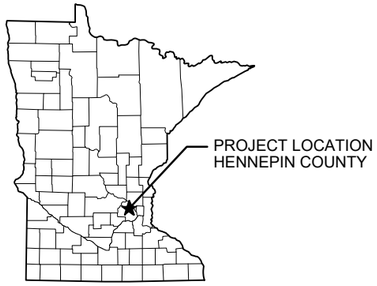
SEA SCHOOL & WILDWOOD PARK FLOOD MITIGATION PROJECT

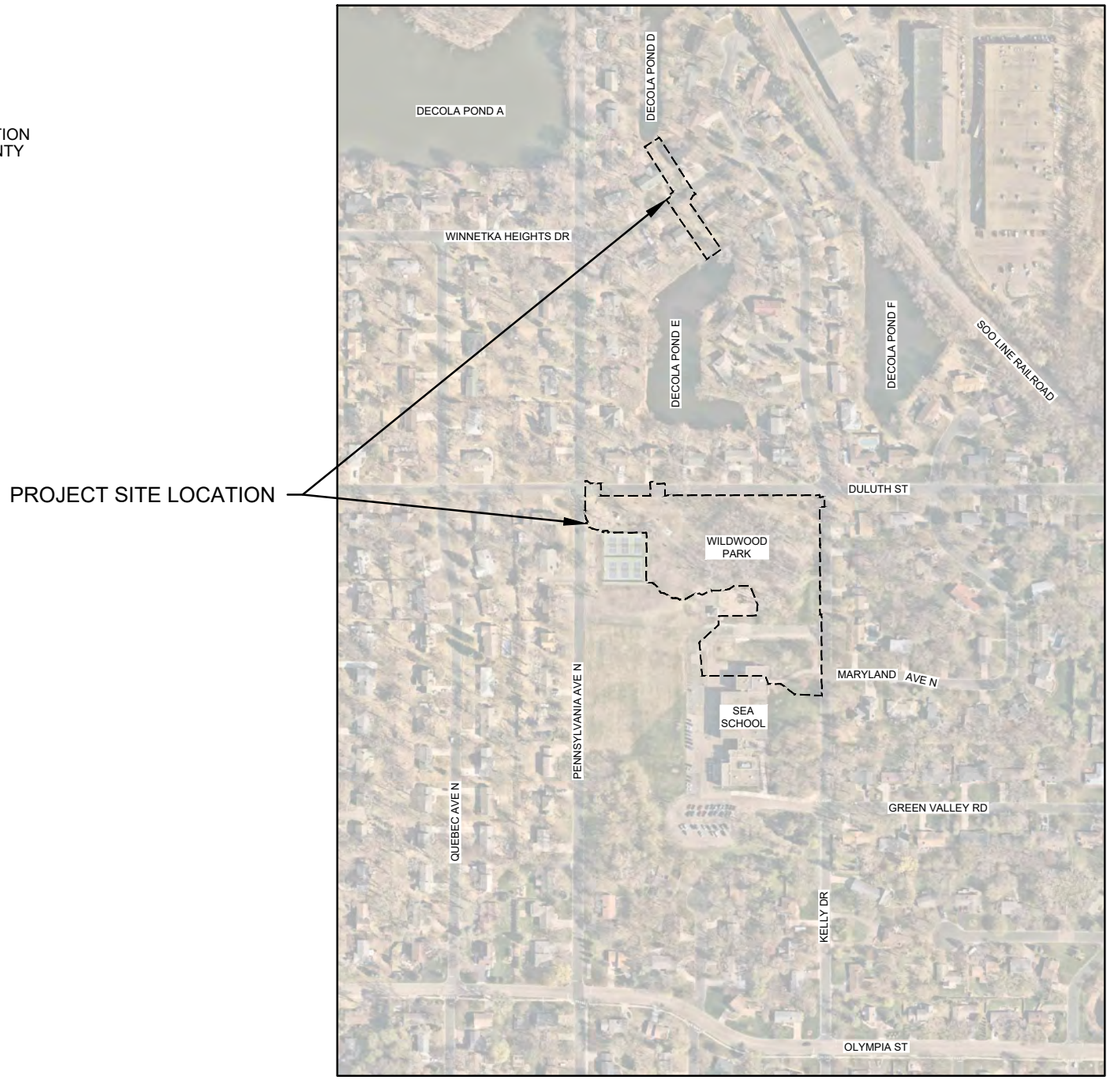
CITY OF GOLDEN VALLEY PROJECT 20-27

GOLDEN VALLEY, MN

Item 5B.
BCWMC 1-20-22



LOCATION MAP



VICINITY MAP

INDEX OF SHEETS

ENGINEER:
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EMAIL: PBROCKAMP@BARR.COM
PH: 952-842-3593

OWNER:
CITY OF GOLDEN VALLEY
7800 GOLDEN VALLEY ROAD
GOLDEN VALLEY, MN. 55427

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CITY ENGINEER
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PH: 763-593-8034

ERIC ECKMAN
ENVIRONMENTAL RESOURCES MANAGER
EMAIL: EECKMAN@GOLDENVALLEYMN.GOV
PH: 763-593-8084

COORDINATE SYSTEM: HENNEPIN COUNTY
HORIZONTAL DATUM: NAD83 (2011)
VERTICAL DATUM: NAVD88
DATE OF SURVEY: NOVEMBER 2020

GOPHER STATE ONE CALL

GOPHER STATE ONE CALL:
CALL BEFORE YOU DIG.
1-800-252-1166

50% DESIGN
NOT FOR CONSTRUCTION

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
-	-	-	-	— —	-

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.

PRINTED NAME _____

SIGNATURE _____

DATE _____ LICENSE # _____

CLIENT	01/11/22	—	—	—	—	—	—	—
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CONSTRUCTION	—	—	—	—	—	—	—	—
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DATE RELEASED								

BARR

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Scale	AS SHOWN
Date	01/11/2022
Drawn	EPF
Checked	PEB
Designed	BARR
Approved	JAK2

city of golden valley

SEA SCHOOL & WILDWOOD PARK
FLOOD MITIGATION PROJECT

TITLE SHEET & SITE LOCATION MAP

BARR PROJECT No.	23/27-1900.00
CLIENT PROJECT No.	20-27
DWG. No.	G-01
REV. No.	A

CADD USER: ERIC P. FITZGERALD FILE: M:\DESIGN\23271900.00\23271900.00_G-01_TITLE SHEET.DWG PLOT SCALE: 1:2.5849 PLOT DATE: 1/10/2022 2:49 PM

STATEMENT OF ESTIMATED QUANTITIES

Cat. No.	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY
A	MOBILIZATION/DEMOBILIZATION	LS	1
B	TRAFFIC AND PEDESTRIAN SAFETY CONTROL MEASURES	LS	1
D	TEMPORARY EROSION CONTROL	LS	1
E	UTILITY COORDINATION (ALLOWANCE)	ALW	1
	LOWER/INSULATE WATER MAIN (DULUTH STREET)	LF	
F	CLEARING AND GRUBBING	AC	1
	TREE REMOVAL	EA	60
	TRANSPLANT TREE	EA	22
	TREE PROTECTION FENCING	LF	
G	REMOVE AND DISPOSE BITUMINOUS PAVEMENT	SY	820
H	REMOVE AND DISPOSE OF CONCRETE PAVEMENT	SY	1,660
I	REMOVE AND DISPOSE OF CURB & GUTTER	LF	470
J	SAWCUT BITUMINOUS PAVEMENT (FULL DEPTH)	LF	1,380
K	REMOVE AND SALVAGE BOULDER WALL	LS	1
L	REMOVE AND DISPOSE SEWER PIPE (12" RCP)	LF	225
M	REMOVE AND DISPOSE SEWER PIPE (15" RCP)	LF	208
N	REMOVE AND DISPOSE SEWER PIPE (10" PVC)	LF	91
O	REMOVE AND DISPOSE SEWER PIPE (27" RCP)	LF	0
P	REMOVE AND DISPOSE SEWER PIPE (30" RCP)	LF	320
Q	REMOVE EXISTING MANHOLE	EA	6
	REMOVE HYDRANT	EA	2
	REMOVE WATERMAIN PIPING (6")	LF	40
	REMOVE GATE VALVE (6")	EA	2
R	SALVAGE AND PLACE TOPSOIL (P)	CY	1,900
S	EXCAVATION (P)	CY	23,721
T	SUBGRADE EXCAVATION	CY	2,984
U	OFFSITE DISPOSAL OF EXCAVATED SOIL (CLEAN)	CY	23,823
V	OFFSITE DISPOSAL OF EXCAVATED SOIL (CONTAMINATED)	TON	3,441
W	AGGREGATE BASE (CV), CLASS 5	CY	336
X	COMMON BORROW IMPORT	CY	1
Y	TOPSOIL IMPORT	TON	1,200
Z	BITUMINOUS PAVEMENT (TYP)	SY	1,840
AA	CONCRETE SIDEWALK (TYP)	SY	0
	PICKLEBALL CONCRETE PAD	SY	
BB	CURB & GUTTER	LF	1,050
CC	15" CPEP PIPE SEWER	LF	0
DD	15" CPEP FES	EA	0
EE	SPECIAL GRATE FOR 15" CPEP FES (0.5" OPENINGS)	EA	1
FF	15" CPEP INLINE CHECK VALVE	EA	1
GG	12" RCP PIPE SEWER	LF	294
HH	12" RCP FES	EA	5
II	12" FES TRASH RACK	EA	0
JJ	15" RCP PIPE SEWER	LF	410
KK	24" RCP PIPE SEWER	LF	202
LL	24" RCP FES	EA	3
MM	48" RCP PIPE SEWER	LF	305
NN	48" RCP FES	EA	2
OO	48" FES TRASH RACK	EA	1
	12" AREA DRAIN	EA	2
PP	48" DIAMETER RC DRAINAGE STRUCTURE, COMPLETE	EA	6
QQ	60" DIAMETER RC DRAINAGE STRUCTURE, COMPLETE	EA	2
RR	72" DIAMETER RC DRAINAGE STRUCTURE, COMPLETE	EA	4
RR	72" DIAMETER RC DRAINAGE STRUCTURE WITH 6-FOOT WEIR, COMPLETE	EA	2
	WATERMAIN PIPING (6")	LF	30
	WATERMAIN FITTING (6", 45 DEGREE)	EA	8
	HYDRANT	EA	2
	GATE VALVE (6")	EA	2
SS	RANDOM RIPRAP, CLASS III WITH FILTER FABRIC	TON	35
TT	BULKHEAD EXISTING STORM	LS	0
	SUBSOILING - DEEP SOIL RIPPING	AC	2
	SOIL BED PREP	AC	2
	LOW MAINTANANCE TURF (MNDOT 25-131)	LB	225
	WET MEADOW (MNDOT 33-261)	LB	22
	UPLAND MESIC PRAIRIE (MNDOT 35-641)	LB	8
	PRAIRIE RESTORATION SAVANNA WILD FLOWER SEED MIX	LB	7
	PRAIRIE PLUG PLANTINGS	EA	1,500
	FILTRATION BASIN PLANTINGS	LS	1
	RESIDENTIAL LANDSCAPE REPAIR	LS	1
	TREE PLANTINGS	EA	60
	EROSION CONTROL BLANKET (CATEGORY 3N2S)	SY	8,000
	VEGETATION MAINTENANCE (SEPARATE CONTRACT)		
WW	CLEAN WASHED SAND WITH 5 PERCENT IRON FILINGS	CY	100
XX	SMALL SPLASH BLOCK ASSEMBLY (PIPE DISCHARGE)	EA	1
YY	6" PERFORATED DUAL WALL HDPE DRAINTILE PIPE AND FITTINGS (NO SOCK) (P)	LF	280

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-	-	-	-	— —	-

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Date	01/11/2022
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Checked	PEB
Designed	BARR
Approved	JAK2

city of golden valley

SEA SCHOOL & WILDWOOD PARK
FLOOD MITIGATION PROJECT

STATEMENT OF ESTIMATED QUANTITIES

BARR PROJECT No.	23/27-1900.00
CLIENT PROJECT No.	20-27
DWG. No.	G-02
REV. No.	A

CADD USER: ERIC P. FITZGERALD FILE: M:\DESIGN\2327\1900.00\2327190000_G-02_SEQ.DWG PLOT SCALE: 1:2.5849 PLOT DATE: 1/10/2022 4:12 PM

1.0 GENERAL CONSTRUCTION ACTIVITY INFORMATION:

THIS STORMWATER POLLUTION PREVENTION PLAN (SWPPP) HAS BEEN PREPARED IN COMPLIANCE WITH THE MINNESOTA GENERAL STORMWATER PERMIT FOR CONSTRUCTION ACTIVITY NO. MNR100001 (GENERAL PERMIT), AS REQUIRED BY THE MINNESOTA POLLUTION CONTROL AGENCY (MPCA) UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM/STATE DISPOSAL SYSTEM (NPDES/SDS) PROGRAM.

THE PROJECT IS LOCATED IN THE CITY OF GOLDEN VALLEY, HENNEPIN COUNTY, MINNESOTA. PROPOSED CONSTRUCTION ACTIVITIES WILL TAKE PLACE WITHIN SEA SCHOOL EASEMENT AREA AND PENNSYLVANIA WOODS NATURE RESERVE SURROUNDING DECOLA PONDS E AND E. THE APPROXIMATE CENTROID OF THE PROJECT HAS A LATITUDE OF 44.99962 AND A LONGITUDE OF -93.37401.

THIS PROJECT INVOLVES EROSION CONTROL, REMOVAL AND REPLACEMENT OF CURB AND GUTTER, BITIMOUS TRAILS, ROADS, AND SCHOOL DRIVEWAY, INSTALLATION AND REMOVALS OF STORM SEWER, EXCAVATION AND GRADING, CONSTRUCTION OF FILTRATION BASINS AND RAINGARDENS, CONSTRUCTION OF OVERFLOW BERM, AND UPLAND AND WETLAND RESTORATION. THE PROJECT, AS PROPOSED, HAS A TOTAL DISTURBANCE AREA OF 4.92 ACRES. EROSION PREVENTION AND SEDIMENT CONTROL MEASURES ARE REQUIRED TO MINIMIZE SEDIMENT FROM BEING TRANSPORTED INTO DOWNSTREAM BASSETT CREEK AND UPSTREAM DECOLA POND D, WHICH ARE DNR IDENTIFIED WATER BODIES. REFER TO PROJECT DRAWINGS FOR FURTHER DETAILS. (CSW PERMIT PART III.A.1)

1.1 PROJECT SIZE AND CUMULATIVE IMPERVIOUS SURFACE:

- THE ANTICIPATED AREA OF DISTURBANCE IS APPROXIMATELY 4.92 ACRES.
- THE TOTAL AREA OF PRE-CONSTRUCTION IMPERVIOUS AREA IS APPROXIMATELY 0.56 ACRES.
- THE TOTAL AREA OF POST-CONSTRUCTION IMPERVIOUS AREA IS APPROXIMATELY 0.74 ACRES.
- THE TOTAL NEW IMPERVIOUS AREA IS APPROXIMATELY 0.18 ACRES.

1.2 DATES OF CONSTRUCTION:

- ANTICIPATED START DATE: FALL 2022
- ANTICIPATED END DATE: SUMMER 2023

1.3 CONTACT INFORMATION:

OWNER: THE CITY OF GOLDEN VALLEY
MAILING ADDRESS: 7800 GOLDEN VALLEY ROAD, GOLDEN VALLEY, MN 55427
CONTACT PERSON: JEFF OLIVER, PE — TITLE: CITY ENGINEER
PHONE NUMBER: 763-593-8034 — EMAIL ADDRESS: JOLIVER@GOLDENVALLEYMN.GOV
ALTERNATE CONTACT PERSON: ERIC ECKMAN — TITLE: ENVIRONMENTAL RESOURCES SUPERVISOR
PHONE NUMBER: 763-593-8084 — EMAIL ADDRESS: EECKMAN@GOLDENVALLEYMN.GOV

OPERATOR / GENERAL CONTRACTOR (WHO WILL OVERSEE IMPLEMENTATION OF THE SWPPP): TBD
MAILING ADDRESS: TBD
CONTACT PERSON: TBD — TITLE: TBD
PHONE NUMBER: TBD — EMAIL ADDRESS: TBD

PARTY RESPONSIBLE FOR LONG-TERM OPERATION AND MAINTENANCE OF THE PERMANENT STORMWATER MANAGEMENT SYSTEM:
CITY OF GOLDEN VALLEY
MAILING ADDRESS: 7800 GOLDEN VALLEY ROAD, GOLDEN VALLEY, MN 55427
CONTACT PERSON: JEFF OLIVER, PE — TITLE: CITY ENGINEER
PHONE NUMBER: 763-593-8043 — EMAIL ADDRESS: JOLIVER@GOLDENVALLEYMN.GOV

2.0 RECEIVING WATERS:

LIST ALL WATERS WITHIN ONE MILE (NEAREST STRAIGHT LINE DISTANCE) THAT ARE LIKELY TO RECEIVE STORMWATER RUNOFF FROM THE PROJECT SITE. (CSW PERMIT ITEM 5.10)

NAME OF WATER BODY	TYPE [1]	WATER BODY ID [2]	SPECIAL WATER? [3]	IMPAIRED WATER? [3]	DNR PUBLIC WATER WITH WORK IN WATER RESTRICTIONS?
DECOLA POND D	POND/WETLAND	-	NO	NO	NO
DECOLA POND E	POND/WETLAND	-	NO	NO	NO
HONEYWELL POND	POND	-	NO	NO	NO
BASSETT CREEK	STREAM	07010206-538	NO	YES	NO

(1) TYPE EXAMPLES: DITCH, POND, WETLAND, CALCAREOUS FEN, LAKE, STREAM, RIVER
(2) WATER BODY IDENTIFICATION (ID) MIGHT NOT BE AVAILABLE FOR ALL WATER BODIES. USE THE SPECIAL AND IMPAIRED WATERS SEARCH TOOL AT:
HTTPS://WWW.PCA.STATE.MN.US/WATER/STORMWATER-SPECIAL-AND-IMPAIRED-WATERS-SEARCH
(3) REFER TO CSW PERMIT SECTION 23
IMPAIRED WATER FOR THE FOLLOWING POLLUTANT(S) OR STRESSOR(S): PHOSPHORUS (NUTRIENT EUTROPHICATION BIOLOGICAL INDICATORS), TURBIDITY, TOTAL
SUSPENDED SOLIDS (TSS), DISSOLVED OXYGEN, OR AQUATIC BIOTA (FISH BIOASSESSMENT, AQUATIC PLANT BIOASSESSMENT, AND AQUATIC
MACROINVERTEBRATE BIOASSESSMENT)

2.1 SPECIAL AND IMPAIRED WATERS: THE MPCA'S SPECIAL AND IMPAIRED WATERS SEARCH TOOL WAS USED TO LOCATE SPECIAL AND IMPAIRED WATERS WITHIN ONE MILE (AERIAL RADIUS MEASUREMENT) OF THE PROJECT SITE. NO WATERBODIES WITHIN ONE MILE HAVE AN EPA-APPROVED IMPAIRMENT. BASSETT CREEK, WHICH IS LOCATED FURTHER DOWNSTREAM THAN ONE MILE (AERIAL RADIUS), HAS EPA-APPROVED IMPAIRMENTS FOR CHLORIDES, FECAL COLIFORM, AND FISHES BIOASSESSMENTS. THESE IMPAIRMENTS ARE CONSIDERED NON-CONSTRUCTION RELATED AND DO NOT REQUIRE ADDITIONAL BEST MANAGEMENT PRACTICES (BMPS) OR PLAN REVIEW FOR COMPLIANCE WITH THE GENERAL PERMIT. (CSW PERMIT ITEM 2.7 AND SECTION 23)

ADDITIONAL BMPS OR OTHER SPECIFIC CONSTRUCTION RELATED IMPLEMENTATION ACTIVITIES IDENTIFIED IN AN APPROVED TOTAL MAXIMUM DAILY LOAD (TMDL) ARE NOT APPLICABLE TO THIS PROJECT. (CSW PERMIT ITEM 5.19)

2.2 PUBLIC WATERS WITH WORK IN WATER RESTRICTIONS: THIS PROJECT DOES NOT INCLUDE WORK IN PUBLIC WATERS. (CSW PERMIT ITEM 5.11)

2.3 WETLAND IMPACTS: THIS PROJECT MAY HAVE TEMPORARY ADVERSE IMPACTS TO WETLANDS, INCLUDING: EXCAVATION, DEGRADATION OF WATER QUALITY, DRAINING, FILLING, PERMANENT INUNDATION OR FLOODING. PERIMETER SEDIMENT CONTROLS WILL BE INSTALLED DURING CONSTRUCTION TO HELP MITIGATE WATER QUALITY DEGRADATION. THE PROJECT WILL RESULT IN A NET INCREASE IN WETLAND AREA . (CSW PERMIT ITEMS 2.4 AND 2.10, AND SECTION 22)

2.4 ENVIRONMENTAL REVIEW AND OTHER REQUIRED REVIEWS: STORMWATER MITIGATION MEASURES ARE NOT REQUIRED AS A RESULT OF AN ENVIRONMENTAL REVIEW (E.G., EAW OR EIS), ENDANGERED OR THREATENED SPECIES REVIEW, ARCHEOLOGICAL SITE REVIEW, OR OTHER LOCAL, STATE, OR FEDERAL REVIEW CONDUCTED FOR THE PROJECT. (CSW PERMIT ITEMS 2.8, 2.9, AND 5.16)

2.5 KARST AREAS OR DRINKING WATER SUPPLY MANAGEMENT AREAS: PROPOSED CONSTRUCTION ACTIVITIES DO NOT FALL WITHIN KARST AREAS OR DRINKING WATER SUPPLY MANAGEMENT AREAS. (CSW PERMIT ITEMS 16.19, 16.20, AND 18.10)

3.0 PROJECT PLANS AND SPECIFICATIONS:

REQUIRED FEATURE	SHEET NUMBER
• PROJECT LOCATION AND CONSTRUCTION LIMITS	G-01
• EXISTING AND FINAL GRADES, INCLUDING DRAINAGE AREA BOUNDARIES, DIRECTIONS OF FLOW AND ALL DISCHARGE POINTS WHERE STORMWATER IS LEAVING THE SITE OR ENTERING A SURFACE WATER	C-05, C-06
• SOIL TYPES AT THE SITE	G-03
• LOCATIONS OF IMPERVIOUS SURFACES	C-01, C-02
• LOCATIONS OF AREAS NOT BE BE DISTURBED (E.G., BUFFER ZONES, WETLANDS, ETC.)	C-03, C-04
• LOCATIONS OF AREAS OF STEEP SLOPES	C-03, C-04
• LOCATIONS OF AREAS WHERE CONSTRUCTION WILL BE PHASED TO MINIMIZE DURATION OF EXPOSED SOILS	N/A
• LOCATIONS OF ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL BMPS AS REQUIRED IN PERMIT SECTIONS 8 THROUGH 10 AND 14 THROUGH 19	C-03, C-04
• BUFFER ZONES AS REQUIRED IN PERMIT ITEMS 9.17 AND 23.11	N/A
• LOCATIONS OF POTENTIAL POLLUTION-GENERATING ACTIVITIES IDENTIFIED IN PERMIT SECTION 12	N/A
• STANDARD DETAILS FOR EROSION AND SEDIMENT CONTROL BMPS TO BE INSTALLED AT THE SITE	G-05

4.0 BEST MANAGEMENT PRACTICES (BMPS):

4.1 EROSION PREVENTION PRACTICES:

1. METHODS OF TEMPORARILY STABILIZING SOILS AND SOIL STOCKPILES (E.G., MULCHES, HYDRAULIC TACKIFIERS, EROSION BLANKETS, ETC.): (CSW PERMIT ITEMS 8.4, 8.5, AND 23.9)
   a. AREAS OF EXPOSED SOIL WILL BE STABILIZED WITH ONE OF THE FOLLOWING: EROSION CONTROL BLANKET, PRESERVATION OF MATURE VEGETATION, MULCH, VEGETATIVE SLASH, ETC.
   b. IF PRESENT, SOIL STOCKPILES WILL BE STABILIZED WITH ONE OF THE FOLLOWING MATERIALS: MULCH (SUCH AS STRAW MULCH, SLASH MULCH, WOOD CHIP, OR OTHER APPROPRIATE MULCH) (IF SLOPES ≤3H:1V), COVER MATERIAL SUCH AS TARPS OR PLASTIC SHEETING, ETC.
   c. 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 THESE STABILIZATION REQUIREMENTS.
2. TIMELINE FOR STABILIZATION OF EXPOSED SOILS: WHERE REQUIRED, STABILIZATION OF EXPOSED SOIL AREAS (INCLUDING STOCKPILES) MUST BE INITIATED IMMEDIATELY TO LIMIT SOIL EROSION WHENEVER ANY CONSTRUCTION ACTIVITY HAS PERMANENTLY OR TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING 7 CALENDAR DAYS. THE FOLLOWING ACTIVITIES CAN BE TAKEN TO INITIATE STABILIZATION:
   a. PREPPING THE SOIL FOR VEGETATIVE OR NON-VEGETATIVE STABILIZATION
   b. APPLYING MULCH OR OTHER NON-VEGETATIVE PRODUCT TO THE EXPOSED SOIL AREA
   c. SEEDING OR PLANTING THE EXPOSED AREA
   d. FINALIZING ARRANGEMENTS TO HAVE STABILIZATION PRODUCT FULLY INSTALLED
3. METHODS TO BE USED FOR STABILIZATION OF DITCH AND SWALE WETTED PERIMETERS (NOTE THAT MULCH, HYDRAULIC SOIL TACKIFIERS, HYDROMULCHES, ETC. ARE NOT ACCEPTABLE SOIL STABILIZATION METHODS FOR ANY PART OF A DRAINAGE DITCH OR SWALE WITH A CONTINUOUS SLOPE OF GREATER THAN 2 PERCENT). (CSW PERMIT ITEMS 8.6 THROUGH 8.8)
   a. IN THE EVENT SOILS WITHIN EXISTING STORMWATER DITCHES OR SWALES ARE DISTURBED, THEY WILL BE STABILIZED USING ONE OR MORE OF THE FOLLOWING METHODS: CHANNEL EROSION CONTROL BLANKET, RIPRAP, TURF REINFORCEMENT MAT, ETC.
   b. MULCH, HYDROMULCH, TACKIFIER, POLYACRYLAMIDE, OR SIMILAR EROSION PREVENTION PRACTICES WILL NOT BE USED TO STABILIZE ANY PART OF AN EXISTING STORMWATER DITCH OR SWALE.
   c. TIMELINE FOR STABILIZATION OF STORMWATER DITCHES AND SWALES: THE LAST 200 LINEAL FEET OF LENGTH OF THE NORMAL WETTED PERIMETER OF ANY TEMPORARY OR PERMANENT DITCH OR SWALE THAT DRAINS WATER FROM ANY PORTION OF THE CONSTRUCTION SITE, OR DIVERTS WATER AROUND THE SITE, WITHIN 200 LINEAL FEET FROM THE PROPERTY EDGE, OR FROM THE POINT OF DISCHARGE INTO ANY SURFACE WATER WILL BE STABILIZED WITHIN 24 HOURS AFTER CONNECTING TO A SURFACE WATER OR PROPERTY EDGE. STABILIZATION OF THE REMAINING PORTIONS OF ANY TEMPORARY OR PERMANENT DITCHES OR SWALES WILL BE COMPLETED WITHIN 14 CALENDAR DAYS AFTER CONNECTING TO A SURFACE WATER OR PROPERTY EDGE AND CONSTRUCTION IN THAT PORTION OF THE DITCH HAS TEMPORARILY OR PERMANENTLY CEASED.
4. METHODS TO BE USED FOR ENERGY DISSIPATION AT PIPE OUTLETS (E.G., RIP RAP, SPLASH PADS, GABIONS, ETC.). (CSW PERMIT ITEM 8.9)
5. DESCRIBE TIMELINES TO BE IMPLEMENTED AT THIS SITE FOR COMPLETING THE INSTALLATION OF THE EROSION PREVENTION. (CSW PERMIT ITEMS 5.4, 8.4 THROUGH 8.6, AND 23.9)
   a. IF APPLICABLE, INCLUDE THE TIMELINE FOR COMPLETING SOIL STABILIZATION FOR AREAS WITHIN 200 FEET OF A PUBLIC WATER WITH WORK IN WATER RESTRICTIONS DUE TO FISH SPAWNING TIME FRAMES
   b. SOIL STABILIZATION TIMELINES FOR PORTIONS OF THE SITE THAT DRAIN TO SPECIAL OR IMPAIRED WATERS.
   c. BEFORE LAND DISTURBING ACTIVITIES BEGIN, THE LIMITS OF THE AREAS TO BE DISTURBED DURING CONSTRUCTION WILL BE DELINEATED (E.G., WITH FLAGS, STAKES, SIGNS, SILT FENCE, ETC.).
6. DESCRIBE ADDITIONAL EROSION PREVENTION MEASURES THAT WILL BE IMPLEMENTED AT THE SITE DURING CONSTRUCTION (E.G., CONSTRUCTION PHASING, MINIMIZING SOIL DISTURBANCE, VEGETATIVE BUFFERS, HORIZONTAL SLOPE GRADING, SLOPE DRAINING/TERRACING, ETC.). (CSW PERMIT ITEMS 8.2, 8.3, AND 8.10)
   a. CONSTRUCTION PHASING WILL BE UTILIZED TO MINIMIZE THE AREA OF SOIL EXPOSED AT ANY ONE TIME.
   b. SOIL DISTURBANCE WILL BE MINIMIZED WHEREVER POSSIBLE TO AID IN EROSION PREVENTION.
   c. EXISTING VEGETATION WILL BE PRESERVED WHERE POSSIBLE TO LIMIT EXPOSED SOIL AND THUS WILL SERVE AS NATURAL VEGETATIVE BUFFERS.
   d. EXPOSED SOIL ON STEEP SLOPES (≤3H:1V) WILL BE STABILIZED.
7. IF APPLICABLE, DESCRIBE ADDITIONAL EROSION PREVENTION BMPS TO BE IMPLEMENTED AT THE SITE TO PROTECT PLANNED INFILTRATION AREAS. (CSW PERMIT ITEMS 16.4 AND 16.5)

