

Special Report



How to Keep Your Tennis Court(s) in Playable Condition

by Fred Kolkmann, Certified Tennis Court Builder

2011, Fred Kolkmann Tennis & Sport Surfaces, LLC. All Rights Reserved



ON STAFF



Table of Contents

Introduction	Page 4
Six Components for Keeping Your Tennis Court(s) in playable Condition	Page 6
Certified Tennis Court Builder (CTCB)	Page 8
Routine Court Maintenance	Page 10
Preventative Court Maintenance	Page 12
Tennis Court Evaluation and Maintenance Program™ (TCEMP™) and Facility Analysis Survey (FAS)	Page 14
Court Repairs	Page 20
Court Reconstruction	Page 22
Conclusion	Page 23
Testimonials	Page 24
Next Steps	Page 26
About Fred Kolkmann Tennis & Sport Surfaces, LLC	Page 28

Acronym Index

3-D	Three Dimensional
ASBA	American Sports Builders Association
BMI	Body Mass Index
BMP	Best Management Practices
CAA	Certified Athletic Administrator
CAD	Computer-Aided Design
CTCB	Certified Tennis Court Builder
FAS	Facility Analysis Survey
HMA	Hot-Mix Asphalt
M.A.T.C.H.	Making Appleton Tennis Courts Happen
RSI	<i>Racquet Sports Industry</i> magazine
TCEMP™	Tennis Court Evaluation and Maintenance Program™
USTA	United States Tennis Association

Introduction

Do You Know Your Tennis Court's Numbers?

When people seek to improve their health, most start by collecting their “numbers” – height, weight, pulse, blood pressure, glucose, cholesterol, and triglyceride levels, and Body-Mass Index (BMI). Knowing your numbers is important in an impartial health assessment. The information the numbers convey can offer valuable insight into your present condition, alert you to areas needing improvement, and be used to help you make informed decisions about your health.

Knowing your tennis court's numbers is important in objectively evaluating existing court conditions, so you can make informed decisions regarding routine and preventative maintenance programs, court repairs, and future renovation or tennis court reconstruction activities. But most homeowners, facility managers, and others with decision-making responsibilities for keeping tennis courts in playable condition lack the time, ability, and equipment to inspect, gather, and document relevant tennis facility data and information or the expertise and experience to analyze the numbers relative to established tennis court engineering standards and proven tennis court construction, repair, and renovation practices.

Key to keeping your existing court (or courts) in playable condition is to know its numbers. This knowledge allows you to be proactive, set smart maintenance and budget priorities, and plan systematically for future tennis court maintenance and repair expenses. Pages 14 through 19 of this special report share the most practical ways for court owners and tennis facility managers to establish and leverage their court numbers – **Tennis Court Evaluation and Maintenance Programs (TCEMP™)**, which are employed for hard court analysis and **Facility Analysis Surveys (FAS)**, which are employed for fast-dry (clay) court analysis.



This Special Report also provides relevant information on the five other components needed to keep your tennis court(s) in playable condition:

- Employing a Certified Tennis Court Builder (see page 8)
- Engaging proven, routine facility maintenance practices (see page 10)
- Deploying a preventative facility maintenance program (see page 12)
- Applying proven repair methods at the right times (see page 20)
- Undertaking court reconstruction (when preventative maintenance and repair options are no longer cost-effective; see page 22).

But before you can diagnose and prescribe treatment, you need to determine the health of your tennis facility through examination, measurement, and (sometimes) testing. Do you know your tennis court's numbers?

NOTE: This report frequently interchanges the word “court” with “facility”, and often uses the term “facility” to describe one or more tennis courts. Thus, a homeowner and a tennis club facility manager can be responsible “for keeping his tennis facility in playable condition” ... whether it is the homeowner's single, backyard court or the facility manager's 36-court tennis complex.



Six Components

For Keeping Your Tennis Court(s) in Playable Condition

An effective program for keeping your tennis court(s) in playable condition includes six primary components. Details of each primary component are shared in this report, beginning on page 8.

To be most effective, the program must be implemented throughout the tennis court's life cycle – from concept phase, feasibility study, facility design, and tennis court construction through court maintenance, repair, rehabilitation, and reconstruction.

A typical hard tennis court profile consists of an acrylic court coloring system applied over an asphalt or concrete surface course installed on top of an engineered base of stone, sand, or highly compacted soil (depending on site soil and drainage conditions and on whether asphalt or concrete is part of the court profile). Hypothetically, a well-designed and constructed asphalt tennis court receiving appropriate, timely maintenance (routine and preventative) and repair and rehabilitation should provide 25 years of service before court reconstruction is required. An effective program for keeping this hypothetical court in playable condition would include these six components:

- Employing the services of a Certified Tennis Court Builder as a consultant or design/build contractor during the concept, feasibility study, design, and construction phases
- Engaging routine facility maintenance practices over the service-life of the court (beginning the first day the court is put in service)
- Engaging preventative facility maintenance practices and repairs (including crack filling) and applying the first court re-coloring sometime during the court's 5th-7th years of service

- Initiating a Tennis Court Evaluation and Maintenance Program™ (TCEMP™) sometime during the court's 10th-15th years of service
- Applying the TCEMP™ recommendations for preventative maintenance practices and court repairs and rehabilitation during the court's 10th-25th years of service, including the second, third, and possibly fourth court re-coloring
- Reconstructing the court (after its 25th year of service).

