



*City of Angleton*

# **PARKS & RECREATION**

## **DESIGN STANDARDS MANUAL**

MAY 2022







## DESIGN STANDARDS MANUAL

City of Angleton Department of  
Parks & Recreation

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**Kimley»Horn**



# INTRODUCTION

The City of Angleton, Texas Park System is comprised of approximately 278.65 acres of public open space, 17 discrete individual sites, and serves a diverse demographic of approximately 20,000 citizens.

Stewardship of the system is the responsibility of the City's Department of Park and Recreation. This effort includes planning, management, operations, and maintenance related to active and passive components of the system such as athletic fields, playgrounds, recreation courts, trails, pools, and natural areas.

This Design Standards Manual (Standards) establishes minimum design, construction and performance expectations for City Park features. The Standards are intended to sustain-life cycle resources investment in public space by informing/guiding open space planning capital improvements, and operational capacity. The Standards are a reference instrument for selection of materials, products and systems that integrate City criteria with contemporary industry standards. Criteria are established for each Standard by performance/function, safety, environmental impact, and anticipated operational resources needs.

Although first-established in June 2022, the Standards are a living-document that will periodically be re-evaluated and updated coincident with industry advancements, changes to practices related to the City's open space system and evolving recreation needs.

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# PARK STANDARDS

## 01. PARK DEVELOPMENT STANDARDS

- › Signature Park (SP)
- › Metro Park (MP)
- › Community Park (CP)
- › Neighborhood Park (NP)
- › Natural Area (NA)
- › Special Use Park (SU)
- › Linear Park (LP)
- › Urban Plaza (UP)
- › Undeveloped Park or Passive Park (UD)
- › Recommended Features by Classification

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- › Bike Rack
- › Drinking Fountain
- › Flagpole
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- › Pet Fountain
- › Pet Waste Bag Dispenser
- › Picnic Table
- › Trash Receptacle
- › Bollard

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# 01. PARK DEVELOPMENT STANDARDS



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# Signature Park (SP)



## DEFINITION

A municipal outdoor recreation facility that is unique to the Angleton parks and recreation system. These sites serve a variety of ages and emphasize family and large organized group activities. Signature Parks often include facilities and supporting features that are of special use or single purpose such as fairgrounds, outdoor theaters, festivals or special-event areas. A user experience of up to a full-day is typically anticipated.



## SIZE

Greater than 100 acres

## STAFFING

Staffed with full-time or part-time municipal employees

## UTILITIES

Water, electric/power, telephone, sewer, ITS, stormwater management facilities

## UNIQUE FACILITIES

Substantial waterfront or other distinctive amenity

## TYPICAL FACILITIES

Multiple athletic fields and/or special events area, basketball, tennis, and volleyball courts, multiple playground areas, park trails, benches, multiple restrooms, Wi-Fi, vending machines, or concession areas, multiple picnic areas, large shelters, grills, large parking areas, specialized facilities for staff, stormwater management facilities, and maintenance buildings

Signature Park typical amenity.



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# Metro Park (MP)



Dugout Area at Freedom Park

## DEFINITION

A municipal outdoor recreation facility that provides a high-level of features and uses. These sites serve a variety of passive and active uses and feature multiple game-level athletic fields, skate parks, and/or disc-golf courses. Multiple age groups are served though organized sports programming while balancing protection of natural areas. A user experience of three-four hours is typically anticipated.



Pathway to playground at Freedom Park

### SIZE

50.1 to 100 acres

### STAFFING

Staffed full-time with municipal employees

### UTILITIES

Water, electric/power, telephone, sewer, stormwater management facilities

### EXISTING SITES

- > Freedom Park
- > Bates Park
- > BG Peck Complex

### UNIQUE FACILITIES

Multiple athletic fields, skate parks, and/or disc golf courses.

### TYPICAL FACILITIES

Basketball, tennis, volleyball courts, multiple playgrounds, large open play areas, park trails and benches, Wi-Fi, restrooms and vending machines or concession areas, multiple picnic areas, large shelters, and grills, large parking areas, kiosks, stormwater management facilities, and staff/maintenance buildings



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# Community Park (CP)



▼ Playground at Dickey Park

## DEFINITION

A municipal outdoor recreation facility that provides a mid-range level of features and uses. These sites provide a balance of organized sports active uses and natural area based passive areas for various age groups. A user experience of two-three hours is typically anticipated.



▼ Playground and Open Space at Dickey Park

## SIZE

15.1 to 50 acres

## STAFFING

Community parks are not generally staffed full-time. These parks may be staffed during programmed events by municipal staff or private/non-profit organizations.

## UTILITIES

Water, electric/power, telephone, sewer, ITS, stormwater management facilities

## EXISTING SITES

- > Lakeside Park
- > Dickey Park

## TYPICAL FACILITIES

Multiple athletic fields, basketball, tennis, and volleyball courts, playground areas, park trails, benches, Wi-Fi, restrooms, vending machines, or concession areas, multiple picnic areas, large shelters, and grills, large parking areas, specialized facilities for staff, stormwater management facilities, and maintenance buildings



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# Neighborhood Park (NP)



Playground at Masterson Park

## DEFINITION

A municipal outdoor facility that provides a basic level of features and uses. These sites are limited to at-will group activities that serve various age groups with an emphasis on youth. Based on access and proximity of nearby residential areas, there is limited parking in comparison to higher level parks. Program features are typically customized based on nearby user community. A user experience of 1-2 hours is typically anticipated.



Playground at Masterson Park

## SIZE

Small Neighborhood Park:

0.25-5 acres

Large Neighborhood Park:

5-15 acres

## STAFFING

These parks are not staffed.

## UTILITIES

Water, electric/power, telephone, sewer, ITS, stormwater management facilities

## EXISTING SITES

- > Masterson Park
- > Brushy Bayou Park
- > Peach Street Detention

## UNIQUE FACILITIES

Unlit practice diamonds are rectangular athletic fields, basketball, tennis, and/or volleyball courts, playground equipment, open play areas, park trails, benches, small shelters, picnic tables, and stormwater management facilities



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# Natural Area (NA)



## DEFINITION

A municipal outdoor area characterized by indigenous vegetation, wildlife and visual character in its natural state. These sites include sites of varying scale throughout the City. Retention of a natural state, visual relief and passive recreation such as informal trails/hiking birding, and environmental education are primary considerations. Passive waterway access, fishing, cultural/environmental site interpretation, and regional trail connectivity may be additional uses.



Natural Area

## SIZE

There are no specific standards for size or acreage. Sites of sufficient size to protect cited resources and provide for appropriate use.

## STAFFING

Natural areas can be staffed full-time or part-time; also, these parks may be staffed during programmed events or activities by municipal staff or private/non-profit organizations.

## UTILITIES

Water, electric/power, sewer, stormwater management facilities

## EXISTING SITES

- > Northern Tract at Freedom Park/523 & Freedom Park
- > Austin Town Site

## UNIQUE FACILITIES

Natural or cultural elements to be preserved and/or interpreted.

## TYPICAL FACILITIES

Park trails, overlooks, benches, water access, wayfinding signage, interpretive signage, and picnic tables.



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# Special Use Park (SU)



Officer Cash Memorial Dog Park

## DEFINITION

A municipal outdoor or indoor facility dedicated to intensive singular or focused combined uses. These sites may include competitive athletic complexes for diamond/rectangular field sports, golf, recreation centers, and active water/boating access. In addition to standards cited herein, such uses may be subject to specialized design and facility service standards consistent with the Department of Parks and Recreation Strategic Plan.



Special Use Park typical amenity.

### SIZE

Varies

### STAFFING

Special use sites are typically staffed full time with municipal employees.

### UTILITIES

Water access sites all have water, electric/power, telephone, and sewer

### EXISTING SITES

- > Officer Cash Memorial Dog Park

### SPECIAL USE SITE TYPES

- > Athletic Complexes
- > Recreation Centers
- > Water Access Sites
- > Resort Area Parks
- > Gateway Parks
- > Dog Parks
- > Skate Parks
- > BMX Park



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# Linear Park (LP)



## DEFINITION

A municipal outdoor facility that provides or connects recreation, open space and community resources. These facilities are typically significantly greater in length than width and characterized by a primary trail with secondary connections, sequence of open spaces, extended viewsheds and a combination of active and passive uses. Multi-modal uses such as walking, biking and skateboarding are typical conditions of pass-through travel.



Linear Park typical amenity.

## SIZE

A minimum 30 feet corridor width is recommended for linear parks. Park width may vary per contextual constraints or as approved by the Director of Parks and Recreation.

## STAFFING

Linear Parks are typically not staffed.

## UTILITIES

Water, electric/power, telephone, sewer, ITS, stormwater management facilities

## TYPICAL FACILITIES

Trails, overlooks, benches, bike racks, picnic tables, kiosks, and shelters (if appropriate)



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# Urban Plaza (UP)



## DEFINITION

A municipal outdoor space located among dense commercial or institutional building area. The space may be located on public or private property, at the intersection of important streets, civic uses or commercial activities. The space is characterized by a comparatively high proportion of paved surfaces, promotion of social interaction and ability to accommodate large scale civic events and uses.



## SIZE

5 acres of less

## STAFFING

Staffed only during events

## UTILITIES

Water, electric/power, telephone, sewer

## EXISTING SITES

> Veteran's Park

## UNIQUE FACILITIES

Fountains, amphitheaters, seat walls, decorative pavers, memorial, outdoor art feature

## TYPICAL FACILITIES

Tree plantings, outdoor cafe seating, benches, Wi-Fi, transit stop pedestrian scale lighting, and multi-modal access.



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# Undeveloped Park or Passive Park (UD)



Angleton Recreation Center

## DEFINITION

Parcels or a collection of land parcels that may be acquired by the City for grading, utility or drainage purposes that are held as easements or direct ownership. The land is typically not improved for recreation purposes but may be subject to future use(s) that are presently undefined. The sites typically remain in a natural state with exception of interpretive signs and informal use accessways.



Undeveloped parcel at Rueben Welch Park

## SIZE

Varies

## STAFFING

These parks are not staffed.

## UTILITIES

Water, lighting/electrical/power, telephone, sewer

## EXISTING SITES

- > Rueben Welch Park
- > Municipal Pool
- > Western Avenue Detention Area
- > Angleton Recreation Center
- > Bryan Street Park Detention Area

## UNIQUE FACILITIES

Environmental education signage

## TYPICAL FACILITIES

Trees, shrubs, grasses, and littoral planting material, softscape materials

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# Recommended Features by Classification

	Signature Park (SP)	Metro Park (MP)	Community Park (CP)	Neighborhood Park (NP)	Natural Area (NA)	Special Use Park (SU)	Linear Park (LP)	Urban Plaza (UP)	Undeveloped Park or Passive Park (UD)
Benches	X	X	X	X	X	X	X	X	X
Bike Racks	X	X	X	X	X	X	X	X	X
Drinking/Pet Fountain	X	X	X	X	X	X	X	X	
Flagpole	X	X						X	
Grills	X	X	X	X					
Pet Waste Bag Dispenser	X	X	X	X	X	X	X	X	
Picnic Tables	X	X	X	X	X		X		
Trash Receptacles	X	X	X	X	X	X	X	X	
Bollards	X	X	X	X	X	X	X	X	X
Fencing	X	X				X			X
Walking/Jogging Paths	X	X	X	X	X		X		X
Trail Connections	X	X	X	X	X		X		X
Parking Lot	X	X	X	X	X	X	X		
Picnic Shelters	X	X	X	X					
Restrooms	X	X	X	X			X		
Maintenance Building	X	X	X						X
Playground	X	X	X	X					
Ball Courts	X	X	X	X					
Ball Fields	X	X							
Disc Golf	X	X							
Horseshoe Pit	X	X	X	X					
Signage	X	X	X	X	X	X	X	X	X
Security Lighting	X	X	X	X		X	X	X	X
Landscape	X	X	X	X			X	X	
Irrigation	X	X	X	X			X	X	

Standard Recommendations per Park Type



Playground at Dickey Park

## PURPOSE

The chart above identifies recommended characteristics per park type. Park improvements may vary depending on park topography, size, environmental conditions, contextual constraints, community input, City program needs, and as approved by the Director of Parks and Recreation.

## GENERAL INFORMATION

Park designs to provide access for modes of transportation including vehicular, bicycle, and pedestrian. Site to accommodate ADA accessibility to the fullest extent practical.

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## 02. SITE FURNISHINGS



- › Bench
- › Bike Rack
- › Drinking Fountain
- › Flagpole
- › Grill
- › Pet Fountain
- › Pet Waste Bag Dispenser
- › Picnic Table
- › Trash Receptacle
- › Bollard



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# Bench



Tree Top Products, Champion Bench (Surface Mount)

## STANDARD MODEL

Tree Top Products, Champion Bench (6 foot length)

- > Surface Mount (2ZK2607)
- > In-Ground (2ZK2608)

Finish: Premium Wood Grain  
Wood: Ipe

OR CITY APPROVED EQUAL

## PURPOSE

Locate park benches intermittently along paths and trails adjacent to activity areas.

## GENERAL INFORMATION

A standard, free-standing bench is required to have back support.

Place park benches at a rate of 1 per 2 acres of greenspace, but no less than 2 per park.

## MATERIALS AND FINISH

Benches are to be constructed of a sturdy, durable, metal such as galvanized steel, ductile cast iron, or other metals designed for commercial and exterior use.

Metal finishing is to be of high-quality, permanently affixed powder coating, applied through a heat-finished process.

Use a black color for metal elements of the bench.

Metal products are to have smooth welds, joints, and corners. Joint fasteners are required to be embedded or sealed.

Benches are required to contain a minimum of 70% post-consumer steel.

## FEATURES

Side arms and center bench arms may be added as approved by the Director of Parks and Recreation.

Memorial plaques may be included on benches as approved by the Director of Parks and Recreation.

## INSTALLATION

Affix benches to a hardscape surface (concrete, pavers, etc.).

Provide 3 feet 4 inches minimum hardscape clearance on the accessible sides of benches.

Hardscape surfaces must provide additional accessible companion space directly adjacent to the bench.

Locate trash or recycling cans 5 feet minimum from a bench.

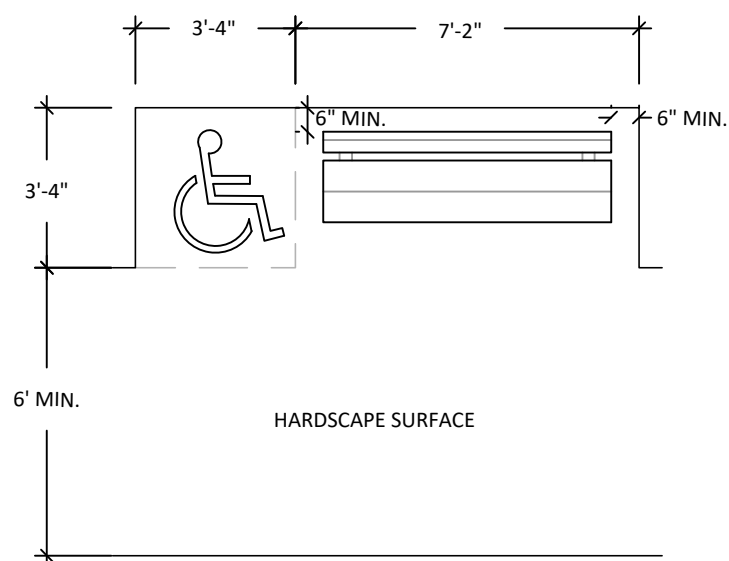
Locate bench in seasonally shaded areas when possible.

## LIFE CYCLE EXPECTATIONS

A 10 year warranty is required.

Benches are anticipated to require replacement after 20 years of normal and ordinary use.

# Bench



▼ Bench with ADA space, plan view - Not to Scale





# Bike Rack



MADRAX Metro Bike Rack

## STANDARD MODEL

Madrax, Metro Bike Rack  
Finish: Galvanized

OR CITY APPROVED EQUAL

## PURPOSE

Provide bike racks at all parks and recreation facilities to support cycling transit.

## GENERAL INFORMATION

Bike racks are to be Madrax Metro Bike Rack, "Inverted U" model type.

## MATERIALS AND FINISH

Bike racks are to be hot dipped galvanized steel and powder-coated.

Metal products must have smooth welds, joints, and corners.

## FEATURES

Alternative bike racks are subject to approval by the Director of Parks and Recreation.

Gray is the preferred bike rack color, but alternatives may be approved by the Director of Parks and Recreation.

## INSTALLATION

Mount bike racks on concrete, consistent with the manufacturer's recommendations.

Set bike racks must to be firm and plumb.

Where required, install steel shims prior to anchoring in place. Base plates more than 3/8 inch from grade require high-strength epoxy non-shrink grout.

Install multiple racks parallel with adjacent units, 3 feet apart.

Locate bike racks so that parked bikes do not impede pedestrians.

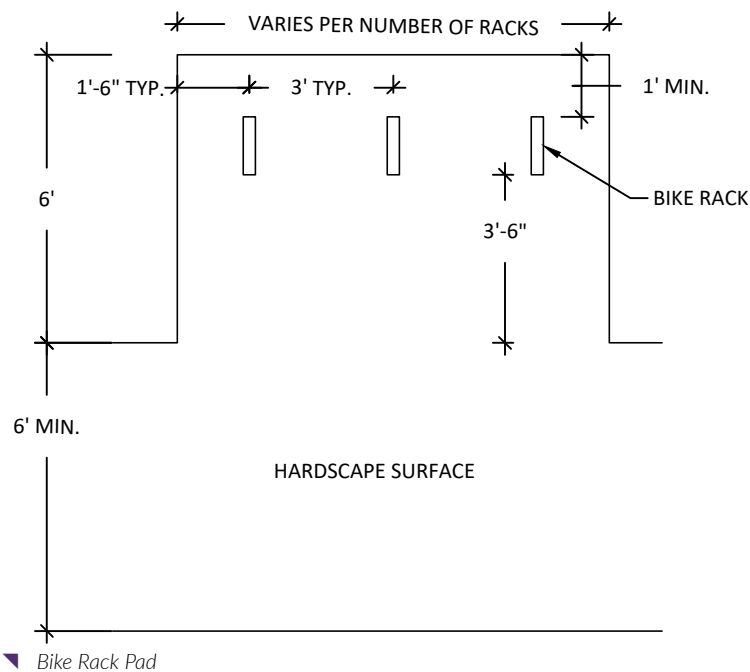
Bike racks are to be located 3 feet - 6 inches minimum from parallel or perpendicular walls.

## LIFE CYCLE EXPECTATIONS

A 10 year minimum warranty is required.

Bike racks are anticipated to require replacement after 20 years of normal and ordinary use.

# Bike Rack





# Drinking Fountain



Drinking fountain with bottle filler

## STANDARD MODEL

Most Dependable Fountain Inc.

> Model 10145

Satin finish stainless steel bowl

Color: Stainless Steel or Black powder-coated galvanized steel pedestal

OR CITY APPROVED EQUAL

## PURPOSE

Provide drinking fountains in parks where water supply is desirable, particularly near active park sites and playgrounds.

## GENERAL INFORMATION

Provide fountains with standard and wheelchair accessible drinking options.

Drinking fountains must maintain 2 feet 3 inch minimum vertical clearance and 2 feet 10 inch maximum vertical clearance from adjacent finished grade.

The drinking bubbler height is to be 3 feet 2 inch maximum vertical distance from adjacent grade.

Drinking fountains are to be activated by a low-weight, 5 lbs or less, push-button operation mechanism located below the bowl.

Include a vandal proof panel for access to interior systems and filters on all drinking fountains.

Locate fountains along pathways on a separate concrete pad with ADA accessibility.

## MATERIALS AND FINISH

Drinking fountain to be comprised of standard steel or stainless steel for commercial and exterior use.

Drinking fountains are to be of black powder coat or stainless steel finish. The bubbler, bowl, and buttons are to be satin finish stainless steel.

Metal products must have smooth, weld joints and corners.

Hinges, latches, and mechanical parts are to be weather resistant.

Include bottle fillers and hose bib on drinking fountains.

## INSTALLATION

Surface or in-ground mount drinking fountains to hardscape surfaces per manufacturer's recommendations.

Provide a 3 feet - 4 inch minimum horizontal dimension of hardscape surface at the accessible perimeter of each fountain.

Install drinking fountains by a licensed plumber consistent with applicable City and State codes.

Slope the slab to shed water.

## LIFE CYCLE EXPECTATIONS

A 1 year minimum warranty is required.

Drinking fountains are anticipated to require replacement after 5 years of normal and ordinary use.



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# Flagpole



▼ Flagpoles

## FLAGPOLE LOCATION

Flagpole locations may include but are not limited to: parks, ball fields, and municipal and or institutional buildings

## PURPOSE

Install flagpoles to display local, state, and federal flags.

