Ballfield

BeaconAthletics.com
VERSION 2.3

DIMENSIONS & REFERENCE GUIDE

EVERYTHING YOU NEED TO LAYOUT YOUR FIELD FROM THE EXPERTS IN THE FIELD

BEACON ATHLETICS

Laying out a ballfield [GREEN section]

Base anchors & warning tracks [BLUE section]

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SPACE NEEDS OF A BALLFIELD

WHAT YOU NEED TO KNOW TO BUILD IT LIKE A PROFESSIONAL: STEP-BY-STEP

The Beacon Athletics team of "experts in the field" has been providing the tools, training and expertise for managing your facilities since 1948. We provide the finest essential facilities & field maintenance equipment, on-field equipment, and training equipment for professional groundskeepers, facility managers, and athletic trainers. Within this *Ballfield Dimensions & Reference Guide*, you'll find all the essential information for accurately laying out your ballfield to meet the specifications according to your ruling league or jurisdiction. If you need additional information, materials, or field and facility equipment, visit BeaconAthletics.com or contact our Project Services Group at 800-747-5985.

How much space will I need?

When looking for space to build a ballfield or a complex of fields, there are several factors that should be considered during the planning stage. In many cases, it is not just the ball diamond that is being built. Typically there are additional features to consider such as, dugouts, bathrooms, concession areas, storage facilities, bleachers, drainage swales, parking and even buffer zones that may need to be built as well.

For the ballfield portion, the table below gives you rough estimates for the area needed for various sized ballfields allowing adequate space for field amenities such as bleachers, dugouts, fences, lights and scoreboards.

Remember, your parking lot is a piece of the puzzle that can use up a lot of space in a hurry. You can use 20 spaces as the starting point for the minimum amount of parking at a ballfield. 20 Spaces will need approximately 0.3 acre. For each additional parking space you'll need to add another 0.015 acre per space.

Addressing fan safety

Multi-field complexes are often planned with little thought regarding protection of spectators. Sometimes fields are squeezed tight together with a bare minimum of common space between fields. Fans watching a game on one field can be subject to stray foul balls from other fields that are right behind them. This is a common issue with many multi-field complexes. *(continued below)*

BASEBALL FIELD space needs	
90 ft bases with 400 ft fence	4.5 acres
80 ft bases with 315 ft fence	3 acres
70 ft bases with 275 ft fence	2 acres
60 ft bases with 215 ft fence	1.5 acres

SOFTBALL FIELD space needs	
65 ft bases with 275 ft fence	2.5 acres
60 ft bases with 200 ft fence	1.5 acres

SOURCE: *Sports Fields; Design, Construction & Maintenance (Puhalla, Krans & Goatley)*

Addressing fan safety *(continued)*

There are three ways you can address this problem. The first way would be to install an expansive overhead netting system to protect the fans. While extremely effective, this could become very expensive depending on the size and scope of the netting system needed. A second idea would be to address this potential problem in the planning stages when simple realignment of fields can help to increase the amount of room between fields, reducing foul ball risk. Your third option involves a little bit of the first two, and it will likely be your best overall plan.

Start by planning your common areas to be as open as possible between fields. Then, use a combination of barrier netting and deciduous trees. Planting trees along the common areas along with netting will greatly reduce the risk of spectator injury. Barrier netting will deflect the lower flying line drive foul balls while trees will become a living, growing ball deflection system for the higher foul pops entering common areas. The older the trees get between fields, the bigger and more dense the natural deflection system will be. Additionally, trees will also provide much appreciated shade for those hot summer days and they'll serve as a wind breaker on gusty days. They'll improve fan comfort while at the same time providing a more appealing park-like atmosphere.

Managing Drainage

Probably the most critical part of an athletic field is it's surface drainage. There are two main styles of surface grade that commonly are used for controlling surface water removal. The first and most popular is called the "turtle back" where the base of the pitcher's mound is the highest point on the field and elevations fall away from that point in all directions much like the back of a turtle's shell. On this type of field, the infield is typically graded to a 0.5 – 1% slope. The outfield and foul areas should be graded at a 1 – 1.5% slope. This is the quickest and most efficient method to shed water off a ballfield.

The other, less popular option involves having the whole field tilt from one side of the field to the opposite side. This type of drainage is called "sheet flow" drainage, like a sheet of water sliding off the side of a hill. This surface drainage will work provided the home plate area is at the highest point of the slope. You want to avoid water draining toward the infield and home plate — it should always move away from the infield. Sheet flow will drain slower than the turtle back method because the water will have a longer distance to travel before exiting the field.

With all of the above in mind, try to find land for your ballfield that will require the least amount of rough grading in order to satisfy one of the above drainage styles. Drainage swales and/or storm drains along the edges of a ball diamond in "out-of-play" areas should be used to carry the surface drained water away from the site.

LAYING OUT YOUR BALLFIELD

WHAT YOU NEED TO KNOW TO BUILD IT LIKE A PROFESSIONAL: STEP-BY-STEP

❶ What is the sun's angle at your ballfield?

How will the sun impact the ballplayers at the time of day when most games will take place on the field? This is a very important consideration because it can affect every player on the diamond — batters and fielders alike.

Ideally, you should aim to keep the sun out of the batter's line of sight. It is very difficult, and even dangerous, for a batter to try to pick up a pitch when looking either directly or indirectly into the sun. In other words, it is best to keep the sun entirely behind the batter's head so it does not present a problem during play.

It is also very important to make sure the sun angle will impact as few of the fielders as possible. Generally speaking, the best angle for both batters and fielders is to have the centerline of the field run from southwest to northeast with home plate at the southwestern end. The centerline of the field is the imaginary line running from the apex (back point) of home plate, through the middle of 2nd base, and on to centerfield.

❷ Where do you want home plate to be?

Now that you have an idea of which direction the field should face, choose where you want home plate to be located. Check with your ruling jurisdiction for the proper distance between home plate and the backstop (see *Field Dimensions Diagrams* in the RED section). If there is already a backstop installed at the field, make sure that you center home plate with the backstop. The objective is to have the centerline of the field be a continuation of the centerline that runs from the existing backstop to home plate. Place a pin, stake, or marking flag where you want the point of home plate to be located.

❸ Stake out 2nd Base.

Next, using a 200-foot (or longer) measuring tape with one end attached to the stake at home plate, measure out in the direction that you want to place 2nd base. Drive another stake at the proper distance for 2nd base, according to the ruling league or jurisdiction that you are in (see *Field Dimensions Diagrams* in the RED section). This point should be the exact center of 2nd base and should fall on the centerline of the field.

❹ Now, stake out 1st & 3rd.

To find the location for 1st base, extend the measuring tape from 2nd base in the direction where the approximate location for 1st base will be. Be sure to measure the required distance according to your league. Then, extend a second measuring tape from your home plate stake toward 1st base. The point at which these two tapes intersect with equal distances from home plate to 1st and 1st base to 2nd is where you will place another stake. This point will be the back outside corner of 1st base. ***Repeat this process to find the location of 3rd base.***

❺ Locate the pitching mound.

After locating home plate and the three bases, you need to locate the pitching mound. The center of the mound is again located on the centerline of the field at a set distance from home plate that is dictated by rules of the league that will be using the field. This distance is always measured from the apex of the white portion of home plate toward 2nd base. ***The black outside edging on the plate is not considered part of home plate and, therefore, is not included when measuring.***

(CONTINUED BELOW)

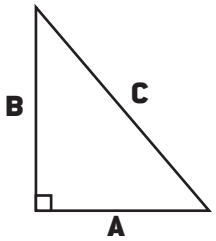
❻ Finally, the foul lines and foul poles.

To locate where the foul poles and the outfield foul lines should be located, it is best to use the geometric formula for a right triangle, $A^2 + B^2 = C^2$. To find the left field foul line, let A equal the distance between 2nd and 3rd base. Let B equal the distance you want the foul line to extend past 3rd base to the foul pole. Square each of these two numbers. Add them together. Then take the square root of the sum of the two numbers to calculate the length of C, or the hypotenuse. Follow the sample below. Once you have values for **A**, **B** and **C**, you can go to work in the field triangulating the location of your foul pole.

■ FOUL POLE CALCULATIONS, Fig. 1

For all right triangles, the following formula holds true:

$$A^2 + B^2 = C^2$$

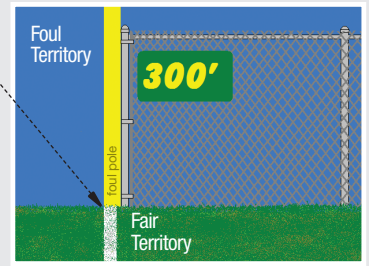


Let A = 90 ft This is the distance between 2nd & 3rd base.

Let B = 240 ft Let's suppose this is the distance you want the foul line to extend from 3rd base to the left field foul pole. This would make the left field foul line **330 ft long** on a baseball field with 90 ft baselines.

Alignment of the Foul Line to the Foul Pole

The foul edge of the **foul line** should always align with the foul edge of the **foul pole**.



Place the stake at the back corner of 3rd base. Place another stake in the exact center of 2nd base (if you have been following the steps above these stakes should already be set). Extend a 300-foot measuring tape from each of these stakes towards the left field foul. The tape that is running from the 3rd base stake should be extended out to the distance B in the above calculation. The other tape should be extended out from 2nd base to the distance C. This distance, the hypotenuse, is the longest side of the right triangle that you formed between 2nd base, 3rd base, and the left field foul pole.

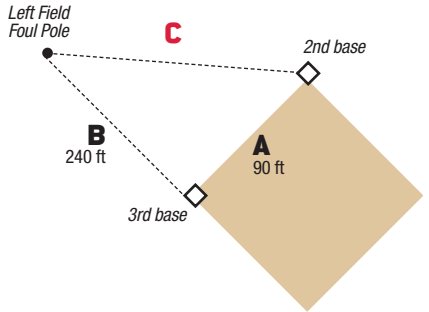
Pull the two measuring tapes toward each other until they intersect at the appropriate distances, B and C. Place a stake or marker of some type at the location to mark the left field corner, as shown below in Figure 2. Repeat this process using 1st base, 2nd base, and the right field corner to locate the right field pole.

■ FOUL POLE CALCULATIONS, Fig. 2

Now, let's apply this to a ballfield. Using the right angle formula and the values from Fig. 1 (left), we see that:

A^2 = 90 x 90 = 8,100 ft
B^2 = 240 x 240 = 57,600 ft
and, since $A^2 + B^2 = C^2$ then:

C^2 = 65,700 ft



To find the value of C, we calculate the square root of 65,700.

Therefore, **C = 256.3 ft**

To convert that decimal into inches, you multiply the number of inches in a foot by 0.3.

12 in/ft x 0.3 ft = 3.6 in

From these calculations, we know the distance from 2ND BASE to the LEFT FIELD FOUL POLE (C) is:

256 feet 3.6 inches

SETTING BASE ANCHORS

WHAT YOU NEED TO KNOW TO DO IT LIKE A PROFESSIONAL: STEP-BY-STEP

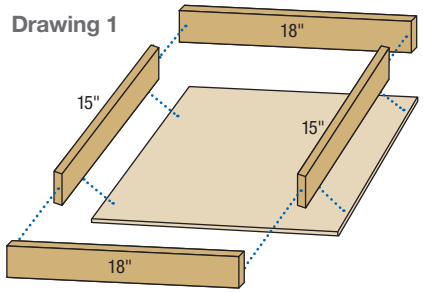
1 Create concrete anchors.

A. Build three forms. Each form will require (2) 15" long 2x4s; (2) 18" long 2x4s; and (1) 18" x 18" piece of ½" plywood or OSB board. Nail, screw and/or glue the pieces together as shown in **Drawing 1**. When finished, the inside of the box should be 15" x 15", the same size as your base.

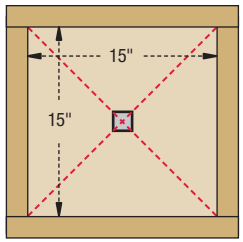
B. Position the anchor on the "X". Using a chalk line or a pencil and straight edge, draw straight lines from corner to corner on the inside bottom of the form making an "X"(see **Drawing 2**). Take your anchor (1" or 1 ½") and center it on that "X" so that the sides of the anchor are parallel to the sides of the wooden form. Be sure that the flared end of the anchor is at the bottom of the form box.

C. Fill with concrete. Mix an 80 lb bag of Redi-Mix concrete as directed on the package. You'll need someone to help you by holding the base anchor in position. Fill the form to the top with the concrete mix and allow one day to cure.

Drawing 1



Drawing 2



2 Locate the base anchor positions on your field.

(Assuming home plate is in place and a centerline can be established on the field)

A. Find the center of 2nd Base. With the centerline in place, refer to the *Field Dimensions Diagrams* in the RED section of this guide to find the correct infield hypotenuse dimension (letter "C" on the diagram) for size field on which you will be installing the base anchors. Measure with a steel measuring tape from the point of home plate following along the centerline to the distance indicated for the Infield Hypotenuse [C]. Place a tarp pin or nail at that exact spot on the centerline. *This is the center of 2nd base.*

B. Measure to 1st Base. Measure from the 2nd base pin the required base distance [A] where 1st base will be positioned (again, reference the *Field Dimensions Diagrams* in the RED section). At the same time, use a second steel tape measure to measure from the point of home plate the required base distance to 1st base. Where the two tape measures come together to form a right angle, set another tarp pin or nail. *This is the back foul corner of 1st base.*

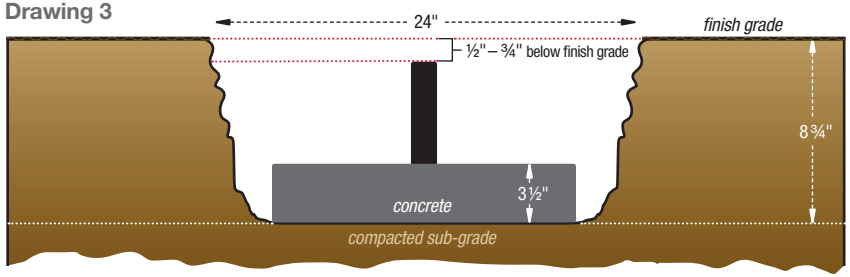
C. Measure to 3rd Base. Now repeat the process to position 3rd base. Measure from the 2nd base pin the proper base distance to 3rd base. Again, using a second tape, measure from the point of home plate to 3rd base and where the tape measures meet to form a right angle is where you place your tarp pin or nail. *This is the back foul corner of 3rd base.*

D. Make sure it's accurate. Measure the hypotenuse from the 1st base pin to the 3rd base pin. This is the same as the home plate to 2nd base hypotenuse. If these are not equal, you need to re-measure all of your base locations. Once the 1st-to-3rd and home-to-2nd distances match, your base locations are accurately marked.

3 Install 1st & 3rd base anchors.

A. String it up, dig a hole. Run a string line up the foul edge of your foul line from the point of home plate to well past 1st or 3rd base pin. This string line should just touch the foul side of your 1st or 3rd base pin. **To be installed correctly,** the base should cover up the foul line as it runs under the base. Next, excavate an area about 2' square in the area where the base should be located (see **Drawing 3**). Excavate knowing the pins you set indicate the back foul corner of the base. **Since most metal anchors are about 8" long**, your 2 x 2 hole for the anchor should be 8 ½" to 8 ¾" deep. The top of the anchor post should always be ½" to ¾" below the surface so it is never caught when nail dragging. Make sure that the bottom of the hole is level and well compacted.

Drawing 3



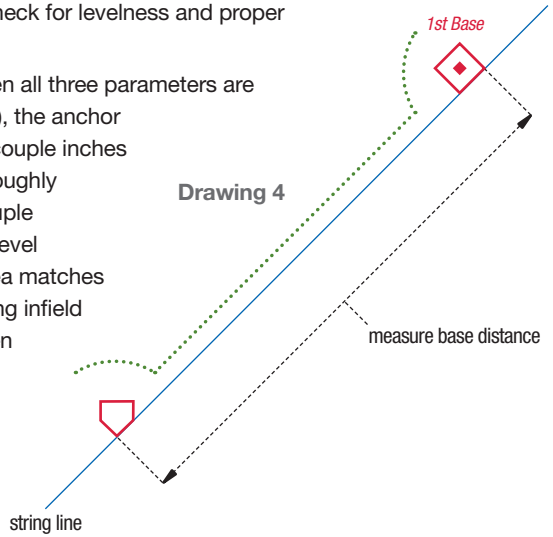
(STEP 3 continued)

B. Place the anchor. Remove one of the concrete anchors from its form by turning it upside down and pounding the form with a rubber mallet to loosen. Make sure that there is no concrete inside the steel anchor post. If necessary, clear out the excess concrete for drainage purposes. Place the concrete anchor in the hole. Check your depth by spanning a 2x4 across the hole like a bridge and over the anchor post. There should be a gap of ½" to ¾" from the top of the anchor post to the bottom of your 2x4 bridge. If not, remove the anchor and correct the sub-grade accordingly.