Service life for the hypothetical court would be reduced and court re-coloring, repair, rehabilitation, and reconstruction schedules would accelerate if portions of one or more of the six components for keeping a tennis court in playable condition were delayed or ignored.

In the real world, not all tennis courts are well-designed and not every contractor offering tennis court construction, repair, or renovation services has expertise and experience in planning and directing tennis court installation, repair, or reconstruction. An inadequately designed and/or poorly constructed asphalt tennis court will require ongoing, extensive, and costly repair and rehabilitation services to remain in playable condition (and court reconstruction much sooner than 25 years).

From concept through reconstruction, homeowners, facility managers, and others with decision-making authority for tennis facilities confront a respected calling: Keeping their tennis court(s) in playable condition.

Details about the six components of an effective program for meeting this calling for your tennis court(s) follow.

Component One –



ON STAFF

The first of six primary components for keeping your tennis court(s) in playable condition is to employ a Certified Tennis Court Builder (CTCB) as a consultant or design/build contractor during the concept, feasibility study, design, and construction phases.

A CTCB is a construction industry professional who has earned the CTCB designation from the American Sports Builders Association (ASBA). To achieve certification, a tennis court builder must pass a comprehensive exam on tennis court construction and maintenance and fulfill prescribed standards of excellence demonstrating high levels of expertise in tennis court construction. To maintain the certification, every three years the certified tennis court builder must demonstrate ongoing, relevant tennis court construction activity and active involvement in the ASBA.

Tennis court owners and facility managers benefit greatly by employing a CTCB for tennis court construction, repair, renovation, or reconstruction. Tennis court construction forms the basis for a dynamic, highly specialized construction industry sub-subsection with a dedicated and ever-evolving body of knowledge, and few construction professionals not specializing in tennis court design, engineering, and construction can keep up with current industry standards of good practice.

Yet in the current economic environment, as pavement and other project opportunities have been limited, many general contractors, pavement contractors, and subcontractors have expanded their service offerings to include tennis court construction, repair, and renovation services – often to the detriment of court owners and tennis facility managers. Though they may be quality driveway and parking lot contractors, road builders, or seal-coating specialists, their pavement installation and rehabilitation skills don't automatically transfer to quality tennis court construction or repair standards.

In contrast, contractors and consultants with one or more CTCBs on staff, have demonstrated high levels of tennis court construction expertise and are experienced in planning and directing tennis court installation, repair, renovation, and reconstruction.

[To be fair, few CTCBs are qualified to plan or direct driveway, parking lot, or roadway installation, repair, renovation, or reconstruction.]

By employing a CTCB as a consultant or design/build contractor during the concept, feasibility study, design, and construction phases, tennis court owners, tennis facility managers, and others with decision-making authority for keeping courts in playable conditions can be certain tennis court design and construction Best-Management Practices (BMP) will be employed across all phases of tennis court construction – from concept through court installation. Applying tennis court design and construction BMPs help court owners and others get the most from their tennis court investments and makes keeping your tennis court in playable condition a highly-manageable proposition.

Few hunters would select a Greyhound racer for pheasant hunting and few dog-racing enthusiasts would bet on a Springer Spaniel pup to win a greyhound-claiming race. Employing a CTCB as a consultant or design/build contractor during the concept, feasibility study, design, and construction phases helps court owners, facility managers, and others with decision-making authority over tennis facilities to keep their courts in playable condition.

A listing of CTCBs – including Fred Kolkmann, CTCB, the author of this special report – is available online at:

<http://sportsbuilders.org/tennis/ctcb.cfm>.

NOTE: If your existing court(s) did not have the advantage of CTCB involvement during its concept, feasibility study, design, and construction phases, don't despair. You can still meet your charge to keep your court in playable condition.

But managing the process will likely be harder, and most likely will cost more (courts employing BMPs across all tennis court construction phases have a higher probability of being easier and less expensive to keep in playable condition than tennis courts lacking this advantage – as low total ownership costs result when a tennis court is designed and installed correctly).

Continue reading this report, and realize now the importance of employing an experienced CTCB to conduct your Tennis Court Evaluation and Maintenance Program™ (TCEMP™) – Component Four for keeping your tennis court in playable condition, which starts on page 14.



Component Two –

Apply In-Season, Routine Facility Maintenance Practices

The second of six primary components for keeping your tennis court(s) in playable condition is to engage proven, in-season, routine tennis facility maintenance practices. Much like common sense, routine maintenance is relevant only when transformed into common practice.

The American Sports Builders Association (ASBA), working with the United States Tennis Association (USTA), created tennis court maintenance planner charts, which were published in *Racquet Sports Industry* magazine. The routine maintenance knowledge presented below was developed from information contained in said charts.

