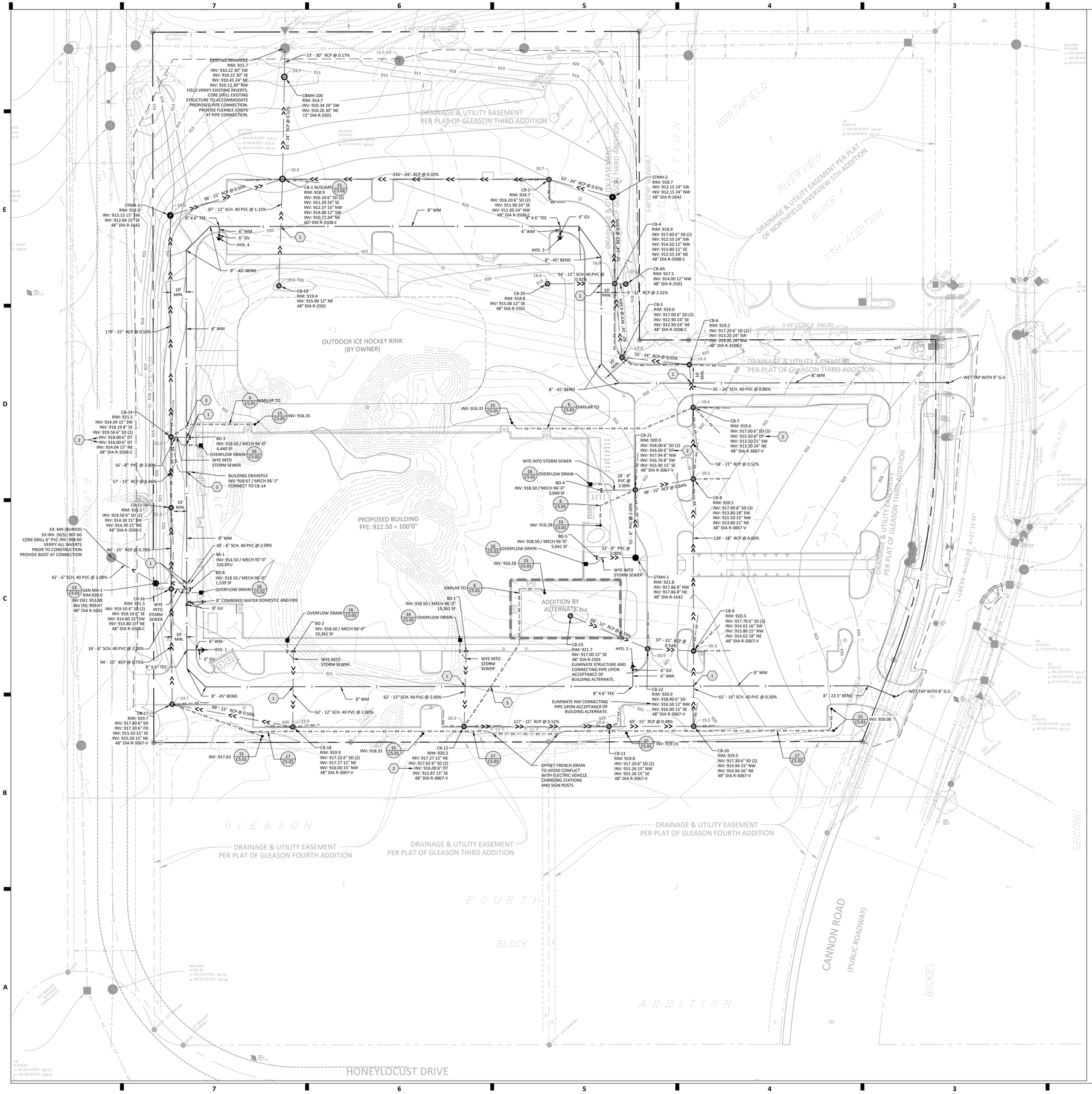
Matthew J. Isakson
59553

REVISION SCHEDULE

NO.	DESCRIPTION	DATE
A2	ADDENDUM #2	4/4/2025
A4	ADDENDUM #4	4/14/2025

CITY OF NORTHFIELD
NORTHFIELD ICE ARENA
1900 CANNON RD, NORTHFIELD, MN 55057

DATE 03/25/2025
PHASE 100% CD
PROJECT NORTHFIELD ICE ARENA
SHEET GRADING AND DRAINAGE PLAN
C3.01



LEGEND

- REFERENCE KEY TO SITE DETAILS (C5.01) — DETAIL I.D. NUMBER (TOP); DETAIL SHEET NUMBER (BOTTOM)
- 920 — EXISTING CONTOUR
- 920.44 — EXISTING SPOT ELEVATION
- 920 — PROPOSED CONTOUR
- 19.4 — PROPOSED SPOT ELEVATION; ME = MATCH EXISTING; EOF = EMERGENCY OVERFLOW; TC = TOP OF CURB
- PROPOSED GRADING LIMITS
- PROPOSED SANITARY SEWER (C5.01)
- PROPOSED STORM SEWER (7 C5.01) (8 C5.01)
- PROPOSED WATERMAIN (8 C5.01)
- PROPOSED DRAIN TILE (DT) / SUBSURFACE DRAINS (SD)
- PROPOSED MANHOLE (MH) (13 C5.01) (1 C5.01)
- PROPOSED CATCH BASIN (CB) (17 C5.01)
- OVERFLOW BUILDING DRAIN (16 C5.01)
- PROPOSED HYDRANT (HYD) (6 C5.01)
- PROPOSED GATE VALVE (GV) (10 C5.01)
- 1 — PROVIDE MINIMUM 18" VERTICAL SEPARATION AT CROSSING - PROVIDE VERTICAL BENDS IN WATERMAIN AS REQUIRED TO ACCOMPLISH. CENTER ONE LENGTH WATERMAIN PIPE ON CROSSING. (11 C5.01)
- 2 — CONNECT DRAIN TILE TO STRUCTURE AND PROVIDE BACKWATER VALVE (3 C5.02)
- 3 — CENTER ONE LENGTH OF SOLID PVC PIPE ON WATERMAIN AT CROSSING
- PROPOSED BUILDING STOOP - REFER TO ARCHITECTURAL PLANS
- PROPERTY LINE