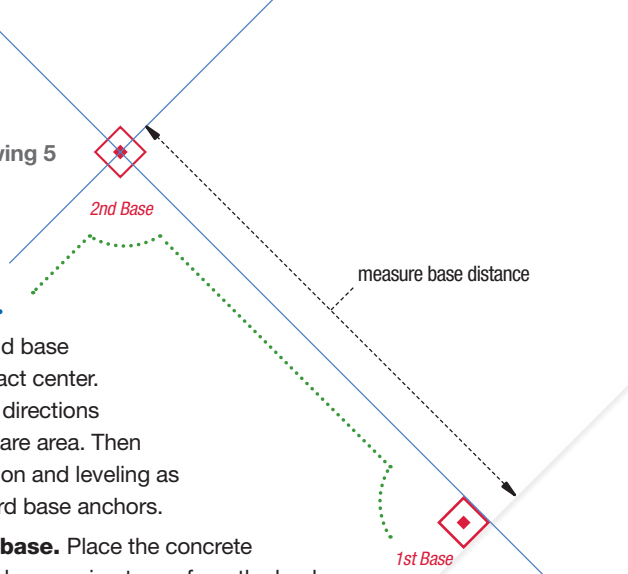
C. Is it level? Once your depth is set, make sure the anchor is level. Use a torpedo level on the sides of the anchor post. If necessary, adjust the grade under the concrete anchor until it is level.

D. Position the anchor accurately. Using the string line as your guide, maneuver the anchor so one edge of the concrete is on the string line, the back foul corner of the concrete is where your pin was placed, and the rest of the concrete is on the "fair side" of your string (see **Drawing 4**). Again, measure from the point of home plate to the back foul corner of the concrete anchor to ensure correct base placement. You may place a base in the anchor to make for easier measuring. After adjusting your concrete anchor accordingly for correct placement, recheck for levelness and proper depth. Adjust if needed.

E. Bury the anchor. When all three parameters are met (distance, depth, level), the anchor can be buried. Add soil a couple inches at a time compacting thoroughly before adding the next couple inches. Continue until the level of soil in the excavated area matches the grade of the surrounding infield skin. Compact the soil, then moisten and apply topdressing if used.



Drawing 4



Drawing 5

4 Install 2nd base anchor.

A. Dig a hole, level it out. The 2nd base pin you placed marks the base's exact center. Therefore, just excavate 1' out in all directions from the base pin to get your 2' square area. Then follow the same process of excavation and leveling as you did in Step 3 with the 1st and 3rd base anchors.

B. Find the exact center of 2nd base. Place the concrete anchor in the hole. Stretch your steel measuring tapes from the back foul corners of both 1st and 3rd base toward 2nd base. Where the two tapes meet forming a right angle at the proper base distance (letter "A" in the *Field Dimensions Diagrams* in the RED section) is the exact center of 2nd base. Center the anchor post at that point (see **Drawing 5**), making sure the sides of the concrete anchor are parallel to the foul lines.

C. Bury the anchor. When all three parameters are met (distance, depth and level), the anchor can be buried, just as you buried the 1st and 3rd base anchors.

5 Test each base, troubleshoot if necessary.

With the anchors now in place, test them by installing the bases to see how they sit on the infield skin surface. The base will sit tight to the skin surface with no gaps under the base. If you see gaps from the base sitting up too high, troubleshoot these common installation problems:

- The steel anchor post is not level (plumb), which means the base will not sit level on the surface.
- The infield skin is not finish graded nice and level, and it does not match the surrounding grade causing low areas around the base.
- How old are your bases? With older bases, it is possible the bottom edges may be curled up — especially on the corners.

All of these problems present a risk to the players. If a base isn't sitting properly and tight to the infield skin, there is a chance players could be injured when sliding into or running over the bases. You should correct these conditions immediately to reduce or eliminate the risk.

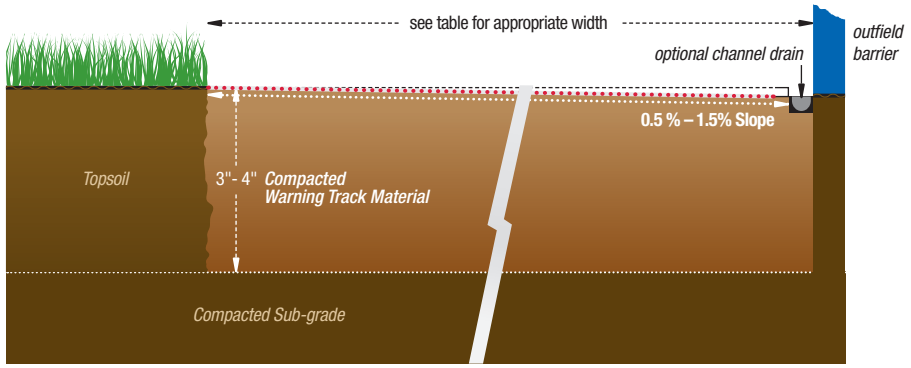
BUILDING THE WARNING TRACK

WHAT YOU NEED TO KNOW TO BUILD IT LIKE A PROFESSIONAL

A Getting the right width for the warning track.

General rule: The track should be wide enough to give players a **3-step warning** (at a full-speed run) that they are approaching a barrier. Their first step onto the track alerts them with a different texture under their feet. Their second and third steps allow players to decelerate before making contact with the barrier. With that in mind, the width of the warning track is determined by the oldest age group using the field.

WARNING TRACK WIDTH	
Oldest **AGE GROUP** Using Field	**WIDTH** of Warning Track
10 & under	8' – 10'
11 – 12	10' – 12'
13 – 16	12' – 15'
17 & older	15' – 18'



B Tips for building the warning track.

Depth of material: Minimum of 3". Shallower depths could result in weed problems on the warning track.

Type of material: Usually a ground aggregate of some kind. The largest grade of stone should be no bigger than about 3/16" mixed with a variety of finer particles to assist in binding the material. Uniformly graded materials will resist compaction, which can increase the safety risk to players.

Drainage: Rely upon a positive surface grade (0.5% – 1.5%) across the track for more rapid drainage.

Surface drains: May be needed at certain points along the track to remove excess surface water.

COVERAGE TABLE for 1 cubic yard of MATERIAL (CRUSHED AGGREGATE WARNING TRACK MATERIAL)		
DEPTH	**AREA COVERED** (non-compacted)	**AREA COVERED** (compacted)
1"	324 sq. ft.	267 sq. ft.
2"	161 sq. ft.	133 sq. ft.
3"	108 sq. ft.	91 sq. ft.
4"	81 sq. ft.	68 sq. ft.

FORMULA FOR CALCULATING WARNING TRACK MATERIAL

$$\frac{\text{LENGTH of Track (ft)} \times \text{WIDTH of Track (ft)} \times \text{DEPTH of Material}}{\text{27 cubic feet per cubic yard Needed}} = \text{Cu. Yds. of WT Material*}$$

* ***Multiply the result of this formula by 1.2*** *to account for 20% compaction on material*

ESTIMATED VOLUME OF WARNING TRACK CRUSHED AGGREGATE MATERIAL NEEDED

QUANTITIES ARE SHOWN IN CUBIC YARDS *for a 3" depth with 20% compaction factored into computation | 1 cu yd of Magic Track Warning Track material = 1.4 tons*

Width of Track ▼	LENGTH OF WARNING TRACK ►															
	50'	100'	150'	200'	250'	300'	350'	400'	450'	500'	550'	600'	650'	700'	750'	800'
8'	4.4	8.9	13.3	17.8	22.2	26.7	31.1	35.6	40.0	44.4	48.9	53.3	57.8	62.2	66.7	71.1
10'	5.6	11.1	16.7	22.2	27.8	33.3	38.9	44.4	50.0	55.6	61.1	66.7	72.2	77.8	83.3	88.9
12'	6.7	13.3	20.0	26.7	33.3	40.0	46.7	53.3	60.0	66.7	73.3	80.0	86.7	93.3	100.0	106.7
14'	7.8	15.6	23.3	31.1	38.9	46.7	54.4	62.2	70.0	77.8	85.6	93.3	101.1	108.9	116.7	124.4
16'	8.9	17.8	26.7	35.6	44.4	53.3	62.2	71.1	80.0	88.9	97.8	106.7	115.6	124.4	133.3	142.2
18'	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0

KEY TO Field Dimensions Diagrams

(See Field Dimensions Diagrams on the following RED PAGES)

ALL MEASUREMENTS APPLY TO BASEBALL OR SOFTBALL FIELDS UNLESS SPECIFICALLY NOTED

A BASE DISTANCE For home-to-1st and 3rd-to-home, the measurement is taken from the back point, or ***apex***, of home plate to the farthest corner of each of 1st or 3rd base down the foul line. For 1st-to-2nd and 2nd-to-3rd, the measurement is taken from the outfield side of 1st or 3rd base at the corner by the foul line and extends to the center of 2nd base.

B 1ST BASE RUNNER'S LANE DISTANCE The runner's lane — which is always 3' to the foul side of the 1st base foul line — starts exactly half the distance down the 1st base line and ends at the back edge of 1st base. In other words, it's marked on the second half of the 1st base line.

C INFIELD HYPOTENUSE Measurement used to ensure the infield is square. May be measured from the back point or apex of home plate to the center of 2nd base. Or, it can be measured from the back corner of 1st base to the back corner of 3rd base.

D INFIELD ARC RADIUS Measurement is taken from the center of the front edge of the pitching rubber and extends toward the outfield grass to the distance recommended.

E COACH'S BOX DISTANCE FROM FOUL LINE Measurement for the distance from the foul edge of the foul line to the line in the coach's box that runs parallel to the foul line.

F COACH'S BOX LENGTH Distance measured on the long side of the coach's box.

G COACH'S BOX WIDTH Distance measured on the short side of the coach's box.

H BATTER'S BOX LENGTH Distance from front to back of the batter's box.

I BATTER'S BOX WIDTH Distance from the inside edge of the batter's box to the outside edge of the batter's box.

J DISTANCE TO BACKSTOP Distance from the back point of home plate (apex) to any portion of the backstop. Distance listed in the table is the *minimum* for that league. This distance can be greater than the minimum distance, but it cannot be any less.

K MINIMUM FENCE DISTANCE Minimum distance from the apex of home plate, down the right and left field foul lines to the outfield fence.

L MINIMUM CENTERFIELD FENCE DISTANCE Minimum distance from the apex of home plate, along the playing field centerline to the center field fence.

M MOUND RADIUS [*BASEBALL*] Measurement from the center of the mound outward to the length indicated.

M MOUND RADIUS [*SOFTBALL*] Measurement from the front center of the pitching rubber outward to the length indicated. The circle that is scribed from this radius is what should be chalked to define the "Softball Pitcher's Mound".

N PITCHING RUBBER DISTANCE Measurement from the apex of home plate along the centerline to the front center of the pitching rubber on the pitcher's mound.

[THE FOLLOWING APPLY TO BASEBALL ONLY]

O CENTER OF MOUND Measured along the imaginary centerline running from the apex of home plate to the center of 2nd base. Measurement runs from the apex of home plate along the centerline to the distance recommended.

P MOUND HEIGHT Height of the mound at the top of the pitching rubber with respect to the reference point prescribed by the governing body of the league. *(Example: Height of mound should be X-inches higher than the surface of home plate.)*

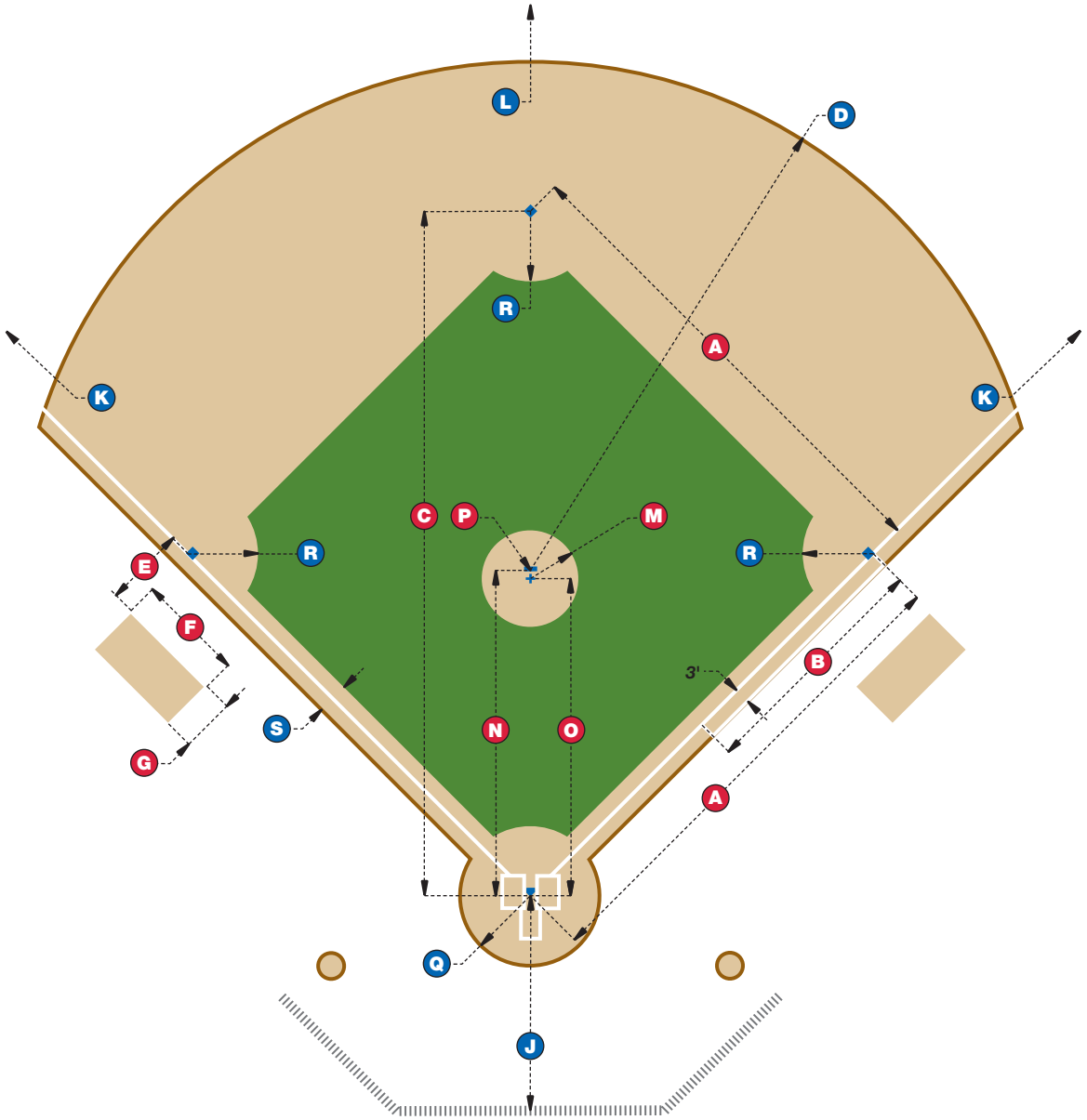
Q HOME PLATE RADIUS Measurement from the apex of home plate outwards to the distance recommended.

R BASE CUTOUT RADIUS At 1st and 3rd base, the measurement is taken from the back corner of the base inward to the infield grass to the distance recommended. At 2nd base the measurement begins at the center of the base and extends inward to the infield grass to the distance recommended.

S 1ST AND 3RD BASELINE WIDTH Width of the skinned baseline. Typically measured from the foul edge of the foul line. Orientation of the foul line in the baseline is at the groundskeepers discretion. Since the 1980s, baseball groundskeepers have moved the foul line to within 1 ft of the infield grass because runners almost always run on the foul side of the foul lines, meaning there is rarely any wear on the fair side of the foul lines. This puts the majority of the skinned area on the foul side of the line where most of the traffic occurs. Prior to this practice becoming standard, the foul line was placed in the middle of the skinned baseline.