## GENERAL INFORMATION

Use flags and flagpoles consistent with the United States Flag Code.

Flagpoles are to be 30 feet maximum vertical height unless otherwise approved by the Director of Parks and Recreation.

The pulley system is to be interior and accessed by a locked panel at the base of the pole.

## MATERIALS AND FINISH

Construct flagpoles of seamless extruded aluminum alloy tubing, with a minimum wall thickness of 5/32 inch, and brushed satin finish.

Flagpoles are to be gray in color.

Flagpoles and flashing collar must have a directional, medium satin polish and be sealed with a clear, hard-coat wax.

Flagpoles are to be designed to fly a 6 feet by 10 feet American flag, a 5 feet by 8 feet Texas State flag, and a 4 feet by 6 feet City of Angleton flag in combination.

## INSTALLATION

Locate flagpoles not to conflict with active uses or with existing or proposed vegetation. Locate flagpoles adjacent to accessible hardscape surfaces.

Install flagpoles in locations that do not disrupt pedestrian traffic. Provide a 3 feet 4 inch minimum horizontal width hardscape surface adjacent to accessible pathway.

Concrete footings must be consistent with manufacturer's recommendations and designed by a professional engineer. Slope the top of footing to shed water.

Design flagpole footings for wind loading consistent with City of Angleton code.

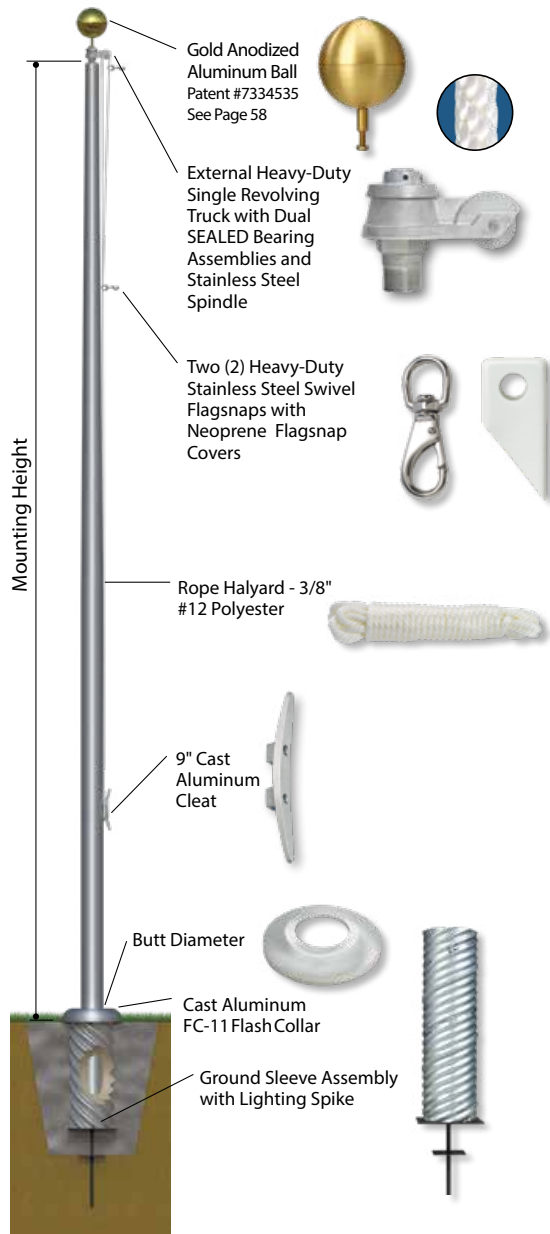
## LIFE CYCLE EXPECTATIONS

A 10 year minimum warranty is required.

Flagpoles are anticipated to require replacement after 20 years of normal and ordinary use.

# Flagpole

## STANDARD FLAGPOLE ACCESSORIES - 6" to 12" BUTT DIAMETERS

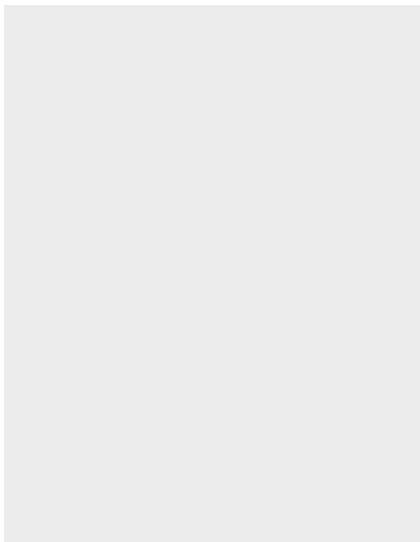


▼ Flagpole





# Grill



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## PURPOSE

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## GENERAL INFORMATION

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## MATERIALS AND FINISH

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## FEATURES

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## INSTALLATION

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## LIFE CYCLE EXPECTATIONS

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# Pet Fountain



▼ Drinking fountain with pet bowl and bottle filler

## STANDARD MODEL

Most Dependable Fountain Inc.

- > Model 10145 w/ Pet Fountain
- > Model 300 (when accessibility requirements and pet water systems conflict)

Satin finish stainless steel bowl

Color/Finish: Black powder coated and stainless steel

OR CITY APPROVED EQUAL

## PURPOSE

Install a drinking fountain with a ground level dog fountain in parks with dedicated pet areas and other areas receiving large amounts of pedestrian traffic.

## GENERAL INFORMATION

Only authorized pet fountains may be attached to standard drinking fountain systems.

Refer to Drinking Fountain standard for other applicable standards.

## MATERIALS AND FINISH

Pet fountain to be comprised of standard steel or stainless steel for commercial and exterior use.

Pet fountains are to be of black powder coat or stainless steel finish. The bubbler, bowl, and buttons are to be satin finish stainless steel.

Metal products must have smooth welds, joints and corners.

Hinges, latches and mechanical parts are to be weather and corrosion resistant.

Include bottle fillers and hose bib on drinking fountains.

## INSTALLATION

Surface or in-ground mount drinking fountains to hardscape surfaces per manufacturer's recommendations.

Provide a 3 feet - 4 inch minimum horizontal dimension of hardscape surface at the accessible perimeter of each fountain.

Install drinking fountains by a licensed plumber consistent with applicable City and State codes.

Slope the slab to shed water.

## LIFE CYCLE EXPECTATIONS

A 1 year minimum warranty is required.

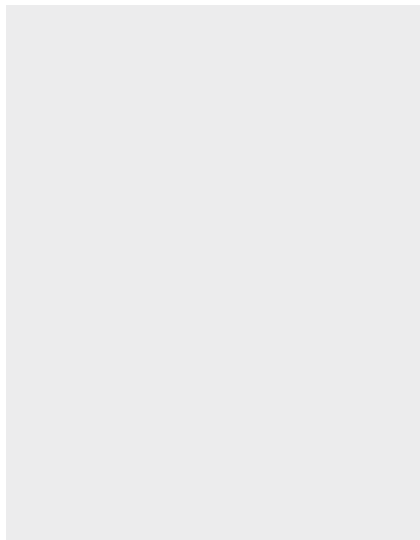
Pet fountains are anticipated to require replacement after 5 years of normal and ordinary use.

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# Pet Waste Bag Dispenser



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# Picnic Table



Tree Top Products Standard Traditional Picnic Table



Tree Top Products Accessible Traditional Picnic Table

## STANDARD MODEL

Tree Top Products, Traditional Recycled Plastic Picnic Table (8 foot length)

- > Standard Model (1ZK5530)
- > Accessible (1ZK5643)

Color: Brown Table w/ Black Frame

OR CITY APPROVED EQUAL

## PURPOSE

Locate picnic tables in designated areas of parks.

## GENERAL INFORMATION

Tables must be tip resistant.

Locate tables to permit 'walk through' access.

Accessible picnic table are to be placed at a rate of 1 per 5 acres on concrete pads, but no less than 1 per park.

Related Standards: Trash Receptacle

## FEATURES

Picnic tables are available in multiple configurations; the standard rectangle with side benches is preferred.

Benches can be configured as an 8 feet long table with 6 feet long benches for compliance with ADA.

## MATERIALS AND FINISH

Tables to use galvanized steel or other durable metals designed for exterior commercial use.

Metal finishing is to be a high-quality, permanently affixed powder coating done through a electrostatic process, or high performance thermoplastic finish.

Metal products to have smooth welds, joints, and corners. Embed joint fasteners or seal to avoid corrosion and personal injury.

Use black powder coated or stainless steel black color and finish. Alternative colors are subject to approval by the Director of Parks and Recreation.

Table tops and seats are to be extruded, UV resistant, recycled high-density polyethylene.

## INSTALLATION

Mount tables with anchor bolts, or consistent with the manufacturer's recommended in-ground method.

Picnic tables must be accessible by hard surface paths.

Slope hard surface pad for a minimum 1% cross slope and provide minimum of 3 feet 4 inches of clearance on all sides and a minimum of 5 feet on the accessible side.

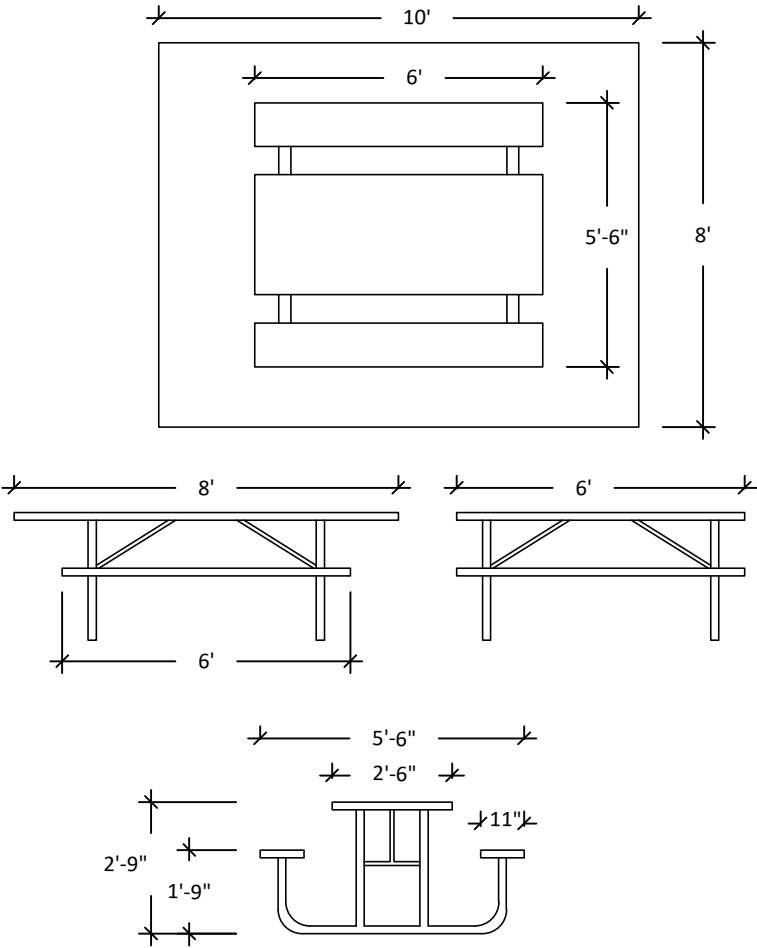
Locate tables in seasonal shade where possible. Locate a trash/recycling can within 15 feet, but 5 feet minimum from the picnic table.

## LIFE CYCLE EXPECTATIONS

A 10 year minimum warranty is required.

Picnic tables are anticipated to require replacement after 15 years of normal and ordinary use.

# Picnic Table

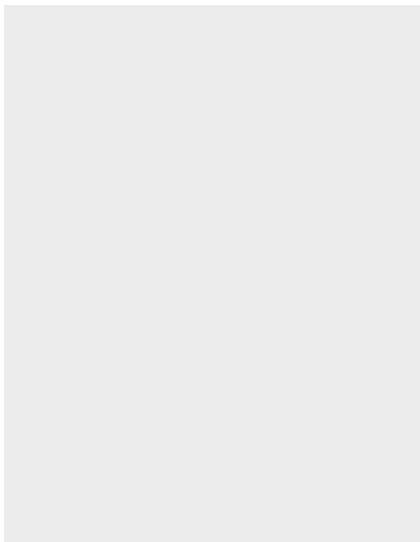


Typical Picnic Table and Concrete Pad Dimensions





# Trash Receptacle



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## INSTALLATION

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## LIFE CYCLE EXPECTATIONS

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# Bollard



Preferred Natural Bollard



Alternative Metal Bollard

## ALTERNATIVE BOLLARD

Manufacturer: Post Guard

Model: 6.6" D x 36" H  
Stainless Steel Bolt Down

## PURPOSE

Use bollards to limit unauthorized vehicular traffic without restricting the movement of pedestrian and cyclists. Natural bollards is the preferred movement restriction method.

## NATURAL BOLLARD

## MATERIALS AND FINISH

A licensed landscape architect in the state of Texas to approve condition of natural bollards.

## INSTALLATION

Natural bollards spacing is approved by the Director of Parks and Recreation.

Install per details provide by a licensed landscape architect or professional engineer in the State of Texas

If the design accommodates other obstructions, such as light poles or signage, these elements may contribute to the bollard spacing as approved by the Director of Parks and Recreation.

## LIFE CYCLE EXPECTATIONS

A 2 year minimum warranty is required.

Natural bollards are anticipated to require replacement only if damaged.

## METAL BOLLARD

## MATERIALS AND FINISH

Finished assembly must have smooth welds, joints, and corners.

Hinges, latches and moving parts must be weather resistant and lubricated at time of purchase.

## FEATURES

In instances where a chain will provide an additional barrier, an eye-bolt is required.

Mounting options are permanent embedded, surface bolted, and/or sleeved/removable.

## INSTALLATION

Metal bollards spacing is 3 feet - 6 inches minimum horizontal distance.

Collar relief from the surface cannot exceed 1/4 inch.

Where authorized and emergency access is needed, removable install is acceptable. Install a sleeve/casing 3 feet vertical depth minimum below finish grade. Secure removable bollards with lock and key.

## LIFE CYCLE EXPECTATIONS

A 5 year minimum warranty is required for metal bollards.

Metal bollards are anticipated to require replacement after 15 years of normal and ordinary use.

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## 03. FENCING



- › Chain Link Fence
- › Metal Fence
- › Wood Enclosure

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# Chain Link Fence



Chain link fencing

## GENERAL INFORMATION

Fence heights vary per use: 4 feet maximum height (playground and use-separation fences), 4 feet (baseball/softball field perimeter for ages 12 and under), 6 feet (baseball/softball field perimeter for ages 13 and up), and 12 feet (ball courts). Additional 15 feet maximum temporary netting is permitted around baseball/softball fields.

Fenced park areas greater than one-half acre must have two entry points minimum.

Fences must not prevent movement of wheelchairs and other devices along accessible path.

Pedestrian entrances are to be 4 feet minimum horizontal width.

## MATERIALS AND FINISH

Chain link fences are to be matte woodland/dark green in color or matte black in color.

Chain link fabric is to be PVC coated, Class 2b, thermally fused and bonded.

Chain link fabric is to have a core wire diameter of 9 gauge. The diamond mesh is to be 2 inches without knots or ties, except as knuckling on the top and bottom of the fabric.

Fence end and corner posts are to be 6 inches outside diameter. Line posts are to be 2-1/2 inches outside diameter. Rails/braces are to be 1-5/8 inch outside diameter.

Chain link fence must include a top and bottom rail. Fences over 6 feet in height must also include a middle rail.

## FEATURES

Fences surrounding diamond outfields must use a "Poly-Cap" system on the top rail.

Gates are to have a lockable fork latch, with a cane rod on double gates. Gates must include a 2 feet horizontal width threshold the full length of the gate and posts.

Pedestrian gates must be single gates 4 feet minimum width. Gate hinges are to be attached to gate posts via clamps and pins that ensure hinges do not rotate on the post.

Maintenance access gates are to be double gates 16 feet horizontal width. Width variations must be approved by the Director of Parks and Recreation. Hinges are to be attached to gate posts via clamps and pins that ensure hinges do not rotate on the post.

Dog parks must include double entrance gates in order to provide leashing area.

## INSTALLATION

Fence posts and supports must be located outside the field of play for athletic facilities.

Fences must be permanently mounted into concrete footings, 1 foot-6 inches minimum diameter, 3 feet minimum depth. Top of footing is to be sloped to shed water.

Footings must be installed flush to adjacent finish grade.

Fence fabric knuckling is to be installed 1-1/2 to 2 inches height above surrounding finish grade.

## PURPOSE

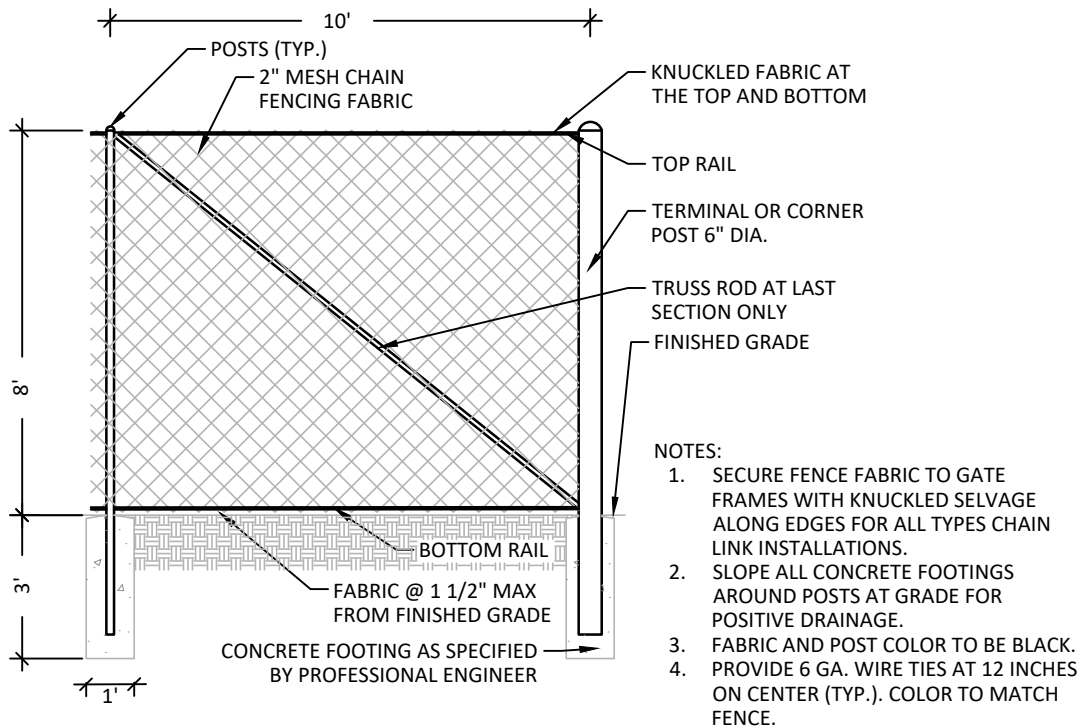
Chain link fences are to be used to separate athletic fields, ball courts, playgrounds and active recreation play areas from adjacent uses, and to secure property boundaries.

## LIFE CYCLE EXPECTATIONS

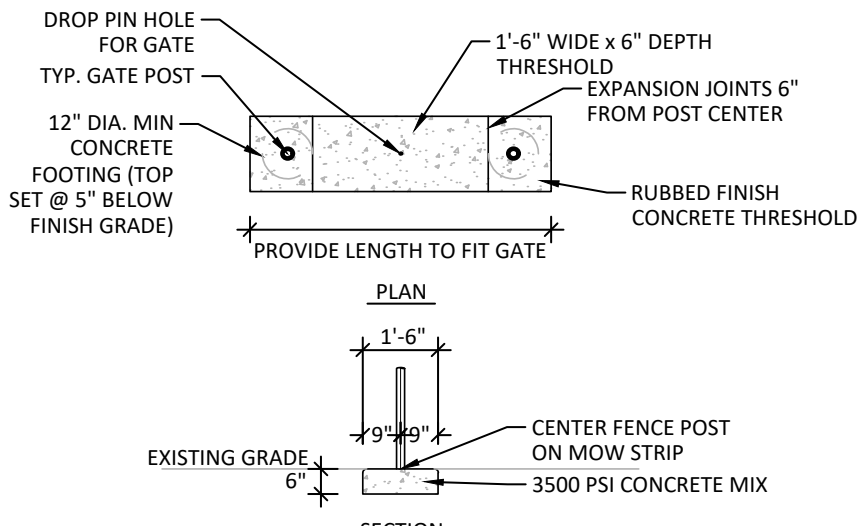
A 5 year minimum warranty is required.