NOTES

1. REFER TO SHEET C3.01, GRADING AND DRAINAGE PLAN, FOR GENERAL NOTES.
2. ALL WATERMAIN PIPE SHALL BE DIP, CLASS 52. ALL WATERMAIN SHALL HAVE MINIMUM 8'-0" BURY (TOP OF PIPE TO FINISH GRADE). DIP SHALL BE ENCASED WITH POLYETHYLENE FILM CONFORMING TO ASTM D 1248-889.
3. ALL SANITARY SEWER PIPE SHALL BE PVC PIPE (ASTM D 3034, SDR 26), UNLESS OTHERWISE NOTED. SANITARY SEWER INSTALLATION SHALL BE IN ACCORDANCE WITH ASTM D2321.
4. ALL SANITARY SEWER PIPE CROSSING WATERMAIN, OUTSIDE OF THE PUBLIC RIGHT-OF-WAY, SHALL BE ASTM D2665, SCHEDULE 40 PVC WITH SOLVENT WELD JOINTS.
5. ALL STORM SEWER PIPE SHALL BE RCP, CLASS III (MIN.), WITH FLEXIBLE WATERTIGHT JOINTS IN ACCORDANCE WITH ASTM C-361 OR PVC PIPE (ASTM D3034, SDR 35) INSTALLED IN ACCORDANCE WITH ASTM D2321, UNLESS OTHERWISE NOTED.
6. ALL STORM SEWER PIPE CROSSING WATERMAIN, OUTSIDE OF THE PUBLIC RIGHT-OF-WAY, SHALL BE ASTM D2665, SCHEDULE 40 PVC WITH SOLVENT WELD JOINTS.
7. FLEXIBLE JOINTS AT STORM SEWER PIPE CONNECTIONS TO STRUCTURES:
   a. IN ACCORDANCE WITH MINNESOTA PLUMBING CODE, PROVIDE FLEXIBLE JOINTS AT ALL PIPE CONNECTIONS TO ALL STORM SEWER STRUCTURES.
   b. ACCEPTABLE MANUFACTURERS / PRODUCTS:
      i. FERNCO, "CONCRETE MANHOLE ADAPTORS" OR "LARGE-DIAMETER WATERSTOPS"
      ii. PRESS-SEAL, WATERSTOP GROUTING RINGS"
      iii. OR APPROVED EQUAL.
9. INSTALL WATERMAIN AT LEAST 10 FEET HORIZONTALLY FROM ANY MANHOLE, CATCH BASIN, STORM SEWER, SANITARY SEWER, DRAIN TILE, OR OTHER POTENTIAL SOURCE FOR CONTAMINATION PER MN PLUMBING CODE. THIS ISOLATION DISTANCE IS MEASURED FROM THE OUTER EDGE OF THE PIPE TO THE OUTER EDGE OF THE CONTAMINATION SOURCE (OUTER EDGE OF STRUCTURES OR SIMILAR).
10. INSTALL MANOLES, CATCH BASINS, STORM SEWER, SANITARY SEWER, DRAIN TILE, AND OTHER POTENTIAL SOURCES OF CONTAMINATION AT LEAST 10 FEET HORIZONTALLY FROM ANY WATERMAIN PER MN PLUMBING CODE. THIS ISOLATION DISTANCE IS MEASURED FROM THE OUTER EDGE OF THE PIPE TO THE OUTER EDGE OF THE CONTAMINATION SOURCE (OUTER EDGE OF STRUCTURES OR SIMILAR).
11. LOCATE ALL EXISTING UTILITIES. VERIFY LOCATION, SIZE AND INVERT ELEVATION OF ALL EXISTING UTILITIES BEFORE BEGINNING CONSTRUCTION.
12. PRIOR TO CONSTRUCTION OF PROPOSED BUILDING UTILITY SERVICES (STORM, SANITARY SEWER, WATERMAIN), VERIFY ALL PROPOSED BUILDING UTILITY SERVICE PIPE SIZES, LOCATIONS AND ELEVATIONS WITH MECHANICAL PLANS. COORDINATE CONSTRUCTION AND CONNECTIONS WITH MECHANICAL CONTRACTOR.
13. STAKE LIMITS OF WALKS AND CURBING PRIOR TO INSTALLATION OF GATE VALVES, CATCH BASINS, AND MANHOLES. ADJUST GATE VALVE AND MANHOLE LOCATIONS TO AVOID PLACEMENT OF THESE STRUCTURES IN WALKS AND CURB AND GUTTER. STAKE CURB AND GUTTER ALIGNMENTS TO ALLOW CURB INLET TYPE CATCH BASINS TO PROPERLY ALIGN WITH CURB AND GUTTER

ROCK REMOVAL

SHALLOW BEDROCK IS KNOWN TO BE PRESENT ON SITE. ALL ROCK REMOVAL IS ANTICIPATED TO BE WITHIN THE SCOPE OF OTHERS. IF ADDITIONAL ROCK REMOVAL IS REQUIRED BY THE BIDDING CONTRACTOR, REFER TO SPEC 31 23 16 ROCK REMOVAL AND UNIT PRICES. REFER TO SPECIFICATION 31 23 16 FOR PROCEDURE ON HOW TO CALCULATE ACTUAL ROCK REMOVAL QUANTITIES.