GOLD LETTERS* indicate measurement that is *ABSOLUTE *and cannot be changed according any of the various baseball governing body rules. All other measurements can be adjusted to the discretion of the groundskeeper, these measurements are recommended but not required.*

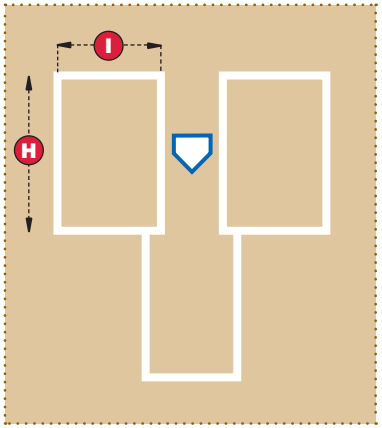
BASEBALL Field Dimensions Diagram



X **RED LETTERS** indicate measurements that are absolute

*See **Key to Field Dimensions Diagrams** on the first page of the **RED** section*

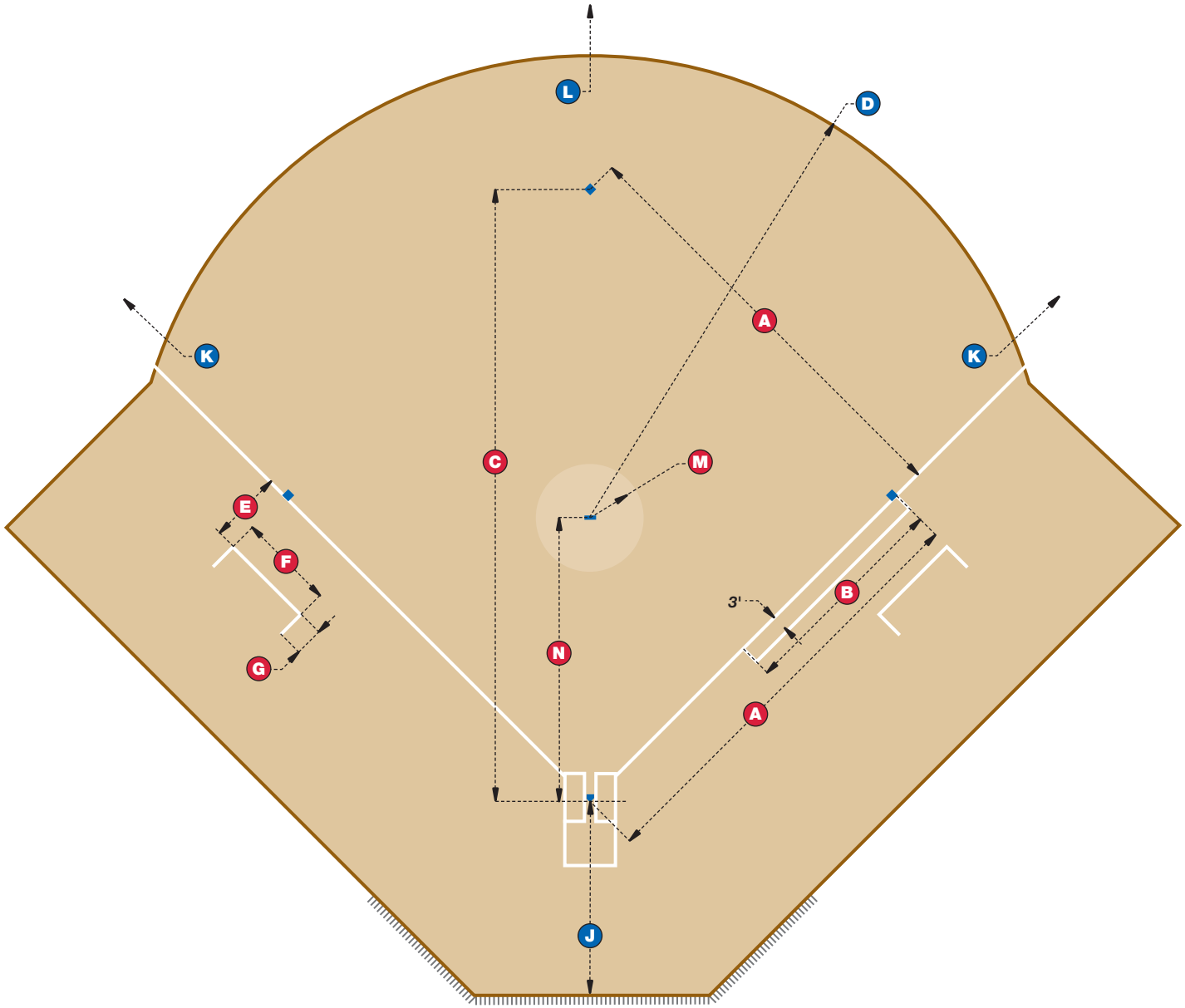
*See **Batter's & Catcher's Box** details in **PURPLE** section*



MEASUREMENTS TABLE | BASEBALL FIELD DIMENSIONS

GOVERNING BODY	LEAGUE	AGE RANGE	BASE DISTANCE	1st BASE RUNNER'S LANE	INFIELD HYPOTENUSE	INFIELD ARC RADIUS	COACH'S BOX FROM FOUL LINE	COACH'S BOX LENGTH	COACH'S BOX WIDTH	BATTER'S BOX LENGTH	BATTER'S BOX WIDTH	DISTANCE TO BACKSTOP	MINIMUM FENCE DISTANCE	MINIMUM CENTERFIELD FENCE DISTANCE	MOUND RADIUS	PITCHING RUBBER DISTANCE	CENTER OF MOUND	MOUND HEIGHT	HOME PLATE RADIUS	BASE CUTOUT RADIUS	1st & 3rd BASELINE WIDTH	FOUL TERRITORY WARNING TRACK WIDTH	OUTFIELD WARNING TRACK WIDTH
Reference letter on diagram			A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	–	–
IBAF	*International*	15 yrs & up	90'	45'	127 '3-3/8"	95'	15'	20'	10'	6'	4'	60'	320'-350'	400'	9'	60' 6"	59'	10"	13'	13'	6'	12'-15'	15'-18'
MLB, MiLB	*Professional*	18 yrs & up	90'	45'	127' 3-3/8"	95'	15'	20'	10'	6'	4'	60'	320'-350'	400'	9'	60' 6"	59'	10"	13'	13'	6'	12'-15'	15'-18'
NCAA	*College*	17 yrs & up	90'	45'	127' 3-3/8"	95'	15'	20'	5'	6'	4'	60'	330'	400'	9'	60' 6"	59'	10"	13'	13'	6'	12'-15'	15'-18'
NFHS	*High School*	14-19 yrs	90'	45'	127' 3-3/8"	95'	15'	20'	5'	6'	4'	60'	300'	350'	9'	60' 6"	59'	10"	13'	13'	6'	12'-15'	15'-18'
Babe Ruth	*Babe Ruth*	13-18 yrs	90'	45'	127' 3-3/8"	95'	15'	20'	10'	6'	4'	60'	320'	400'	9'	60' 6"	59'	10"	13'	13'	6'	12'-15'	15'-18'
Cal Ripken Babe Ruth	*Major 70*	11-12 yrs	70'	35'	99'	65'	6'	8'	4'	6'	3'	30'	200'	200'	6'	50'	48' 6"	8"	11'	11'	6'	8'-12'	12'-15'
	Major 60	11-12 yrs	60'	30'	84' 10-1/4"	50'	6'	8'	4'	6'	3'	25'	200'	250'	5'	46'	45'	6"	9'	9'	6'	8'-12'	12'-15'
	Minor	9-10 yrs	60'	30'	84' 10-1/4"	50'	6'	8'	4'	6'	3'	25'	200'	250'	5'	46'	45'	6"	9'	9'	6'	8'-12'	12'-15'
	Rookie	7-8 yrs	60'	30'	84' 10-1/4"	50'	6'	8'	4'	6'	3'	25'	200'	250'	5'	46'	45'	6"	9'	9'	6'	4'-8'	6'-10'
	T-Ball	4-6 yrs	60'	30'	84' 10-1/4"	50'	6'	8'	4'	6'	3'	25'	200'	250'	5'	46'	45'	0"	9'	9'	6'	4'-8'	6'-10'
Dixie	*"0" Zone*	11-12 yrs	70'	35'	99'	65'	6'	8'	4'	6'	3'	30'	200'	200'	6'	50'	48' 6"	8"	11'	11'	6'	8'-12'	12'-15'
	Major	11-12 yrs	60'	30'	84' 10-1/4"	50'	6'	8'	4'	6'	3'	25'	200'	200'	6'	46'	45'	6"	9'	9'	3'	8'-12'	12'-15'
	AAA	9-10 yrs	60'	30'	84' 10-1/4"	50'	6'	8'	4'	6'	3'	25'	180'	180'	6'	46'	45'	6"	9'	9'	3'	8'-12'	12'-15'
	AA	7-8 yrs	60'	30'	84' 10-1/4"	50'	6'	8'	4'	6'	3'	25'	180'	180'	6'	46'	45'	6"	9'	9'	3'	4'-8'	6'-10'
	T-Ball A	5-6 yrs	50'	25'	70' 8-1/2"	50'	6'	8'	4'	6'	3'	25'	180'	180'	tee	tee	tee	0"	9'	9'	3'	4'-8'	6'-10'
Little League	*Big*	17-18 yrs	90'	45'	127' 3-3/8"	95'	15'	20'	10'	6'	4'	60'	320'-350'	400'	9'	60' 6"	59'	10"	13'	13'	6'	12'-15'	15'-18'
	Senior	14-16 yrs	90'	45'	127' 3-3/8"	95'	15'	20'	10'	6'	4'	60'	320'-350'	400'	9'	60' 6"	59'	10"	13'	13'	6'	12'-15'	15'-18'
	Junior	13-14 yrs	90'	45'	127' 3-3/8"	95'	15'	20'	10'	6'	4'	50'	300'	350'	9'	60' 6"	59'	10"	13'	13'	6'	12'-15'	15'-18'
	Majors	9-12 yrs	60'	30'	84' 10-1/4"	50'	6'	8'	4'	6'	3'	25'	200'	200'	5'	46'	45'	6"	10'	9'	4'	8'-12'	12'-15'
	Minor	7-12 yrs	60'	30'	84' 10-1/4"	50'	6'	8'	4'	6'	3'	25'	200'	200'	5'	46'	45'	6"	10'	9'	4'	4'-8'	6'-10'
	T-Ball	5-6 yrs	60'	30'	84' 10-1/4"	50'	6'	8'	4'	6'	3'	25'	200'	200'	5'	46'	45'	0"	10'	9'	4'	4'-8'	6'-10'
Pony	*Palomino*	17-19 yrs	90'	45'	127' 3-3/8"	95'	15'	20'	10'	6'	4'	50'	300'	350'	9'	60' 6"	59'	10"	13'	13'	6'	12'-15'	15'-18'
	Colt	15-16 yrs	90'	45'	127' 3-3/8"	95'	15'	20'	10'	6'	4'	50'	300'	350'	9'	60' 6"	59'	10"	13'	13'	6'	12'-15'	15'-18'
	Pony	13-14 yrs	80'	40'	113' 1-2/3"	80'	12'	12'	6'	6'	4'	40'	275'	315'	7-1/2'	54'	53'	8"	12'	12'	6'	12'-15'	15'-18'
	Bronco	11-12 yrs	70'	35'	99'	65'	9'	12'	6'	6'	4'	30'	225'	275'	6'	48'	47'	6"	11'	11'	4'	8'-12'	12'-15'
	Mustang	9-10 yrs	60'	30'	84' 10-1/4"	50'	6'	8'	4'	6'	3'	20'	175'	225'	4'6"	44'	44'	4"	10'	10'	4'	8'-12'	12'-15'
	Pinto	7-8 yrs	50'	25'	70' 8-1/2"	50'	6'	8'	4'	6'	4'	20'	150'	200'	4'6"	38'	38'	4"	10'	9'	4'	4'-8'	6'-10'
	Shetland	5-6 yrs	50'	25'	70' 8-1/2"	50'	6'	8'	4'	6'	4'	20'	125'	200'	tee	tee	tee	0"	10'	9'	4'	4'-8'	6'-10'

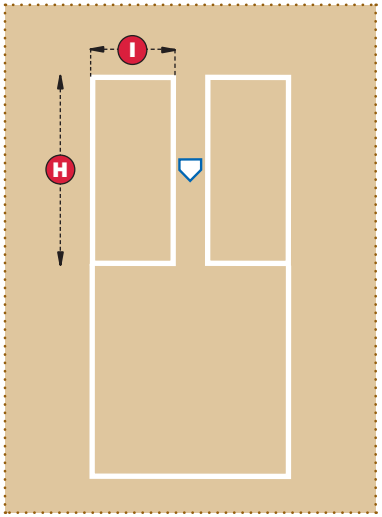
SOFTBALL Field Dimensions Diagram



X **RED LETTERS** indicate measurements that are absolute

*See **Key to Field Dimensions Diagrams** on the first page of the **RED** section*