Routine, in-season tennis facility management practices for an outdoor asphalt tennis court would include:

Daily – Inspect court; Clean off spills and other contaminants; Vacuum, sweep, or blow court surface clean; Empty trash and recycling containers; Re-sweep, or blow clean or vacuum court surface after any heavy rain; Confirm windscreens are securely fastened to fence framework; Water grass and planting areas as needed.

Every Monday – Vacuum, sweep, or blow walkways and court surface clean; Check net tension and height and adjust if needed.

Every Week – Inspect net, headband, and center strap and clean as required; Trim grass; Weed, edge, prune, and deadhead perennials to keep planting areas adjacent to the court looking their best; Inspect planting beds and planters, monitoring for insects and other pests and diseases; Change seasonal plantings as appropriate; Fertilize plants, shrubs, and grass as required; Add mulch to planting beds as needed.

Routine tennis facility maintenance practices for clay, grass, and sand-filled turf courts are also included in the ASBA/USTA Tennis Court Maintenance Planner Charts. To review the charts online, visit:

http://www.racquetsportsindustry.com/articles/2009/03/16_your_court_maintenance_plan.html.

Too many homeowners, facility managers, and others are quick to dismiss routine maintenance practices as “basic” and too often are quick to cut corners on daily and weekly routine, in-season, tennis facility maintenance activities.

Yet these routine maintenance practices are essential to keeping your tennis court in playable condition.

Poor routine or lack of court maintenance practices can damage the acrylic court color surface and accelerate court weathering and aging processes. Wear and tear from court use (and misuse) and damage from the elements – wind, rain, and ultra-violet radiation – slowly destroy your court’s textured color surface, which negatively impacts asphalt surface course protection and the overall playing experience, including player visibility, pace and ball-bounce consistency, and court aesthetics.

Surface deterioration on courts receiving the routine tennis facility maintenance practices described above will happen gradually over a five-to-seven year period, at which time, court re-coloring will be required to maintain the court in playable condition. Surface deterioration will be accelerated on tennis courts receiving infrequent or no routine court maintenance, subjecting the court to unnecessary wear and tear, accelerating the schedule for court re-coloring, increasing the potential for early court crack development, and, if left unchecked, causing player-safety issues and reducing the tennis court’s useful service life.

Lack of, or poor routine tennis facility maintenance practices also decrease the useful service life of windscreens, nets, head-bands, and center straps, reducing return on your tennis court investment.

When routine, in-season tennis court maintenance is transformed into common practice, court owners, facility managers, and others are in the best position to keep their tennis courts in playable condition.



Component Three –

Deploy a Preventative Facility Maintenance Program

The third of six primary components for keeping your tennis court(s) in playable condition is to deploy a tennis facility preventative maintenance program.

While routine, in-season tennis court maintenance practices transform common sense court maintenance into common practice, preventative tennis facility maintenance programs up the court-maintenance ante, focusing on proactive maintenance activities addressing court playability, including pre-season and post-season maintenance activities for outdoor courts located in areas where weather considerations prohibit year-round play. Preventative maintenance programs strive to uncover and address facility weathering, use, and aging issues before the onset of serious problems, applying cost-effective activities designed to maintain and extend the functional condition of the court and tennis facility and support a positive playing experience.

The preventative maintenance knowledge presented below was developed from information contained in tennis court maintenance planner charts created by the ASBA, in cooperation with the USTA. The charts were published in *Racquet Sports Industry* magazine.

A preventative tennis facility management program for an outdoor asphalt tennis court would include:

Every Monday – Vacuum, sweep, or blow walkways and court surface clean; Check net tension and height and adjust if needed.

Every Week – Inspect courts and surroundings for drainage problems or erosion, repair as needed; Inspect net posts – check for surface cracking and repair as required; Check net, headband, and center strap and clean and repair as needed; Inspect fence

framing, hardware, and footings – repair as required or replace damaged elements; Examine windscreens – replace any broken fasteners and hose down or wash windscreens as required; Check gate swings, lubricate as needed; Review landscaping around the court to ensure it is performing as intended to ensure court surface integrity.

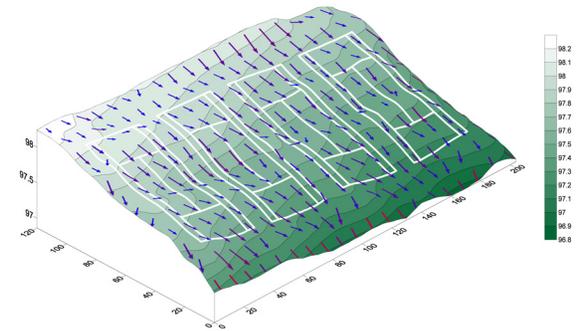
Post-Season – Vacuum, sweep, or blow walkways and court surface clean, then wash with a tennis court waterbroom; Inspect court surface – clean and fill any cracks; Remove net and store (protect net from rodent damage during storage); Check net cables and replace as required; Remove net post, cap net post sleeves, and store; Tag windscreen locations and inspect, clean, and store windscreens (protect windscreens from rodent damage during storage); Measure and order replacement windscreen panels, as required; Clean light lenses and inspect wiring and conduit; Clean, repair, winterize, and store court maintenance equipment; Undertake fall clean-up for planting areas and grass, including pruning back overgrowth, fertilizing and mulching planting beds, dethatching and fertilizing lawn, and raking or vacuuming leaves and other debris.

