

Birchwood Sidewalk and Drainage Work

General Work:

The work includes excavation, retaining wall, concrete flat work, storm sewer installation, grading, erosion control and restoration.

Materials:

All existing on-site topsoil in work zone shall be salvaged and re-used in restoration. All topsoil shall be screened and free of rocks larger than ½" diameter, and free of sticks and other wooded debris. Contractor shall provide sufficient topsoil to place a minimum thickness of 4" in all turf areas.

All storm grates shall be Bicycle Safe and ADA compliant.

Concrete sidewalk shall be placed a minimum of 5" thick, installed on 12" granular subbase or 6" base aggregate dense 1 1/4", include 6 x6 x10/10 Welded Wire Reinforcement. Concrete shall be 4,000 psi minimum compressive strength, and have air entrainment of 6% +/- 1%. Maximum slump shall be 4-inch.

Retaining Wall concrete shall be 4,000 psi, with air entrainment of 6% +/- 1%. Maximum slump shall be 4-inch. Retaining wall design shall be completed by contractor to withstand the soil pressures at the site. The exposed face of the concrete wall shall have a pattern by using a form liner or equal system to create a textured surface. The surface shall also be colored by staining or use of colored concrete. Contractor shall offer samples for acceptance to the owner for the texture and color proposed. The top of the wall shall have a smooth concrete capped appearance with edges rounded (1/2" radius). Walls exceeding 2 feet in height shall have a minimum of 48" chain link fence installed at the top of the wall. Fence shall have a top and bottom rail along with a commercial grade galvanized fabric.

Riprap shall be equal to Light Riprap (3" to 12" sized stone with fractured faces) per the WisDOT specifications, and shall be placed on Type R fabric.

Construction:

Install erosion control including silt fence.

Remove salvageable topsoil and store on-site with minimum of surface damage to areas beyond work site limits.

Remove existing sidewalk and structures and dispose of at approved facility. Remove and disposal of the three trees (approved by school district staff) along the sidewalk and removal of the rocks on West side of the school.

Install piping systems and drainage structures. Excavate along west side of gym wall, seal the block wall and install drain tile and tie into nearest drainage structure (catch basin). All catch basins shall have the bottoms fully grouted to seal the bottoms and connecting pipes. The flow lines and inverts shall be smoothly formed to ensure complete drainage after a rain event.

Grade the surface to desirable grades.

Install granular subbase.

Install retaining wall.

Install concrete sidewalks. Sidewalks along road shall be minimum of 6 feet wide. Water for the concrete shall not be added at job site unless the slump is less than workable. If it is necessary to add water to get the desired slump, put it all in at once, then run the mixer at full speed for two full minutes and record amount added. All concrete should be placed within 90 minutes from the time the truck was initially batched. Prolonged mixing time or waiting time on the job site results in a loss of air content and/or slump.

Complete finished grading and install riprap in discharge swale, topsoil, seeding, fertilizer and erosion mat.

Saw cut edges of all asphalt pavements damaged and repair surface with hot asphalt patches compacted in place.

Furnish and install a Concrete bike rack 15'x 10'.

Install three 6' x6' x6" concrete slabs at the three roof drains on south side of building.

The drain pipe that goes underground need to be insulated with 4 inches of rigid foam insulation and build a box around the drain pipe by adding a 12" vertical piece of 2" insulation extending downward at the edges of the 8 foot wide insulated panels.