



ITF® Official Programme

Tennis10s: Marking Red and Orange Courts - A Guidance Manual

The new rule for 10-and-under competition comes into worldwide effect from 1st January 2012 . The rule states that 10-and-under competitions can no longer be played using a regular Yellow tennis ball, with the mandatory use of slower 'Red', 'Orange' or 'Green' balls on the appropriate size court.

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Contents Page

Acknowledgements

Introduction	1
Chapter 1	2
What is Tennis10s?	2
Why Use Slower Balls?	3
Why Use Smaller Courts?	4
The Court Set Up	5
Tennis10s Overview Table	6
Chapter 2	7
Establishing Red and Orange Courts	7
Stand Alone Courts	8
Permanent Blended & Coloured Lines	9
Temporary Lines	10
Chapter 3	12
Acrylic Courts	12
Stand Alone Acrylic Courts	13
Permanent Blended & Coloured Lines	14
Temporary Lines	15
Chapter 4	17
Clay Courts	17
Permanent Blended & Coloured Lines	18
Temporary Lines	19
Chapter 5	20
Natural Grass Courts	20
Stand Alone Natural Grass Courts	20
Temporary Lines on Natural Grass	21
Artificial Clay & Grass Courts	22
Stand Alone Artificial Clay & Grass Courts	22
Blended & Shared Lines on Artificial Clay & Grass Courts	22
Temporary Lines on Artificial Clay & Grass Courts	23
Chapter 6	24
Carpet & Other Playing Areas	24
Chapter 7	26
Temporary Lines: Limitations	26
Chapter 8	27
Product Information and Installation	27
Throw Down lines	27
Roll Down Lines	28
Tape	29
Elastic, Fabric, and PVC Coated Lines	30
Permanent Blended & Coloured Lines on Acrylic Courts	31
Permanent Blended and Coloured Lines on Clay Courts	32
Temporary Nets	32
Specific Product Information	32

Chapter 9	33
Details and Specifications	33
Stand Alone Courts	34
Court Conversions	38
Shared or Blended Lines	39
 Appendices	 43
Appendix A 10 and Under Tennis Competition	43
Appendix B Quick and Easy Red & Orange Court Setup Guide	44
Appendix C Establishing Red and Orange Courts	51
Appendix D ITF Classified Surfaces	52

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Introduction

Welcome to the *Tennis10s: Marking Red and Orange Courts – A Guidance Manual* by the International Tennis Federation (ITF). This manual will act as a guidance document for coaches, tennis facilities and industry professionals around the world providing information and advice regarding how different types of lines can be used to establish Red (36' foot) and Orange (60' foot) courts. Whether it is developing stand alone courts, providing permanent, semi-permanent or temporary lines on existing tennis surfaces or marking courts in non-traditional tennis settings, smaller courts can be set up more effectively.

Tennis Play and Stay Campaign



Tennis Play and Stay is the ITF 'Marketing the Game' campaign aimed at increasing tennis participation worldwide. The campaign has the slogan of "Serve Rally and Score" and seeks to promote tennis as easy, fun and healthy, so that a player's first experience of tennis is a positive one.

Key Messages

The Tennis Play and Stay campaign has 5 key messages that underpin the key values and motives for increasing participation worldwide.

- *Tennis is easy* when coaches working with starter players use slower red, orange or green balls
- *Tennis is fun* when starter players serve, rally and score from the first lesson
- *Tennis competition can be fun* and formats and scoring systems exist to suit all lifestyles
- *Tennis is healthy* when players serve, rally and score...research conducted in 2006 by the ITF supports this
- *Tennis is a sport for all* and all players who learn to serve, rally and score should have a rating which helps them to find players of a similar level to play with

Supporting Programmes

The following supporting programmes have been developed to introduce tennis in an easy, fun and healthy way to National Federations to increase participation and implement into their national structures.



Club Level

It is important that players have an opportunity to participate at the club level and opportunities are provided for all ages and abilities from the supporting programmes. Competition is an important part of the Tennis Play and Stay campaign and once a player is able to Serve Rally and Score they should be encouraged to gain an International Tennis Number (ITN) rating or National Federation equivalent. The ITN assists players to find playing partners of the same level and therefore helping to increase participation, including those players competing using the Orange and Green balls.



VIDEO

Fundamental to Tennis Play and Stay is the use of slower Red, Orange and Green balls on smaller courts by coaches to keep more starter players in tennis. The campaign is supported by The ITF member nations, tennis manufacturers and major coaching organisations.

For an Introduction to Tennis Play and Stay Video, please see the following video by clicking the image to the right.

Chapter 1

What is Tennis10s?

Tennis10s is a supporting programme of the Tennis Play and Stay campaign. Tennis10s is an introduction to tennis for players aged 10-and-Under, played on smaller courts with slower balls. It is a easy and fun way to start and progress in tennis, making it simpler to develop good technique and implement tactics.



By using the slower balls on smaller courts, the players are able to Serve Rally and Score from their first lesson, developing fundamental skills that prepare them for a full court (78' foot) game as they learn and grow.

Whilst some National Federations may use alternative names for their respective ten and under tennis programmes, they are in full support of the ITF Tennis10s format and brand.



From January 1st 2012, the Rules of Tennis will state that competition for players aged 10-and-Under must be played with slower Red, Orange and Green balls on appropriately sized courts. The traditional Yellow ball will no longer be permitted in competition for the age 10-and-Under.

The Rules of Tennis are Changing video can be seen by clicking the image to the left.

Tennis10s provides a sound development structure for players aged 10-and-Under through three colour-coded stages.

Red, Orange and Green

Through these stages a series of developmental steps are created to allow players to progress along a pathway according to their age, ability, confidence and orientation to competition. In the process, the court size, racket length, ball speed and duration of games all increase until the player is ready to move onto the full full-size court (78' / 23.77m x 8.23m) court and use a Yellow ball.

Smaller, Slower, Easier

Most people understand that Tennis10s is:

- a three-stage version of tennis
- designed initially for children, and is now used for starter adults (Tennis Xpress)
- a structured way of using slower balls, smaller courts and shorter rackets
- age and size appropriate

Efficient and Effective

Tennis10s allows beginner players to:

- develop fundamental skills more easily and faster;
- play the game quickly rather than focusing on a remote set of skills;
- stay motivated to play as they progress through the levels; and
- allows players to **Serve**, **Rally** and **Score** from their first experience of tennis.

The Programmes

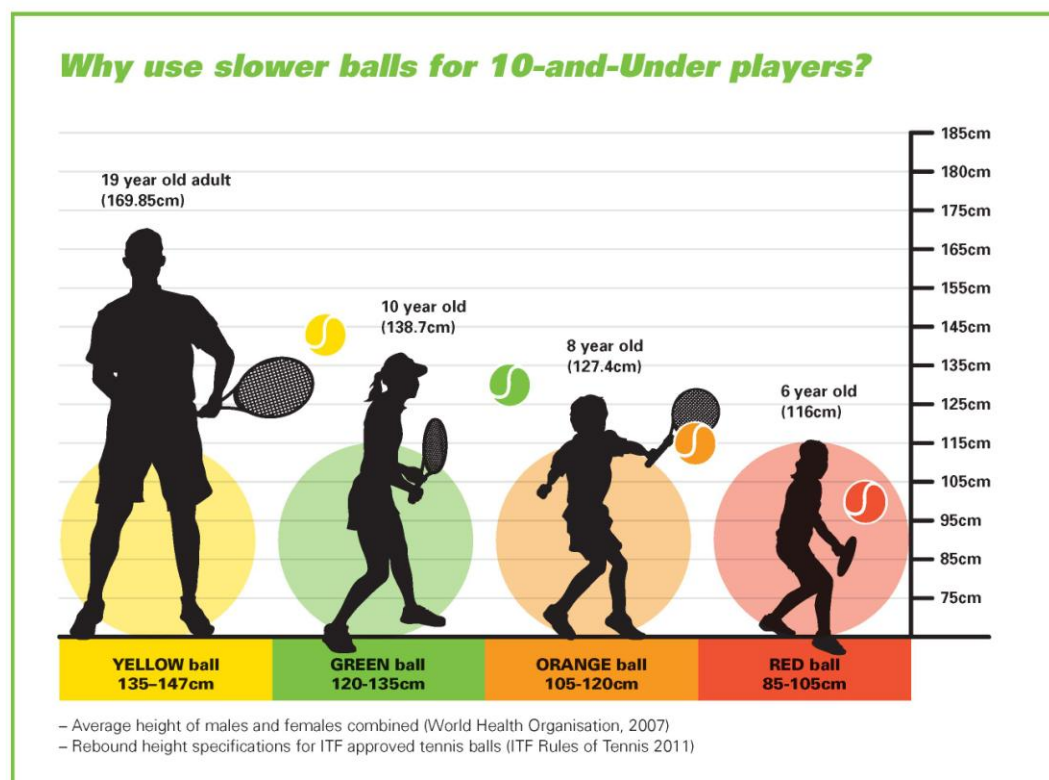
Through the use of the three stages of Tennis10s, each club or tennis facility can provide a structured development programme that includes training and competitive play that better caters to the needs of young players. Coaching sessions, competitive play and practice opportunities are provided throughout as a way to immerse players in the game rather than sessions that are not linked to actual game play.

Often children who begin playing tennis with standard Yellow balls become quickly discouraged or can become bored without really experiencing the easy and fun aspect of the game. The Yellow ball bounces high over the children's heads; the rallies are short; and they spend most of their time picking up balls – this results in a loss of interest quickly. Through an appropriate Tennis10s programme using the slower balls on the smaller courts, children are able to play the game, enabling them increasingly likely to develop a long term relationship with the sport.

Through the ITF Tennis Xpress programme, it is important to emphasise the importance of the use of the slower balls with the appropriate programmes for starter adults and for wheelchair users beginning the game too.

Why Use Slower Balls?

The diagram below highlights the standard ball rebound height of the slower balls in comparison to the regular Yellow ball. As displayed in the diagram, the regular Yellow ball rebound height is much higher than an average 8-year old. The slower Red and Orange balls are far more appropriate since their rebound heights allow young players to swing through the ball more, developing the technique of their strokes with greater emphasis on control of the ball. This is also true for beginner adults and wheelchair tennis players too, resulting in a fundamentally better, easier and more fun experience.



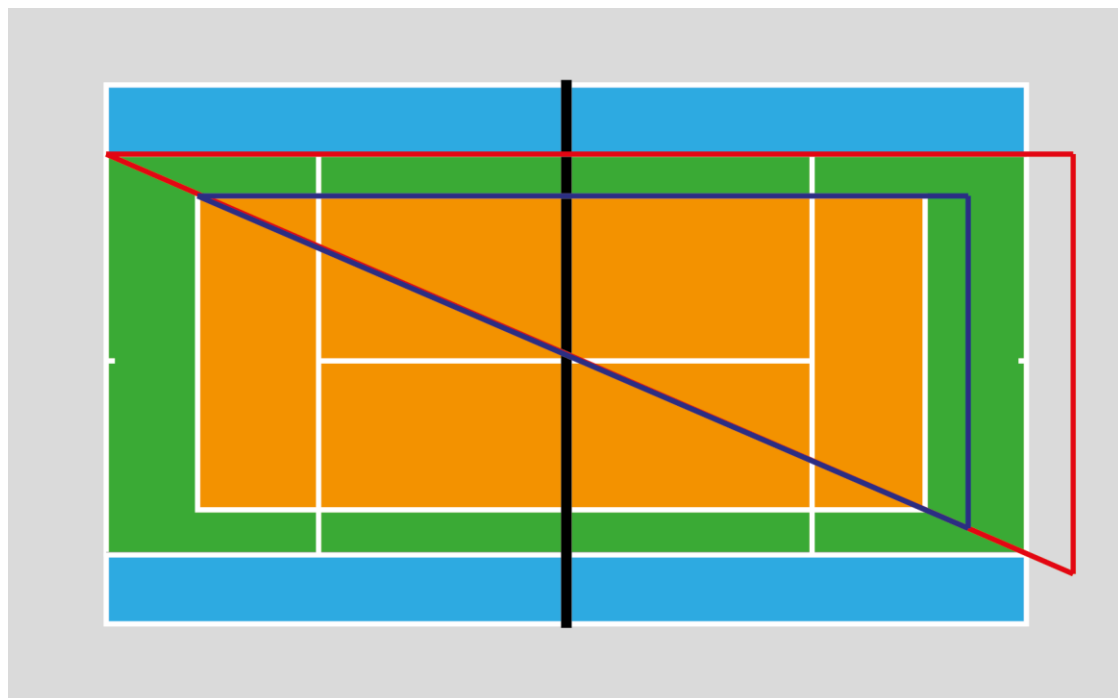
Note, average age / height statistics courtesy of World Health Organisation (2007). The average adult height is taken from US National Health & Nutrition Survey (1999-2002). Average ball rebound height are taken from the ITF Rules of Tennis 2011.

Why Use Smaller Courts?

The court size is relevant to the size of the player. Most children aged 8-and-Under will have trouble covering the full-size court (78'), resulting in shorter rallies and unrealistic tactics. Young players will experience fast travelling, high-bouncing regular Yellow balls, with much of their play inside the baseline and too much court area to hit the ball into.

Realistic footwork patterns are difficult to develop for children too as they require more steps to cover the full-size court (78') area, affecting movement styles to the ball and in recovery during the rally. This is particularly exaggerated by the regular Yellow ball. For example, the tactic to approach the net becomes an almost impossible option for young players on the full-size court (78'). It takes longer to reach an optimal net position because of their size and speed of movement, with much volleying taking place deep behind the service line and in an unrealistic position. Once at the net, they then become an easy target for passing or for the lob.

The diagram below demonstrates that a typical cross court groundstroke from the baseline travels a longer distance towards the opposite corner as the court size increases, for example from the Orange (60') court (see Blue Line) to full-size (78') court (see Red line). As the court size widens, the court coverage across the baseline for the player increases which highlights that the full court (78') requirements are too great for most players of height below 138cm (a average 10-year old). This causes unrealistic footwork patterns to and from the ball to be developed, notably due to the greater number of steps taken compared to an average adult's movement and steps taken.



The Court Set Up

As this manual will detail, there are many ways to set up and mark the Red (36') and Orange (60') courts, at traditional tennis facilities, as well as at non-tennis orientated locations and spaces. When setting up for training and competition, players should be encouraged to participate in the court setup so that they can prepare their own areas for play, independent of a coach. This will also allow them to play outside of their structured sessions and any organised competition.

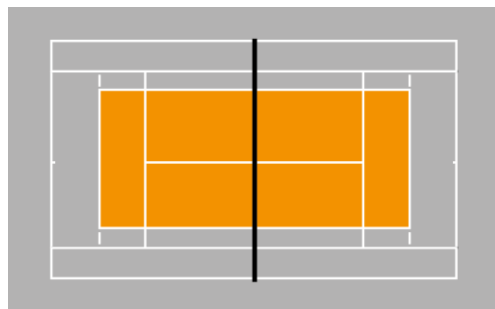
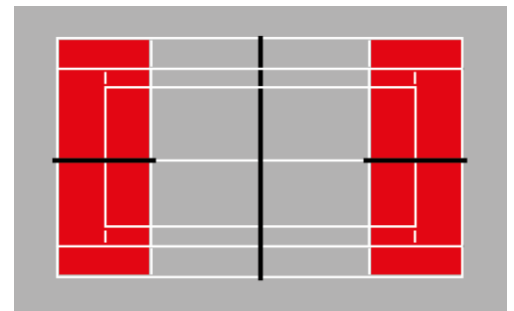
According to the ITF Rules of Tennis 2011, in addition to the full-size court (78'), the following court dimensions may be used for 10-and-Under tennis competition.

See Appendix A for the court dimensions.

