HOLE 1: STREAM CROSSING

Hole One currently has bank erosion where the fairway meets Plymouth Creek. The methods proposed to fix the problem are by introducing a new low-flow crossing point with bank steps leading to steps within the creek bed, increasing the amount of vegetation through shrub plantings and native grasses. The putting green for hole one is located close and to mitigate the soil erosion the proposed solution includes increasing the height of the existing boulder wall and flattening out the "green" area. In addition, adding wood chips in the high traffic 30 radius of the pin will reduce the amount of mud and improve play conditions.
HOLE 8 LOOKING ACROSS TO TEE BOX OF HOLE 12: STREAM ACCESS + STABILIZATION

ON HOLE 8 HAS A HIGH POTENTIAL FOR DISCS TO ENTER THE CREEK. THE EXISTING BANKS ARE IN NEED OF EROSION MATION VESTICATION AND ARMORING. IN ORDER TO ACCOMPLISH BOTH DESIRED OUTCOMES A COMBINATION OF SHRUB PLANTINGS TO STABILIZE THE BANK WITH ACCESS STEPS LEADING TO THE CREEK EDGE FOR FISHING DISCS OUT. THE OUTSIDE BEND WILL BE ARMORED WITH VEGETATED REPAIR TO CONTROL FLOW VELOCITY AND PRESERVE THE VISUAL AESTHETIC WITH TALL GRASSES GROWING OVER THE ARMORING.

MULTIPLE EXISTING DRAINAGE SWALES OCCUR WITHIN THE DISC GOLF COURSE. THE ADDITION OF REPAIR TO STABILIZE THE SOILS WILL MITIGATE SOIL MIGRATION INTO THE CREEK. PLANNING OF THE COURSE WILL NOT BE AFFECTED AND A REDUCTION OF OVERALL MUD WILL BE ACHIEVED.
HOLE 8: MUDDY PATH OPTIONS

Existing trees within the flight path are scarred by discs repeatedly hitting the soft tissue of young trees. To protect the trees, disc stop poles would be placed between the tree and the direction of flying discs. With staggered rows of poles, deflection will serve to protect trees.

Steep slopes can be rectified through the use of boardwalks, which also minimizes the foot traffic trampling any vegetation. The addition of disc stop poles will protect existing/newly planted trees and add a new element of difficulty for players to shoot around.

For areas of heavy foot traffic in sunny locations, the use of grass pathways would allow for reduced construction and transplanting of turf grasses. The soils in these locations would thus be preserved while allowing for consistent golfer traffic. In areas of heavy shade due to tree canopy, the use of additional boardwalks will serve to focus traffic movements around tree roots and dune soils.
FOR AREAS OF HEAVY FOOT TRAFFIC IN AND AROUND SNOWY TEE BOXES THE
PARKMENTS CAN BE BOXED IN USING PRESSURE TREATED TIMBERS AND THE BOXES
FILLED WITH EITHER WOODCHIPS OR GRAVEL. THIS WILL SERVE TO REDUCE THE
AMOUNT OF MUD AND KEEP THE SOIL VARIATION DOWN.

HOLE 11: MUDDY TEE BOX OPTIONS
OXE—BOW: POLINATOR HABITAT + FOOD

The rusty patched bumblebee became the first bee species ever listed under the Endangered Species Act in March of the year. However, pollinators of all kinds (bees, moths, and butterflies) are currently in a declining state across the U.S. For the island off the edge of the course behind the Oxe-Bow, a dedicated pollinator habitat and nectar source is planned. A combination of seeding native grasses and forbs are proposed, as well as rotated forbs to increase the density. In order to achieve the necessary sunlight for these species, the current trees will be removed.

In addition to the pollinator specific island, native seed mixes and flowering shrub species will be used to stabilize the banks of the creek. The density of flowers will not be as intense but they will serve as a connective path for the new plant life, including pollinators. Within Plymouth, like the pollinator island, trees along the common will need to be removed to allow needed sunlight for the new covered types. Removals will be limited to only what is necessary as to not change the character of the park and the Oxe Bow course.
EROSION AND SEDIMENT CONTROL PRACTICES

All exposed soil areas must have temporary erosion protection (erosion control blanket, seed) as soon as possible or within 7 days after the construction activity in that portion of the site has temporarily or permanently ceased.