Chain link fencing is anticipated to require replacement after 15-20 years of normal and ordinary use.

# Chain Link Fence



Chain Link Specification

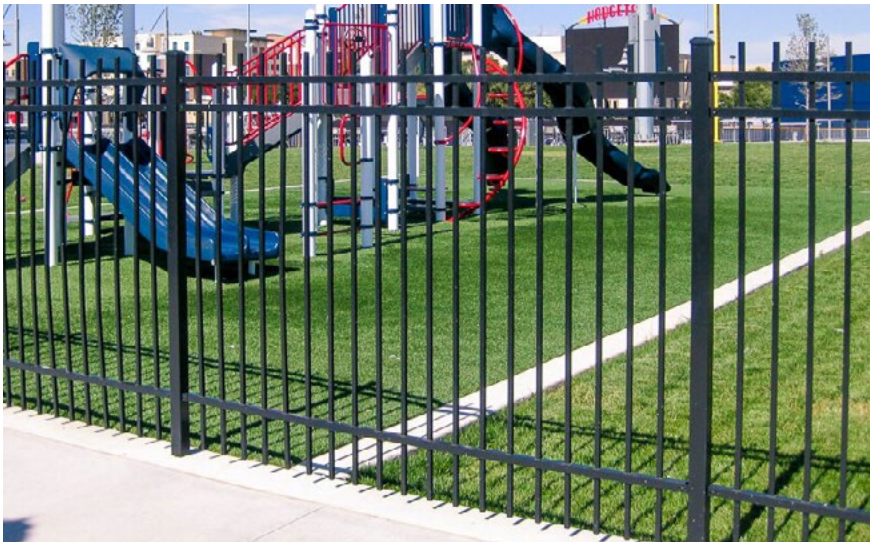


Chain Link Concrete Threshold





# Metal Fence



▼ Metal fencing

## METAL FENCING

Ameristar Fencing - Echelon Plus

### PURPOSE

Metal fencing is to be used in historic districts and special conditions of park use.

### GENERAL INFORMATION

A metal fence can not exceed 6 feet vertical height.

For use-separation, 3 feet - 6 inches minimum vertical height is acceptable.

Fences must not prevent movement of wheelchairs and other devices along accessible paths.

Pedestrian entrances must be 4 feet minimum horizontal width.

### MATERIALS AND FINISH

Metal fences must be black in color.

Fencing is to consist of 2-1/2 inch square line posts with a 14 gauge wall thickness, constructed of steel or other durable metal designed for exterior use.

Pickets are to be 3/4 inch solid bars constructed of steel or other durable metal designed for exterior use.

Corner and terminal posts are to be square steel tubing 3 inches square, with a 3/16 inch wall thickness.

### FEATURES

Decorative post caps must include a newell post ball cap sized to fit post top.

Fences are to include ornamental steel rings at a dimension of 3-7/8 inches outside dimension or sized to fit picket spacing.

Access gates are to include a lockable fork latch. Double gates must include a cane rod. Gates must include diagonal bracing.

### INSTALLATION

Shop drawings for fabrication are required to be approved by the Director of Parks and Recreation.

Fences must be permanently mounted in concrete footings.

Footings must be installed flush to adjacent finish grade. Top of footing is to be sloped to shed water.

Bottom of pickets are to be installed 2 inches maximum vertical height from the surrounding finish grade.

Fence panels are to step panel-to-panel, not slope, with the topography of the site.

### LIFE CYCLE EXPECTATIONS

A 10 year minimum warranty is required.

Metal fencing is anticipated to require replacement after 20-30 years of normal and ordinary use.



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# Wood Enclosure



*Cedar Wood Dumpster Enclosure*

## PURPOSE

Solid board fence is used to create a physical/visual barrier surrounding dumpster areas only.

## GENERAL INFORMATION

Solid board fences are 6 feet maximum vertical height.

Solid board fences consist of 8 inch by 1 inch (nominal dimensions) mounted perpendicular to finish grade. Provide horizontal rails continuous; top, middle, and bottom.

Board to board spacing not to exceed 1/8" inch.

Support posts are 6 inch by 6 inch (nominal sizes) square posts throughout.

Do not impede movement of wheelchairs and other mobility devices along accessible paths.

## MATERIALS AND FINISH

Lumber materials are to be pressure-treated cedar wood or as approved by the Director of Parks and Recreation.

All hardware material is to be stainless steel.

Pressure-treated lumber treated with Chromated Copper Arsenate (CCA) is prohibited.

Provide metal cap sized to fit post top.

Fences with a decorative lattice or other patterns is prohibited.

## LIFE CYCLE EXPECTATIONS

A 5 year minimum warranty is required.

Solid board fences are anticipated to require replacement after 20 years of normal and ordinary use.

## INSTALLATION

Mount fence posts in concrete. Footing size is 1 foot - 6 inches minimum diameter, 3 feet inches minimum depth. Install footing top flush with finished grade. Slope the top of footing to shed water.

Do not obstruct the view of parks and activity centers from public right-of-way.

Bottom of fence to be 1 inch maximum vertical height from the finish grade.

Fences are to step, not slope, with the topography of the site.

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## 04. PAVING



- › Concrete Sidewalk
- › Crushed Stone Trail
- › Deck / Boardwalk
- › Foot Bridge
- › Natural Trail
- › Parking Lot
- › Park Walkways / Trails

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# Concrete Sidewalk



Concrete Sidewalk at Dickey Park

## TYPICAL DIMENSIONS

Primary pathways: 10 feet in continuous width.

Secondary pathways: 6 feet in continuous width.

## PURPOSE

Provide concrete paving materials for non vehicular circulation where a rigid system is desired.

## GENERAL INFORMATION

Concrete materials including Portland cement, admixtures, aggregates, and reinforcement to comply with ASTM C-150 standards for Type I concrete.

## MATERIALS AND FINISH

Design mixes to appropriate project conditions, weather, site test results, and materials.

Finish exterior concrete pavement with a light broom finish perpendicular to travel direction unless otherwise specified.

Test concrete mixes for compressive strength, slump, and air content.

## FEATURES

Include reinforcement, as determined by the geotechnical or professional engineer, for strength.

Concrete pavement may include integral color or decorative aggregate throughout the entire pavement section as approved by the Director of Parks and Recreation.

## INSTALLATION

Include expansion and saw-cut control joints with concrete pavement.

Forms and form release agents may be applied to appropriate concrete mixes and finishes, but can not impair subsequent treatment of the concrete.

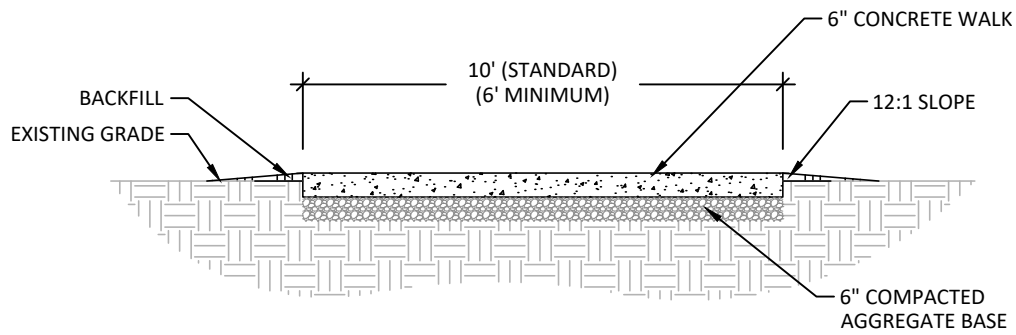
Design concrete pavement with a 2% minimum to 4.5% maximum slope, with a 1.5% cross slope.

## LIFE CYCLE EXPECTATIONS

Pavement is anticipated to require replacement after 20-30 years of normal and ordinary use with regular maintenance.

# Concrete Sidewalk

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▼ Typical concrete sidewalk cross section.



# Crushed Stone Trail



Crushed stone trail at Freedom Park

## TYPICAL DIMENSIONS

Primary pathways: 10 feet in continuous width.

Secondary pathways: 6 feet in continuous width.

## PURPOSE

Provide crushed stone trails in environmentally sensitive and natural areas where pedestrian access is desired.

## GENERAL INFORMATION

Walkways: 10 feet wide minimum

In certain circumstances, the use of a 6' wide path may be appropriate for minor connections, as approved by the Director of Parks and Recreation.

Trails for horseback riding are recommended to have a 4 foot wide shoulder.

## MATERIALS AND FINISH

Compose crushed stone trails with a range of particle sizes, from fine dust to 3/8 inch maximum. Locally source stone. Over 90% of stone to pass a 3/8 inch sieve analysis.

A minimum 2 inch crushed stone depth with a 6 inch compacted aggregate base.

Stone color to be gray or as approved by Director of Parks and Recreation.

## FEATURES

Clean stone mix from all debris and sharpened stone pieces.

## INSTALLATION

Adjacent trail construction standard clearing limits is as follows:

- > Clear brush and branches, within 3 feet of the trail and overhead, to a 10 feet vertical height.
- > Remove all roots and organic debris to a depth of 4 inches, where appropriate.

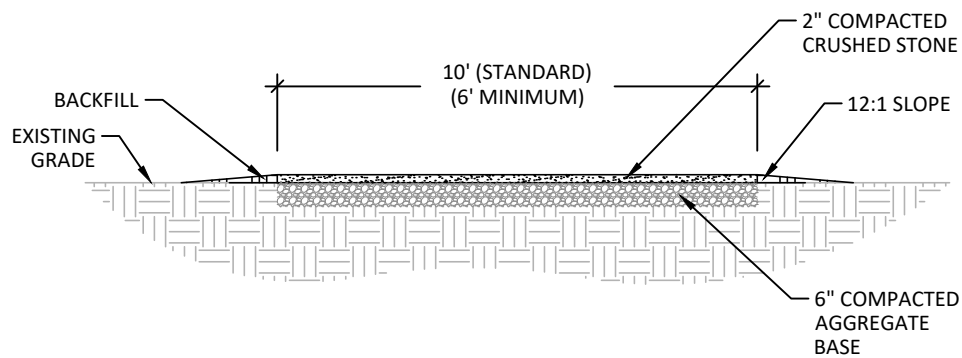
Establish a design cross-slope in sub-grade materials. Provide complete mechanical compaction to geotechnical or professional engineer specifications. Where this is impractical or impossible, compact by hand with an appropriately weighted implement.

## LIFE CYCLE EXPECTATIONS

Crushed stone is anticipated to require replacement after 20-30 years of normal and ordinary use.

# Crushed Stone Trail

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▼ Crushed Stone Trail



# Deck / Boardwalk



▼ Boardwalk

## PURPOSE

Provide elevated structures, such as decks and boardwalks, where water bodies, unstable ground conditions, elevation changes, or other site conditions impede access, or for elevated pathways over protected natural scenic areas.

## GENERAL INFORMATION

Design structures and foundations to industry standard engineering practices and principles. Certify structures by a structural engineer registered and licensed to practice in the state of Texas.

Subsurface and hydrologic investigation is required to inform structural designs.

## GENERAL INFORMATION CONTINUED

Include railings and handrails on elevated structures, per local building codes.

When decks, boardwalks, bridges, or other structures are located within the 100-year FEMA/FIRM floodplain, comply with design and/or performance requirements required for floodplains.

Design structures to all loading requirements. Loads include but are not limited to, dead, live, concentrated, vehicle, wind, and snow. Design structures to accommodate lightweight construction equipment and vehicles.

When decks, boardwalks, bridges, or other structures are located on a designated multi-modal trail route, comply with the most current City parkland dedication ordinances, land development code, or other applicable standards within this document.

## FEATURES

A 6 feet minimum horizontal clear width is required for all boardwalk and/or structures. Other features, such as handrails, load signs, limitations of vehicle load, and/or limitations of pedestrian/bike traffic, may be added as approved by the Director of Parks and Recreation.

## MATERIALS AND FINISH

Structural members may consist of marine grade weathering steel, fiberglass, composite resin, concrete or silicate impregnated lumber.

Decking materials include concrete, silicate impregnated lumber or composite resin, and be slip resistant.

Use wood materials on a limited basis. If wood is used, install crown side up. Hardwoods or silicate impregnated lumber must be approved by the Director Parks and Recreation.

Piling foundations to be concrete with the tops sloped to shed water.

Aluminum, stainless-steel, or hot-dipped galvanized steel is acceptable hardware. Do not mix hardware use.

## INSTALLATION

Approaches must be smooth transitions and comply with current accessible standards. Transitions can not exceed 1/2 inch vertical dimensions.

Place boards perpendicular to travel direction.

## LIFE CYCLE EXPECTATIONS

A 10 year minimum warranty is required for natural woods.

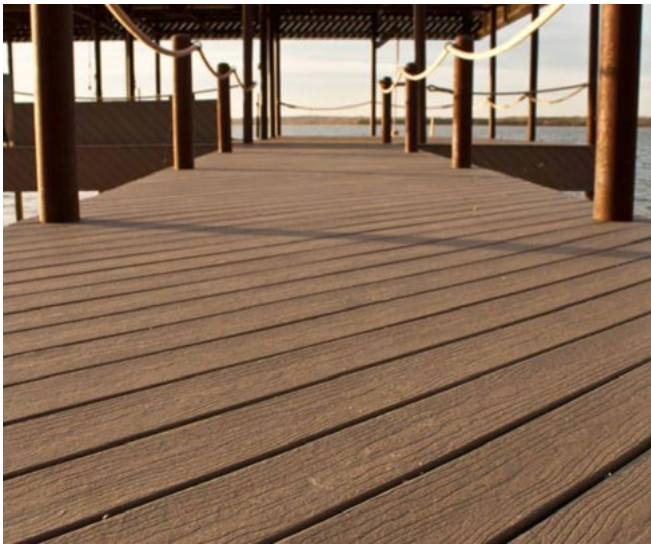
A 10 year minimum warranty is required for synthetic materials.

Decking is anticipated to require replacement after 15 years based on normal and ordinary use.



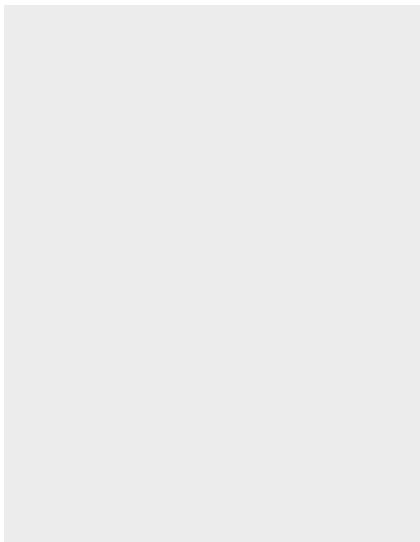
# Decks / Boardwalk

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▼ *Composite Decking*

# Foot Bridge



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# Parking Lot



Concrete Parking Lot at Freedom Park

## GENERAL INFORMATION

Design parking lots to comply with the following:

- > City of Angleton Zoning Ordinance, most recent edition
- > AASHTO's policy of Geometric Design of Highways and Streets, most recent edition
- > Americans with Disabilities Act/ State and Federal Handicap Standards
- > Designed by a professional engineer or landscape architect

## SAFETY

Pedestrian movement in parked vehicle areas must plan to provide the highest degree of safety and convenience. Plans for parking lots include pedestrian circulation incorporating walkways, narrowed crossways, and striped paving. Utilize proposed landscaping to separate pedestrian from vehicles paths but maintain visibility.

Design parking lots with a 2% min. to 4.5% max. slope, with a 1.5% cross slope.

## LIFE CYCLE EXPECTANCY

Pavement is anticipated to require replacement after 20-30 years of normal and ordinary use with regular maintenance.

## LOW IMPACT DEVELOPMENT (LID) STANDARDS

Incorporate methods of storm water management utilizing LID techniques into parking lots. These include:

- > Create bio-retention cell(s) with under drain(s) and landscaping in terminal parking islands
- > Create bio-retention cells or drainage inlets (or curb cuts) in the terminal parking islands
- > Create bio-retention cells and bio-retention strips to collect runoff between head-in parking.
- > Create bio-retention cells between lines of parking stalls to increase the total treatment surface area of these systems.
- > One-way drive aisles to reduce impervious surfaces, as approved by the Director of Parks and Recreation.
- > Permeable paving systems where as approved by the Director of Parks and Recreation. Where it is not feasible for the entire parking lot, consider portions of the parking lot such as overflow areas and/or parking stall areas.

## BICYCLE FACILITIES

Provide bicycle lanes and parking, where appropriate, on ingress and egress routes, consistent with the most current City parkland dedication ordinances, land development code, or other applicable standards within this document.

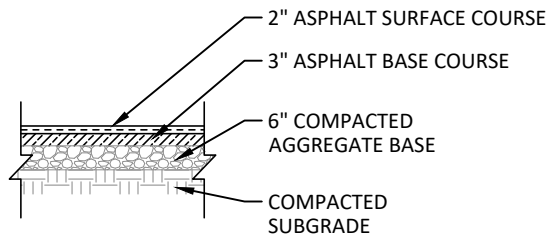
## PURPOSE

Design parking lots to provide safe and convenient access to the site and its facilities. A variety of paving options exist within the Angleton park system. Parking requirements will vary from little to no need for off-street parking at many neighborhood parks, to the need for large off-street parking lots at more active metro and community parks.

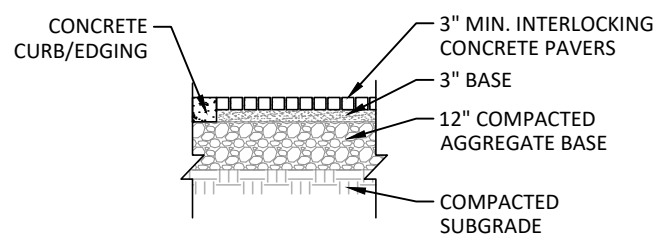
## ENTRANCES/EXITS

All entrances and exits must have a clear visibility zone. The zone will vary due to adjacent street widths and speeds. Locate entrances and exits either directly across from or as far as possible from street intersections. Paved frontage with curbs and gutters are required frontages abutting the outside perimeter parkland.

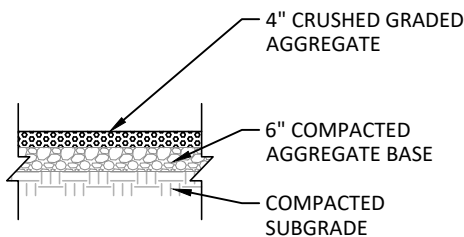
# Parking Lot



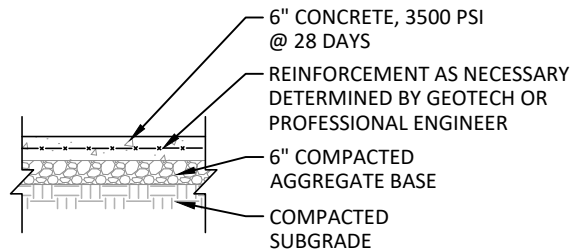
▼ Asphalt Parking Lot



▼ Pervious Parking Lot



▼ Gravel Parking Lot



▼ Concrete Parking Lot

## ASPHALT PARKING LOT

**USE:** General standard for most applications.

**EDGING:** Preferred encroachment barriers include wheel stops or continuous concrete curbing of at least 6 inches in height.

**STALL WIDTH:** Standard parking space size is 9' x 18'. Utilize standard white thermoplastic striping to delineate all stalls.

**ACCESSIBILITY GUIDELINES:** Provide a minimum of two 8' x 18' parking stalls with a central van accessible area. Delineate spacing as stated above.

## PERVIOUS PARKING LOT

**USE:** For use in environmentally sensitive areas or where a pervious pavement application is desired.

**EDGING:** Preferred encroachment barriers include wheel stops or continuous concrete curbing of at least 6 inches in height.

**STALL WIDTH:** Standard parking space size is 9' x 18'. Utilize standard white thermoplastic striping to delineate stalls if paving material allows. Otherwise, utilize contrasting color pavers, or alternate patterns to delineate stalls.

**ACCESSIBILITY GUIDELINES:** Consistent with asphalt parking lot. Delineate spacing as stated above.

## GRAVEL PARKING LOT

**USE:** Gravel parking areas are acceptable low traffic and/or temporary parking areas, as approved by the Director of Parks and Recreation.

**EDGING:** Wheel stop encroachment barriers of at least 6 inches in height is required for parking spaces.

**STALL WIDTH:** Standard size parking spaces are 9' x 18'.

**ACCESSIBILITY GUIDELINES:** Provide a minimum of two 8' x 18' parking stalls with a central van accessible area.

## CONCRETE PARKING LOT

Concrete may be used for vehicular circulation as approved by Director of Parks and Recreation.