See Appendix B for details regarding setting up Red (36') and Orange (78') courts for Competition and Training purposes.

Red (Stage 3)

A court designated "Red" for the purposes of 10-and-Under tennis competition, shall be a rectangle, between 10.97m (36') and 12.80m (48') long, and between 4.88m (16') and 6.10m (20') wide. The net shall be between 0.800m (31.5 inches) and 0.838m (33.0 inches) high at the centre.



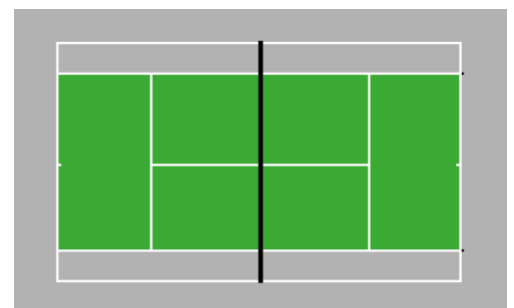
Orange (Stage 2)

A court designated "Orange", shall be a rectangle, between 17.98m (59') and 18.29m (60') long, and between 6.40m (21') and 8.23m (27') wide. The net shall be between 0.800m (31.5 inches) and 0.914m (36.0 inches) high at the centre.

Please see Appendices for comprehensive examples of court layouts for Red and Orange competition and training purposes.

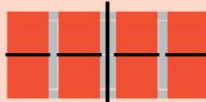

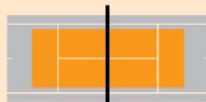

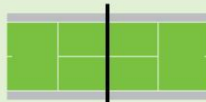

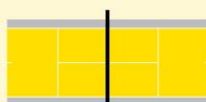

Green (Stage 1)

Green is the final stage before using the Yellow ball. A court designated "Green", shall be a rectangle, 23.77m (78') long and, for singles matches, 8.23m (27') wide, following the full court dimensions as stated in the ITF Rules of Tennis 2011. The height of the net shall be 0.914m (36.0 inches) high at the centre.



Tennis10s Overview Table

The table below provides an overview for the three different stages of the Tennis10s programme as it progresses towards the use of the Yellow ball. The necessary details for each stage are highlighted including the ball, the racket, the court environment and the recommended scoring options.

STAGE/ AGE	BALL	BALL SIZE/ RACKET/ COURT SIZE	SCORING OPTIONS	STAGE DESCRIPTION
tennis 10s 5-8 YEARS 	 (Foam or Felt) 75% slower than a Yellow ball*	Foam ball 8-9cm Standard ball 7-8cm Racket 17-23" (43-58cm)** Court 10.97-12.8m x 4.88-6.1m Net Height (at the centre) 0.80-0.838m	1 x Tiebreak to 7 or 10 Best of 3 Tiebreaks to 7 1 x Short Set to 4 Timed matches	<ul style="list-style-type: none"> • Slower balls, smaller courts and shorter rackets. • Players are able to play the game from their first lesson. • Players start to play in tennis festival events that use fun, team-based multi match events. • Development of good technique and use of realistic tactics.
tennis 10s 8-10 YEARS 	 50% slower than a Yellow ball*	Standard ball 6-6.86cm Racket 23-25" (58-63cm)** Court 17.98-18.29m x 6.4-8.23m Net Height (at the centre) 0.8m-0.914m	Best of 3 Tiebreaks to 7 1 x Short Set to 4	<ul style="list-style-type: none"> • Players move to a larger court, relevant to their size. • Ball is slightly faster than at Red, but continues to provide an optimal striking zone. • Players have the ability to implement advanced tactics. • Matches are longer than at Red, and children play both 'team' and 'individual' multi match events.
tennis 10s 9-10 YEARS 	 25% slower than a Yellow ball*	Standard ball 6.3-6.86cm Racket 25-26" (63-66cm)** Full Size Court 23.77m x 8.23m Standard Net Height (at the centre) 0.914m	1 x Short set to 4 Best of 3 Short Sets to 4 (3rd Set as match Tiebreak to 10)	<ul style="list-style-type: none"> • The ball is faster than at Orange. • Ball still slower and lower bouncing than the yellow ball. • Experienced players are able to continue to develop good technique and to implement advanced tactics. • Matches are slightly longer than at Orange, with both 'team' and individual' multi match competition played.
tennis 11 YEARS AND OVER 	 Yellow ball	Standard ball 6.54-6.86cm Racket 26-29" (66-73.7cm) Full Size Court 23.77m x 8.23m Standard Net Height (at the centre) 0.914m	Any scoring system within the Rules of Tennis	<ul style="list-style-type: none"> • Players reach Yellow having progressed through the Red, Orange and Green stages. • Players will usually be ready to train and compete with the Yellow ball on the full court.

From 2012, The International Tennis Federation rules will mandate that 10-and-Under competition is organised using slower Red, Orange, or Green balls on the appropriate sized court, with the appropriate sized racket. Players who begin tennis later (e.g. 9 years and Older) are still recommended to begin training and competing at Red, before progressing to Orange and then Green. *(Estimated ball speed) **(Dependent on the size of the player)

Chapter 2

Establishing Red and Orange Courts

There are many different ways to establish Red (36') and Orange (60') court lines depending on the type of surface, space available, the intended use of the courts (either for training or competitive play), and the funds available.

The following table is a general summary of the different lines used to mark the smaller courts based on cost during the year, the weight of the line, the average setup time, the lifespan of the product, and whether or not it is suitable for competitive play. Specific surface restrictions may apply for each product.

Key *****Most Favourable **Favourable *Least Favourable**

	Use	Cost	Weight	Setup Time	Competitive Play	Lifespan	Overall
Stand Alone Courts	Permanent	*	***	***	***	***	***
Permanent Blended Lines	Permanent	**	***	*	***	***	***
Permanent Coloured Lines	Permanent	*	***	*	***	***	***
Throw Down lines	Temporary	**	*	**	*	**	**
Elastic, Fabric and PVC Coated Lines	Temporary	**	**	**	**	**	**
Chalk	Temporary	***	***	**	**	*	**
Semi-Permanent Tape (Painters Tape)	Semi-permanent	**	***	**	**	**	**
Temporary Tape (Masking Tape)	Temporary	**	***	**	**	*	**

For a full description of the table above, please see Appendix C.

Stand Alone Courts

Stand alone courts are permanent Red (36') or Orange (60') Courts that are very similar to standard full-size court (78') in that the line striping and nets are permanently installed. Stand alone courts are ideal since no routine setup is required and independent programming and instructing can occur.

Stand alone courts are often constructed by converting existing full-size court (78') batteries at facilities where there may not be adequate space, or it may not be feasible to construct new stand alone courts. For example, one full-size court (78') with appropriate overrun distances around the playing area can be converted into four smaller Red (36') courts as shown the following photos.



Permanent Lines



Red and Orange courts can be laid out on a full-size court (78') court such that the playing lines for each court can be shared between the various court sizes. For example as shown as in the photograph, the full-size court (78') baselines and service lines are used as the sidelines for the Red court, by simply extending the service line through the doubles lines of the full-size (78') court.

When Red court striping is added to the full-size court (78') court as described, temporary portable nets are used for Red (36') court play, thereby allowing for full-size court (78') court play while the Red (36') courts are not in use.

Permanent Blended Lines

Permanent Blended Lines are an option for tennis facilities where the installations of permanent stand alone Red (36') or Orange (60') courts are not feasible. The permanent blended lines should be painted from the same color palette as the full-size court (78') playing area, either in a slightly darker or lighter tone. It is important that the blended lines can be differentiated from the full-size court (78') court playing lines and to not disrupt the tennis player during full-size court play.

Blended Orange Court Striping on full-size (78') Indoor Court: Steamboat Springs, Colorado



The texture for the blended line should be of the same texture as the court playing surface material. It is recommended that black paint be used to darken the line colour from the court surface and not paint pigment. To lighten line colour is achieved by selecting a colour tone from the color palette.

"I barely noticed the 36' and 60' foot lines on the courts at the National Indoor Intercollegiate Championships. The blended lines definitely didn't bother the players – and all of us are excited that the event will be back in New York at the National Tennis Centre again next year."

Steve Johnson, NCAA Champions '11 and 3 time All-American

Permanent Coloured Lines

Permanent Coloured Lines follow the same principle and dimensions as Blended Lines, as stated above. However these lines are clearly visible on the full-size court playing area and could disrupt the tennis player during full-size court play. The lines are painted in a contrasting colour palette such as Orange or a lighter blue from the colour palette. The texture for the coloured line should be of the same texture as the court playing surface material.





*Permanent Orange Court Lines:
LTA, Great Britain*

“At the National Tennis Centre our two outdoor acrylic courts with permanent Orange Court markings are used for training purposes by our top performance players. The courts are used during some of our premier British tennis competitions, including Challenger and Futures tournaments as well as the AEGON British Tour and AEGON British Junior National Championships. The additional lines on the court do not impact on the players’ ability to enjoy high quality tennis.”

***Oliver Scadgell, Head of Competitions and Programmes,
Great Britain LTA***

Temporary Lines

Temporary Lines for Red (36’) and Orange (60’) courts can be added to full-size court (78’) courts using a wide variety of products; however, not all Temporary Lines are appropriate for competitive play.

In some cases, to make setup easier, small dots may be marked permanently on the full-size court (78’) court surface to indicate where the four corners of the Red (36’) or Orange (60’) courts should be positioned for training or competition purposes.

The following are different types of Temporary Lines available:

Throw Down lines

Throw Down lines are small rubber or thermoplastic strips ranging from one to three feet in length, and are a common way to temporarily line Red (36’) and Orange (60’) courts. Some setup is required, as Throw Down lines are laid out and then removed directly after play. Throw Down lines are durable, relatively inexpensive, and if properly cared for, can last many years.



*Image of Temporary Throw Down lines
used to mark an Orange court on Hard*



Roll Down Lines

Roll Down lines are almost identical to Throw Down lines, but are sold in rubber or thermoplastic strips anywhere from 7.62m (25’) to 22.86m (75’) in length. Roll Down lines can be cut to desired lengths and simply rolled down and then removed after play. As shown in the following image, Rolled Down lines can be used to mark out both Red (36’) and Orange (60’) courts.

*Image of Temporary Rolled Lines used to mark
Red and Orange courts on Synthetic Grass*

Fabric and Elastic Lines

Fabric or elastic lines, with anchors holding them in place, may also be used to line smaller Red (36’) and Orange (60’) courts. Since most fabric and elastic lines that are manufactured are meant to be placed over existing full-size court (78’) courts, adding permanent anchors both inside and outside the playing area could affect the game for a full-size court (78’) court tennis player. As the elastic lines themselves are not permanent, they need to be laid down for each session and removed after play.



*Image of Elastic Lines used to mark an
Orange (60’) court on a Hard court*

Chalk Lines

Using non-toxic conventional chalk (as used in pavement / sidewalk paintings) to create Temporary striping is a low budget method for establishing Red (36') and Orange (60') courts; however, chalk requires a great deal of effort to maintain, and may not be suitable for all surfaces.



Image of Tape Lines used to mark a Red court on an acrylic court

Tape Lines

Tape is another means of adding Red (36') and Orange (60') court lines to full-size court (78') courts. Semi-permanent tape, such as painter's tape is said to last up to six months if applied correctly to a clean dry surface, while temporary tape such as common masking tape is needed to be thrown away after only a few uses. Tape can be a relatively cheap way to add Red (36') and Orange (60') courts to a surface; however, if left on too long, or exposed to high temperatures, tape can leave marks on the court surface after it is removed.

Chapter 3

Court Surfaces

Tennis is played on a wide variety of surfaces, ranging from acrylic, concrete and asphalt, to clay, grass and artificial grass. Other surfaces can also host tennis courts, ranging from modular systems (tiles) to wood and canvas.

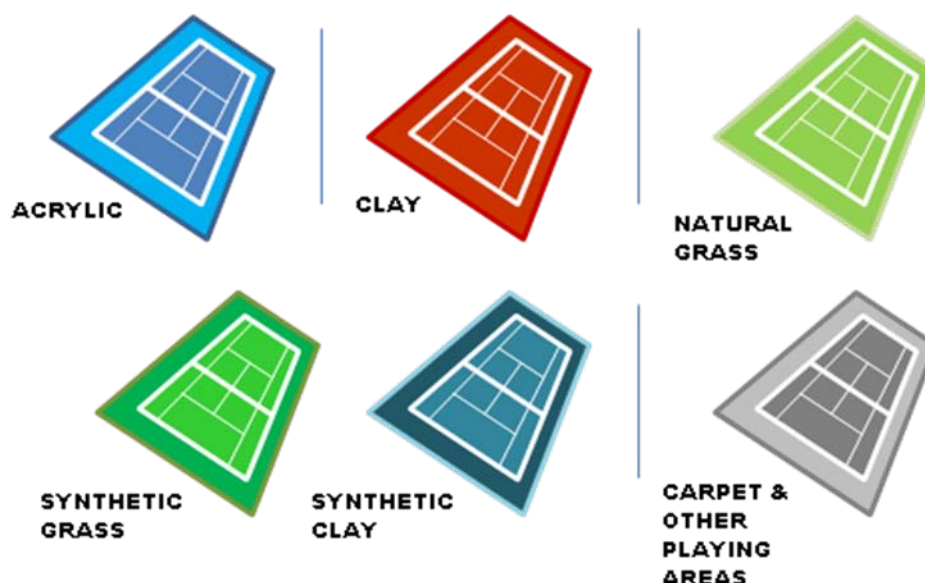
With the implementation of Tennis10s, various approaches to the installation of Red (36') and Orange (60') courts for training and competitive play have been developed throughout the world. This section of the manual will focus on the utilisation of different court surfaces for Tennis10s and how to develop both permanent and temporary t Red (36') and Orange (60') courts on various surfaces.

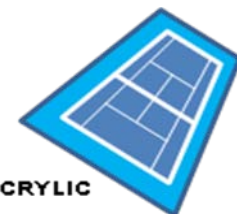
Following the ITF Approved Tennis balls, Classified Surfaces & Recognised Course 2011 (See Appendix D) the following surfaces have been categorised for the purpose of this manual.

Category (for manual)	Surface Code	Type	Description
Acrylic (Asphalt & Concrete) Courts	A	Acrylic	Textured, pigmented, resin-bound coating
	D	Asphalt	Bitumen-bound aggregate
	G	Concrete	Cement-bound aggregate
Clay Courts	F	Clay	Unbound mineral aggregate
Natural Grass Courts	H	Grass	Natural grass grown from seed
Artificial Clay & Grass Courts	B	Artificial Clay	Synthetic surface with the appearance of clay
	C	Artificial Grass	Synthetic surface with the appearance of natural grass
Carpet & Other playing areas	E	Carpet	Textile or polymeric material supplied in rolls or sheets of finished product
	J	Other	e.g. modular systems (tiles), wood, canvas

This section also describes product information that is relevant to each described surface. If specific product information is desired, please see Chapter 6, Product Information and Installations.

The following key denotes the respective court surface within this manual.





Acrylic Courts

Category (for manual)	Surface Code	Type	Description
Acrylic (Asphalt & Concrete) Courts	A	Acrylic	Textured, pigmented, resin-bound coating
	D	Asphalt	Bitumen-bound aggregate
	G	Concrete	Cement-bound aggregate

Following the ITF Approved Tennis balls, Classified Surfaces & Recognised Course 2011 (See Appendix D) the above surface categorisation is for the purpose of this manual.

Stand Alone Acrylic Courts



Stand Alone Red Acrylic Courts: Belton, South Carolina

Stand alone acrylic courts are permanent Red (36') and Orange (60') courts that are very similar to standard full-size (78') acrylic courts in that the line striping and nets are permanently installed.