WORK SCOPE BY OTHERS

ALL UTILITY WORK 10' OUTSIDE OF THE BUILDING WILL BE COMPLETED BY OTHERS, EXCLUDING ALL DRAINTILE, SUBSURFACE DRAIN, AND FRENCH DRAIN INSTALLATION. BIDDING CONTRACTORS SHALL NOT BID ON STORM SEWER, SANITARY SEWER, OR WATERMAIN UTILITY WORK AT A DISTANCE 10' OUTSIDE OF THE BUILDING. **THIS WORK WILL INCLUDE APPROXIMATELY 300 CUBIC YARDS OF ROCK REMOVAL.**

WORK SCOPE BY BIDDING CONTRACTORS

ALL WORK NOT COMPLETED BY OTHERS SHALL BE INCLUDED IN THE SCOPE OF THE BIDDING CONTRACTOR.

HORZ. SCALE 0 30 60 FEET

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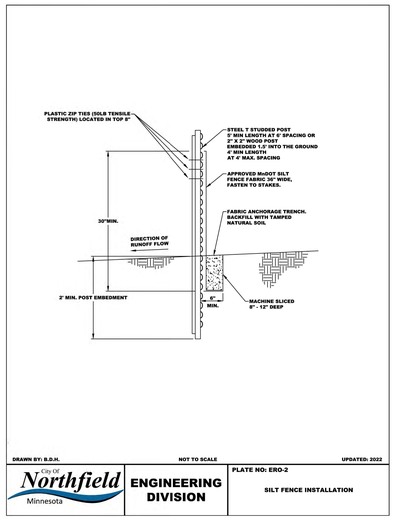
CITY OF NORTHFIELD
NORTHFIELD ICE ARENA
1900 CANNON RD, NORTHFIELD, MN 55057

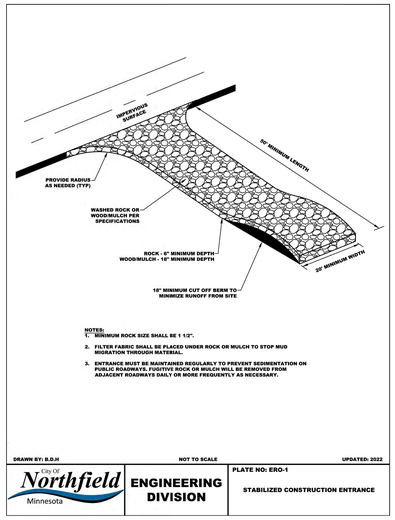
DATE 03/25/2025
PHASE 100% CD
PROJECT NORTHFIELD ICE ARENA
SHEET UTILITY PLAN
C4.01



DRAWN BY: B.D.H. | NOT TO SCALE | UPDATED: 2022

City Of Northfield Minnesota | ENGINEERING DIVISION | PLATE NO: ERO-2 | SILT FENCE INSTALLATION

1 C5.01 SILT FENCE INSTALLATION

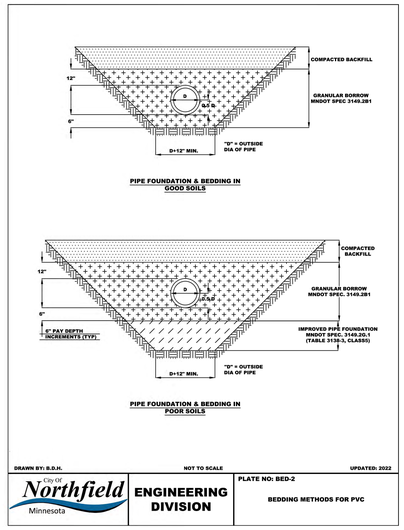


NOTES:
1. MINIMUM ROCK SIZE SHALL BE 1 1/2".
2. FILTER FABRIC SHALL BE PLACED UNDER ROCK OR MULCH TO STOP MUD MIGRATION THROUGH MATERIAL.
3. ENTRANCE MUST BE MAINTAINED REGULARLY TO PREVENT SEDIMENTATION ON PUBLIC ROADWAYS. FUGITIVE ROCK OR MULCH WILL BE REMOVED FROM ADJACENT ROADWAYS DAILY OR MORE FREQUENTLY AS NECESSARY.

DRAWN BY: B.D.H. | NOT TO SCALE | UPDATED: 2022

City Of Northfield Minnesota | ENGINEERING DIVISION | PLATE NO: ERO-1 | STABILIZED CONSTRUCTION ENTRANCE

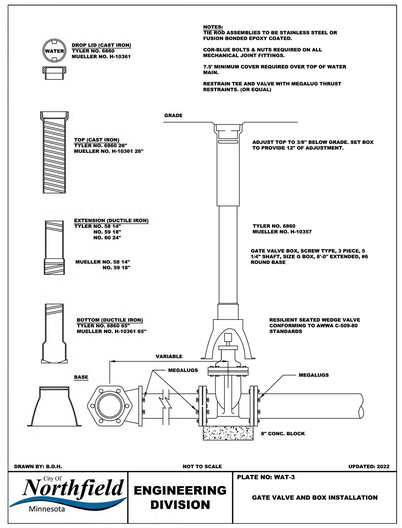
4 C5.01 STABILIZED CONSTRUCTION ENTRANCE



DRAWN BY: B.D.H. | NOT TO SCALE | UPDATED: 2022

City Of Northfield Minnesota | ENGINEERING DIVISION | PLATE NO: BED-2 | BEDDING METHODS FOR PVC