Pre-Season – Vacuum, sweep, or blow walkways and court surface clean, then gently wash with a tennis court waterbroom; Clean and fill any cracks; Check courts for birdbaths and repair if required; Uncap and clean out net post sleeves (paint as required); Install net posts and lubricate sleeves and mechanisms; Install net, and adjust height and tension; Inspect fencing, making sure frames and fence fabric are secure and free from hazards; Install windscreens; Clean light lenses, inspect wiring and conduit, set timer clock(s), and check and record light-level readings; Clean, lubricate, tune-up, and test maintenance equipment; Undertake spring maintenance program for grass and planting areas, including raking the lawn and over-seeding any bare patches, fertilizing and commencing weed control measures for grass and planting areas, installing seasonal plantings, and adding mulch to planting areas as required.

Preventative tennis facility maintenance practices for clay, grass, and sand-filled turf courts are also included in the ASBA/USTA Tennis Court Maintenance Planner Charts. To review the charts online, visit:

http://www.racquetsportsindustry.com/articles/2009/03/16_your_court_maintenance_plan.html.

Like routine maintenance, a preventative tennis facility maintenance program is essential to keeping your tennis court in playable condition. By addressing court and facility weathering, use, and aging issues before the onset of serious damage, preventative maintenance helps to improve the playing experience, preserves a high level of playability, and cost-effectively extends court service life.



Component Four –

Initiate a Tennis Court Evaluation and Maintenance Program™ or a Tennis Facility Analysis Survey

The fourth of six primary components for keeping your tennis court(s) in playable condition is to initiate a Tennis Court Evaluation and Maintenance Program™ (TCEMP™) for your hard court or a tennis Facility Analysis Survey (FAS) for your clay court.

What is a TCEMP™?

A TCEMP™ is an essential tool for helping homeowners, facility managers, and others with decision-making authority for tennis facilities keep their courts in playable condition. TCEMPs include three main elements – on-site investigation of the court/tennis facility, including visual inspection, measurement, and relevant data collection; comprehensive analysis of current court conditions, comparing site investigation results with ASBA tennis court design, construction, maintenance, and repair standards; and an evaluation report, including court improvement strategies with cost estimates.

For hard-court evaluations, TCEMP™ on-site investigation includes the collection of topographical and geotechnical information. Data is gathered to establish the condition and performance of the color-coated court surface and the asphalt or concrete surface course. Court grade shots are taken on ten-foot by ten-foot centers to determine court planarity, slope, and drainage. Control joints (or lack of same) and any structural cracks are identified, photographed, measured, and evaluated. Amount and severity of low court areas are documented. Fencing is photographed and inspected, with measurements on fence heights and fence-post spacing and documentation and condition evaluation of fence posts, fencing fabric, and top/intermediate/bottom fence rails (or fence tension wires). Measurement is made between net posts to verify the distance specification is still met and the height of net posts is checked to verify height requirements. Condition evaluation is also provided and documented for fence and net-post

footings, gate sizes and conditions, net, net-cable, and net center-strap tie downs, and for other tennis court amenities and accessories, including windscreens and lighting.

For courts with lights, a comprehensive review of the existing lighting system is undertaken, with review results compared to ASBA lighting standards. The lighting evaluation includes review of facility electrical plans (if available), and site investigation of existing lighting, electrical distribution, and control systems to provide an evidence-based opinion of the capacity, age, and condition of all systems and major components, including the light poles, bases, and luminaries. Any code violations are noted and documented. Light levels are measured and recorded using a hand-held digital light meter, in accordance with ASBA requirements. Light-level measurement results are used to create a 3-D, color-coded drawing showing court light levels (or light levels for each court for multi-court facilities). Analysis of the court lighting system is included in the TCEMP™ evaluation report, including a description of the existing system (age, capacity, condition), its ability to meet current ASBA lighting standards, recommendations for how to provide any required additional capacity, equipment, and distribution systems, and cost estimates for all recommended system upgrades and/or corrective actions.

For public tennis courts, court access, slope, and gates are checked to ensure they meet Americans with Disabilities Act standards for accessible design. Landscaping around the court is also documented and evaluated to determine if it is performing as intended to ensure the court's surface integrity.