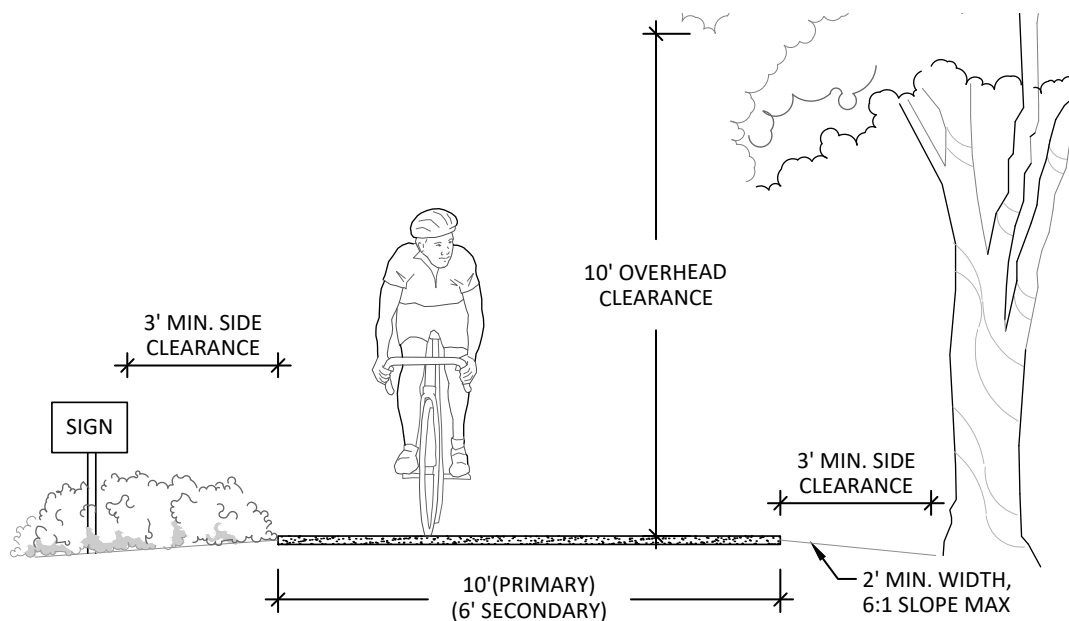
Design use, edging, stall width, and accessibility requirements is consistent with asphalt parking lot.

Concrete materials include Portland cement, admixtures, aggregates and reinforcement consistent with ASTM C-150.

Test concrete for compressive strength, slump, and air content. Design expansion and saw-cut control joints per industry standards.

Include steel reinforcement as determined by the geotechnical or professional engineer. Rebar and welded wire fabric to comply with ASTM standards.

# Park Walkways / Trails



Shared Pathway



Bike Pathway

## PURPOSE

This section establishes standards for public walkways, trails, and internal pedestrian circulation systems that will provide user-friendly pedestrian access.

## GENERAL INFORMATION

For additional information related to the development of safe trail facilities, refer to the most recent edition of the American Association of State Highway and Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities.

## FEATURES

Provide continuous internal pedestrian walkways from the public walkway or right-of-way to the main entrance of all buildings and active amenity areas on the site. Connect walkways to pedestrian activities including transit stops, street crossings, buildings, and major site amenities.

A 9 feet overhead clearance from any obstruction is required for all pathways.

Primary trail - 12 feet wide

Secondary trail - 8 feet wide

In certain circumstances, the use of 6' wide paths may be appropriate for minor connections as approved by the Director of Parks and Recreation.

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## 05. PARK STRUCTURES AND SHELTERS



- › Dugout Cover
- › Metal Shelter
- › Restroom Facility
- › Shade Canopy
- › Wood Shelter



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# Dugout Cover / Bleacher



▼ Dugout at Freedom Park

## PURPOSE

To standardize dugouts provided for each diamond field. Install bleacher assemblies to provide spectator seating at outdoor athletic facilities.

## GENERAL INFORMATION

Provide 2 dugouts per diamond field.

Bleachers to comply with the most current building and accessibility codes including requirements for guardrails and barriers. Bleachers to have 50 person maximum capacity.

## LIFE CYCLE EXPECTATIONS

A 5 year minimum warranty is required for dugout cover and bleacher. Bleachers are anticipated to require replacement after 10 years or normal and ordinary use.

## PRIMARY DUGOUT STYLE

### MATERIALS AND FINISH

Primary dugout style is a metal frame structure.

Provide metal roofs with exposed powder coated metal fascia's on all sides.

Use galvanized or stainless steel hardware.

### SECONDARY DUGOUT STYLE

The use of the secondary dugout style must be approved by Director of Parks and Recreation.

## MATERIALS AND FINISH

Secondary dugout style is a wood frame structure.

Design wood dugout to comply with the latest edition of the following guidelines and standards:

- > American Institute of Timber Construction Standards
- > Standard Specification for Glued Laminated Timber
- > American National Standard of Wood Products - Structural Glued Laminated Timber
- > American Institute of Timber Construction Inspection Manual
- > American Wood Preserver's Association Standard
- > International Building Code

All lumber to be pressure treated.

Provide architectural shingles or standing seam aluminum roof on wood dugout.

Use galvanized or stainless steel hardware.

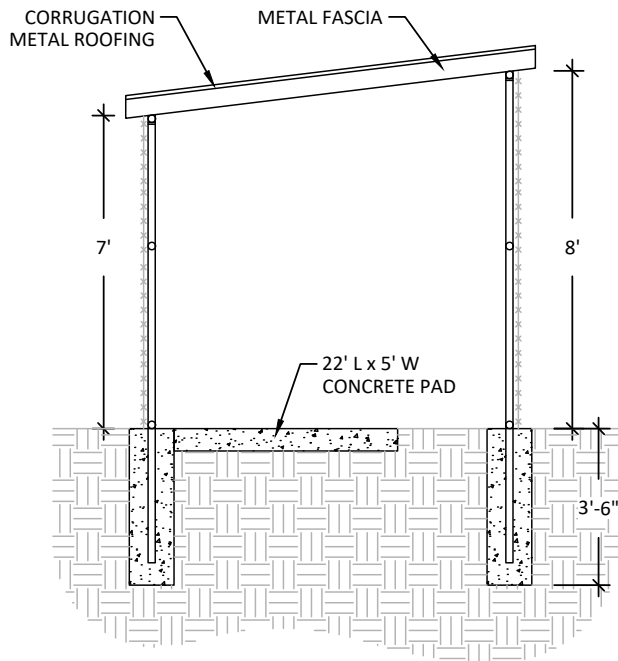
## INSTALLATION

When dugouts are a pre-fabricated structure, follow the manufacturer's assembly instruction.

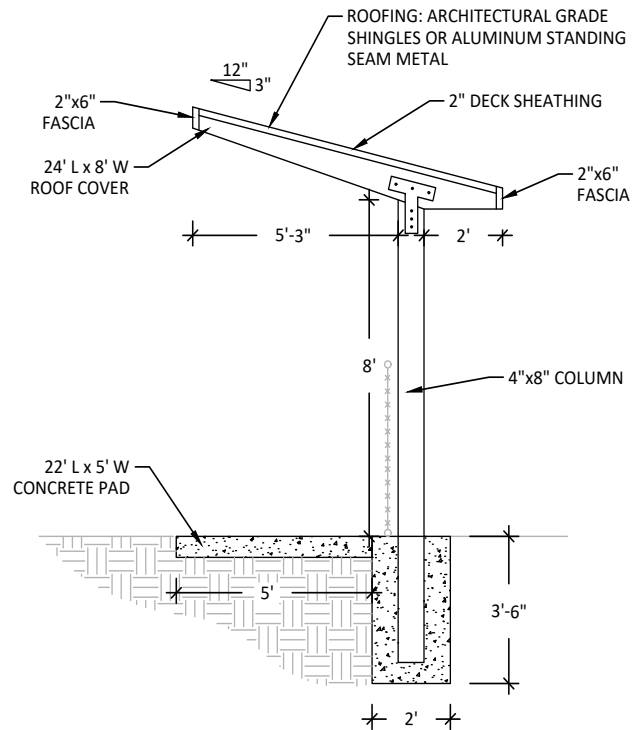
Provide shop drawings to the Director of Parks and Recreation for review prior to install.

Design dugout structures for wind load of 110 miles per hour minimum sustained. Permits are required.

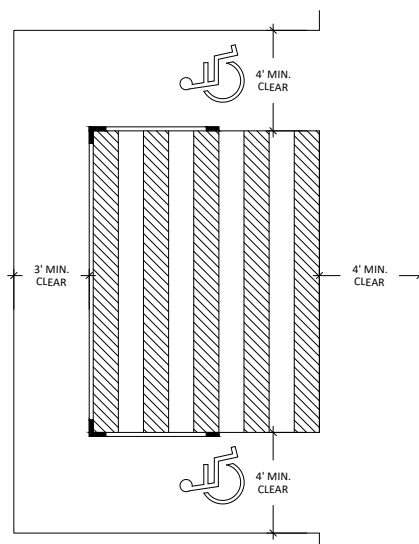
# Dugout Cover / Bleacher



▼ Primary Dugout Style



▼ Secondary Dugout Style



▼ Typical Bleachers, plan view. Not to scale

## BLEACHERS

### MATERIALS AND FINISH

Construct bleacher seats of anodized aluminum.

Include a guard rail with chain link fall barrier on bleachers with more than 5 rows of seats, or seats more than 2 feet - 6 inches above adjacent grade.

Provide slip resistant ribbed surface for bleacher treads and seats. Provide seats as a continuous bench style.

Furnished assembly is to be free from sharp edges, pinch points, corners or protrusions.

## INSTALLATION

Comply with manufacturer's recommendations for assembly.

Install bleachers on a hardscape surface with 4 feet minimum clear horizontal distance from the edge of structure on accessible perimeter.

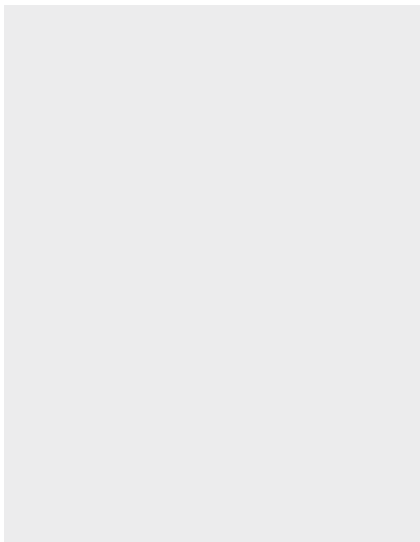
Where possible, install bleachers adjacent to accessible hardscape surface pathways.

Stabilize bleachers with wedge anchors.

Bleachers to be annually inspected.



# Metal Shelter



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## PURPOSE

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## GENERAL INFORMATION

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## MATERIALS AND FINISH

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## FEATURES

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## INSTALLATION

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## LIFE CYCLE EXPECTATIONS

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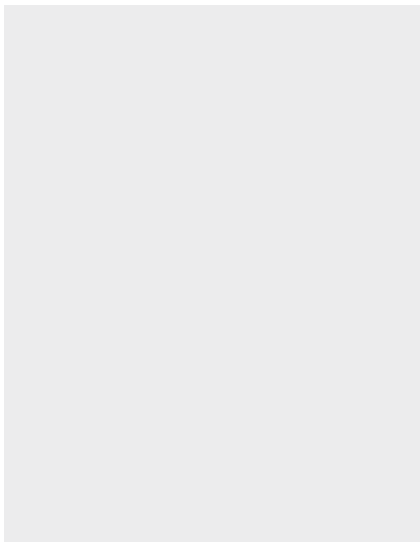
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# Wood Shelter



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## PURPOSE

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## GENERAL INFORMATION

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## MATERIALS AND FINISH

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## LIFE CYCLE EXPECTATIONS

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## 06. PLAYGROUNDS



- › Playground
- › Establish Boundary Monument
- › Fall Material / Surfacing

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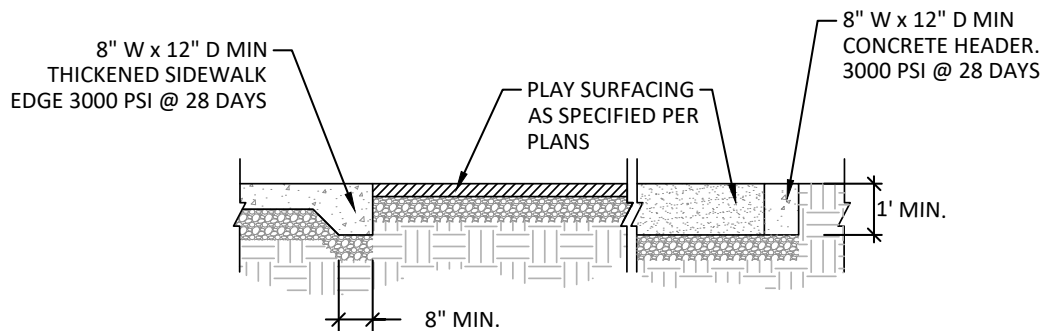
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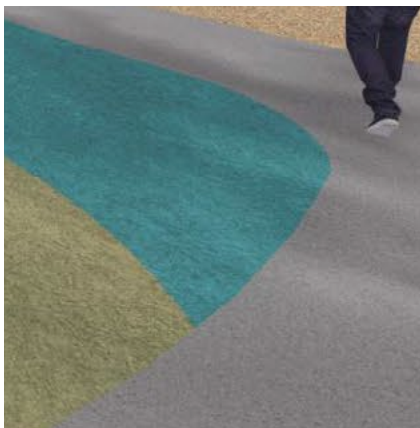
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# Playground Boundary



## Playground boundary conditions



Concrete playground boundary - Concept Plan for Lakeside Park

## PURPOSE

Provide playground boundary to secure play surfacing for a safe and clean environment.

## GENERAL INFORMATION

Enclose all play surfacing with a concrete boundary. Design and install boundary to meet standards approved by the Director of Parks and Recreation, in accordance with related federal, national, state or local codes including, but not limited to, the following:

- > International Play Equipment Manufacturer's Association (IPEMA)
- > Consumer Product Safety Commission (CPSC) Handbook for Public Safety
- > American Society for Testing and Materials (ASTM)
- > Accessibility Standards for Play Areas through the ADA Accessibility Guidelines (ADAAG)

## INSTALLATION

Install containment borders wide enough to protect surfacing from mowing and other maintenance equipment.

Install a 4 foot wide concrete sidewalk around play spaces and along all street frontage of park.

Match concrete boundary finish grade with play surfacing finish grade.

## LIFE CYCLE EXPECTATIONS

A 3 year minimum warranty is required.

Concrete boundary are anticipated to require replacement after 20 years based on normal and ordinary use.



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# Fall Surfacing - Engineered Wood Fiber



Engineered Wood Fiber

## PURPOSE

Use engineered wood fiber on a limited basis with approval by the Director of Parks and Recreation. Use this material in outdoor playgrounds and areas where an impact attenuating surface is desired at current facilities. Surface is not recommended for new facilities.

## GENERAL INFORMATION

Safety surfacing to meet or exceed the most current ASTM and CPSC safety standards for public playgrounds.

Use only material certified by the International Playground Equipment Manufacturers Association or equivalent.

Surfacing to be accessible.

Install a subsurface drainage system with all new safety surfacing.

## MATERIALS AND FINISH

Comprise wood fiber of Texas softwood or hardwoods that do not exceed 3/4 inches in length.

Use non-toxic material. Chemicals, additives, recycled wood products, wood pallets or waste wood are prohibited.

Material to be free of disease, insects, invasive species, soil, leaves, bark, twigs, metals, or other foreign objects.

## INSTALLATION

Prior to installation, contractor to confirm existing sub-grade is free of weeds, and other debris.

Install material according to depths specified by the manufacturer and CPSC guidelines.

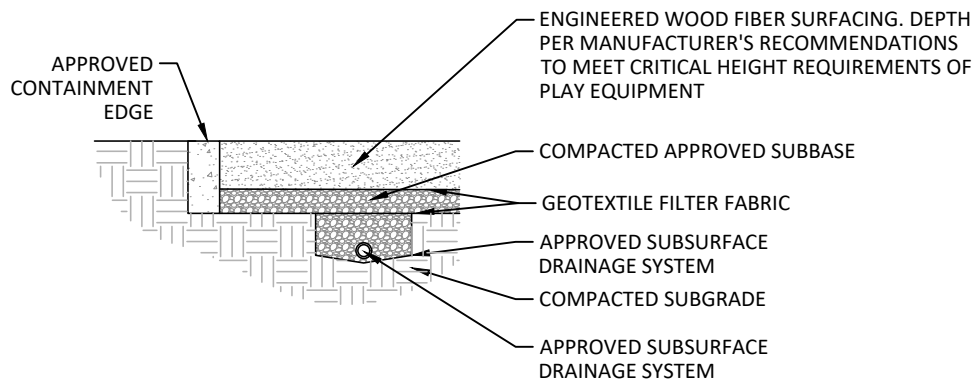
After installation, a qualified third party must test the surfacing for GMAX and HIC scoring, consistent to ASTM standards.

## LIFE CYCLE EXPECTATIONS

Engineered wood fiber is anticipated to require replenishment annually based on normal and ordinary use.

# Fall Surfacing - Engineered Wood Fiber

---



▼ Engineered Wood Fiber Surfacing section



# Fall Surfacing - Poured in Place Rubber



Poured in Place Rubber Surfacing - Concept Plan for Lakeside Park

## PURPOSE

Use poured in place rubber in outdoor playgrounds and areas where an impact attenuating surfacing is desired.

## GENERAL INFORMATION

Safety surfacing to meet or exceed the most current ASTM and CPSC safety standards for public playgrounds.

Use only material certified by the International Playground Equipment Manufacturers Association or equivalent.

Surfacing to be accessible.

Install a subsurface drainage system with all new safety surfacing.

## MATERIALS AND FINISH

Manufactures to use native rubber for surface material.

Minimize the use of light or bright colors. Color ratios should incorporate between 40-60% black ethylene propylene diene monomer (EPDM).

Use 'aliphatic' 100% polyurethane with UV stabilizer binders.

A containment border is required for poured in place safety surfacing in accordance to the parameters outlined in this document.

Compacted gravel is the preferred sub-base material. A minimum gravel sub-base is 8 inches vertical depth. Concrete may be used for poor or unstable soils.

Install surfacing as a two layer system consisting of EPDM. The minimum vertical depth of the top EPDM layer is 1/4 inch.

## INSTALLATION

Coordinate installation with play equipment manufacturer and installer.

Follow manufacturer installation recommendations. Install material consistent to manufacturer recommended depths and ASTM and CPSC guidelines.

Contractor responsible to ensure sub-grade and all subsurface drainage systems drain properly.

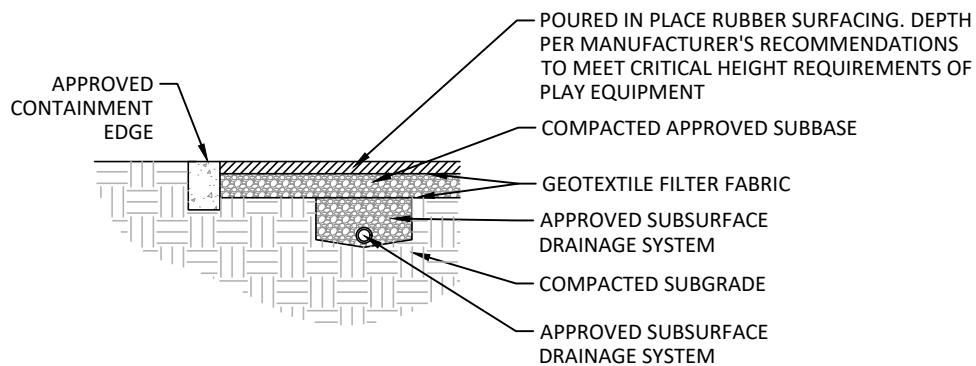
After installation, a qualified third party must test the surfacing for GMAX and HIC scoring, consistent to ASTM standards.

## LIFE CYCLE EXPECTATIONS

A 5 year limited warranty is required.

Poured in place rubber is anticipated to require replacement after 10-15 years based on normal and ordinary use.

# Fall Surfacing - Poured in Place



▼ Poured in Place Rubber Surfacing section

# Fall Surfacing -Rubber Tile System



▼ SofSurfaces Rubber Tile System

## RUBBER TILE SYSTEM

Manufacturer: SofSurfaces  
Product: SofTILE KrosLOCK

### PURPOSE

Use rubber tiles in outdoor playgrounds and areas where an impact attenuating surfacing is desired.

### GENERAL INFORMATION

Safety surfacing to meet or exceed the most current ASTM and CPSC safety standards for public playgrounds.