Acrylic courts can last twenty or more years, but usually need resurfaced every five to seven years. Acrylic courts require minimal maintenance which may include occasionally washing or sweeping the courts to remove dirt and / or debris.



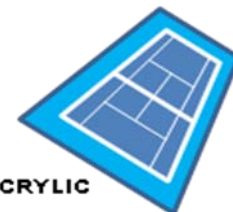
Stand Alone Red Acrylic Courts: Brewster, Massachusetts



Stand Alone Orange Acrylic Courts: Austin, Texas



*Stand Alone Red Acrylic Courts:
Court Conversion: North Little Rock, Arkansas*



Permanent Blended & Coloured Lines

In order to quickly implement Tennis10s at existing tennis facilities in the United States, the United States Tennis Association (USTA) has developed specifications for blended lines to be painted on existing full-size (78') tennis courts. In July 2011, the ITF approved the USTA's request to pilot blended lines on a trial basis at lower level ITF sanctioned tournaments. The trials are restricted to acrylic surfaces only, and the trial period will conclude at the end of 2012.



Example of alternative colour tones for blended lines on blue painted acrylic court
Source: California Products Corporation, US

For more information on how to properly place Red (36') and Orange (60') court lines on full-size (78') courts please refer to Chapter 9, Details and Specifications.

EXAMPLE | History made with sixty foot Blended Lines Court

On 28th February 2011 the USTA and event producers StarGames and MSG Sports, staged the first pro tennis match to be played on a traditional 78-foot regulation with 60-foot blended lines. The matches featured Ivan Lendl vs. John McEnroe and Pete Sampras vs. Andre Agassi, and took place at Madison Square Garden, New York.

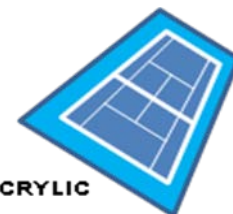


Blended lines are painted in the same color as the court but using a different tone, enabling courts to be adapted for competitive play for younger children. These blended lines are a major component of the USTA's 10-and-Under Tennis Initiative. The event was shown as a live broadcast on ESPN2 as part of the "Tennis Night in America" celebration.

Andre Agassi playing on a full-size (78') court with blended Orange Court lines during the "Tennis Night in America"; Madison Square Garden, New York

"I was initially skeptical of playing a National collegiate event on courts with blended lines. I was definitely concerned that the lines would be distracting for the players. Instead, because the lines are so well done the players hardly noticed them at all – they were not a factor."

Peter Smith, Head Men's Coach, USC NCAA Champion ('09-'11)



Temporary Lines



Temporary Throw Down lines used to mark out Red (36') courts at Melbourne Park, Australia

Although there are many benefits to having permanent Red (36') and Orange (60') Courts, installing them may not be practical for every facility, in which case temporary lines are an option.

There are various ways to incorporate temporary Red (36') and Orange (60') Court playing lines on acrylic courts; however, many temporary lines do pose certain drawbacks and inconveniences, which may not make them suitable for competitive play. Please see Chapter 7, Temporary Lines: Limitations for more information.

Throw Down lines

Acrylic courts make an ideal surface for Throw Down lines since acrylic courts have high-friction surfaces; however, Throw Down lines are not anchored to the surface so they still have the potential to slip, especially if the court surface becomes wet. Additionally, Throw Down lines typically mark portions of the playing lines, allowing gaps in between them, which is not ideal for competition and can cause difficulty calling shots during practice matches. Most Throw Down lines are at least 2mm in thickness which can cause erratic bounces and deviation when the ball hits the line.



Temporary Throw Down lines used to mark out Red (36') courts during The Australian Open, Melbourne

Roll Down Lines

Roll Down Lines are very effective for marking out the smaller Red (36') and Orange (60') courts on acrylic court surfaces. Unlike Throw Down lines, the line is a solid line allowing the court area to be clearly seen during play. Most Roll Down lines are at least 2mm in thickness can cause erratic bounces and deviation should the ball hit the line. Some lines, unless treated and stored properly, can curl at the ends over time, which may create a tripping hazard.

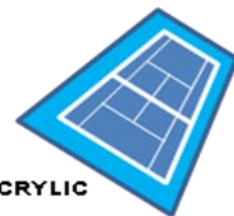
Fabric, Elastic Lines and PVC Coated Lines

On acrylic surfaces, the anchors used for fabric and elastic lines are usually adhesive-backed Velcro pieces. In some cases the Velcro piece can be permanently fixed to the surface, whereas others simply have limited life adhesive that once removed from the court surface cannot be replaced. The image on the left shows Elastic lines used to mark an Orange (60') court on a Acrylic court.



The installation of permanent Velcro anchors on acrylic courts is not preferred, as they may affect the ball bounce for a full-size (78') court player if placed within the seventy-eight court playing area. Some adhesives can also permanently mark the court surface if not removed carefully, by either leaving behind adhesive residue or removing surface paint.

Durable string or a form of narrow rope can be used to mark the Tennis10s lines; however this would also require a form of an anchor such as a nail to hold the lines in place.



Chalk Lines

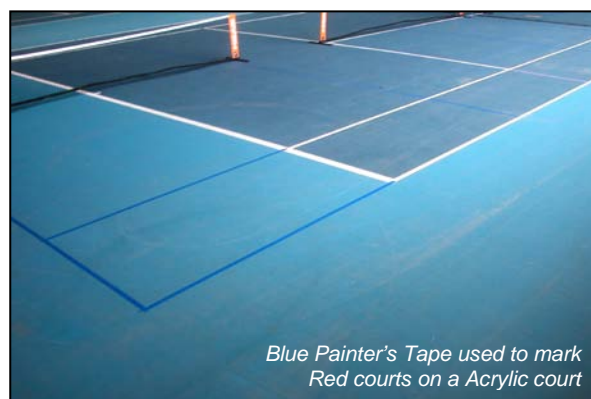
Using chalk is an affordable method of marking smaller Red (36') and Orange (60') court playing lines on acrylic courts. In order to accurately establish Red (36') and Orange (60') court striping with chalk, a long straight edge is needed. A meter stick could be used; however, this method is very time consuming and may not result in consistent, straight lines, particularly for the longer Orange (60') Court lines. One method is to use water-based chalk which is desirable for clay courts. This mixture can be made permanent with repeated application of coats to the smaller court lines.

Chalk can be quite messy and may require extensive surface cleaning to remove.

Tape Lines

Tape is a useful method when marking Tennis10s courts, particularly Red (36') courts on acrylic surfaces since very few lines are needed. The tape has limited affect on the ball deviation and can easily be replaced if damaged. Masking tape is ideal in width and color since it is clearly contrasting with the darker court surface. The used of tape lines for day to day programming could become relatively expensive due to the amount of tape used and the frequency that the lines need to be re-established.

In some cases, thicker and more durable painter's tape can be laid on a acrylic court surface for longer periods of time than common masking tape, although may cause permanent damage to the court surface if removed without proper care.



Blue Painter's Tape used to mark Red courts on a Acrylic court

"The National Tennis Centre stages a large number of Red and Orange Ball competitions throughout the year, with a proportion of these being played on the indoor acrylic courts. The use of masking tape for these competitions is by far the most effective temporary way to mark the smaller court lines for the these Mini Tennis events. The tape creates little or no ball deviation, it is non-marking when removed and relatively cheap to purchase."

Oliver Scadgell, Head of Competitions and Programmes, Great Britain LTA

Chapter 4

Clay Courts

Category (for manual)	Surface Code	Type	Description
Clay Courts	F	Clay	Unbound mineral aggregate

Following the ITF Approved Tennis balls, Classified Surfaces & Recognised Course 2011 (See Appendix D) the above surface categorisation is for the purpose of this manual.

Stand Alone Clay Courts

Permanent Stand Alone clay courts, such as the courts shown in the image to the right from Charlottesville, Virginia, US, require the same routine maintenance as typical the full-size (78') clay courts, such as watering and rolling to ensure they do not get too dry or dusty. Clay courts often need fresh clay added to the surface annually.



Stand Alone Red Clay Courts: Court Conversion: Charlottesville, Virginia



Stand Alone Red (36') Clay Court: Cairo, Egypt

The same materials used to mark the standard full-size (78') court lines may be used for the Red (36') and Orange (60') Court lines. Typical clay court lines are nailed permanently into the clay surface and after the initial installation; this type of shared line rarely requires any maintenance above what is already necessary to sustain the existing full-size (78') court.



Stand Alone Orange Clay Courts: Marietta, Georgia (USTA)



Stand Alone Red (36') Clay Courts: Court Conversion: Charlottesville, Virginia



Permanent Blended & Coloured Lines

Permanent blended lines can be added to existing full-size (78') clay courts. If the lines of the existing full-size (78') court are tape, similar tape may be used for the Red (36') and Orange (60') court lines. The Red (36') and Orange (60') court lines are nailed permanently into the clay surface and can be of a similar colour tone to the clay surface. After the initial installation, this type of shared lines rarely require any maintenance above what is already necessary to sustain the existing full-size (78') court.



*Full-size (78') Clay Court with
Permanent Nail Down Shared Lines:
Charlottesville, Virginia*



Adding tape to a full-size (78') clay court will create more obstacles that may affect the bounce or path of the ball, which will have an impact on the overall game for a full-size (78') player. For more information on how to properly place Red (36') and Orange (60') court lines on full-size (78') courts, please refer to Chapter 9, Details and Specifications.

*USTA: Blended Orange Court Striping on a
Full-size (78') Clay Court:
Shelby, North Carolina*



Temporary Lines

Temporary Red (36') and Orange (60') lines can be added to clay courts using Chalk, Throw Down, Fabric, PVC coated or Elastic lines. Some temporary lines have certain limitations that make them acceptable for training, but unsuitable for competitive play. Please see Chapter 5, Temporary Lines: Limitations.

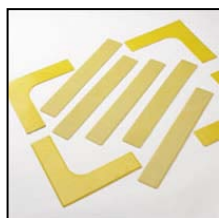
Chalk and Spray Paint Lines

Chalk and spray paint lines are one of the least expensive ways to incorporate temporary Red (36') and Orange (60') court lines on clay surfaces, but require the greatest amount of upkeep, as they will most likely need repainted or touched up after each session.



Throw Down lines

Throw Down lines may be used to temporarily line Red (36') and Orange (60') courts on clay surfaces. If the Throw Down lines are to be placed over an existing full-size (78') clay court, permanent coloured nails (Red (36') and Orange (60') for the respective courts) are sometimes nailed into the existing full-size (78') court tape. This allows setup to be easier by indicating where the corners of the Red (36') and Orange (60') courts should be placed.



Throw Down lines may not be the best option for a clay surface, since it may be more difficult to keep them clean during play due to the level of dust create by the clay court surface, especially in dry conditions. Throw Down lines are suitable for training, but are not recommended for competitive play since they have the potential to move. This becomes an even greater problem on clay since there is less friction between the clay and the rubber to hold the Throw Down lines in place.

Roll Down Lines

Roll Down lines are nearly identical to Throw Down lines except that they are sold in rolls anywhere from twenty five to seventy five feet in length and can be cut into strips of desired lengths. As with Throw Down lines, they may not be the best option for a clay surface, since it may be more difficult to keep them clean during play due to the level of dust create by the clay court surface, especially in dry conditions. Roll Down lines are suitable for training, but are not recommended for competitive play since they have the potential to move, which becomes an even greater problem on clay since there is less friction between the clay and the rubber to hold the Throw Down lines in place.

Fabric, Elastic and PVC Coated Lines

Elastic or fabric lines may also be used to temporarily install Red (36') and Orange (60') court playing lines on clay surfaces. On clay surfaces, elastic and fabric lines are temporarily held in place using anchors that are nailed one to three inches into the clay surface, typically through small eyelets position in the line, keeping the line fixed to the surface. This is also the case for the use of durable string or narrow form of rope to mark the coats.



*Fabric Red (36') Court Lines on Clay:
Naples, Florida*

The anchors do not permanently damage the clay surface; however, the anchors should be positioned carefully so as not to interfere with the playing area. Some Fabric, Elastic and PVC Coated lines have excess material that allow for the anchoring to be well outside the playing area for safety reasons. It is important that anchors, particularly if sharp nails are used, be removed carefully and stored away from children.

Chapter 5

Natural Grass Courts

Category (for manual)	Surface Code	Type	Description
Natural Grass Courts	H	Grass	Natural grass grown from seed

Following the ITF Approved Tennis balls, Classified Surfaces & Recognised Course 2011 (See Appendix D) the above surface categorisation is for the purpose of this manual only.

Over the past 20 years, the number of natural grass courts has been reduced, as tennis facilities are more inclined to invest in court surfaces that allow play for a longer period of time during the calendar year. Therefore, the use of Red (36') and Orange (60') Courts on natural grass is not a very common occurrence. This does not mean that Red (36') and Orange (60') Courts cannot be used on natural grass. Natural grass court play is restricted to dry conditions and any play in damp / wet conditions should be treated with caution due to the slipperiness of the surface, whether on a Red (36'), Orange (60') court or full-size (78') court.

Stand Alone Natural Grass Courts

Stand alone grass courts are permanent Red (36') and Orange (60') courts very similar to standard full-size (78') grass courts. *Like full-size (78') grass courts, Red (36') and Orange (60') grass courts require extensive maintenance including, but not limited to, routine mowing, fertilizing, and rolling.

Blended & Coloured Lines on Natural Grass Courts

Permanent Blended or Coloured lines can be added to existing full-size (78') grass courts using lime or spray paint. Depending upon how the existing full-size (78') court striping is applied to the grass, lime or spray paint, preferably of a different color than the full-size (78') lines so as not to distract the full-size (78') court player, may be used to apply the Red (36') and Orange (60') court striping.



Red (36') Court Painted Shared Lines on Full-size (78') Court: LTA, London, England

The positioning of the Red (36') and Orange (60') courts on existing natural grass courts is important, as it can reduce the number of Red (36') and Orange (60') lines that need to be added. For more information on how to properly place Red (36') and Orange (60') court lines on full-size (78') courts please refer to Chapter 9, Details and Specifications.



Temporary Lines on Natural Grass

Temporary Red (36') and Orange (60') lines can be added to natural grass surfaces using Throw Down, Fabric, PVC Coated, or Elastic lines. Some temporary lines have certain limitations that make them acceptable for training, but unsuitable for competitive play, so before investing in temporary lines, please see Chapter 5, Temporary Lines: Limitations.

Throw Down lines

Throw Down lines may be used on natural grass to temporarily add Red (36') and Orange (60') Court striping. Since natural and artificial grass courts are not high-friction surfaces, throw down lines may slide during play since they are not anchored to the surface.

Throw Down lines require some setup since they are only intended for temporary use and need to be laid out and removed after each session. Since these lines are durable rubber or thermoplastic strips, they last many years; however, they do become slippery if wet or dirty. As a result, special care and storage is needed to ensure that the strips stay dry and clean, and last many years.

To reduce the number of Throw Down lines that are need to line a Red (36') or Orange (60') court, the Throw Down lines may be placed over an existing full-size (78') court surface. To make setup easier, small dots may be marked on the artificial turf to indicate where the four corners of the Red (36') or Orange (60') court should go.



Roll Down Lines

Roll Down lines are nearly identical to Throw Down lines except that they are sold in rolls anywhere from 7.62m (25') to 22.86m (75') in length and can be cut into strips of desired lengths.

Fabric, PVC Coated and Elastic Lines

Fabric, PVC Coated, and Elastic lines may also be used to temporarily install Red (36') and Orange (60') Court playing lines on natural grass surfaces. Specially manufactured anchors are used to fix Fabric, PVC Coated and Elastic lines to natural grass surfaces. Nails or stakes are often used as anchors for natural grass Red (36') and Orange (60') courts.

Roll Down Lines used on Artificial Grass

Chalk or Lime Lines

A mix of diluted chalk paint can be used to mark the temporary lines on natural grass surfaces. Lime may be used to temporarily line Red (36') and Orange (60') courts on natural grass surfaces.