CONTRACTOR shall implement appropriate construction phasing, vegetative buffer strips, horizontal slope grading, and other construction practices that minimize erosion when practical. The normal wetted perimeter of any temporary or permanent drainage ditch that drains water from a construction site, or diverts water around a site, must be stabilized within 200 linear feet from the property edge, or from the point of discharge to any surface water. Stabilization must be completed within 24 hours of connecting to a surface water. Pipe outlets must be provided with temporary or permanent energy dissipation within 24 hours of connection to a surface water.

The following measures will be taken as sediment control practices in order to minimize sediments from entering surface waters:

1. Installation of silt fence within 50 feet of the channel as the downgradient extent of construction activity prior to site disturbance. Floating silt fence shall be installed in two locations upstream of the culverts under the Brooks Creek and the Amanoosa Lane as shown on Sheets EC-102 and EC-103. Install silt fence as shown on Sheet D-104.

2. Installation of perimeter silt fence in the locations shown on Sheets EC-102 through EC-104 prior to site disturbance. Perimeter silt fence shall be installed as shown on Sheet D-104.

3. Installation of erosion protection in the locations shown on Sheets EC-102 through EC-104 prior to site disturbance. Erosion protection shall be installed as shown on Sheet D-104.

4. Installation of rock construction entrances in the locations shown on Sheet C863 to prevent tracking of sediment offsite. Street sweeping of tracked sediment shall be performed as required.

Dewatering

Turbid or sediment-laden water must be treated with the appropriate BMPs, such that discharge does not adversely affect the receiving water. Ensure that discharge points are adequately protected from erosion and scour. CONTRACTOR responsible to develop and submit dewatering plan to engineer, secure any required permits, and comply with permits.

Final Stabilization

All areas disturbed by construction will receive seed according to the plans and specifications within the specified vegetative time schedule.

Final stabilization will occur when the site has a uniform vegetative cover with a density of 70% over the entire disturbed area. All temporary synthetic erosion prevention and sediment control BMPs (such as silt fence) must be removed as part of the site final stabilization. All sediment must be cleared out of conveyances and temporary sedimentation basins if applicable.

Notice of Termination (NOT) must be submitted within 30 days of final stabilization. Before Termination, revegetation establishment and coverage must meet the permit requirements.

Pollution Prevention Measures

Solid Waste

Solid waste, including but not limited to, collected asphalt and concrete millings, floating debris, paper, plastic, fabric, construction and demolition debris and other waste must be disposed of properly and must comply with MPCA disposal requirements.

Hazardous Materials

Hazardous materials, including but not limited to, oil, gasoline, paint and any hazardous substance must be properly stored including secondary containments, to prevent spills, leaks or other discharge. Restricted access to storage areas must be provided to prevent vandalism. Storage and disposal of hazardous waste must be in compliance with MPCA regulations.

Washing of Construction Vehicles

External washing of trucks and other construction vehicles must be limited to a defined area of the site. Runoff must be contained and waste properly disposed of. No engine degreasing is allowed on site.

Concrete Washout Area

The contractor shall provide adequate containment for all liquid and solid wastes generated by washout operations to prevent runoff to surface waters. Liquid and solid wastes must be disposed of properly in compliance with MPCA rules.

Amendments

Amend the SWPPP as necessary to address any changes in design, construction, operation, maintenance weather or seasonal conditions that have a significant effect on discharge of pollutants to surface or underground waters; or to address concerns identified during inspections or investigations by OWN or local government entities.

Record Retention

The SWPPP, all changes to it, and inspection and maintenance records must be kept on-site during construction. "The OWNER must retain a copy of the SWPPP along with the following records for three (3) years after submittal of the Notice of Termination:

1. Any other permits required for the project;
2. Records of all inspection and maintenance conducted during construction;
3. All permanent and temporary agreements that have been implemented, including all right of way, contract, covenants and other binding requirements regarding perpetual maintenance;
4. All required calculations for design of the temporary and permanent stormwater management systems.

Inspections

The inspection log will be completed by the CONTRACTOR for the construction site. Inspections at the site will be completed as follows:

- Once every seven (7) days during active construction and,
- Within 24 hours after a rainfall event greater than 0.5 inches in 24-hours.

The individual performing inspections must be trained as required by part I.E.V of the Permit. CONTRACTOR to provide OWNER with proof of training. Inspections must include stabilized areas, erosion prevention and sediment control BMPs, and infiltration areas. Corrective actions must be identified and date of correction must be noted as identified in Section I.E.V of the Permit.