Use only material certified by the International Playground Equipment Manufacturers Association or equivalent.

Surfacing to be accessible.

Install a subsurface drainage system with all new safety surfacing.

The standard interlocking tile system is "SofTILE KrosLOCK" manufactured by SofSurfaces, Inc., or City approved equal.

### MATERIALS AND FINISH

Use 2 inches minimum for tile thickness, or greater in compliance with CPSC and ASTM standard.

Minimize use of light or bright colors. Color ratios should incorporate between 40-60% black ethylene propylene diene monomer (EPDM).

A containment border is required for poured in place safety surfacing in accordance to the parameters outlined in this document.

Install tiles on concrete slab.

### INSTALLATION

Coordinate installation with play equipment manufacturer and installer.

Follow manufacturer installation recommendations. Install material consistent to manufacturer recommended depths and ASTM and CPSC guidelines.

Contractor responsible to ensure sub-grade and all subsurface drainage systems drain properly.

After installation, a qualified third party must test the surfacing for GMAX and HIC scoring, consistent to ASTM standards.

### LIFE CYCLE EXPECTATIONS

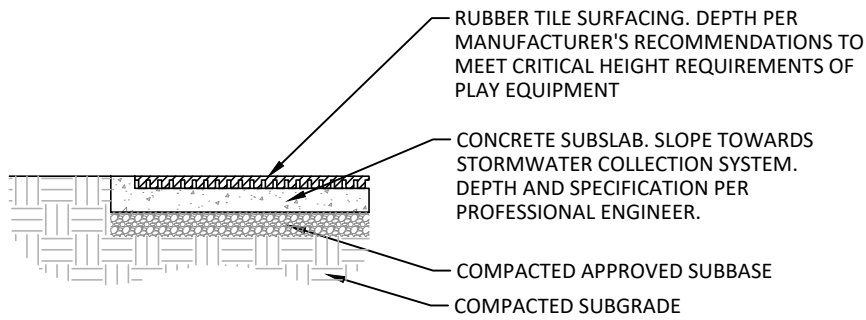
An 8 year minimum warranty is required.

Rubber tile systems are anticipated to require replacement after 10-15 years based on normal and ordinary use.



# Fall Surfacing - Rubber Tile System

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▼ *Poured in Place Rubber Surfacing section*



## 07. BALL COURTS AND ATHLETIC FIELDS



- › Baseball / Softball Field
- › Basketball Court
- › Court Surfacing
- › Disc Golf
- › Football Field
- › Horseshoe Pit
- › Soccer Field
- › Tennis Court
- › Volleyball Court

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# Ball Courts



▼ Tennis Court



▼ Basketball Court

## PURPOSE

Provide outdoor ball courts to serve the recreation needs of the community.

## GENERAL INFORMATION

Ball courts to comply with the most current National Federation of State High School Associations (NFSH) standards or other governing bodies as appropriate.

Provide positive drainage, maximum 1% slope, from base line to base line on all ball courts..

Provide an accessible pedestrian pathways to all ball courts.

Orient ball courts north-south on the long axis, with maximum 11 degrees off axis.

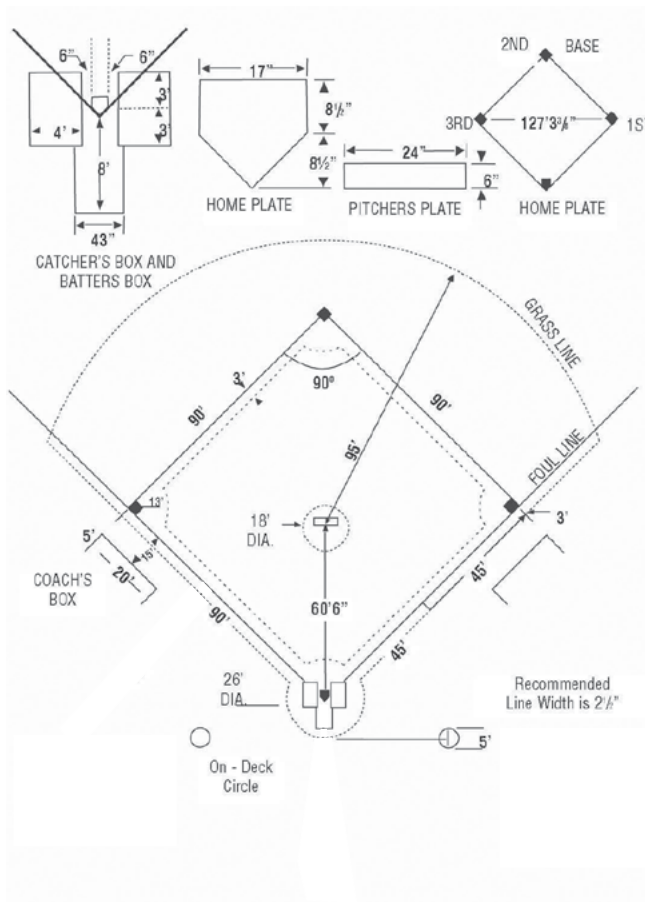
Ball courts may be designed to serve multiple sports as approved by the Director of Parks and Recreation.

Related Standards: Court Surfacing, Basketball Court, and Tennis Courts.

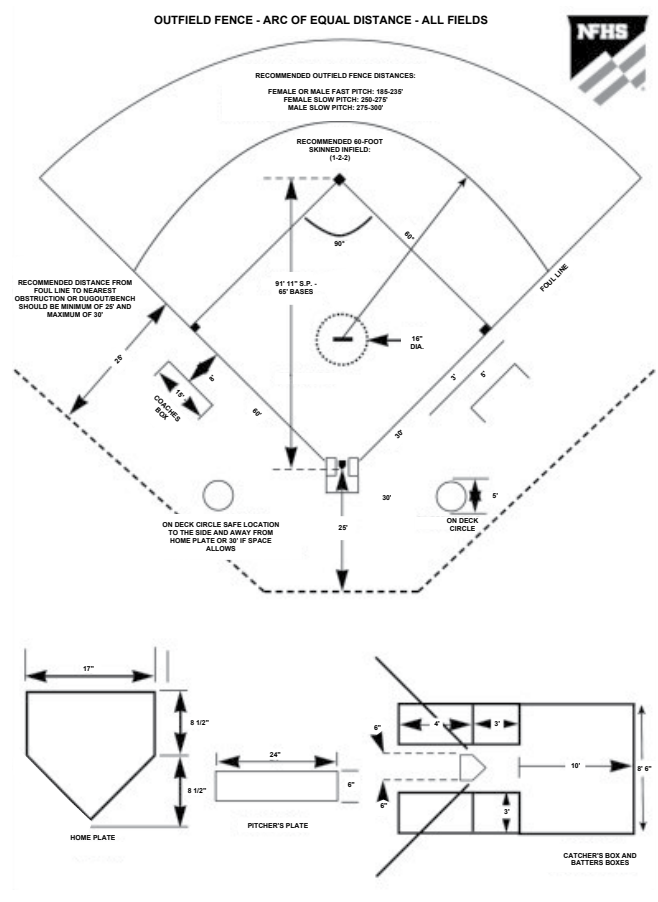
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# Baseball / Softball Field



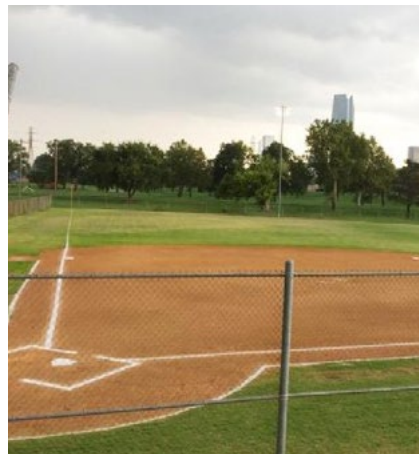
Baseball Field Diagram



Softball Field Diagram



Baseball Field



Softball Field

## PURPOSE

To provide regulation fields for baseball or softball competition.

## GENERAL INFORMATION - BASEBALL/SOFTBALL

Field layouts to conform to the most current National Federation of State High School Association (NFHS) standards or other governing bodies as appropriate.

Related Standards: Chain Link Fencing, Baseball/Softball Backstop



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# Baseball and Softball / Backstop

## PURPOSE

To provide a backstop with every diamond field.

## GENERAL INFORMATION

Install backstops with a permanent, hooded, and flared/winged structure on diamond fields.

Backstop dimensions include:

- › 16 feet minimum horizontal wings (each)
- › 20 feet minimum horizontal center panel
- › 12 feet minimum vertical height fence at the wings and rear of hood
- › 20 feet minimum vertical height clearance at the front of hood

Related Standards: Baseball/Softball Field

## MATERIALS AND FINISH

Use PVC coated, Class 2b, thermally fused and bonded for chain link fabric.

Install chain link fabric mesh with a core wire diameter of 9 gauge for the wings and hood.

Install chain link fabric mesh with a core wire diameter of 6 gauge for the center panels.

Use the color black for fabric mesh.

Include bottom rail on backstops.

Install 6 inches outside diameter, Schedule 40 for backstop posts.

Install hood frame rails 2 inches outside diameter.



▼ Backstop

Include a middle rail for fence panels over 6 feet in vertical height. Use 1-5/8 inch outside diameter middle rail/brace.

Include 2 feet width by 12 feet length boards, 4 feet vertically from finished grade, as 'kick boards' that run the length of the center panels of the backstop.

Prime kick boards and paint to match the fence.

## LIFE CYCLE EXPECTATIONS

A 5 year minimum warranty is required on metal framework.

Kickboards are anticipated to require replacement after 4 years of normal and ordinary use.

Backstop structures are anticipated to require replacement after 20 years of normal and ordinary use.

## INSTALLATION

Locate fence posts and supports outside the field of play for athletic facilities.

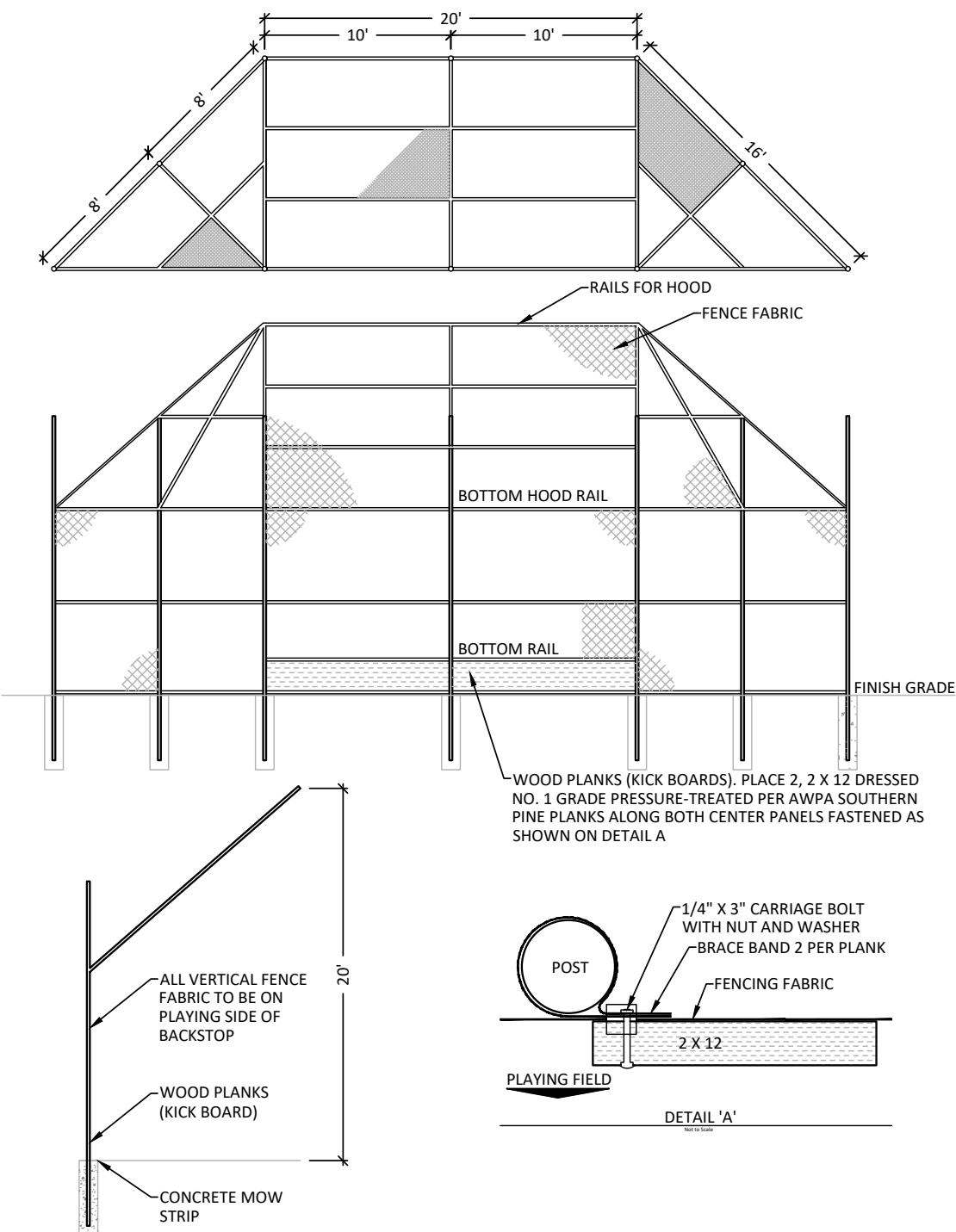
Mount posts in concrete footings to be flush to adjacent finished grade.

Slope the top of footing to shed water.

Footings and supports to be designed and sealed by a professional structural engineer.

The fence fabric knuckling can not exceed 1-1/2 inches vertical height above the surrounding finish grade.

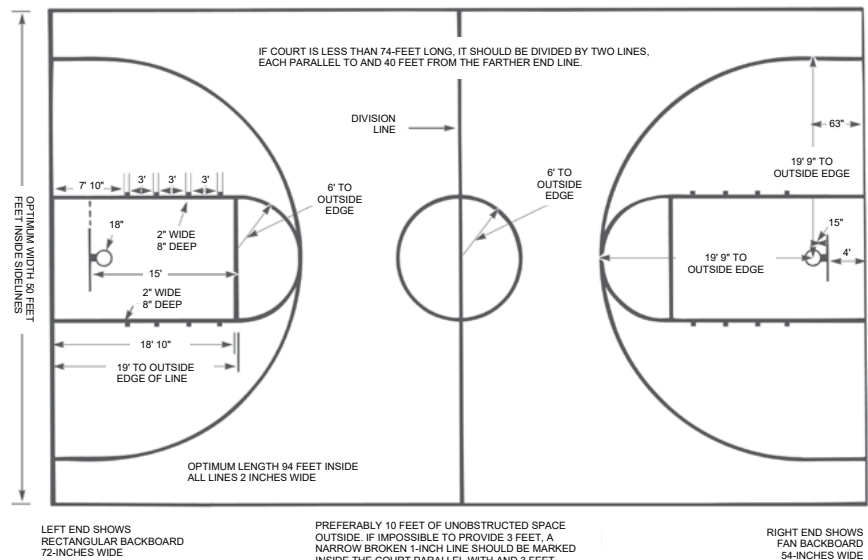
# Baseball and Softball / Backstop



Backstop



# Basketball Court



IP by Bison BA873U Basketball Hoop

Court Diagram

## PURPOSE

To provide competition style, heavy duty basketball hoops at outdoor basketball facilities.

## GENERAL INFORMATION

Basketball hoop specification is the IPI by Bison BA873U.

Court layouts to comply to the most current National Federation of State High School Associations (NFHS) standards or other governing bodies as appropriate.

Post systems to comply with National Collegiate Athletic Association (NCAA) regulations or other governing authority.

Related Standards: Court Surfacing, Chain Link Fencing.

## MATERIALS AND FINISH

Posts and supports are 6 inches minimum square structural steel tubing with 1/4 inch thick walls.

Steel components to have a black color, double powder coat finish.

The backboard to be square, clear, unbreakable 1/2 inch thick polycarbonate with official perimeter and target area markings.

The goals to be double 5/8" diameter solid steel rim, with a continuous net attachment system.

The nets to be a white color, heavy duty, weather resistant nylon fiber.

## FEATURES

Locate the backboard to be 4 feet inside the baseline with the rim 10 feet above the playing surface.

Provide post and backboard padding when upright posts are located within court run out area.

## INSTALLATION

Install posts consistent with manufacturer's recommendations. Position backboards consistent with NCAA standards.

Slope the top of post foundations to shed water and be flush to finished grade.

Wind loading design to comply with American Society of Civil Engineers (ASCE) 7-98.

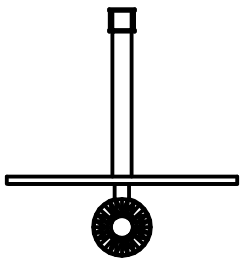
## LIFE CYCLE EXPECTATIONS

A 10 year minimum warranty is required.

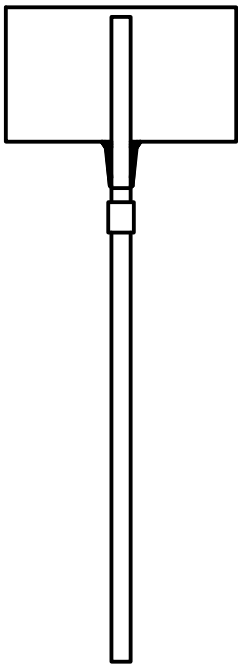
Basketball hoops are anticipated to require replacement after 20 years of normal and ordinary use.

Nets are anticipated to require annual replacement with normal and ordinary use.

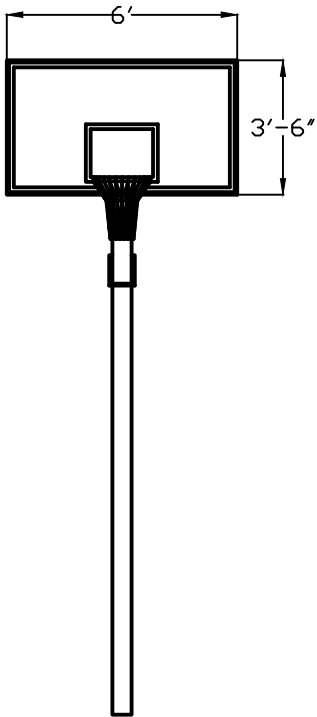
# Basketball Court



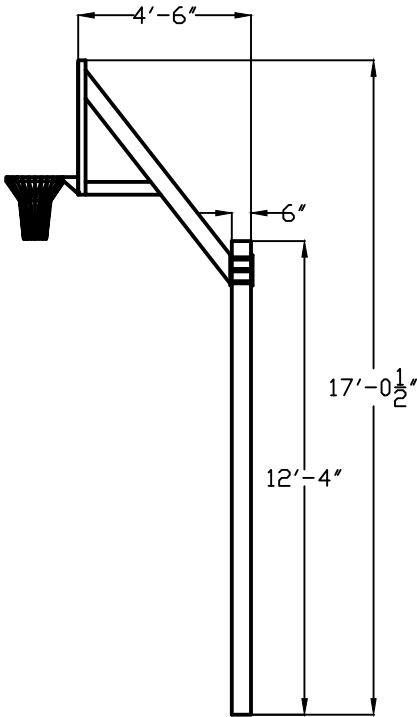
PLAN



SIDE ELEVATION



FRONT ELEVATION



BACK ELEVATION

▼ Basketball Hoop



# Court Surfacing



▼ Basketball Court Surfacing

## COURT SPECIFICATIONS

3" surfacing base minimum  
4" Course base minimum  
Colors: Purple or Gray

## PURPOSE

All tennis, basketball, and multi-purpose courts to use a textured slip resistant surfacing.

## GENERAL INFORMATION

Surfacing material and lining to meet United States Tennis Association standards and National Federation of State High School Associations.

Related Standards: Basketball Court, Tennis Court

## MATERIALS AND FINISH

Install courts on a 4 inch minimum vertical depth base course aggregate compacted to 95% proctor density or as specified by geotechnical or professional engineer.

Install surfacing asphalt to a 3 inch minimum vertical depth or as specified by geotechnical or professional engineer.

Include a 10 feet minimum horizontal width paved run out area around all courts.

Use primers or resurfacers to fill and seal the asphalt. Air pockets, holes, cracks, seams, depressions and other blemishes are unacceptable.

Color coating to consist of a mixture of 100% acrylic resins, water, sand and Portland cement.

Install a minimum of two coats during color coating.

Provide solid and consistent black lines with sharp edges and corners.

## FEATURES

The standard colors are Purple and Gray, with black lines.