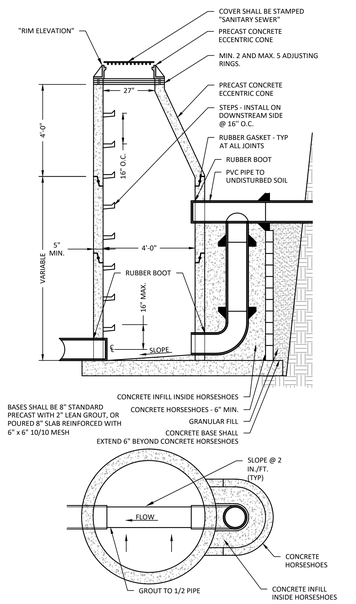
7 C5.01 BEDDING METHODS FOR PVC



DRAWN BY: B.D.H. | NOT TO SCALE | UPDATED: 2022

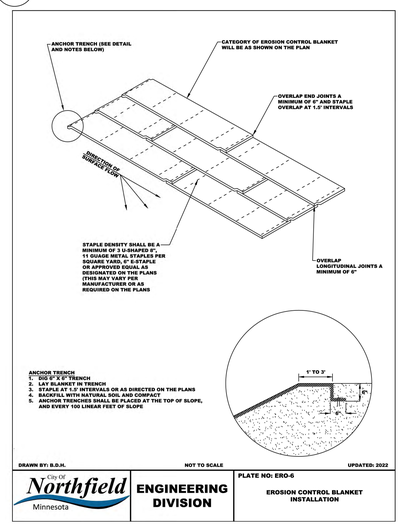
City Of Northfield Minnesota | ENGINEERING DIVISION | PLATE NO: WAT-3 | GATE VALVE AND BOX INSTALLATION

10 C5.01 GATE VALVE AND BOX INSTALLATION



13 C5.01 SANITARY SEWER OUTSIDE DROP MANHOLE

NOT TO SCALE

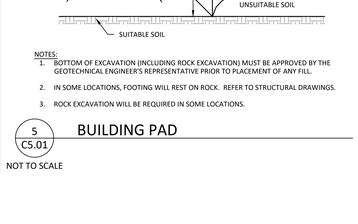


NOTES:
1. SEE MNDOT SPECS 2573, AND 3897
2. APPROXIMATE SPACING OF DITCH CHECK (FT)=Y= DITCH CHECK HEIGHT (FT) / CHANNEL SLOPE X 100
3. POINT "A" MUST BE A MINIMUM OF 6 INCHES HIGHER THAN POINTS "B" TO ENSURE THAT WATER FLOWS OVER THE DIKE AND NOT AROUND THE ENDS

DRAWN BY: B.D.H. | NOT TO SCALE | UPDATED: 2022

City Of Northfield Minnesota | ENGINEERING DIVISION | PLATE NO: ERO-7 | BIOROLL DITCH CHECK TEMPORARY SEDIMENT CONTROL

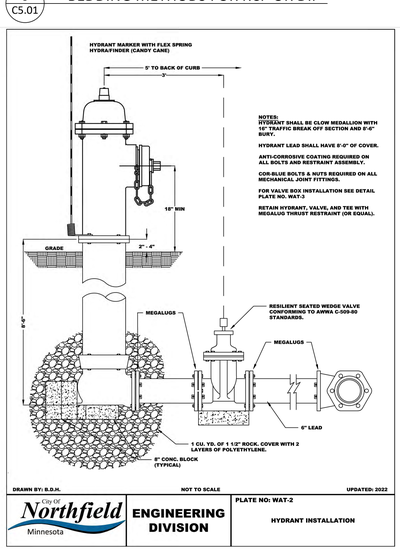
2 C5.01 BIOROLL DITCH CHECK / SEDIMENT CONTROL LOG



NOTES:
1. BOTTOM OF EXCAVATION (INCLUDING ROCK EXCAVATION) MUST BE APPROVED BY THE GEOTECHNICAL ENGINEER'S REPRESENTATIVE PRIOR TO PLACEMENT OF ANY FILL.
2. IN SOME LOCATIONS, FOOTING WILL REST ON ROCK. REFER TO STRUCTURAL DRAWINGS.
3. ROCK EXCAVATION WILL BE REQUIRED IN SOME LOCATIONS.

5 C5.01 BUILDING PAD

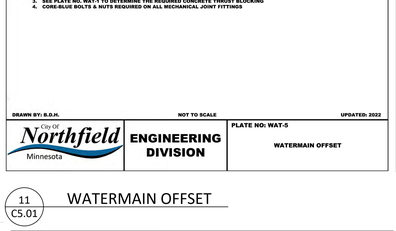
NOT TO SCALE



DRAWN BY: B.D.H. | NOT TO SCALE | UPDATED: 2022

City Of Northfield Minnesota | ENGINEERING DIVISION | PLATE NO: BED-1 | BEDDING METHODS FOR RCP OR DIP

8 C5.01 BEDDING METHODS FOR RCP OR DIP

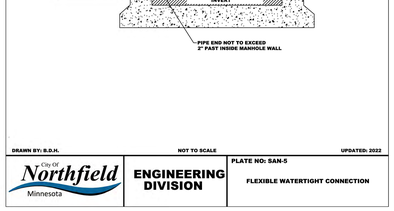


NOTES:
1. USE MEGALUG THRUST RESTRAINTS ON ALL FITTINGS
2. ON NEW CONSTRUCTION: RESTRAIN A MINIMUM OF TWO PIPE JOINTS (40LF) LEFT AND RIGHT OF THE OFFSET PIPING
3. SEE PLATE NO. WAT-1 TO DETERMINE THE REQUIRED CONCRETE THRUST BLOCKING
4. CORE-BLUE BOLTS & NUTS REQUIRED ON ALL MECHANICAL JOINT FITTINGS

DRAWN BY: B.D.H. | NOT TO SCALE | UPDATED: 2022

City Of Northfield Minnesota | ENGINEERING DIVISION | PLATE NO: WAT-5 | WATERMAIN OFFSET