Artificial Clay & Grass Courts

Category (for manual)	Surface Code	Type	Description
Artificial Clay & Grass Courts	B	Artificial Clay	Synthetic surface with the appearance of clay
	C	Artificial Grass	Synthetic surface with the appearance of natural grass

Following the ITF Approved Tennis balls, Classified Surfaces & Recognised Course 2011 (See Appendix D) the above surface categorisation is for the purpose of this manual only.

Many tennis facilities are more inclined to invest in artificial surfaces rather than the cost of maintaining and preserving standard clay or natural grass courts. Although clay is a surface that can withstand play throughout the calendar year, grass is a surface that requires dry conditions, preferably during hotter periods. The use of Red (36') and Orange (60') courts can be easily marked out during construction of the artificial clay and grass surfaces.

Stand Alone Artificial Clay & Grass Courts

Stand alone artificial clay and grass courts are Red (36') and Orange (60') courts otherwise identical to standard full-size (78') artificial courts. Artificial clay is a synthetic surface with a similar appearance to clay, using material fill such as sand, rubbers granules or even standard clay, laid on the synthetic surface. Artificial grass courts create a similar game as natural grass courts, typically using sand as the chosen material laid on the surface. Both the artificial clay and grass courts require much less maintenance as they do not need to be watered. Regular maintenance includes brooming and brushing the surface to create a uniform, well-groomed playing area. Artificial courts have an approximate life span of every nine years, with an annual addition of material fill to sustain the use and desired speed of the court.

Temporary stand alone Red (36') and Orange (60') artificial clay or grass courts that are rubber-backed can be installed temporarily on hard surfaces such as a gymnasium floors, and can be rolled up for storing purposes.

Blended & Shared Lines on Artificial Clay & Grass Courts

Permanent Blended or Coloured lines can be added to existing full-size (78') artificial clay and grass courts using lime or spray paint. Depending upon how the existing full-size (78') court striping is applied to the surface using lime or spray paint either in a blended colour tone or in a contrasting coloured line to the full-size court playing area as a contrast.



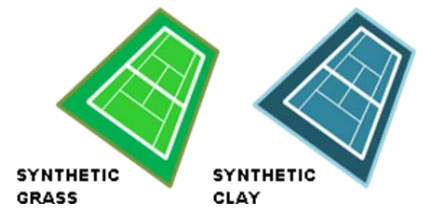
Source:
Fleet (Line Markers) Ltd,
2011



Source: Bank of England
Sports Ground, London

Images of full-size (78')
court lines with other sport shared lines

If shared lines are desired on full-size (78') artificial clay and grass courts, actual colored turf fibers may be tufted or seamed into the turf during installation to line both the full-size (78') and Red (36') and Orange (60') Courts. If a full-size (78') artificial grass court already exists, shared lines can be added using paint.



The positioning of the Red (36') and Orange (60') courts on existing artificial clay and grass courts is important, as it can reduce the number of Red (36') and Orange (60') lines that need to be added. For more information on how to properly place Red (36') and Orange (60') court lines on full-size (78') courts please refer to Chapter 9, Details and Specifications.

Temporary Lines on Artificial Clay & Grass Courts

Temporary Red (36') and Orange (60') lines can be added to artificial clay and grass surfaces using Throw Down, Fabric, PVC Coated, or Elastic lines. Some temporary lines have certain limitations that make them acceptable for training, but unsuitable for competitive play, so before investing in temporary lines, please see Chapter 7, Temporary Lines: Limitations.

Paint

Semi-Permanent paint that has a life span of a few months may be used on artificial clay and grass surfaces. This type of paint is commonly used at dual use facilities such as school artificial playing pitches where the surface is also used for other sports such as hockey or soccer. If the facility is outdoors, the semi-permanent paint will wash away naturally, and need to be reapplied every few months.

Throw Down lines

Throw Down lines may be used on artificial clay and grass to temporarily add Red (36') and Orange (60') Court striping. These artificial surfaces are relatively high-friction surfaces so therefore throw down lines will remain in their position on the surface without the use of an anchor.

Throw Down lines require some setup since they are only intended for temporary use and need to be laid out and removed after each session. Since these lines are durable rubber or thermoplastic strips, they last many years; however, they do become slippery if wet or dirty. As a result, special care and storage is needed to ensure that the strips stay dry and clean, and last many years.

To reduce the number of Throw Down lines that are needed to line a Red (36') or Orange (60') court, the Throw Down lines may be placed over an existing full-size (78') court surface. To make setup easier, small dots may be marked on the artificial turf to indicate where the four corners of the Red (36') or Orange (60') court should go.



Roll Down Lines

Roll Down lines are nearly identical to Throw Down lines except that they are sold in rolls anywhere from 7.62m (25') to 22.86m (75') in length and can be cut into strips of desired lengths.

Fabric, PVC Coated and Elastic Lines

Fabric, PVC Coated, and Elastic lines may also be used to temporarily install Red (36') and Orange (60') Court playing lines on artificial clay and grass surfaces. Specially manufactured anchors are used to fix Fabric, PVC Coated and Elastic lines to the artificial surfaces. Special velcro or nail anchors are used for artificial grass Red (36') and Orange (60') Courts.

Roll Down Lines used on Artificial Grass

Chalk Lines

A mix of diluted chalk paint can be used to mark the temporary lines on both artificial clay and grass surfaces. Lime may be used to temporarily line Red (36') and Orange (60') courts on natural grass surfaces, but is not suitable for artificial grass courts.



Chapter 6

Carpet & Other Playing Areas

CARPET & OTHER PLAYING AREAS

Category (for manual)	Surface Code	Type	Description
Carpet & Other playing areas	E	Carpet	Textile or polymeric material supplied in rolls or sheets of finished product
	J	Other	e.g. modular systems (tiles), wood, canvas

Following the ITF Approved Tennis balls, Classified Surfaces & Recognised Course 2011 (See Appendix D) the above surface categorisation is for the purpose of this manual only.

Tennis10s can be implemented in almost any playing area that is large enough to accommodate Red (36') and Orange (60') courts.

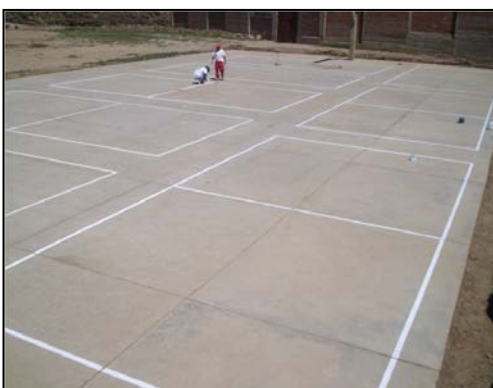


In order to promote tennis opportunities at school facilities and parks where building stand alone permanent courts may not be practical, Red (36') and Orange (60') court striping may be painted directly on parking lot or playground surfaces, gym floors, or well maintained fields.

These installations typically consist of line painting only, with portable nets used so that the surfaces can be retained for their original intended purposes.

Elementary School Playground with Red Court Striping: Blue Point, New York

Below are some images showing examples of other surfaces turned or marked into Tennis10s playing areas.



Outlined Red Courts on a concrete space



Red Court Nets on a Supermarket parking lot: Santiago, Chile



Red Courts (Yellow Lines) on Elementary School Blacktop: Benicia, California



Red Courts on Public Park Blacktop: San Francisco, California



CARPET & OTHER PLAYING AREAS



Tiles with Red (36') or Orange (60') court striping may be placed over various surfaces. In some cases, tile courts may demand a large amount of setup time to properly assemble, and may be costly. If a base layer of tile is laid down first, the tile courts may be structurally sound enough to be installed over any surface suitable, making them a very convenient way to temporarily install Red (36') and Orange (60') courts for special events, as well as in some cases permanently.

*A permanent tiled full-size (78') court, Canada
Source: Connor Sport Court International*



The follow images show an example of Tennis10s courts on other playing surfaces.



*Red Court Tiles on Grass: Washington
Source: Connor Sport Court International*



*ITF Annual General Meeting 2010:
Source: Connor Sport Court International*



*Former Players Jim Courier & Andre Agassi:
Source: Connor Sport Court International*



Multi-sport area with a Orange court marked, Watford, UK



*ITF Worldwide Coaches Conference 2011,
Port Ghalib, Egypt Source: Connor Sport Court International*



Tiled Red Court: Ravenscraig Sports Centre, Scotland

Carpet

Carpet is an indoor surface that often have their standard full-size court (78') court lines stitched in place, along with larger panels of carpet used within the playing surfaces. The color of the surface can be in a variety of colors and is a fast playing surface.

With carpet, it is more likely that the smaller Red (36') and Orange (60') court lines be added during the laying of the court surfaces and stitched into the surface similar to with the standard full-size court (78') lines.

Chapter 7

Temporary Lines: Limitations

More set up and maintenance is required when using Temporary playing lines, which creates a major disadvantage as it can limit or eliminate spontaneous play and reduces time for teaching and programming. Complicated setups may also discourage play independent of coaches or teachers. When setup is required, it is recommended that coaches and teachers involve players, so they may become capable of setting up on their own temporary court for Tennis10s. Temporary Red (36') and Orange (60') courts also lack the feeling of permanence for youth players in the tennis world.

Another disadvantage of temporary lines is that some lines may affect the bounce of the ball if it were to land on them. This is not an issue with permanent blended and coloured lines painted on acrylic surfaces, but Throw Down lines, tapes, fabric or elastic lines may influence the bounce deviation and the spin of the ball. Some manufacturers do advertise textured tapes that are designed to reduce their impact on the spin or path of the ball when it bounces on them.

Another limitation for temporary lines is how some lines are held in place for during training or competition. Anchors can vary dependant on the quality of the line and the court surface. For example, a Fabric line or string would require a nail fixed into a clay surface. Such anchors can be fixed inside the full-size (78') court to mark the Red (36') or Orange (60') courts or outside. It is imperative that any such anchor should be visible at all times and not jeopardise the safety of the players. The use of anchors is a challenge with some manufacturers suggesting that purpose made holes be made so temporary anchors can be screwed into the court surface. Additionally, anchors temporarily hidden beneath the surface using a flap or door in the court could be used, so as not to affect play on the full-size (78') court.

While many different types of permanent and temporary lines are suitable for training purposes, stand alone courts are the best for formal competition. Stand alone courts are ideal since no routine setup is required and independent programming and instructing can occur. For full-size (78') acrylic courts, when the conditions are dry, Tape is seen as the most effective method for marking the Red (36') and Orange (60') courts for competition purposes.

For details regarding setting up Red (36') and Orange (60') courts for Competition and Training purposes, please see 'Quick and Easy Red (36') & Orange (60') Court Setup Guide' as shown in Appendix B.

Chapter 8

Product Information and Installation

Throw Down lines



Throw Down lines are easily installed and are a relatively inexpensive way to temporarily provide Red (36') and Orange (60') courts on almost all surfaces. Throw Down lines can be used almost anywhere there is adequate space for Red (36') and Orange (60') courts, but work best on high-friction surfaces that reduce the possibility of the rubber strips moving during play.



Throw Down lines can also be used on existing full-size court (78') courts, for both training purposes and for marking the smaller court areas. The number of Throw Down lines that are needed to line Red (36') and Orange (60') courts can be reduced by positioning them correctly over an existing full-size court (78') court.

By placing a Red (36') court over the width of an existing full-size court (78') court and by placing an Orange (60') court over the length of a full-size court (78') court, minimal Throw Down lines are needed. To make setup easier, permanent markings are often placed on the surface to indicate where the four corners of the Red (36') or Orange (60') court should be installed. (See Appendix B for the 'Quick and Easy Red & Orange Court Setup Guide')



Since Throw Down lines are rubber or thermoplastic strips, they become slippery and dangerous when wet or dirty. As a result, special care and storage is needed to ensure that the strips stay dry, clean, and last many years.

Throw Down lines are suitable for training purposes, but are not recommended for competitive play since they are not anchored to the surface and have the potential to move during play. When looking to purchase Throw Down lines finding a product with a textured underside could reduce the potential for the lines to move. Thin

Throw Down lines with beveled edges may not affect the bounce deviation of the ball as much if it were to bounce on them, and may also reduce the potential for a player to trip.

Roll Down Lines



Like Throw Down lines, Roll Down lines are an easy, relatively inexpensive way to temporarily install Red (36') and Orange (60') courts on almost all surfaces. Roll Down lines are long rubber or thermoplastic lines that are sold in rolls ranging anywhere from 7.62m (25') to 22.86m (75') feet in length which can be cut to desired lengths. The length or number of rolls needed to line Red (36') and Orange (60') courts can be reduced by positioning them correctly over an existing full-size court (78') court.

By placing a Red (36') court over the width of an existing full-size court (78') court and by placing an Orange (60') court over the length of a full-size court (78') court, the length of line needed is reduced. To make setup easier, permanent markings are often placed on the surface to indicate where the four corners of the Red (36') or Orange (60') court should be installed.

Roll Down lines can last many years if they are stored and cared for properly. Keeping the Roll Down lines clean will not only increase the lifetime of the product, but will also reduce the potential for players to slip, as the lines may become slippery when dirty. Since Roll Down lines are rubber or thermoplastic strips, they also become slippery and dangerous when wet. Special care and storage is needed to ensure that the strips stay dry and clean. Roll Down lines are intended for temporary use and therefore need to be setup for each session and then rolled up and put away afterwards. Making sure the lines are rolled up neatly and stored properly, will help increase the lifetime of the lines.



Roll Down lines are convenient for training purposes, but are not recommended for competitive play since they are not anchored to the surface and have the potential to move. When looking to purchase Roll Down lines, finding a product with a textured underside could reduce the potential for the lines to move. Some Roll Down lines have a tendency to curl on the ends, so purchasing heavier lines or a product that advertises against this curling is recommended.

For more information on how Roll Down lines on a particular surface, please see the section of the manual that deals with temporary lines on that specific surface.

Tape



Because tape adheres best to clean smooth surfaces, it is often used to add Red (36') and Orange (60') striping to acrylic courts as shown in the photograph below.

Since tape lays flat against the surface, it does not create the potential for players to trip, and does not significantly affect the bounce of the ball; making it suitable for competitive play. Either temporary or semi permanent tape can be used. Temporary tape, such as masking tape is a very inexpensive way to add Tennis10s lines to an area but has the potential to rip during play, and is thrown away after a few uses.

See the following video demonstrations from the Great Britain LTA for marking Red (36') and Orange (60') courts for competition on indoor acrylic courts using Tape.



VIDEO



VIDEO

<http://www.lta.org.uk/players-parents/Mini-Tennis/Mini-Tennis-Competition/>

Semi permanent tape, such as painter's tape is said to last up to six months if applied correctly to a clean dry surface. Whether temporary or semi permanent, tape is one of the cheapest ways to add Red (36') and Orange (60') courts to a surface; however, if left on too long, or exposed to high temperatures, tape can leave marks on courts or surfaces after it is removed.

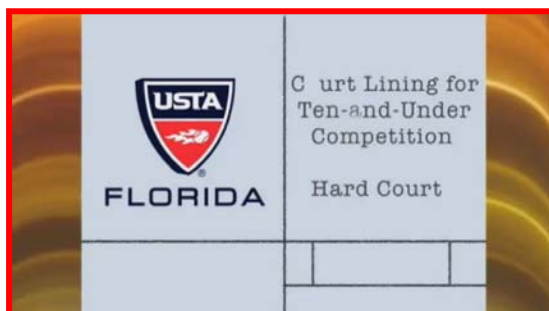


When looking to purchase tape to line courts, tape that is close to 1.5 inches in width is recommended. It is also best to choose a product that advertises slip-resistance, and an adhesive that will not leave behind residue, especially if the surface has the potential to become hot.