Line tennis courts for both singles and doubles play.

Pickelball lines may be added as approved by Director of Parks and Recreation.

## INSTALLATION

Trained and certified crews to install court surfacing.

Courts to drain baseline-to-baseline at a 1% slope.

Ensure sub-grade and all subsurface drainage systems drain properly.

Standing water or water ponding on surfacing is unacceptable.

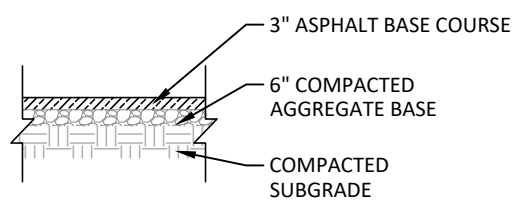
## LIFE CYCLE EXPECTATIONS

Color coating is anticipated to require re-application after 5 years of normal and ordinary use.



# Court Surfacing

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▼ Court Surfacing Section

# Disc Golf



▼ Disc Golf Basket at Bates Park



▼ Disc Golf Tee Pad at Bates Park

## DESCRIPTION

Disc Golf is played much like traditional golf, except players use a flying disc. A golf disc is thrown from a tee pad area to a target.

## PURPOSE

Provide suitable disc golf baskets and tee for recreational play.

## GENERAL INFORMATION

A well-balanced course has a mixture of holes that traverse through wooded and open areas. Typically, fairways in wooded area range from 20-40 feet wide. Small recreational courses typically fit two (2) to three (3) holes per acre depending on the terrain.

Fairways should not cross one another and be located far enough apart so errant throws do not become a safety hazard for other players. Avoid installing fairways that are close to public streets, sidewalks, and other areas where non-players congregate.

Course for recreational players should average less than 250 feet per hole, although, no hole should be shorter than 120 feet.

Courses are typically nine (9) or eighteen (18) holes.

## MATERIALS AND FINISH

Provide one (beginner) and one (experienced) tee pad for each hole. This provides opportunity for players of varying skill levels. Locate experienced tee pads 30 feet minimum from the back of the beginner tee pad.

Tee pads must be level from left to right. Provide a maximum slope of 1% from front to back of tee pad.

## FEATURES

Provide a colored band at the top of the disc golf basket for visibility. Provide galvanized coating to basket chains to increase durability.

Provide a heavy broom finish for increased traction and slip resistance on all tee pads.

## INSTALLATION

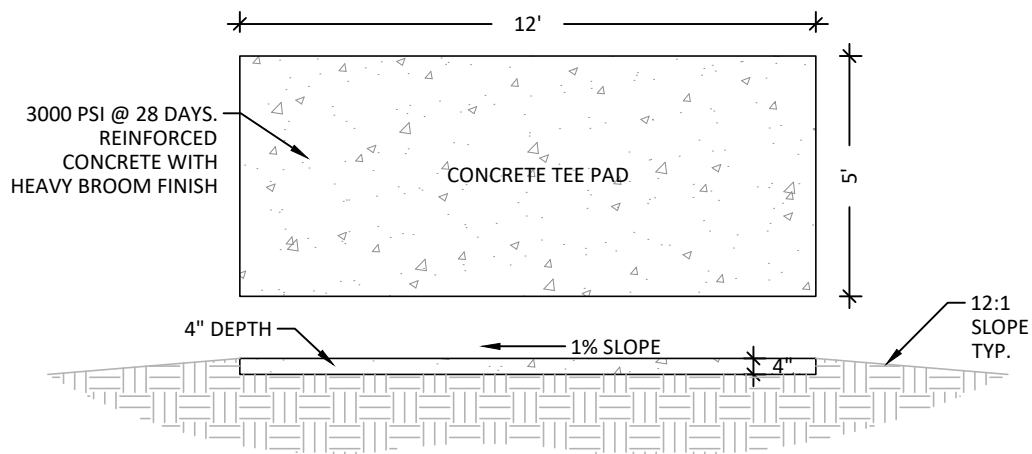
Locate baskets and tee pads in compliance to park design layout.

## LIFE CYCLE EXPECTATIONS

A 5 year minimum warranty is required.

Disc golf baskets are anticipated to require replacement after 15 years of normal and ordinary use.

# Disc Golf



▼ Standard disc golf concrete tee pad layout and dimensions.

# Football Field

## GENERAL INFORMATION

Field layouts to conform to the most current National Federation of State High School Associations (NFHS) standards or other governing bodies as appropriate.

Related Standards: Fencing, Park Structures and Shelters, Ball Courts and Athletic Fields, Signage, Lighting, and Planting and Irrigation.

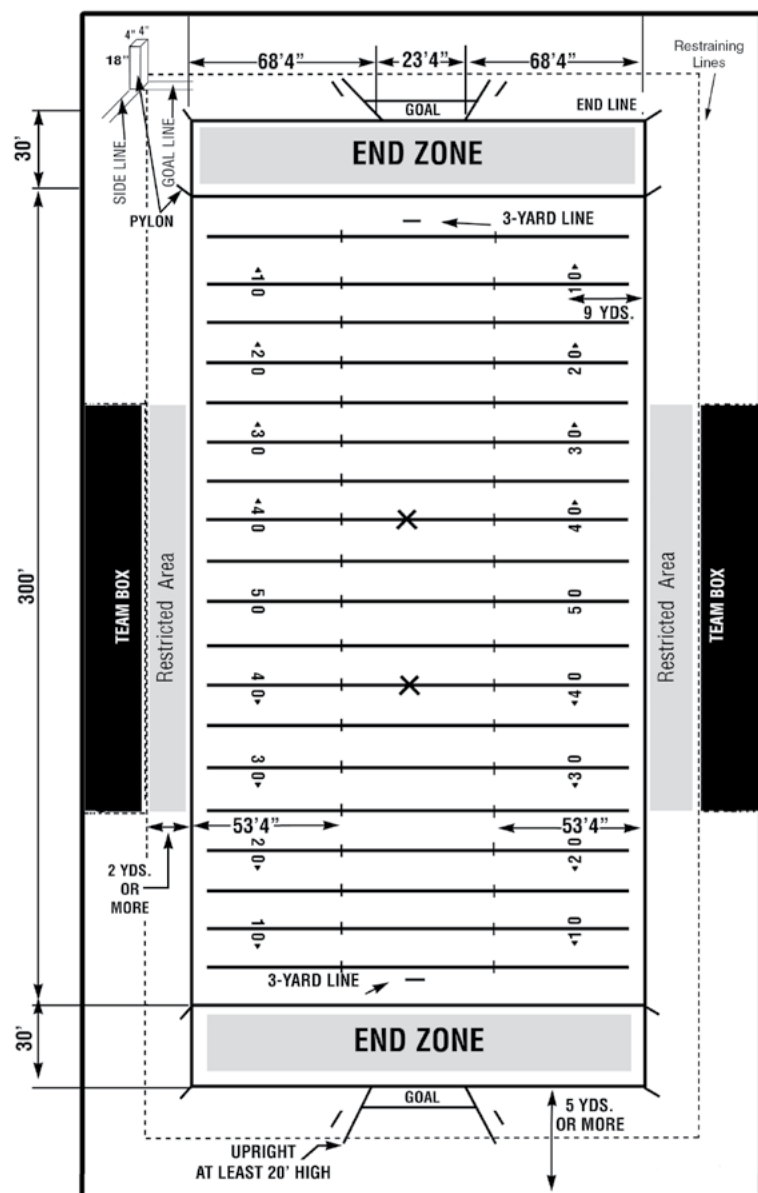
## FEATURES

Dimensions:

The total field width is measured from face of side line to face of side line.

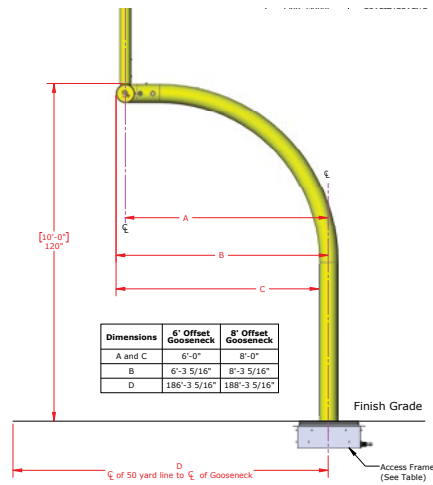
The total field length is measured from face of back-end line to face of back-end line.

**Football Field Diagram**  
**11-player Football Field**

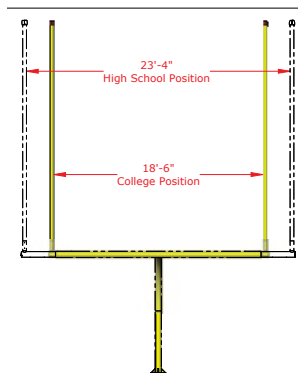


Field Diagram

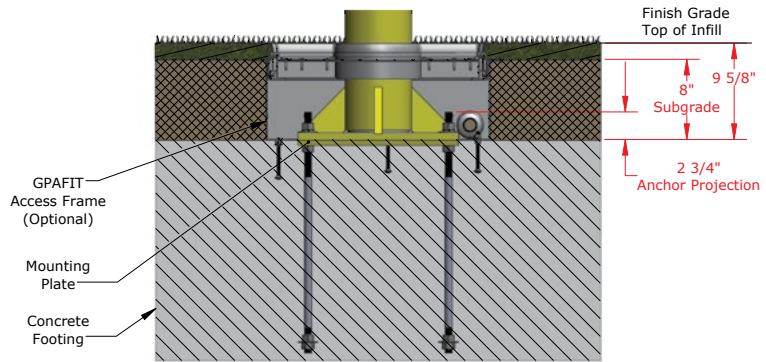
# Football Field



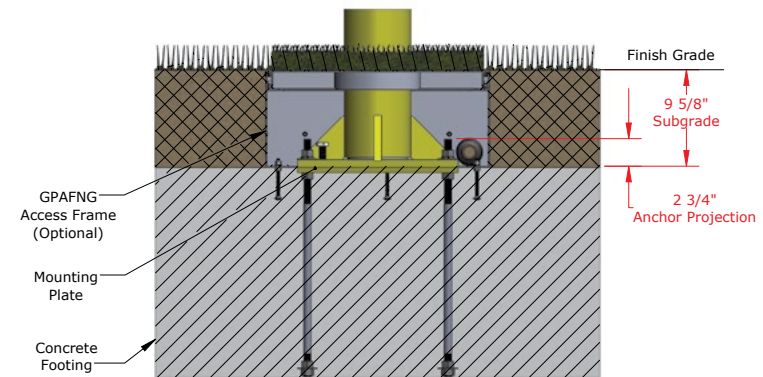
▼ Goal Post Gooseneck



▼ Goal Post Width

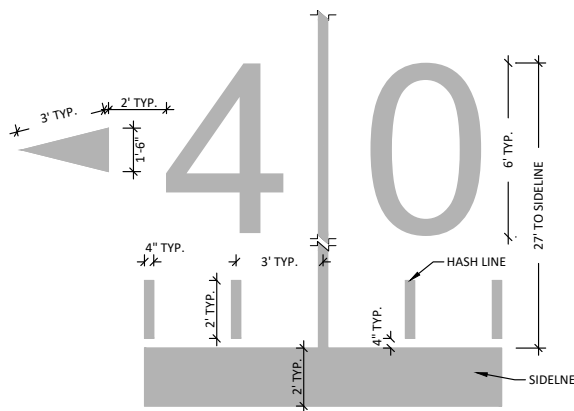


Synthetic Infill Turf Application

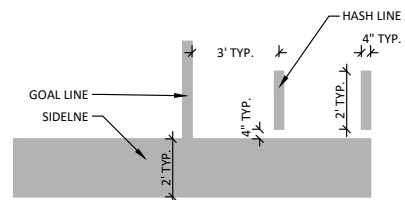


Natural Grass Application

▼ Goal Post Natural and Synthetic Turf Install

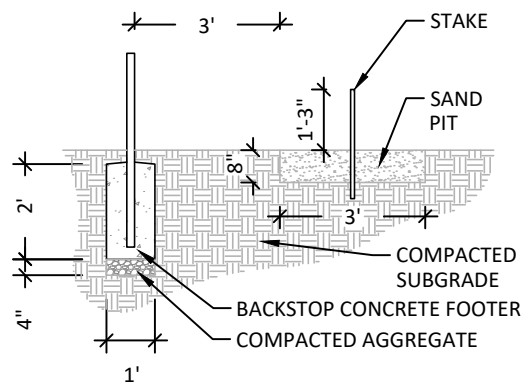
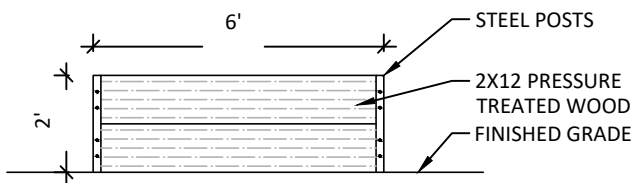
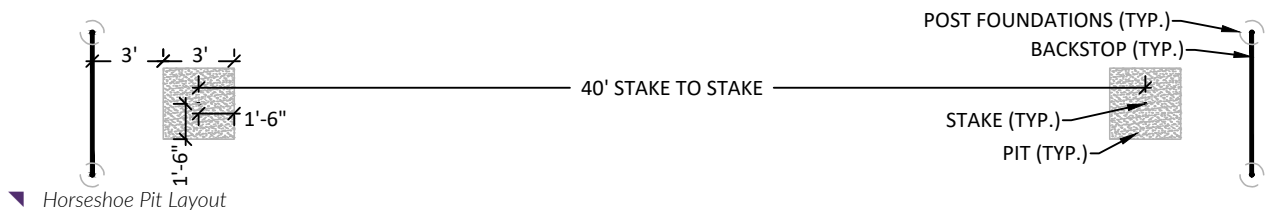


▼ Football Hash Mark



▼ Football Goal Line

# Horseshoe Pit



Horseshoe Pit Backboard



Horseshoe Pit at Dickey Park

## PURPOSE

Provide suitable horseshoe stakes and backstops at all appropriate parks for recreational use.

## GENERAL INFORMATION

Locate horseshoe pits on a north to south axis.

Space adjacent courts at 12 feet apart minimum from stake to stake horizontal distance.

## MATERIALS AND FINISH

Sand must be high quality sand, fast draining, free of shells, rocks, clay, and other debris.

## INSTALLATION

Fill pit areas with sand, 8 inch depth minimum.

## LIFE CYCLE EXPECTATIONS

Provide sand as a top layer annually based on normal and ordinary use.

Backstop boards are anticipated to be replaced every 5 years based on normal and ordinary use.



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Related Standards: Fencing, Park Structures and Shelters, Ball Courts and Athletic Fields, Football Field Diagram, Signage, Lighting, and Planting and Irrigation.

## SOCCKER FIELD

\***MEASUREMENTS** are taken from outside to outside of the line.

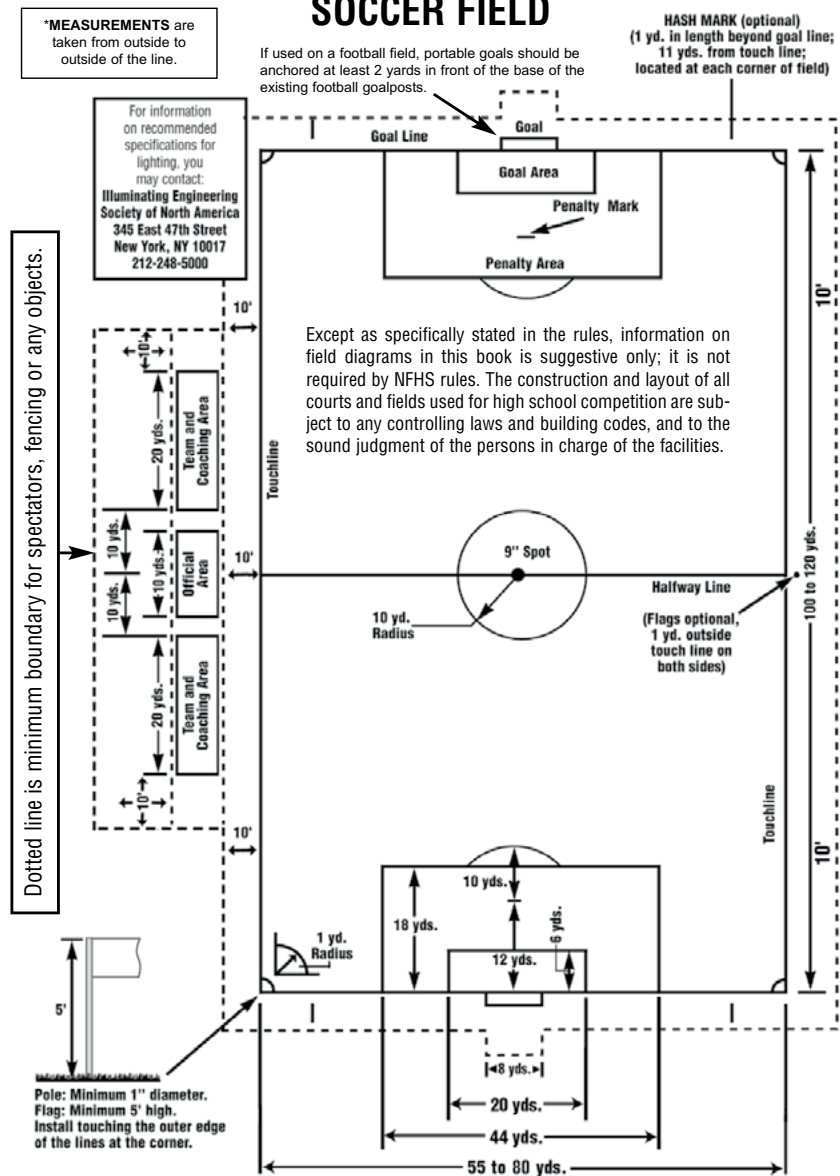
If used on a football field, portable goals should be anchored at least 2 yards in front of the base of the existing football goalposts.

**HASH MARK (optional)**  
(1 yd. in length beyond goal line;  
11 yds. from touch line;  
located at each corner of field)

For information  
on recommended  
specifications for  
lighting, you  
may contact:  
**Illuminating Engineering  
Society of North America**  
345 East 47th Street  
New York, NY 10017  
212-248-5000

Dotted line is minimum boundary for spectators, fencing or any objects.

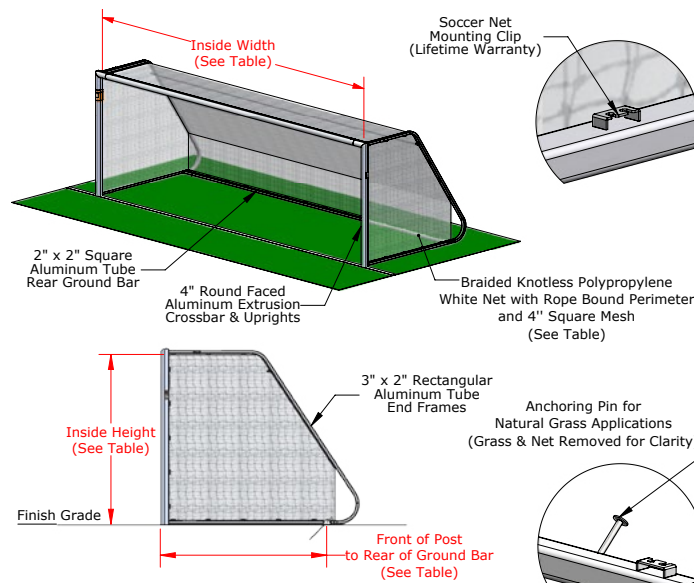
Except as specifically stated in the rules, information on field diagrams in this book is suggestive only; it is not required by NFHS rules. The construction and layout of all courts and fields used for high school competition are subject to any controlling laws and building codes, and to the sound judgment of the persons in charge of the facilities.