Once the field-investigation data for the hard court is gathered and documented, it is analyzed in regard to ASBA tennis court design, construction, maintenance, and repair standards, and cost estimates are developed for all proposed improvement strategies. Results of the on-site investigation and analysis are compiled in an easy-to-understand report, including digital photos, three-dimensional topographical court surface image maps, color-coded CAD drawings showing site elevations and locations of structural cracks and birdbaths (low areas), and Microsoft Word and Excel documents in support of proposed court improvement strategies (short- and long-term methods and measures). The report includes terminology discussion, unit pricing, and facility asset value information.

A budget spreadsheet defines the types of preventative maintenance and repairs included in the proposed court improvement strategies, when these maintenance measures and repairs should be performed, and present-and future-year budget allocations. Budget numbers include contingency fees and fees for engineering design, construction administration, and inspection services.

To view screenshots of some of the fundamental elements included in a TCEMP™ report, visit:

<http://www.kolkmanncourtbuilder.com/resources>

How Does a TCEMP™ Help You Keep Your Court in Playable Condition?

There are several ways TCEMPs help tennis court owners, tennis facility managers, and other with decision making authority for tennis facilities keep their courts in playable condition. A TCEMP™ helps you:

- Determine the present stage of wear or repair of your tennis court surface
- Objectively decide which, of the many options available for repairing, renovating, or reconstructing an existing court, best meets your tennis facility needs
- Understand what capital improvements will be required over the next 10-15 years to keep your court in playable condition
- Identify proper preventative maintenance and repair procedures and establish a schedule for applying them to your tennis court at the right times
- Set reliable annual and long-term maintenance, repair and reconstruction budgets, based on specific maintenance recommendations and various repair and renovation options
- Reduce future resurfacing and reconstruction costs over the service-life of your tennis court by employing, before major court renovation is required, lower-cost, preventative maintenance measures and proven repairs
- Extend the service life of your tennis court, helping you get the most from your tennis court investment.

A TCEMP™ also provides relevant information to support applying for tennis facility assistance grants and other facility repair fundraising efforts.

A TCEMP™ Supports Organizational Asset Management Efforts

A detailed discussion of facility asset management is beyond the scope of this special report. As a comprehensive strategy employing information, people, and technology to effectively (and efficiently) allocate funds to competing assets, asset management provides facility managers and others a systematic process for maintaining, upgrading, and managing physical assets like tennis courts.

Key elements for any asset management system are a detailed inventory and a condition rating for identified assets. A TCEMP™ provides identification and objective valuation of the physical elements of your tennis court and helps to minimize asset depreciation through proven maintenance management (routine and preventative) recommendations and sound facility improvement strategies. The data and objective analysis resulting from a TCEMP™ may be used for multiple purposes, including planning, budgeting, and scheduling of court maintenance and repairs.

Benefits a TCEMP™ provides for facility managers and the organizations and stakeholders they act for include:

- Development of a permanent data record for tennis court assets
- Creation of predictive tennis court maintenance and repair plans
- Forecasting of future maintenance and repair budgets, based on objective need assessment
- Identification of court asset deficiencies in their early stages, in order to resolve them before major capital improvement programs are required
- Construction of an accurate foundation for future tennis court asset management, ensuring optimum use of organizational resources
- Justification of funding needs (strategic investment) required for keeping the tennis court assets in playable condition.

A TCEMP™ supports accurate and responsive reporting of tennis court asset information and wise organizational decision-making. It also facilitates fact-based dialogue between facility managers, organizational stakeholders, and other managers and personnel involved with day-to-day tennis court operations. A TCEMP™ can provide ready access to quantitative and qualitative data, allowing organizational decision-makers to readily identify and focus on key tennis asset issues.

In this time of limited resources, a growing number of public and private organizations are initiating TCEMPs to support asset management efforts.

Does a Residential Tennis Court Really Need a TCEMP™?

A TCEMP™ helps a homeowner determine the present condition of his/her court, guides the homeowner through the various improvement options available, and provides reliable estimates of the cost of undertaking the repairs and recommended court maintenance and upkeep.

A detailed TCEMP™ may seem like overkill for a homeowner. Homeowners don't need, for example, to go before budget and planning committees to lobby for permission to undertake capital improvements. Homeowners don't manage capital budgets on behalf of school districts, municipalities, or other governmental units funded by taxpayers. The comprehensive analysis and detailed budget estimates TCEMPs provide may well seem disproportionate to a homeowner's needs.

But smart homeowners embrace the concept of tennis court asset management and a majority of homeowners appreciate knowing in advance how keeping their court in playable condition will impact their household budget. Most homeowners do not have the expertise to self-diagnose tennis court problems or can objectively determine best methods for repairing and maintaining their residential tennis court. Results of a TCEMP™ on-site investigation, subsequent analysis, and reporting of the conditions observed and data collected help homeowners to be proactive, set smart maintenance and budget priorities, and plan systematically for future tennis court maintenance and repair expenses.