4.2 SEDIMENT CONTROL PRACTICES:

1. METHODS TO BE USED FOR DOWNGRADIENT PERIMETER CONTROL. (CSW PERMIT ITEMS 9.2 THROUGH 9.6)
   a. SEDIMENT CONTROL PRACTICES SHALL BE ESTABLISHED ON ALL DOWNGRADIENT PERIMETERS AND LOCATED UPGRADIENT OF ANY BUFFER ZONES. PERIMETER SEDIMENT CONTROLS THAT MAY BE USED IN AREAS OF SHEET FLOW INCLUDE: SILT FENCING, SEDIMENT CONTROL LOGS / BIOROLLS (FILLED WITH COMPOST, WOOD CHIPS, ROCK, ETC.), VEGETATIVE SLASH BARRIERS, OTHER NATIVE MATERIAL BARRIERS, VEGETATIVE BUFFERS (RETAIN EXISTING VEGETATION WHERE POSSIBLE), EARTHEN BERMS, ROCK CHECKS, ETC.
   b. PERIMETER SEDIMENT CONTROL PRACTICES MUST BE INSTALLED BEFORE ANY UPGRADIENT LAND-DISTURBING ACTIVITIES BEGIN AND REMAIN IN PLACE UNTIL PERMANENT COVER HAS BEEN ESTABLISHED.
   c. IF SEDIMENT CONTROL PRACTICES HAVE BEEN ADJUSTED OR REMOVED TO ACCOMMODATE SHORT-TERM ACTIVITIES (SUCH AS CLEARING, GRUBBING, OR PASSAGE OF VEHICLES), THE CONTROLS MUST BE RE-INSTALLED IMMEDIATELY AFTER THE SHORT-TERM ACTIVITY HAS BEEN COMPLETED. SEDIMENT CONTROL PRACTICES MUST BE RE-INSTALLED BEFORE THE NEXT PRECIPITATION EVENT, EVEN IF THE SHORT-TERM ACTIVITY IS NOT COMPLETE.
   d. IF THE DOWNGRADIENT SEDIMENT CONTROLS ARE OVERLOADED (BASED ON FREQUENT FAILURE OR EXCESSIVE MAINTENANCE REQUIREMENT), INSTALL ADDITIONAL UPGRADIENT SEDIMENT CONTROL PRACTICES OR REDUNDANT BMPS TO ELIMINATE THE OVERLOADING AND AMEND THE SWPPP TO IDENTIFY THESE ADDITIONAL PRACTICES.
2. METHODS TO BE USED TO CONTAIN SOIL STOCKPILES. (CSW PERMIT ITEMS 9.9 AND 9.10)
   a. ANY TEMPORARY SOIL STOCKPILES SHALL BE SURROUNDED BY SILT FENCING OR BIOROLLS (OR OTHER EFFECTIVE SEDIMENT CONTROLS) AND SHALL NOT BE PLACED IN ANY NATURAL BUFFERS OR SURFACE WATERS.
3. METHODS TO BE USED FOR STORM DRAIN INLET PROTECTION. (CSW PERMIT ITEMS 9.7 AND 9.8)
   a. IF STORM DRAINS ARE PRESENT, INLET PROTECTION BMPS WILL BE INSTALLED AROUND ALL STORM DRAIN INLETS DOWNGRADIENT OF CONSTRUCTION ACTIVITIES. STORM DRAIN INLETS WILL BE PROTECTED UNTIL ALL SOURCES WITH POTENTIAL FOR DISCHARGING TO THE INLET HAVE BEEN STABILIZED. INLET PROTECTION BMPS THAT MAY BE USED INCLUDE: SEDIMENT CONTROL LOG, FILTER SACK, ROCK WITH FILTER FABRIC, FILTER FENCE BOX, ETC.
4. METHODS TO MINIMIZE VEHICLE TRACKING AT CONSTRUCTION EXITS AND STREET SWEEPING ACTIVITIES. (CSW PERMIT ITEMS 9.11 AND 9.12)
   a. A VEHICLE TRACKING BMP (SUCH AS A ROCK PADS, MUD MATS, SLASH MULCH, CONCRETE OR STEEL WASH RACKS, OR AN EQUIVALENT SYSTEM) SHALL BE INSTALLED TO MINIMIZE THE TRACKING OUT OF SEDIMENT FROM THE CONSTRUCTION AREA.
   b. IF SUCH VEHICLE TRACKING BMPS ARE NOT ADEQUATE TO PREVENT SEDIMENT FROM BEING TRACKED ONTO THE PAVED ROAD, STREET SWEEPING WILL ALSO BE EMPLOYED. SEDIMENT WILL BE REMOVED BY SWEEPING WITHIN 24 HOURS.
5. IF APPLICABLE, ADDITIONAL SEDIMENT CONTROLS (E.G., DIVERSION BERMS) WILL BE INSTALLED TO KEEP RUNOFF AWAY FROM PLANNED INFILTRATION AREAS WHEN EXCAVATED PRIOR TO ESTABLISHING PERMANENT COVER WITHIN THE CONTRIBUTING DRAINAGE AREA. (CSW PERMIT ITEMS 16.4 AND 16.5)
6. DESCRIBE METHODS TO BE USED TO MINIMIZE SOIL COMPACTION AND PRESERVE TOP SOIL (UNLESS INFEASIBLE) AT THIS SITE. (CSW PERMIT ITEMS 5.24, 9.14, AND 9.15)
7. METHODS TO BE USED TO PROMOTE INFILTRATION AND SEDIMENT REMOVAL ON THE SITE PRIOR TO OFFSITE DISCHARGE, UNLESS INFEASIBLE. (CSW PERMIT ITEM 9.16)
   a. DISCHARGES FROM BMPS WILL BE DIRECTED TO VEGETATED AREAS OF THE SITE (INCLUDING ANY NATURAL BUFFERS) IN ORDER TO INCREASE SEDIMENT REMOVAL AND MAXIMIZE STORMWATER INFILTRATION. IF EROSION IS NOTED TO OCCUR AS THE RESULT OF SUCH A DISCHARGE, VELOCITY DISSIPATION BMPS WILL BE CONSIDERED AND INSTALLED AS NECESSARY TO PREVENT EROSION.
8. DESCRIBE PLANS TO PRESERVE A 50-FOOT NATURAL BUFFER BETWEEN THE PROJECT'S SOIL DISTURBANCE AND A SURFACE WATER OR PLANS FOR REDUNDANT SEDIMENT CONTROLS IF A BUFFER IS INFEASIBLE. (CSW PERMIT ITEM 9.17)
   a. IN WETLANDS AND NON-SPECIAL WATERS, A 50-FOOT NATURAL BUFFER SHALL BE PRESERVED. WHEN A SURFACE WATER IS LOCATED WITHIN 50 FEET OF THE PROJECT'S EARTH DISTURBANCES AND STORMWATER FLOWS TO THE SURFACE WATER, OR WHEN A BUFFER IS INFEASIBLE, REDUNDANT SEDIMENT CONTROLS SHALL BE PROVIDED. REDUNDANT PERIMETER CONTROLS WILL BE INSTALLED AT LEAST 5 FEET APART UNLESS LIMITED BY LACK OF AVAILABLE SPACE.
   b. A 100-FOOT NATURAL BUFFER SHALL BE PRESERVED IN CONSTRUCTION AREAS DISCHARGING TO SPECIAL WATERS OR, IF A BUFFER IS INFEASIBLE, REDUNDANT SEDIMENT CONTROLS SHALL BE PROVIDED, WHEN A SPECIAL WATER IS LOCATED WITHIN 100 FEET OF THE PROJECT'S EARTH DISTURBANCES AND STORMWATER FLOWS TO THE SURFACE WATER.
9. DESCRIBE PLANS FOR USE OF SEDIMENTATION TREATMENT CHEMICALS (E.G., POLYMERS, FLOCCULANTS, ETC.). (CSW PERMIT ITEMS 5.22 AND 9.18)
10. IF REQUIRED TO INSTALL A TEMPORARY SEDIMENT BASIN DUE TO 10 OR MORE ACRES DRAINING TO A COMMON LOCATION OR 5 ACRES OR MORE IF THE SITE IS WITHIN 1 MILE OF A SPECIAL OR IMPAIRED WATER, DESCRIBE (OR ATTACH PLANS) SHOWING HOW THE BASIN WILL BE DESIGNED AND CONSTRUCTED. (CSW PERMIT ITEMS 5.6, 9.13, AND 23.10 AND SECTION 14)

4.3 DEWATERING AND BASIN DRAINING: (CSW PERMIT SECTION 10 AND ITEM 10.5)

   a. THE FOLLOWING WILL BE USED TO TREAT/DISPOSE OF TURBID OR SEDIMENT-LADEN WATER DURING DEWATERING OR BASIN DRAINING: DEWATERING FILTER BAGS OR EQUIVALENT MEASURES.
   b. THE FOLLOWING WILL BE USED TO PREVENT EROSION OR SCOUR OF DISCHARGE POINTS DURING DEWATERING OR BASIN DRAINING: TEMPORARY DRAINAGE CHANNELS AND SEDIMENT BASINS OR EQUIVALENT MEASURES.
   c. FILTERS FOR BACKWASH WATER WILL BE MANAGED ON THE SITE AND CONSISTENTLY INSPECTED FOR DAMAGE AND PROPERLY DISPOSED OF OFFSITE WHEN PUMPING IS COMPLETED OR IF SIGNS OF DAMAGE ARE FOUND.

4.4 BMP DESIGN FACTORS: THE FOLLOWING BMP DESIGN FACTORS HAVE BEEN CONSIDERED IN DESIGNING THE TEMPORARY EROSION PREVENTION AND SEDIMENT CONTROL BMPS:

1. EXPECTED AMOUNT, FREQUENCY, INTENSITY, AND DURATION OF PRECIPITATION.
2. NATURE OF STORMWATER RUNOFF AND RUN-ON AT THE SITE, INCLUDING FACTORS SUCH AS EXPECTED FLOW FROM IMPERVIOUS SURFACES, SLOPES, AND SITE DRAINAGE FEATURES.
3. STORMWATER VOLUME, VELOCITY, AND PEAK FLOW RATES TO MINIMIZE DISCHARGE OF POLLUTANTS IN STORMWATER AND TO MINIMIZE CHANNEL AND STREAMBANK EROSION AND SCOUR IN THE IMMEDIATE VICINITY OF DISCHARGE POINTS.
4. RANGE OF SOIL PARTICLE SIZES EXPECTED TO BE PRESENT.

4.5 BMP QUANTITIES: ANTICIPATED EROSION PREVENTION AND SEDIMENT CONTROL BMP QUANTITIES NEEDED FOR THE LIFE OF THE PROJECT:

- INLET PROTECTION (EA): 13
- SILT FENCE (LF): 90
- SILT CURTAIN (LF): 80
- SEDIMENT LOG (LF): 1,520
- EROSION CONTROL BLANKET (SY): 13,100
- ORANGE CONSTRUCTION FENCING (LF): 720
- STABILIZED CONSTRUCTION ENTRANCE (EA): 1

50% DESIGN
NOT FOR CONSTRUCTION

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
-	-	-	-	— — -	

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.
PRINTED NAME _____
SIGNATURE _____
DATE _____ LICENSE # _____

CLIENT	01/11/22	—	—	—	—	—	—	—
BID	—	—	—	—	—	—	—	—
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	DATE RELEASED							

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Scale	AS SHOWN
Date	01/11/2022
Drawn	EPF
Checked	PEB
Designed	BARR
Approved	JAK2

city of golden valley

SEA SCHOOL & WILDWOOD PARK
FLOOD MITIGATION PROJECT

STORMWATER POLLUTION PREVENTION PLAN
(SWPPP)

BARR PROJECT No.	23/27-1900.00
CLIENT PROJECT No.	20-27
DWG. No.	G-03
REV. No.	A

5.0 PERMANENT STORMWATER MANAGEMENT SYSTEM:

A PERMANENT STORMWATER MANAGEMENT SYSTEM IS REQUIRED IF THE PROJECT RESULTS IN ONE ACRE OR MORE OF NEW IMPERVIOUS SURFACES OR RESULTS IN A NET INCREASE OF ONE OR MORE ACRES OF CUMULATIVE NEW IMPERVIOUS SURFACES IN TOTAL OR IF THE PROJECT IS PART OF A LARGER PLAN OF DEVELOPMENT. (CSW PERMIT ITEM 15.3)

5.1 A WATER QUALITY VOLUME OF ONE INCH OF RUNOFF FROM THE NET INCREASE IN CUMULATIVE NEW IMPERVIOUS SURFACES CREATED BY THE PROJECT MUST BE RETAINED ON-SITE THROUGH VOLUME REDUCTION PRACTICES (E.G., INFILTRATION OR OTHER) UNLESS PROHIBITED DUE TO ONE OF THE REASONS IN PERMIT ITEMS 16.14 THROUGH 16.21. IF INFILTRATION IS PROHIBITED, IDENTIFY OTHER METHOD(S) TO TREAT THE WATER QUALITY VOLUME (E.G., WET SEDIMENTATION BASIN, FILTRATION BASIN, REGIONAL POND, OR EQUIVALENT METHOD). (CSW PERMIT ITEMS 5.15, 15.4 THROUGH 15.9, AND 23.14)

5.2 FOR LINEAR PROJECTS WITH LACK OF RIGHT OF WAY TO INSTALL TREATMENT SYSTEMS CAPABLE OF TREATING THE ENTIRE WATER QUALITY VOLUME, IDENTIFY OTHER METHOD(S) FOR PROVIDING TREATMENT OF RUNOFF PRIOR TO DISCHARGE (E.G., GRASSED SWALES, FILTRATION SYSTEMS, SMALLER PONDS OR GRIT CHAMBERS, ETC.). (CSW PERMIT ITEM 15.9)

5.3 THIS PROJECT DOES NOT DISCHARGE TO A TROUT STREAM (OR A TRIBUTARY TO A TROUT STREAM). (CSW PERMIT ITEM 23.12)

6.0 INSPECTION AND MAINTENANCE ACTIVITIES:

6.1 PERSONS WITH REQUIRED TRAINING: TRAINED INDIVIDUALS INCLUDE THOSE PARTIES RESPONSIBLE FOR INSTALLING, SUPERVISING, REPAIRING, INSPECTING, AND MAINTAINING EROSION PREVENTION AND SEDIMENT CONTROL BMPS AT THE SITE. TRAINED INDIVIDUALS ARE ALSO RESPONSIBLE FOR IMPLEMENTATION OF THE SWPPP AND COMPLIANCE WITH THE GENERAL PERMIT UNTIL THE CONSTRUCTION ACTIVITIES ARE COMPLETE, PERMANENT COVER HAS BEEN ESTABLISHED, AND A NOTICE OF TERMINATION (NOT) HAS BEEN SUBMITTED. (CSW PERMIT ITEMS 5.20, 5.21, AND 11.9 AND SECTION 21)

THESE INDIVIDUALS WILL BE TRAINED IN ACCORDANCE WITH THE REQUIREMENTS OF THE GENERAL PERMIT, INCLUDING THE REQUIREMENT THAT THE CONTENT AND EXTENT OF TRAINING WILL BE COMMENSURATE WITH THE INDIVIDUAL'S JOB DUTIES AND RESPONSIBILITIES.

BELOW IS A LIST OF PEOPLE RESPONSIBLE FOR THIS PROJECT WHO ARE KNOWLEDGEABLE AND EXPERIENCED IN THE APPLICATION OF EROSION PREVENTION AND SEDIMENT CONTROL BMPS.

TRAINED INDIVIDUAL	RESPONSIBILITY	TRAINING ENTITY*	TRAINING DATE
ERIC FITZGERALD	PREPARATION OF THE SWPPP	UNIVERSITY OF MINNESOTA	APRIL 2021
TBD	OVERSIGHT OF SWPPP IMPLEMENTATION, REVISION, AND AMMENDMENT	TBD	TBD
TBD	PERFORMANCE OF SWPPP INSPECTIONS	TBD	TBD
TBD	PERFORMANCE OR SUPERVISION OF INSTALLATION, MAINTENANCE, AND REPAIR OF BMPS	TBD	TBD

*TRAINING DOCUMENTATION AVAILABLE UPON REQUEST.

6.2 FREQUENCY OF INSPECTIONS: A TRAINED PERSON WILL ROUTINELY INSPECT THE ENTIRE CONSTRUCTION SITE. (CSW PERMIT ITEMS 11.2, 11.10, AND 23.13)

- AT LEAST ONCE EVERY 7 DAYS DURING ACTIVE CONSTRUCTION
- WITHIN 24 HOURS AFTER A RAINFALL EVENT GREATER THAN 0.5 INCHES IN 24 HOURS

INSPECTION FREQUENCY MAY BE ADJUSTED UNDER THE FOLLOWING CIRCUMSTANCES:

- WHERE PARTS OF THE CONSTRUCTION AREAS 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 AREAS HAVE PERMANENT COVER AND NO CONSTRUCTION ACTIVITY IS OCCURRING ON THE SITE, INSPECTIONS CAN BE REDUCED TO ONCE PER MONTH AND, AFTER 12 MONTHS, MAY BE SUSPENDED COMPLETELY UNTIL CONSTRUCTION ACTIVITY RESUMES.
- WHERE CONSTRUCTION ACTIVITY HAS BEEN SUSPENDED DUE TO FROZEN GROUND CONDITIONS, THE INSPECTIONS MAY BE SUSPENDED. THE REQUIRED INSPECTIONS AND MAINTENANCE SCHEDULE MUST BEGIN WITHIN 24 HOURS AFTER RUNOFF OCCURS AT THE SITE OR UPON RESUMING CONSTRUCTION, WHICHEVER COMES FIRST.

6.3 INSPECTION REQUIREMENTS: EACH CONSTRUCTION STORMWATER SITE INSPECTION SHALL INCLUDE INSPECTION OF THE FOLLOWING AREAS. (CSW PERMIT ITEMS 11.3 THROUGH 11.8)

- ALL EROSION PREVENTION AND SEDIMENT CONTROL BMPS AND POLLUTION PREVENTION MANAGEMENT MEASURES
- SURFACE WATERS FOR EVIDENCE OF EROSION AND SEDIMENT DEPOSITION
- CONSTRUCTION SITE VEHICLE EXIT LOCATIONS FOR EVIDENCE OF OFF SITE SEDIMENT TRACKING
- STREETS AND OTHER AREAS ADJACENT TO THE PROJECT FOR EVIDENCE OF OFF SITE ACCUMULATIONS OF SEDIMENT

6.4 MAINTENANCE REQUIREMENTS: MAINTENANCE OF THE FOLLOWING AREAS AND BMPS SHALL BE PERFORMED AS FOLLOWS: (CSW PERMIT ITEMS 11.3 THROUGH 11.8)

- NONFUNCTIONAL BMPS WILL BE REPAIRED, REPLACED, OR SUPPLEMENTED WITH FUNCTIONAL BMPS BY THE END OF THE NEXT BUSINESS DAY AFTER DISCOVERY OR AS SOON AS FIELD CONDITIONS ALLOW ACCESS.
- PERIMETER CONTROL DEVICES WILL BE REPAIRED, REPLACED, OR SUPPLEMENTED WHEN THEY BECOME NONFUNCTIONAL OR THE SEDIMENT REACHES 1/2 OF THE HEIGHT OF THE DEVICE.
- TEMPORARY AND PERMANENT SEDIMENTATION BASINS WILL BE DRAINED AND THE SEDIMENT REMOVED WHEN THE DEPTH OF SEDIMENT COLLECTED IN THE BASIN REACHES 1/2 THE STORAGE VOLUME.
- DELTAS AND SEDIMENT DEPOSITED IN SURFACE WATERS WILL BE REMOVED, AND THE AREAS WHERE SEDIMENT REMOVAL RESULTS IN EXPOSED SOIL WILL BE RE-STABILIZED. THE REMOVAL AND STABILIZATION WILL BE COMPLETED WITHIN 7 CALENDAR DAYS OF DISCOVERY UNLESS PRECLUDED BY LEGAL, REGULATORY, OR PHYSICAL ACCESS CONSTRAINTS. IF PRECLUDED DUE TO ACCESS CONSTRAINTS, REASONABLE EFFORTS TO OBTAIN ACCESS WILL BE USED. REMOVAL AND STABILIZATION WILL TAKE PLACE WITHIN 7 CALENDAR DAYS OF OBTAINING ACCESS.
- TRACKED SEDIMENT ON PAVED SURFACES WILL BE REMOVED WITHIN 1 CALENDAR DAY OF DISCOVERY.
- AREAS UNDERGOING STABILIZATION WILL BE RESTABILIZED AS NECESSARY TO ACHIEVE REQUIRED COVER.

6.5 RECORDKEEPING REQUIREMENTS: (CSW PERMIT ITEMS 11.11 AND 24.5 AND SECTIONS 6 AND 20)

1. ALL INSPECTIONS AND MAINTENANCE ACTIVITIES MUST BE RECORDED IN WRITING WITHIN 24 HOURS OF BEING CONDUCTED AND THESE RECORDS MUST BE RETAINED WITH THE SWPPP. RECORDS OF EACH INSPECTION AND MAINTENANCE ACTIVITY SHALL INCLUDE THE DATE AND TIME; NAME OF INSPECTOR(S); FINDINGS OF INSPECTIONS; CORRECTIVE ACTIONS (INCLUDING DATES, TIMES, AND PARTY COMPLETING MAINTENANCE ACTIVITIES); AND DATE OF ALL RAINFALL EVENTS GREATER THAN 0.5 INCHES IN 24 HOURS AND THE AMOUNT OF RAINFALL FOR EACH EVENT.
   a. IF ANY DISCHARGE IS OBSERVED DURING THE INSPECTION, DOCUMENT THE LOCATION AND APPEARANCE OF THE DISCHARGE (I.E., COLOR, ODOR, SETTLED OR SUSPENDED SOLIDS, OIL SHEEN, AND OTHER OBVIOUS INDICATORS OF POLLUTANTS), AND A PHOTOGRAPH OF THE DISCHARGE.
2. THE SWPPP WILL BE AMENDED TO INCLUDE ADDITIONAL OR MODIFIED BMPS TO CORRECT PROBLEMS OR ADDRESS SITUATIONS WHENEVER 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 GROUNDWATER.
   a. THE SWPPP WILL BE AMENDED WHEN INSPECTIONS OR INVESTIGATIONS BY THE SITE OWNER, OPERATOR, OR CONTRACTORS OR BY USEPA/MPCA OFFICIALS INDICATE THAT THE SWPPP IS NOT EFFECTIVE IN ELIMINATING OR MINIMIZING THE DISCHARGE OF POLLUTANTS TO SURFACE WATERS OR GROUNDWATER; THE DISCHARGES ARE CAUSING WATER QUALITY STANDARD EXCEEDANCES; OR THE SWPPP IS NOT CONSISTENT WITH A USEPA APPROVED TMDL.
   b. ANY AMENDMENTS TO THE SWPPP PROPOSED AS A RESULT OF THE INSPECTION WILL BE DOCUMENTED AS REQUIRED WITHIN 7 CALENDAR DAYS.
   c. AMENDMENTS WILL BE COMPLETED BY AN APPROPRIATELY TRAINED INDIVIDUAL. CHANGES INVOLVING THE USE OF A LESS STRINGENT BMP WILL INCLUDE A JUSTIFICATION DESCRIBING HOW THE REPLACEMENT BMP IS EFFECTIVE FOR THE SITE CHARACTERISTICS.
3. RECORDS RETENTION: THE SWPPP, INCLUDING ALL CHANGES TO IT, AND INSPECTION AND MAINTENANCE RECORDS MUST BE KEPT AT THE SITE DURING CONSTRUCTION BY THE PERMITTEE WHO HAS OPERATIONAL CONTROL OF THE SITE. THE SWPPP CAN BE KEPT IN EITHER A FIELD OFFICE OR IN AN ON SITE VEHICLE DURING NORMAL WORKING HOURS.
4. RECORD AVAILABILITY: THE PERMITTEES MUST MAKE THE SWPPP, INCLUDING INSPECTION REPORTS, MAINTENANCE RECORDS, AND TRAINING RECORDS, AVAILABLE TO FEDERAL, STATE, AND LOCAL OFFICIALS WITHIN THREE DAYS UPON REQUEST FOR THE DURATION OF THE PERMIT COVERAGE AND FOR THREE YEARS FOLLOWING THE NOT.

7.0 POLLUTION PREVENTION MEASURES:

1. ANY CONSTRUCTION PRODUCTS AND LANDSCAPE MATERIALS THAT HAVE THE POTENTIAL TO LEACH POLLUTANTS SHALL BE STORED UNDER COVER (E.G., PLASTIC SHEETING OR TEMPORARY ROOFS) TO PREVENT DISCHARGE OF POLLUTANTS THROUGH MINIMIZATION OF CONTACT WITH STORMWATER. STORAGE OF SUCH MATERIALS WITHIN THE PROJECT AREA WILL BE MINIMIZED TO THE EXTENT POSSIBLE. (CSW PERMIT ITEM 12.2)
2. PESTICIDES, FERTILIZERS, AND TREATMENT CHEMICALS WILL BE STORED UNDER COVER (E.G., PLASTIC SHEETING, TEMPORARY ROOFS, WITHIN A BUILDING, OR IN WEATHER-PROOF CONTAINERS) TO PREVENT DISCHARGE OF POLLUTANTS THROUGH MINIMIZATION OF CONTACT WITH STORMWATER. STORAGE OF SUCH MATERIALS WITHIN THE PROJECT AREA WILL BE MINIMIZED TO THE EXTENT POSSIBLE. (CSW PERMIT ITEM 12.3)
3. HAZARDOUS MATERIALS AND TOXIC WASTE (E.G., OIL, DIESEL FUEL, GASOLINE, HYDRAULIC FLUIDS, PAINT SOLVENTS, PETROLEUM-BASED PRODUCTS, WOOD PRESERVATIVES, ADDITIVES, CURING COMPOUNDS, AND ACIDS) SHALL BE STORED AND DISPOSED OF IN COMPLIANCE WITH MINNESOTA RULES CHAPTER 7045, INCLUDING SECONDARY CONTAINMENT (AS APPLICABLE). HAZARDOUS MATERIALS SHALL BE PROPERLY STORED IN SEALED CONTAINERS TO PREVENT SPILLS, LEAKS, OR OTHER DISCHARGES AND PREVENT PRECIPITATION FROM FALLING ONTO THE CONTAINERS OR STORED HAZARDOUS MATERIALS. (CSW PERMIT ITEMS 2.3 AND 12.4)
4. SOLID WASTE SHALL BE COLLECTED, STORED, AND DISPOSED OF PROPERLY IN COMPLIANCE WITH MINNESOTA RULES CHAPTER 7035. THIS INCLUDES STORAGE WITHIN COVERED TRASH CONTAINERS AND DAILY REMOVAL OF LITTER AND DEBRIS. STORAGE OF SOLID WASTE WITHIN THE PROJECT AREA WILL BE MINIMIZED TO THE EXTENT POSSIBLE. (CSW PERMIT ITEM 12.5)
5. PORTABLE TOILETS WILL BE LOCATED AWAY FROM SURFACE WATERS AND POSITIONED AND SECURED TO THE GROUND SO THEY WILL NOT BE TIPPED OR KNOCKED OVER. SANITARY WASTE WILL BE DISPOSED OF IN ACCORDANCE WITH MINNESOTA RULES, CHAPTER 7041. PORTABLE TOILETS WILL BE PERIODICALLY EMPTIED AND THE WASTE HAULED OFF-SITE BY A LICENSED HAULER. (CSW PERMIT ITEM 12.6)
6. VEHICLE FUELING WILL ONLY OCCUR IN DESIGNATED AREAS. SPILL KITS SIZED APPROPRIATELY FOR THE AMOUNT OF REFUELING TAKING PLACE WILL BE LOCATED. SPILL KITS WILL BE CLEARLY LABELED AND CONTAIN MATERIALS TO ASSIST IN SPILL CLEANUP INCLUDING ABSORBENT PADS, BOOMS FOR CONTAINING SPILLS, AND HEAVY-DUTY PROTECTIVE GLOVES. SPILLS WILL BE REPORTED TO THE MINNESOTA DUTY OFFICER AS REQUIRED BY MINNESOTA STATUTES, SECTION 115.061. (CSW PERMIT ITEMS 2.3 AND 12.7)
   a. ANY FUEL TANKS BROUGHT ON-SITE WILL HAVE PROPERLY SIZED CONTAINMENT AND WILL NOT BE TOPPED OFF TO AVOID SPILLS FROM OVERFILLING. FUEL TANKS WILL MEET INDUSTRY STANDARDS (DESIGNED TO HOLD FUEL TYPE, PROPERLY MAINTAINED, NOT ILLEGALLY MODIFIED, NOT MISSING LEAK INDICATOR FLOATS FOR DOUBLE WALLED TANKS, SIGHT GAUGES NOT USED, ETC.) OR BE REMOVED FROM THE WORK AREA.
   b. GUIDELINES FOR SPILL PREVENTION AND RESPONSE INCLUDE:
      - TAKE REASONABLE STEPS TO PREVENT THE DISCHARGE OF SPILLED OR LEAKED CHEMICALS, INCLUDING FUEL, FROM ANY AREA WHERE CHEMICALS OR FUEL WILL BE LOADED OR UNLOADED, INCLUDING THE USE OF DRIP PANS OR ABSORBENTS UNLESS INFEASIBLE;
      - PERFORM REGULAR PREVENTATIVE MAINTENANCE ON TANKS AND FUEL LINES;
      - INSPECT PUMPS, CYLINDERS, HOSES, VALVES, AND OTHER MECHANICAL EQUIPMENT ON-SITE FOR DAMAGE OR DETERIORATION;
      - DO NOT WASH OR RINSE FUELING AREAS WITH WATER;
      - MAINTAIN ADEQUATE SUPPLIES TO CLEAN UP DISCHARGED MATERIALS AND PROVIDE AN APPROPRIATE DISPOSAL METHOD FOR RECOVERED SPILLED MATERIALS;
      - REPORT AND CLEAN UP SPILLS IMMEDIATELY AS REQUIRED BY MINNESOTA STATUTES, SECTION 115.061, USING DRY CLEAN UP MEASURES WHERE POSSIBLE; AND
      - MAINTAIN COPIES OF SAFETY DATA SHEETS (SDSS) FOR HAZARDOUS MATERIALS ON-SITE IN LOCATIONS READILY AVAILABLE TO EMERGENCY RESPONDERS.
7. IF VEHICLE AND EQUIPMENT WASHING IS NECESSARY, A VEHICLE WASH STATION WILL BE LOCATED IN A DESIGNATED AREA. RUNOFF FROM THE WASHING AREA WILL BE CONTAINED IN A SEDIMENT BASIN AND WASTE FROM THE WASHING ACTIVITY WILL BE PROPERLY DISPOSED OF. ANY SOAPS, DETERGENTS, OR SOLVENTS WILL BE PROPERLY USED AND STORED. ANY DETERGENTS AND OTHER CLEANERS NOT PERMITTED FOR DISCHARGE WILL NOT BE USED. (CSW PERMIT ITEMS 2.3 AND 12.8)
8. THE PROJECT WILL RESULT IN CONCRETE OR OTHER WASHOUT ACTIVITIES. IF NECESSARY, A DESCRIPTION OF THE STORAGE AND DISPOSAL OF CONCRETE AND OTHER WASHOUT WASTES SO THAT WASTES DO NOT CONTACT THE GROUND WILL BE ADDED. (CSW PERMIT ITEMS 2.3 AND 12.9)
   a. THE CONTRACTOR WILL SET UP A CONCRETE WASHOUT STATION. EXAMPLES OF APPROPRIATE CONCRETE WASHOUT PRACTICES INCLUDES, BUT ARE NOT LIMITED TO:
      - PUTTING ALL WASHOUT WATER BACK INTO CONCRETE TRUCKS FOR CONCRETE VENDOR TO MANAGE AT THEIR FACILITY.
      - BRINGING IN A PORTABLE CONCRETE WASHOUT TUB AND MANAGING ALL RECOVERED WASHOUT WATER APPROPRIATELY.THE PERIMETER MUST BE PROTECTED WITH SILT FENCE.
      - MAKE A RING OF HAY BALES AND PUT A POLY LINER IN THE MIDDLE TO CREATE AN IMPERMEABLE CONTAINMENT SO THAT CONCRETE WASHOUT DOES NOT CONTACT THE GROUND. ALL MATERIALS SHALL BE REMOVED WHEN DRY.
      - BUILDING A LINED PIT USING AN IMPERMEABLE LINER. THE PIT MUST BE SIZED FOR THE AMOUNT OF EXPECTED CONCRETE WASHOUT NEEDED. THE PIT MUST BE BERMED TO PREVENT RUN-IN OF STORMWATER DURING A PRECIPITATION EVENT.
      - CONCRETE WASHOUT AREAS SHALL BE LABELED "CONCRETE WASHOUT AREA" AND "CONTRACTORS MUST UTILIZE PROPER FACILITIES FOR DISPOSAL OF CONCRETE".
   b. THE CONCRETE WASHOUT AREA CONCRETE WASHOUT WATER FOR CONCRETE TRUCK CHUTE AND TOOLS WILL ALSO NOT TOUCH THE GROUND. THIS PAIL OF WASH WATER CAN BE PUT BACK INTO THE CONCRETE TRUCK.