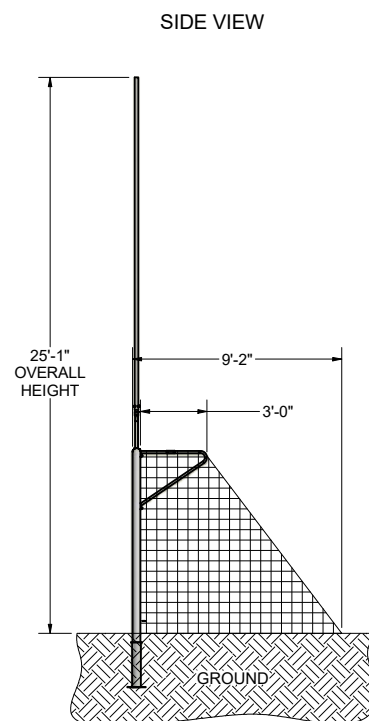
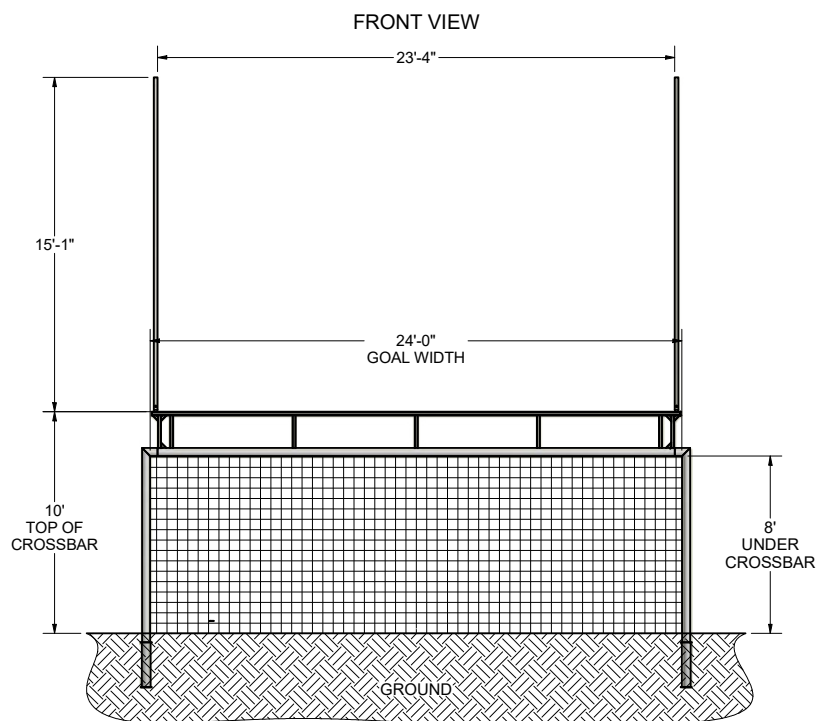
An engineered natural turf soccer field should have a minimum of one-and-one-half percent (1.5%) slope for fields which are surface drained. For natural turf fields with a sub-surface drain system the slope should be no less than one (1.0%) percent. For synthetic turf fields with a sub-surface drain system the slope should be no less than one half of one (0.5%) percent. Slope is measured from center to side. For consulting services, contact SportsPLAN Studio, 816-842-5200.

Field Diagram

# Soccer Field



▼ Soccer Goal



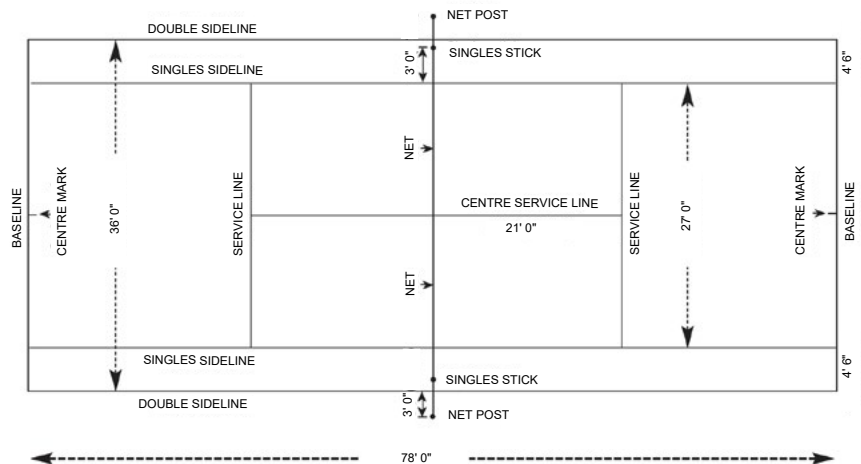
▼ Soccer and Football Goal Combination



# Tennis Court



Tennis Court



Court Diagram

## PURPOSE

Provide regulation tennis net systems at outdoor tennis facilities.

## GENERAL INFORMATION

Court layouts to conform to the most current National Federation of State High School Association (NFHS) standards or other governing bodies as approved.

Regulation nets to comply with United States Tennis Association standards or other governing authority.

Related Standards: Court Surfacing, Chain Link Fencing

## LIFE CYCLE EXPECTATIONS

A 2 year minimum warranty is required for posts.

Nets are anticipated to require replacement annually with normal and ordinary use.

Posts are anticipated to require replacement after 10 years of normal and ordinary use.

## MATERIALS AND FINISH

Provide 3-1/2 inches min. aluminum or galvanized steel net posts with a green powder coat finish and caps.

Use weather resistant No. 36 nylon net fabric. Provide a galvanized top cable with a white headband on all nets. Install protective net edging at bottom and ends.

## FEATURES

Provide a vandal resistant with heavy duty gear net tensioning reel.

Conceal, or install removable, wheel handle.

Provide center net anchors.

Install net posts foundations as designed by a professional engineer.

## INSTALLATION

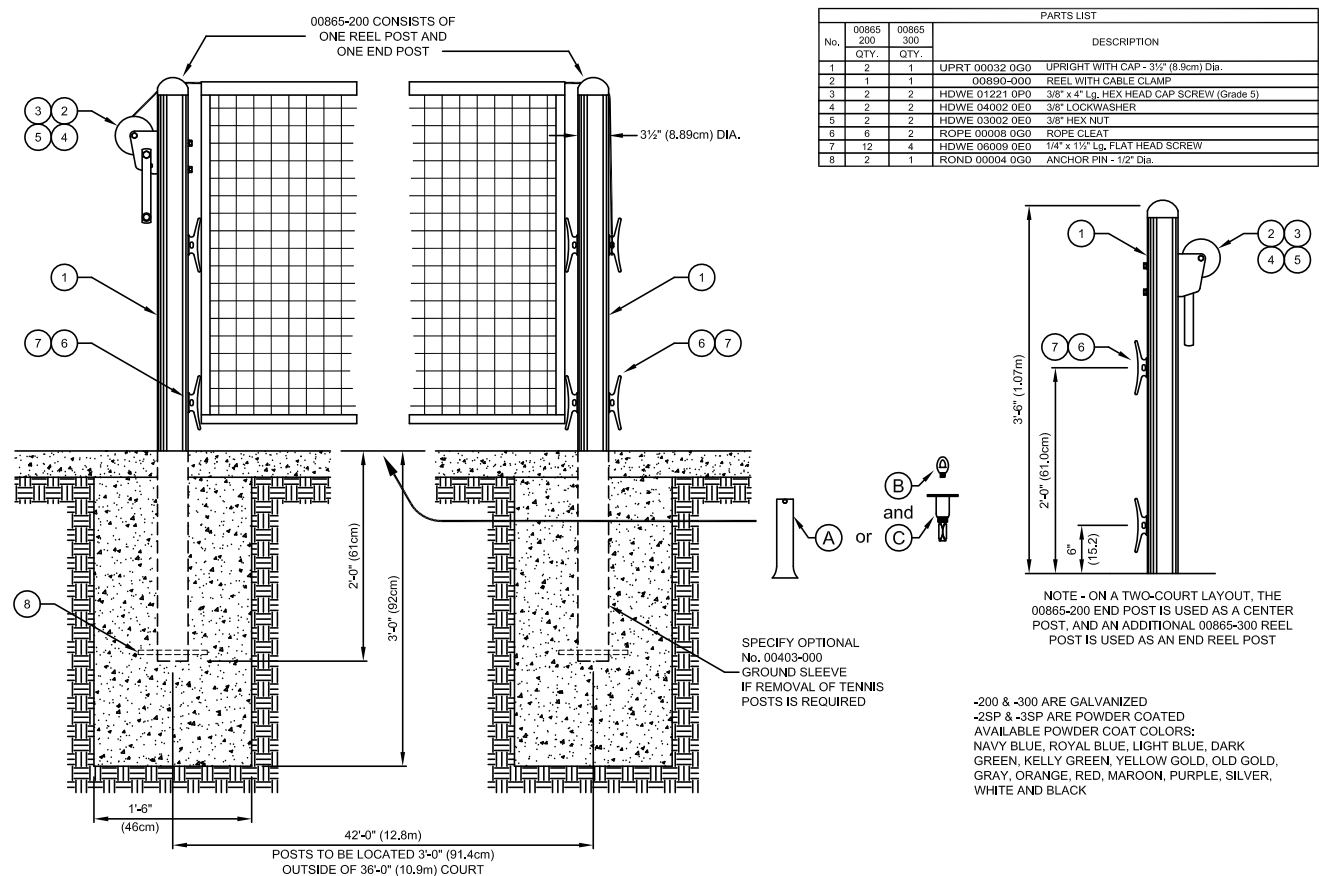
Install the posts in the ground prior to final surface installation and court lining.

Post layout to comply with USTA athletic standards.

Install the top of post foundation flush with final surface. Slope the top of footing to shed water. Install concrete net posts as 1 foot-6 inches diameter and 3 feet vertical depth minimum.

Set center net anchors in, 1 foot by 1 foot horizontal dimension and 1 foot minimum vertical depth, concrete footings.

# Tennis Court



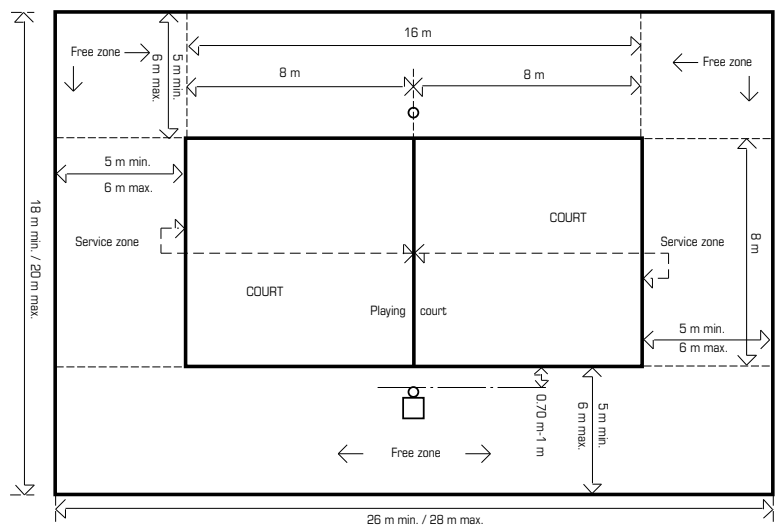
Tennis Court Netting



# Volleyball Court



Sand Volleyball Court



Court Diagram

## PURPOSE

Provide volleyball court and sand mixes for safe athletic play at outdoor volleyball facilities.

## GENERAL INFORMATION

Court layouts to conform to the most current standards of the International Federation of Volleyball or other governing bodies as appropriate.

Contain volleyball sand with a concrete border or other containment system approved by the Director of Parks and Recreation.

Provide a USDA soil classification analysis prior to installing court.

## MATERIALS AND FINISH

Provide high quality, low clay content, and fast draining sand, free of shells, rocks and other debris.

Install volleyball sand with 1 foot minimum continuous vertical depth.

Ensure sub-grade and all subsurface drainage systems drain properly.

## FEATURES

Install a nylon material volley ball net with dimensions of 36-feet long, by 39" wide, by 7' 4-1/8 inches tall, measured at the center of the playing court.

## INSTALLATION

Install the volleyball court on a north to south orientation. Provide a 10-foot minimum unobstructed area on all sides of the court.

## LIFE CYCLE EXPECTATIONS

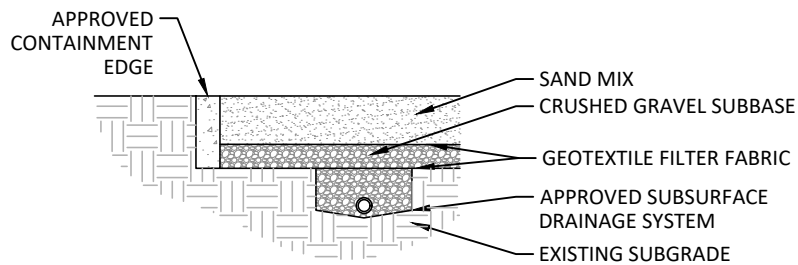
Volleyball sand is anticipated to require replenishment annually based on normal and ordinary use.

Nets are anticipated to require replacement annually with normal and ordinary use.

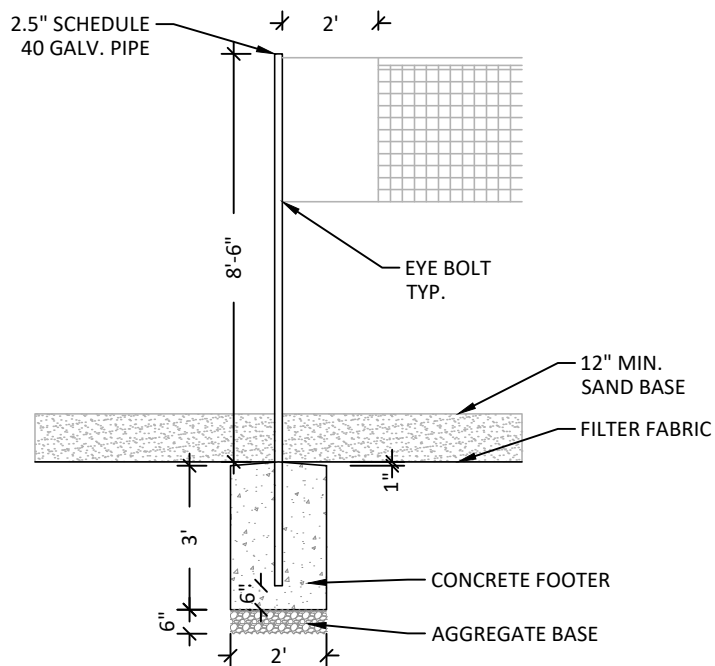
Posts are anticipated to require replacement after 10 years of normal and ordinary use.



# Volleyball Court



▼ Volleyball Court sand cross section



▼ Volleyball Net





## 08. UTILITY SYSTEMS

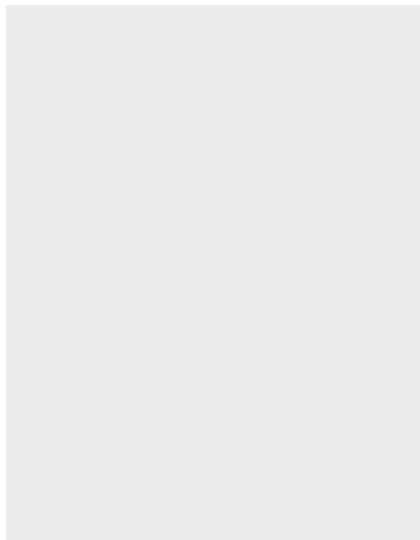


- › Park Utilities / Wireless Network Infrastructure
- › Clearing / Site Prep



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# Park Utilities / Wireless Network Infrastructure



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## Clearing / Site Prep



Tree protection measures

### PURPOSE

All sites commencing for construction are prepared to protect the health, safety, and welfare of the public, construction crews, and surrounding natural and built environments.

### GENERAL INFORMATION

Design and construct parks to meet City of Angleton and Brazoria County requirements, any standards approved by the Director of Parks and Recreation, and in accordance with related federal, national, state or local codes including but not limited to, the following:

- > International Play Equipment Manufacturer's Association (IPEMA)
- > Consumer Product Safety Commission (CPSC) Handbook for Public Safety
- > American Society of Testing and Materials (ASTM and ASTM F08)
- > Accessibility Standards for Play Areas through the ADA Accessibility Guidelines (ADAAG)
- > Illuminating Engineering Society of North American (IESNA RP-6-01)
- > Sports Turf Management Association (STMA)

Install erosion and sediment control and tree protection materials per plans as designed by a professional engineer or licensed landscape architect.

All tree work is to be performed or supervised by an ISA Certified Arborist.

Water, wastewater, electrical services, and all other utilities provided to the remainder of the subdivision is to be provided to the park as part of standard subdivision improvements.

Contractor responsible to remove all trash, dead trees and other unusable materials from the property.

Disposing of construction materials within the park by the owner or developer's contractors, subcontractors, employees or agents at any time while the subdivision is being built is prohibited. If materials are deposited or disposed of within the park, the owner or developer is required to remove these materials within 72 hours of written notice by the City.

Contractors responsible to mark each corner of the park land to be dedicated with a permanent monument consisting of 3/4 inch iron pins set in concrete. Located and identify the corners on a recordable land survey completed by a land surveyor registered in the state of Texas and provided to the City.



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## 09. SIGNS



- › General Sign Parameters
- › Educational / Interpretive
- › Wayfinding
- › Entry
- › Regulatory / Warning

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# General Sign Parameters



▼ Type A Sign from City of Angleton Gateways and Identity Master Plan

## PURPOSE

To establish a consistency throughout the City of Angleton park system that identify, inform, regulate, protect, and educate park users.

## GENERAL INFORMATION

Informational signs include:

- > Educational/Interpretive
- > Entry
- > Regulatory / Warning
- > Wayfinding

Other signs include:

- > MUTCD Manual of Uniform Traffic Control Devices
- > Site Specific Warnings and Regulation

New park developments are required to include a site sign package. The package will identify location and design of all signs.

Signs designating the area as a park is supplied by the developer.

The placement of multiple signs on fences, trees, and light poles is prohibited.

## MATERIALS AND FINISH

Sign types per the City of Angleton Gateway and Identity Master Plan vary in material. Materials may include:

- > Cream Limestone
- > Stone Veneer
- > Concrete
- > Aluminum
- > Vinyl

## FEATURES

Sign designs are to comply with the City of Angleton Gateways and Identity Master Plan or otherwise specified by the PARD or the director of Parks and Recreation.

## INSTALLATION

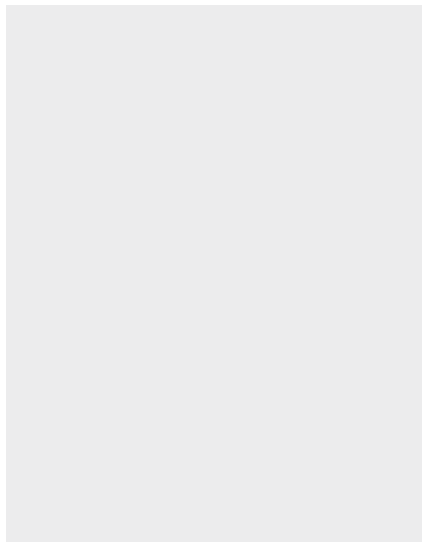
Structural foundations for signs is to be designed by a licensed structural engineer in the state of Texas.

## LIFE CYCLE EXPECTATIONS

Signs are anticipated to require replacement after 20-30 years based on normal and ordinary wear.

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# Educational / Interpretive



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## PURPOSE

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## INSTALLATION

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## LIFE CYCLE EXPECTATIONS

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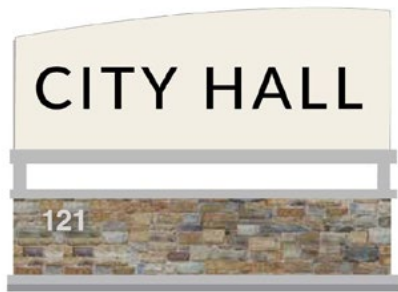
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# Entry



▼ Type E Sign from City of Angleton Gateways and Identity Master Plan

## PURPOSE

Locate identity signs at the entrances of city owned buildings and designated parks.

## GENERAL INFORMATION

All new parks, except Undeveloped Park or Passive Park (UD), are to have an entry sign.

One entry sign per egress/ingress or as approved by the Director of Parks and Recreation.

Signs designating the area as a park is supplied by the developer.

Related Standards: Parking Lot

## MATERIALS AND FINISH

Sign types per the City of Angleton Gateway and Identity Master Plan vary in material. Materials for sign type E include:

- > Cream Limestone
- > Stone Veneer
- > Concrete
- > Aluminum

## FEATURES

Sign designs to comply with the City of Angleton Gateways and Identity Master Plan or otherwise specified by the PARD or the Director of Parks and Recreation.

## INSTALLATION

Design structural foundations for signs by licensed structural engineer in the state of Texas.

Locate entry signs outside the clear visibility zone of a parking lot egress/ingress.

## LIFE CYCLE EXPECTATIONS

Signs are anticipated to require replacement after 20-30 years based on normal and ordinary wear.

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# Regulatory / Warning



▼ Park Rules Sign at Dickey Park

## PURPOSE

Permanent regulatory sign provide information such as park hours, rules, regulations, emergency contact information and non-essential programming at all parks.

## GENERAL INFORMATION

State the name of the park, the City of Angleton as the park operator, and a contact number to report safety issues on all signs.

