PROJECT AND BID LOCATION
HOFFMAN ESTATES PARK DISTRICT
1685 W. HIGGINS ROAD
HOFFMAN ESTATES, IL 60169

HOFFMAN ESTATES PARK DISTRICT

TRIPHAHN CENTER ICE ARENA
ICE RINK REPLACEMENT
2019
CONSTRUCTION DRAWINGS

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I hereby certify that this engineering document was prepared in my own person, by me, personally responsible, and that I am a duly registered Professional Engineer under the laws of the State of Illinois.

J. James Maland
062.04744311/27/2019

My license expires later in November 23, 2021.

J. James Maland
REMOVE EXISTING MAIN RINK FLOOR - ~16,650 SF

SEE DRAWINGS R-505 AND R-506 FOR EXISTING FLOOR DETAILS

SALVAGE DOUBLE LEAF PEDESTRIAN GATE

SALVAGE PEDESTRIAN GATE, TYP. OF 6.

SALVAGE PLAYER BENCH AREA, TYP. OF 2

SALVAGE 2'-5" PLAYER GATE, TYP. OF 6.

SALVAGE PLAYER BENCH, TYP. OF 2.

REMOVE AND SALVAGE RUBBER FLOORING IN ALL BOXES

REMOVE AND SALVAGE EXISTING ALUMINUM BLEACHER WALKWAY AND STAIRS AS NECESSARY TO COMPLETE RINK FLOOR REPLACEMENT WORK.

REMOVE 1" WIDTH CAULKED EXPANSION JOINT AROUND RINK PERIMETER

SALVAGE PENALTY BENCH, TYP. OF 2.

SALVAGE SCORER'S TABLE

SALVAGE EXISTING DASHER BOARDS FOR REUSE, INCLUDING BOXES, GATES, SHIELDING, NETTING, AND ACCESSORIES STORE AND RE-INSTALL UNDER THE BASE BID. ANY ITEMS REMAINING IN RINK AREA SHALL BE COVERED AND PROTECTED FOR REUSE.

SALVAGE ALL ELECTRICAL AND SCOREBOARD WIRING, BOXES, AND CONNECTIONS AT SCORER'S BOX TRENCH

SALVAGE EQUIPMENT GATE

REMOVE AND SALVAGE BANNERS HANGING FROM ROOF JOISTS, TYP. BANNERS TO BE STORED BY OWNER DURING CONSTRUCTION. RE-HANG BANNERS IN SAME LOCATION AFTER CONSTRUCTION IS COMPLETE.

SALVAGE EXISTING CASHIER BOARDS FOR REUSE, INCLUDING BOXES, GATES, SHIELDING, NETTING, AND ACCESSORIES STORE AND RE-INSTALL UNDER THE BASE BID. ANY ITEMS REMAINING IN RINK AREA SHALL BE COVERED AND PROTECTED FOR REUSE.

SALVAGE EQUIPMENT GATE

SALVAGE BANNERS HANGING FROM ROOF JOISTS, TYP. BANNERS TO BE STORED BY OWNER DURING CONSTRUCTION. RE-HANG BANNERS IN SAME LOCATION AFTER CONSTRUCTION IS COMPLETE.

THE CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS. DO NOT SCALE THE DRAWING - ANY ERRORS OR OMISSIONS SHALL BE REPORTED TO STANTEC WITHOUT DELAY.

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SUB-SLAB REPLACEMENT PROCESS, IF NECESSARY

1. SAW CUT AND REMOVE SECTION 1 AREAS FIRST
2. POUR 5" ± CONCRETE W/ #3 @ 16" O.C., E.W. IN SECTION 1 AREAS
3. AFTER NEW CONC. IN SECTION 1 AREAS HAS OBTAINED 3000 PSI STRENGTH, SAW CUT AND REMOVE SECTION 2 AREAS
4. POUR 5" ± CONCRETE W/ #3 @ 16" O.C. E.W. IN SECTION 2 AREAS
5. SEE DETAIL A, B, AND C/R-504 FOR SUB SLAB REMOVAL AND REPLACEMENT DETAILS.