8.0 PERMANENT COVER AND PERMIT TERMINATION CONDITIONS:

1. THE AREAS DISTURBED DURING CONSTRUCTION WILL BE STABILIZED WITH PERMANENT COVER UPON COMPLETION OF WORK. PERMANENT COVER MAY BE VEGETATIVE OR NON-VEGETATIVE, AS APPROPRIATE. ESTABLISHMENT OF PERMANENT COVER MAY INCLUDE THE FOLLOWING ACTIVITIES: PLACEMENT OF EROSION CONTROL BLANKET, PLACEMENT OF TURF REINFORCING MAT, UPLAND ZONE SEED MIXES AND PLUGS, WETLAND MEADOW SEED MIXES AND PLUGS, AND BITUMINOUS SURFACES. (CSW PERMIT ITEM 5.17)
2. FOR A CONSTRUCTION-SITE TO ACHIEVE "PERMANENT COVER", THE FOLLOWING REQUIREMENTS MUST BE COMPLETED PRIOR TO TERMINATION OF PERMIT COVERAGE (CSW PERMIT SECTIONS 4 AND 13):
   a. ALL SOIL DISTURBING CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED AND PERMANENT COVER HAS BEEN INSTALLED OVER ALL AREAS. VEGETATIVE COVER CONSISTS OF A UNIFORM PERENNIAL VEGETATION WITH A DENSITY OF 70% OF ITS EXPECTED FINAL GROWTH. VEGETATION IS NOT REQUIRED WHERE THE FUNCTION OF A SPECIFIC AREA DICTATES NO VEGETATION (SUCH AS IMPERVIOUS SURFACES OR THE BASE OF A SAND FILTER).
   b. ALL SEDIMENT HAS BEEN REMOVED FROM CONVEYANCE SYSTEMS, INCLUDING CULVERTS.
   c. ALL TEMPORARY SYNTHETIC EROSION PREVENTION AND SEDIMENT CONTROL BMPS HAVE BEEN REMOVED. BMPS DESIGNED TO DECOMPOSE ON-SITE MAY BE LEFT IN PLACE.
3. SUBMIT A NOTICE OF TERMINATION (NOT) FORM TO THE MPCA WITHIN 30 DAYS AFTER THE TERMINATION CONDITIONS ARE COMPLETE.

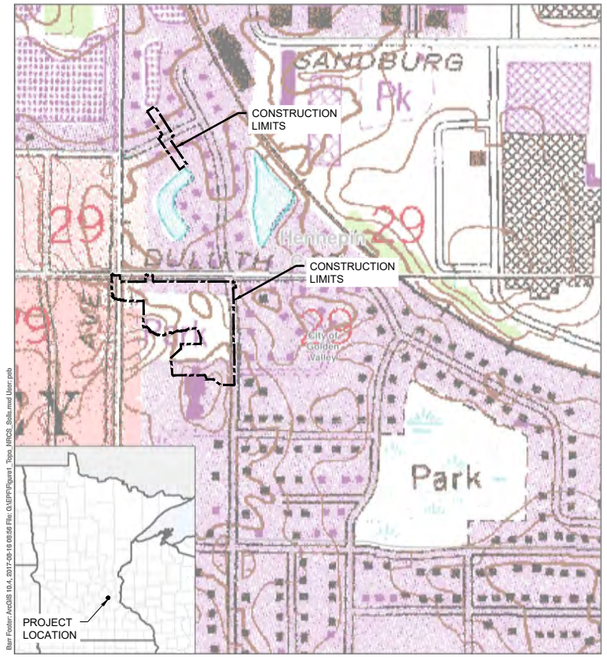

Figure 1

TOPOGRAPHIC MAP WITH SURFACE WATERS AND SOIL TYPES
Stormwater Pollution Prevention Plan
Hennepin County, Minnesota

50% DESIGN
NOT FOR CONSTRUCTION

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
-	-	-	-	— — -	-

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PRINTED NAME _____

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DATE _____ LICENSE # _____

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BID	—	—	—	—	—	—	—	—
CONSTRUCTION	—	—	—	—	—	—	—	—
RECORD	—	—	—	—	—	—	—	—
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	DATE RELEASED							

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www.barr.com

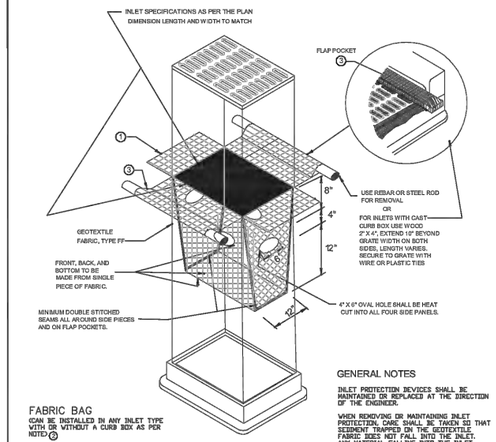
Scale	AS SHOWN
Date	01/11/2022
Drawn	EPF
Checked	PEB
Designed	BARR
Approved	JAK2

city of golden valley

SEA SCHOOL & WILDWOOD PARK
FLOOD MITIGATION PROJECT

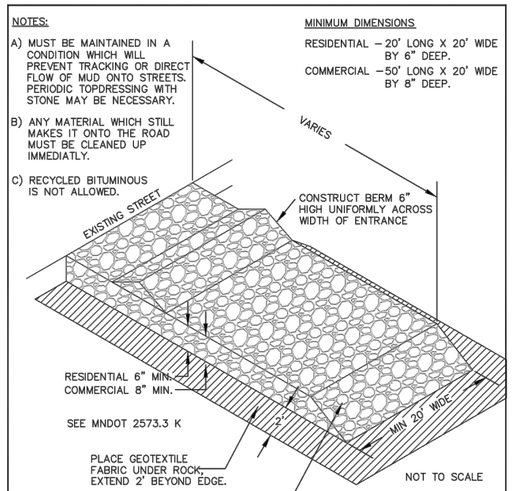
STORMWATER POLLUTION PREVENTION PLAN
(SWPPP)

BARR PROJECT No.	
23/27-1900.00	
CLIENT PROJECT No.	
20-27	
DWG. No.	REV. No.
G-04	A



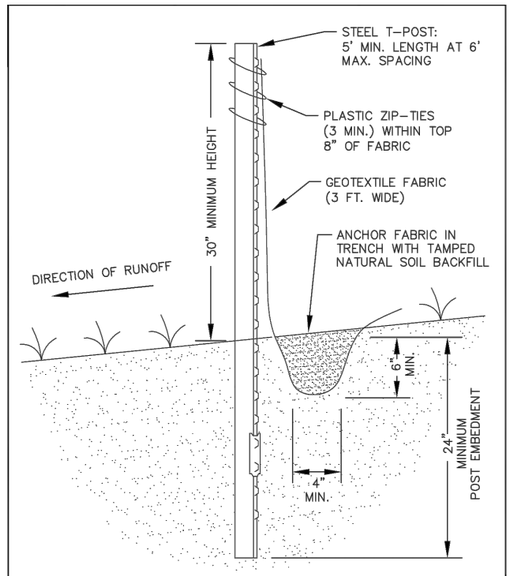
APPROVED DECEMBER 31, 2015	FAST FLOW INLET BAG TO PROTECT STORM INLETS	Golden Valley GV-EC-090
CITY ENGINEER REG 23110		

1 DETAIL: INLET PROTECTION
AS SHOWN



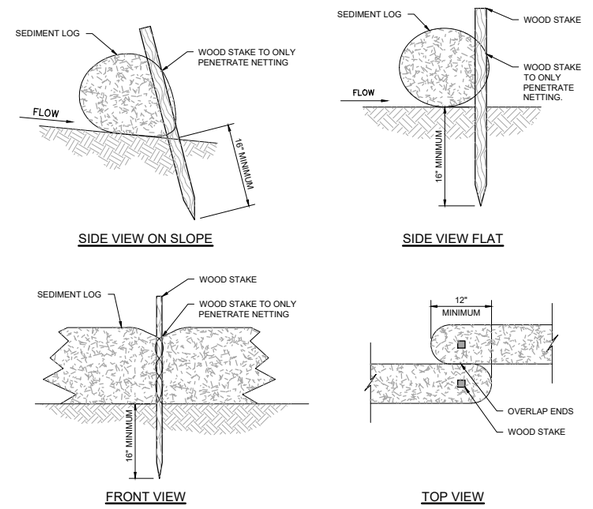
APPROVED DECEMBER 31, 2015	ROCK CONSTRUCTION ENTRANCE	Golden Valley GV-EC-080
CITY ENGINEER REG 23110		

2 DETAIL: ROCK CONSTRUCTION ENTRANCE
AS SHOWN



APPROVED DECEMBER 31, 2015	INSTALLATION OF HEAVY DUTY SILT FENCE	Golden Valley GV-EC-020
CITY ENGINEER REG 23110		

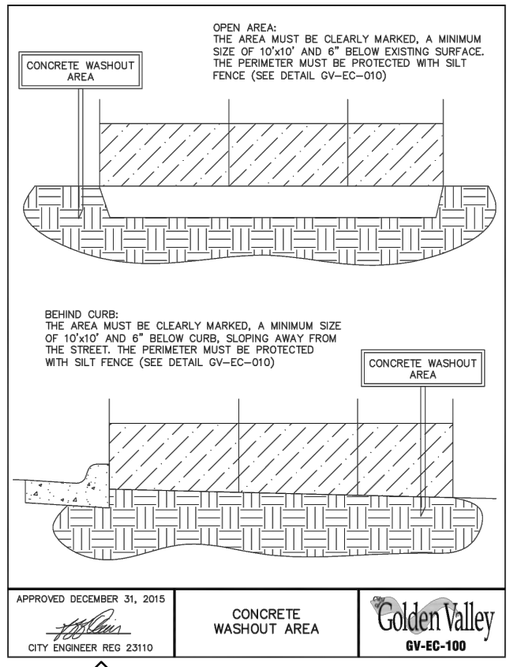
3 DETAIL: SILT FENCE
AS SHOWN



NOTES:

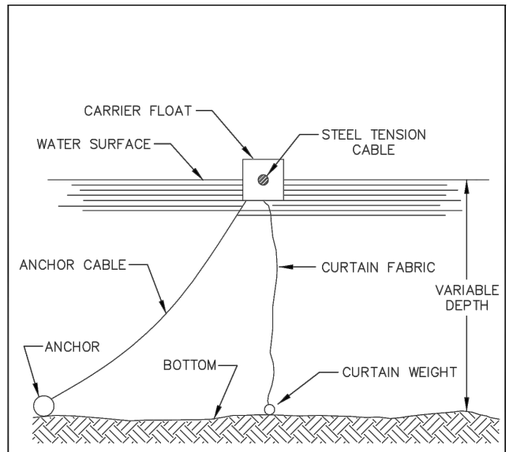
1. INSTALL SEDIMENT LOG ALONG CONTOURS (CONSTANT ELEVATION).
2. NO GAPS SHALL BE PRESENT UNDER SEDIMENT LOG. PREPARE AREA AS NEEDED TO SMOOTH SURFACE OR REMOVE DEBRIS.
3. REMOVE ACCUMULATED SEDIMENT WHEN REACHING 1/3 OF LOG HEIGHT.
4. MAINTAIN SEDIMENT LOG THROUGHOUT THE CONSTRUCTION PERIOD AND REPAIR OR REPLACED AS REQUIRED.

4 DETAIL: SEDIMENT LOG - STAKING
NOT TO SCALE



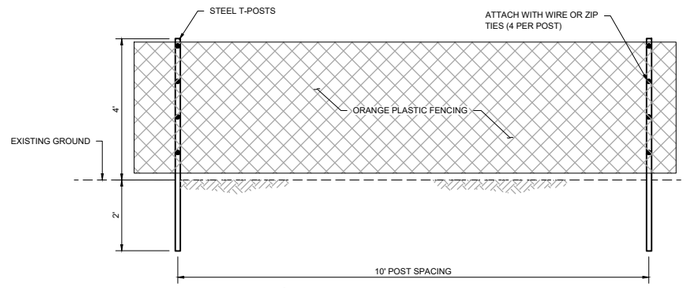
APPROVED DECEMBER 31, 2015	CONCRETE WASHOUT AREA	Golden Valley GV-EC-100
CITY ENGINEER REG 23110		

5 DETAIL: CONCRETE WASHOUT AREA
AS SHOWN



APPROVED DECEMBER 31, 2015	FLOTATION SILT CURTAIN	Golden Valley GV-EC-040
CITY ENGINEER REG 23110		

6 DETAIL: FLOATATION SILT CURTAIN
AS SHOWN



7 DETAIL: CONSTRUCTION FENCE

50% DESIGN
NOT FOR CONSTRUCTION

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
-	-	-	-	— —	-

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PRINTED NAME
SIGNATURE
DATE — LICENSE # —

	01/11/22						
CLIENT							
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CONSTRUCTION							
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DATE RELEASED							

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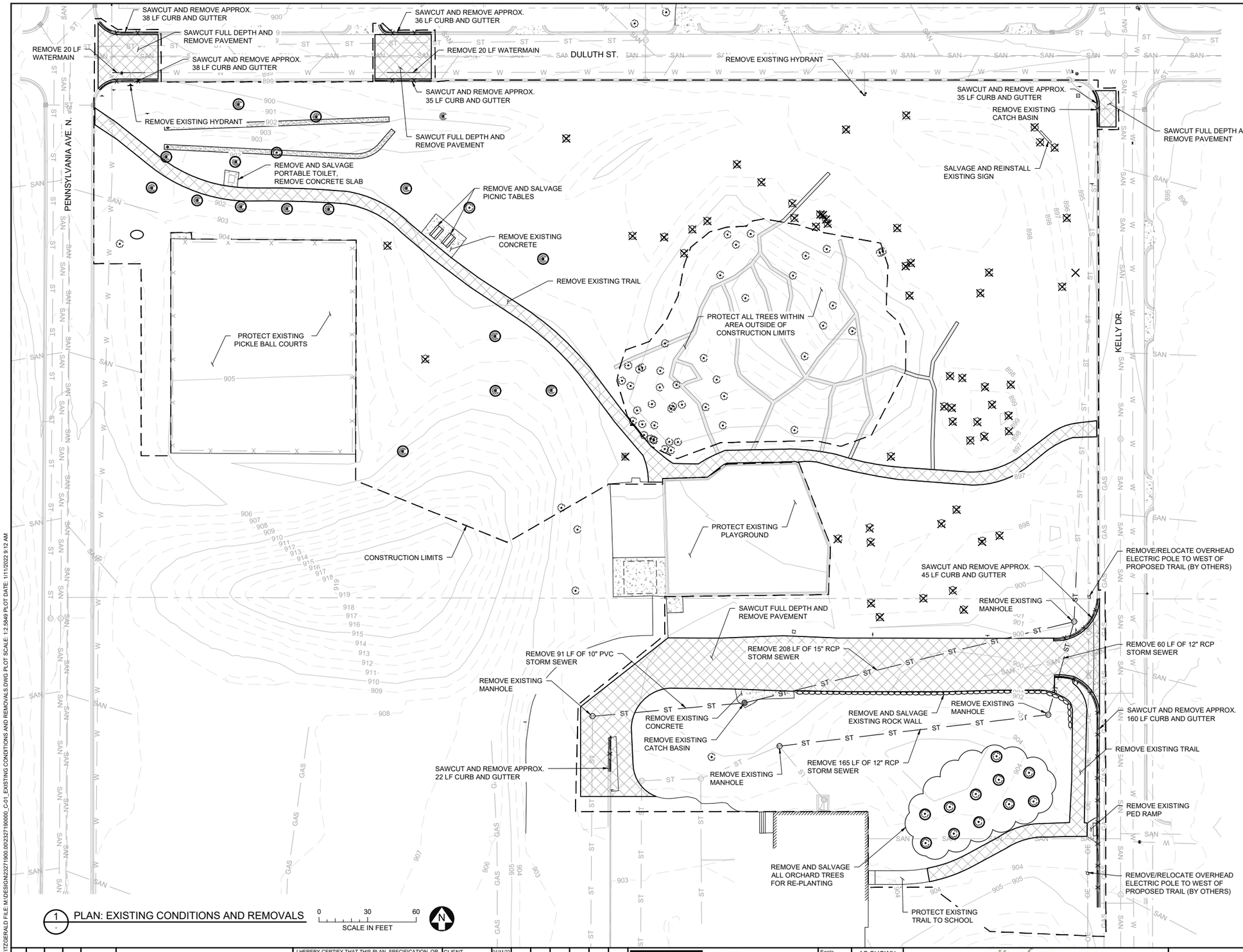
Scale	AS SHOWN
Date	01/11/2022
Drawn	EPF
Checked	PEB
Designed	BARR
Approved	JAK2

city of golden valley

SEA SCHOOL & WILDWOOD PARK
FLOOD MITIGATION PROJECT
EROSION & SEDIMENT CONTROL DETAILS

BARR PROJECT No.	23/27-1900.00
CLIENT PROJECT No.	20-27
DWG. No.	G-05
REV. No.	A



SYMBOL AND PATTERN LEGEND

- 995 — EXISTING 5' CONTOUR
- 994 — EXISTING 1' CONTOUR
- EXISTING PROPERTY LINE
- EXISTING DRAINAGE/UTILITY EASEMENT
- ST — EXISTING STORM SEWER
- SAN — EXISTING SANITARY SEWER
- GAS — EXISTING GAS LINE
- W — EXISTING WATERMAIN
- X — X — EXISTING FENCE
- EXISTING FOOTPATHS
- CONSTRUCTION LIMITS
- ST — STORM SEWER REMOVAL
- AREA OF PAVEMENT SAWCUT AND REMOVAL
- CURB AND GUTTER REMOVAL
- EXISTING DECIDUOUS TREE (PROTECT)
- EXISTING DECIDUOUS TREE (REMOVE)
- EXISTING DECIDUOUS TREE (SALVAGE AND REINSTALL)
- EXISTING CONIFEROUS TREE (PROTECT)
- EXISTING CONIFEROUS TREE (REMOVE)
- EXISTING CONIFEROUS TREE (SALVAGE AND REINSTALL)

REMOVAL NOTES:

1. LOCATE AND FIELD VERIFY ALL EXISTING UTILITIES PRIOR TO WORK.
2. PROTECT ALL EXISTING ROADS, PARKING LOTS, TRAILS, FENCES, SIGNS, OR SIMILAR NOT CALLED OUT FOR REMOVAL DURING CONSTRUCTION.
3. CONTRACTOR SHALL TAKE PRECAUTIONS TO MINIMIZE THE TRANSFER OF AQUATIC AND TERRESTRIAL INVASIVE SPECIES TO THE MAXIMUM EXTENT POSSIBLE.
4. PROTECT TREES DURING CONSTRUCTION, UNLESS IDENTIFIED FOR REMOVAL PLAN OR DIRECTED BY OWNER.

1 PLAN: EXISTING CONDITIONS AND REMOVALS

0 30 60
SCALE IN FEET

50% DESIGN
NOT FOR CONSTRUCTION

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
-	-	-	-	— — -	

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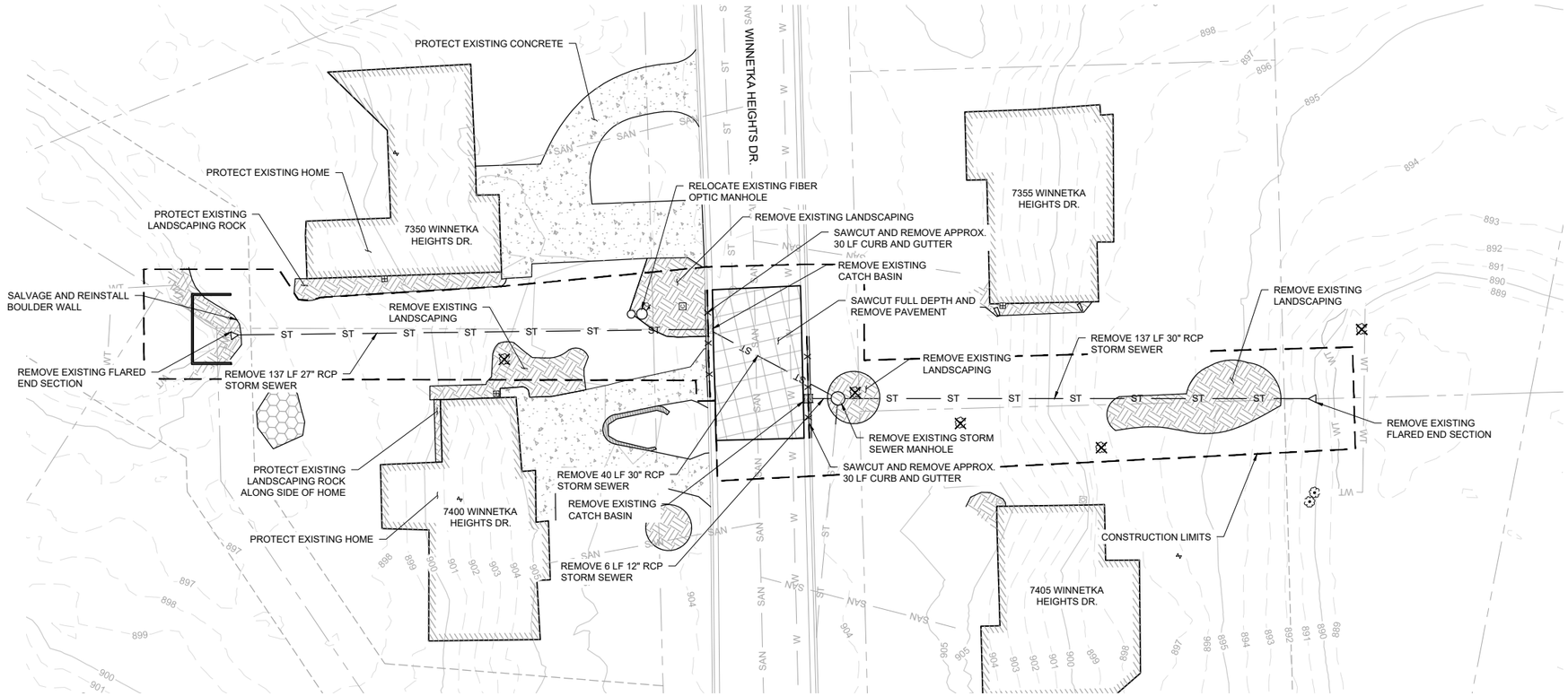
Scale	AS SHOWN
Date	01/11/2022
Drawn	EPF
Checked	PEB
Designed	BARR
Approved	JAK2

city of golden valley

SEA SCHOOL & WILDWOOD PARK
FLOOD MITIGATION PROJECT

EXISTING CONDITIONS AND REMOVALS
SEA SCHOOL & WILDWOOD PARK

BARR PROJECT No.	23/27-1900.00
CLIENT PROJECT No.	20-27
DWG. No.	C-01
REV. No.	A



1 PLAN: EXISTING CONDITIONS AND REMOVALS

0 20 40
SCALE

SYMBOL AND PATTERN LEGEND

- 995 — EXISTING 5' CONTOUR
- 994 — EXISTING 1' CONTOUR
- EXISTING PROPERTY LINE
- EXISTING DRAINAGE/UTILITY EASEMENT
- WT — EXISTING WETLAND DELINEATION
- SS — EXISTING STORM SEWER
- SAN — EXISTING SANITARY SEWER
- GAS — EXISTING GAS LINE
- W — EXISTING WATERMAIN
- X — X — EXISTING FENCE
- CONSTRUCTION LIMITS
- AREA OF PAVEMENT SAWCUT AND REMOVAL
- CURB AND GUTTER REMOVAL
- EXISTING DECIDUOUS TREE (PROTECT)
- EXISTING DECIDUOUS TREE (REMOVE)
- EXISTING CONIFEROUS TREE (PROTECT)
- EXISTING CONIFEROUS TREE (REMOVE)

50% DESIGN
NOT FOR CONSTRUCTION

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
-	-	-	-	— —	-

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CONSTRUCTION	—	—	—	—	—	—	—	—
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Date	01/11/2022
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Checked	PEB
Designed	BARR
Approved	JAK2

city of golden valley

SEA SCHOOL & WILDWOOD PARK
FLOOD MITIGATION PROJECT

EXISTING CONDITIONS AND REMOVALS
DECOLA POND D OUTLET

BARR PROJECT No.	
23/27-1900.00	
CLIENT PROJECT No.	
20-27	
DWG. No.	REV. No.
C-02	A

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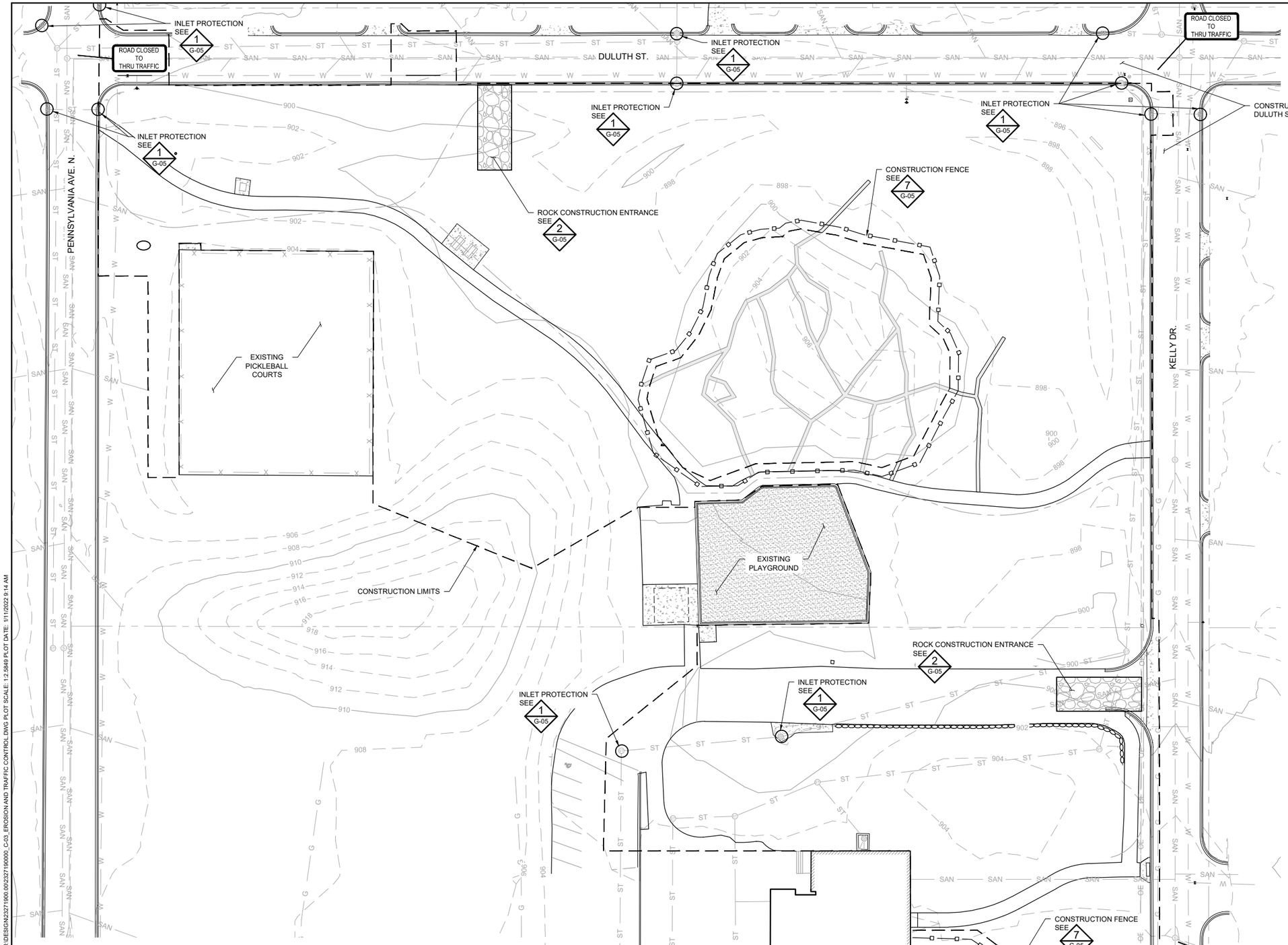