11 C5.01 WATERMAIN OFFSET



DRAWN BY: B.D.H. | NOT TO SCALE | UPDATED: 2022

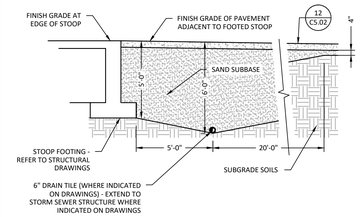
City Of Northfield Minnesota | ENGINEERING DIVISION | PLATE NO: SAN-5 | FLEXIBLE WATERTIGHT CONNECTION

14 C5.01 FLEXIBLE WATERTIGHT CONNNECTION

DRAWN BY: B.D.H. | NOT TO SCALE | UPDATED: 2022

City Of Northfield Minnesota | ENGINEERING DIVISION | PLATE NO: ERO-6 | EROSION CONTROL BLANKET INSTALLATION

3 C5.01 EROSION CONTROL BLANKET



NOTE:
REFER TO GRADING AND DRAINAGE PLAN FOR LIMITS OF SAND SUBBASE

6 C5.01 SAND SUBBASE / DRAIN TILE AT DOORS & FROST FOOTED STOOPS

NOT TO SCALE

NOTES:
HYDRANT SHALL BE CLOW MEDALLION WITH 16" TRAFFIC BREAK OFF SECTION AND 8'-6" BURY.
HYDRANT LEAD SHALL HAVE 8'-0" OF COVER.
ANTI-CORROSIVE COATING REQUIRED ON ALL BOLTS AND RESTRAINT ASSEMBLY.
COR-BLUE BOLTS & NUTS REQUIRED ON ALL MECHANICAL JOINT FITTINGS.
FOR VALVE BOX INSTALLATION SEE DETAIL PLATE NO. WAT-3
RETAIN HYDRANT, VALVE, AND TEE WITH MEGALUG THRUST RESTRAINT (OR EQUAL).

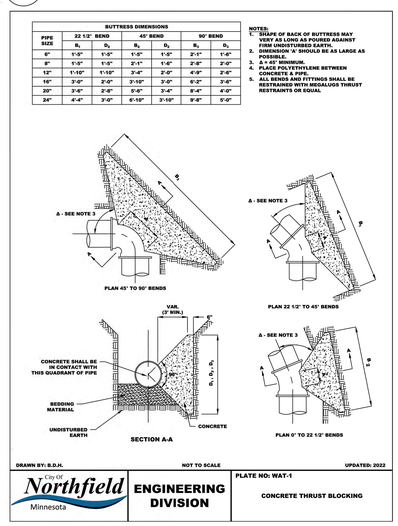
DRAWN BY: B.D.H. | NOT TO SCALE | UPDATED: 2022

City Of Northfield Minnesota | ENGINEERING DIVISION | PLATE NO: WAT-2 | HYDRANT INSTALLATION

9 C5.01 HYDRANT INSTALLATION

BUTTRESS DIMENSIONS						
PIPE SIZE	22 1/2° BEND		45° BEND		90° BEND	
	B_1	D_1	B_1	D_1	B_1	D_1
6"	1'-0"	1'-0"	1'-0"	1'-0"	2'-1"	1'-4"
8"	1'-3"	1'-3"	2'-1"	1'-4"	2'-8"	2'-0"
12"	1'-10"	1'-10"	3'-4"	2'-0"	4'-0"	2'-8"
16"	2'-6"	2'-0"	3'-10"	3'-0"	5'-3"	3'-4"
20"	3'-4"	2'-8"	5'-6"	3'-4"	8'-4"	4'-0"
24"	4'-4"	3'-0"	6'-10"	3'-10"	9'-8"	5'-0"

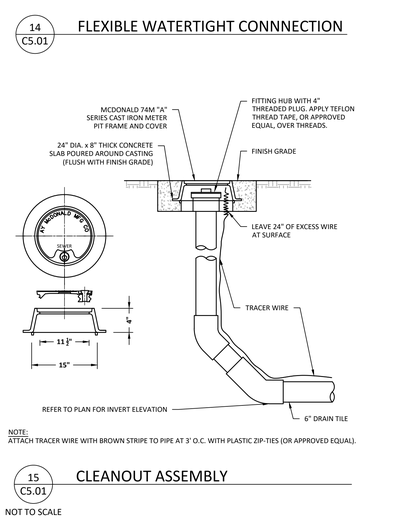
NOTES:
1. SHAPE OF BACK OF BUTTRESS MAY VARY AS LONG AS POURED AGAINST FIRM UNDISTURBED EARTH.
2. FACE OF BUTTRESS SHOULD BE AS LARGE AS POSSIBLE.
3. A = 45° MINIMUM.
4. PLACE POLYETHYLENE BETWEEN CONCRETE & PIPE.
5. ALL BENDS & FITTINGS SHALL BE RESTRAINED WITH MEGALUGS THRUST RESTRAINTS OR EQUAL



DRAWN BY: B.D.H. | NOT TO SCALE | UPDATED: 2022

City Of Northfield Minnesota | ENGINEERING DIVISION | PLATE NO: WAT-1 | CONCRETE THRUST BLOCKING

12 C5.01 CONCRETE THRUST BLOCKING



NOTE:
ATTACH TRACER WIRE WITH BROWN STRIPE TO PIPE AT 3' O.C. WITH PLASTIC ZIP-TIES (OR APPROVED EQUAL).