Masking tape and painters tape can be found at almost any convenient or hardware store. Some manufacturers produce tape specifically intended for lining Red (36') and Orange (60') courts.

The following video explains how to install temporary lines with painter's tape on an existing full-size court (78') acrylic court:



VIDEO

<http://www.youtube.com/watch?v=t1fJTWI4g>

Elastic, Fabric, and PVC Coated Lines



Elastic, fabric and PVC coated lines can be used to temporarily install Red (36") and Orange (60") striping on acrylic courts, clay courts, grass courts and synthetic grass courts. Depending on the manufacturer, different anchors are used to hold the lines down on each surface. For example, on acrylic surfaces, small Velcro anchors are often adhered permanently to the surface as shown in the following photograph.

Since most manufactured fabric and elastic lines are meant to be placed over existing full-size court (78') courts, adding permanent Velcro pieces to the court could affect the game for a full-size court (78') court player. Adding any type of adhesive to a surface creates the risk of lifting or peeling of the surface during removal. Sticky adhesives that are difficult to remove may be left behind after the anchors are removed.

On both grass and clay courts, nails or stakes are used to anchor the lines to the surface. The nails and stakes should be long enough that they hold the lines taut, but short enough that they may be removed easily. This is also the case when using durable string or narrow rope to mark out the smaller courts.



When installing the lines it is important to make sure they are pulled taut when anchored to reduce the potential for players to trip.

Fabric, elastic, and PVC coated lines normally take around five to ten minutes for one person to install.

The following videos show how to install PVC coated lines on an existing full-size court (78') clay court:



VIDEO

<http://www.youtube.com/watch?v=JALs8pIR8Q>



VIDEO

<http://www.youtube.com/watch?v=5AyEIPAg9Ww>

Permanent Blended & Coloured Lines on Acrylic Courts



Blended and Coloured lines are relatively easy to install, and last until the court needs to be resurfaced, which is normally every five to seven years. Both types of lines should be painted with textured line paint. The lines should be 1.5 inches in width, and terminate 3 inches from the existing full-size court (78') court side lines, so as not to distract the players. After the initial installation, these shared lines rarely require any maintenance above what is already necessary to sustain the existing full-size court (78') court.



The following videos demonstrate how permanent Blended and Coloured Orange court (60') lines are painted on an existing full-size (78') acrylic court.

VIDEO



<http://www.youtube.com/watch?v=3UtEG1UIs4k>

VIDEO



<http://www.youtube.com/watch?v=2jk2l3fHedY>

Permanent Blended and Coloured Lines on Clay Courts

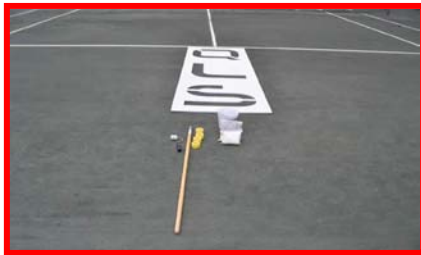
VIDEO

Blended or Coloured lines can be permanently nailed into clay courts using the same kind of tape that is used for full-size court (78') court lines. Har-Tru manufactures a product called "Herringbone Tape" that is used to add temporary lines to full-size court (78') courts. Step by step instructions on how to install Red (36') and Orange (60') courts using "Herringbone Tape" can be found in Appendix A of this manual.



Paint may also be used to install temporary Red (36') and Orange (60') court striping on clay courts. The video to the right shows one way to install temporary lines on existing full-size court (78') clay courts using spray paint.

<http://www.youtube.com/watch?v=csxLXXg4Py8>



The video below shows a simple way of marking lines utilising a template with specific dimensions that automatically measures the correct areas to mark the Orange (60') court line. The main ingredient is a water-based chalk (calcium Hydroxide) which is desirable for clay courts. This mixture can be made permanent with repeated application of coats to the smaller court lines.

VIDEO

<http://www.youtube.com/watch?v=zLeAmucrV6U&feature=related>

Temporary Nets



Portable or temporary nets are often used when Red (36') and Orange (60') courts are added to surfaces that were originally intended for other purposes such as playground or parking lots. Temporary nets are also used when blended or coloured Red (36') Court striping is added to full-size court (78') courts.

Caution tape is another way to install temporary nets. Caution tape can be extended between two chairs, posts, or temporary nets. Extra care is needed to ensure that the caution tape is hung at the appropriate height. Since caution tape is very light weight, it is easy affected by the wind. Caution tape is a cheap way to install temporary nets for training purposes, but is not recommended for competitive play.



Specific Product Information

More information is available on specific manufacturer's Temporary Lines and other products by visiting www.tennisplayandstay.com. The Equipment section provides details of each manufacture who supports the Tennis Play and Stay campaign, including the various product ranges associated with Tennis10s and marking the smaller courts.

Chapter 9

Details and Specifications

This section of the manual provides standard details that can be used to line Red (36') and Orange (60') courts on any surface.

It is important to note that the ranges for the Red (36') and Orange (60') court dimensions do not include overrun distances. The ITF is yet established recommended minimum distances between the baselines and backstops for Red (36') and Orange (60') courts; however, the USTA recommends at least 3.05m (10') free of obstructions at the baselines and 2.44m (8') free of obstructions at the sidelines for Red (36') courts, and at least 4.27m (14') free of obstructions at the baselines and 3.05m (10') free of obstructions at the sidelines for Orange (60') courts. Courts that do not have adequate overrun distances are unsafe, especially for competitive play.

According to the ITF Rules of Tennis 2011, the recommended minimum distances for the full-size (78') court are as follow:

As a guide for international competitions, the recommended minimum distance between the baselines and the backstops should be 21 feet (6.40 m) and between the sidelines and the sidestops the recommended minimum distance should be 12 feet (3.66 m).

As a guide for recreational and Club play, the recommended minimum distance between the baselines and the backstops should be 18 feet (5.48 m) and between the sidelines and the sidestops the recommended minimum distance should be 10 feet (3.05 m).

Stand Alone Courts

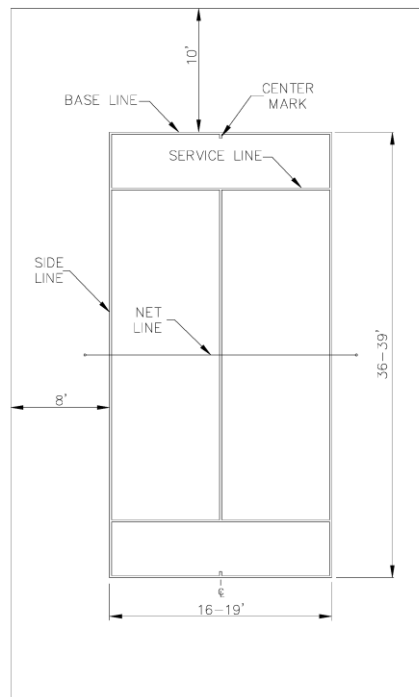
As long as Stand Alone courts have proper overrun distances they are acceptable for competitive play.

Red Courts

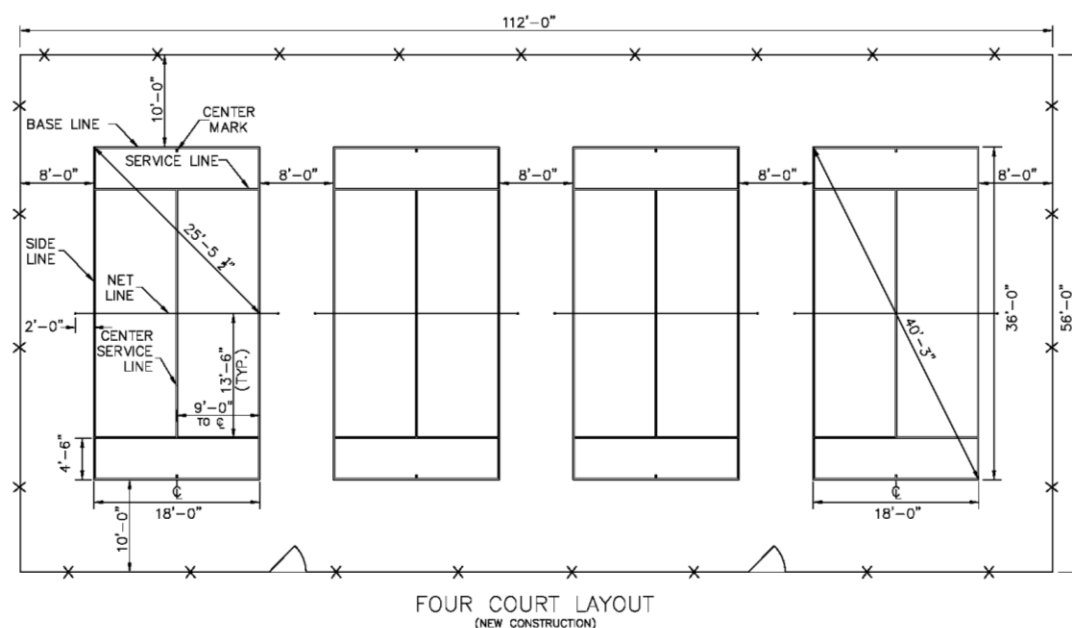
The following details apply for all stand alone Red (36') courts:

1. All Red (36') court playing lines should be 0.61m (2') wide.
2. All Red (36') court playing lines should be measured to the outside edge of the lines, with the exception of the center lines which should be measured out to center.
3. Net posts should be set 6.71m (22') apart, measured from the center of each post.

The following diagram shows a standard stand alone Red (36') court:



The following diagram shows a newly constructed (not converted) four court battery of Stand Alone Red (36') courts:

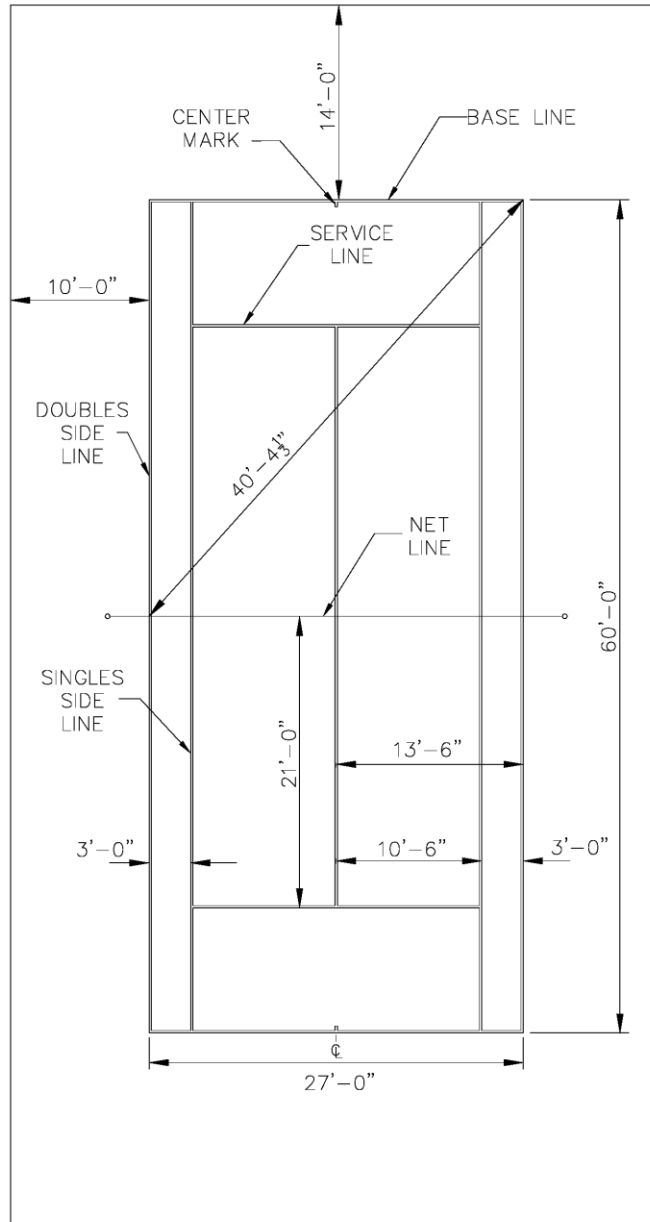


Orange Courts

The following details apply for all stand alone Orange (60') courts:

1. All Red (36') court playing lines should be 0.61m (2') wide.
2. All Red (36') court playing lines should be measured to the outside edge of the lines, with the exception of the center lines which should be measured out to center.
3. Net posts should be set 10.06 (33') apart, measured from the center of each post.

The following detail is for a standard stand alone Orange (60') court:



Court Conversions

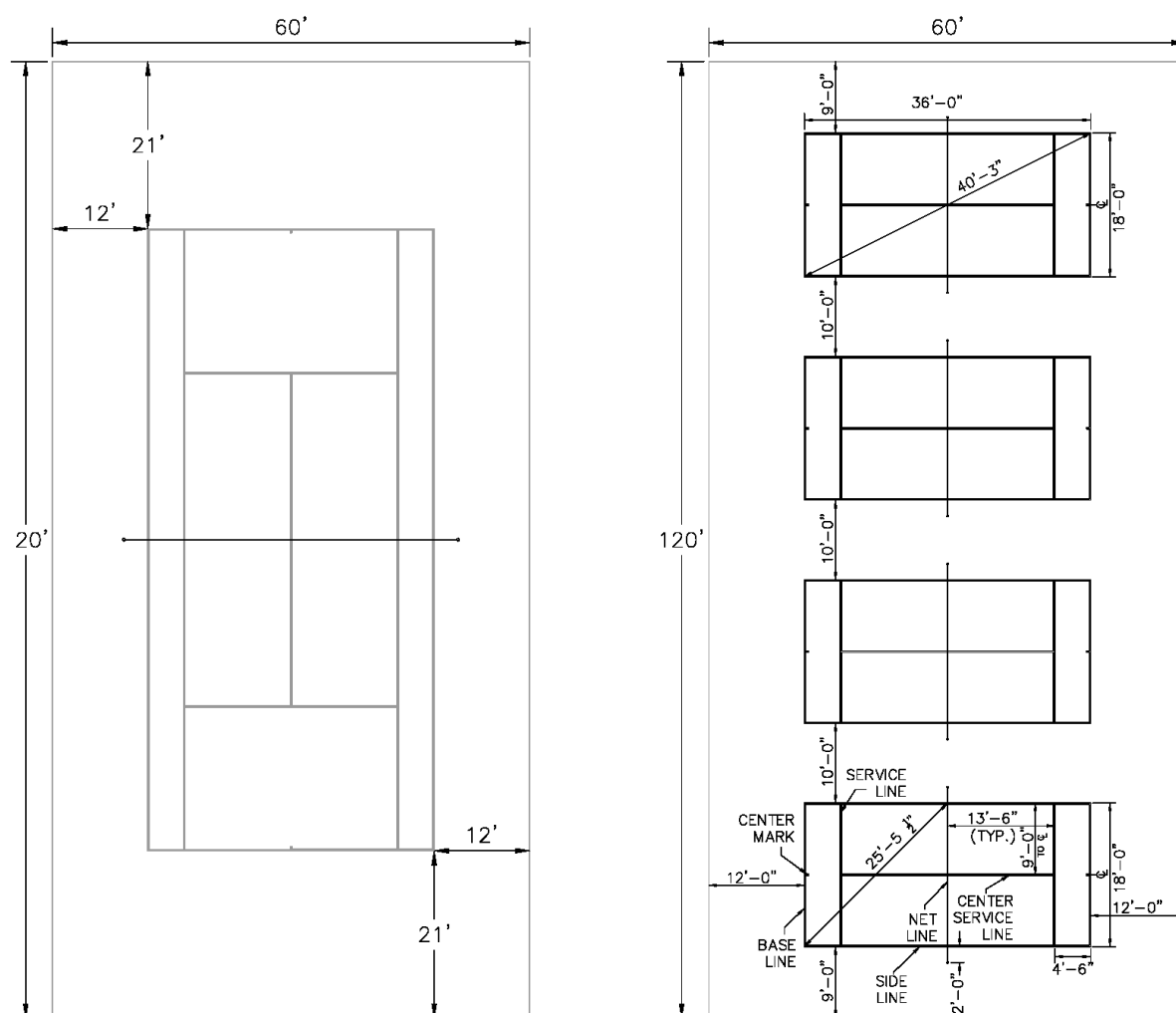
At facilities where there may not be adequate space or it may not be feasible to construct all new Red (36') or Orange (60') court batteries, stand alone courts are often constructed by converting existing full-size court (78') courts.