Note: Inspect sub-slab after it is completely exposed. If buckling and cracking are apparent, replace buckled area using the alternating process described and shown.
REMOVE EXISTING CONCRETE FLOOR, SUBSOIL HEAT PIPING, AND REFRIGERANT TRANSMISSION MAINS TO NORTH RINK. ENSURE TRENCH IS WIDE ENOUGH FOR INSTALLATION OF NEW SUBSOIL HEAT AND REFRIGERANT PIPING.

EXISTING DRAIN TILE TO REMAIN

CAP AND ABANDON EXISTING STEEL REFRIGERATION TRANSMISSION MAIN UNDER ICE RESURFACER ROOM FLOOR.

REMOVE CONCRETE FLOOR SLAB PREVIOUSLY REMOVED

EXISTING CONCRETE FLOOR SLAB TO REMAIN

CONTRACTOR REMOVAL ROUTE/CONSTRUCTION ACCESS

OWNER'S STAFF WILL CONSTRUCT TEMPORARY WALL TO SEPARATE REMOVAL ROUTE FROM ACTING RESURFACER ROOM

LEGEND:

- REMOVE CONCRETE FLOOR SLAB
- CONCRETE FLOOR SLAB PREVIOUSLY REMOVED
- EXISTING CONCRETE FLOOR SLAB TO REMAIN
- CONTRACTOR REMOVAL ROUTE/CONSTRUCTION ACCESS
- SAWCUT CONCRETE
**SUB-SOIL HEATING NOTES:**

2. SUB-SOIL HEAT PIPING JOINTS SHALL BE FUSION WELDED. JOINTS IN THE 1" PIPING SHALL OCCUR ONLY AT CONNECTIONS TO 3" HEADERS. SEE DETAIL E/R-501.
3. PRESSURE TESTING OF PIPING SHALL BE COMPLETED PRIOR TO BACKFILLING WITH CLEAN SAND.
ICE TEMPERATURE SENSOR, TYP. SEE DETAIL B/R-502

SUB-SOIL TEMPERATURE SENSOR, TYP. SEE DETAIL D/R-502

" PVC CONDUITS TO REFRIGERATION EQUIPMENT ROOM, TYP. 1" PERIMETER EXPANSION JOINT WITH COMPRESSION SEAL, SEE DETAIL A/R-502

1" POLY RINK TUBING @ 3.5" O.C. 1" POLY PERIMETER PIPE, SEE DETAIL E/R-502. CONNECT TO PERIMETER SLAB WITH PIPE SUPPORTS AS SHOWN ON DETAIL G/R-502.

WWF 6x6-W2.0XW2.0 TIE TO REBAR AND PIPE CHAIRS EVERY 24" MAX BOTH WAYS. SEE DETAIL F/R-502

PIPE CHAIRS/SPACERS @ 3'-0" O.C. FOR LENGTH OF RINK. SEE DETAILS G/R-501 AND F/R-502

EXTRUDED POLYSTYRENE INSULATION - 2 LAYERS 4'-0"x8'-0"x2", WITH JOINTS STAGGERED AS SHOWN. PROVIDE 6 MIL VAPOR BARRIER BELOW AND ABOVE INSULATION AND TAPE ALL HOLES AND SEAMS.

8" POLY BRINE SUPPLY HEADER

8" POLY BRINE RETURN HEADER

HEADER ENDS, SEE DETAILS E/R-501 AND F/R-501

P IPING AT RINK ENDS, SEE DETAIL E/R-502

3" POLY RETURN HEADER

3" POLY REVERSE RETURN MAIN

3" POLY SUPPLY HEADER

1" BETWEEN HEADER PIPE CENTERLINES

THICKEN FLOOR PATCH AT RINK EDGE TO MATCH ADJACENT EXISTING CONCRETE CURB DEPTH

4" X 4" TEE, TYP.

#4 REBAR @ 24" O.C. IN DIRECTION PERPENDICULAR TO 1" POLY RINK TUBING. MINIMUM 25" OVERLAP SPLICE LENGTH. SEE DETAIL F/R-502

#4 REBAR @ 24" O.C. IN DIRECTION PARALLEL TO 1" POLY RINK TUBING. MINIMUM 30" OVERLAP SPLICE LENGTH. SEE DETAIL F/R-502

NOTE:
1. SEE SHEET R-106 FOR ENLARGED PIPING PLAN IN AREA BETWEEN ICE RINK FLOOR AND REFRIGERATION EQUIPMENT ROOM.