15 C5.01 CLEANOUT ASSEMBLY

NOT TO SCALE

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PLYMOUTH, MN 55447

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

Matthew J. Isakson

59553

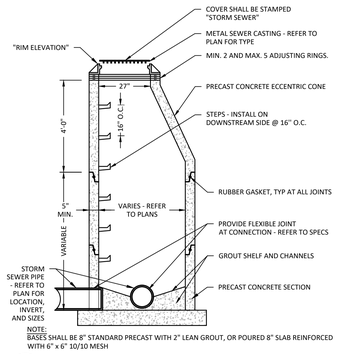
REVISION SCHEDULE

NO.	DESCRIPTION	DATE
A2	ADDENDUM #2	4/4/2025

CITY OF NORTHFIELD
NORTHFIELD ICE ARENA
1900 CANNON RD, NORTHFIELD, MN 55057

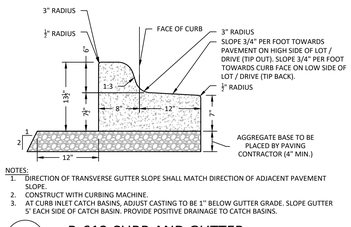
DATE 03/25/2025
PHASE 100% CD
PROJECT NORTHFIELD ICE ARENA
SHEET CIVIL DETAILS

C5.01



1 C5.02 STORM SEWER MANHOLE

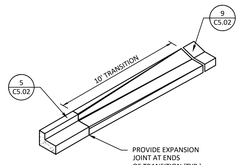
NOT TO SCALE



NOTES:
1. DIRECTION OF TRANSVERSE GUTTER SLOPE SHALL MATCH DIRECTION OF ADJACENT PAVEMENT SLOPE.
2. CONSTRUCT WITH CURBING MACHINE.
3. AT CURB INLET CATCH BASINS, ADJUST CASTING TO BE 1" BELOW GUTTER GRADE. SLOPE GUTTER 5' EACH SIDE OF CATCH BASIN. PROVIDE POSITIVE DRAINAGE TO CATCH BASINS.

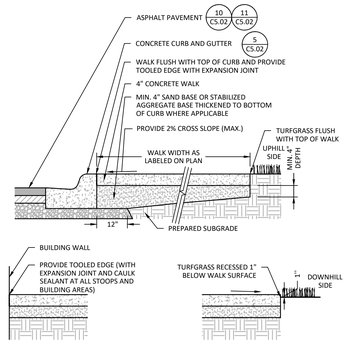
5 C5.02 B-612 CURB AND GUTTER

NOT TO SCALE



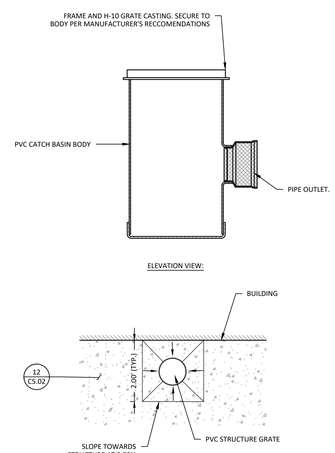
8 C5.02 CURB TRANSITION D-412 TO B-612

NOT TO SCALE

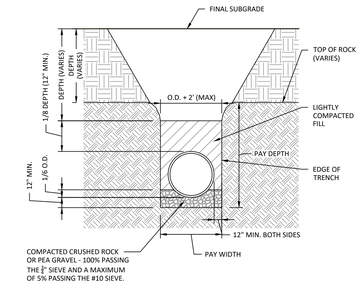


12 C5.02 CONCRETE WALK

NOT TO SCALE



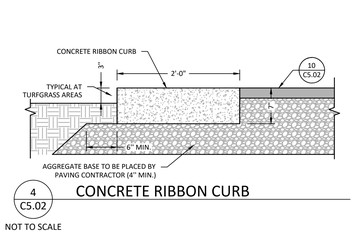
16 C5.02 PVC CATCH BASIN AT BUILDING OVERFLOW DRAINS



NOTES:
1. TRENCH SIDEWALLS TO MEET O.S.H.A REQUIREMENTS.
2. UPPER 3 FT. OF BACKFILL SHALL BE COMPACTED TO AT LEAST 100% MODIFIED PROCTOR DRY DENSITY. BELOW THIS ELEVATION, BACKFILL SHALL BE COMPACTED TO AT LEAST 95% MODIFIED PROCTOR DRY DENSITY.
3. ROCK EXCATATION IN UTILITY TRENCHES IS SUBJECT TO UNIT PRICES - REFER TO SECTION 01 22 00.

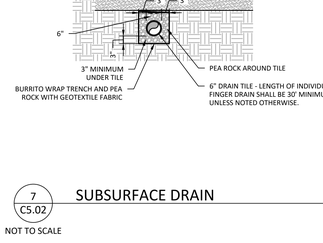
20 C5.02 ROCK EXCAVATION FOR UTILITY TRENCHING

NOT TO SCALE



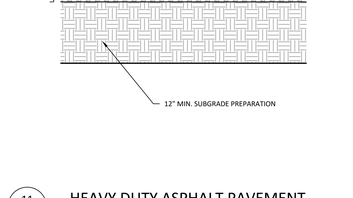
2 C5.02 CATCH BASIN

NOT TO SCALE



6 C5.02 B-612 CURB TERMINATOR

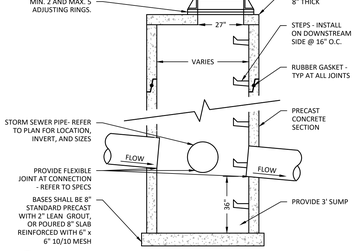
NOT TO SCALE



NOTES:
1. DIRECTION OF TRANSVERSE GUTTER SLOPE SHALL MATCH DIRECTION OF ADJACENT PAVEMENT SLOPE.
2. CONSTRUCT WITH CURBING MACHINE.
3. AT CURB INLET CATCH BASINS, ADJUST CASTING TO BE 1" BELOW GUTTER GRADE. SLOPE GUTTER 5' ON EACH SIDE OF CATCH BASIN. PROVIDE POSITIVE DRAINAGE TO CATCH BASINS.