*See **Batter's & Catcher's Box** details in **PURPLE** section*



MEASUREMENTS TABLE | SOFTBALL FIELD DIMENSIONS

GOVERNING BODY	LEAGUE	AGE RANGE	A BASE DISTANCE	B 1st BASE RUNNER'S LANE	C INFIELD HYPOTENUSE	D INFIELD ARC RADIUS	E COACH'S BOX FROM FOUL LINE	F COACH'S BOX LENGTH	G COACH'S BOX WIDTH	H BATTER'S BOX LENGTH	I BATTER'S BOX WIDTH	J DISTANCE TO BACKSTOP	K MINIMUM FENCE DISTANCE	L MINIMUM CENTERFIELD FENCE DISTANCE	M MOUND RADIUS	N PITCHING RUBBER DISTANCE	– FOUL TERRITORY WARNING TRACK WIDTH	– OUTFIELD WARNING TRACK WIDTH
Reference letter on diagram																		
ISF-International	*Inter. Adult*	Male FP	60'	30'	84' 10-1/4"	60'	12'	15'	3'	7'	3'	25'	250'	250'	8'	46'	12'-15'	12'-15'
	Inter. Adult	Female FP	60'	30'	84' 10-1/4"	60'	12'	15'	3'	7'	3'	25'	220'	220'	8'	43'	12'-15'	12'-15'
	Inter. Junior	Male 19U FP / Male 16U FP	60'	30'	84' 10-1/4"	60'	12'	15'	3'	7'	3'	25'	250'	250'	8'	46'	12'-15'	12'-15'
	Inter. Junior	Female 19U FP	60'	30'	84' 10-1/4"	60'	12'	15'	3'	7'	3'	25'	220'	220'	8'	43'	12'-15'	12'-15'
	Inter. Junior	Female 16U FP	60'	30'	84' 10-1/4"	60'	12'	15'	3'	7'	3'	25'	220'	220'	8'	40'	12'-15'	12'-15'
	Inter. Adult	Male SP	65'	32'	91' 11"	65'	12'	15'	3'	7'	3'	25'	300'	300'	NA	50'	12'-15'	12'-15'
	Inter. Adult	Female SP	65'	32'	91' 11"	65'	12'	15'	3'	7'	3'	25'	275'	275'	NA	50'	12'-15'	12'-15'
	Inter. Adult	Co-ed SP	65'	32'	91' 11"	65'	12'	15'	3'	7'	3'	25'	275'	275'	NA	50'	12'-15'	12'-15'
	Inter. Junior	Male 19U SP	65'	32'	91' 11"	65'	12'	15'	3'	7'	3'	25'	300'	300'	NA	50'	12'-15'	12'-15'
	Inter. Junior	Female 19U SP	65'	32'	91' 11"	65'	12'	15'	3'	7'	3'	25'	265'	265'	NA	50'	12'-15'	12'-15'
	Inter. Junior	Male / Female 16U SP	65'	32'	91' 11"	65'	12'	15'	3'	7'	3'	25'	265'	265'	NA	46'	12'-15'	12'-15'
NCAA	*College*	FP-Female	60'	30'	84' 10-1/4"	60'	8'	15'	3'	7'	3'	25'	190'	200'	8'	43'	12'-15'	15'-18'
NFHS	*High School*	FP-Female	60'	30'	84' 10-1/4"	60'	8'	15'	3'	7'	3'	25'	185'-235'	185'-235'	8'	43'	12'-15'	15'-18'
Babe Ruth Softball		18 & under	60'	30'	84' 10-1/4"	60'	8'	15'	3'	7'	3'	25'	200'	200'	8'	43'	12'-15'	15'-18'
		16 & under	60'	30'	84' 10-1/4"	60'	8'	15'	3'	7'	3'	25'	200'	200'	8'	43'	8'-12'	12'-15'
		14 & under	60'	30'	84' 10-1/4"	60'	8'	15'	3'	7'	3'	25'	200'	200'	8'	43'	8'-12'	12'-15'
		12 & under	60'	30'	84' 10-1/4"	60'	8'	15'	3'	7'	3'	25'	200'	200'	8'	40'	8'-12'	10'-15'
		10 & under	60'	30'	84' 10-1/4"	60'	8'	15'	3'	7'	3'	25'	200'	200'	8'	40'	4'-8'	6'-10'
Dixie Softball	*Debs*	16-18 yrs	60'	30'	84' 10-1/4"	50'	6'	8'	4'	7'	3'	25'	180'	180'	8'	43'	8'-12'	12'-15'
	Belles	13-15 yrs	60'	30'	84' 10-1/4"	50'	6'	8'	4'	7'	3'	25'	180'	180'	8'	43'	8'-12'	12'-15'
	Ponytails	11-12 yrs	60'	30'	84' 10-1/4"	50'	6'	8'	4'	6'	3'	25'	180'	180'	8'	40'	8'-12'	12'-15'
	Angels	9-10 yrs	60'	30'	84' 10-1/4"	50'	6'	8'	4'	6'	3'	25'	180'	180'	8'	35'	8'-12'	10'-15'
	Darlings	7-8 yrs	50'	25'	70' 9"	50'	6'	8'	4'	6'	3'	25'	180'	180'	8'	30'	4'-8'	6'-10'
	Sweetees	4-6 yrs	50'	25'	70' 9"	50'	6'	8'	4'	6'	3'	25'	180'	180'	8'	30'	4'-8'	6'-10'
Little League Softball	*Big / Senior*	17-18 yrs / 14-16 yrs	60'	30'	84' 10-1/4"	50'	6'	8'	4'	7'	3'	25'	200'	200'	8'	43'	12'-15'	15'-18'
	Majors / Juniors	9-12 yrs / 13-14 yrs	60'	30'	84' 10-1/4"	50'	6'	8'	4'	7'	3'	25'	200'	200'	8'	40'	8'-12'	10'-15'
	Minor	7-12 yrs	60'	30'	84' 10-1/4"	50'	6'	8'	4'	7'	3'	25'	200'	200'	8'	35'	4'-8'	6'-10'
	T-Ball	5-6 yrs	50'	25'	70' 9"	50'	6'	8'	4'	7'	3'	25'	200'	200'	8'	0	4'-8'	6'-10'
Pony Fast Pitch Softball	*Palomino / Colt*	18 & under / 16 & under / 14 & under	60'	30'	84' 10-1/4"	50'	8'	15'	3'	7'	3'	25'	175'-200'	175'-200'	8'	43'	12'-15'	15'-18'
	Bronco / Pony	12 & under	60'	30'	84' 10-1/4"	50'	8'	15'	3'	7'	3'	25'	175'-200'	175'-200'	8'	40'	8'-12'	10'-15'
	Mustang	10 & under	60'	30'	84' 10-1/4"	50'	8'	15'	3'	7'	3'	25'	150'-175'	150'-175'	8'	35'	8'-12'	10'-15'
	Pinto	8 & under	55'	27'	77' 9-3/8"	50'	8'	15'	3'	7'	3'	25'	150'-175'	150'-175'	8'	35'	4'-8'	6'-10'
	Shetland	6 & under	55'	27'	77' 9-3/8"	50'	8'	15'	3'	7'	3'	25'	150'-175'	150'-175'	8'	35'	4'-8'	6'-10'
A.S.A. Adult	*Fast Pitch*	Female	60'	30'	84' 10-1/4"	60'	8'	15'	3'	7'	3'	25'	200'-250'	200'-250'	8'	43'	10'-15'	15'-18'
	Fast Pitch	Male	60'	30'	84' 10-1/4"	60'	8'	15'	3'	7'	3'	25'	225'-275'	225'	8'	46'	10'-15'	15'-18'
	Slow Pitch	Male/Female	70'	35'	99'	70'	8'	15'	3'	7'	3'	25'	275'-300'	275'-300'	NA	50'	10'-15'	15'-18'
A.S.A. Youth	*Fast Pitch*	Female U16-18	60'	30'	84' 10-1/4"	55'	8'	15'	3'	7'	3'	25'	200'-225'	200'-225'	8'	43'	10'-15'	15'-18'
	Fast Pitch	Female U14	60'	30'	84' 10-1/4"	60'	8'	15'	3'	7'	3'	25'	200'-225'	200'-225'	8'	40'	10'-15'	15'-18'
	Fast Pitch	Female U12	60'	30'	84' 10-1/4"	60'	8'	15'	3'	7'	3'	25'	200'-225'	200'-225'	8'	40'	8'-12'	10'-15'
	Fast Pitch	Female U10	60'	30'	84' 10-1/4"	60'	8'	15'	3'	7'	3'	25'	175'	175'	8'	35'	8'-12'	10'-15'
A.F.A. Youth	*Fast Pitch*	Female U16-18	60'	30'	84' 10-1/4"	60'	8'	15'	3'	7'	3'	25'	200'-225'	200'-225'	8'	43'	10'-15'	15'-18'
	Fast Pitch	Female U12-14	60'	30'	84' 10-1/4"	60'	8'	15'	3'	7'	3'	25'	200'-225'	200'-225'	8'	40'	10'-15'	15'-18'
	Fast Pitch	Female U10	60'	30'	84' 10-1/4"	60'	8'	15'	3'	7'	3'	25'	175'-225'	175'-225'	8'	35'	8'-12'	10'-15'
U.S.S.S.A. Adult	*Slow Pitch*	Men's 12"	65'	32'	91' 11"	65'	10'	10'	3'	5-1/2'	3'	25'	300'	300'	NA	50'	10'-15'	15'-18'
	Slow Pitch	Women's 11"	60'	30'	84' 10-1/4"	65'	10'	10'	3'	5-1/2'	3'	25'	250'	250'	NA	50'	10'-15'	15'-18'

SETTING THE PITCHING RUBBER

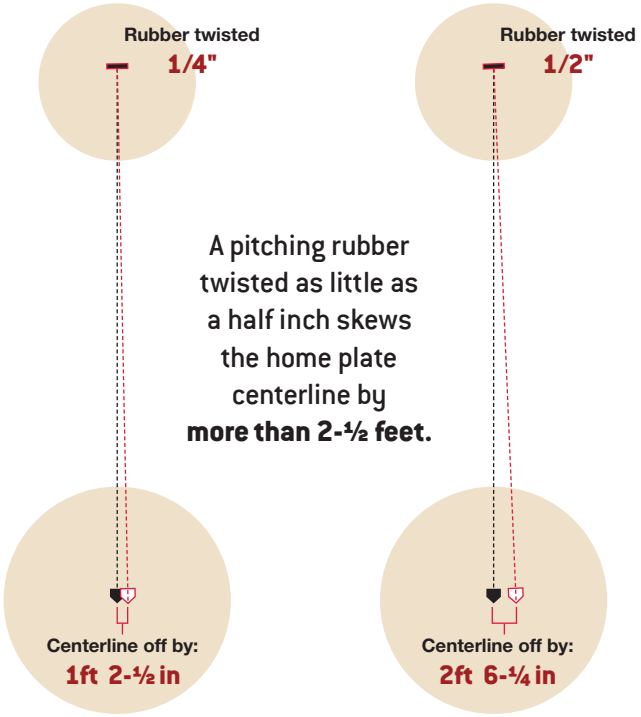
WHAT YOU NEED TO KNOW TO DO IT LIKE A PROFESSIONAL

When a half inch becomes two feet…

Ever stood on a pitching mound and noticed the rubber was twisted in one direction or the other? While most might think that it is not a big deal, ask a pitcher, a pitching coach, or a trainer how this seemingly minor turn can have major effects on a pitcher's mechanics and even the health of his or her arm.

A pitching rubber that is just slightly turned by ¼" on a Major League mound will move the centerline off-center from home plate by 1.15°, or 14-½". A rubber that is twisted just a little more to a ½" will throw the centerline off by 2.39°, or more than two and a half feet! That can mess with a pitcher's mechanics, increasing wear on a pitcher's arm as they work to compensate for the misalignment.

While the apex of home plate is the benchmark of a ballfield — where everything is laid out with respect to — the pitching mound and it's rubber are equally critical to ensure proper alignment and function for a pitcher.



Elevation, Distance, Level, and Square

There are 4 parameters that require absolute perfection in order to successfully install a pitching rubber to specification — elevation, distance, level, and square. Because they are interdependent, anytime you move or adjust any of these four parameters, you'll likely need to double-check the other three to make sure they are all still correct.

▶ **ELEVATION:** The elevation of the pitching rubber is measured with respect to the elevation of home plate. When someone says the mound is ten inches tall It means that the surface of the pitching rubber is exactly ten inches higher than the surface of the home plate. Most infields have a slope from the base of the mound down towards the baselines and bases in order to facilitate surface drainage off the infield. This will take away some of the height that you will build your mound up to.

For instance, if you have three inches of fall from the base of the mound to home plate and you have to build a ten inch high mound, then the actual mound of soil you will build should only be seven inches in height. It is easiest to use a transit or builders level to help measure the elevations of the surface of the home plate and the surface of the pitching rubber to insure the correct change in elevation between the two. Some fields will have irregular surface grades and may tilt in odd directions. In these situations, it sometimes might be easier to build the mound 10" higher than the ground immediately surrounding it.

DISTANCE: When the rule book lists the pitching distance for a ballfield, it is describing the distance from the apex of home plate to the front center of the pitching rubber. By the way, that is the apex of the white portion of home plate, not the black portion. This distance should always be measured using a steel tape when possible. Fiberglass tapes can stretch considerably over distance thereby threatening the accuracy of the measurement.

LEVEL: Now that you know precisely where the rubber will be located, it's time to level it. Level is checked in two directions on the rubber. From side to side and front to back. A torpedo level will work best for this portion of installation. Be sure that the pitching rubber you are working with does not have any bubbling of the rubber going on. This can make it almost impossible to level the rubber.

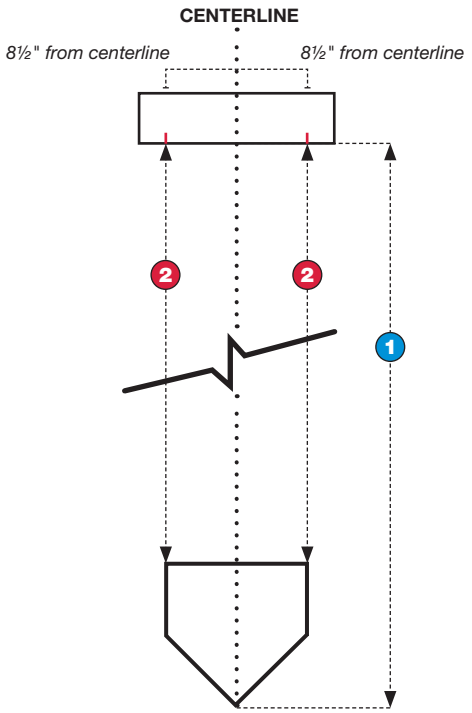
SQUARE: Once the pitching distance is correct, then checking to make sure the rubber is square to home plate is the next critical measurement and alignment. On the pitching rubber scribe a line with a pencil or pen marking the centerline of the pitching rubber. Then, run a very tight string line from the apex of home plate to the center of second base. Pop the string three to five times to get an idea where the line is settling on average. Ideally, the string will fall on to the center line drawn on the rubber each time.

Next, to be able to accurately determine if the pitching rubber is square, you'll need to measure from the square portion of home plate. On the rubber, measure out in both directions 8-½" from the centerline and make a mark at those points on the front of the rubber *(see illustration)*. Using the Measurements Table, find the pitching distance for your ballfield and reference the squaring measurement. Measure the distance from the front square corner of home plate to the front of the pitcher's rubber at the 8-½" mark you made earlier. Repeat this measurement on the other side, from the opposite corner of home plate to front of the pitcher's rubber. These two measurements should be the same when home plate is square to the pitching rubber.

If these measurements are not the same, then the pitching rubber needs to be adjusted by twisting it ever so slightly until the measurements to match. Each time you manipulate the rubber to bring it square, you'll need to re-measure the pitching distance and the two squaring measurements on each side of the rubber until they all meet the specified distances shown on the chart.

MEASUREMENTS TABLE

① Pitching Distance	② Squaring Measurement
BASEBALL	
60' 6"	59' 1"
54'	52' 7"
50'	48' 7"
48'	46' 7"
46'	44' 7"
44'	42' 7"
38'	36' 7"
SOFTBALL	
50'	48' 7"
46'	44' 7"
43'	41' 7"
40'	38' 7"
35'	33' 7"
30'	28' 7"

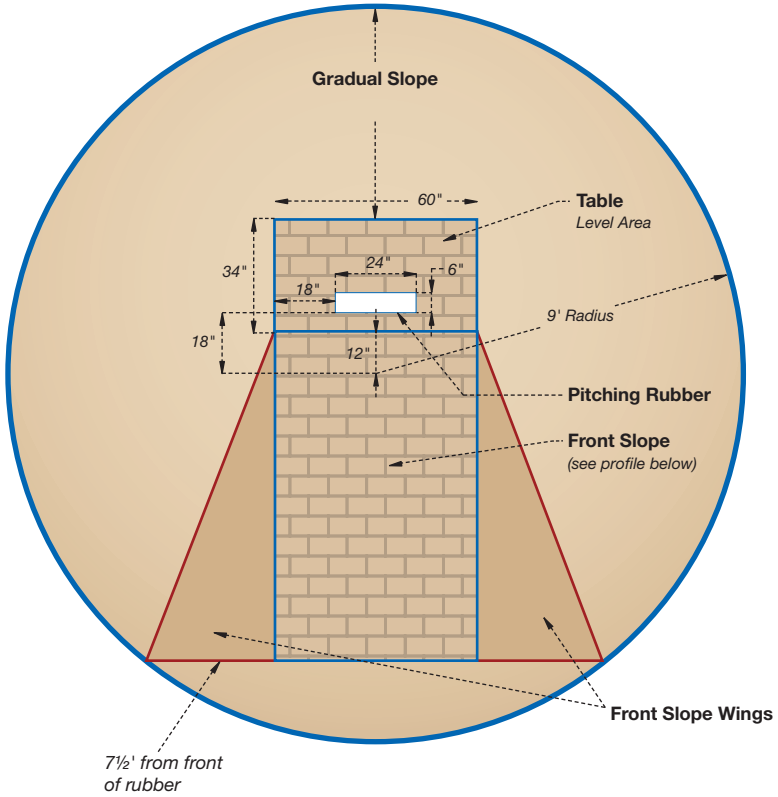


When all of these 4 parameters have been met — elevation, distance, level, and square — make sure to double-check all of the measurements one last time before finally backfilling around the rubber. After compacting around the rubber, do one final check on level, distance, and square to insure the compacting process did not throw the rubber off its mark.

Installing a pitching rubber can be a tedious task, especially if you have never done it before. Setting the pitching rubber is one ballfield task that demands both accuracy and patience. It can take as little as 15 minutes to set the rubber, or it can take as much as an hour or more. In either case, precision is the ultimate goal.

PITCHING MOUND 10-inch mound

PROFESSIONAL | COLLEGE | HIGH SCHOOL



The **10" pitching mound** is an 18' diameter circle. The center is located 59' from the apex (back point) of home plate along an invisible line extending from the apex through the center of 2nd base.

The front, center edge of the **pitching rubber** is located 60'6" from the apex of home plate along this same line.

The top face of the **pitching rubber** should be elevated 10" above home plate to ensure the proper slope can be achieved on the front landing area.

The **front slope** of the mound is a uniform 1 inch drop for every 1 foot towards home plate, beginning 6" in front of the pitching rubber.

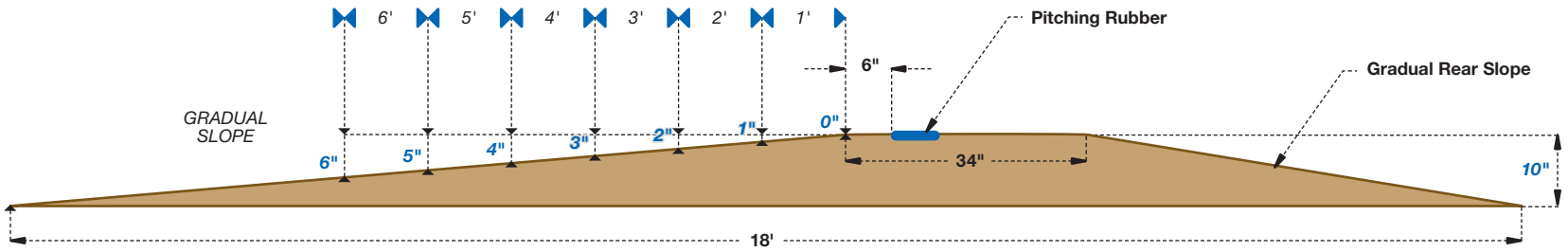
If desired, bagged clay or unfired clay brick can be added to the **table** and **front slope** of the mound to reduce digout and improve footing. This clay layer should be a minimum of 2-¼" - 4" thick.