Post signs in unobstructed viewsheds near activity centers or park entrances.

Additional languages may be included on signs as approved by the Director of Parks and Recreation.

## MATERIALS AND FINISH

Materials to be durable, reflective, weather resistant, UV resistant and low-glare.

Sign graphics, colors and fonts to comply with City of Angleton Brand Standards.

Signs to be 1/16 inch minimum thick aluminum.

## INSTALLATION

Affix signs to fences or attached to a standard post.

Post signs at a 4 feet vertical height from finish grade to the center of the sign board.

Any outdated or repetitive signs to be removed at time of construction.

## FEATURES

Sign designs are to comply with the City of Angleton Gateways and Identity Master Plan or otherwise specified by the PARD or the director of Parks and Recreation.

The following sign sizes are acceptable as determined by location, size of park, visibility, and as approved by the Director of Parks and Recreation:

- > 24 inch length x 18 inches width
- > 24 inch length x 24 inches width
- > 36 inch length x 24 inch width
- > 48 inch length x 36 inch width

QR codes may be included on signs as approved by the Director of Parks and Recreation.

Orient signs in a portrait direction.

Authorized signs are approved for the following areas:

- > Fields/Active Recreation Sites
- > Natural Areas
- > Picnic Areas
- > Playgrounds
- > Ponds
- > Residential Neighborhoods
- > Waterfront, including Marina
- > Dog Park

## LIFE CYCLE EXPECTATIONS

Signs are anticipated to require replacement after 10-15 years based on normal and ordinary wear.



# Regulatory / Warning Signs

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## PURPOSE

The following text is used for park regulatory signs.

### ALL PARK AREAS

*(except user specific, such as dog parks, waterfront parks, athletic fields, etc.)*

- › Park hours are from sunrise to sunset, except by permitted use
- › Dogs must be on a leash and handlers must clean up after their pet
- › Use trash cans to dispose of all waste
- › No amplified sound, except by permitted use
- › No firearms or explosives
- › No alcoholic beverages or glass containers
- › All vehicles in designated parking

*For non-emergency police assistance, call 979-849-2283. For General recreation information, call 979-549-0410 opt. 5 or visit [www.tx-angleton2.civicplus.com/394/Parks-Recreation](http://www.tx-angleton2.civicplus.com/394/Parks-Recreation). Use of this park is subject to the City of Angleton code.*

### NATURAL AREAS

- › Park hours are from sunrise to sunset, except by permitted use
- › Dogs must be on a leash and handlers must clean up after their pet
- › Use trash cans to dispose of all waste
- › No amplified sound
- › No firearms or explosives
- › No alcoholic beverages or glass containers
- › All vehicles in designated parking
- › Stay on trails to protect native plants and to avoid poison ivy
- › Disturbing park wildlife or plants is prohibited

## FIELD / ACTIVE RECREATION SITES

- › Park hours are from sunrise to sunset, except by permitted use
- › Dogs must be on a leash and handlers must clean up after their pet
- › Use trash cans to dispose of all waste
- › No amplified sound, except by permitted use
- › No firearms or explosives
- › No alcoholic beverages or glass containers
- › No dogs allowed on field
- › Field use by permit only
- › No golfing
- › Vehicles in designated areas only; the City of Angleton is not responsible for damages to vehicles in this lot.
- › No vehicle maintenance allowed on site
- › Add for diamond fields: No hitting balls into fence

## PICNIC AREAS

- › Park hours are from sunrise to sunset, except by permitted use
- › Dogs must be on a leash and handlers must clean up after their pet
- › Use trash cans dispose of all waste
- › No amplified sound, except by permitted use
- › No firearms or explosives
- › No alcoholic beverages or glass containers
- › All vehicles in designated parking
- › No organized sports allowed in picnic areas
- › Fires are permitted in park grills only
- › Picnic areas available by reservation; reserve online at <https://secure.rec1.com/TX/angleton-tx/catalog>



## 10. LIGHTING



- › Athletic Field
- › Historic Pole
- › Solar
- › Street, Parking Lot, Path, and Area

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# Athletic Field



Typical Athletic Field Lighting

## PURPOSE

Provides athletic field and court lighting systems to ensure safe play environments where athletic field/court use is desired beyond normal daylight hours.

## LIFE CYCLE EXPECTATIONS

A 25 year warranty is required on athletic lighting systems.

Lighting systems are anticipated to require replacement after 40 years of normal and ordinary use.

## GENERAL INFORMATION

Provide athletic field and court lighting as a complete sports lighting system.

The standard system is the LED Musco Light-Structure, or City approved equal.

Provide lighting levels for safe play for the programmed sports. The average foot candle level on a rectangular playing surface is 50 foot candles (fc) with uniformity at 2.0:1.0. The average foot candle level on a court playing surface is 30 fc with uniformity at 2.0:1.0.

Include photometric plan for all park developments. Provide ample overhead lighting throughout the park to provide a safe and secure environment.

Design and install parks to meet standards approved by the Director of Parks and Recreation, in accordance with related federal, national, state, or local codes, including, but not limited to, the following:

- › Illuminating Engineering Society of North American (IESNA)

## FEATURES

Include a remote monitoring system on all light systems for performance tracking.

Include a remote lighting control system on all light systems that allows operation via website, phone, and email. Program system up to a year in advance and accept a seven day schedule.

Include an accessible on-off selector switch located on one of the poles for all lighting systems.

Include pegs on poles for maintenance access on lighting.

Locate ballasts on individual poles.

## MATERIALS AND FINISH

Light poles and cross arms to be galvanized steel, and meet wind loading requirements of the IBC Building Code and AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaries and Traffic Signals.

Use pre-stressed direct burial concrete for bases. Design foundations by a professional structural engineer licensed in the State of Texas.

The mounting heights for athletic fields are 60-90 feet above the playing surface. Mounting heights for athletic courts are 20-40 feet above the playing surface.

Contain wiring inside the cross arms and poles.

Use 1500W or 1000W metal halide lamps with external visors to minimize light glare and spill on light fixtures.

## INSTALLATION

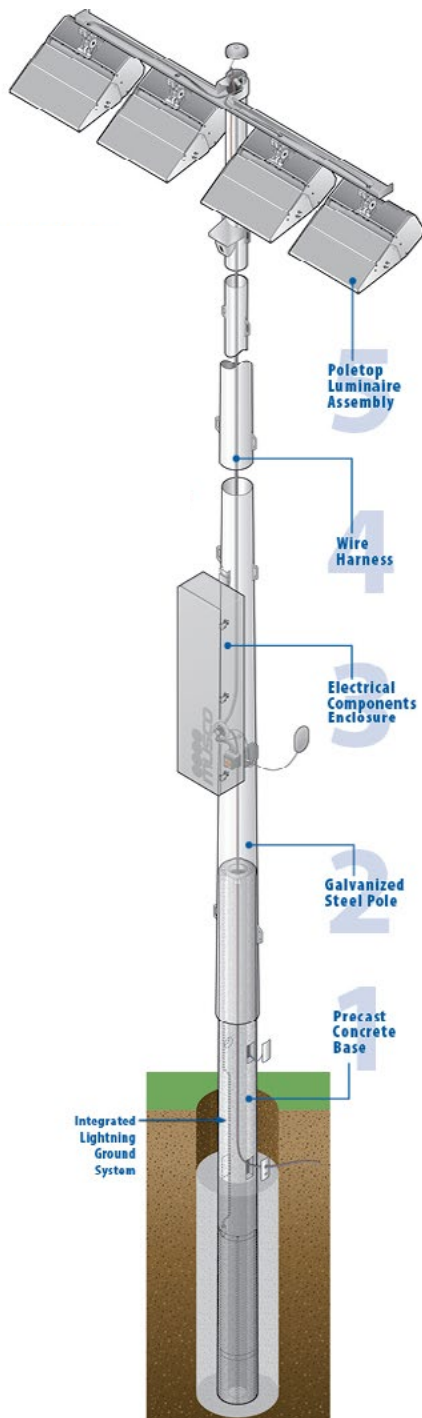
Light pole installation require separate permits.

Coordinate player-activated switches and timers to minimize additional infrastructure.

Include direct burial concrete bases for poles.

# Athletic Lighting

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▼ Typical Athletic Lighting





# Historic Pole



Amerlux AP24 Light Fixture

## LIGHT FIXTURE

Amerlux

Model: AP24 (D131/AP24)

## LIGHT POLE

Holophane

Model: Wadsworth Aluminum

## PURPOSE

The historic pole light is used as a street, park road, or pathway light in the City's Historic District to illuminate portions of public land or right-of-way.

## GENERAL INFORMATION

Amerlux AP24 Series light fixture is the approved light fixture in the Historic District. Alternatives must be approved by the Director of the Department of Parks and Recreation.

Include photometric plan for all park developments. Provide ample overhead lighting throughout the park to provide a safe and secure environment.

Design and install parks to meet standards approved by the Director of Parks and Recreation, in accordance with related federal, national, state, or local codes, including, but not limited to, the following:

- > Illuminating Engineering Society of North American (IESNA)

## MATERIALS AND FINISH

Mount light fixtures on Holophane Wadsworth aluminum poles.

Finish poles and fixtures with a satin black UV-resistant catalyzed urethane coating.

Light poles and fixtures are not to exceed 14 feet total height from finished grade to top of fixture.

Install an anchor base with poles.

The ornamental base must cover anchor bolts with one or two pieces, be vandal resistant, and finished to match the pole.

The pole top to meet the Department of Transportation and Environmental Services requirements.

A fixture cage, band, or finial is prohibited.

All metal finishing must be a high-quality, permanently affixed powder coating, done through a heat-finished process.

## FEATURES

Light fixtures with separate ballast boxes are prohibited.

Include full top reflectors for all globes/post top light fixtures.

## INSTALLATION

Locate light poles not to conflict with existing or proposed vegetation or plantings.

Locate lights a minimum of 3 feet from the edge of all shared-use paths or pedestrian walkways.

Slope the top of light pole foundations to shed water and must be flush to finished grade.

Sleeve conduit and connections installed beneath paving.

Install lights on a GFI circuit and switch.

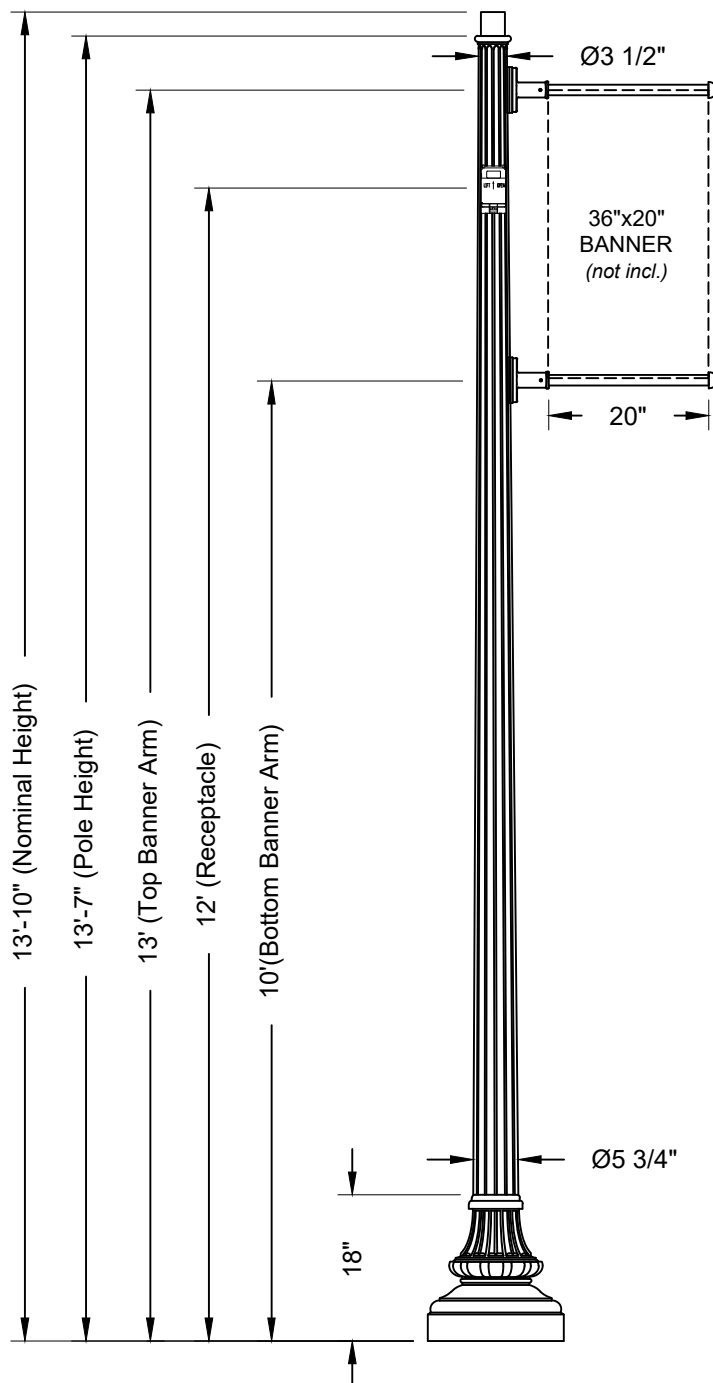
## LIFE CYCLE EXPECTATIONS

A 3 year minimum warranty is required on fixtures and poles.

Fixtures and poles are anticipated to require replacement after 20 years of normal and ordinary use.



## Historic Pole

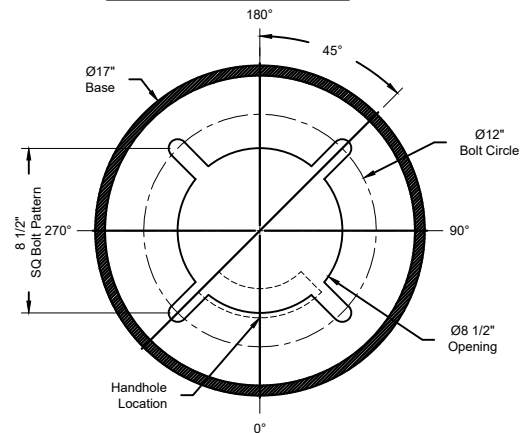


▼ *Holophane Wadsworth Aluminum Pole*

### Accessory Mounting Detail

	Orientation	Height
RECEPTACLE	0°	12'-0"
BANNER ARMS	180°	13'-0 & 10'-0"

### Anchorage Detail





# Solar



JEC Solar Light



Solar Lights at Freedom Park

## PURPOSE

Locate lighting to illuminate portions of the park including trail heads and intersections and designated areas.

## GENERAL INFORMATION

The JEC All in One Smart Solar fixture may be installed in park locations as approved by the Director of Parks and Recreation.

Include photometric plan for all park developments. Provide ample overhead lighting throughout the park for a safe and secure environment.

Design and install parks to meet standards approved by the Director of Parks and Recreation, in accordance with related federal, national, state, or local codes, including, but not limited to, the following:

- > Illuminating Engineering Society of North American (IESNA)

## MATERIALS AND FINISH

Provide a black metal pole with a powder coat finish.

Light pole total height must not exceed 15 feet from finished grade to top of fixture. Recess anchor bolts anchor base casting. Provide tamper resistant covers.

## FEATURES

Light fixtures to operate at 30W and 500K CCT.

## INSTALLATION

Locate light poles not to conflict with existing or proposed vegetation or plantings.

Lights are to be located a minimum of 3 feet from the edge of all shared-use paths or pedestrian walkways.

Mount light pole foundations to be flush to finished grade. Slope top of footing to shed water.

Sleeve conduit and connections installed beneath paving.

## LIFE CYCLE EXPECTATIONS

A 5 year minimum warranty is required.

Lights are anticipated to require replacement after 20 years of normal and ordinary use.

## SOLAR

Manufacturer: JEC

Model: All In One Smart Solar Light

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# Street, Parking Lot, Path, and Area



National LED DoradoXLE Fixture

## LIGHT POLE

National LED  
Model: DoradoXLE

### PURPOSE

Portions of the park, street, trails, roads, parking lots and designated areas is illuminated by standard LED lighting.

### GENERAL INFORMATION

Install square, down light, National LED DoradoXLE fixtures in park locations subject to City of Angleton guidelines.

Include photometric plan for all park developments. Provide ample overhead lighting throughout the park to provide a safe and secure environment.

Design and install parks to meet standards approved by the Director of Parks and Recreation, in accordance with related federal, national, state, or local codes, including, but not limited to, the following:

- > Illuminating Engineering Society of North American (IESNA)

### MATERIALS AND FINISH

Black, die-cast aluminum powder coat finish for lamp housing and lens frame.

Install hinge assembly with lens frame for maintenance. Lens to be high-impact, clear tempered glass.

Black, powder coat finish for metal poles with matching anchor base and tamper resistant cover.

Mount light fixture on square aluminum poles with an extended pole mounting arm to offset the fixture.

Pole bases must cover the anchor bolts in one or two pieces, be vandal resistant and finished to match the pole.

Pedestrian area light poles must not exceed 15 feet in height from finished grade to top of the fixture. Vehicular area light poles to comply with Department of Transportation Requirements.

### FEATURES

Light fixtures that require separate ballast boxes are prohibited.

Lamps may include a wire guard.

### INSTALLATION

Locate light poles not to conflict with existing or proposed vegetation or plantings.

Locate lights a minimum of 3 feet from the edge of all shared-use paths or pedestrian walkways.

Slope the top of light pole foundations to shed water and be flush to finished grade.

Sleeve conduit and connections installed beneath paving.

### LIFE CYCLE EXPECTATIONS

A 3 year minimum warranty is required on all light fixtures and poles.

Lights are anticipated to require replacement after 20 years of normal and ordinary use.

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# 11. PLANTING AND IRRIGATION



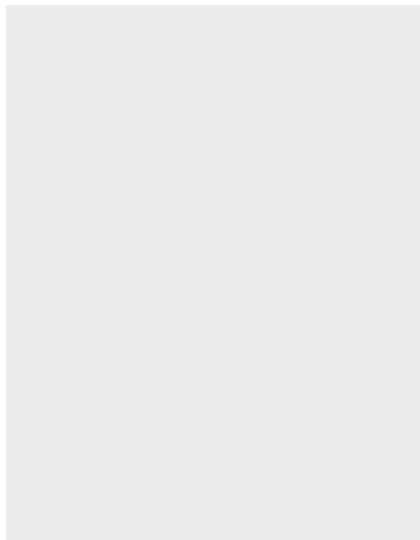
- › Planting Design
- › Irrigation



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# Planting Design



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## GENERAL INFORMATION

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## MATERIALS AND FINISH

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## FEATURES

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## INSTALLATION

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## LIFE CYCLE EXPECTATIONS

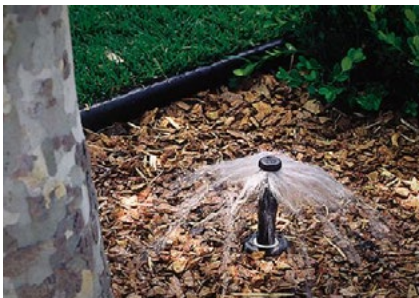
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# Irrigation



▼ Irrigation types from top to bottom: drip, spray head, rotors, and bubblers.

## PURPOSE

Irrigation and water management systems is to provide supplementary water for plantings and turf areas during periods of drought.

## GENERAL INFORMATION

Each park irrigation system will operate as a stand-alone system.

Standard irrigation components include: Hunter, Rainbird, Toro, or City approved equal.

## MATERIALS AND FINISH

All irrigation systems must include communication devices to coordinate with the controller including: cluster control unit, site satellite or radio antenna, flow sensor, and rain sensor. Small sites may be exempt at the determination of the Director of Parks and Recreation.

Use heavy duty, H-20 loaded, Carson valve boxes with black covers. Include 3 inches minimum vertical depth of gravel at the base in all valve boxes.

## FEATURES

All new irrigation installations to include an accurate, complete, data report of all components installed, precipitation rates and water pressure/flow rates.

Irrigation systems may include drip, spray-head, rotors, and bubblers as applicable for site specific needs.

## INSTALLATION

Installed irrigation systems to comply per plans designed by a professional irrigator licensed in the State of Texas.

Irrigation systems operate at a minimum 60 static pressure unless otherwise noted by a professional irrigator licensed in the State of Texas.

After the irrigation system is installed and operates, provide as-built drawings, detailing component type and information, location and connections, to the Director of Parks and Recreation.

Irrigation systems must provide head-to-head (100%) coverage.

## LIFE CYCLE EXPECTATIONS

A 5 year minimum warranty is required on communication components.

A 1 year minimum warranty is required on irrigation components.





**City of Angleton  
Department of Parks & Recreation**

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