1 PLAN: EROSION, SEDIMENT, AND TRAFFIC CONTROL

0 30 60
SCALE IN FEET

SYMBOL AND PATTERN LEGEND

- 996 — EXISTING 10' CONTOUR
- 994 — EXISTING 2' CONTOUR
- EXISTING PROPERTY LINE
- EXISTING DRAINAGE/UTILITY EASEMENT
- SS — EXISTING STORM SEWER
- SAN — EXISTING SANITARY SEWER
- GAS — EXISTING GAS LINE
- W — EXISTING WATERMAIN
- X — X — EXISTING FENCE
- CONSTRUCTION LIMITS
- SILT FENCE
- SL — SEDIMENT CONTROL LOG
- CONSTRUCTION FENCE

EROSION & SEDIMENT CONTROL NOTES:

1. INSTALL PERIMETER EROSION CONTROL AT THE LOCATIONS SHOWN ON THE PLANS PRIOR TO THE COMMENCEMENT OF ANY LAND DISTURBANCE OR CONSTRUCTION ACTIVITIES.
2. BEFORE BEGINNING CONSTRUCTION, INSTALL A TEMPORARY ROCK CONSTRUCTION ENTRANCE AT EACH POINT WHERE VEHICLES EXIT THE CONSTRUCTION SITE PRIOR TO COMMENCING ANY CLEARING/GRUBBING, REMOVAL, OR EARTHWORK ACTIVITIES. USE 2 INCH OR GREATER DIAMETER ROCK IN A LAYER AT LEAST 6 INCHES THICK ACROSS THE ENTIRE WIDTH OF THE ENTRANCE. EXTEND THE ROCK ENTRANCE AT LEAST 50 FEET INTO THE CONSTRUCTION ZONE USING A GEO-TEXTILE FABRIC BENEATH THE AGGREGATE TO PREVENT MIGRATION OF SOIL INTO THE ROCK FROM BELOW.
3. REMOVE ALL SOILS AND SEDIMENTS TRACKED OR OTHERWISE DEPOSITED ONTO PUBLIC AND PRIVATE PAVEMENT AREAS. AT A MINIMUM REMOVAL SHALL BE ONCE DAILY. SWEEPING SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE CONSTRUCTION AND DONE IN A MANNER TO PREVENT DUST BEING BLOWN TO ADJACENT PROPERTIES.
4. INSTALL INLET PROTECTION AT ALL CATCH BASIN INLETS WHICH RECEIVE RUNOFF FROM THE DISTURBED AREAS. CONTRACTOR SHALL CLEAN, REMOVE SEDIMENT, OR REPLACE STORM DRAIN INLET PROTECTION DEVICES ON A ROUTINE BASIS SUCH THAT THE DEVICES ARE FULLY FUNCTIONAL FOR THE NEXT RAIN EVENT. SEDIMENT DEPOSITED IN AND/OR PLUGGING DRAINAGE SYSTEMS IS THE RESPONSIBILITY OF THE CONTRACTOR. HAY BALES OR FILTER FABRIC WRAPPED GRATES ARE NOT ALLOWED FOR INLET PROTECTION.
5. LOCATE SOIL OR DIRT STOCKPILES NO LESS THAN 25 FEET FROM ANY DRAINAGE CHANNEL. IF REMAINING FOR MORE THAN SEVEN DAYS, STABILIZE THE STOCKPILES BY MULCHING, VEGETATIVE COVER, TARPS, OR OTHER MEANS. CONTROL EROSION FROM ALL STOCKPILES BY PLACING SILT BARRIERS AROUND THE PILES.
6. MAINTAIN ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES IN PLACE UNTIL THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED. INSPECT TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES ON A DAILY BASIS AND REPLACE DETERIORATED, DAMAGED, OR ROTTED EROSION CONTROL DEVICES IMMEDIATELY.
7. TEMPORARILY OR PERMANENTLY STABILIZE ALL CONSTRUCTION AREAS WHICH HAVE UNDERGONE FINAL GRADING, AND ALL AREAS IN WHICH GRADING OR SITE BUILDING CONSTRUCTION OPERATIONS ARE NOT ACTIVELY UNDERWAY AGAINST EROSION DUE TO RAIN, WIND AND RUNNING WATER. STABILIZATION TO BEGIN IMMEDIATELY AND BE COMPLETED WITHIN 14 DAYS. USE SEED AND MULCH, EROSION CONTROL MATTIING, AND/OR SODDING AND STAKING IN GREEN SPACE AREAS. REMOVE ALL TEMPORARY SYNTHETIC, STRUCTURAL, NON-BIODEGRADABLE EROSION AND SEDIMENT CONTROL DEVICES AFTER THE SITE HAS UNDERGONE FINAL STABILIZATION WITH PERMANENT VEGETATION ESTABLISHMENT. FINAL STABILIZATION FOR PURPOSES OF THIS REMOVAL IS 70% ESTABLISHED COVER OVER DENUDED AREA.
8. CHANGES TO APPROVED EROSION CONTROL PLAN MUST BE APPROVED BY THE ENGINEER PRIOR TO IMPLEMENTATION. CONTRACTOR TO PROVIDE INSTALLATION AND DETAILS FOR ALL PROPOSED ALTERNATE TYPE DEVICES.
9. IF DEWATERING OR PUMPING OF WATER IS NECESSARY, THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY NECESSARY PERMITS AND/OR APPROVALS PRIOR TO DISCHARGE OF ANY WATER FROM THE SITE. IF THE DISCHARGE FROM THE DEWATERING OR PUMPING PROCESS IS TURBID OR CONTAINS SEDIMENT LADEN WATER, IT MUST BE TREATED THROUGH THE USE OF SEDIMENT TRAPS, VEGETATIVE FILTER STRIPS, OR OTHER SEDIMENT REDUCING MEASURES SUCH THAT THE DISCHARGE IS NOT VISIBLY DIFFERENT FROM THE RECEIVING WATER. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED AT THE DISCHARGE POINT TO PREVENT SCOUR EROSION.
10. PLACE EROSION CONTROL BLANKET ON ALL DISTURBED SLOPES 4H:1V AND STEEPER. EROSION CONTROL BLANKET MUST BE 2-SIDED WITH NATURAL NETTING, MEETING MnDOT SPECIFICATIONS.

TRAFFIC CONTROL NOTES:

1. ALL TRAFFIC CONTROL DEVICES AND SIGNAGE SHALL CONFORM TO THE MN MUTCD, INCLUDING FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.
2. SIGNS NOT MOUNTED ON BARRICADES SHALL BE MOUNTED ON A TEMPORARY SUPPORT.
3. THE NUMBER OF BARRICADES REQUIRED AND PLACEMENT WILL BE SUBJECT TO APPROVAL BY THE CITY.
4. ALL TRAFFIC CONTROL SIGNS SHALL BE PLACED AND MAINTAINED BY CONTRACTOR.
5. IF A FULL ROAD CLOSURE IS NECESSARY TO COMPLETE WORK, CONTRACTOR WILL NEED TO PROVIDE A TRAFFIC CONTROL PLAN INCLUDING A SCHEDULEDATES FOR ROAD CLOSURE ACTIVITIES AND DETOUR ROUTES, AND AND EXTRA SIGNAGE TO BE REVIEWED AND APPROVED BY CITY. SIGNAGE MUST MEET MUTCD REQUIREMENTS. CONTRACTOR SHALL COORDINATED WITH CITY REGARDING COORDINATION WITH RESIDENTS/NOTIFICATIONS. ADDITIONALLY, CONTRACTOR SHALL COORDINATED WITH MnDOT/COUNTY IF THEY ARE PROPOSING SIGNS IN THEIR RIGHT OF WAY.

50% DESIGN
NOT FOR CONSTRUCTION

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
-	-	-	-	— — —	-

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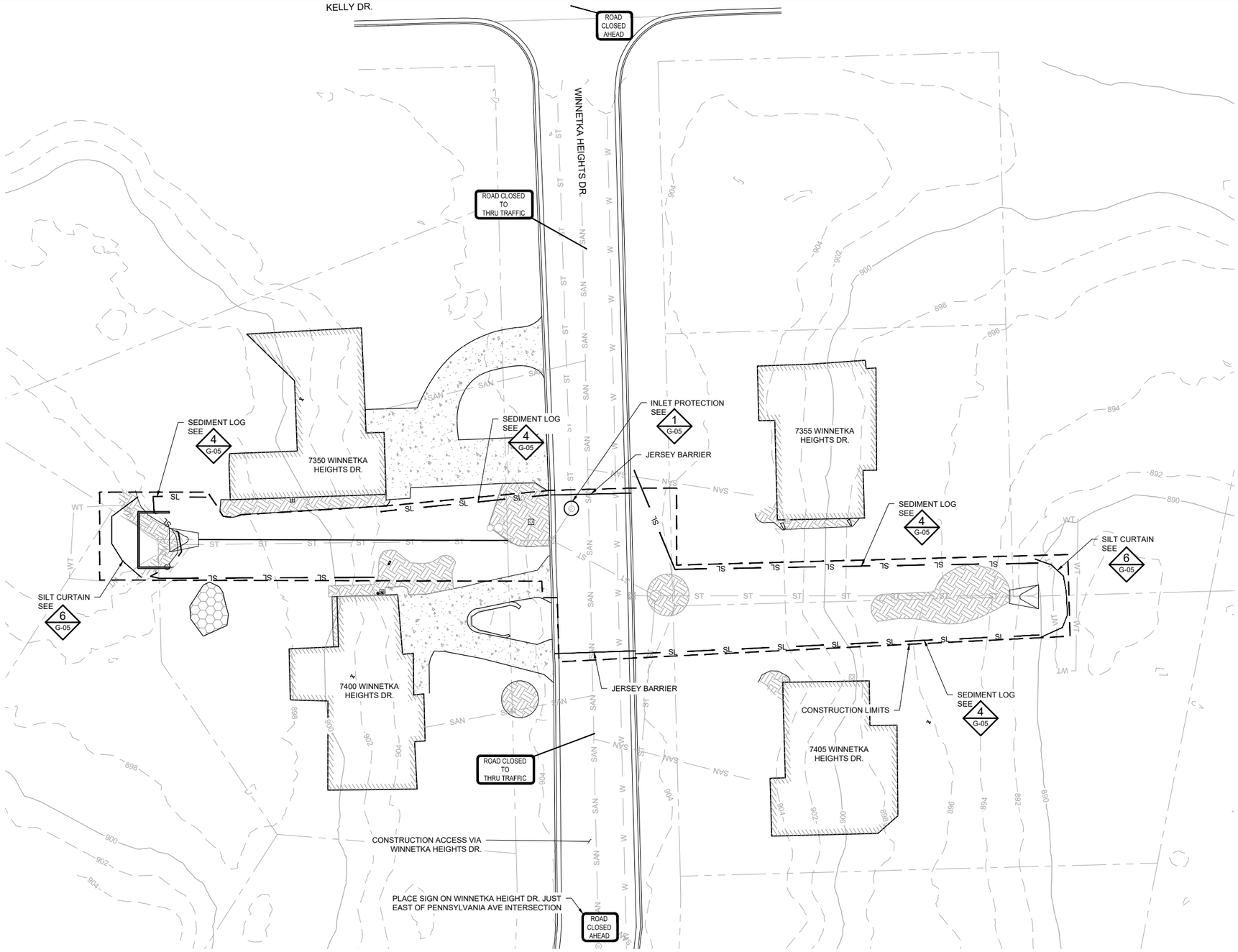
Scale	AS SHOWN
Date	01/11/22
Drawn	EPF
Checked	PEB
Designed	BARR
Approved	JAK2

city of golden valley

SEA SCHOOL & WILDWOOD PARK
FLOOD MITIGATION PROJECT

EROSION, SEDIMENT, AND TRAFFIC CONTROL
SEA SCHOOL & WILDWOOD PARK

BARR PROJECT No.	23/27-1900.00
CLIENT PROJECT No.	20-27
DWG. No.	C-03
REV. No.	A



1 PLAN: EROSION, SEDIMENT, AND TRAFFIC CONTROL

0 20 40
SCALE IN FEET

SYMBOL AND PATTERN LEGEND

- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- EXISTING PROPERTY LINE
- EXISTING DRAINAGE/UTILITY EASEMENT
- EXISTING WETLAND DELINEATION
- EXISTING STORM SEWER
- EXISTING SANITARY SEWER
- EXISTING GAS LINE
- EXISTING WATERMAIN
- EXISTING FENCE
- CONSTRUCTION LIMITS
- SILT FENCE
- SEDIMENT CONTROL LOG

EROSION & SEDIMENT CONTROL NOTES:

1. INSTALL PERIMETER EROSION CONTROL AT THE LOCATIONS SHOWN ON THE PLANS PRIOR TO THE COMMENCEMENT OF ANY LAND DISTURBANCE OR CONSTRUCTION ACTIVITIES.
2. BEFORE BEGINNING CONSTRUCTION, INSTALL A TEMPORARY ROCK CONSTRUCTION ENTRANCE AT EACH POINT WHERE VEHICLES EXIT THE CONSTRUCTION SITE PRIOR TO COMMENCING ANY CLEARING/GRUBBING, REMOVAL, OR EARTHWORK ACTIVITIES. USE 2 INCH OR GREATER DIAMETER ROCK IN A LAYER AT LEAST 6 INCHES THICK ACROSS THE ENTIRE WIDTH OF THE ENTRANCE. EXTEND THE ROCK ENTRANCE AT LEAST 50 FEET INTO THE CONSTRUCTION ZONE USING A GEO-TEXTILE FABRIC BENEATH THE AGGREGATE TO PREVENT MIGRATION OF SOIL INTO THE ROCK FROM BELOW.
3. REMOVE ALL SOILS AND SEDIMENTS TRACKED OR OTHERWISE DEPOSITED ONTO PUBLIC AND PRIVATE PAVEMENT AREAS. AT A MINIMUM REMOVAL SHALL BE ONCE DAILY. SWEEPING SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE CONSTRUCTION AND DONE IN A MANNER TO PREVENT DUST BEING BLOWN TO ADJACENT PROPERTIES.
4. INSTALL INLET PROTECTION AT ALL CATCH BASIN INLETS WHICH RECEIVE RUNOFF FROM THE DISTURBED AREAS. CONTRACTOR SHALL CLEAN, REMOVE SEDIMENT, OR REPLACE STORM DRAIN INLET PROTECTION DEVICES ON A ROUTINE BASIS SUCH THAT THE DEVICES ARE FULLY FUNCTIONAL FOR THE NEXT RAIN EVENT. SEDIMENT DEPOSITED IN AND/OR PLUGGING DRAINAGE SYSTEMS IS THE RESPONSIBILITY OF THE CONTRACTOR. HAY BALES OR FILTER FABRIC WRAPPED GRATES ARE NOT ALLOWED FOR INLET PROTECTION.
5. LOCATE SOIL OR DIRT STOCKPILES NO LESS THAN 25 FEET FROM ANY DRAINAGE CHANNEL. IF REMAINING FOR MORE THAN SEVEN DAYS, STABILIZE THE STOCKPILES BY MULCHING, VEGETATIVE COVER, TARPS, OR OTHER MEANS. CONTROL EROSION FROM ALL STOCKPILES BY PLACING SILT BARRIERS AROUND THE PILES.
6. MAINTAIN ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES IN PLACE UNTIL THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED. INSPECT TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES ON A DAILY BASIS AND REPLACE DETERIORATED, DAMAGED, OR ROTTED EROSION CONTROL DEVICES IMMEDIATELY.
7. TEMPORARILY OR PERMANENTLY STABILIZE ALL CONSTRUCTION AREAS WHICH HAVE UNDERGONE FINAL GRADING, AND ALL AREAS IN WHICH GRADING OR SITE BUILDING CONSTRUCTION OPERATIONS ARE NOT ACTIVELY UNDERWAY AGAINST EROSION DUE TO RAIN, WIND AND RUNNING WATER. STABILIZATION TO BEGIN IMMEDIATELY AND BE COMPLETED WITHIN 14 DAYS. USE SEED AND MULCH, EROSION CONTROL MATTIING, AND/OR SODDING AND STAKING IN GREEN SPACE AREAS. REMOVE ALL TEMPORARY SYNTHETIC, STRUCTURAL, NON-BIODEGRADABLE EROSION AND SEDIMENT CONTROL DEVICES AFTER THE SITE HAS UNDERGONE FINAL STABILIZATION WITH PERMANENT VEGETATION ESTABLISHMENT. FINAL STABILIZATION FOR PURPOSES OF THIS REMOVAL IS 70% ESTABLISHED COVER OVER DENUDED AREA.
8. CHANGES TO APPROVED EROSION CONTROL PLAN MUST BE APPROVED BY THE ENGINEER PRIOR TO IMPLEMENTATION. CONTRACTOR TO PROVIDE INSTALLATION AND DETAILS FOR ALL PROPOSED ALTERNATE TYPE DEVICES.
9. IF DEWATERING OR PUMPING OF WATER IS NECESSARY, THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY NECESSARY PERMITS AND/OR APPROVALS PRIOR TO DISCHARGE OF ANY WATER FROM THE SITE. IF THE DISCHARGE FROM THE DEWATERING OR PUMPING PROCESS IS TURBID OR CONTAINS SEDIMENT LADEN WATER, IT MUST BE TREATED THROUGH THE USE OF SEDIMENT TRAPS, VEGETATIVE FILTER STRIPS, OR OTHER SEDIMENT REDUCING MEASURES SUCH THAT THE DISCHARGE IS NOT VISIBLY DIFFERENT FROM THE RECEIVING WATER. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED AT THE DISCHARGE POINT TO PREVENT SCOUR EROSION.
10. PLACE EROSION CONTROL BLANKET ON ALL DISTURBED SLOPES 4H:1V AND STEEPER. EROSION CONTROL BLANKET MUST BE 2-SIDED WITH NATURAL NETTING, MEETING MnDOT SPECIFICATIONS.

TRAFFIC CONTROL NOTES:

1. ALL TRAFFIC CONTROL DEVICES AND SIGNAGE SHALL CONFORM TO THE MN MUTCD, INCLUDING FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.
2. SIGNS NOT MOUNTED ON BARRICADES SHALL BE MOUNTED ON A TEMPORARY SUPPORT.
3. THE NUMBER OF BARRICADES REQUIRED AND PLACEMENT WILL BE SUBJECT TO APPROVAL BY THE CITY.
4. ALL TRAFFIC CONTROL SIGNS SHALL BE PLACED AND MAINTAINED BY CONTRACTOR.
5. IF A FULL ROAD CLOSURE IS NECESSARY TO COMPLETE WORK, CONTRACTOR WILL NEED TO PROVIDE A TRAFFIC CONTROL PLAN INCLUDING A SCHEDULE/DATES FOR ROAD CLOSURE ACTIVITIES AND DETOUR ROUTES, AND AND EXTRA SIGNAGE TO BE REVIEWED AND APPROVED BY CITY. SIGNAGE MUST MEET MUTCD REQUIREMENTS. CONTRACTOR SHALL COORDINATED WITH CITY REGARDING COORDINATION WITH RESIDENTS/NOTIFICATIONS. ADDITIONALLY, CONTRACTOR SHALL COORDINATED WITH MnDOT/COUNTY IF THEY ARE PROPOSING SIGNS IN THEIR RIGHT OF WAY.

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NOT FOR CONSTRUCTION

NO.	BY	CHK	APP.	DATE	REVISION DESCRIPTION
-	-	-	-	-	-

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PRINTED NAME _____

SIGNATURE _____

DATE _____ LICENSE # _____

		A	B	C	0	1	2	3
CLIENT	01/11/22							
BID								
CONSTRUCTION								
RECORD								
RELEASED TO/FOR		DATE RELEASED						

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Suite 200
MINNEAPOLIS, MN 55435
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Fax: (952) 832-2601
www.barr.com

Scale	AS SHOWN
Date	01/11/22
Drawn	EPF
Checked	PEB
Designed	BARR
Approved	JAK2

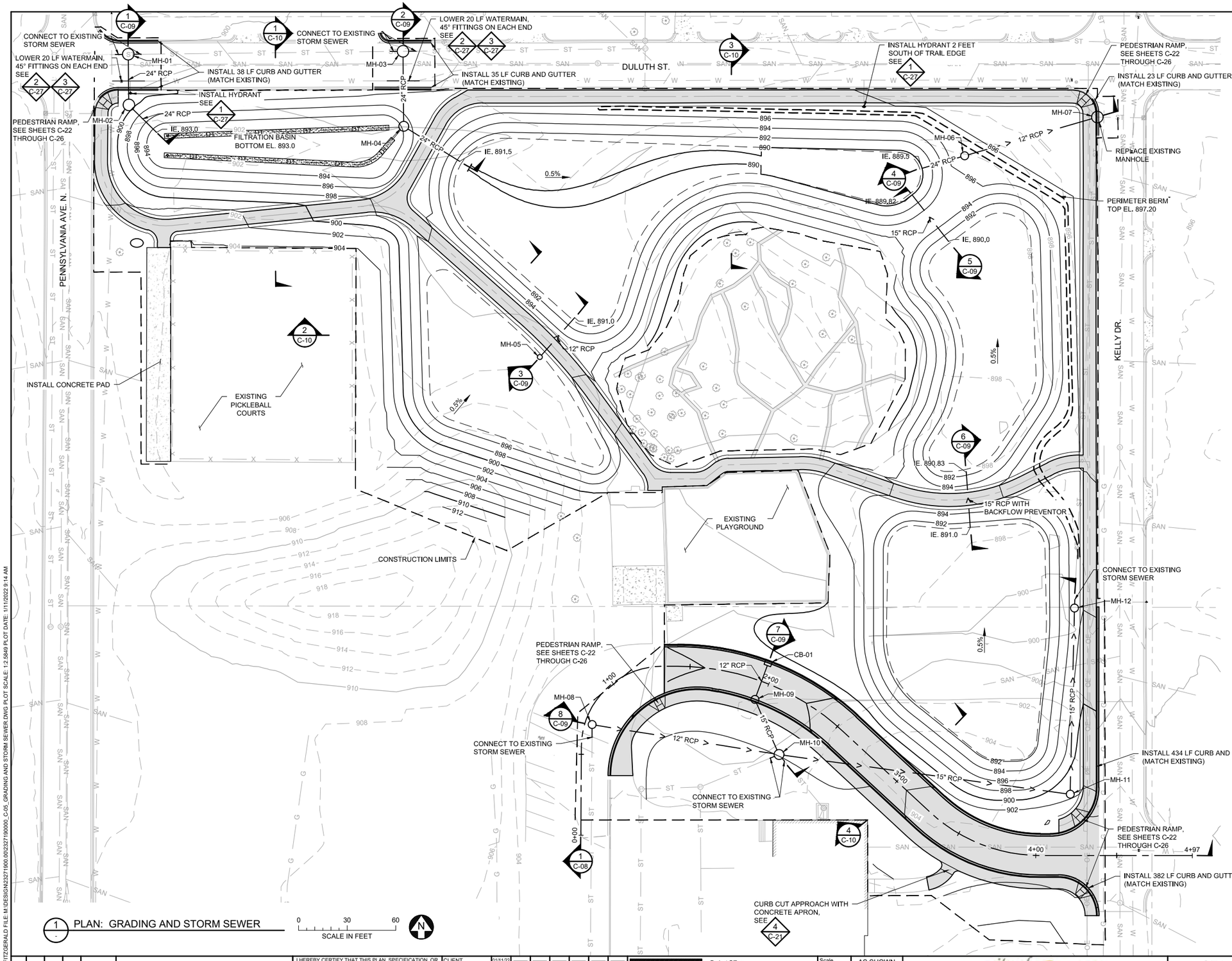
city of golden valley

SEA SCHOOL / WILDWOOD PARK
FLOOD MITIGATION PROJECT

EROSION, SEDIMENT, AND TRAFFIC CONTROL
DECOLA POND D OUTLET

BARR PROJECT No. 23/27-1900.00
CLIENT PROJECT No. 20-27
DWG. No. C-04
REV. No. A

CADD USER: ERIC P. FITZGERALD FILE: M:\DESIGN\23271900.00\23271900_C-03_EROSION AND TRAFFIC CONTROL.DWG PLOT SCALE: 1:2.5849 PLOT DATE: 1/12/2022 2:50 PM



SYMBOL AND PATTERN LEGEND

- 996 — EXISTING 10' CONTOUR
- 994 — EXISTING 2' CONTOUR
- EXISTING PROPERTY LINE
- ST — EXISTING STORM SEWER
- SAN — EXISTING SANITARY SEWER
- GAS — EXISTING GAS LINE
- W — EXISTING WATERMAIN
- X — X — EXISTING FENCE
- CONSTRUCTION LIMITS
- 996 — PROPOSED 10' CONTOUR
- 994 — PROPOSED 2' CONTOUR
- > — PROPOSED STORM SEWER

NOTES:

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2. ALL EXISTING ROADS, PARKING LOTS, TRAILS, FENCES, SIGNS, OR SIMILAR SHALL BE PROTECTED DURING CONSTRUCTION. CONTRACTOR RESPONSIBLE TO COORDINATE SURVEYS WITH OWNER TO DOCUMENT PRE-CONSTRUCTION EXISTING CONDITION ISSUES.
3. CONSTRUCTION LIMITS AS SHOWN ARE APPROXIMATE FINAL CONSTRUCTION LIMITS TO BE COORDINATED WITH THE OWNER AND STAKED IN THE FIELD.
4. SOIL SURFACES COMPACTED DURING CONSTRUCTION MUST BE DECOMPACTED TO A SOIL COMPACTING PRESSURE OF LESS THAN 1400 KILOPASCALS OR 200 POUNDS PER SQUARE INCH IN THE UPPER 1 INCH OF SOIL.
5. SEE SHEET L-01 FOR PLANTING SCHEDULE AND SITE RESTORATION DETAILS.