Red Courts

The following details apply for all stand alone Red (36') courts, including conversions:

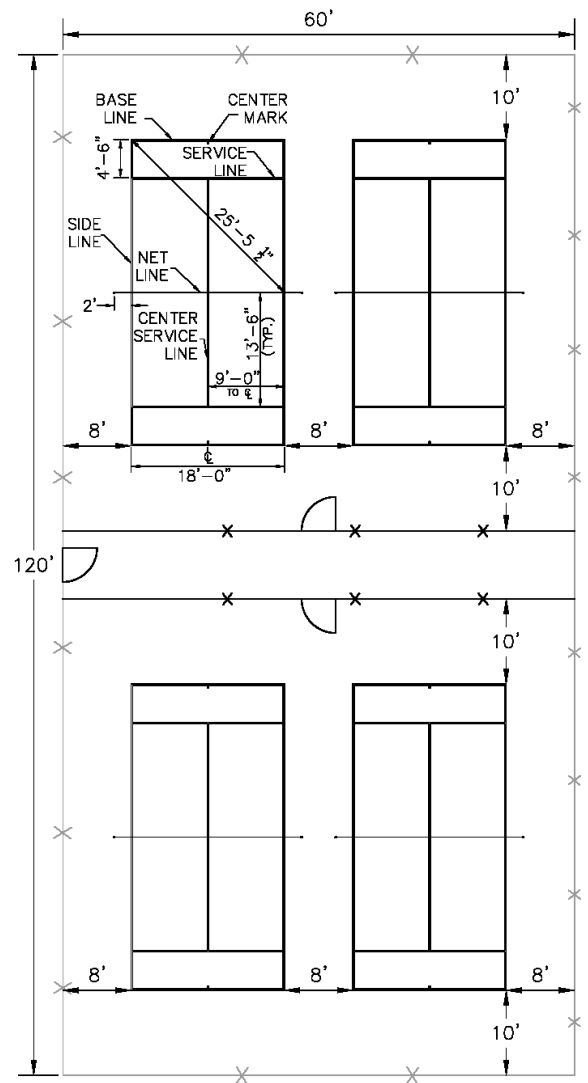
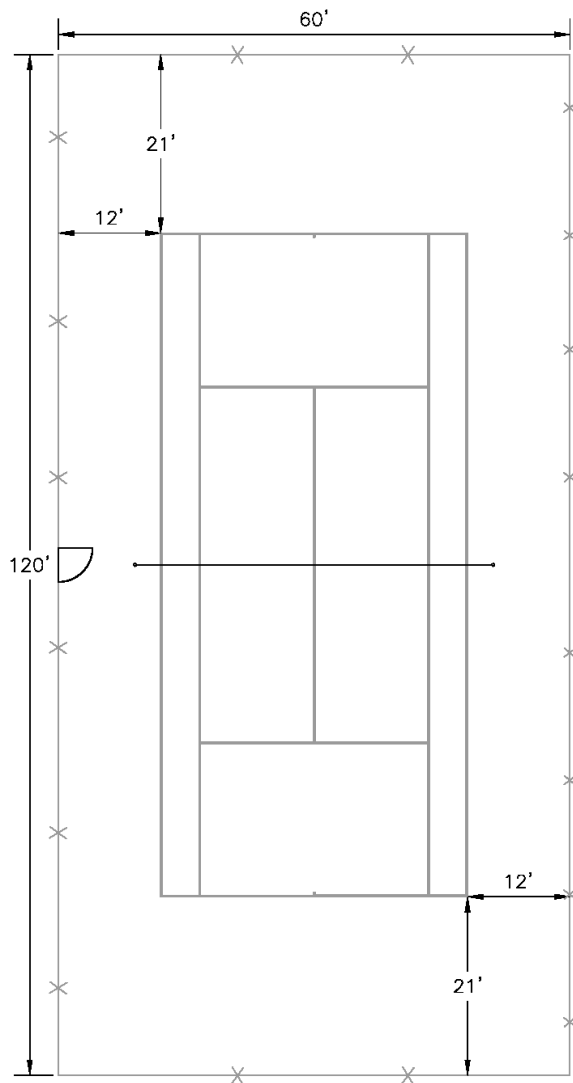
1. All Red (36') court playing lines should be 0.61m (2') wide.
2. All Red (36') court playing lines should be measured to the outside edge of the lines, with the exception of the center lines which should be measured out to center.
3. Net posts should be set 6.71m (22') apart, measured from the center of each post.

As shown in the following diagram, a standard full-size court (78') court with proper overrun distances can easily be converted into four Red (36') courts that are acceptable for competitive play.



The diagram at the top of the following page shows another way that a standard full-size court (78') court with proper overrun distances can be converted into four Red (36') courts that are acceptable for competitive play.

This layout provides a walkway between the thirty six foot court batteries, but requires additional fencing to be installed (4' high fencing is adequate for Red (36') courts).

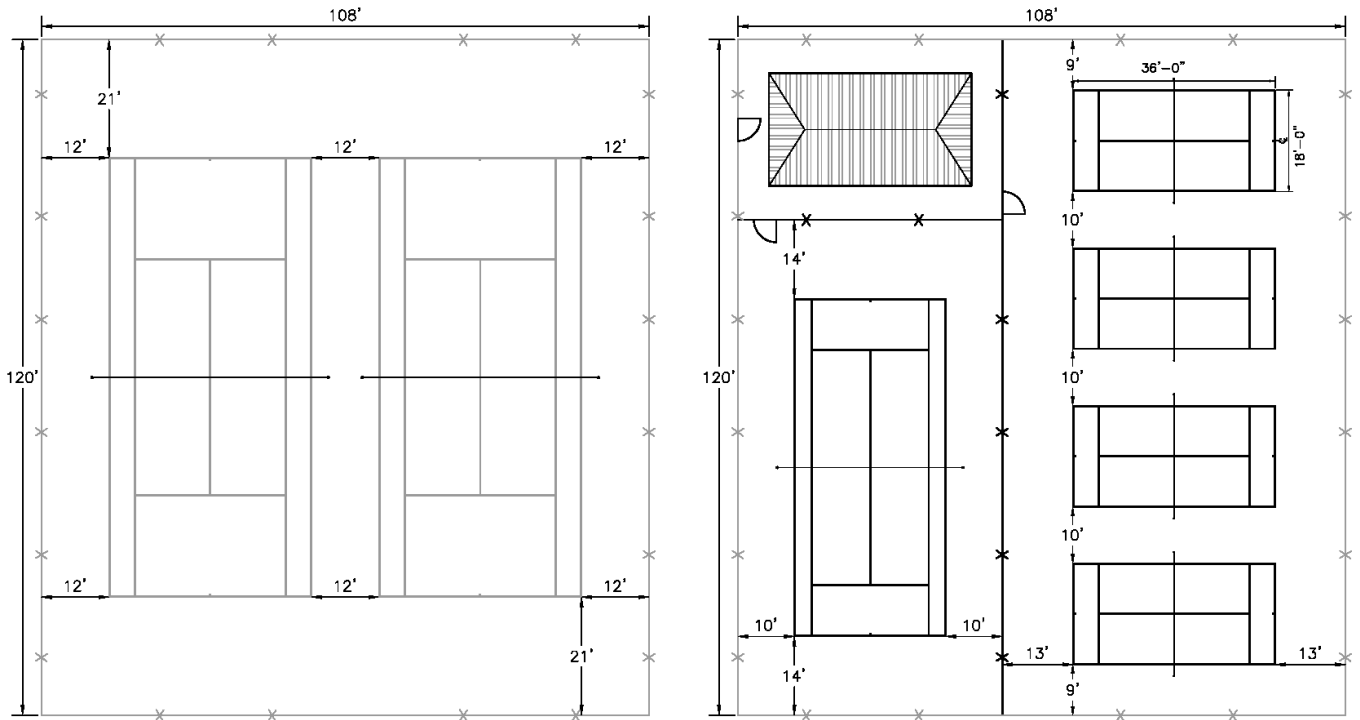


Orange Courts

The following details apply for all stand alone Orange (60') courts, including conversions:

1. All Orange (60') court playing lines should be 2" wide.
2. All Orange (60') court playing lines should be measured to the outside edge of the lines, with the exception of the center lines which should be measured out to center.
3. Net posts should be set 33' apart, measured from the center of each post.

The diagram at the top of the following page shows a battery of two standard full-size court (78') courts with proper overrun distances converted into four Red (36') courts and one Orange (60') courts that are acceptable for competitive play. This layout provides a shade shelter and requires additional fencing to be installed (6' high fencing is adequate for Orange (60') courts).



Shared or Blended Lines

When Red (36') court striping is added to full-size court (78') courts, temporary nets are normally used to allow full-size court (78') play while the Red (36') courts are not in use. The Orange (60') court baseline is used as the center service line for the Red (36') Court, while the full-size court (78') outside doubles-tramline is used at the Red (36') court" baseline, with the service-line and baseline the Red (36') court sidelines.

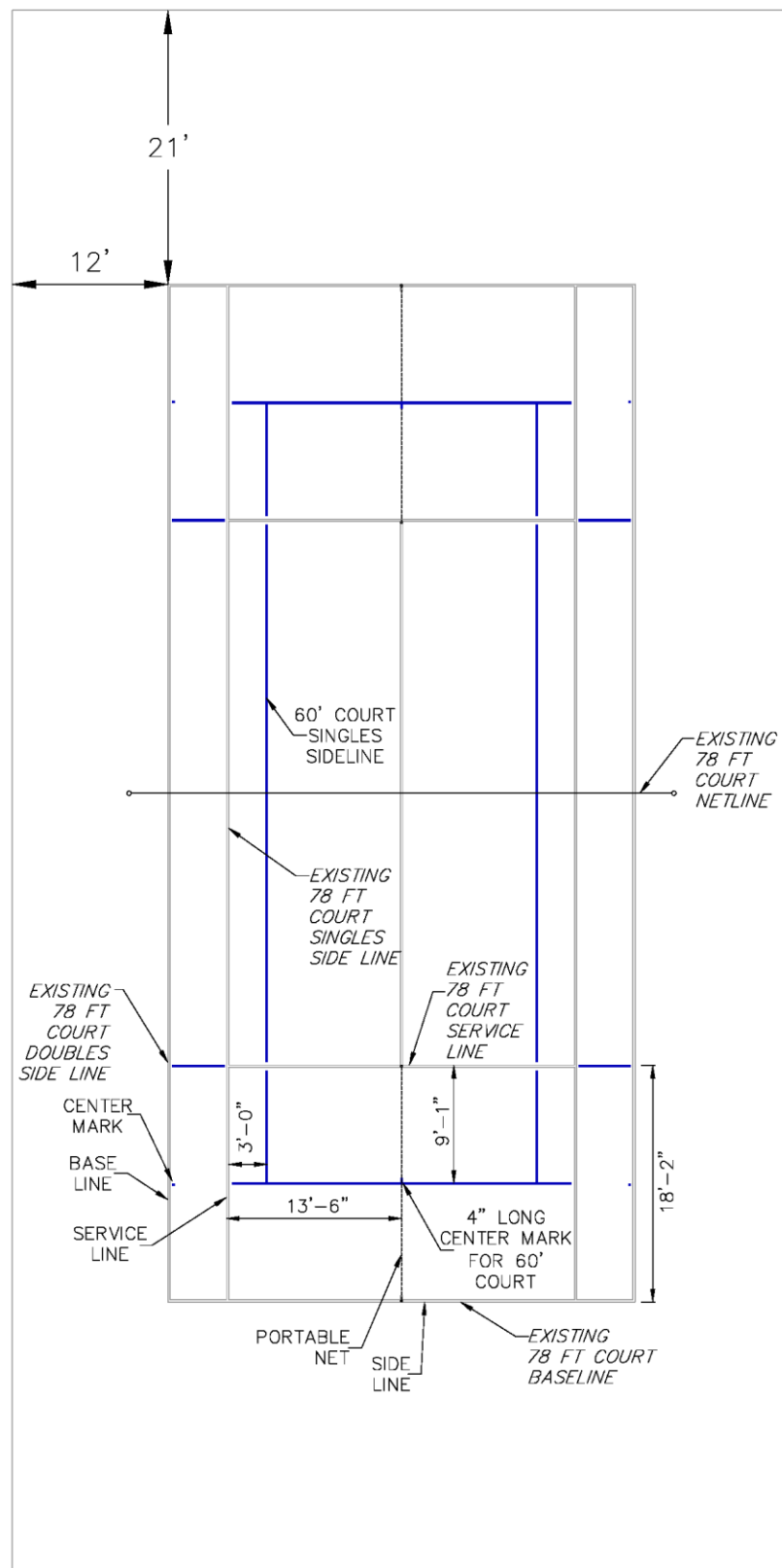
As shown in the image below, when striping Red (36') Courts, the full-size court (78') court service line is extended into the tramlines with the Red (36') court markings as a continuation of the Red (36') court side line.

The following details apply for Red (36') and Orange (60') court shared or blended lines:

1. Red (36') and Orange (60') court playing lines should be a different color than full-size court (78') court playing lines, but within the same color family of the surface.
2. All Red (36') and Orange (60') court playing lines should terminate 3 inches from the full-size court (78') playing lines.
3. All Red (36') and Orange (60') court playing lines should be 1.5 inches wide.
4. All Red (36') and Orange (60') court playing lines should be measured to the outside edge of the playing lines, with the exception of the center lines which are measured out to center.
5. The center mark for the Red (36') court is set 2 inches off the full-size court (78') court doubles sideline and should be 2 inches long by 1.5 inches wide.