ICE RINK FLOOR NOTES:
1. RINK PIPING JOINTS SHALL BE FUSION WELDED. JOINTS IN THE 1" PIPING SHALL OCCUR ONLY AT CONNECTIONS TO HEADERS AND AT 90 DEGREES RETURN BENDS.

2. PRESSURE TESTING OF RINK PIPING SHALL BE COMPUTED PRIOR TO PLACEMENT OF CONCRETE.

THICKEN FLOOR PATCH AT RINK EDGE TO MATCH ADJACENT EXISTING CONCRETE CURB DEPTH

ICE RINK FLOOR NOTES:
1. RINK PIPING JOINTS SHALL BE FUSION WELDED. JOINTS IN THE 1" PIPING SHALL OCCUR ONLY AT CONNECTIONS TO HEADERS AND AT 90 DEGREES RETURN BENDS.

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ICE RINK FLOOR NOTES:
1. RINK PIPING JOINTS SHALL BE FUSION WELDED. JOINTS IN THE 1" PIPING SHALL OCCUR ONLY AT CONNECTIONS TO HEADERS AND AT 90 DEGREES RETURN BENDS.

2. PRESSURE TESTING OF RINK PIPING SHALL BE COMPUTED PRIOR TO PLACEMENT OF CONCRETE.
6" THICKNESS CONCRETE FLOOR PATCH OVER HEADER TRENCH. SEE SHEET R-103 FOR EXTENT OF FLOOR PATCHES. SEE DETAIL CR-502.

8" POLY TRANSMISSION MAINS TO REFRIGERATION EQUIPMENT ROOM, SEE SHEET R-103 FOR EXTENT OF CONCRETE FLOOR PATCHING OVER TRENCH.

CORE DRILL THROUGH FOUNDATION WALL AS NECESSARY FOR NEW DRAIN TILE AND TRANSMISSION MAIN PIPING, TYP.

CONNECT NEW DRAIN TILE INTO EXISTING DRAIN TILE.

EXISTING 6" PERFORATED DRAIN TILE

INSTALL NEW TRENCH DRAIN AT LOCATION OF REMOVED EXISTING TRENCH DRAIN. SLOPE CONCRETE FLOOR TOWARDS TRENCH DRAIN. SEE SPECIFICATIONS.

CONNECT NEW TRENCH DRAIN TO EXISTING DRAIN TILE SUMP

3" POLY SUB-SOIL HEAT TRANSMISSION MAINS TO REFRIGERATION EQUIPMENT ROOM, SEE SHEET R-103 FOR EXTENT OF CONCRETE FLOOR PATCHING OVER TRENCH.

3" POLY SUB-SOIL HEAT TRANSMISSION MAINS TO REFRIGERATION EQUIPMENT ROOM. SEE SHEET R-103 FOR EXTENT OF CONCRETE FLOOR PATCHING OVER TRENCH.

WHERE STEEL TRANSMISSION MAINS ARE REPLACED WITH POLY, CUT STEEL pipe UP ABOVE EQUIPMENT ROOM FLOOR, AND WELD FLANGES INTO STEEL PIPE ENDS.

EXISTING 6" PERFORATED DRAIN TILE

3" PVC CONDUTS TO REFRIGERATION EQUIPMENT ROOM

NOTE:
1. SEE SHEET R-103 FOR EXTENTS OF CONCRETE FLOOR REPLACEMENT.
THE CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS. DO NOT SCALE THE DRAWING - ANY ERRORS OR OMISSIONS SHALL BE REPORTED TO STANTEC WITHOUT DELAY.

PIPE SUPPORT & REINFORCEMENT DETAIL

4" PVC SCH. 40 CONDUIT
BOTH WAYS WITH 6" MIN. OVERLAP AT ALL EDGE JOINTS OF WWF.