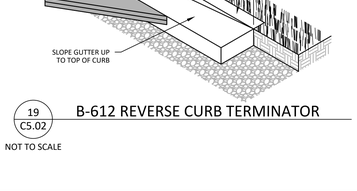
9 C5.02 D-412 CURB & GUTTER

NOT TO SCALE



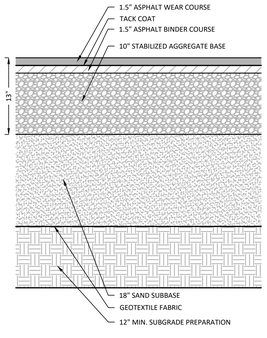
13 C5.02 CONCRETE SLAB

NOT TO SCALE



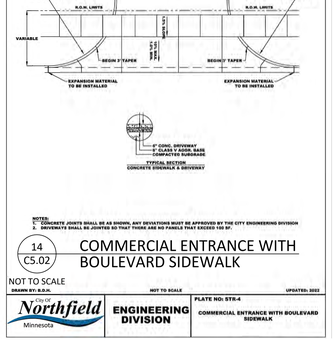
17 C5.01 FRENCH DRAIN

NOT TO SCALE



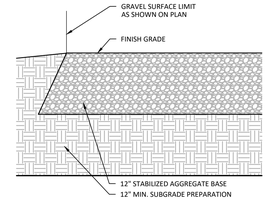
10 C5.02 MEDIUM DUTY ASPHALT PAVEMENT (WITH SAND SUBBASE)

NOT TO SCALE



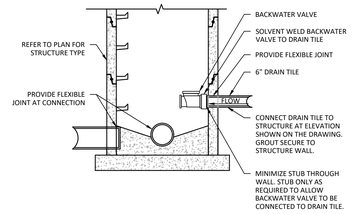
14 C5.02 COMMERCIAL ENTRANCE WITH BOULEVARD SIDEWALK

NOT TO SCALE



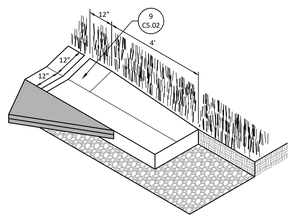
18 C5.02 GRAVEL SURFACE

NOT TO SCALE



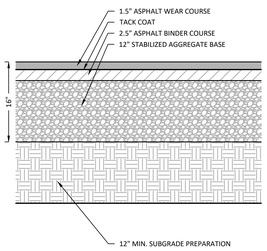
3 C5.02 BACKWATER VALVE

NOT TO SCALE



6B C5.02 D-412 CURB TERMINATOR

NOT TO SCALE

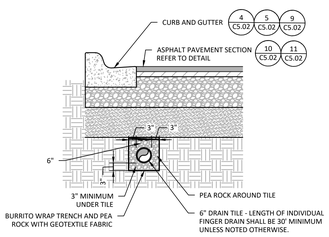


11 C5.02 HEAVY DUTY ASPHALT PAVEMENT

NOT TO SCALE

15 C5.02 36" SUMP CATCH BASIN

NOT TO SCALE

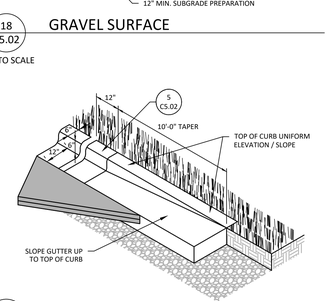


7 C5.02 SUBSURFACE DRAIN

NOT TO SCALE

4 C5.02 CONCRETE RIBBON CURB

NOT TO SCALE



19 C5.02 B-612 REVERSE CURB TERMINATOR

NOT TO SCALE

JLG architects
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Minneapolis, MN 55401
phone: (612) 746-4260
www.jlgarchitects.com

BOLTON & MENK
3300 FERNBROOK LANE N, SUITE 300
PLYMOUTH, MN 55447

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

Matthew J. Isakson

59553

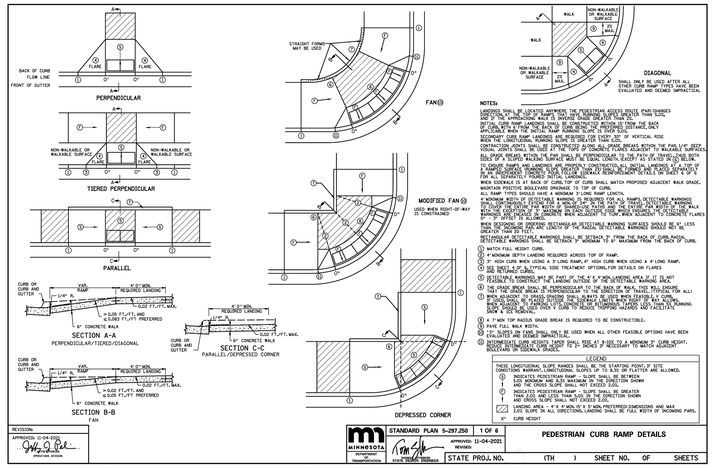
REVISION SCHEDULE

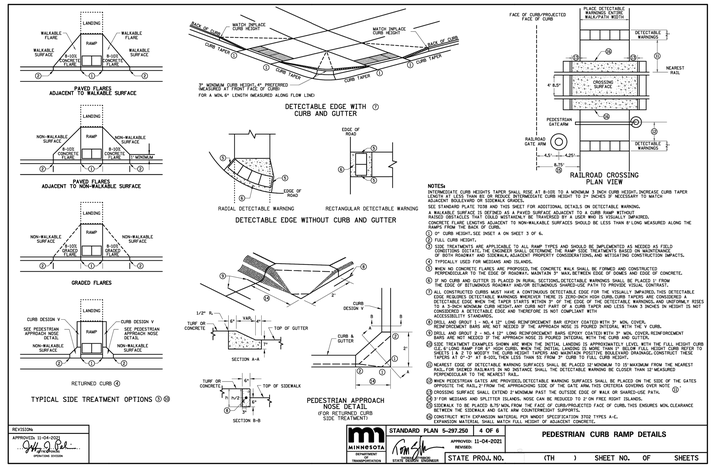
NO.	DESCRIPTION	DATE
A4	ADDENDUM #4	4/14/2025