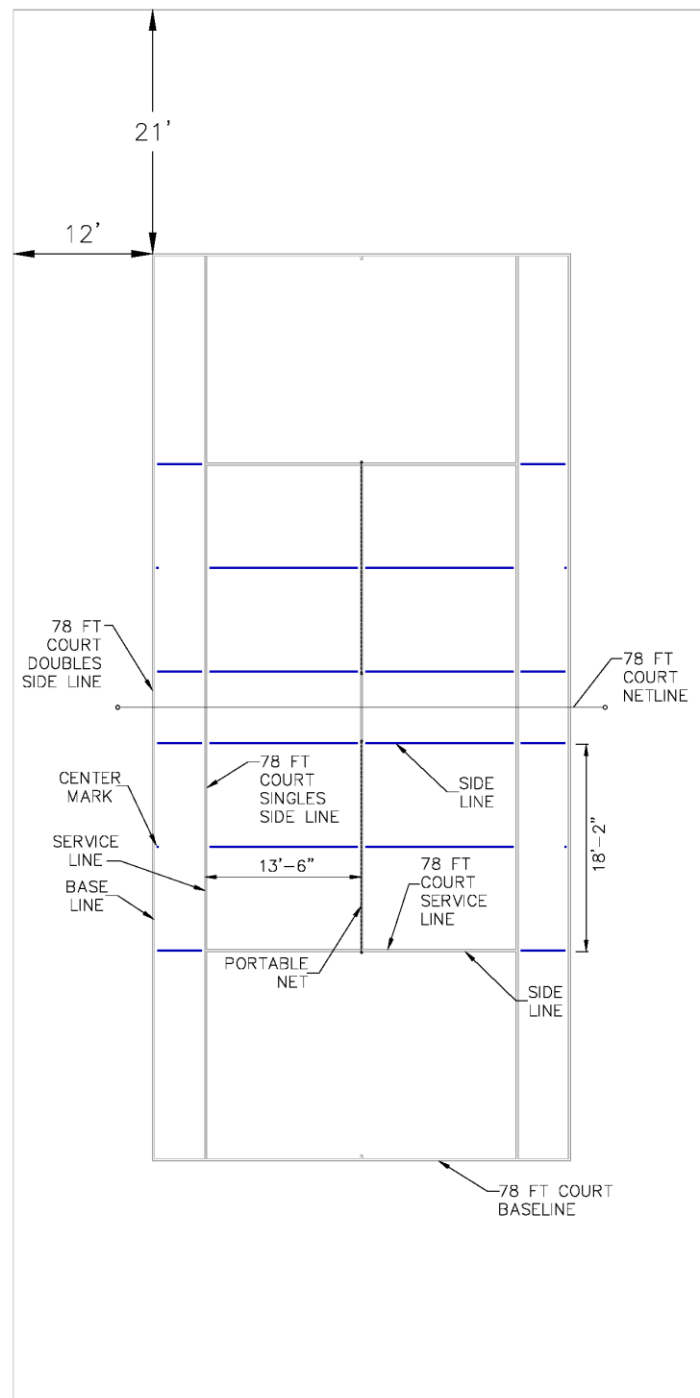
Red and Orange Courts

The following diagram shows a standard full-size court (78') court with both Red (36') and Orange (60') court shared lines. This layout is acceptable for competitive play.



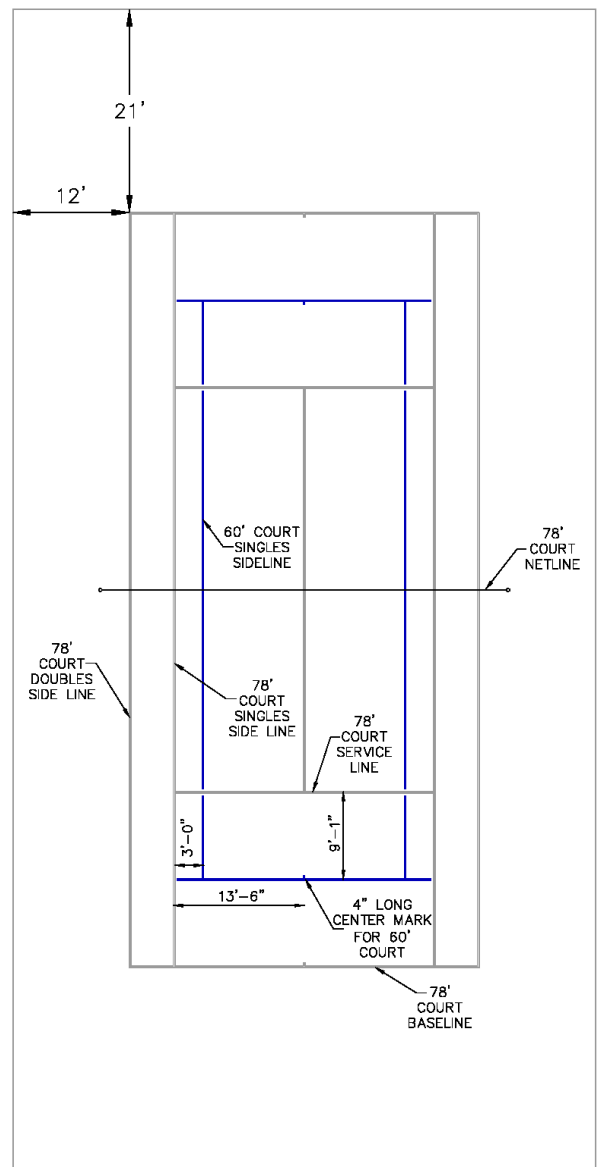
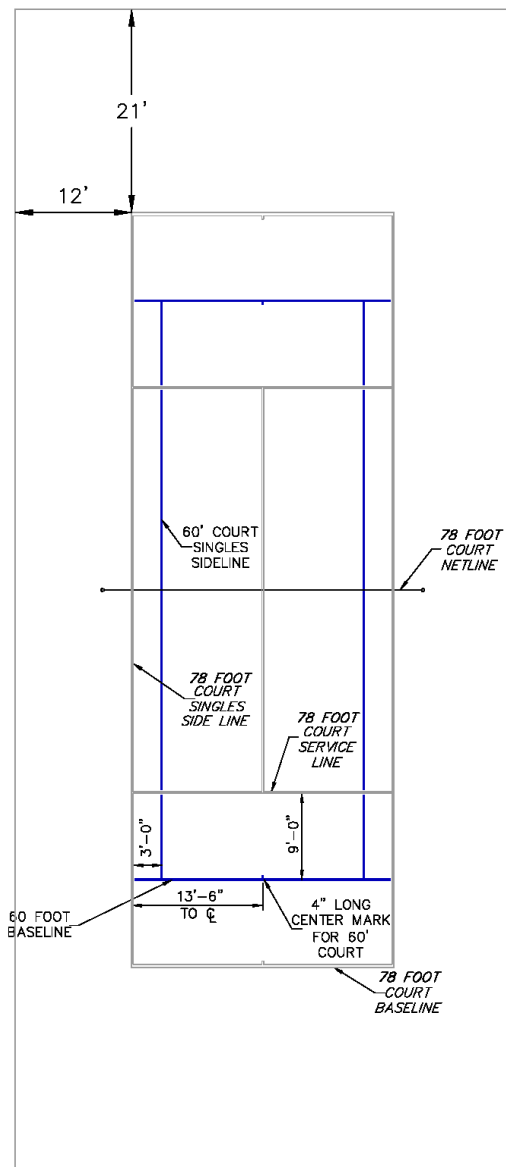
Red Courts

The following diagram shows a standard full-size court (78') court with Red (36') court shared lines. This layout is acceptable for training purposes, but is not recommended for competitive play since the sidelines are not a minimum of 2.44m (8') from the full-size court (78') court net and net posts.



Orange Courts

The following diagrams show standard full-size court (78') singles and doubles courts with Orange (60') court shared lines. Both layouts are acceptable for competitive play.



Appendices

Appendix A | 10 and Under Tennis Competition

(Extract as taken from The ITF Rules of Tennis 2011, Appendix VI)

To download the latest Rules of Tennis, please visit <http://www.itftennis.com/technical/rules/>.

Courts:

In addition to the (full sized) court described in Rule 1, the following court dimensions may be used for 10 and under tennis competition:

- A court, designated “red” for the purposes of 10 and under tennis competition, shall be a rectangle, between 36 feet (10.97 m) and 42 feet (12.80 m) long, and between 16 feet (4.88 m) and 20 feet (6.10 m) wide. The net shall be between 31.5 inches (0.800 m) and 33.0 inches (0.838m) high at the centre.
- A court, designated “orange”, shall be a rectangle, between 59 feet (17.98 m) and 60 feet (18.29 m) long, and between 21 feet (6.40 m) and 27 feet (8.23 m) wide. The net shall be between 31.5 inches (0.800 m) and 36.0 inches (0.914m) high at the centre.

Balls:

From January 2012, only the following ball types can be used in 10 and under tennis competition:

- A stage 3 (red) ball, which is recommended for play on a “red” court, by players aged up to 8 years, using a racket up to 23 inches (58.4 cm) long.
- A stage 2 (orange) ball, which is recommended for play on an “orange” court, by players aged 8 to 10 years, using a racket between 23 inches (58.4 cm) and 25 inches (63.5 cm) long.
- A stage 1 (green) ball, which is recommended for play on a full sized court, by advanced players aged 9 to 10 years, using a racket between 25 inches (63.5 cm) and 26 inches (66.0 cm) long.

Note: From January 2012, other ball types described in Appendix I cannot be used in 10 and under tennis competition.

Specifications for stage 1, 2 and 3 balls:

	STAGE 3 (RED) FOAM	STAGE 3 (RED) STANDARD	STAGE 2 (ORANGE) STANDARD	STAGE 1 (GREEN) STANDARD
MASS (WEIGHT)	25.0-43.0 grams (0.882-1.517 ounces)	36.0-49.0 grams (1.270-1.728 ounces)	36.0-46.9 grams (1.270-1.654 ounces)	47.0-51.5 grams (1.658-1.817 ounces)
SIZE	8.00-9.00 cm (3.15-3.54 inches)	7.00-8.00 cm (2.76-3.15 inches)	6.00-6.86 cm (2.36-2.70 inches)	6.30-6.86 cm (2.48-2.70 inches)
REBOUND	85-105 cm (33-41 inches)	90-105 cm (35-41 inches)	105-120cm (41-47 inches)	120-135 cm (47-53 inches)
FORWARD DEFORMATION	-----	-----	1.40-1.65 cm (0.551-0.650 inches)	0.80-1.05 cm (0.315-0.413 inches)

All tests for rebound, mass, size and deformation shall be made in accordance with the regulations described in the current edition of *ITF Approved Tennis Balls & Classified Court Surfaces*.

Scoring methods:

For 10 and under tennis competition using stage 3 (red), stage 2 (orange) or stage 1 (green) balls, scoring methods specified in the Rules of Tennis (including the Appendix IV) can be utilised, in addition to short duration scoring methods involving matches of one match tie-break, best of 3 tie-breaks / match tie-breaks or one set.

Appendix B | Quick and Easy Red & Orange Court Setup Guide

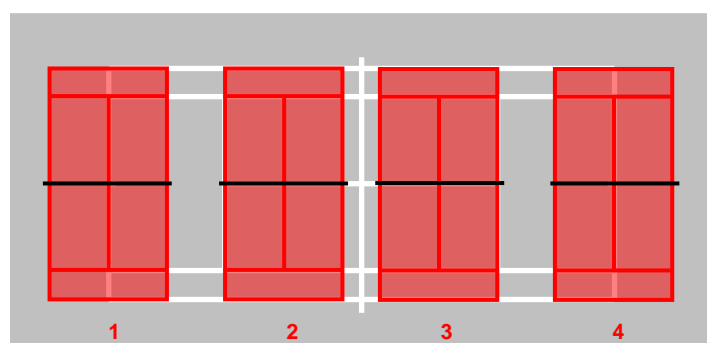
	 (Foam or Felt) 75% slower than a Yellow ball*	Foam ball 8-9cm Standard ball 7-8cm Racket 17-23" (43-58cm)** Court 10.97-12.8m x 4.88-6.1m Net Height (at the centre) 0.80-0.83m	1 x Tiebreak to 7 or 10 Best of 3 Tiebreaks to 7 1 x Short Set to 4 Timed matches	<ul style="list-style-type: none"> • Slower balls, smaller courts and shorter rackets. • Players are able to play the game from their first lesson. • Players start to play in tennis festival events that use fun, team-based multi match events. • Development of good technique and use of realistic tactics.
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FOR RED COMPETITION

Ideally courts in competition should follow the designs below, however as competition at this stage is less formal, using training courts for informal competition is acceptable.

Competition Setup A

4 Red Courts on 1 full-size court (78' / 23.77m x 10.97m) Court



COURT DIMENSIONS

Court 1 & 4 = 10.97m x 5.5m

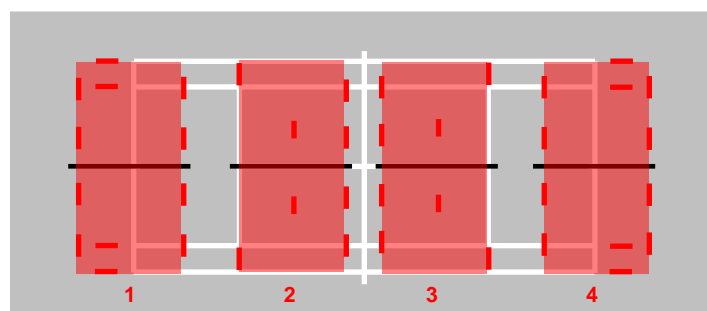
Mark each Red (36") sideline, 2.75m out from the full court baseline

Court 2 & 3 = 10.97m x 5.5m

Mark Red (36") sideline closest to the full

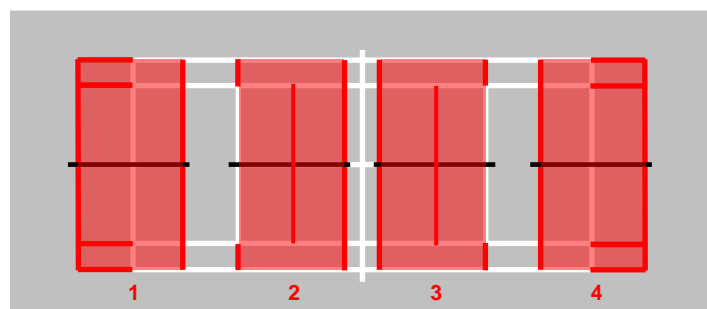
Temporary nets used 0.80-0.83m (at the centre)

Marking the Courts (Dimensions as above)



Throw Down Lines

Lines needed = 40 throw down lines (as shown in the diagram)

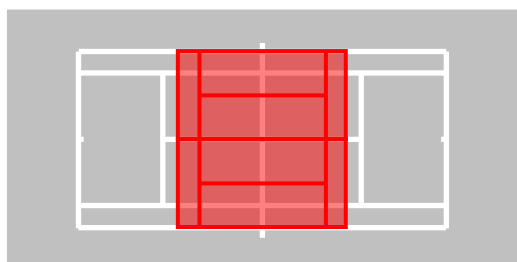


Temporary Lines / Roll Down Lines, Tape, Chalk & Paint

Tape needed = 110m (as shown in the diagram)

Competition Setup B

2 Red Courts on 1 full-size court (78') (23.77m x 10.97m) Court (using smaller service boxes)



COURT DIMENSIONS

Courts = 11m x 5.845m

Mark Red (36') baseline 0.9m inside from the service line on the full court

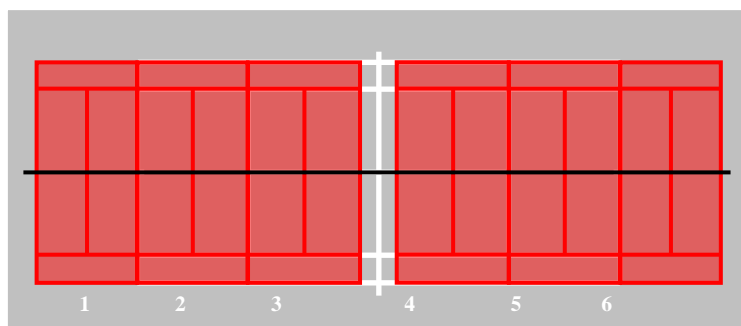
Full court net lowered to 0.80-0.83m (at the centre)

FOR TRAINING

These court options can be used effectively for Red (36') court training.