WWF 6X6-W2.0XW2.0 TIE TO #4 REBAR EVERY 2'-0" PERIMETER CONCRETE TO REFRIGERATION EQUIPMENT ROOM

MALLEABLE IRON "LB" 3/4" HUB SIZE, THREADED CONNECTIONS

DUXSEAL (TYP.) 2 1/4" 2 5/8" 1/8" 1/4" STEEL PIPE CAP

PERIMETER EXPANSION JOINT 0 1" 2" 4" 8" FOAM JOINT FILLER. 3/4" COMPRESSIBLE

PERIMETER CONCRETE 0 1" 2" 4"

PERIMETER PIPE SUPPORT DETAIL

3/8" DRILLED HOLE

PERIMETER PIPE SUPPORT DETAIL

PERIMETER CONCRETE

PERIMETER EXPANSION JOINT 0 1" 2" 4" 8" 1'-4"

PERIMETER CONCRETE

PERIMETER PIPE SUPPORT DETAIL

PERIMETER CONCRETE

PERIMETER EXPANSION JOINT 0 1" 2" 4" 8" 1'-4"

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PERIMETER PIPE SUPPORT DETAIL

PERIMETER CONCRETE

PERIMETER EXPANSION JOINT 0 1" 2" 4" 8" 1'-4"

PERIMETER CONCRETE
EXTEND RAISED CONCRETE BOX FLOOR BY 1'-6", TYP.

NEW CURVED SAFETY SHIELDING, TYP. AT 4 LOCATIONS SHOWN. MODIFY ADJACENT DASHERS AND SHIELDING AS SPECIFIED.

LEGEND:
1. REPLACE HARDWARE, LATCHES, AND HINGES FOR ALL PEDESTRIAN AND EQUIPMENT GATES
2. REPLACE SPRING LOADED CASTERS ON ALL DOUBLE LEAFED GATES
3. PROVIDE NEW COLOR DASHED BOARD PANEL ON DASHED BOARDS WHERE ICE MARKINGS MEET DASHED BOARDS

NOTE:
1. SEE SPECIFICATION FOR ADDITIONAL MODIFICATIONS TO EXISTING DASHED BOARDS.
2. SEE B/R-503 FOR CURVED SAFETY SHIELDING PLAN.
OPTIONAL SUB-SLAB REPLACEMENT DETAILS

A. CONCRETE SUB-SLAB REMOVAL PHASING

1. SAW CUT AND REMOVE 5" ± SLAB REMOVE THIS SLAB FIRST, THEN DO
   AFTER 3000 PSI COMPR. STRENGTH TEST IS OBTAINED.

2. SAW CUT AND REMOVE 5" ± SLAB REMOVE THIS SLAB FIRST, THEN DO
   AFTER 3000 PSI COMPR. STRENGTH TEST IS OBTAINED.

B. CONCRETE SUB-SLAB REPLACEMENT - PHASE 1

1. CONCRETE SUB-SLAB REMOVAL PHASING
2. CONCRETE SUB-SLAB REPLACEMENT - PHASE 1
3. CONCRETE SUB-SLAB REPLACEMENT - PHASE 2

C. CONCRETE SUB-SLAB REPLACEMENT - PHASE 2

NOTES:
1. PROVIDE WATERSTOP AT ALL CONSTRUCTION JOINTS SIMILAR TO DETAIL D.
2. DRILL & DOWEL INTO ALL CONCRETE SLAB AS SHOWN IN DETAIL D.
3. LEVEL ALL REPAIRED AREA SUBGRADE PRIOR TO POURING REPLACEMENT SLAB.

#3 REBAR @ 16" O.C.

NEW 5" ± CONCRETE SLAB TO OBTAIN 3000 PSI STRENGTH PRIOR TO REMOVAL OF SECTION 2 CONCRETE SLAB

EXISTING 5" ± CONCRETE SLAB TO REMAIN IN PLACE WHILE REPLACING SECTION 1 CONCRETE SLAB

NEW SECTION 1, 5" ± CONCRETE SLAB TO OBTAIN 3000 PSI STRENGTH PRIOR TO REMOVAL OF SECTION 2 CONCRETE SLAB