PROFESSIONAL / COLLEGE / H.S. 10" MOUND MATERIALS

		Beacon Pro Bricks		Shredded Clay	
	SQUARE FEET	2-1/4" DEPTH	4" DEPTH †	3" DEPTH	4" DEPTH †
TABLE	14	60 bricks	112 bricks	11 bags	14 bags
FRONT SLOPE	40	169 bricks	320 bricks	30 bags	40 bags
WINGS (2 total)	25	106 bricks	200 bricks	18 bags	25 bags
TOTAL AREA	79	335 bricks	632 bricks	59 bags	79 bags

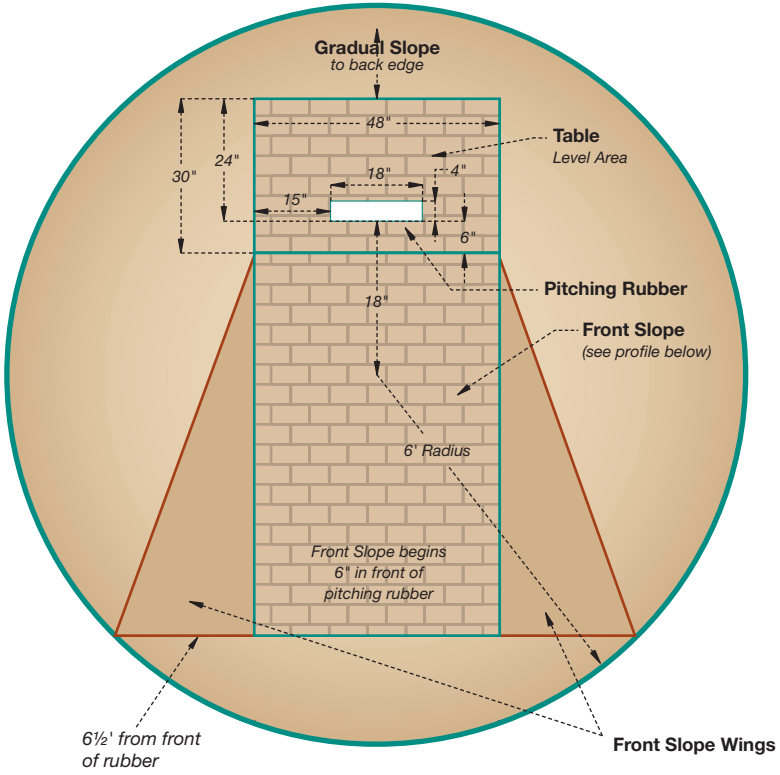
† *Only the front slope of mound area requires 4" depth of clay.* ***Use of clay is recommended only on mounds where proper maintenance practices can be followed regularly.***
Not sure if clay is a good choice for your field? Call Beacon Athletics at 800-747-5985.

10" PITCHING MOUND PROFILE



PITCHING MOUND 8-inch mound

CAL RIPKEN-BABE RUTH | PONY



The **8" pitching mound** is a 12' diameter circle. The center is located 48'6" from the apex (back point) of home plate along an invisible line extending from the apex through the center of 2nd base.

The front, center edge of the **pitching rubber** is located 50' from the apex of home plate along this same line.

The top face of the **pitching rubber** should be elevated 8" above home plate to ensure the proper slope can be achieved on the front landing area.

The **front slope** of the mound is a uniform 1 inch drop for every 1 foot towards home plate, beginning 6" in front of the pitching rubber.

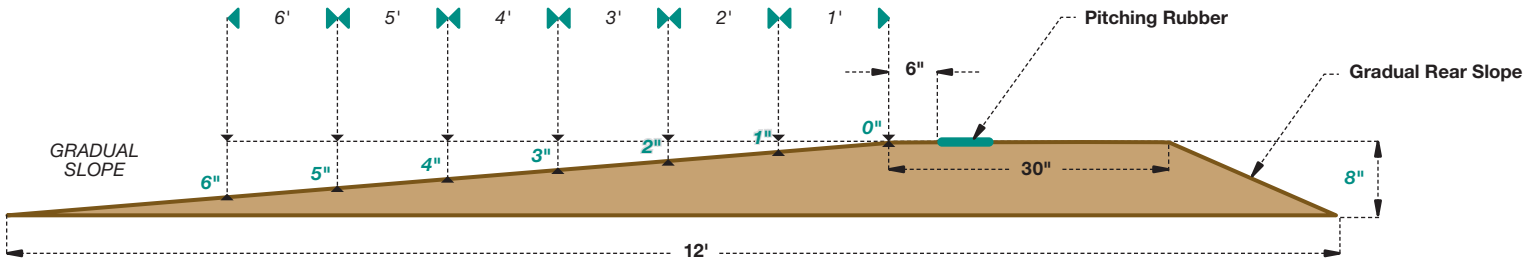
If desired, bagged clay or unfired clay brick can be added to the **table** and **front slope** of the mound to reduce digout and improve footing. This clay layer should be a minimum of 2-¼" - 4" thick.

YOUTH 8" MOUND MATERIALS

		Beacon Pro Bricks		Shredded Clay	
	SQUARE FEET	2-1/4" DEPTH	4" DEPTH †	3" DEPTH	4" DEPTH †
TABLE	9	38 bricks	38 bricks	7 bags	7 bags
FRONT SLOPE	26	110 bricks	202 bricks	20 bags	26 bags
WINGS (2 total)	13	54 bricks	54 bricks	10 bags	10 bags
TOTAL AREA	48	202 bricks	294 bricks	37 bags	43 bags

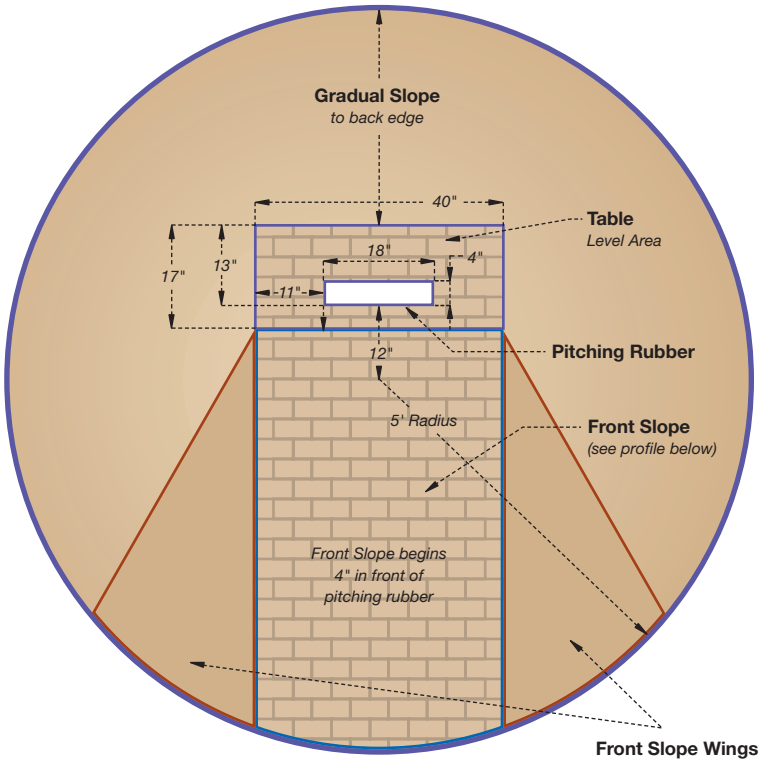
† *Only the front slope of mound area requires 4" depth of clay.* ***Use of clay is recommended only on mounds where proper maintenance practices can be followed regularly.***
Not sure if clay is a good choice for your field? Call Beacon Athletics at 800-747-5985.

8" PITCHING MOUND PROFILE



PITCHING MOUND 6-inch mound

LITTLE LEAGUE | DIXIE | CAL RIPKEN-BABE RUTH | PONY



The **6" pitching mound** is a 10' diameter circle. The center is located 45' from the apex (back point) of home plate along an invisible line extending from the apex through the center of 2nd base.

The front, center edge of the **pitching rubber** is located 46' from the apex of home plate along this same line.

The top face of the **pitching rubber** should be elevated 6" above home plate to ensure the proper slope can be achieved on the front landing area.

The **front slope** of the mound is a uniform 1 inch drop for every 1 foot towards home plate, beginning 4" in front of the pitching rubber.

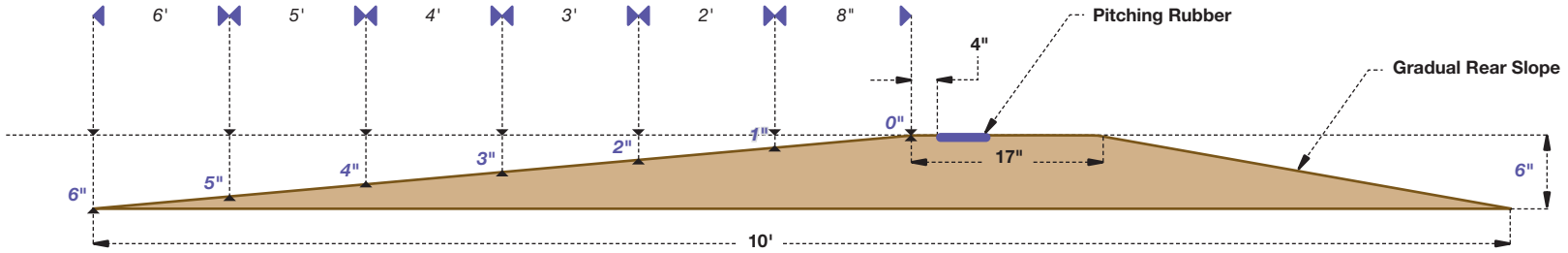
If desired, bagged clay or unfired clay brick can be added to the **table** and **front slope** of the mound to reduce digout and improve footing. This clay layer should be a minimum of 2-¼" - 4" thick.

LITTLE LEAGUE 6" MOUND MATERIALS

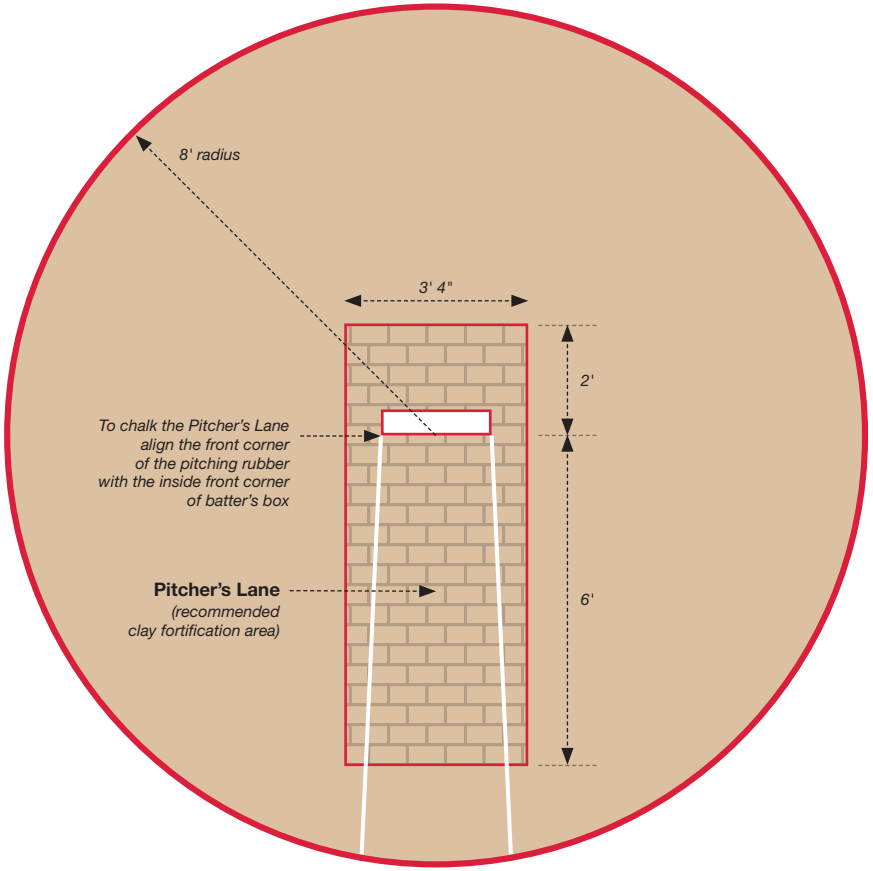
		Beacon Pro Bricks		Shredded Clay	
	SQUARE FEET	2-1/4" DEPTH	4" DEPTH	3" DEPTH	4" DEPTH
TABLE	3.5	15 bricks	Metal spikes not allowed at this level	3 bags	Metal spikes not allowed at this level
FRONT SLOPE	20	85 bricks		15 bags	
WINGS (2 total)	12	51 bricks		10 bags	
TOTAL AREA	36	151 bricks	0 bricks	28 bags	0 bags

† *Only the front slope of mound area requires 4" depth of clay.* ***Use of clay is recommended only on mounds where proper maintenance practices can be followed regularly.***
Not sure if clay is a good choice for your field? Call Beacon Athletics at 800-747-5985.

6" PITCHING MOUND PROFILE



PITCHING CIRCLE Softball Circle



The **Softball Pitching Circle** is a 16' diameter circle. The center is located along an invisible line extending from the apex of home plate through the center of 2nd base. The front, center edge of the pitching rubber is located in the center of the 8' radius pitching circle. The distance of the pitching rubber from the apex of home plate varies from 35' – 50'. Consult the *Softball Field Dimensions Diagram* earlier in this guide for the appropriate distance for your governing body and league.

The **"Pitcher's Lane"** is a chalked lane within the softball pitching circle. Softball pitchers are required to stay within this lane when delivering a pitch to the plate. To mark the chalk lines for this lane, run a string line from the front corners of the pitching rubber and extend the string lines to the front inside corners of the batter's boxes at home plate. **Only chalk along the string lines within the softball pitching circle.**

The **pitcher's lane** is 3' 4" wide and 8' long. If desired, bagged clay or unfired clay brick can be added to the **pitcher's lane** to reduce digout and improve footing. This clay layer should be a minimum of 2-¼" - 4" thick.

SOFTBALL PITCHING CIRCLE MATERIALS

		Beacon Pro Bricks		Shredded Clay	
	SQUARE FEET	2-1/4" DEPTH	4" DEPTH	3" DEPTH	4" DEPTH
TOTAL AREA	27	109 bricks	199 bricks	20 bags	26 bags

Use of clay is recommended only on mounds where proper maintenance practices can be followed regularly. *Not sure if clay is a good choice for your field? Call Beacon Athletics at 800-747-5985.*

BATTER'S BOX & CATCHER'S BOXES

Sorting it all out

Just like pitching mounds, there are several different layouts for batter's and catcher's boxes. Each governing body establishes the protocol for layout of the home plate area. To make it easy for you on this page and the next page we specify each particular home plate area layout, listing the governing body or the specific leagues within a governing body.

For those using shredded bagged clay or clay bricks to help fortify the high wear areas in the boxes, approximate amounts needed are listed with each layout. The depth of clay needed is dependent on the type of cleats that will be predominantly used on that field. Rubber or plastic cleats can use a more shallow depth of clay or brick, while metal cleats should use the deeper depths. There are three very important keys to the successful use of clay as fortification in your batter's and catcher's boxes. When these keys are properly followed, clay fortification will drastically reduce wear in these areas.