The introduction to this special report asks if you know your tennis court's numbers. A TCEMP™ is the most practical and reliable way for a homeowner to know the relevant numbers for her/his court. Realize also most of the issues impacting a homeowner's ability to keep her/his tennis court in playable condition are no different than the issues effecting facility managers and others from keeping the courts in their charge in playable condition. The effects of weathering and aging, of wear and tear from court use (and misuse), or of poor tennis court design and/or construction do not scale back to any significant degree based on the number of courts a tennis facility has or who owns the court. An effective tennis court evaluation and maintenance program for a residential tennis court requires the same detailed on-site investigation, comprehensive analysis, and reporting of evidence-based recommendations for court improvement strategies as a TCEMP™ for a private tennis club, local school district, or a municipal park and recreation department.

Don't overlook this final benefit of initiating a residential TCEMP™ – When selling your home, the availability of a detailed, independent report documenting the current state of the tennis court and outlining options for keeping it in playable condition can help to calm any anxiety by prospective buyers about purchasing a home with an existing tennis court.

How Does a TCEMP™ Differ From the Free Court Inspections Offered by Some Contractors?

Some reputable contractors offer free tennis court inspections. All fly-by-night contractors – known in fraud-detection circles as “transients” – do.

The transient contractors lack the specialized knowledge and experience to effectively return your court to playable condition and often use inferior materials and quick-fix-repair methods providing less than a full season of service. Most often, the transients' high-pressure sales tactics will differentiate them from the reputable contractors.

A free tennis court inspection by a reputable contractor may benefit court owners and facility managers. Without detailed information about what is included in the free inspection, it is difficult to know how a TCEMP™ differs from a complimentary inspection. Most likely the free inspection lacks the depth of on-site investigation, analysis, and reporting detail provided in a TCEMP™. Objective, third-party evaluation of the many options available for repairing or renovating your court may also be compromised in a free court inspection report. There are numerous options available for repairing and resurfacing tennis courts. Many of these repair and resurfacing options are proprietary and can be employed only by licensed contractors. This restriction raises the potential that the recommended solution from a free tennis court inspection is biased toward the technology(ies) the contractor providing the free inspection is licensed to use – instead of an objective recommendation of the best repair or resurfacing solution for keeping your court in playable condition.

What is a Facility Analysis Survey (FAS)?

A FAS is to soft (clay) tennis courts what a TCEMP™ is to hard tennis courts. Introduced to the soft court marketplace by

Har-Tru (formerly known as Lee Tennis Court Products) in 2001, the company recently celebrated a major milestone, the completion of its 1000th FAS.

According to Ed Montecalvo, Consulting Services Manager for Har-Tru, FASs create a “roadmap” for court owners looking for ways to improve the performance of their clay courts. Like a TCEMP™, a FAS includes three major elements – on-site investigation, comprehensive analysis, and an evaluation report, including improvement strategy proposals with cost estimates.

“The deliverables that flow out of the report become the basis for long-range planning to ensure the success of the player and the facility,” says Montecalvo.

FAS on-site investigation includes an examination of the clay surface for depth and consistency, analysis of the stone base layers, irrigation system performance, curbing, net post and fencing conditions, analysis of existing maintenance equipment and an understanding of daily, periodical, and annual maintenance practices.

NOTE: Har-Tru and Ed Montecalvo have created a highly-useful series of videos and links to help tennis court owners and facility managers earn best value from their soft (clay) court tennis facility investments. To access the resources, visit:

<http://hartru.com/have-a-court/court-maintenance> and <http://edmontecalvo.brandyourself.com/Links>.

Allay Uncertainty and Eliminate Guesswork

A TCEMP™ or FAS is a key component for helping court owners, facility managers, and others with decision-making authority allay uncertainty and eliminate guesswork as they discharge their duties in regards to keeping the courts in their charge in playable condition. TCEMPs and FASs provide:

- Guidance for employing appropriate routine and preventative maintenance measures
- Unbiased evaluation of existing court condition
- Support in identifying court and facility improvement opportunities and needs
- Help in developing reliable maintenance, repair, and capital improvement budgets based on specific maintenance recommendations and various repair, renovation, and reconstruction options
- Direction for undertaking needed court or facility repair or renovation.

The court improvement strategies resulting from on-site facility evaluation and data analysis provide an action plan for improving court playability (and the player experience) and extending court service life until tennis court reconstruction is required.



Component Five –

Apply Proven Repair and Renovation Methods

The fifth of six primary components for keeping your tennis court(s) in playable condition is to apply proven repair and renovation methods at the right times.

This component should be straightforward for homeowners, facility managers and others: Simply implement the court improvement recommendations provided in your court's TCEMP™ or FAS.

Court repairs are less straightforward when a tennis facility lacks a TCEMP™.

As discussed earlier, a typical outdoor asphalt tennis court, if well-designed, properly constructed, and appropriately maintained, has a service life of about 25 years before court reconstruction is required. As the court ages, the court coloring will age and weather, and the court will require re-coloring, most likely after 5-7 years (sooner if poor or no maintenance or court misuse causes premature court color aging). Court coloring provides a level of protection for the asphalt surface course, but this protection level decreases as the court coloring ages.

According to ASBA, asphalt tennis court cracking is caused, in part, by the natural tendency of the material to shrink as it weathers and ages. Over time, a court's asphalt surface course will experience a loss in pliability, making it more vulnerable to cracking as the court expands and contracts due to temperature changes.