Training Setup A

6 Red Courts on 1 full-size court (78') (23.77m x 10.97m) Court



COURT DIMENSIONS

Court 1 & 6 = 10.97m x 5m

Sidelines are: full court baseline and 5m from full court baseline in the run back

Court 2 & 5 = 10.97m x 5.485m

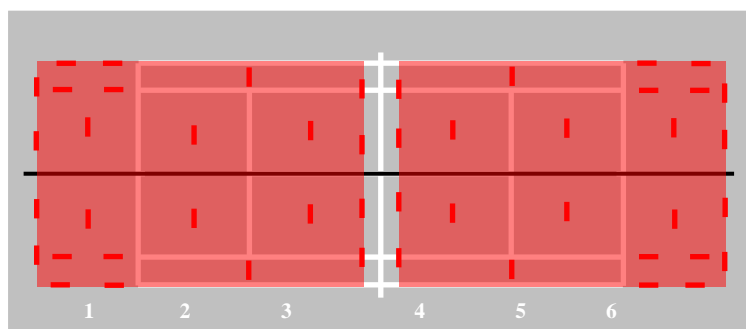
Sidelines are: full court baseline and service line

Court 3 & 4 = 10.97m x 5.5m

Sidelines are: 0.9m from the full net and the full court service line

Temporary nets used 0.80-0.83m (at the centre)

Marking the Courts (Dimensions as above)

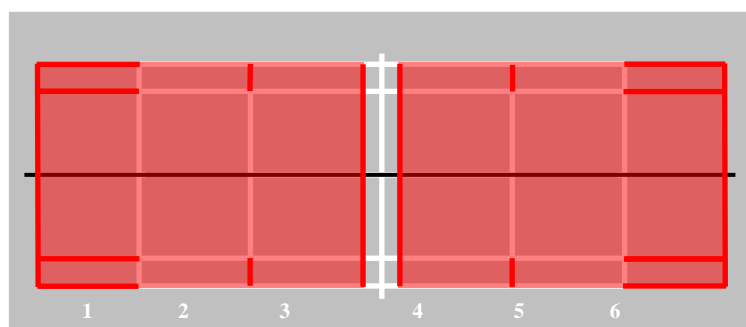


Throw down lines

Lines needed for 6 courts (as pictured) = 48 Throw Down lines

Lines needed for 4 courts (removing courts 1 & 6) = 12 Throw Down lines

Temporary nets used 0.80-0.83m (at the centre)



Temporary Lines | Roll Down Lines, Tape, Chalk & Paint

Tape needed for 6 courts (as pictured) = 90m

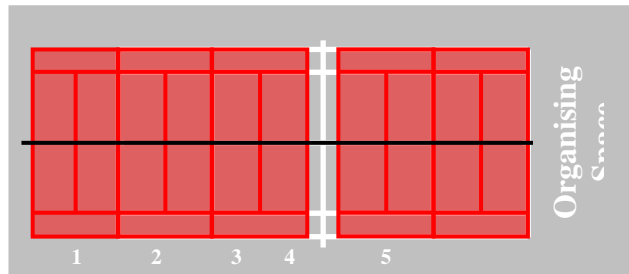
Tape needed for 4 courts (removing courts 1 & 6) = 25m

Temporary nets used 0.80-0.83m (at the centre)

Training Setup B

5 Red Courts on 1 full-size court (78') (23.77m x 10.97m) Court

This option gives space to organise players, which is especially good for running informal competition or fun days.



COURT DIMENSIONS

Court 1 = 10.97m x 5m

Court 2 & 5 = 10.97m x 5.485m

Court 3 & 4 = 10.97m x 5.5m

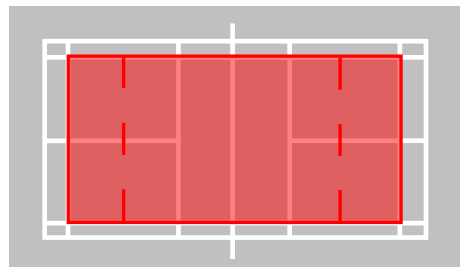
All sidelines are: as described on 'Training Setup A' (previous diagrams)

FOR RED NON-TENNIS COURT SURFACE

Courts can be setup and can be used for training and competition, if appropriately sized.

Non-Tennis Court Setup A

1 Red Court on a Badminton Court



COURT DIMENSIONS

Court: 11.89m x 5.6m

Badminton inside service line acts as Red (36') court baseline, the badminton singles sideline acts as the Red (36') court sideline.

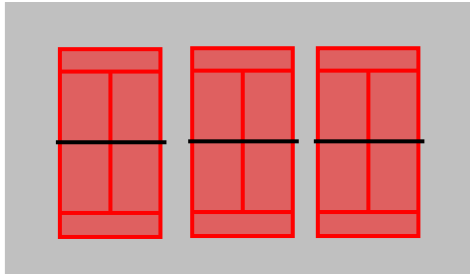
Badminton net lowered or temporary net used 0.80-0.83m (at the centre)

Service Boxes are Optional - Add a service line approx 2m from baseline

Non-Tennis Court Setup B

Using Red Court on any other surface

Red (36') courts are excellent for playing tennis on any flat surface such as a playground, schoolyard or other flat, clear surface.



COURT DIMENSIONS

Court: 10.97-12.8m x 4.88-6.1m (or to fit space available)

Temporary nets used 0.80-0.83m (at the centre)

Service Boxes are Optional - Add a service line approx 2m from baseline

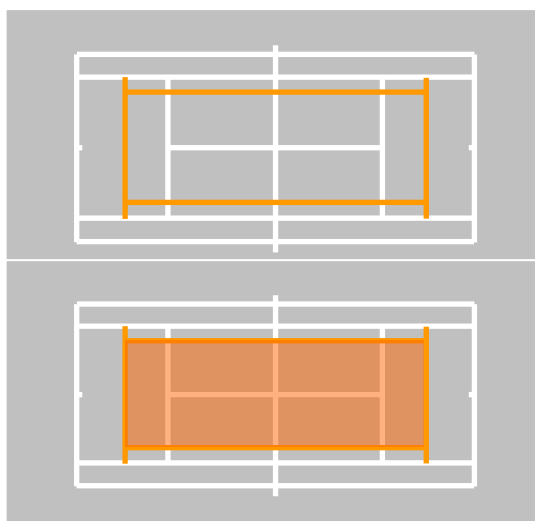
	 <p>50% slower than a Yellow ball*</p>	<p>Standard ball 6-6.86cm</p> <p>Racket 23-25" (58-63cm)**</p> <p>Court 17.98-18.29m x 6.4-8.23m</p> <p>Net Height (at the centre) 0.8m-0.914m</p>	<p>Best of 3 Tiebreaks to 7</p> <p>1 x Short Set to 4</p>	<ul style="list-style-type: none"> • Players move to a larger court, relevant to their size. • Ball is slightly faster than at Red, but continues to provide an optimal striking zone. • Players have the ability to implement advanced tactics. • Matches are longer than at Red, and children play both 'team' and 'individual' multi match events.
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FOR ORANGE COMPETITION

The following courts are suitable for competition using the Orange ball.

Competition Setup A

1 Narrow Orange Court on 1 full-size court (78') (23.77m x 10.97m) Court



COURT DIMENSION

Court: 17.98m x 6.4m

Sidelines – measure 0.86m inside from each full court sideline to mark the Orange (60') court sidelines

Baseline – measure 2.88m inside from each full court baseline to measure the Orange (60') court baselines

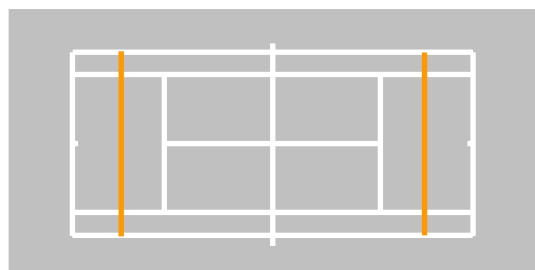
Doubles – full court sidelines can be used as the outside doubles tramlines

Service boxes – as for full court

Full court net can be lowered to suit range 0.80-0.914m (at the centre)

Competition Setup B

1 Wide Orange Court on 1 full-size court (78') (23.77m x 10.97m) Court



COURT DIMENSIONS

Court: 17.98m x 8.23m (full width)

Sidelines – as for full size court

Baseline – measure 2.88m inside from each full court baseline to measure the Orange (60') court baselines

Service Boxes and Doubles – as for full court

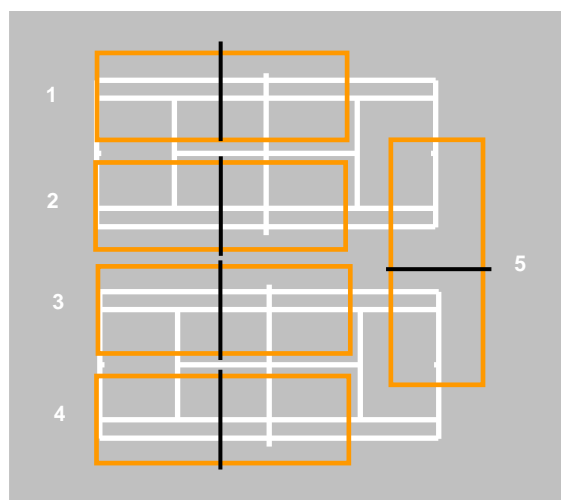
Marking the Courts

Following the dimensions above, the Orange (60') court can be temporarily marked by Throw Down Lines, Roll Down Lines, Tape, Chalk & some Paint.

Competition Setup C

5 Orange Courts on 2 full-size court (78') (23.77m x 10.97m) Court

This setup requires adequate space to ensure player safety.



COURT DIMENSIONS

Courts: 18m x 6.5m

Note: The full court net is removed for this court design

Courts 1 & 4: Mark sidelines 1.2m from centre-service line and 2.3m from outside tramline

Mark baselines as full court baseline and 1.18m from service line

*Court 5: Mark sidelines 3.25m from the baseline
Mark baselines 18m apart, across the length of the 2 full courts*

Court 1-5: Place 80cm net in middle, 9m from each baseline

Mark service line 6.4m from net and centre-service line 3.25m from each sideline

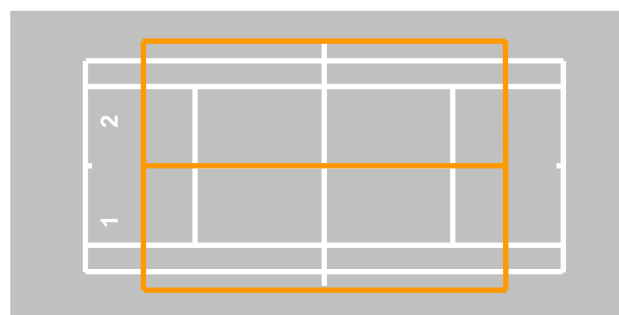
Temporary nets are used 0.80-0.914m (at the centre)

FOR ORANGE TRAINING

The following courts are suitable for training using the Orange ball.

Training Setup A

2 Orange Courts on 1 full-size court (78') (23.77m x 10.97m) Court



COURT DIMENSIONS

Courts: 17.98m x 6.5m

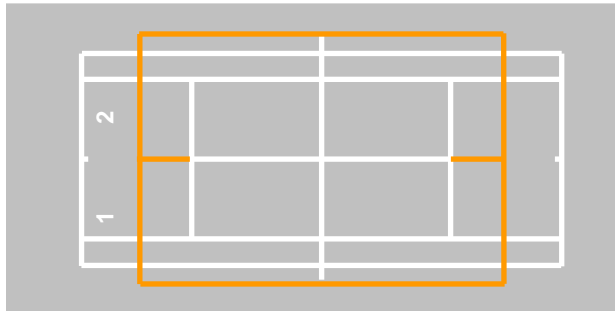
Sidelines – measure 1m outside the full court outside tramline to mark the Orange (60') court sidelines

Baseline – measure 2.88m inside from each full court baseline to measure the Orange (60') court baselines

Service Line and Centre Line (optional) – Can extend the full court service line and create service boxes by using throw down lines or tape to create a centre line for each court

Marking the Courts

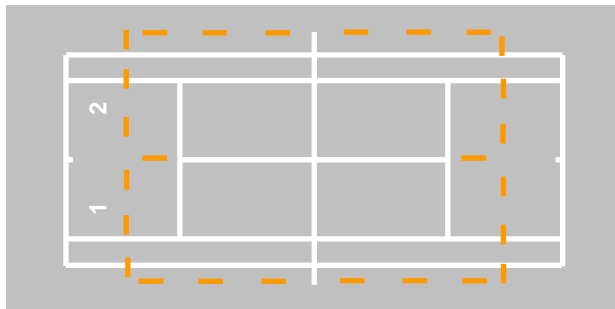
Following the dimensions above, the Orange (60') court can be temporarily marked by Throw Down Lines, Roll Down Lines, Tape, Chalk & some Paint.



Temporary Lines | Roll Down Lines, Tape, Chalk & Paint

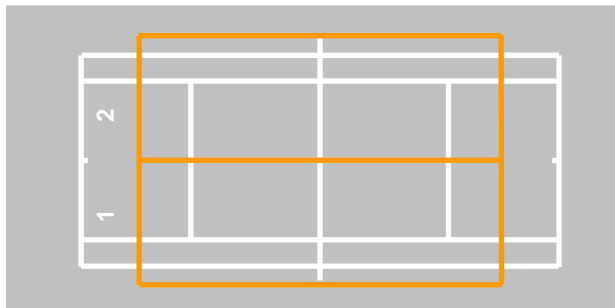
Tape needed = 55m

1 full set of specific Orange (60') court training lines



Temporary Lines | Throw Down Lines

Throw down lines needed = 26 throw down lines



Temporary Lines | Roll Down Lines

Lines needed = 1 full set of specific Orange training lines

Appendix C | Establishing Red and Orange Courts

	Use	Cost	Weight	Setup Time	Competitive Play	Lifespan	Overall
Stand Alone Courts	Permanent	High	None	None	Good	5-7 years	***
Permanent Blended Lines	Permanent	Medium / Low	None	None, Low (if temporary net is necessary)	Good	5-7 years	***
Permanent Coloured Lines	Permanent	Medium / Low	None	None, Low (if temporary net is necessary)	Okay	5-7 years	***
Throw Down lines	Temporary	Medium	Heavy	Medium	Poor	Removed directly after play	**
Elastic, Fabric and PVC Coated Lines	Temporary	Medium	Light (some Fabric Lines can be Heavy)	Medium	Okay	Removed directly after play	**
Chalk	Temporary	Low	Light	Medium	Good	1-2 uses	**
Semi-Permanent Tape <i>(Painters Tape)</i>	Semi-permanent	Medium	Light	Medium	Good	6 months	**
Temporary Tape <i>(Masking Tape)</i>	Temporary	Medium	Light	Medium	Good	1-2 uses	**

Appendix D | ITF Classified Surfaces

(Extract as taken from The ITF Approved Tennis balls, Classified Surfaces & Recognised Course 2011 – a guide to product and test methods, pp62)

For more information, please visit <http://www.itftennis.com/technical/equipment/courts/>.

The descriptions in the table below can be cross-referenced with the classified court surfaces to identify the generic court surface type associated with each product in the list. The descriptions relate only to court construction, and not to performance characteristics.

Surface code	Type	Description
A	Acrylic	Textured, pigmented, resin-bound coating
B	Artificial Clay	Synthetic surface with the appearance of clay
C	Artificial Grass	Synthetic surface with the appearance of natural grass
D	Asphalt	Bitumen-bound aggregate
E	Carpet	Textile or polymeric material supplied in rolls or sheets of finished product
F	Clay	Unbound mineral aggregate
G	Concrete	Cement-bound aggregate
H	Grass	Natural grass grown from seed
J	Other	e.g. modular systems (tiles), wood, canvas

Notes:

All surfaces may be porous or non-porous, with the exception of "Clay" and "Grass", which are always porous.

Acrylic Normally forms only the uppermost few millimetres of a court.

Artificial Clay, Artificial Grass "Appearance" relates only to the form of the surface material and not other characteristics (e.g. colour).

Asphalt, Concrete Used only when the material itself forms the playing surface. When used as a base for other surfaces (e.g. acrylic), reference will be made only to the playing surface.

Clay This term denotes a type of surface that is constructed from naturally-derived materials, and includes an unbound fine gritty material as the uppermost (playing) layer, e.g. fast-dry.

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