1 - PLAN: GRADING AND STORM SEWER

0 30 60
SCALE IN FEET

50% DESIGN
NOT FOR CONSTRUCTION

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
-	-	-	-	— — -	

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CONSTRUCTION								
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RELEASED TO/FOR	A	B	C	0	1	2	3	
	DATE RELEASED							

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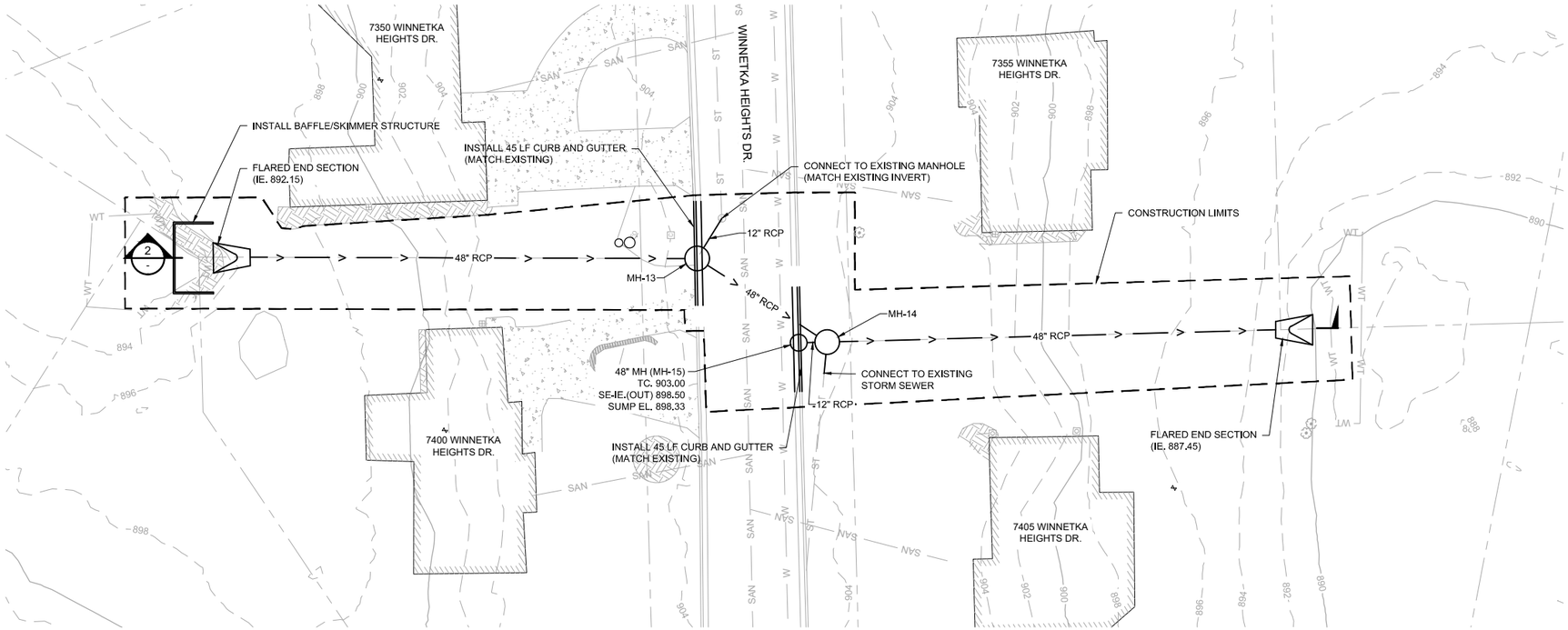
Scale	AS SHOWN
Date	01/11/2022
Drawn	EPF
Checked	PEB
Designed	BARR
Approved	JAK2

city of golden valley

SEA SCHOOL & WILDWOOD PARK
FLOOD MITIGATION PROJECT

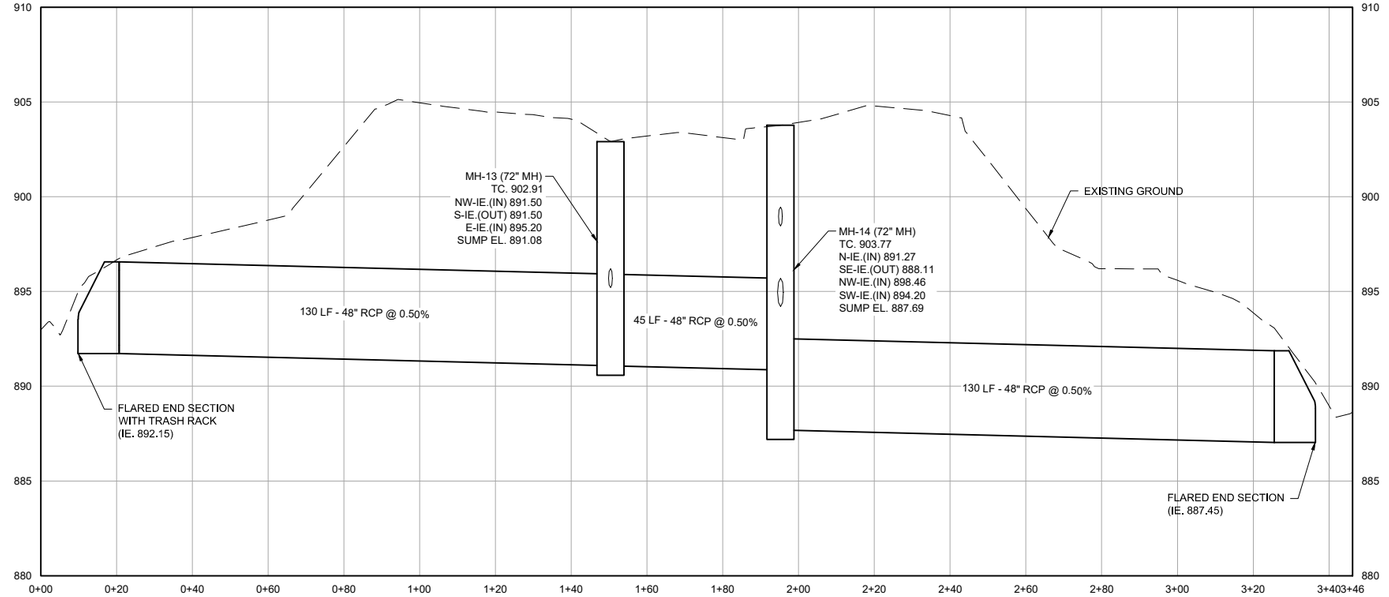
PROPOSED GRADING AND STORM SEWER
SEA SCHOOL & WILDWOOD PARK

BARR PROJECT No.	23/27-1900.00
CLIENT PROJECT No.	20-27
DWG. No.	C-05
REV. No.	A



1 PLAN: GRADING AND STORM SEWER

0 20 40 SCALE



2 PROFILE: DECOLA POND D OUTLET

0 20 40 HORIZONTAL SCALE IN FEET

0 5 10 VERTICAL SCALE IN FEET

SYMBOL AND PATTERN LEGEND

- 996 — EXISTING 10' CONTOUR
- 994 — EXISTING 2' CONTOUR
- EXISTING PROPERTY LINE
- WT — EXISTING WETLAND DELINEATION
- SS — EXISTING STORM SEWER
- SAN — EXISTING SANITARY SEWER
- GAS — EXISTING GAS LINE
- W — EXISTING WATERMAIN
- X — X — EXISTING FENCE
- CONSTRUCTION LIMITS
- 996 — PROPOSED 10' CONTOUR
- 994 — PROPOSED 2' CONTOUR
- > — PROPOSED STORM SEWER

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5. SEE SHEET L-02 FOR PLANTING SCHEDULE AND SITE RESTORATION DETAILS.

50% DESIGN
NOT FOR CONSTRUCTION

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CONSTRUCTION							
RECORD							
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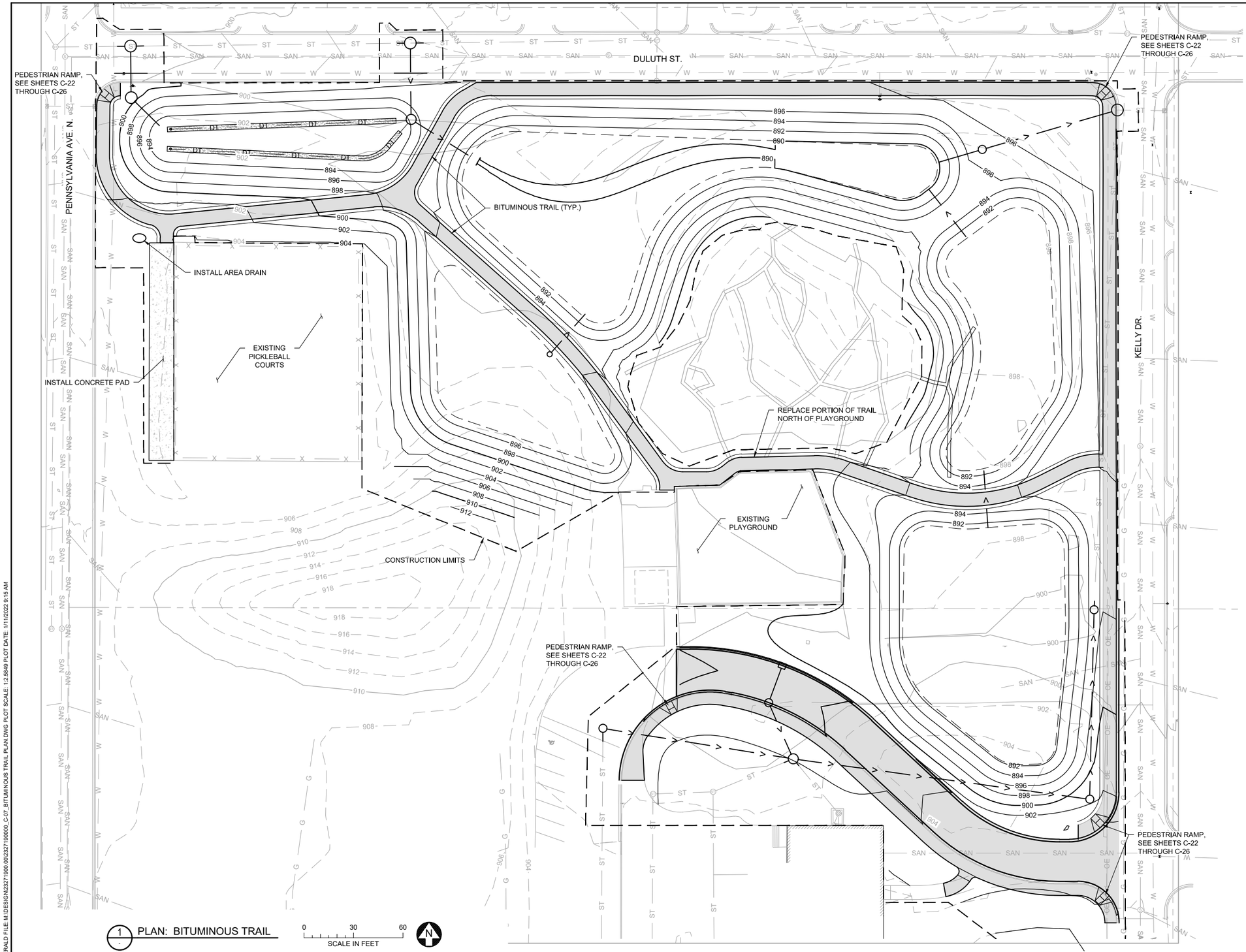
Approved	JAK2

city of golden valley

SEA SCHOOL & WILDWOOD PARK
FLOOD MITIGATION PROJECT

PROPOSED GRADING AND STORM SEWER
DECOLA POND D OUTLET

BARR PROJECT No.	
23/27-1900.00	
CLIENT PROJECT No.	
20-27	
DWG. No.	REV. No.
C-06	A



SYMBOL AND PATTERN LEGEND

- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- EXISTING PROPERTY LINE
- EXISTING STORM SEWER
- EXISTING SANITARY SEWER
- EXISTING GAS LINE
- EXISTING WATERMAIN
- EXISTING FENCE
- CONSTRUCTION LIMITS
- PROPOSED 10' CONTOUR
- PROPOSED 2' CONTOUR
- PROPOSED STORM SEWER
- PROPOSED BITUMINOUS TRAIL
- PROPOSED CONCRETE PAD
- PROPOSED PEDESTRIAN RAMP

NOTES:

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5. SEE SHEETS L-01, L-02, AND L-03 FOR PLANTING SCHEDULE AND SITE RESTORATION DETAILS.

1 / - PLAN: BITUMINOUS TRAIL

0 30 60
SCALE IN FEET

50% DESIGN
NOT FOR CONSTRUCTION

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
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CONSTRUCTION	—	—	—	—	—	—	—	—
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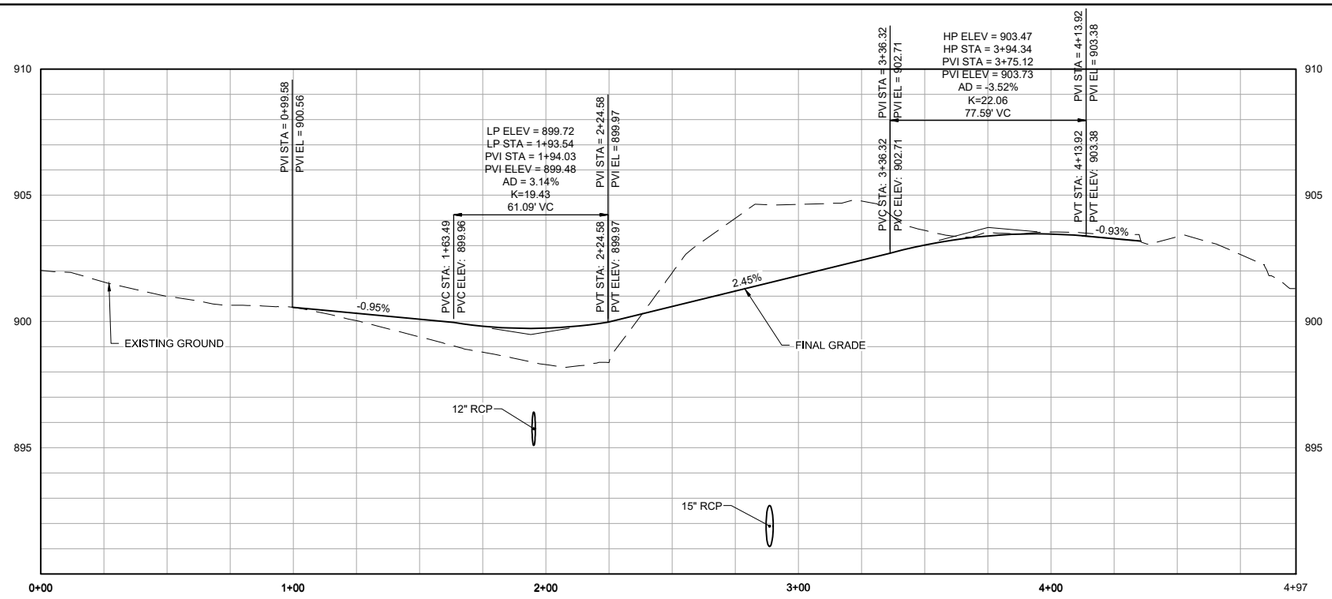
Designed	BARR
Approved	JAK2

city of golden valley

SEA SCHOOL & WILDWOOD PARK
FLOOD MITIGATION PROJECT

BITUMINOUS TRAIL PLAN
SEA SCHOOL & WILDWOOD PARK

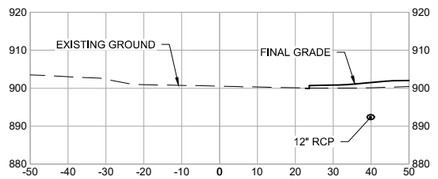
BARR PROJECT No.	23/27-1900.00
CLIENT PROJECT No.	20-27
DWG. No.	C-07
REV. No.	A



1 PROFILE: SCHOOL DRIVEWAY

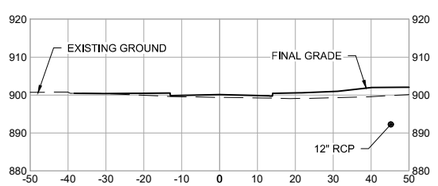
0 30 60
HORIZONTAL SCALE IN FEET

0 3 6
VERTICAL SCALE IN FEET



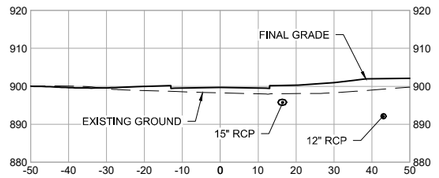
2 SECTION: SCHOOL DRIVEWAY (STA. 1+00)

0 20 40
SCALE IN FEET



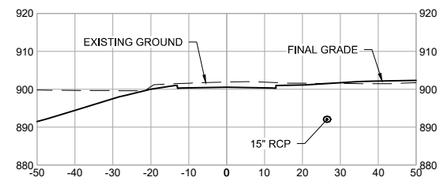
3 SECTION: SCHOOL DRIVEWAY (STA. 1+50)

0 20 40
SCALE IN FEET



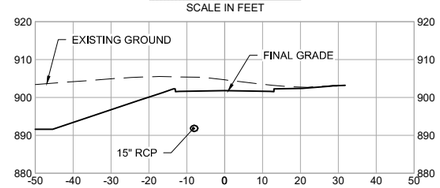
4 SECTION: SCHOOL DRIVEWAY (STA. 2+00)

0 20 40
SCALE IN FEET



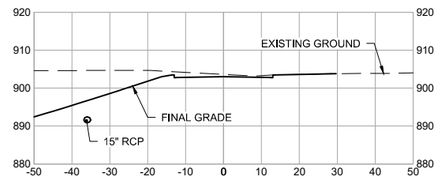
5 SECTION: SCHOOL DRIVEWAY (STA. 2+50)

0 20 40
SCALE IN FEET



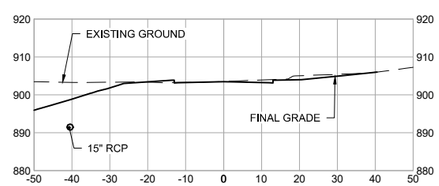
6 SECTION: SCHOOL DRIVEWAY (STA. 3+00)

0 20 40
SCALE IN FEET



7 SECTION: SCHOOL DRIVEWAY (STA. 3+50)

0 20 40
SCALE IN FEET



8 SECTION: SCHOOL DRIVEWAY (STA. 4+00)

0 20 40
SCALE IN FEET

50% DESIGN
NOT FOR CONSTRUCTION

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BID	—	—	—	—	—	—	—	—
CONSTRUCTION	—	—	—	—	—	—	—	—
RECORD	—	—	—	—	—	—	—	—
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DATE RELEASED	—	—	—	—	—	—	—	

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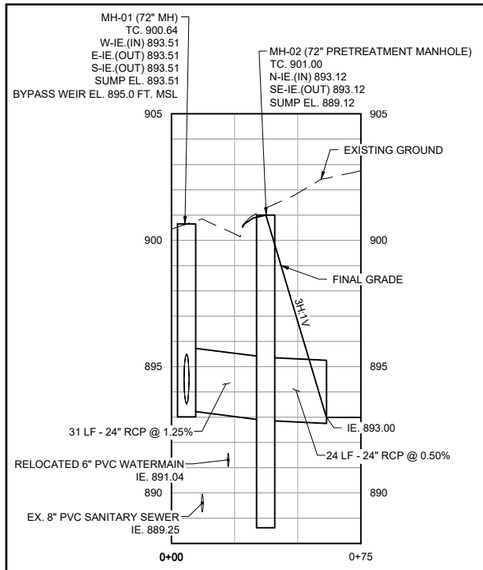
Approved	JAK2

city of golden valley

SEA SCHOOL & WILDWOOD PARK
FLOOD MITIGATION PROJECT

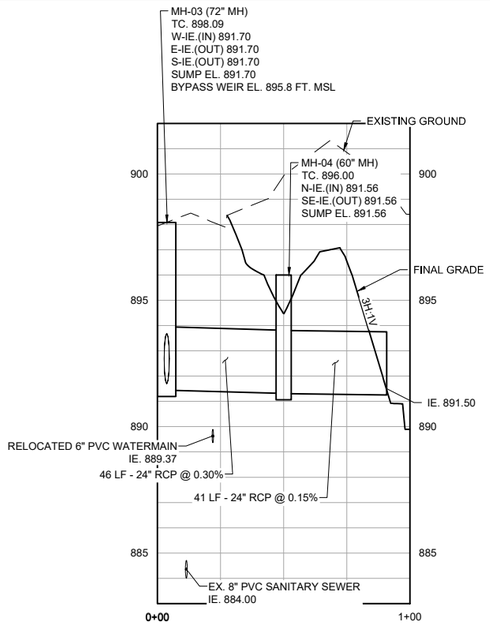
SCHOOL DRIVEWAY PROFILE AND SECTIONS

BARR PROJECT No.	23/27-1900.00
CLIENT PROJECT No.	20-27
DWG. No.	C-08
REV. No.	A



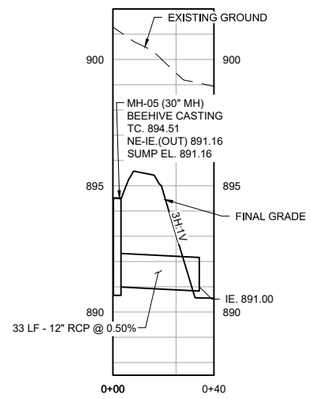
1 - PROFILE: STORM SEWER #1

0 30 60
HORIZONTAL SCALE IN FEET
0 3 6
VERTICAL SCALE IN FEET



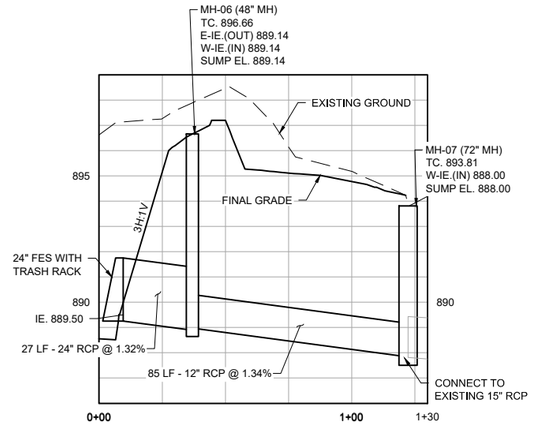
2 - PROFILE: STORM SEWER #2

0 30 60
HORIZONTAL SCALE IN FEET
0 3 6
VERTICAL SCALE IN FEET



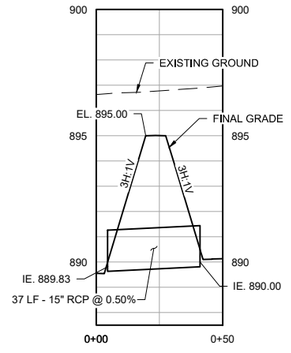
3 - PROFILE: STORM SEWER #3

0 30 60
HORIZONTAL SCALE IN FEET
0 3 6
VERTICAL SCALE IN FEET



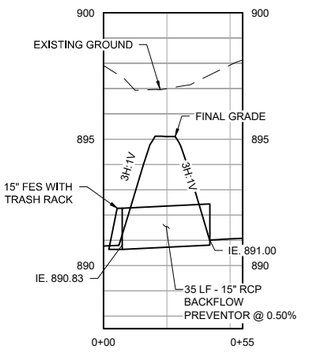
4 - PROFILE: STORM SEWER #4

0 30 60
HORIZONTAL SCALE IN FEET
0 3 6
VERTICAL SCALE IN FEET



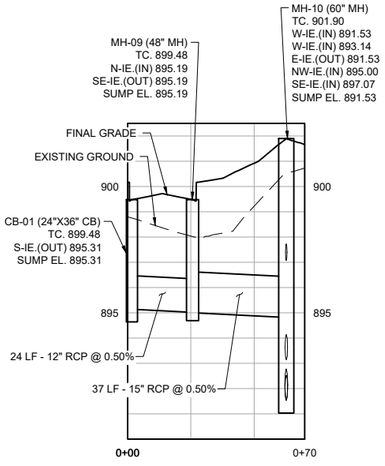
5 - PROFILE: STORM SEWER #5

0 30 60
HORIZONTAL SCALE IN FEET
0 3 6
VERTICAL SCALE IN FEET



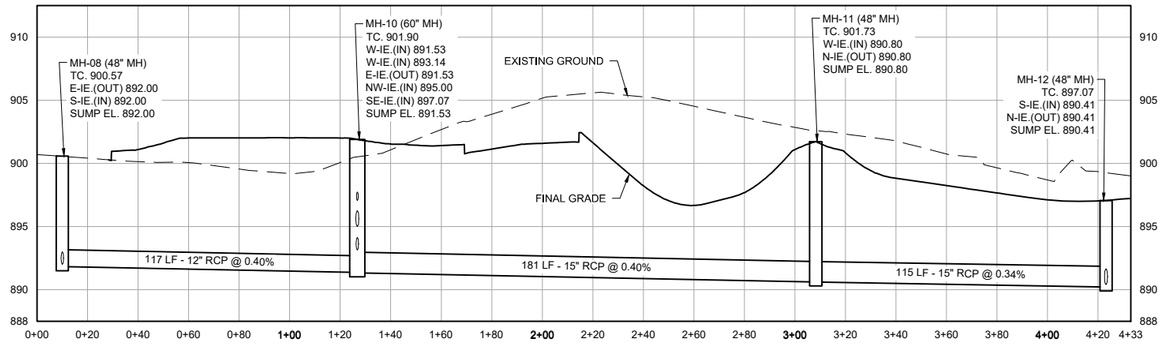
6 - PROFILE: STORM SEWER #6

0 30 60
HORIZONTAL SCALE IN FEET
0 3 6
VERTICAL SCALE IN FEET



7 - PROFILE: STORM SEWER #7

0 30 60
HORIZONTAL SCALE IN FEET
0 3 6
VERTICAL SCALE IN FEET



8 - PROFILE: STORM SEWER #1

0 30 60
HORIZONTAL SCALE IN FEET
0 3 6
VERTICAL SCALE IN FEET

50% DESIGN
NOT FOR CONSTRUCTION

NO.	BY	CHK	APP.	DATE	REVISION DESCRIPTION
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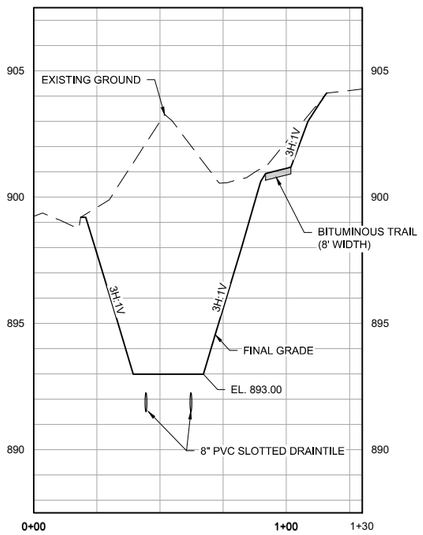
Scale	AS SHOWN
Date	01/11/2022
Drawn	EPF
Checked	PEB
Designed	BARR
Approved	JAK2

city of golden valley

SEA SCHOOL & WILDWOOD PARK
FLOOD MITIGATION PROJECT

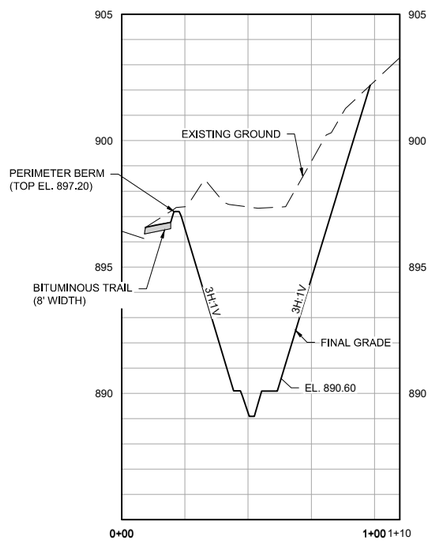
STORM SEWER PROFILES

BARR PROJECT No.	23/27-1900.00
CLIENT PROJECT No.	20-27
DWG. No.	C-09
REV. No.	A



1 - SECTION: FILTRATION BASIN (TYP.)

0 30 60
HORIZONTAL SCALE IN FEET
0 3 6
VERTICAL SCALE IN FEET



3 - SECTION: NORTH WET MEADOW (TYP.)

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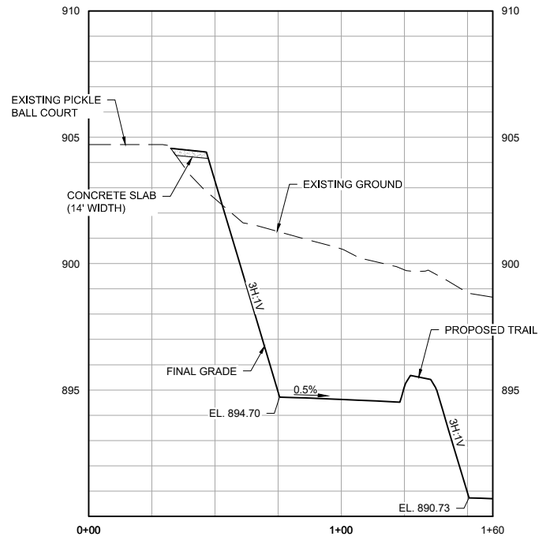
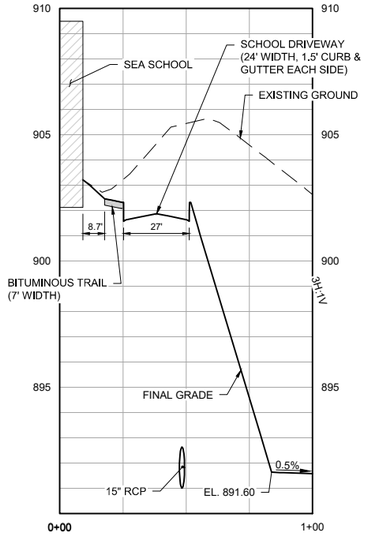
HORIZONTAL SCALE IN FEET
0 3 6
VERTICAL SCALE IN FEET



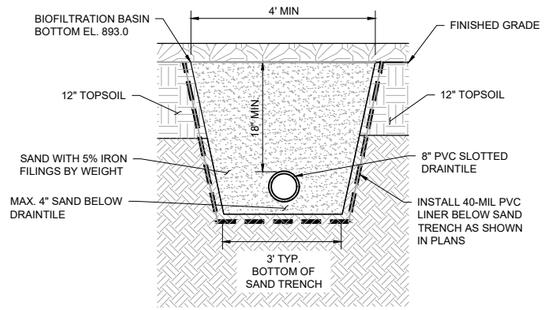
2 - SECTION: PICKLEBALL PAD TO TURF (TYP.)

0 30 60
HORIZONTAL SCALE IN FEET
0 3 6
VERTICAL SCALE IN FEET



4 - SECTION: SEA SCHOOL DRIVE TO PRAIRIE (TYP.)

0 30 60
HORIZONTAL SCALE IN FEET
0 3 6
VERTICAL SCALE IN FEET



1 - SECTION: RAINGARDEN (TYP.)
NOT TO SCALE

50% DESIGN
NOT FOR CONSTRUCTION

NO.	BY	CHK	APP.	DATE	REVISION DESCRIPTION
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city of golden valley

SEA SCHOOL & WILDWOOD PARK
FLOOD MITIGATION PROJECT

TYPICAL SECTIONS

BARR PROJECT No.	23/27-1900.00
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DWG. No.	C-10
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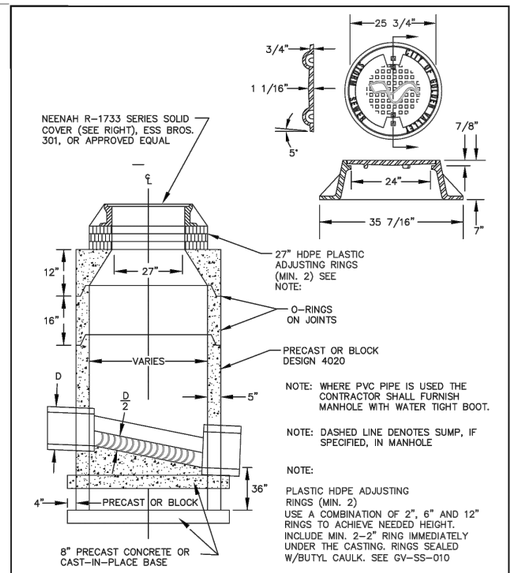
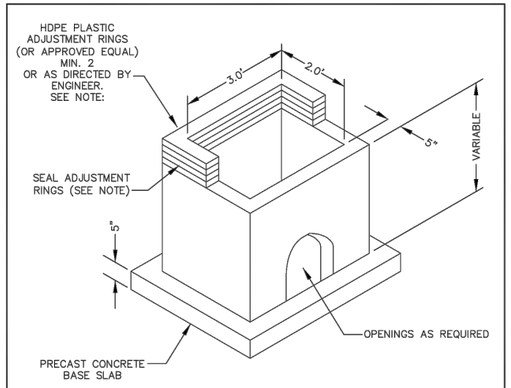


APPROVED JANUARY 1, 2018	STANDARD STORM SEWER MANHOLE DES 4020 WITH CASTING & COVER	Golden Valley
CITY ENGINEER REG 23110		GV-ST-010

1 DETAIL: STORM MANHOLE
NOT TO SCALE



NOTE:

CASTINGS SHALL BE NEENAH R3067-L WITH "L" TYPE GRATE.