Poorly designed or constructed asphalt tennis courts are highly-susceptible to early cracking. Improper subbase construction or poor perimeter drainage can cause excessive subsoil movement, resulting in cracking, surface heave, and birdbaths. Tree roots

seeking moisture held beneath the court subbase can crack and uplift court surfaces. Unsuitable asphalt mix design and inadequate court slope can also support cracking conditions.

For tennis facilities showing visible signs of surface deterioration but lacking a TCEMP™, the court owner or facility manager will normally contact a contractor or engineer, who may or may not recommend repair measures in conformance with ASBA tennis court construction standards. To ensure conformance, hire a tennis court contractor or engineering firm with a CTCB on staff.

In addition to re-coloring, typical repairs applied to a tennis court over its service life could include:

- Crack filling
- Crack repair
- Full-depth crack repair
- Court leveling
- Court grinding
- Court resurfacing
 - Hot-mix asphalt overlay
 - Hot-mix asphalt overlay with geotextile membrane
 - Stone slip-sheet
 - Post-tension concrete
 - Sand-filled turf
 - Cushioned mat
 - Modular tile surface systems.

If routine and preventative maintenance measures are regularly applied to the court, other repairs required to keep your tennis court in playable condition throughout its service life should be minimal and would include replacing windscreens every 4-5 years, and replacing lamps on outdoor lights every 8000 hours (about 4-5 years). Accidents or vandalism may require fencing repairs or replacement. Quality tennis court fencing should match or exceed your tennis court's service life and often, original fencing can be used on complete tennis court reconstruction projects.

Should your tennis court experience severe heaving or depressions, with major cracking, improper court slope or acute drainage issues, court repair will not be cost-effective, and total court reconstruction will be the practical solution.

Component Six – Undertake Total Tennis Court Reconstruction



The last component for keeping your tennis courts in playable condition is total court reconstruction.

For courts enjoying the benefits accrued from employing components one through five described above, total court reconstruction will not be necessary until the court has reached the end of its useful service life. Sadly, many courts require total reconstruction well before they should, the result of inadequate design and construction and poor routine and preventative maintenance practices.

When faced with court reconstruction, be aware any soil or drainage issues contributing to surface damage of the old court must be properly addressed before the new court is installed, or the new court will be put under stress from the get-go. Employing a CTCB to support your court reconstruction efforts ensures you will get the highest return from your tennis court reconstruction investment.

Conclusion

Keep Your Tennis Court(s) in Playable Condition



This Special Report shares an effective, six-component program for helping you keep your tennis court(s) in playable condition:

- Employ a Certified Tennis Court Builder (CTCB)
- Engage proven, routine facility maintenance practices
- Deploy preventative facility maintenance practices
- Initiate a Tennis Court Evaluation and Maintenance Program™ (TCEMP™) or tennis Facility Analysis Survey (FAS)
- Apply proven repair methods at the right times
- Undertake court reconstruction (when preventative maintenance and repair options are no longer cost-effective).

Employing the components help court owners, facility managers, and others with decision-making authority over tennis facilities get the most from their hard surface tennis court or clay tennis court investments.

An essential tool for keeping your tennis court(s) in playing condition is to initiate a TCEMP™ (for asphalt or concrete courts) or FAS for clay courts. The court improvement strategies resulting from on-site facility evaluation and data analysis provide an action plan for improving court playability (and the player experience) and extending court service life until tennis court reconstruction is required.

TCEMP™ and FAS testimonials follow.



Testimonials

About TCEMPs and FASs

Our tennis courts are in need of some significant repairs. Nobody in our district had the necessary expertise in tennis court evaluation and I wanted to be sure any money invested in our courts was a “wise investment.” We hired Fred to provide an unbiased assessment and received a well-written and highly-detailed report outlining the condition of our tennis courts, options for addressing court repair issues, and budget estimates for future maintenance ... exactly what I need when I go before our school board and ask them to approve funds for addressing our court repairs.

– Brad Jodarski, CAA, Oshkosh West Activities Director

We had Fred Kolkmann Tennis & Sport Surfaces perform, for capital reserve purposes, a Tennis Court Evaluation and Maintenance Program (TCEMP™) analysis of our hard courts and clay/Har-Tru courts. Fred partnered with Ed Montecalvo and Lee Tennis for the Har-Tru portion of our facility evaluation, an example of how Fred puts the needs of his customers first and of his thoroughness and professionalism. No question we had went unanswered; no request unmet. We will be relying on Fred’s TCEMP™ over the next 10 years in budgeting for our repairs and maintenance needs. Based on his report, we now have all the information we will need to adequately inform our Boards.