Keys for Clay Fortification

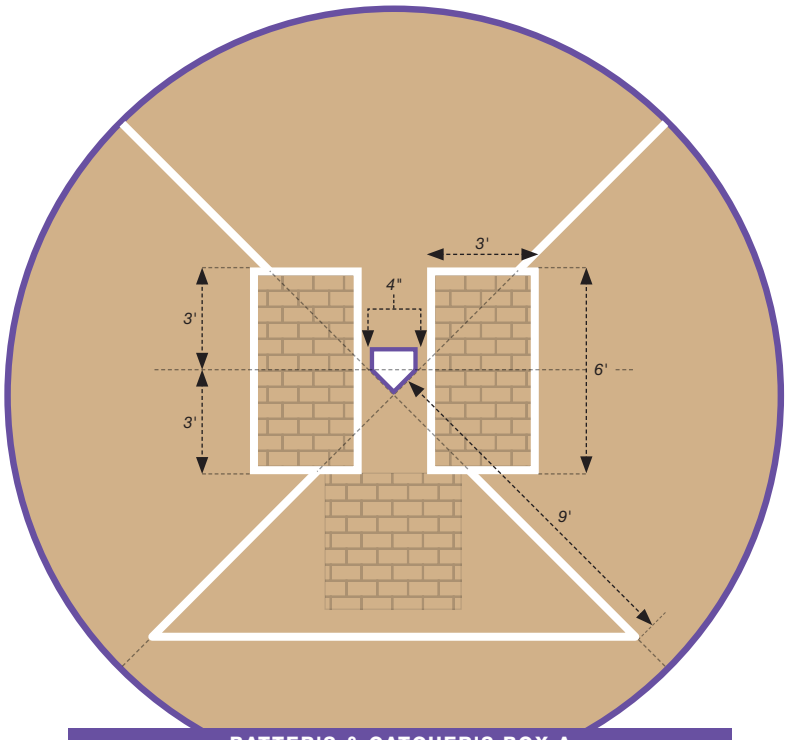
1) Repair worn areas in the clay regularly (preferably with new clay).

2) Add water to the clay areas as needed. Anytime these areas are exposed to the open air, evaporation is occurring. Whatever moisture Mother Nature has taken away, put that back into the clay.

3) During practices, use artificial turf mats over the clay areas to hold moisture in and keep wear to a minimum. Whenever the home plate area is not in use, keep it covered with a tarp to manage the moisture and minimize evaporation or limit potential over-wetting from rain or irrigation.

BOX A

BABE RUTH-CAL RIPKEN (ages 4-12) | **DIXIE BASEBALL & SOFTBALL** (all ages)
LITTLE LEAGUE BASEBALL & SOFTBALL (t-ball, minor & major divisions)
PONY BASEBALL (shetland, pinto, mustang, bronco divisions)



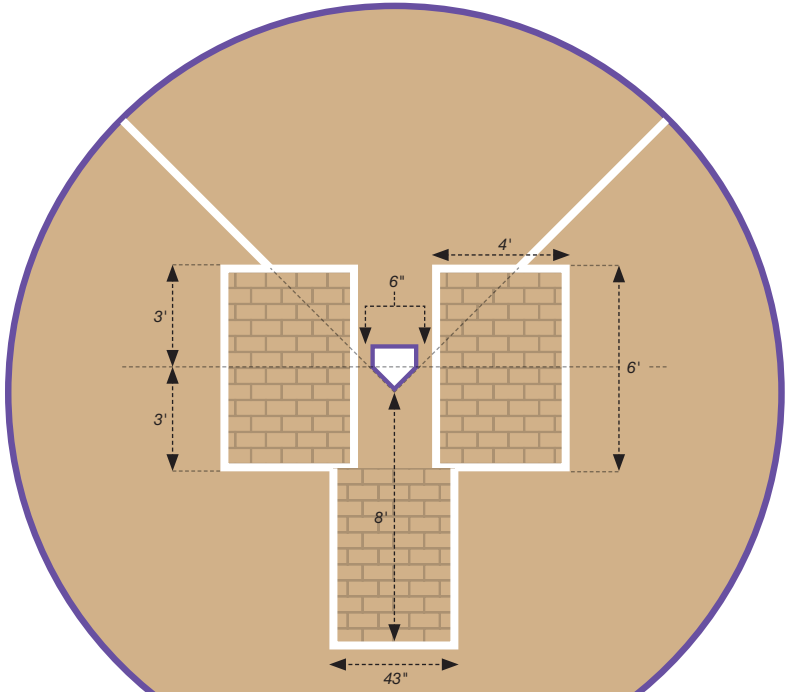
BATTER'S & CATCHER'S BOX A

		Beacon Pro Bricks *		Shredded Clay	
	SQ FEET	2-1/4" DEPTH	4" DEPTH	3" DEPTH	4" DEPTH
BATTER'S BOX – 6 x 3 (per box)	18	76 bricks	140 bricks	14 bags	18 bags
CATCHER'S BOX – 4 x 4	16	68 bricks	124 bricks	12 bags	16 bags

** Each **Beacon Pro Brick** measures approximately 8-1/4"L x 4-1/8"W x 2-1/4"H depending upon moisture content; sold 250 bricks per pallet.*

BOX B

BABE RUTH-CAL RIPKEN (ages 4-12) | **DIXIE BASEBALL & SOFTBALL** (all ages)
PONY BASEBALL (shetland, pinto, mustang, bronco divisions)
LITTLE LEAGUE BASEBALL & SOFTBALL (t-ball, minor & major divisions)



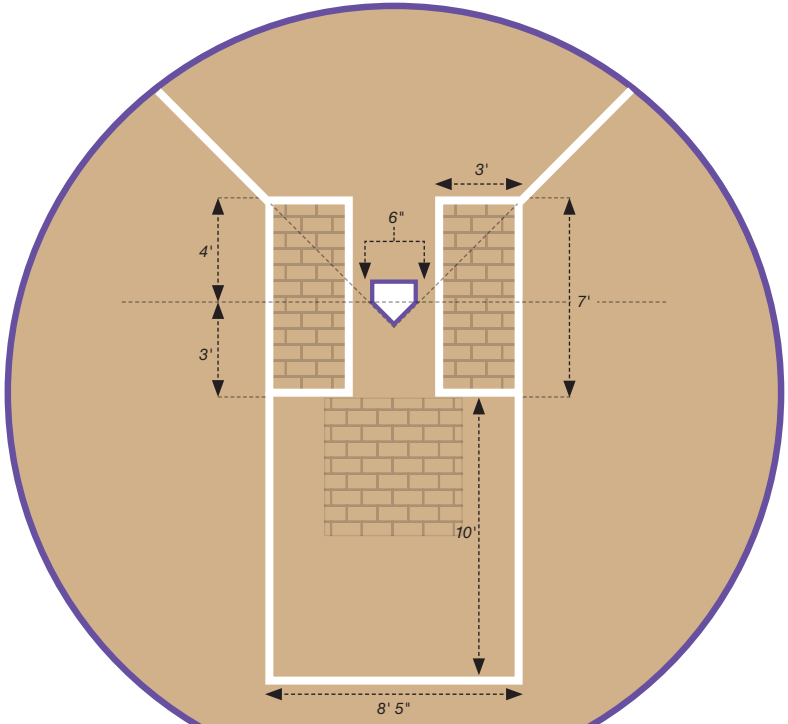
BATTER'S & CATCHER'S BOX B

		Beacon Pro Bricks *		Shredded Clay	
	SQ FEET	2-1/4" DEPTH	4" DEPTH	3" DEPTH	4" DEPTH
BATTER'S BOX – 6 x 4 (per box)	24	102 bricks	186 bricks	18 bags	24 bags
CATCHER'S BOX – 5 x 4	20	85 bricks	155 bricks	15 bags	20 bags

** Each **Beacon Pro Brick** measures approximately 8-1/4"L x 4-1/8"W x 2-1/4"H depending upon moisture content; sold 250 bricks per pallet.*

BOX C

ISF | **NCAA** | **NFHS** | **BABE RUTH SOFTBALL** (all divisions)
DIXIE SOFTBALL (belles & debs – 4" offset rather than 6")
LITTLE LEAGUE SOFTBALL (junior, senior, and big divisions)
ASA | **AFA** | **USSSA** | **PONY BASEBALL** (all divisions)

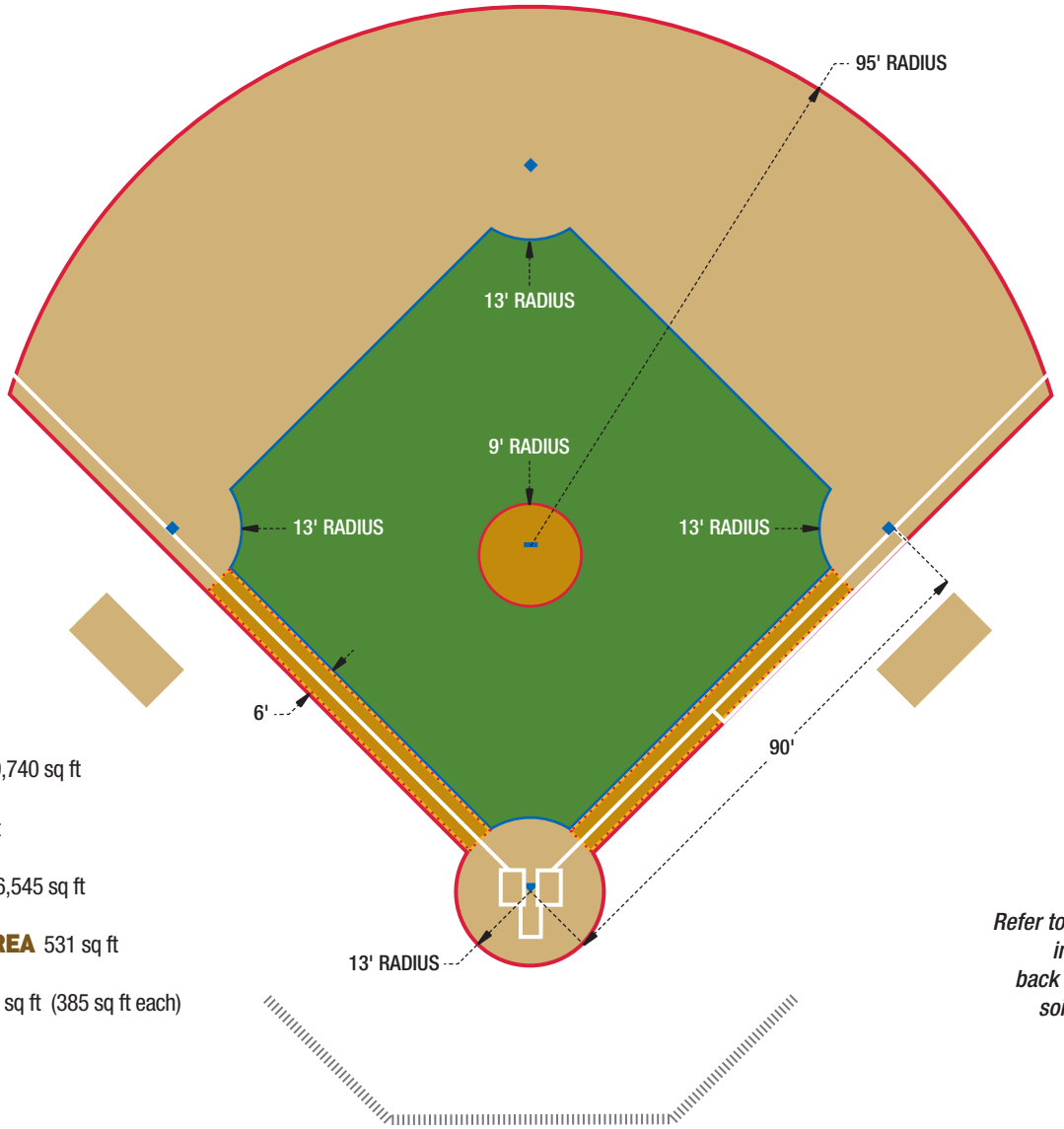


BATTER'S & CATCHER'S BOX C

		Beacon Pro Bricks *		Shredded Clay	
	SQ FEET	2-1/4" DEPTH	4" DEPTH	3" DEPTH	4" DEPTH
BATTER'S BOX – 7 x 3 (per box)	21	89 bricks	163 bricks	16 bags	21 bags
CATCHER'S BOX – 5 x 5	25	106 bricks	194 bricks	19 bags	25 bags

** Each **Beacon Pro Brick** measures approximately 8-1/4"L x 4-1/8"W x 2-1/4"H depending upon moisture content; sold 250 bricks per pallet.*

BASEBALL 90' Field Areas Diagram



INFIELD SKIN 9,740 sq ft

MOUND 255 sq ft

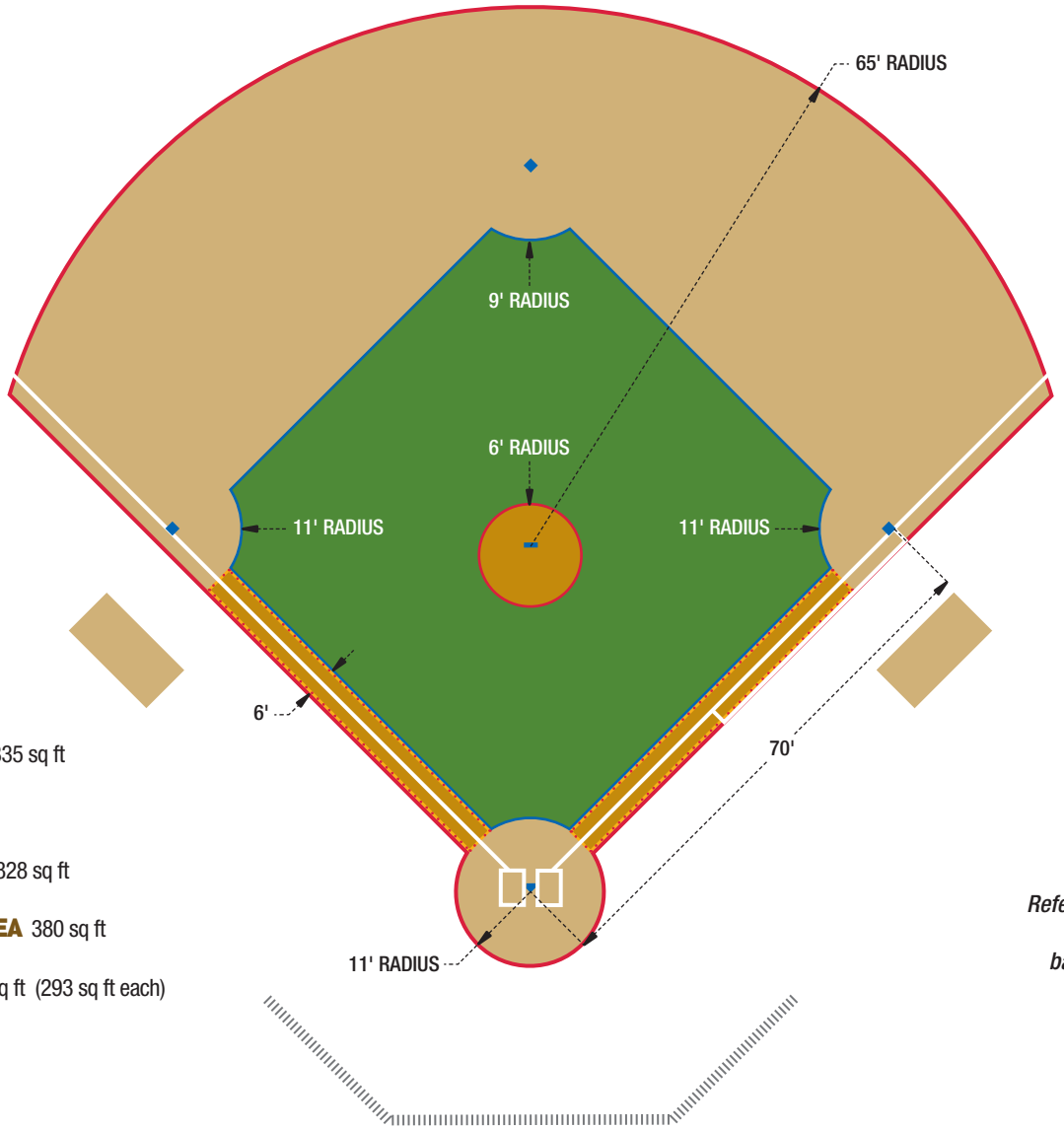
INFIELD TURF 6,545 sq ft

HOME PLATE AREA 531 sq ft

BASELINES 770 sq ft (385 sq ft each)

Refer to Soil & Topdressing table in the GRAY section in the back of this guide to calculate soil and top dressing needs

