

# **Example Materials Standards**

## PRODUCTS AND DESIGN GUIDELINES

### **DIVISION 2 - SITEWORK CONSTRUCTION**

#### **2.1) Mow curbs and Header boards**

Provide a 6 inch wide by 12 inch deep concrete mow curb where buildings are adjacent to lawn areas for ease of maintenance. Concrete mow curbs or an approved header board can to be used to separate divergent types of landscaping conditions when deemed necessary by the design team. Use of recycled plastic components should be considered for longevity and sustainability.

#### **2.2) Decomposed Granite**

Decomposed Granite (DG) is to be used in areas where landscaping and/or turf is not desirable due to long term maintenance needs or other District input. DG paths may be substituted for hardscape, when it is necessary to create a path of travel in field areas.

When used, areas are to be contained and level so as to prevent erosion, and/or being washed away into adjacent areas and/or into the storm drain system. Use a stabilizer, bonding agent in areas deemed to be at risk to erosion or in areas of high use.

DG surfacing to be igneous rock which has weathered in place or any sedimentary material principally derived from igneous rock and washed free of organic material and other deleterious materials. Material to conform to the following sieve gradation:

<u>Sieve Size</u>	<u>Percent Passing (by weight)</u>
3/8 inch	100
No. 4	100
No. 8	93
No. 16	65
<u>Sieve Size</u>	<u>Percent Passing (by weight)</u>
No. 30	44
No. 50	28
No. 100	16
No. 200	8.7

Resistance "R" values 82%, and the Sand Equivalent value 61%.

DG Paths and landscaping elements are to be enclosed within concrete curbs, 3x redwood headers or other forms of hardscape.

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### **2.3) Irrigation Systems**

Irrigation Systems products shall consist of the following, unless requested and approved in writing for any deviation:

<u>Use/Device</u>	<u>Manufacturer/Model #</u>
Bubbleheads	Hunter
Pop-up Sprinklers	Hunter PC-570Z XF
Rotors Sprinklers	Hunter – I-40, I-20 and PGH
Remote Control Valves	Hunter 100 Series
Gate Valves	Nibco #T-113-Bronze
Quick Couplers	Hunter
Backflow Device	Bebco 825Y/860
Main Line Pipe	2" and Smaller: Schedule 40 PVC
Lateral Line	Schedule 40 PVC
Sleeves	Class 315 PVC

All irrigation lines to have a minimum of 12" to 18" of minimum coverage after installation.

Place location of all controllers in areas accommodating to their use and in a location that is away from easy access and damage.

Use the appropriate sprinkler head for its application and to obtain the best coverage with the minimum water usage. Avoid designs/installations that spray hard surface areas and waste water.

### **2.4) Irrigation Control Systems**

Controllers: Hunter with PMR+Communications Strong Box

Controller Box: Strong Box Stainless Steel and Front Entry (Part of Greentech's package ETS-FSAV-200B) includes master valve and flow sensor.

### **2.5) Foundation Drainage System**

Foundation drainage systems are to be a molded sheet drainage panel system such as Amerdrain 500 by American Wick Drain Crop, Use as a base standard Hydroduct by WR Grace, or Greenstreak by Sheet Drain. Use a prefabricated, composite drainage system made with drainage core and filter fabric with a minimum flow rate of 15 gpm/foot at 1 hydraulic gradient and 3,600 psf normal pressure.

Verify need and/or use of drainage system with Geotechnical Report and civil engineer and/or architect. Use drainage system at the perimeter of all building foundations, and critical site walls (retaining, etc,) as recommended by civil engineer and/or architect, and with the approved of the District. Unless directed by District, use of drainage system with landscape planter walls, remote non-critical site walls, etc. shall not be required.

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### **2.6) PVC Cleanouts**

Cleanouts are to have a PVC body with a PVC threaded plug with fitting and riser to cleanout of the same material as sewer pipe. Cleanouts are to be located in areas of easy access for future maintenance in either floor or if necessary, a wall condition.