IF MORE THAN 5 - 2" RINGS ARE NEEDED CONTRACTOR SHALL USE A COMBINATION OF 2", 6" AND 12" RINGS TO ACHIEVE NEEDED HEIGHT.

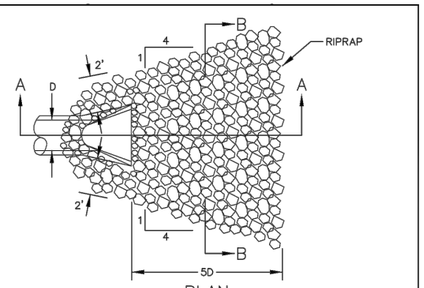
REINFORCING AND CONCRETE ARE TO BE IN ACCORDANCE WITH ASTM SPECIFICATION C478.

NOTE:

PLASTIC HDPE ADJUSTING RINGS (MIN. 2) USE A COMBINATION OF 2", 6" AND 12" RINGS TO ACHIEVE NEEDED HEIGHT. INCLUDE MIN. 2-2" RING IMMEDIATELY UNDER THE CASTING. RINGS SEALED W/BUTYL CAULK. SEE GV-SS-010

APPROVED JANUARY 1, 2018	CATCH BASIN DESIGN K	Golden Valley
CITY ENGINEER REG 23110		GV-ST-020

2 DETAIL: CATCH BASIN
NOT TO SCALE



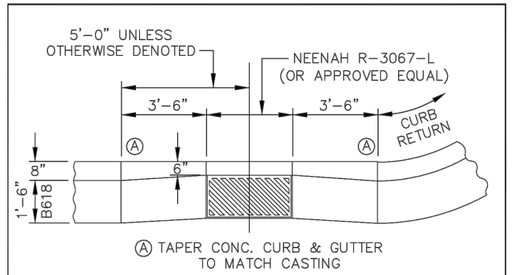
NOTE:

FOR EXACT RIPRAP QUANTITES REFER TO MNDOT STANDARD PLATES M3133B, 3133C, AND 3134C.

GRANULAR FILTER BLANKET OR GEOTEXTILE FABRIC, TYPE IV (MNDOT SPEC. 3733) REQUIRED UNDER RIPRAP.

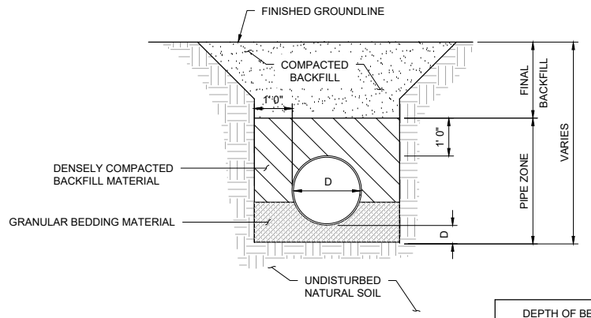
APPROVED DECEMBER 31, 2015	RIPRAP AT OUTLETS	Golden Valley
CITY ENGINEER REG 23110		GV-EC-070

3 DETAIL: RIPRAP AT OUTLETS
NOT TO SCALE



APPROVED JANUARY 1, 2018	CATCH BASIN INSTALLATION FOR B618 CURB & GUTTER	Golden Valley
CITY ENGINEER REG 23110		GV-STRT-070

4 DETAIL: CATCH BASIN INSTALLATION (B618 CURB & GUTTER)
NOT TO SCALE



NOTE:
SHAPED SUBGRADE WITH GRANULAR FOUNDATION ALSO PERMITTED

DEPTH OF BEDDING BELOW PIPE	
D	d (MIN.)
27" & LESS	3"
30" to 60"	4"
66" & LARGER	6"

5 DETAIL: RCP STORM SEWER TRENCH
NOT TO SCALE

50% DESIGN
NOT FOR CONSTRUCTION

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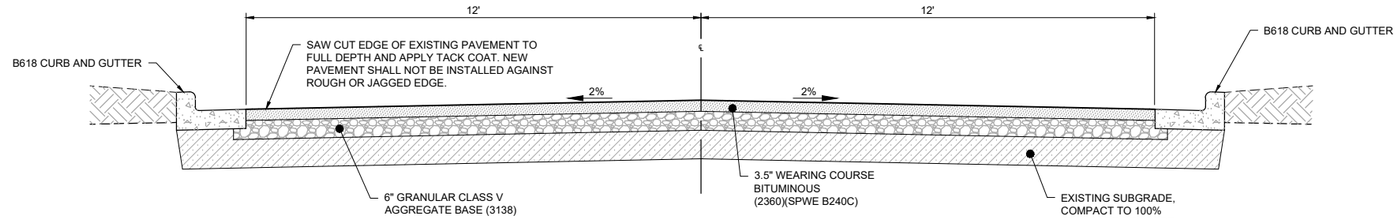
city of golden valley

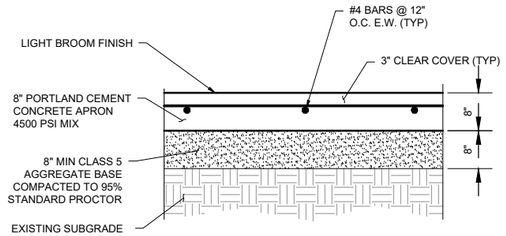
SEA SCHOOL & WILDWOOD PARK
FLOOD MITIGATION PROJECT

DETAILS
STORM SEWER

BARR PROJECT No.	
23/27-1900.00	
CLIENT PROJECT No.	
20-27	
DWG. No.	REV. No.
C-20	A

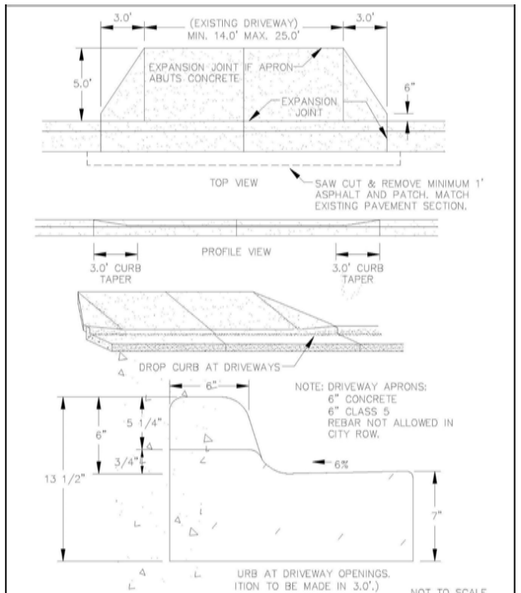


1 - SECTION: BITUMINOUS PAVEMENT DRIVEWAY
1" = 1/2"

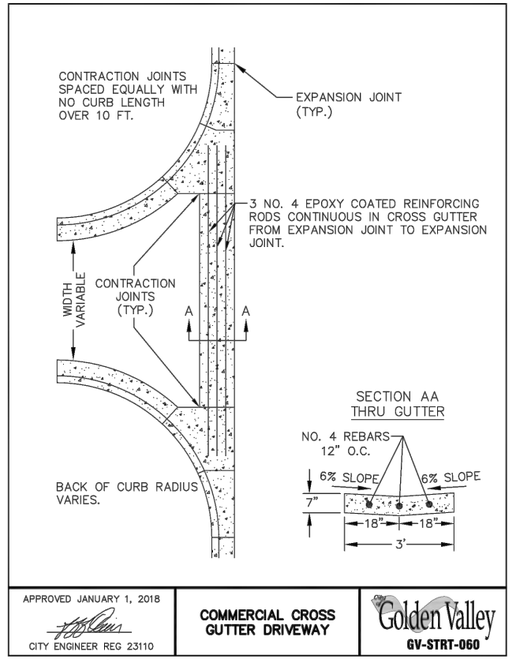


NOTES:
CONTRACTION JOINT SPACING MAX. 8' O.C. E.W.

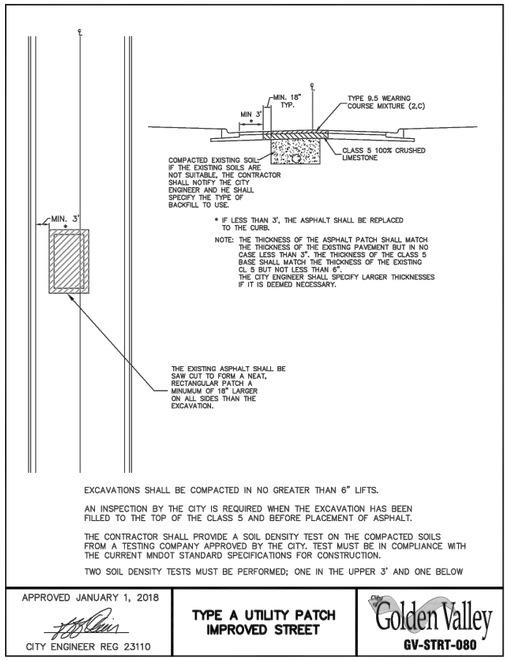
2 - DETAIL: CONCRETE APRON
NOT TO SCALE



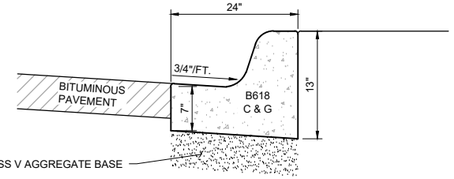
4 - DETAIL: DRIVEWAY APPROACH WITH CONCRETE APRON
NOT TO SCALE



5 - DETAIL: CROSS GUTTER DRIVEWAY
NOT TO SCALE



6 - DETAIL: TYPE A UTILITLY PATCH
NOT TO SCALE



NOTES:

1. BROOM FINISH ALL EXPOSED SURFACES.
2. DIMENSIONS MATCH MNDOT DETAIL, UNLESS SHOWN OTHERWISE.
3. COMPACT UPPER 3' OF EXISTING SUBGRADE TO MIN. 100% STANDARD PROCTOR DENSITY (ASTM D698).

3 - DETAIL: B618 CURB AND GUTTER
NOT TO SCALE

50% DESIGN
NOT FOR CONSTRUCTION

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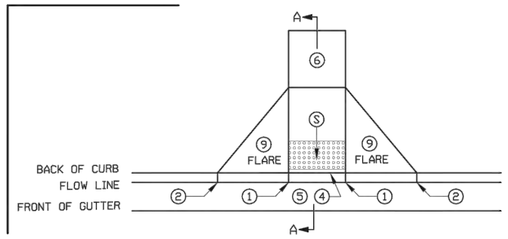
city of golden valley

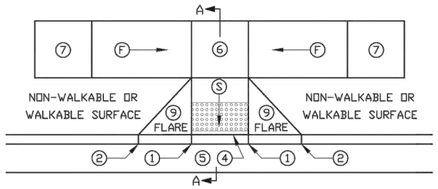
SEA SCHOOL & WILDWOOD PARK
FLOOD MITIGATION PROJECT

DETAILS
CURB & DRIVEWAY

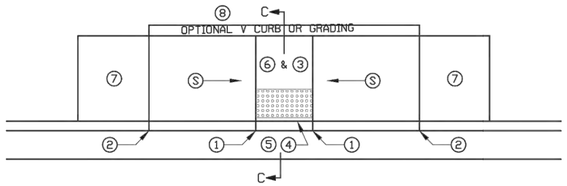
BARR PROJECT No.	23/27-1900.00
CLIENT PROJECT No.	20-27
DWG. No.	C-21
REV. No.	A



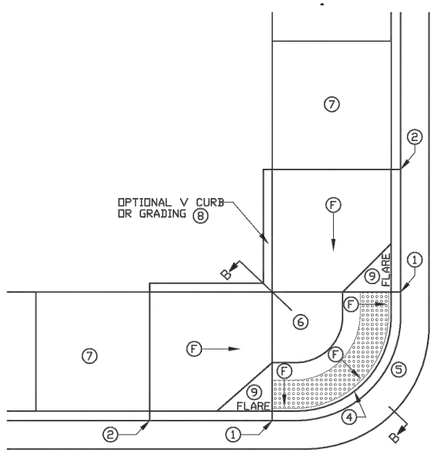
PERPENDICULAR



TIERED PERPENDICULAR



PARALLEL



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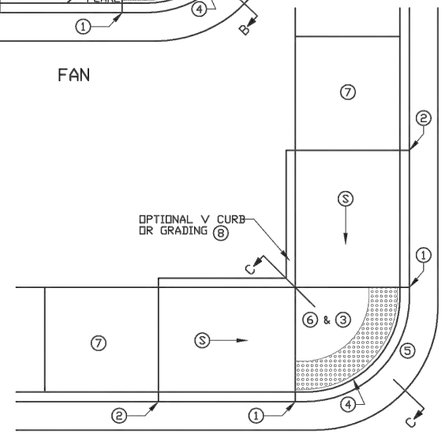
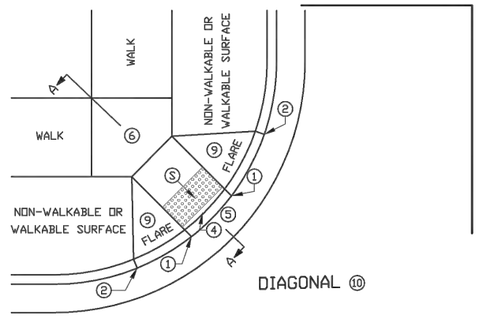
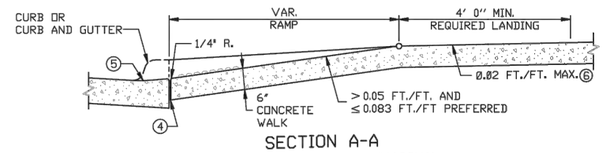


DEPRESSED CORNER

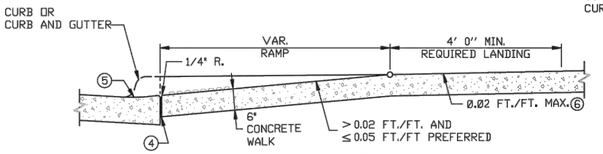


DIAGONAL ⑩



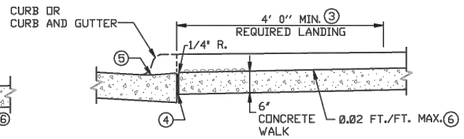
SECTION A-A

PERPENDICULAR/TIERED/DIAGONAL



SECTION B-B

FAN



SECTION C-C

PARALLEL/DEPRESSED CORNER

NOTES:

LANDINGS SHALL BE LOCATED ANYWHERE THE PEDESTRIAN ACCESS ROUTE CHANGES DIRECTION, AT THE TOP OF RAMPS THAT HAVE RUNNING SLOPES GREATER THAN 5.0%, AND IF THE APPROACHING WALK IS INVERSE GRADE.

INITIAL CURB RAMP LANDINGS SHALL BE CONSTRUCTED WITHIN 15' FROM THE BACK OF CURB, WITH 6' FROM THE BACK OF CURB BEING THE PREFERRED DISTANCE.

SECONDARY CURB RAMP LANDINGS ARE REQUIRED FOR EVERY 30" OF VERTICAL RISE WHEN THE LONGITUDINAL SLOPE IS GREATER THAN 5.0%.

CONTRACTION JOINTS SHALL BE CONSTRUCTED ALONG ALL GRADE BREAKS.

ALL GRADE BREAKS WITHIN THE PAR SHALL BE PERPENDICULAR TO THE PATH OF TRAVEL.

TO ENSURE RAMPS AND LANDINGS ARE PROPERLY CONCTRUCTED, LANDINGS MAY BE CAST SEPARATELY. FOLLOW SIDEWALK REINFORCEMENT DETAILS ON SHEET 5 WHEN LANDINGS ARE CAST SEPARATELY.

ALL SLOPES ARE ABSOLUTE, RATHER THAN RELATIVE TO SIDEWALK/ROADWAY GRADES.

TOP OF CURB SHALL MATCH PROPOSED ADJACENT WALK GRADE.

4' MINIMUM WIDTH OF DETECTABLE WARNING IS REQUIRED FOR ALL RAMPS. DETECTABLE WARNINGS SHALL CONTINUOUSLY EXTEND FOR A MINIMUM OF 24" IN THE PATH OF TRAVEL. SHARED USE PATHS SHALL HAVE DETECTABLE WARNING ACROSS THE ENTIRE WIDTH OF PATH WHEN THE PATH CROSSES A ROAD.

SEE STANDARD PLATE 7038 AND SHEET 4 OF 5 FOR ADDITIONAL DETAILS ON DETECTABLE WARNING.

① 0" CURB HEIGHT.
② FULL CURB HEIGHT.
③ DETECTABLE WARNINGS MAY BE PART OF 4' X 4' LANDING AREA IF IT IS NOT FEASIBLE TO CONSTRUCT THE LANDING OUTSIDE OF THE DETECTABLE WARNING AREA.
④ 1/2" PREFORMED JOINT FILLER MATERIAL AASHTO M 213. JOINT FILLER SHALL BE PLACED FLUSH WITH THE BACK OF CURB AND ADJACENT SIDEWALK. JOINT SHALL BE FREE OF DEBRIS. RECTANGULAR DETECTABLE WARNINGS SHALL BE SETBACK 3" FROM THE BACK OF CURB. RADIAL DETECTABLE WARNINGS SHALL BE SETBACK 3" MINIMUM TO 6" MAXIMUM FROM THE BACK OF CURB.
⑤ SEE PEDESTRIAN ACCESS ROUTE CURB AND GUTTER DETAIL FOR INFORMATION ON CONSTRUCTING CURB AND GUTTER AT CURB OPENINGS. SEE SHEET NO. 3 OF 5.
⑥ 4' BY 4' MIN. LANDING WITH MAX. 2.0% SLOPE IN ALL DIRECTIONS.
⑦ IF LONGITUDINAL SLOPE IS GREATER THAN 5.0%, 4' X 4' MIN. LANDING WITH MAX 2.0% SLOPE IN ALL DIRECTIONS REQUIRED.
⑧ V CURB, IF USED, SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY ALLOWS. SEE SHEET 5 OF 5.
⑨ SEE SHEET 4 OF 5, TYPICAL SIDE TREATMENT OPTIONS, FOR DETAILS ON FLARES AND RETURNED CURBS.
⑩ DIAGONAL RAMPS SHOULD ONLY BE USED AFTER ALL OTHER CURB RAMP TYPES HAVE BEEN EVALUATED AND DEEMED IMPRACTICAL.

LEGEND

THESE LONGITUDINAL SLOPE RANGES SHALL BE THE STARTING POINT. IF SITE CONDITIONS WARRANT, LONGITUDINAL SLOPES UP TO 8.3% OR FLATTER ARE ALLOWED.

S — INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND THE CROSS SLOPE SHALL NOT EXCEED 2.0%

F — INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE GREATER THAN 2.0% AND LESS THAN 5.0% IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%

REVISION:
APPROVED: 8-6-2014
OPERATIONS ENGINEER

REVISED:
APPROVED: 8-6-2014
STATE DESIGN ENGINEER

1 - DETAIL: PEDESTRIAN CURB RAMP (SHEET 1)
NOT TO SCALE

PEDESTRIAN CURB RAMP DETAILS

STANDARD PLAN 5-297.250 | 1 OF 5

50% DESIGN
NOT FOR CONSTRUCTION

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SEA SCHOOL & WILDWOOD PARK
FLOOD MITIGATION PROJECT

DETAILS
CURB & DRIVEWAY

BARR PROJECT No. 23/27-1900.00
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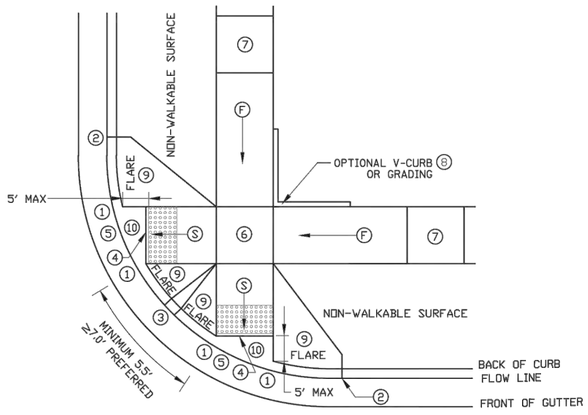
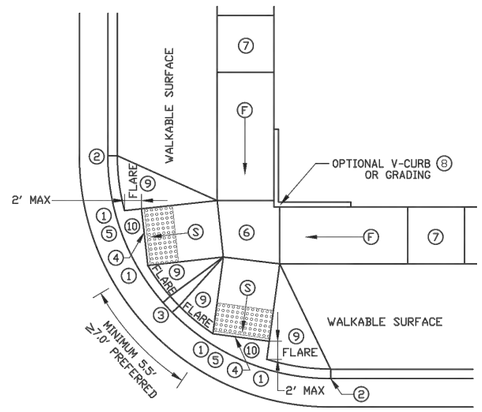
CADD USER: ERIC P. FITZGERALD FILE: M:\DESIGN\23271900.00\23271900_C-20_DETAILS.DWG PLOT SCALE: 1:2.5849 PLOT DATE: 1/10/2022 12:04 PM



ADJACENT TO NON-WALKABLE SURFACE



ADJACENT TO WALKABLE SURFACE

NOTES:

LANDINGS SHALL BE LOCATED ANYWHERE THE PEDESTRIAN ACCESS ROUTE CHANGES DIRECTION, AT THE TOP OF RAMPS THAT HAVE RUNNING SLOPES GREATER THAN 5.0%, AND IF THE APPROACHING WALK IS INVERSE GRADE.

INITIAL CURB RAMP LANDINGS SHALL BE CONSTRUCTED WITHIN 15' FROM THE BACK OF CURB, WITH 6' FROM THE BACK OF CURB BEING THE PREFERRED DISTANCE.

SECONDARY CURB RAMP LANDINGS ARE REQUIRED FOR EVERY 30" OF VERTICAL RISE WHEN THE LONGITUDINAL SLOPE IS GREATER THAN 5.0%.

CONTRACTION JOINTS SHALL BE CONSTRUCTED ALONG ALL GRADE BREAKS.

ALL GRADE BREAKS WITHIN THE PAR SHALL BE PERPENDICULAR TO THE PATH OF TRAVEL.

TO ENSURE RAMPS AND LANDINGS ARE PROPERLY CONCTRUCTED, LANDINGS MAY BE CAST SEPARATELY. FOLLOW SIDEWALK REINFORCEMENT DETAILS ON SHEET 5 WHEN LANDINGS ARE CAST SEPARATELY.

ALL SLOPES ARE ABSOLUTE, RATHER THAN RELATIVE TO SIDEWALK/ROADWAY GRADES.

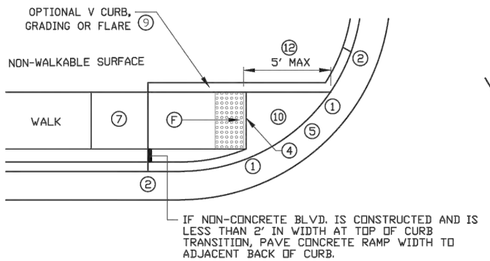
TOP OF CURB SHALL MATCH PROPOSED ADJACENT WALK GRADE.

4' MINIMUM WIDTH OF DETECTABLE WARNING IS REQUIRED FOR ALL RAMPS. DETECTABLE WARNINGS SHALL CONTINUOUSLY EXTEND FOR A MINIMUM OF 24" IN THE PATH OF TRAVEL. SHARED USE PATHS SHALL HAVE DETECTABLE WARNING ACROSS THE ENTIRE WIDTH OF PATH WHEN THE PATH CROSSES A ROAD.

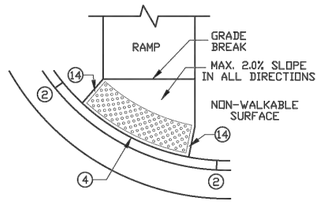
SEE STANDARD PLATE 7038 AND SHEET 4 OF 5 FOR ADDITIONAL DETAILS ON DETECTABLE WARNI

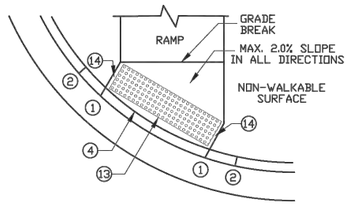
(1) 0" CURB HEIGHT.
(2) FULL CURB HEIGHT.
(3) 3" MINIMUM CURB HEIGHT, 4" PREFERRED.
(4) 1/2" PREFORMED JOINT FILLER MATERIAL AASHTO M 213. JOINT FILLER SHALL BE PLACED FLUSH WITH THE BACK OF CURB AND ADJACENT SIDEWALK. JOINT SHALL BE FREE OF DEBRIS. RECTANGULAR DETECTABLE WARNINGS SHALL BE SETBACK 3" FROM THE BACK OF CURB. RADIAL DETECTABLE WARNINGS SHALL BE SETBACK 3" MIN. TO 6"MAX. FROM THE BACK OF CUR
(5) SEE PEDESTRIAN ACCESS ROUTE CURB AND GUTTER DETAIL FOR INFORMATION ON CONSTRUCTING CURB AND GUTTER AT CURB OPENINGS. SEE SHEET NO. 3 OF 5.
(6) 4' BY 4' MIN. LANDING WITH MAX. 2.0% SLOPE IN ALL DIRECTIONS.
(7) IF LONGITUDINAL SLOPE IS GREATER THAN 5.0%, 4' X 4' MIN. LANDING WITH MAX 2.0% SLOPE I ALL DIRECTIONS REQUIRED.
(8) V CURB, IF USED, SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY AL
(9) SEE SHEET 4 OF 5, TYPICAL SIDE TREATMENT OPTIONS, FOR DETAILS ON FLARES AND RETURNED CURBS.
(10) MAX. 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK AND DRAIN TO FLOW LINE. SHALL BE CONSTRUCTED INTEGRAL WITH CURB AND GUTTER.
(11) TO BE USED FOR ALL DIRECTIONAL RAMPS.
(12) PLACE DOMES AT THE BACK OF CURB WHEN ALLOWABLE SETBACK CRITERIA IS EXCEEDED.
(13) RECTANGULAR DETECTABLE WARNINGS MAY BE SETBACK 9" FROM THE BACK OF CURB WITH CORNERS SET 3" FROM BACK OF CURB. IF 9" SETBACK IS EXCEEDED USE RADIAL DETECTABLE WARNINGS.
(14) WHEN NO CONCRETE FLARES ARE PROPOSED, THE CONCRETE WALK SHALL BE FORMED AND CONSTRUCTED PERPENDICULAR TO THE BACK OF CURB. MAINTAIN 3" BETWEEN EDGE OF DOMES AND EDGE OF CONCRETE.
(15) FRONT EDGE OF DETECTABLE WARNING SHALL BE SET BACK 2' MAXIMUM WHEN ADJACENT TO WALKABLE SURFACE, AND 5' MAXIMUM WHEN ADJACENT TO NON-WALKABLE SURFACE WITH ONE CORNER SET 3" FROM BACK OF CURB. WHETHER A SURFACE IS WALKABLE OR NOT SHALL BE DETERMINED BY THE ENGINEER

COMBINED DIRECTIONAL (15)

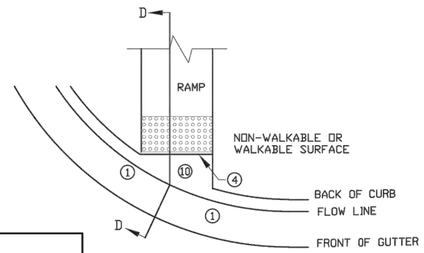


ONE-WAY DIRECTIONAL

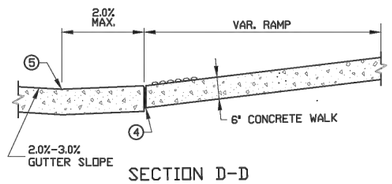




DETECTABLE WARNING PLACEMENT WHEN SETBACK CRITERIA IS EXCEEDED



CURB FOR DIRECTIONAL RAMPS (11)



SECTION D-D

LEGEND

THESE LONGITUDINAL SLOPE RANGES SHALL BE THE STARTING POINT. IF SITE CONDITIONS WARRANT, LONGITUDINAL SLOPES UP TO 8.3% OR FLATTER ARE ALLOWED.