BASEBALL 70' Field Areas Diagram



INFIELD SKIN 4,835 sq ft

MOUND 113 sq ft

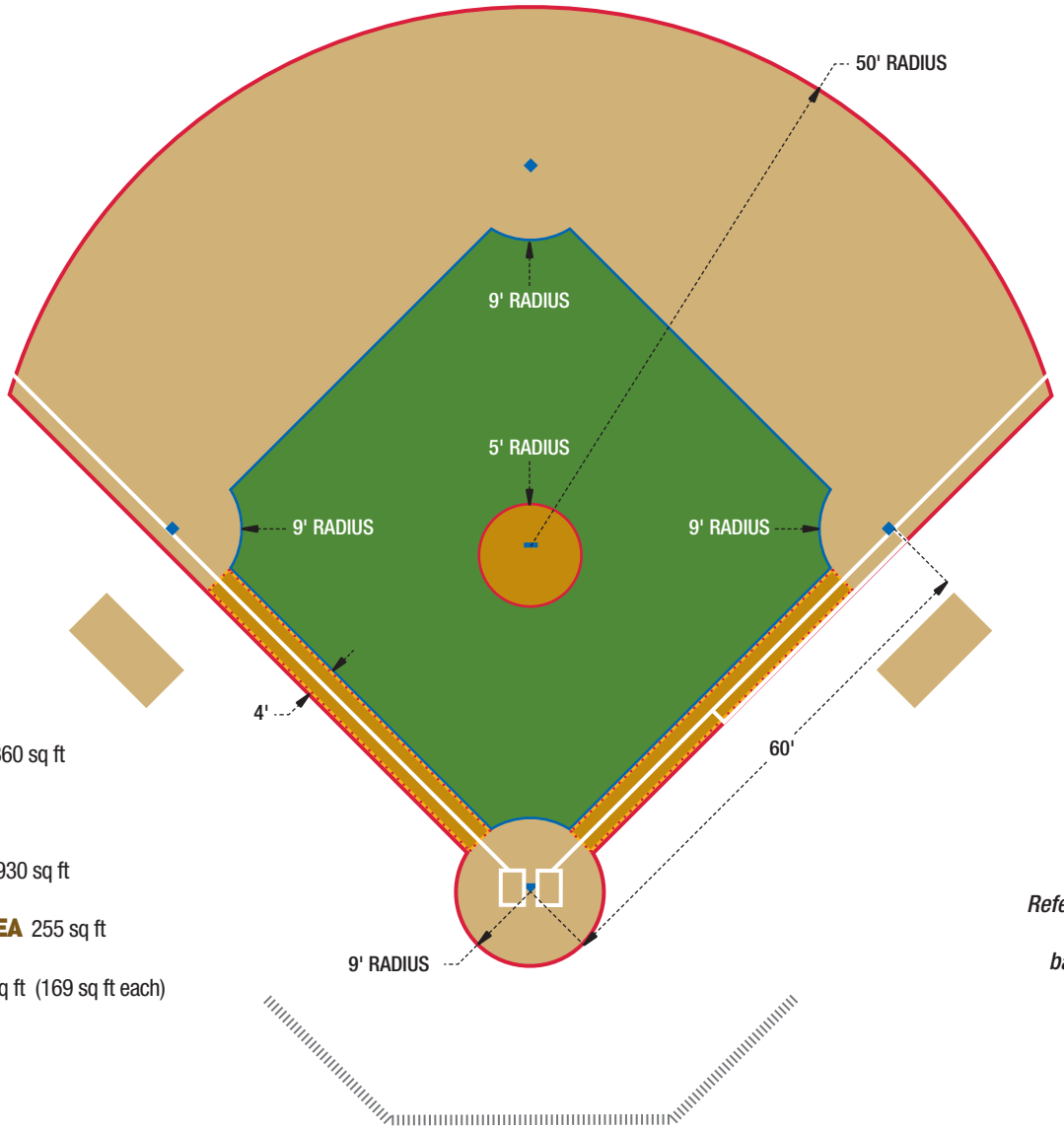
INFIELD TURF 3,828 sq ft

HOME PLATE AREA 380 sq ft

BASELINES 586 sq ft (293 sq ft each)

Refer to Soil & Topdressing table in the GRAY section in the back of this guide to calculate soil and top dressing needs

BASEBALL 60' Field Areas Diagram



INFIELD SKIN 2,860 sq ft

MOUND 79 sq ft

INFIELD TURF 2,930 sq ft

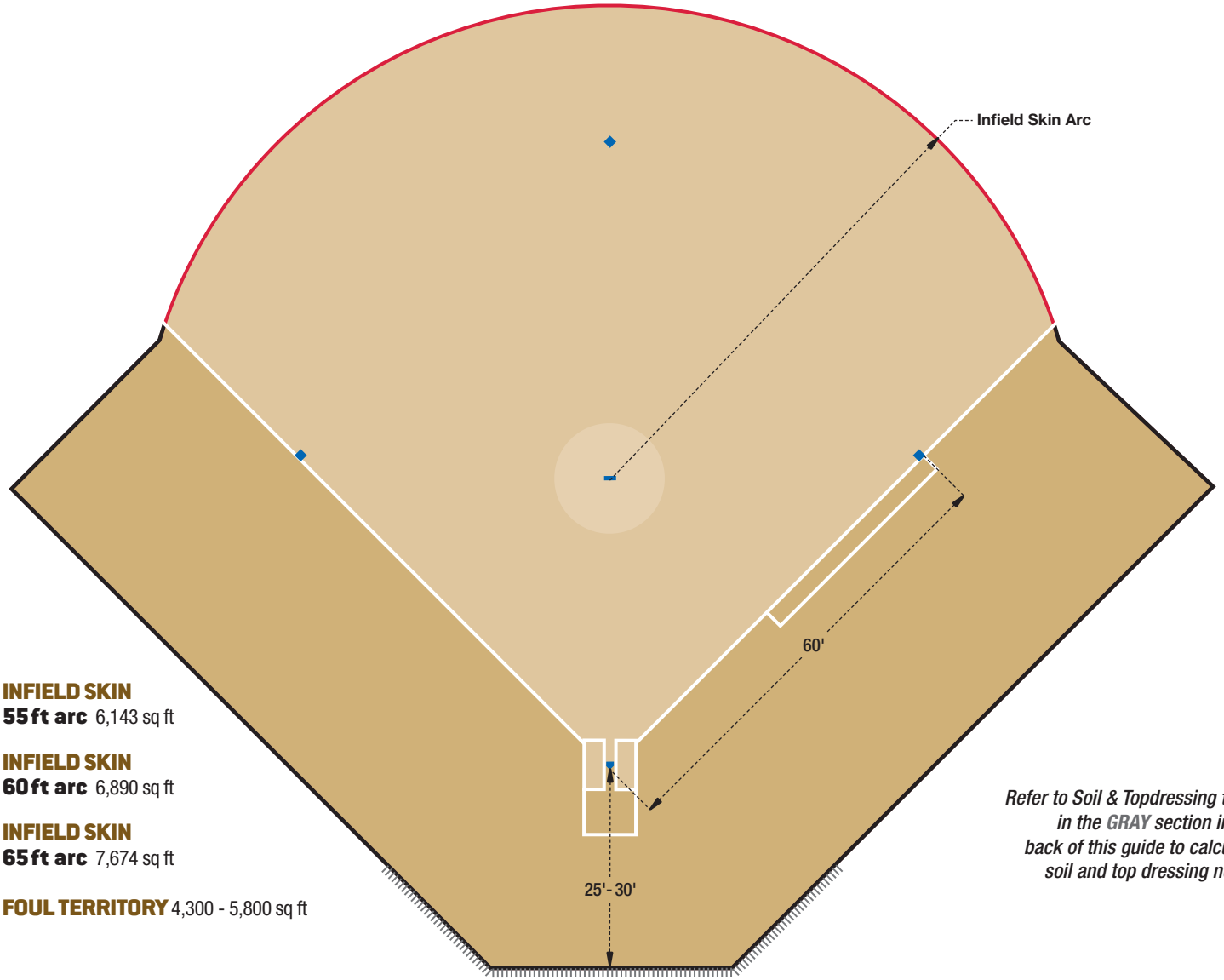
HOME PLATE AREA 255 sq ft

BASELINES 338 sq ft (169 sq ft each)

Refer to Soil & Topdressing table in the GRAY section in the back of this guide to calculate soil and top dressing needs

SOFTBALL Field Areas Diagram

ADULT | COLLEGE | HIGH SCHOOL



INFIELD SKIN
55 ft arc 6,143 sq ft

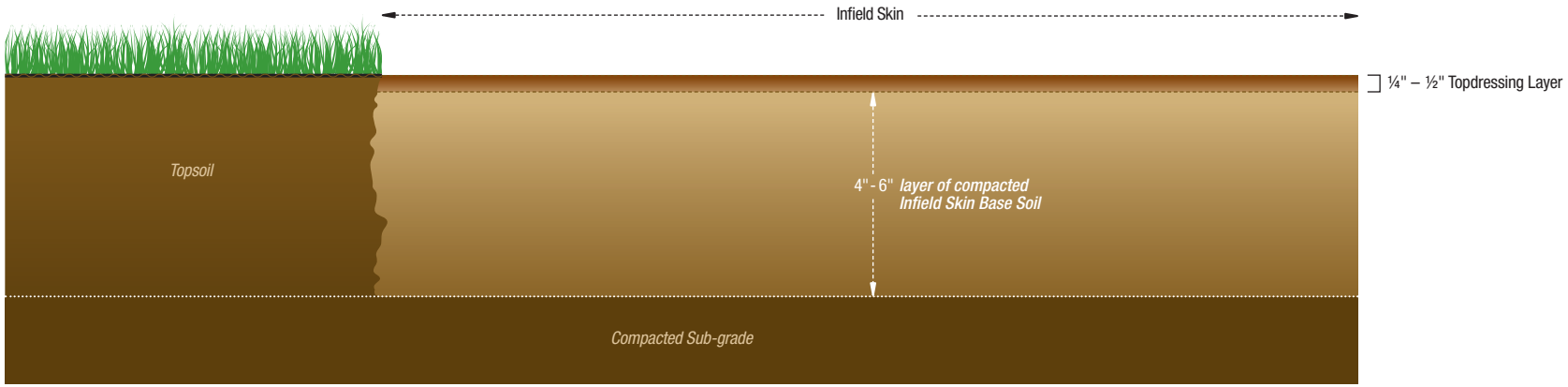
INFIELD SKIN
60 ft arc 6,890 sq ft

INFIELD SKIN
65 ft arc 7,674 sq ft

FOUL TERRITORY 4,300 - 5,800 sq ft

Refer to Soil & Topdressing table in the GRAY section in the back of this guide to calculate soil and top dressing needs

INFIELD SKIN Soil Material Volume



RECOMMENDED AMOUNTS OF INFIELD SKIN SOIL MATERIALS

TYPE OF INFIELD	TOTAL EXPOSED SKIN [sq ft]	INFIELD SKIN BASE SOILS — APPROXIMATE VOLUME OF DURAEDGE INFIELD SOIL NEEDED (COMPACTION FACTOR 15%)		INFIELD SKIN TOPDRESSING MATERIALS — MAGIC MIX™ CRUSHED AGGREGATE		DIAMOND PRO® VITRIFIED CLAY INFIELD CONDITIONER		DIAMOND PRO® CALCINED CLAY PROFESSIONAL GRADE	
		4" Deep Profile	6" Deep Profile	1/4" depth *1 ton covers 960 sq ft*	1/2" depth *1 ton covers 480 sq ft*	1/4" depth *1 ton covers 1,600 sq ft*	1/2" depth *1 ton covers 800 sq ft*	1/4" depth *1 ton covers 2,400 sq ft*	1/2" depth *1 ton covers 1,200 sq ft*
BASEBALL FIELD *(90' bases with a 95' infield arc)*									
with GRASS infield	11,296 sq ft	160 cu yds (215 tons)	240 cu yds (325 tons)	12 tons	24 tons	7 tons	14 tons	5 tons	9.5 tons
totally SKINNED infield	17,841 sq ft	253 cu yds (342 tons)	380 cu yds (513 tons)	19 tons	37 tons	11 tons	22 tons	7.5 tons	15 tons
LITTLE LEAGUE FIELD *(60' bases with a 50' infield arc)*									
with GRASS infield	3,532 sq ft	50 cu yds (68 tons)	75 cu yds (102 tons)	4 tons	8 tons	2 tons	4.5 tons	1.5 tons	3 tons
totally SKINNED infield	6,462 sq ft	92 cu yds (124 tons)	138 cu yds (186 tons)	7 tons	13.5 tons	4 tons	8 tons	3 tons	5.5 tons
SOFTBALL FIELDS									
55' Arc w/ 25' of foul territory skin	10,443 sq ft	148 cu yds (200 tons)	222 cu yds (300 tons)	11 tons	22 tons	6.5 tons	13 tons	4.5 tons	9 tons
60' Arc w/ 25' of foul territory skin	11,190 sq ft	159 cu yds (214 tons)	238 cu yds (322 tons)	11.5 tons	23.5 tons	7 tons	14 tons	4.5 tons	9.5 tons
65' Arc w/ 25' of foul territory skin	11,974 sq ft	170 cu yds (229 tons)	255 cu yds (344 tons)	12.5 tons	25 tons	7.5 tons	15 tons	5 tons	10 tons

CALCULATING Infield Soil Needs

■ Formula For Estimating Infield Soil Needs

To estimate the amount of soil needed to add to your infield skin to bring it up to the proper grade, use the following formula:

$$\frac{\text{Area of Infield Skin (sq ft)} \times \text{Depth of Material To Be Added (ft)}}{\text{27 cu ft per cu yd Needed}} = \text{Cu. Yds. of Soil}$$

For a more accurate estimation of soil needed, compaction should be factored into this equation as well. Ask your soil supplier for the compaction factor of the soil you will be ordering. If, for example, the CF (Compaction Factor) is 43%, then multiply the amount of soil suggested from the equation above by 1.43. If the compaction factor was 30%, then multiply it by 1.30.

EXAMPLE:

$$\frac{\text{(11,300 sq ft} \times \text{0.1667 ft)}}{\text{27 cu ft}} = \text{69.8 cu yd} \times \text{1.30 CF} = \text{?}$$

ANSWER: **90.74 cu yd of soil is required to raise the infield skin 2"**

■ Square Footage of Skinned Areas on Infields

The table below shows for different portions of the skinned areas of infields. The softball field areas cover only the skinned area in fair territory, from the foul lines inward. No skinned area in foul territory was included in the softball calculations because of the wide variation of these dimensions from one field to the next.

INFIELD SIZE	Infield Skin	1st & 3rd Baselines	Mound	Home Plate Area
Regulation Baseball Infield w / 95' arc	9,740	385 ea.	255	531
Little League Infield w / 50' arc	2,860	169 ea.	79	255
Skinned Softball Field w / 55' arc	6,143	Assumes recommended dimensions. Areas are in square feet.		
Skinned Softball Field w / 60' arc	6,890			
Skinned Softball Field w / 65' arc	7,674			

INCHES TO FEET CONVERSIONS	
1" = 0.0833'	7" = 0.5833'
2" = 0.1667'	8" = 0.6667'
3" = 0.2500'	9" = 0.7500'
4" = 0.3333'	10" = 0.8333'
5" = 0.4167'	11" = 0.9167'
6" = 0.5000'	12" = 1.0000'

COMPACTION FACTOR EXAMPLES	
If CF is:	Multiply by:
10%	1.1
20%	1.2
30%	1.3
40%	1.4
50%	1.5

ESTIMATED QUANTITY OF SOIL IN A STOCKPILE

Height of Stockpile ▼	DIAMETER OF BASE OF SOIL STOCKPILE *QUANTITIES ARE SHOWN IN CUBIC YARDS* | *1 cu yd of DuraEdge Infield Soil or FieldSaver material = 1.35 tons*														
	5'	10'	15'	20'	25'	30'	35'	40'	45'	50'	55'	60'	65'	70'	75'
4'	1	3.9	8.7	15.5	24.2	34.8	47.5	62							
6'	1.4	5.8	13	23.3	36.3	52.3	71.2	93	117.7						
8'	1.9	7.7	17.4	31	48.5	69.8	95	124	157	193.8					
10'		9.7	21.8	38.8	60.6	87.2	118.7	155.1	196.3	242.3	293.2				
12'			26.2	46.5	72.7	104.7	142.5	186	235.6	290.7	351.8	418.7			
14'				54.3	84.8	122.1	166.2	217.1	274.8	339.2	410.4	488.4	573.2		
16'					96.9	139.5	189.9	248.1	314.1	387.6	469	558.2	655.1	759.8	
18'						157	213.7	279.1	353.3	436.1	527.7	628	737	854.8	981.2
20'						174.4	237.4	310.1	392.6	484.6	586.3	697.8	818.9	949.6	1,090.2

Approximate Volume in Pile (Cu. Yds.) = 1/3 Height of Pile (Ft.) × Area of the Circular Base of Stockpile (Sq. Ft.) ÷ 27
Area of a Circle = 3.14 × R^2 or Area of Circle = 3.14 × Radius × Radius

FUNCTION OF Various Soil Entities

A soil is made up of three types of soil particles: sand, silt and clay. Each of these particles plays a vital role in the success of the infield skin. In order for the soil to provide ample support for athletic play, it will need to have the proper density of particles to fully stabilize the soil surface.