### **2.7) Concrete Pull Boxes**

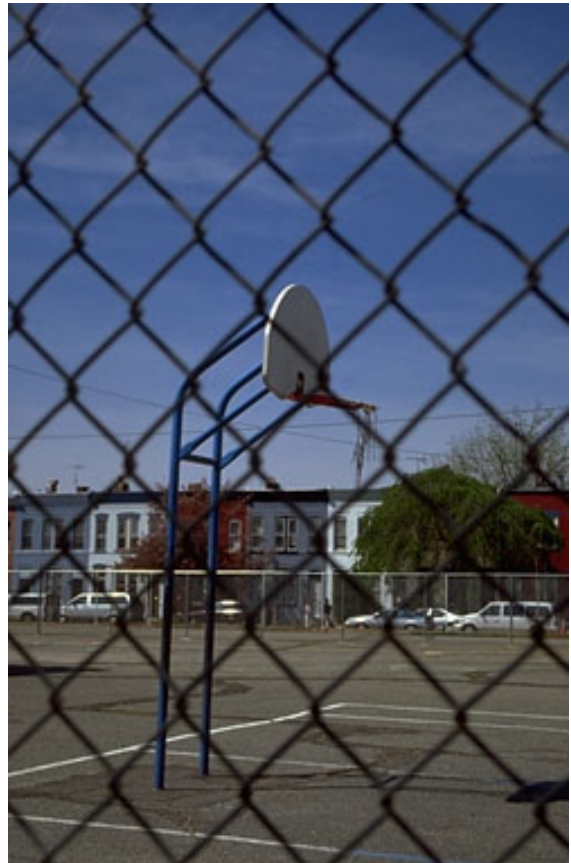
Concrete pull boxes shall be designed and specified to be equipped with heavy-duty steel bolt down cover plates. Boxes are to be placed away from pedestrian and vehicular circulation paths if at all possible (if placed within a vehicular traffic path specify adequate load bearing box and cover plate, etc.). All cover plates and/or grates within traffic circulation paths of travel are to meet all required ADA compliance criteria.

### **2.8) Chainlink Fences & Gates**

All fencing is to be designed for appropriate wind loading and its specific use. Use round steel pipe, standard weight (unless otherwise directed due to design criteria needs), schedule 40 and hot dipped galvanized after fabrication.

Minimum perimeter fence height is to be 8'-0" unless otherwise approved by District. At perimeter fencing conditions poles are to be 10 feet maximum spacing with the height to be based on the specific situation/criteria, but never greater than 12 feet as a single piece. Always use a top and bottom rail unless otherwise directed in writing by the District (some locations away from use/activities by individuals may be allowed to use a bottom cable in lieu of a rail). The fabric is to be a galvanized 9 gage material having no more than a 1¾-inch square opening. Smaller fabric opening sizes are acceptable, but only to be used with the District's approval.

At all Athletic Areas always use a top and bottom rail (if fence is 10'-0" or higher, a mid-span support rail is to be used and spaced as necessary depending upon height of fence and



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surrounding use). The fabric is to be a galvanized 9 gauge steel material with no larger than 1 ¾ inch square openings (smaller fabrics such as a security sized 1-inch square opening must be approved by the District). Fence heights less than 6 feet high in areas of sport activities shall not be acceptable unless approved by the District in writing.

Do not design chain link fence lines to intersect buildings at approximately 90° angles so as to avoid providing easy climbing/access to a buildings roof. If a perpendicular condition must occur, use roof overhang, and/or the smaller security mesh adjacent (maximum 10 foot extension from building) to the building to deter access.

At Special Areas, where specific design intent is to be accomplished, the use of a vinyl color coated fabric, a special fence height, and/or fabric opening size will be considered by the District, but only after the consultant has obtained an approval by the District for the specific design being considered.

Hinges at all chain link gates with a gate leaf size of no more than 12 feet long and/or 8 feet high, shall have a heavy duty chain link hinge as necessary to meet the design intent. All gate leaf sizes greater than 12 feet wide and/or 8 feet high shall have a custom designed hinge with zirk fittings, and welded if structurally necessary to carry the size and weight of the gate. Design shall be reviewed and detailed by a structural engineer.

### **2.9) Ornamental Fencing**

Use of a pre-designed and manufactured fencing system is acceptable if approved by District prior to bidding and installation. Ornamental metal fencing is to be used in limited cases as per a specific design treatment dictates and the District approves.

Fencing is to be galvanized or anodized, with drain holes in pickets, to minimize rusting. Fencing can be custom designed but is to be limited to tube steel and all gate assemblies must have a motor drive where size or need dictates. All rolling gates to have safety features including wheel cover guards.