CITY OF NORTHFIELD
NORTHFIELD ICE ARENA
1900 CANNON RD, NORTHFIELD, MN 55057

DATE 03/25/2025
PHASE 100% CD
PROJECT NORTHFIELD ICE ARENA
SHEET CIVIL DETAILS

C5.02





1 C5.03 PEDESTRIAN RAMP DETAILS

NOT TO SCALE

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Minneapolis, MN 55401
phone: (612) 746-4260
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3300 FERNBROOK LANE N, SUITE 300
PLYMOUTH, MN 55447

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

Matthew J. Isakson

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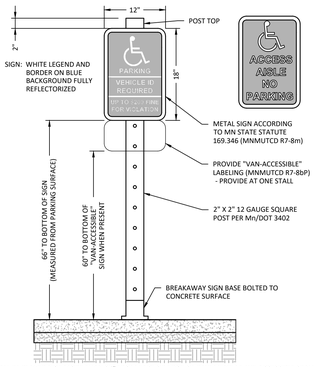
REVISION SCHEDULE

NO.	DESCRIPTION	DATE

CITY OF NORTHFIELD
NORTHFIELD ICE ARENA
1900 CANNON RD, NORTHFIELD, MN 55057

DATE
03/25/2025
PHASE
100% CD
PROJECT
NORTHFIELD ICE ARENA
SHEET
CIVIL DETAILS

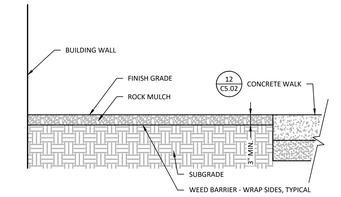
C5.03



NOTE:
SIGN SHALL BE PLACED NOT MORE THAN 96" FROM FACE OR EDGE OF PAVEMENT AT THE ACCESSIBLE STALL.

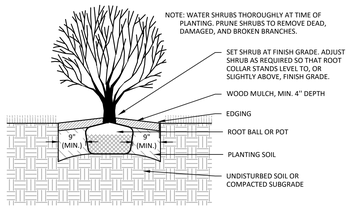
1 C5.04 ACCESSIBLE PARKING SIGN AND POST WITH BREAKAWAY BASE

NOT TO SCALE



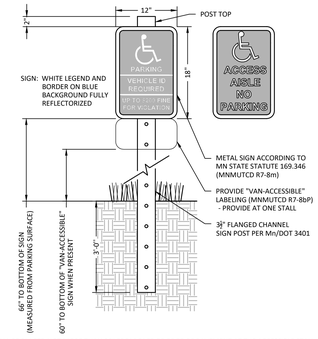
5 C5.04 ROCK MULCH BED

NOT TO SCALE



7 C5.04 SHRUB

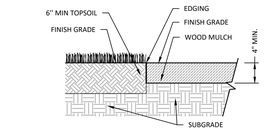
NOT TO SCALE



NOTE:
SIGN SHALL BE PLACED NOT MORE THAN 96" FROM FACE OR EDGE OF PAVEMENT AT THE ACCESSIBLE STALL.

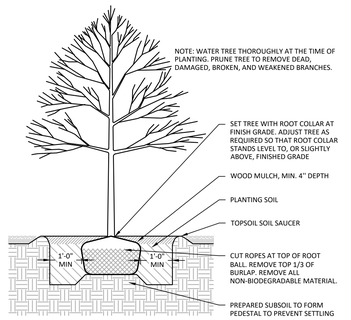
2 C5.04 ACCESSIBLE PARKING SIGN AND POST IN GRASS

NOT TO SCALE



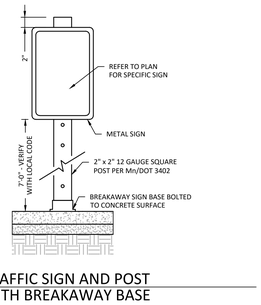
6 C5.04 WOOD MULCH BED

NOT TO SCALE



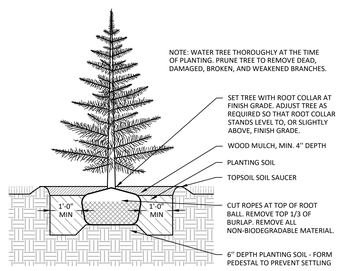
8 C5.04 DECIDUOUS TREE

NOT TO SCALE



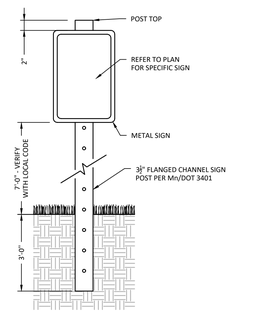
3 C5.04 TRAFFIC SIGN AND POST WITH BREAKAWAY BASE

NOT TO SCALE



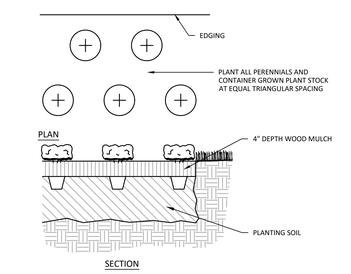
9 C5.04 CONIFEROUS TREE

NOT TO SCALE



4 C5.04 TRAFFIC SIGN AND POST IN GRASS

NOT TO SCALE



10 C5.04 PERENNIALS AND CONTAINER GROWN PLANT STOCK

NOT TO SCALE

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

Matthew J. Isakson

59553

REVISION SCHEDULE

NO.	DESCRIPTION	DATE

CITY OF NORTHFIELD
NORTHFIELD ICE ARENA
1900 CANNON RD, NORTHFIELD, MN 55057

DATE
03/25/2025

PHASE
100% CD

PROJECT
NORTHFIELD ICE ARENA

SHEET
CIVIL DETAILS

C5.04