(S) INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND THE CROSS SLOPE SHALL NOT EXCEED 2.0%

(F) INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE GREATER THAN 2.0% AND LESS THAN 5.0% IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%

REVISION:
APPROVED: 8-6-2014
OPERATIONS ENGINEER

REVISED:
APPROVED: 8-6-2014
STATE DESIGN ENGINEER

PEDESTRIAN CURB RAMP DETAILS

STANDARD PLAN 5-297.250 | 2 OF 5

1 - DETAIL: PEDESTRIAN CURB RAMP (SHEET 2)
NOT TO SCALE

50% DESIGN
NOT FOR CONSTRUCTION

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
-	-	-	-	-	-

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PRINTED NAME
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RECORD								
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	DATE RELEASED							

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Scale	AS SHOWN
Date	01/11/2022
Drawn	EPF
Checked	PEB
Designed	BARR
Approved	JAK2

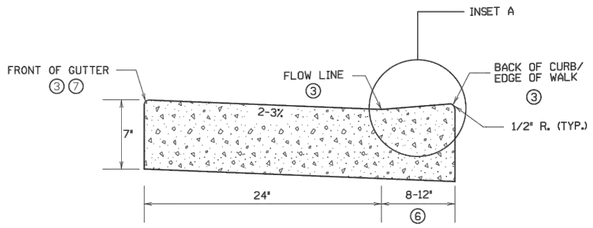
city of golden valley

SEA SCHOOL & WILDWOOD PARK
FLOOD MITIGATION PROJECT

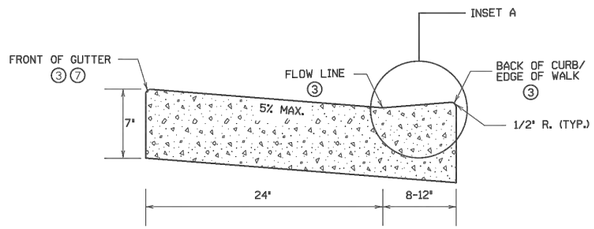
DETAILS
CURB & DRIVEWAY

BARR PROJECT No. 23/27-1900.00
CLIENT PROJECT No. 20-27
DWG. No. C-23
REV. No. A

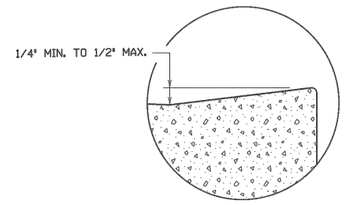
CADD USER: ERIC P. FITZGERALD FILE: M:\DESIGN\23271900.00\23271900000_C-20_DETAILS.DWG PLOT SCALE: 1:2.5849 PLOT DATE: 1/10/2022 12:05 PM



NON PERPENDICULAR ①

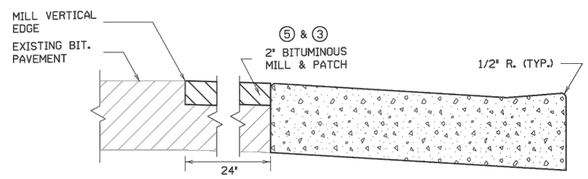


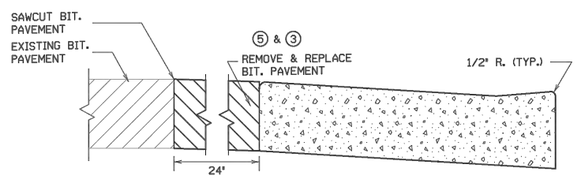
PERPENDICULAR ②

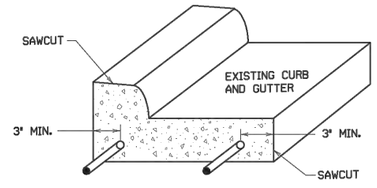


INSET A

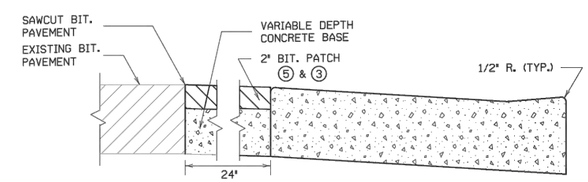
PEDESTRIAN ACCESS ROUTE CURB & GUTTER DETAIL

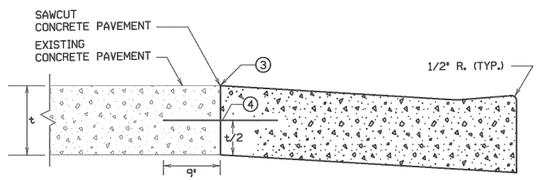






CURB AND GUTTER REINFORCEMENT ⑧
FOR USE ON CURB RAMP RETROFITS





PAVEMENT TREATMENT OPTIONS IN FRONT OF CURB & GUTTER
FOR USE ON CURB RAMP RETROFITS

NOTES:

POSITIVE FLOW LINE DRAINAGE SHALL BE MAINTAINED THROUGH THE PEDESTRIAN ACCESS ROUTE (PAR) AT A 2% MAXIMUM.

NO PONDING SHALL BE PRESENT IN THE PAR.

ANY VERTICAL LIP THAT OCCURS AT THE FLOW LINE SHALL NOT BE GREATER THAN 1/4 INCH.

① FOR USE AT CURB CUTS WHERE THE PEDESTRIAN'S PATH OF TRAVEL IS ASSUMED NON PERPENDICULAR TO THE GUTTER FLOW LINE. RAMP TYPES INCLUDE: FANS, DEPRESSED CORNERS, & ONE WAY AND COMBINED DIRECTIONALS.

② FOR USE AT CURB CUTS WHERE THE PEDESTRIAN'S PATH OF TRAVEL IS ASSUMED PERPENDICULAR TO THE GUTTER FLOW LINE. RAMP TYPES INCLUDE: PERPENDICULAR, TIERED PERPENDICULAR, PARALLEL, AND DIAGONAL RAMPS.

③ THERE SHALL BE NO VERTICAL DISCONTINUITIES GREATER THAN 1/4".

④ DRILL AND GROUT NO. 4 EPOXY-COATED 18" LONG TIE BARS AT 30" CENTER TO CENTER INTO EXISTING CONCRETE PAVEMENT.

⑤ ELEVATION CHANGE TAKES PLACE FROM THE EXISTING TO NEW FRONT OF GUTTER. PATCH IS USED TO MATCH THE NEW GUTTER FACE INTO THE EXISTING ROADWAY.

⑥ VARIABLE WIDTH FOR DIRECTIONAL CURB APPLICATIONS.

⑦ TOP FRONT OF GUTTER SHALL BE CONSTRUCTED FLUSH WITH PROPOSED ADJACENT PAVEMENT ELEVATION. PAR GUTTER SHALL NOT BE OVERLAID.

⑧ WHERE PLAN SPECIFIES, DRILL AND GROUT 2 - NO. 4 X 12" LONG REINFORCEMENT BARS (EPOXY COATED).

REVISION:
APPROVED: 8-6-2014
OPERATIONS ENGINEER

REVISED:
APPROVED: 8-6-2014
STATE DESIGN ENGINEER

PEDESTRIAN CURB RAMP DETAILS

STANDARD PLAN 5-297.250 | 3 OF 5

1 DETAIL: PEDESTRIAN CURB RAMP (SHEET 3)
NOT TO SCALE

50% DESIGN
NOT FOR CONSTRUCTION

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
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CONSTRUCTION	—	—	—	—	—	—	—	—
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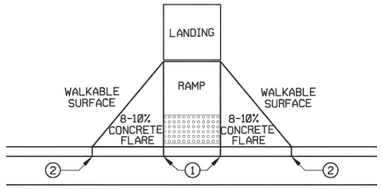
Scale	AS SHOWN
Date	01/11/2022
Drawn	EPF
Checked	PEB
Designed	BARR
Approved	JAK2

city of golden valley

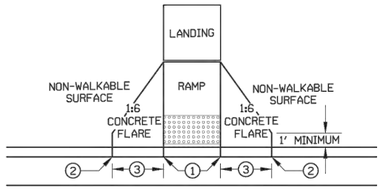
SEA SCHOOL & WILDWOOD PARK
FLOOD MITIGATION PROJECT

DETAILS
CURB & DRIVEWAY

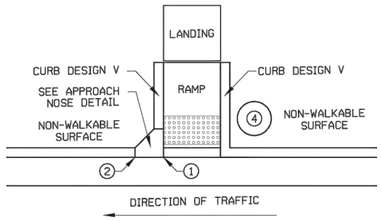
BARR PROJECT No. 23/27-1900.00
CLIENT PROJECT No. 20-27
DWG. No. C-24
REV. No. A



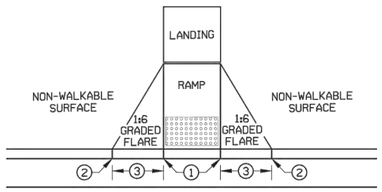
PAVED FLARES
ADJACENT TO WALKABLE SURFACE



PAVED FLARES
ADJACENT TO NON-WALKABLE SURFACE

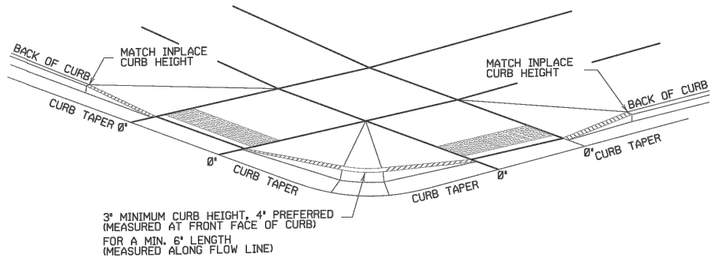


RETURNED CURB

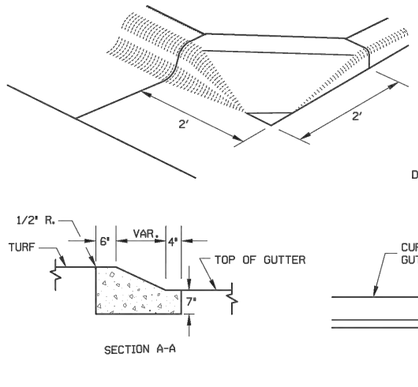


GRADED FLARES

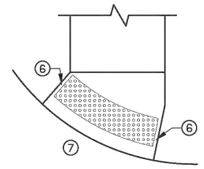
TYPICAL SIDE TREATMENT OPTIONS ⑤



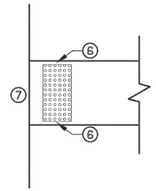
DETECTABLE EDGE WITH CURB AND GUTTER ⑧



APPROACH NOSE DETAIL
FOR DOWNSTREAM SIDE OF TRAFFIC



RADIAL DETECTABLE WARNING



RECTANGULAR DETECTABLE WARNING

DETECTABLE EDGE WITHOUT CURB AND GUTTER

NOTES:

SEE STANDARD PLATE 7038 AND THIS SHEET FOR ADDITIONAL DETAILS ON DETECTABLE WARNING.

WHETHER A SURFACE IS WALKABLE OR NOT SHALL BE DETERMINED BY THE ENGINEER.

CONCRETE FLARE LENGTHS ADJACENT TO NON-WALKABLE SURFACES SHOULD BE LESS THAN 8' LONG MEASURED ALONG THE RAMPS FROM THE BACK OF CURB.

① Ø" CURB HEIGHT.
② FULL CURB HEIGHT.
③ 2' - 3' FLARE.
④ IMMOVABLE OBJECT OR OBSTRUCTION.
⑤ SIDE TREATMENTS ARE APPLICABLE TO ALL RAMP TYPES AND SHOULD BE IMPLEMENTED AS NEEDED ON ALL RAMPS AS FIELD CONDITIONS DICTATE. THE ENGINEER SHALL DETERMINE THE RAMP SIDE TREATMENTS BASED ON MAINTENANCE OF BOTH ROADWAY AND SIDEWALK, ADJACENT PROPERTY CONSIDERATIONS, AND MITIGATING CONSTRUCTION IMPACTS.
⑥ WHEN NO CONCRETE FLARES ARE PROPOSED, THE CONCRETE WALK SHALL BE FORMED AND CONSTRUCTED PERPENDICULAR TO THE EDGE OF ROADWAY. MAINTAIN 3" BETWEEN EDGE OF DOMES AND EDGE OF CONCRETE.
⑦ IF NO CURB AND GUTTER IS PLACED IN RURAL SECTIONS, DETECTABLE WARNINGS SHALL BE PLACED 1' FROM THE EDGE OF ROADWAY TO PROVIDE VISUAL CONTRAST.
⑧ ALL CONSTRUCTED CURBS MUST HAVE A CONTINUOUS DETECTABLE EDGE FOR THE VISUALLY IMPAIRED. THIS DETECTABLE EDGE REQUIRES DETECTABLE WARNINGS WHEREVER THERE IS ZERO-INCH HIGH CURB. CURB TAPERS ARE CONSIDERED A DETECTABLE EDGE WHEN THE TAPER STARTS WITHIN 3" OF THE EDGE OF THE DETECTABLE WARNINGS AND UNIFORMLY RISES TO A 3-INCH MINIMUM CURB HEIGHT. ANY CURB NOT PART OF A CURB TAPER AND LESS THAN 3 INCHES IN HEIGHT IS NOT CONSIDERED A DETECTABLE EDGE AND THEREFORE IS NOT COMPLIANT WITH ACCESSIBILITY STANDARDS.

REVISION:
APPROVED: 8-6-2014
OPERATIONS ENGINEER

REVISED:
APPROVED: 8-6-2014
STATE DESIGN ENGINEER

PEDESTRIAN CURB RAMP DETAILS

STANDARD PLAN 5-297.250 | 4 OF 5

1 DETAIL: PEDESTRIAN CURB RAMP (SHEET 4)
NOT TO SCALE

50% DESIGN
NOT FOR CONSTRUCTION

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CONSTRUCTION								
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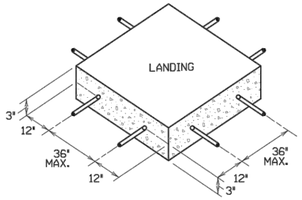
Scale	AS SHOWN
Date	01/11/2022
Drawn	EPF
Checked	PEB
Designed	BARR
Approved	JAK2

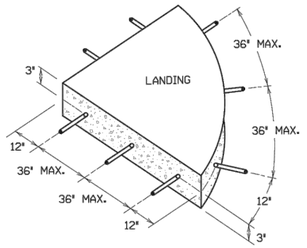
city of golden valley

SEA SCHOOL & WILDWOOD PARK
FLOOD MITIGATION PROJECT

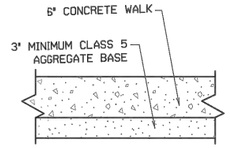
DETAILS
CURB & DRIVEWAY

BARR PROJECT No.	23/27-1900.00
CLIENT PROJECT No.	20-27
DWG. No.	C-25
REV. No.	A

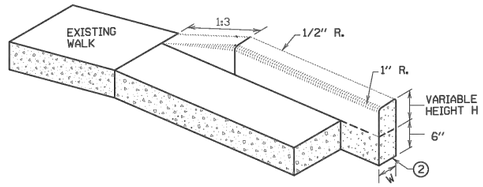




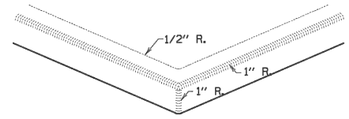
SIDEWALK REINFORCEMENT ⑥ ⑦



TYPICAL SIDEWALK SECTION WITHIN INTERSECTION CORNER

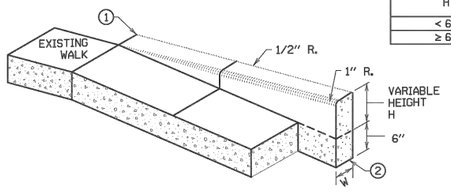


V CURB ADJACENT TO LANDSCAPE
CURB WITHIN SIDEWALK LIMITS

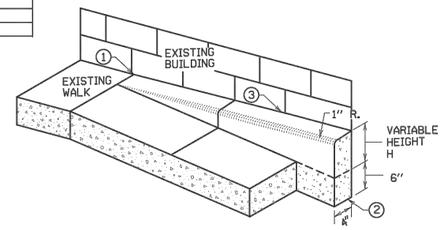


V CURB INTERSECTION

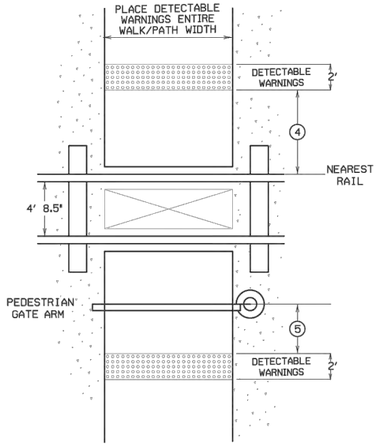
CONCRETE CURB DESIGN V	
CURB HEIGHT H	CURB WIDTH W
< 6"	4"
≥ 6"	6"



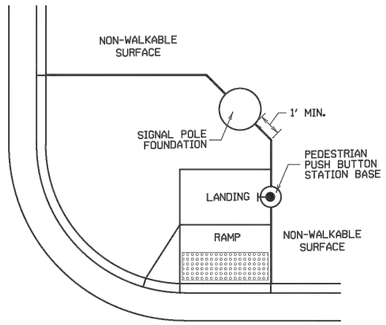
V CURB ADJACENT TO LANDSCAPE
CURB OUTSIDE SIDEWALK LIMITS



V CURB ADJACENT TO BUILDING OR BARRIER



RAILROAD CROSSING
PLAN VIEW



CONCRETE WALK EDGES ADJACENT
TO CONCRETE STRUCTURES

NOTES:

ALL V CURB CONTRACTION JOINTS SHALL MATCH CONCRETE WALK JOINTS.

WHERE RIGHT-OF-WAY ALLOWS, USE OF V CURB SHOULD BE MINIMIZED. GRADING ADJACENT TURF OR SLOPING ADJACENT PAVEMENT IS PREFERRED.

V CURB SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY ALLOWS.

V CURB NEXT TO BUILDING SHALL BE A 4" WIDTH AND SHALL MATCH PREVIOUS TOP OF SIDEWALK ELEVATIONS.

① END TAPERS AT TRANSITION SECTION SHALL MATCH INPLACE SIDEWALK GRADES.

② ALL V CURB SHALL MATCH BOTTOM OF ADJACENT WALK.

③ EDGE BETWEEN NEW V CURB AND INPLACE STRUCTURE SHALL BE SEALED AND BOND BREAKER SHALL BE USED BETWEEN EXISTING STRUCTURE AND PLACED V-CURB.

④ NEAREST EDGE OF DETECTABLE WARNING SURFACES SHALL BE PLACED 12' MINIMUM TO 15' MAXIMUM FROM THE NEAREST RAIL. FOR SKEWED RAILWAYS IN NO INSTANCE SHALL THE DETECTABLE WARNING BE CLOSER THAN 12' MEASURED PERPENDICULAR TO THE NEAREST RAIL.

⑤ WHEN PEDESTRIAN GATES ARE PROVIDED, DETECTABLE WARNING SURFACES SHALL BE PLACED ON THE SIDE OF THE GATES OPPOSITE THE RAIL, 2' FROM THE APPROACHING SIDE OF THE GATE ARM.

⑥ WHEN PLAN SPECIFIES, DRILL AND GROUT NO. 4 12" LONG REINFORCEMENT BARS AT 36" MAX. CENTER TO CENTER (EPOXY COATED).

⑦ TO ENSURE RAMPS AND LANDINGS ARE PROPERLY CONSTRUCTED, LANDINGS MAY BE CAST SEPARATELY. FOLLOW SIDEWALK REINFORCEMENT DETAILS ON THIS SHEET WHEN LANDINGS ARE CAST SEPARATELY.

REVISION:
APPROVED: 2-9-2015
OPERATIONS ENGINEER

REVISED:
MINNESOTA DEPARTMENT OF TRANSPORTATION
STATE DESIGN ENGINEER
APPROVED: 2-9-2015

PEDESTRIAN CURB RAMP DETAILS
STANDARD PLAN 5-297.250 | 5 OF 5

1 DETAIL: PEDESTRIAN CURB RAMP (SHEET 5)
NOT TO SCALE

50% DESIGN
NOT FOR CONSTRUCTION

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
-	-	-	-	— — -	

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PRINTED NAME
SIGNATURE
DATE — - — LICENSE # — - —

CLIENT	01/11/22	—	—	—	—	—	—	—
BID	—	—	—	—	—	—	—	—
CONSTRUCTION	—	—	—	—	—	—	—	—
RECORD	—	—	—	—	—	—	—	—
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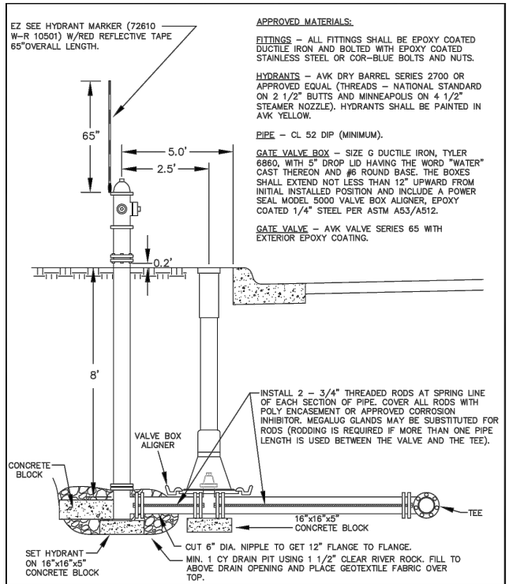
Scale	AS SHOWN
Date	01/11/2022
Drawn	EPF
Checked	PEB
Designed	BARR
Approved	JAK2

city of golden valley

SEA SCHOOL & WILDWOOD PARK
FLOOD MITIGATION PROJECT
DETAILS
CURB & DRIVEWAY

BARR PROJECT No. 23/27-1900.00
CLIENT PROJECT No. 20-27
DWG. No. C-26
REV. No. A



APPROVED MATERIALS:

FITTINGS – ALL FITTINGS SHALL BE EPOXY COATED DUCTILE IRON AND BOLTED WITH EPOXY COATED STAINLESS STEEL OR COR–BLUE BOLTS AND NUTS.

HYDRANTS – AVK DRY BARREL SERIES 2700 OR APPROVED EQUAL (THREADS – NATIONAL STANDARD ON 2 1/2" BUTTS AND MINNEAPOLIS ON 4 1/2" STEAMER NOZZLE). HYDRANTS SHALL BE PAINTED IN AVK YELLOW.

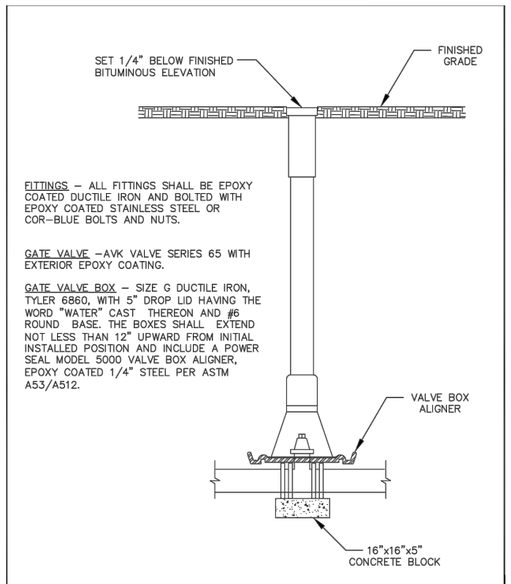
PIPE – CL 52 DIP (MINIMUM).

GATE VALVE BOX – SIZE G DUCTILE IRON, TYLER 6860, WITH 5" DROP LID HAVING THE WORD "WATER" CAST THEREON AND #6 ROUND BASE. THE BOXES SHALL EXTEND NOT LESS THAN 12" UPWARD FROM INITIAL INSTALLED POSITION AND INCLUDE A POWER SEAL MODEL 5000 VALVE BOX ALIGNER, EPOXY COATED 1/4" STEEL PER ASTM A53/A512.

GATE VALVE – AVK VALVE SERIES 65 WITH EXTERIOR EPOXY COATING.

APPROVED JANUARY 1, 2018	TYPICAL HYDRANT INSTALLATION	Golden Valley GV-WM-010
CITY ENGINEER REG 23110		

1 - DETAIL: WATER HYDRANT
NOT TO SCALE



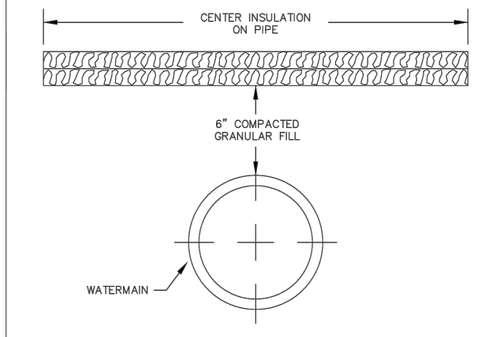
FITTINGS – ALL FITTINGS SHALL BE EPOXY COATED DUCTILE IRON AND BOLTED WITH EPOXY COATED STAINLESS STEEL OR COR–BLUE BOLTS AND NUTS.

GATE VALVE –AVK VALVE SERIES 65 WITH EXTERIOR EPOXY COATING.

GATE VALVE BOX – SIZE G DUCTILE IRON, TYLER 6860, WITH 5" DROP LID HAVING THE WORD "WATER" CAST THEREON AND #6 ROUND BASE. THE BOXES SHALL EXTEND NOT LESS THAN 12" UPWARD FROM INITIAL INSTALLED POSITION AND INCLUDE A POWER SEAL MODEL 5000 VALVE BOX ALIGNER, EPOXY COATED 1/4" STEEL PER ASTM A53/A512.

APPROVED JANUARY 1, 2018	TYPICAL GATE VALVE INSTALLATION	Golden Valley GV-WM-060
CITY ENGINEER REG 23110		

2 - DETAIL: GATE VALVE
NOT TO SCALE



NOTE:
MINIMUM 2" PER FOOT UNDER 8' OF COVER – 2" THICK HIGH DENSITY POLYSTYRENE INSULATION (MINIMUM TOTAL R VALUE OF 20) LAYERS WITH JOINTS STAGGERED AND EXTENDING A MINIMUM OF 2' EACH WAY FROM WATERMAIN C/L OR AS DIRECTED BY THE ENGINEER.

APPROVED JANUARY 1, 2018	WATERMAIN INSULATION	Golden Valley GV-WM-050
CITY ENGINEER REG 23110		

3 - DETAIL: WATERMAIN INSULATION
NOT TO SCALE

50% DESIGN
NOT FOR CONSTRUCTION

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
-	-	-	-	— — -	

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PRINTED NAME _____

SIGNATURE _____

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RELEASED TO/FOR	A	B	C	0	1	2	3	
	DATE RELEASED							

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Scale	AS SHOWN
Date	01/11/2022
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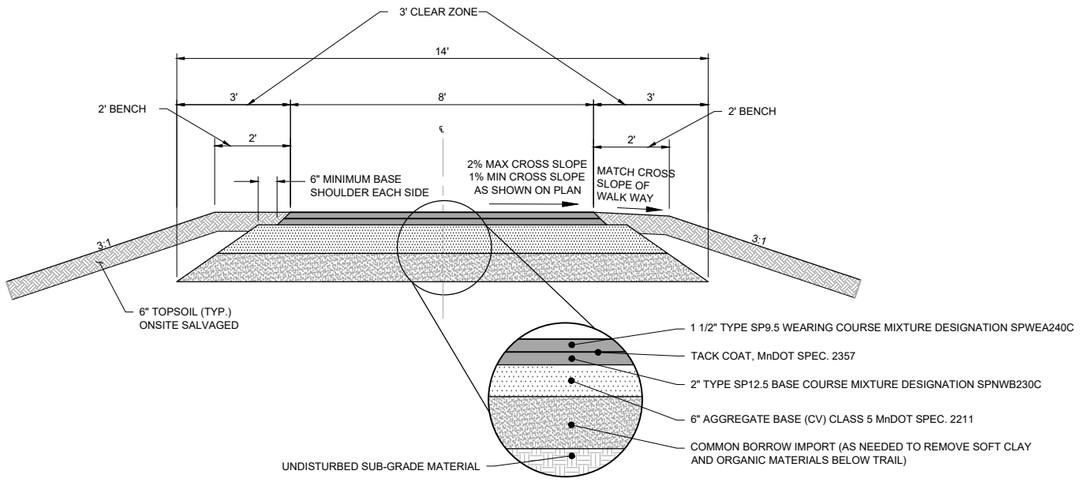
Approved	JAK2

city of golden valley

SEA SCHOOL & WILDWOOD PARK
FLOOD MITIGATION PROJECT

DETAILS
BITUMINOUS TRAIL & MISCELLANEOUS

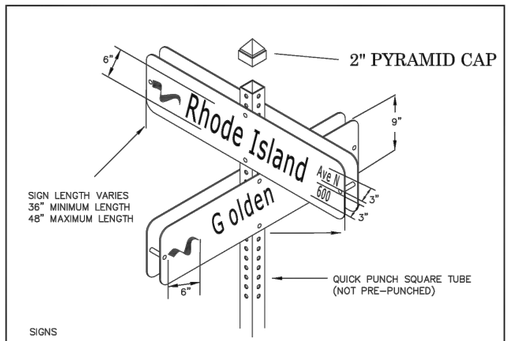
BARR PROJECT No.	
23/27-1900.00	
CLIENT PROJECT No.	
20-27	
DWG. No.	REV. No.
C-27	A



NOTES:

1. COMPACT ALL AGGREGATE BASE AND SELECT GRANULAR TO 100% STANDARD PROCTOR
2. PROPOSED PLAN INDICATES SLOPE DIRECTIONS OF TRAILS.

1 - TYPICAL SECTION: WILDWOOD PARK TRAIL
NOT TO SCALE



SIGNS

SIGNS SHALL BE MADE OF FLAT ALUMINUM THAT IS .080 THICK AND 9" HIGH WITH 1.5" RADIUS CORNERS AND TELESPAR PUNCHING.

SIGNS SHALL BE SINGLE FACE DG3 DIAMOND GRADE SHEETING.

PUBLIC STREET SIGNS SHALL HAVE A GREEN BACKGROUND WITH WHITE LETTERING, .5" E 450 SERIES BORDER, AND 6" CITY LOGO ON LEFT.

SIGNS SHALL HAVE .75" OF GREEN BACKGROUND ON ALL SIDES OF THE SIGN LEGEND.

STREET NAMES SHALL BE 6" UPPER CASE AND 4.5" LOWER CASE USING CLEARVIEW ONE FONT WITH .375" MARGINS.

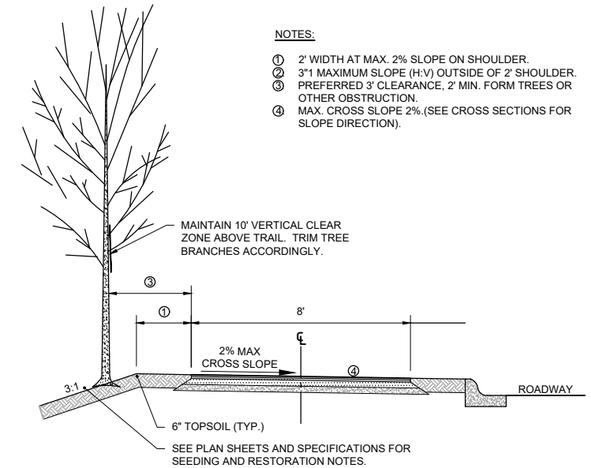
STREET SUFFIXES AND BLOCK NUMBERS SHALL BE 3" UPPER CASE AND 2.25" LOWER CASE USING CLEARVIEW ONE FONT WITH .375" MARGINS.