– Randy Barker, Geneva National Director of Landscaping and Grounds

Our experience with Fred Kolkmann Tennis & Sport Surfaces LLC was excellent, and if you are looking to build, repair, or resurface your tennis courts, I give my highest recommendation for Fred. He evaluated our existing courts, made repair and resurfacing recommendations, provided cost estimates and specifications for the project, oversaw the bidding process, addressed our tennis coach's concerns regarding court availability over the summer break, inspected the work, and provided daily reports. Fred was always open and clear with his communication and made sure everything went smoothly. The completed courts look beautiful and have had unbelievable use. Many evenings, all eight courts are in play and a backlog of players, which we never had before, awaits open courts.

-- Keith Brandstetter, Superintendent, Waterford Union High School

As concerned residents of our community, we were devastated to hear that all of our neighborhood park tennis courts were planned for removal by 2014. We soon contacted Mr. Fred Kolkmann, and are so thankful that we did. He was able to view and evaluate our courts and provide us with an incredible amount of information, including an analysis as to the several options we had for our unique situations. He also has a great eye for detail, and provided us with budget estimates so we knew where we stood financially. He clearly recognized our need to achieve the best value for our investment. We appreciated his excellent follow-up of prompt return of phone calls and e-mails, as he answered our many questions. I would highly recommend him to anyone that has a question regarding tennis court repairs, replacement or new construction. Mr. Kolkmann is truly a professional, experienced tennis court builder. We now look forward to continuing our efforts of saving the tennis courts citywide, with the cooperation of the City and our Parks & Recreation Department. We especially look forward to our continued relationship with Mr. Kolkmann, in achieving these goals.

– Mrs. Maryann Goymerac, Appleton, a founding member of the Friends of the M.A.T.C.H. Committee (Making Appleton Tennis Courts Happen)

Next Steps

You have Read the Report. Now What?

Next step recommendations depend on where your court is in its lifecycle – concept, recently installed, maturing, beginning to show evidence of disrepair, in need of minor repair, or no longer in playable condition.

The advantages of employing the services of a CTCB as a consultant or design/build contractor during the concept, feasibility study, design, and construction phases cannot be expressed strongly enough. If your tennis facility is in the concept or feasibility study phase, you should be talking with a CTCB.

Contact Fred Kolkmann, CTCB:

fred@kolkmanncourtbuilder.com | 1.262.685.7507 or one of his CTCB colleagues:

<http://sportsbuilders.org/tennis/ctcb.cfm>.

If your tennis court was recently installed, review the routine and preventative maintenance sections of this report (pp. 10-13) and apply them to your facility. If you are not responsible for keeping hard tennis courts in playable condition, visit the Sports Racquet Industry link below for information on how to maintain your grass, clay, or sand-filled turf tennis court:

http://www.racquetsportsindustry.com/articles/2009/03/16_your_court_maintenance_plan.html.



If your court is in the mature stage of its lifecycle, especially if it is beginning to show evidence of disrepair, initiate a TCEMP™ or FAS. Contact Fred Kolkmann, CTCB:

fred@kolkmanncourtbuilder.com | **1.262.685.7507** for more information about TCEMPs or FASs or to get the ball rolling.

For online information about TCEMPs, visit:

<http://www.kolkmanncourtbuilder.com>;

<http://www.kolkmanncourtbuilder.com/resources>;

<http://www.kolkmanncourtbuilder.com/services/consultations>.

If your facility is in need of minor repair, or no longer in playable condition, you should be talking with a CTCB.

Contact Fred Kolkmann, CTCB: fred@kolkmanncourtbuilder.com | **1.262.685.7507** or one his CTCB colleagues:

<http://sportsbuilders.org/tennis/ctcb.cfm>.

Finally, if you know someone who would benefit from reviewing the information contained in this Special Report, please share it with them.



About

Fred Kolkmann Tennis & Sport Surfaces, LLC

Fred Kolkmann Tennis & Sports Surfaces, LLC helps people across North America get the most from their court investments.

The firm's principal, Fred Kolkmann, CTCB, directs all company services and will work directly with you on your tennis court project. Fred has 40-plus-years experience in tennis court and sport surface design and construction that includes the construction or reconstruction of over 1,700 courts, including planning and directing the installation and repair of asphalt, clay, modular, post-tensioned concrete, and synthetic-turf tennis court surfaces.

Contact Fred Kolkmann Tennis & Sports Surfaces for site evaluations and feasibility studies, to determine court maintenance programs (and costs), for award-winning court design, and to ensure you get the best value from your court.

The company's unique Tennis Court Evaluation and Maintenance Program™ (TCEMP™) helps you determine the present condition of your courts, guides you through the various improvement options available, and provides reliable estimates of the cost of undertaking the repairs. Your TCEMP™ will also identify proper maintenance activities for your tennis court and a timeline for applying them to the right places at the right time, helping you to keep your court in playable condition by protecting and extending its service life.

For more information about how Fred Kolkmann Tennis & Sports Surfaces, LLC, can help you get the most from your tennis court investments, visit: <http://www.kolkmanncourtbuilder.com>.

To contact Fred directly –

Call: **1.262.685.7507**;

Email: fred@kolkmanncourtbuilder.com;

Write: 1921 Mayfair Road • Grafton, WI 53024.