SAND — It's function in the infield soil is to provide the structural stability. When sand is present in proper amounts and sizes, it creates "pore space" or "air space" which leaves room for the smaller particles of silt and clay. Because of its large particle size, sand should take up the majority of the volume in your infield soil.

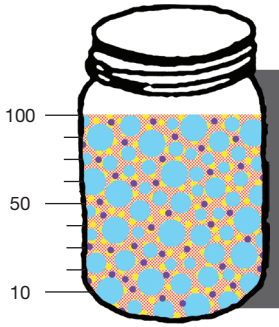
Sand is usually divided into five sizes ranging from very fine to very coarse. For infield soils the majority of the sand should be in the medium to very coarse range. An infield soil with the proper volume and sizes of sand will easily support athletic traffic on the surface — even in wet conditions. Conversely, infield soils with large volumes of fine and very fine sand will lack stability.

SILT — This is the soil particle that is sized between sand particles (larger) and clay particles (smaller). Because of this, silt helps to bind sand and clay particles together in a mix. However, excess silt can cause many problems on an infield ranging from a greasy surface when wet to a very dusty infield when the soil is dry.

How much silt is needed? The ideal silt content is a ratio which is equal to or ½ the clay content. *Reference the SCR Scale below for the proper Silt-to-Clay Ratio.*

CLAY — Represents the smallest particle size in an infield soil and it provides color and moisture retention. In general, higher clay content in a mix requires more maintenance.

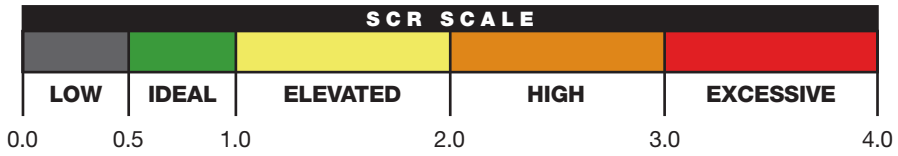
How much clay is needed? The ideal clay content is a ratio which is equal to or 1 ½ times the silt content. *Reference the SCR Scale below for the proper Silt-to-Clay Ratio.*



This jar represents an infield soil profile. Blue and purple particles indicate variations of sand, yellow silt, and the red haze indicates all kinds of tiny little clay particles. The proper amount of each size particles creates structural stability in an infield soil.

SCR: IT'S IMPORTANCE TO INFIELD SOILS

The Silt-to-Clay Ratio This number is arrived at by taking the percent silt reported in a soil test and dividing it by the percent clay from the test. Use this **SCR Scale** to judge how this entity of your infield soil measures up.



As mentioned above regarding clay content, the ideal SCR range for any infield soil is between 0.5 and 1.0, as indicated in green in the SCR Scale. When the SCR is between 1.0 and 2.0 — the "elevated" range — these fields can usually be fixed by merely placing a topdressing on the infield skin. Typically, a topdressing will address these elevated SCR problems in the soil if they are managed properly. Soils with an SCR of around 2.0 or higher will definitely need to be amended to adjust the SCR closer to the desired level. Overall sand content and sand size distribution will need to be adjusted as well in these fields. High SCR infield soils typically will be very slippery or greasy when wet, and very dusty when dry. Both of these conditions are due to excessive silt content in the infield soil. From Beacon's infield soil testing experience, we have found that most of the infield soils tested had a high to excessive SCR, especially in the eastern half of the Unite States. These fields typically are very high in silt and sometimes high in fine and very fine sand content as well. That combination of high SCRs and high fine to very fine sand content results in some very unstable infield soils when wet. Infield soils that have a low SCR do occur, but not very often. Low SCR fields will typically suffer from either being too loose and sandy or they could have too high a clay content which will cause chunking-out on the infield skin.

RECOMMENDED Infield Soil Specs

PROFESSIONAL LEVEL

This level of field will always have access to water and be maintained on a regular or daily basis, often with crew of several people. Examples of these type fields include professional ballparks (MLB, MiLB) and Division 1 colleges and universities

Sand: Total content 58% to 62%. 38% to 45% of the total sand content shall be composed of medium, coarse and very coarse sand particles. Sand shape should be sub-angular to sub-rounded with low to medium sphericity.

Silt & Clay: The combined amount of silt and clay shall be between 38% and 42%. The silt-to-clay ratio (SCR), which is found by dividing the percent silt by the percent clay, shall be between 0.5 and 1.0. *(Reference **SCR Scale** on the page above)*

INTERMEDIATE LEVEL

This level of field will always have access to water and be maintained on a somewhat limited basis by usually one person or maybe the team who uses the field. Examples of these type fields include colleges and universities, some high schools or sports complexes.

Sand: Total content 65% to 69%. Of the total sand content, 45% to 50% shall be composed of medium, coarse, and very coarse sand particles. Sand shape should be sub-angular to sub-rounded with low to medium sphericity.

Silt & Clay: The combined amount of silt and clay shall be between 31% and 35%. The silt-to-clay ratio (SCR), which is found by dividing the percent silt by the percent clay, shall be between 0.5 and 1.0. *(Reference **SCR Scale** on the page above)*

RECREATIONAL LEVEL

This level of field typically will not have access to water and is maintained on a volunteer or irregular basis. Examples of these type fields include most school and park fields.

Sand: Total content 70% to 75%. >50% of the total sand content shall be composed of medium, coarse and very coarse sand particles. Sand shape should be sub-angular to sub-rounded with low to medium sphericity.

Silt & Clay: The combined amount of silt and clay shall be between 30% and 25%. The silt to clay ratio (SCR), which is achieved by dividing the percent silt by the percent clay, shall be between 0.5 and 1.0. *(Reference **SCR Scale** on the page above)*

To insure the quality of a supplied infield soil, a sample of the material produced for you should be sent to a soil testing lab of your choice. If the project is one that requires a large volume of infield soil, then a soil test should be conducted at the rate of one per 200 tons of material delivered to the job site. All testing should be performed by the same soil testing agency. Test results should be compared to and successfully fall into the range provided in these Infield Soil Specifications.

No particles in the infield mix shall exceed 3 millimeters in size and no more than 5% of particles shall be retained on the 2 millimeter screen.

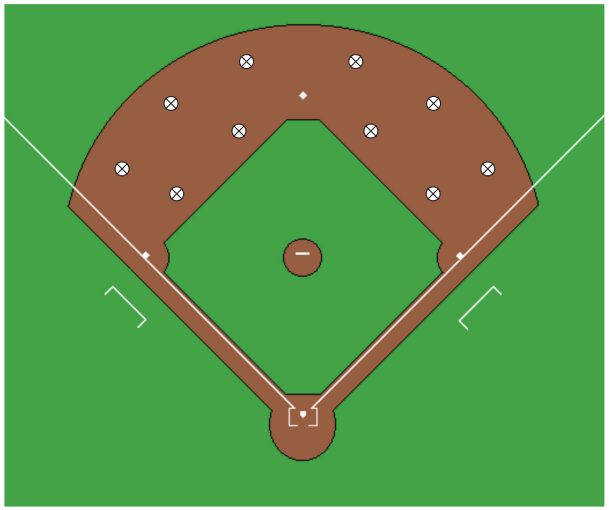
WHY AND HOW TO Test Your Infield Soil

Managing Your Infield Soil is a Science.

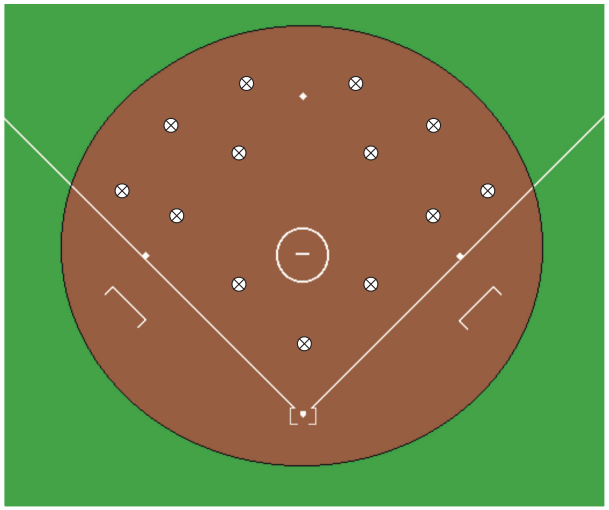
An infield skin can be the source of unlimited frustration for a professional groundskeeper. However, identifying the composition of the infield mix will allow any groundskeeper to more accurately predict how the infield skin will perform in less than ideal weather.

Managing the skinned portion of an infield is a science — not guesswork. For this reason, you must know your infield soil composition before taking any action to amend it. Soil testing provides quantitative data that helps to identify the shortcomings of an infield mix. After interpreting your test results, you will be able to make an educated decision about the amendment material to choose.

Infield soil tests are a diagnostic tool that many soil testing facilities can perform, but very few can interpret what those results mean in terms of playability on an infield. Choose a soil testing company that understands how the composition of an infield soil affects game day performance. Beacon Athletics has over 10 years experience of infield soil test interpretation and analysis. Our team of soil scientists and a former Major League groundskeeper work with one of the top soil testing firms in the country to be sure you get accurate testing and analysis. Just follow the protocol below to harvest your sample and send it in for testing.



⊗ = sample areas



Infield Soil Testing Protocol

1. **Randomly choose 8 to 12 locations around the infield skin** that you will pull samples from. This is done to assemble a good representative sample of the skin area.

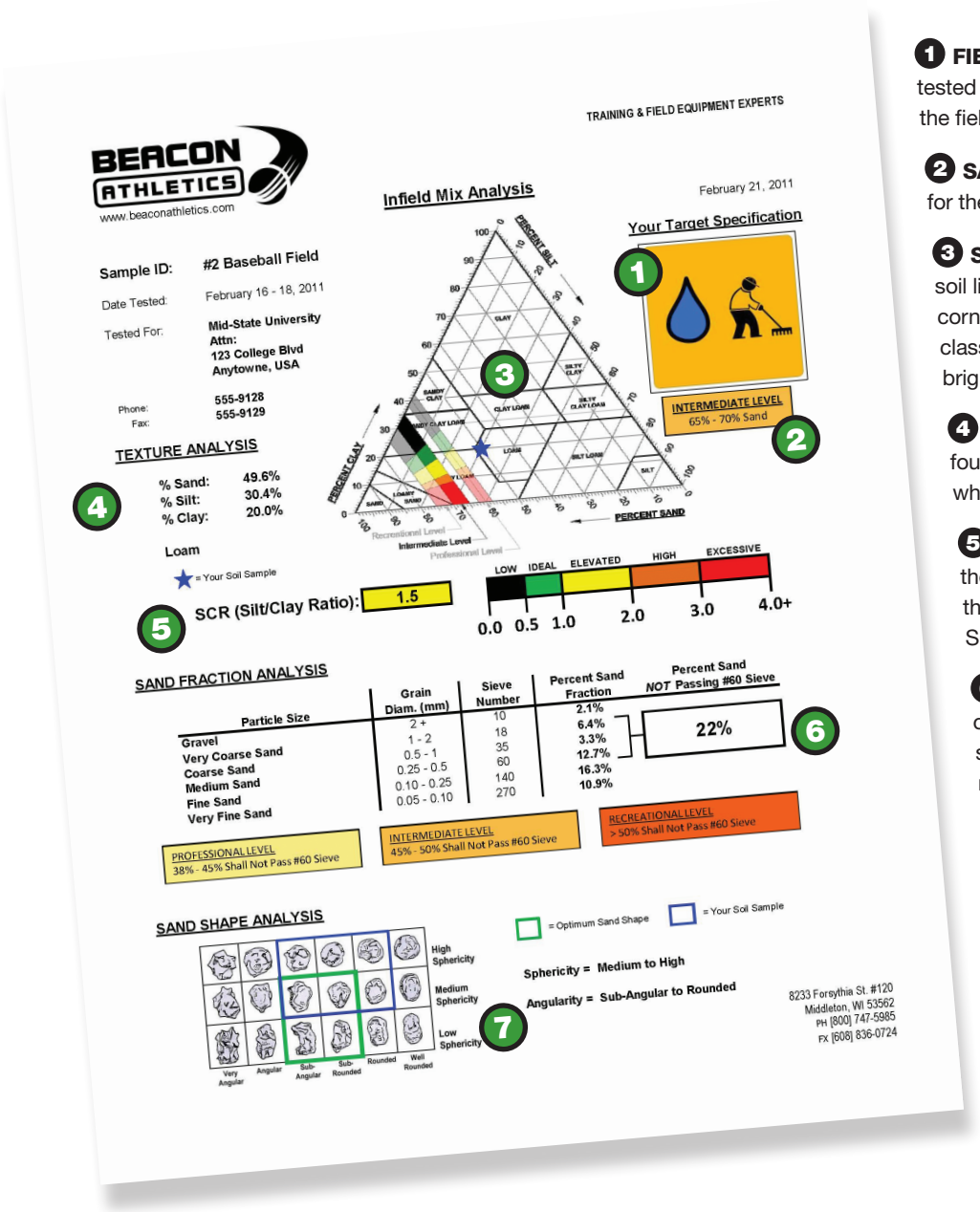
2. **If your infield has a topdressing material on it**, scrape or sweep it away completely from the areas you are about to sample to prevent contamination.

3. **Find a box or storage container** to compile all of your samples. Then, using a small shovel, dig into the infield soil. Collect a 3"x 3" sample from each location, no deeper than 3 inches, and toss them into the box.

4. **Once you have collected all of your samples in the box**, pulverize the soil as much as possible and mix all of the samples together. Use a quart sized zipper storage bag, label the bag in a way that you will remember from which field or complex the samples were taken. Fill the zipper bag almost full and seal it. Your sample is now ready to be sent to your soil testing lab for testing and analysis. *Remember, Beacon Athletics can conduct your infield soil test and analysis.*

5. **Normally, you should expect to see results** from your test in about 7 to 10 days. If your soil lab does not analyze results, we can help. Call Beacon Athletics and send us your test results and we'll analyze your results for you.

UNDERSTANDING A Soil Test Report



1 FIELD CLASSIFICATION ICON. Identifies what classification the field being tested is targeted at. Water availability and maintenance resources (manpower) dictate the field classification and it's respective infield soil specifications.

2 SAND CONTENT BOX. Indicates what the total sand content specification is for the field classification indicated above it.

3 SOIL TEXTURE TRIANGLE. The blue star indicates where the tested soil lies on the triangle. The three strips showing the SCR scale in the lower left corner of the triangle indicate where the three soil specs for the different field classifications lie on the graph. Ideally, the infield soil tested should land in the bright green area indicated on this graph.

4 TEXTURE ANALYSIS. Indicates the total percentage of sand, silt and clay found in the infield soil sample. Check this percentage of sand with respect to what is specified in the Sand Content Box (#2).

5 SCR NUMBER. The SCR number, or silt-to-clay ratio, is found by dividing the amount of silt in the infield soil by the amount of clay. The ratio is indicated in the box and the color used to fill the box reflects where the SCR relates on the SCR scale. The ideal SCR for ALL infield soils is between 0.5 and 1.0.

6 COARSE SAND PERCENTAGE. Identifies the total combined amount of the medium, coarse, and very coarse sand that is present in the overall soil sample. The background of this box will be white when the number does not match the specs for the classification that is being tested for. When the amount falls into the proper spec for the desired classification, the background will turn the color of the matching specification shown in the boxes below the sand fraction analysis.

7 SAND SHAPE ANALYSIS. Indicates the shapes of the sand particles that were present in the tested sample. Sphericity indicates whether the shape of the sand particles were more globe shaped or elongated. The Angularity indicates how smooth or jagged the surface of the sand particles were. The green box indicates the "ideal" shapes preferred for an infield soil while the blue box indicates the results from the tested sample.

Before you start, be prepared.

Make sure you have these recommended tools ready to go:

- ☐ Measuring Tape
- ☐ Calculator
- ☐ String Winder(s)
- ☐ Stakes or Tarp Pins
- ☐ Beacon Mound Slope Gauge
- ☐ Beacon Triple Play Batter's Box Template
- ☐ Torpedo Level
- ☐ Transit or Builder's Level
- ☐ Pitching Rubber(s)
- ☐ Home Plate(s)
- ☐ Base Anchors
- ☐ Base Plugs
- ☐ Mound/Home Plate Clay or Bricks
- ☐ Infield Soil & Topdressing Material
- ☐ Warning Track Material

BALLFIELD DIMENSIONS & REFERENCE GUIDE

BEACON ATHLETICS

VERSION 2.3

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