A 6" ARROW SHALL BE ON THE RIGHT IF APPLICABLE.

ALL SIGNS SHALL CONFORM TO ALL REQUIREMENTS OF THE CURRENT EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MN MUTCD).

APPROVED JANUARY 1, 2018	TYPICAL STREET SIGN	City of Golden Valley
CITY ENGINEER REG 23110		GV-STRT-210

3 - DETAIL: STREET SIGN (TYPICAL)
NOT TO SCALE



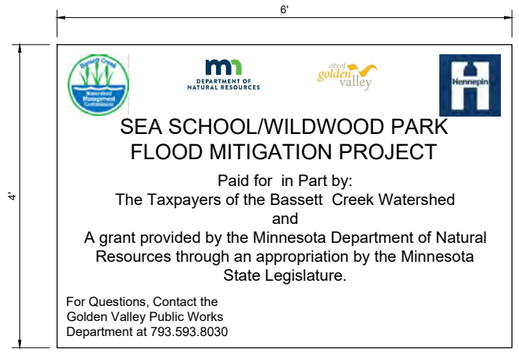
NOTES:

① 2' WIDTH AT MAX. 2% SLOPE ON SHOULDER.
② 3"1 MAXIMUM SLOPE (H:V) OUTSIDE OF 2' SHOULDER.
③ PREFERRED 3' CLEARANCE, 2' MIN. FORM TREES OR OTHER OBSTRUCTION.
④ MAX. CROSS SLOPE 2%.(SEE CROSS SECTIONS FOR SLOPE DIRECTION).

NOTES:

1. COMPACT ALL AGGREGATE BASE AND SELECT GRANULAR TO 100% STANDARD PROCTOR
2. PROPOSED PLAN INDICATES SLOPE DIRECTIONS OF TRAILS.

2 - DETAIL: KELLY DRIVE/DULUTH STREET TRAIL RESTORATION
NOT TO SCALE



4 - DETAIL: BCWMC SIGN
AS SHOWN

NOTE:

1. SIGN SHALL BE MOUNTED ON 4" X 4" POSTS AND SHALL BE PLACED IN A LOCATION HIGHLY VISIBLE TO ALL TRAFFIC ENTERING THE PROJECT.

50% DESIGN
NOT FOR CONSTRUCTION

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
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BID	-	—	—	—	—	—	—
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RECORD	-	—	—	—	—	—	—
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	DATE RELEASED						

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Scale	AS SHOWN
Date	01/11/2022
Drawn	EPF
Checked	PEB
Designed	BARR
Approved	JAK2

city of golden valley

SEA SCHOOL & WILDWOOD PARK
FLOOD MITIGATION PROJECT

DETAILS
BITUMINOUS TRAIL & MISCELLANEOUS

BARR PROJECT No.	
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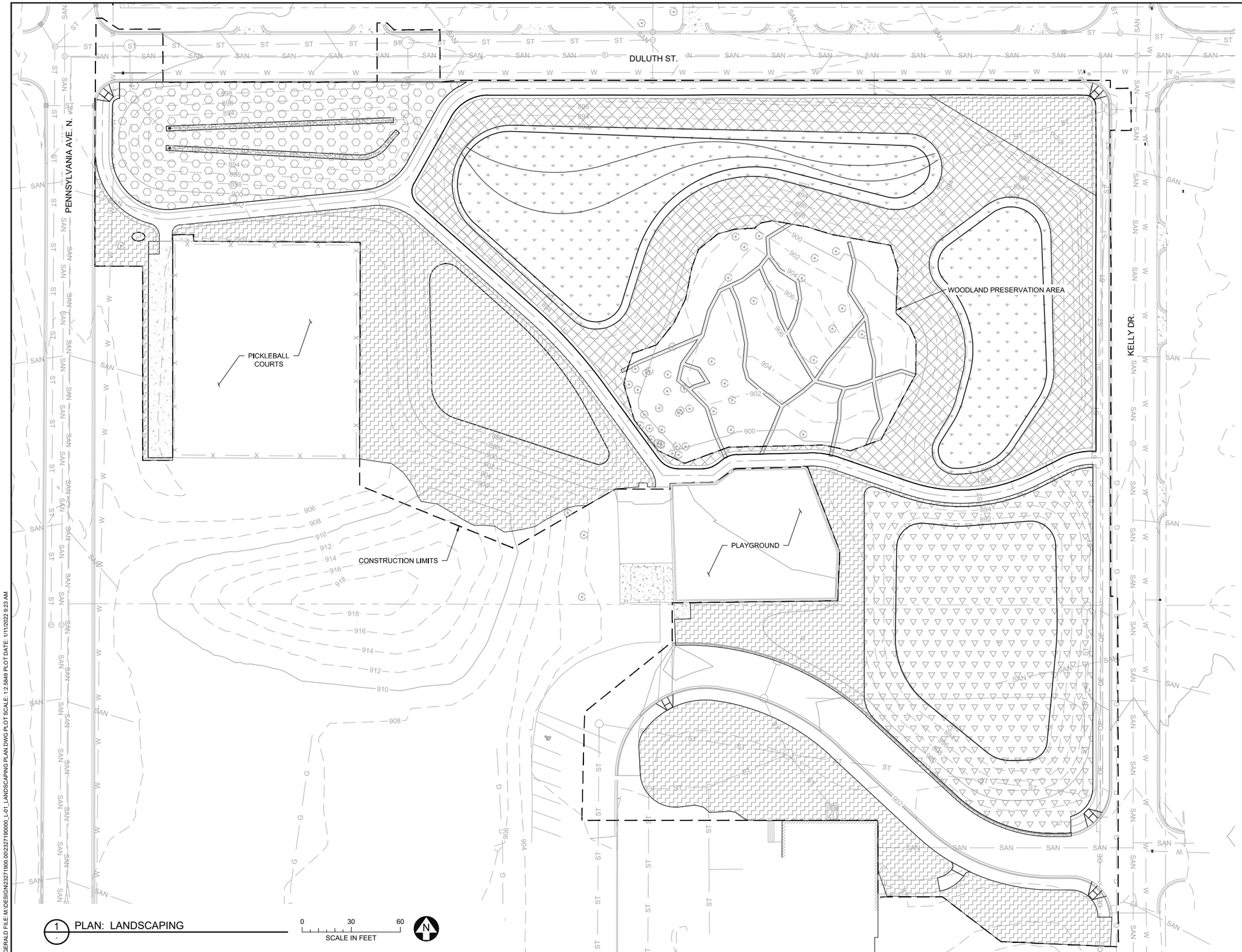
20-27	
DWG. No.	REV. No.
C-28	A



SYMBOL AND PATTERN LEGEND

- 996 — EXISTING 10' CONTOUR
- 994 — EXISTING 2' CONTOUR
- EXISTING PROPERTY LINE
- ST — EXISTING STORM SEWER
- SAN — EXISTING SANITARY SEWER
- GAS — EXISTING GAS LINE
- W — EXISTING WATERMAIN
- X — X — EXISTING FENCE
- CONSTRUCTION LIMITS

CITY PROJECT 20-27 RESTORATION PLAN

LOW MAINTENANCE TURF
- EROSION CONTROL BLANKET
- MnDOT 25-131 LOW MAINTENANCE TURF MIX, SEEDING RATE: 220 LBS./ACRE

WET MEADOW ZONE (BELOW 892)
- EROSION CONTROL BLANKET
- STATE SEED MIX 33-261 STORMWATER SOUTHWEST, SEEDING RATE: 35 LBS./ACRE
- SEE SPECIAL PROVISIONS

UPLAND ZONE (892+)
- EROSION CONTROL BLANKET
- STATE SEED MIX 35-641 MESIC PRAIRIE SOUTHEAST, SEEDING RATE: 12 LBS./ACRE
- SEE SPECIAL PROVISIONS

UPLAND ZONE GRASS AND FORB MIX
- EROSION CONTROL BLANKET
- STATE SEED MIX 35-35-641 MESIC PRAIRIE SOUTHEAST, SEEDING RATE: 12 LBS/ACRE SUPPLEMENTED WITH PRAIRIE RESTORATION SAVANNA WILD FLOWER SEED MIX AND PLUGS (OR APPROVED EQUAL), SEEDING RATE 4 LBS/ACRE

FILTRATION BASIN PLANTING AREA
- EROSION CONTROL BLANKET
- SHRUB AND PERENNIAL PLANTING
- TREE PLANTING

NOTES:
1. SEEDING MUST BE COMPLETED WHEN PONDS ARE AT NWL
2. SEE SHEET L-04 FOR TREE AND SHRUB PLANTING DETAILS.
3. SEE 7 / L-03 FOR SPECIAL SOIL PREP REQUIREMENTS
4. LOCATE UNDERGROUND UTILITIES PRIOR TO TREE AND SHRUB PLANTING. NOTIFY ENGINEER OF CONFLICTS WITH UTILITIES. TREE AND SHRUB LOCATIONS WILL BE ADJUSTED IN THE FIELD.

CITY PROJECT 20-27 PLANT SCHEDULE

1 / - PLAN: LANDSCAPING

0 30 60
SCALE IN FEET

50% DESIGN
NOT FOR CONSTRUCTION

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
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SEA SCHOOL & WILDWOOD PARK
FLOOD MITIGATION PROJECT

LANDSCAPING PLAN
SEA SCHOOL & WILDWOOD PARK

BARR PROJECT No.	23/27-1900.00
CLIENT PROJECT No.	20-27
DWG. No.	L-01
REV. No.	A

SYMBOL AND PATTERN LEGEND

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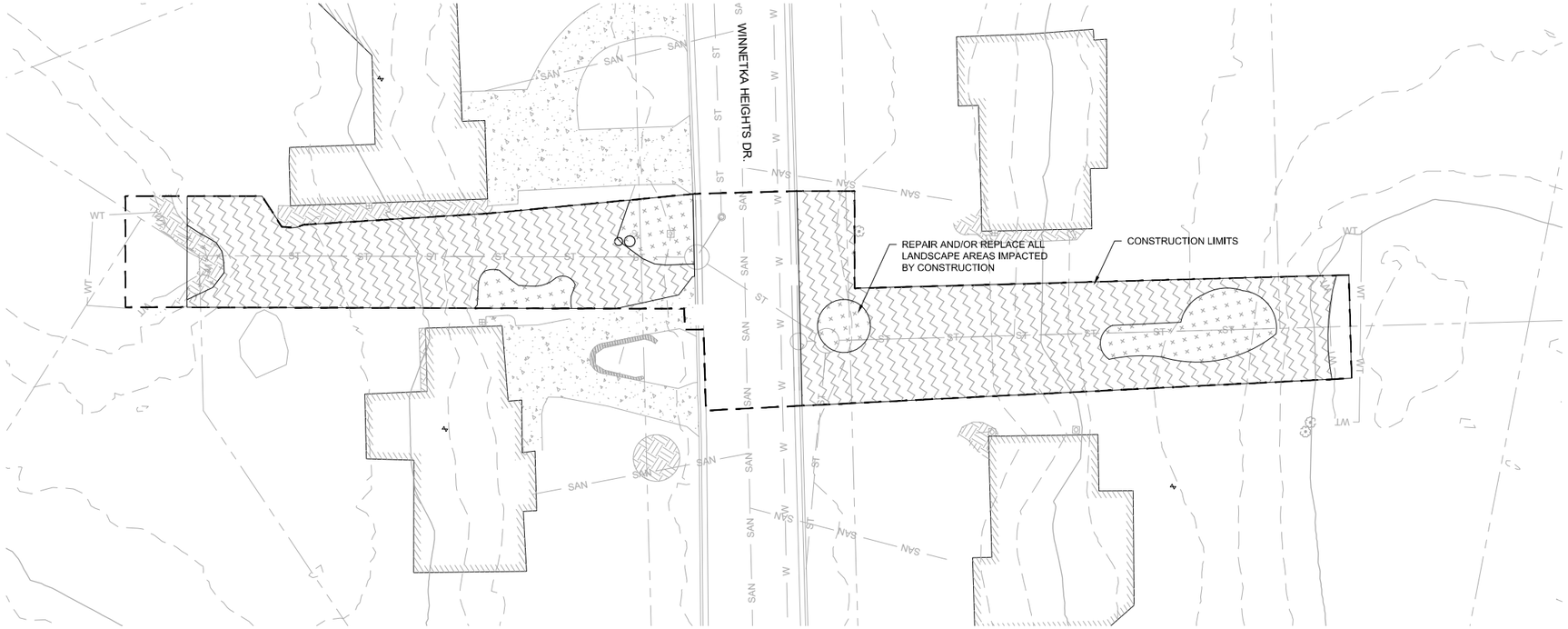
- EXISTING PROPERTY LINE
- WT — EXISTING WETLAND DELINEATION
- ST — EXISTING STORM SEWER
- SAN — EXISTING SANITARY SEWER
- GAS — EXISTING GAS LINE
- W — EXISTING WATERMAIN
- X — X — EXISTING FENCE
- CONSTRUCTION LIMITS



1 PLAN: LANDSCAPING

0 20 40
SCALE

CITY PROJECT 20-27 RESTORATION PLAN

LOW MAINTENANCE TURF
- EROSION CONTROL BLANKET
- MnDOT 25-131 LOW MAINTENANCE TURF MIX, SEEDING RATE: 220 LBS./ACRE

REPAIR LANDSCAPE AREAS TO MATCH EXISTING CONDITIONS PRIOR TO CONSTRUCTION

NOTES:
1. SEEDING MUST BE COMPLETED WHEN PONDS ARE AT NWL
2. SEE SHEET L-03 FOR TREE AND SHRUB PLANTING DETAILS.
3. SEE 7/L-03 FOR SPECIAL SOIL PREP REQUIREMENTS
4. LOCATE UNDERGROUND UTILITIES PRIOR TO TREE AND SHRUB PLANTING. NOTIFY ENGINEER OF CONFLICTS WITH UTILITIES. TREE AND SHRUB LOCATIONS WILL BE ADJUSTED IN THE FIELD.

CITY PROJECT 20-27 PLANT SCHEDULE

50% DESIGN
NOT FOR CONSTRUCTION

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
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Approved	JAK2

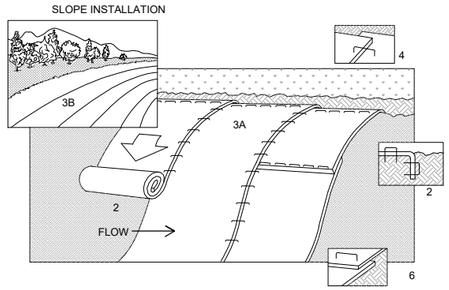
city of golden valley

SEA SCHOOL & WILDWOOD PARK
FLOOD MITIGATION PROJECT

LANDSCAPING PLAN
DECOLA POND D OUTLET

BARR PROJECT No.	23/27-1900.00
CLIENT PROJECT No.	20-27
DWG. No.	L-02
REV. No.	A

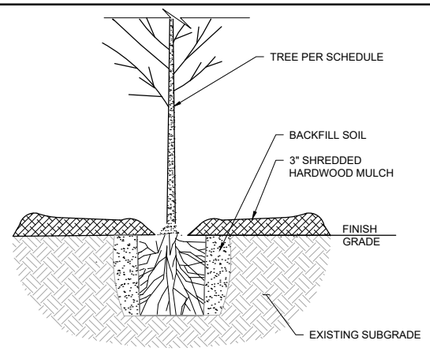
CADD USER: ERIC P. FITZGERALD FILE: M:\DESIGN\2327\1900.00\2327190000_L-01_LANDSCAPING PLAN.DWG PLOT SCALE: 1:2.5848 PLOT DATE: 1/12/2022 2:57 PM



NOTES:

1. REFER TO MANUFACTURER RECOMMENDATIONS FOR STAPLE PATTERNS FOR SLOPE INSTALLATIONS.
2. PREPARE SOIL BY LOOSENING TOP 1-2 INCHES AND APPLY SEED (AND FERTILIZER WHERE REQUIRED) PRIOR TO INSTALLING BLANKETS. GROUND SHOULD BE SMOOTH AND FREE OF DEBRIS.
3. BEGIN (A) AT THE TOP OF THE SLOPE AND ROLL THE BLANKETS DOWN OR (B) AT ONE END OF THE SLOPE AND ROLL THE BLANKETS HORIZONTALLY ACROSS THE SLOPE.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 6" OVERLAP, WITH THE UPHILL BLANKET ON TOP.
5. WHEN BLANKETS MUST BE SPLICED DOWN THE SLOPE, PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH APPROXIMATELY 6" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART.
6. BLANKET MATERIALS SHALL BE AS SPECIFIED OR AS APPROVED BY ENGINEER.

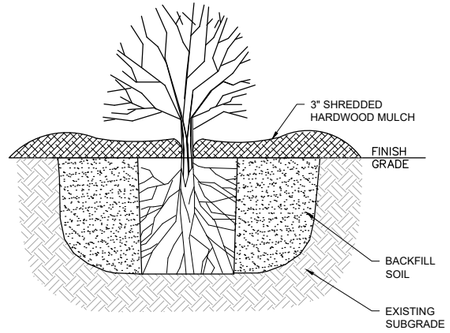
1 - DETAIL: EROSION CONTROL BLANKET INSTALLATION
NOT TO SCALE



TREE PLANTING NOTES:

1. PROVIDE AND INSTALL PLANTS PER SCHEDULE.
2. REMOVE DEAD OR DAMAGED BRANCHES. RETAIN THE NATURAL FORM OF PLANT. DO NOT CUT THE LEADER
3. IF ROOT FLARE IS NOT EXPOSED WITHIN THE CONTAINER EXCAVATE SURFACE SOIL TO BASE OF ROOT FLARE.
4. DIG PLANT HOLES 6" MIN. LARGER THAN ROOT MASS, ALL SIDES.
5. SCARIFY BOTTOM AND SIDES OF HOLE PRIOR TO PLANTING
6. SET TREE ON LIGHTLY FIRMED BACKFILL SOIL SO ROOT FLARE IS EVEN WITH FINISH GRADE.
7. REMOVE BURLAP AND ROPES FROM TOP 1/3 OF ROOT BALLS, CUT WIRE BASKET DOWN TO SECIND HORIZONTAL WIRE FROM BOTTOM, AND DISPOSE OF OFF-SITE.
8. BACKFILL WITH PLANTING SOIL AND FIRM SOIL AROUND ROOT MASS TO MAINTAIN PLUMB AND ENSURE NO AIR GAPS AROUND ROOT MASS.
9. CONSTRUCT 3" WATERING BASIN. THOROUGHLY WATER WITHIN 3 HOURS OF INSTALLATION.
10. PLACE SHREDDED HARDWOOD MULCH (MN/DOT SPEC 3882.2 TYPE 6 - WEED SEED FREE SHREDDED HARDWOOD.) TO A RADIUS OF 24" AND TO A DEPTH OF 3" AROUND TREE (SOIL PREPARED AS PER PLAN).
11. NO MULCH TO BE IN CONTACT WITH BASE OF PLANT.
12. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING TREES IN A PLUMB POSITION THROUGHOUT THE WARRANTY PERIOD.

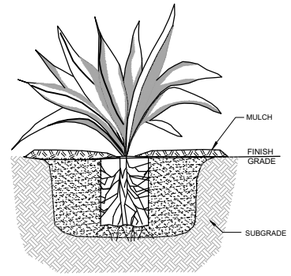
2 - DETAIL: TREE PLANTING
NOT TO SCALE



SHRUB PLANTING NOTES:

1. PROVIDE AND INSTALL PLANTS PER SCHEDULE.
2. REMOVE DEAD OR DAMAGED BRANCHES. RETAIN THE NATURAL FORM OF PLANT.
3. IF ROOT FLARE IS NOT EXPOSED WITHIN THE CONTAINER EXCAVATE SURFACE SOIL TO BASE OF ROOT FLARE.
4. DIG PLANT HOLES 6" MIN. LARGER THAN ROOT MASS, ALL SIDES.
5. SET SHRUB ON LIGHTLY FIRMED BACKFILL SOIL SO ROOT FLARE IS EVEN WITH FINISH GRADE.
6. PLACE SHREDDED HARDWOOD MULCH (MN/DOT SPEC 3882.2 TYPE 6 - WEED SEED FREE SHREDDED HARDWOOD.) TO A RADIUS OF 24" AND TO A DEPTH OF 3" AROUND PLANT.
7. NO MULCH TO BE IN CONTACT WITH PLANT.

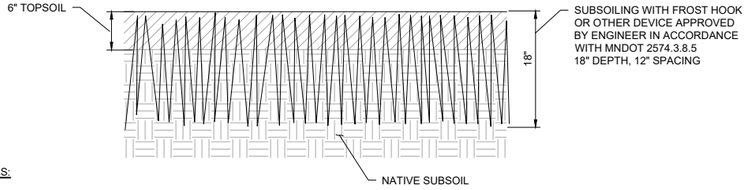
3 - DETAIL: SHRUB PLANTING
NOT TO SCALE



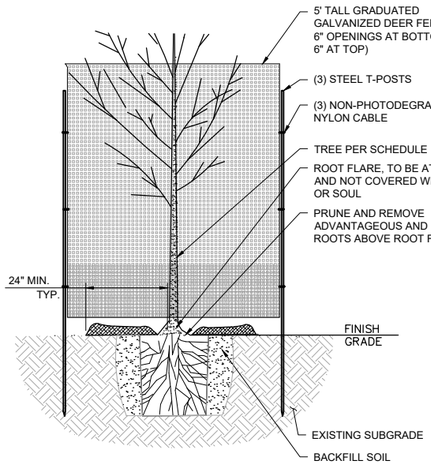
HERBACEOUS PLUG PLANTING NOTES:

1. PREPARE SOIL WITH COMPOST AMENDMENT PER PLAN
2. PROVIDE AND INSTALL PLANTS PER SCHEDULE.
3. EXCAVATE HOLE 3 TIMES WIDTH OF ROOTBALL.
4. BREAK BOTTOM OF ROOTBALL TO LOOSEN ROOTS.
5. PLANT THROUGH MULCH ALIGNING ROOTBALL TOP EVEN WITH SOIL - DO NOT PLANT TOO DEEP OR TOO SHALLOW. FIRM SOIL TO ENSURE GOOD CONTACT WITH ROOTS.
6. APPLY 3" DEPTH SHREDDED HARDWOOD MULCH TO ENTIRE PLANTING AREA (SOIL PREPARED AS PER SPECIFICATIONS).
7. NO MULCH TO BE IN CONTACT WITH PLANT.
8. WATER THOROUGHLY AFTER PLANTING.
9. HERBACEOUS PLANTS SHALL BE GUARANTEED FOR 60 DAYS FROM TIME OF OWNER ACCEPTANCE. CONTRACTOR TO WATER AS NECESSARY TO MAINTAIN IN A HEALTHY CONDITION. AT THE END OF THIS PERIOD ANY DEAD PLANTS SHALL BE REPLACED AT CONTRACTOR'S EXPENSE.

4 - DETAIL: HERBACEOUS PLUG
NOT TO SCALE



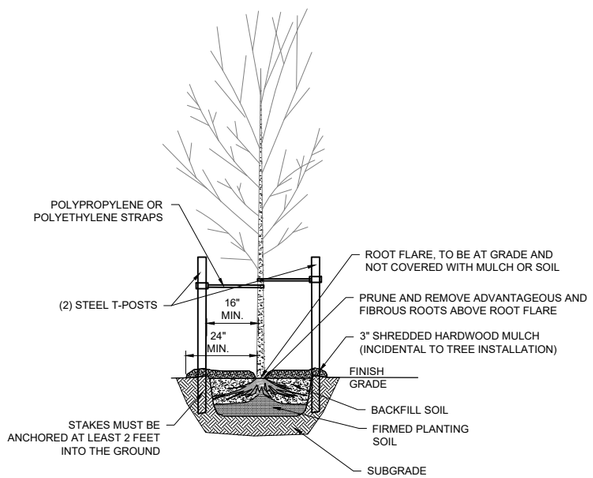
7 - DETAIL: SUBSOILING
NOT TO SCALE



TREE PLANTING NOTES:

1. PROVIDE AND INSTALL PLANTS PER SCHEDULE.
2. ALL DECIDUOUS TREES SHALL BE ENCLOSED BY GALVANIZED DEER FENCING TO PROTECT FROM ANIMAL BROWSING. TREE PROTECTION SHALL BE CONSIDERED INCIDENTAL TO TREE PLANTING
3. REMOVE DEAD OR DAMAGED BRANCHES. RETAIN THE NATURAL FORM OF PLANT. DO NOT CUT THE LEADER
4. IF ROOT FLARE IS NOT EXPOSED WITHIN THE CONTAINER EXCAVATE SURFACE SOIL TO BASE OF ROOT FLARE.
5. DIG PLANT HOLES 6" MIN. LARGER THAN ROOT MASS, ALL SIDES.
6. SCARIFY BOTTOM AND SIDES OF HOLE PRIOR TO PLANTING
7. SET TREE ON LIGHTLY FIRMED BACKFILL SOIL SO ROOT FLARE IS EVEN WITH FINISH GRADE.
8. BACKFILL WITH PLANTING SOIL AND FIRM SOIL AROUND ROOT MASS TO MAINTAIN PLUMB AND ENSURE NO AIR GAPS AROUND ROOT MASS.
9. CONSTRUCT 3" WATERING BASIN. THOROUGHLY WATER WITHIN 3 HOURS OF INSTALLATION.
10. PLACE SHREDDED HARDWOOD MULCH (MN/DOT SPEC 3882.2 TYPE 6 - WEED SEED FREE SHREDDED HARDWOOD.) TO A RADIUS OF 24" AND TO A DEPTH OF 3" AROUND TREE (SOIL PREPARED AS PER PLAN).
11. NO MULCH TO BE IN CONTACT WITH BASE OF PLANT.
12. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING TREES IN A PLUMB POSITION THROUGHOUT THE GUARANTEE PERIOD.
13. CONTRACTOR TO WATER AS NECESSARY THROUGHOUT GUARANTEE PERIOD TO MAINTAIN IN A HEALTHY CONDITION. AT THE END OF THE GUARANTEE PERIOD ALL TREES THAT ARE DEAD OR DETERMINED UNHEALTHY OR UNSIGHTLY SHALL BE REPLACED AT CONTRACTOR'S EXPENSE. SEE HERBACEOUS PLANT ESTABLISHMENT SPECIFICATIONS FOR ADDITIONAL DETAIL.

5 - DETAIL: TREE PLANTING WITH PROTECTION
NOT TO SCALE



6 - DETAIL: BARE ROOT TREE PLANTING
NOT TO SCALE

BARE ROOT TREE PLANTING NOTES:

1. INSTALL PLANT MATERIAL THAT MEETS SPECIFICATIONS.
2. SOAK ROOTS IN WATER MINIMUM OF ONE HOUR PRIOR TO PLANTING.
3. PLANTING HOLE DIMENSIONS FOR 8' TALL TREE: MIN. 54" WIDE, MIN. 14" DEEP.
4. SCARIFY SIDES AND BOTTOM OF PLANTING HOLE PRIOR TO PLANTING.
5. TRANSFER PLANT DIRECTLY FROM WATER TO HOLE, SET PLANT SO THE ROOT FLARE IS AT THE FINISHED SOIL ELEVATION. SPREAD ROOTS OUT EVENLY.
6. SET PLUMB AND IMMEDIATELY BACKFILL WITH PLANTING SOIL. DO NOT LEAVE IN PLANTING HOLE UNCOVERED. LIGHTLY FIRM SOIL TO MAINTAIN PLUMB POSITION
7. WATER THOROUGHLY WITHIN 2 HOURS TO SETTLE PLANTS AND FILL VOIDS.
8. BACK FILL VOIDS AND WATER A SECOND TIME.
10. PLACE SHREDDED HARDWOOD MULCH (MN/DOT SPEC 3882.2 TYPE 6 - WEED SEED FREE SHREDDED HARDWOOD.) TO A RADIUS OF 24" AND TO A DEPTH OF 3" AROUND TREE (SOIL PREPARED AS PER PLAN) WITHIN 48 HOURS OF THE SECOND WATERING UNLESS SOIL MOISTURE IS EXCESSIVE
11. PROTECT TREE AS SHOWN IN TREE PLANTING WITH PROTECTION DETAIL.
12. ALL TREES SHALL BE STAKED AND TIED TO MAINTAIN VERTICALITY FOLLOWING PLANTING. TREE STAKING SHALL BE CONSIDERED INCIDENTAL TO TREE PLANTING.
13. INSTALL TWO (2) 8' STEEL T-POSTS, ANCHORED 2' INTO THE GROUND ON EITHER SIDE OF THE TRUNK.
14. INSTALL 16" LONG 40 MIL POLYPROPYLENE OR POLYETHYLENE STRAPS AROUND TRUNK AND AFFIX TO TO HOLES IN T-POSTS WITH 10 GAUGE WIRE.
15. REMOVE THE TREE STAKING AFTER TWO (2) YEARS OF MAINTAINED PLUMB POSITION.

50% DESIGN
NOT FOR CONSTRUCTION

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
-	-	-	-	—— ——	-

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.

PRINTED NAME _____

SIGNATURE _____

DATE _____ LICENSE # _____

CLIENT	01/11/22							
BID								
CONSTRUCTION								
RECORD								
RELEASED TO/FOR	A	B	C	0	1	2	3	
	DATE RELEASED							

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Scale	AS SHOWN
Date	01/11/2022
Drawn	EPF
Checked	PEB
Designed	BARR
Approved	JAK2

city of golden valley

SEA SCHOOL & WILDWOOD PARK
FLOOD MITIGATION PROJECT

LANDSCAPING DETAILS

BARR PROJECT No.	23/27-1900.00
CLIENT PROJECT No.	20-27
DWG. No.	L-03
REV. No.	A