

## **Tennis court (HMA binder & HMA surface overlay with reflective crack control grid)**

### PART ONE- GENERAL

#### 1.01 SUMMARY

- A. This work includes surface preparation, crack filling, crack control grid, hot mix asphalt (HMA) paving, net post and fence adjustments, and the acrylic color system applications for existing tennis court, pickleball court.

#### 1.02 QUALITY ASSURANCE

- A. Installing firm: Installer must regularly engage in construction and color acrylic surfacing. Documented experience in athletic surface paving, and acrylic color system applications must be provided. Minimum of 10 projects similar in complexity in the last 3 years.
- B. Surfacing shall conform to the guidelines of the ASBA, (American Sports Builders Association).

#### 1.03 SUBMITTALS

- A. Provide manufacturer specifications for all products, asphalt mix design, color chart and installation instructions.

#### 1.04 MATERIAL HANDLING AND STORAGE

- A. Store materials in accordance with manufactures specifications and MSDS.
- B. All surfacing material shall be non-flammable.
- C. NO MATERIAL STORED ON SITE during the duration of the project unless fully secured with fencing.

#### 1.05 GUARANTEE

- A. Provide guarantee against defects in the materials and workmanship for a period of one (1) year from the date of substantial completion unless otherwise stated.

### PART TWO- PRODUCTS

#### 2.01 MANUFACTURERS

- A. Tensar International Corp. Alpharetta, GA 30009/ GlasGrid 8501
- B. Douglas Industries, Eldridge IA./ Athletic Equipment.
- C. U.S. Tennis Court Construction Company Lockport, IL 60441/ Elite Sport Coating System.
- D. Local Asphalt plant with qualified mix.
- E. Approved equal product.

## 2.02 MATERIAL/PRODUCTS

- A. Reinforcement Grid (GlasGrid 8501)-for use below compacted HMA.
- B. Tack Coat/Primer (SS-1)-aids in bonding of new HMA to existing surface.
- C. HMA Binder Course (N-50 Binder Course)- Lower course of pavement with maximum aggregate size no more than three-quarters of one inch (3/4").
- D. HMA Surface Course (N-30 Surface Course) -fine graded asphalt course with one half inch (1/2") maximum aggregate or smaller, free of reclaimed asphalt shingles (RAS) and with no more than 25% reclaimed asphalt pavement (RAP), applied over reinforcement grid.
- E. Patching Mix (Elite Patch Binder)-for use in patching cracks, holes, depressions, "birdbaths" and other surface imperfections.
- F. Acrylic Patch Crack Filler (Elite Acrylic Patch Crack Filler)-for use in filling cracks
- G. Acrylic Resurfacer (Elite Acrylic Resurfacer)- Mixed with approved silica sand and applied as a filler coat on new or existing asphalt surfaces and for pre-coating rough areas.
- H. Acrylic Color Playing Surface (Elite Color Concentrate) mix with approved silica sand and applied over acrylic resurfacer or textured acrylic color.
- I. Textured Line Paint (Elite Textured Line Paint)-for use as line or graphic marking on play surface.
- J. Net Post Sleeves (Douglas GS-24 #63424)-Installed in concrete footings 2 per court.
- K. Center anchor (Douglas center tie down anchor # 63428)- Installed in concrete. One (1) per court.
- L. Tennis Net Posts (Douglas DTP-37 #63007(green)or #63008(Black) -Installed in ground sleeve 2 per court.
- M. Tennis Net (Douglas TN-40 #20040)- Install to tennis net posts.
- N. Center strap (Douglas Deluxe adjustable CS #20600)-Fastened to center anchor.

## PART THREE- EXECUTION

### 3.01 WEATHER LIMITATIONS

- A. Do not install when raining or rain is imminent.
- B. Do not install if surface is wet or damp.
- C. Do not apply unless surface and air temperatures are 50°F and rising.
- D. Do not apply if surface temperature is more than 140°F.

### 3.02 DEMOLITION

- A. Tennis net posts, nets, center anchors, and ground sleeves including concrete footings shall be removed in their entirety. And disposed of legally off site. (If foundations and sleeves are plum and level with existing surface, sleeves may be extended without complete removal.)
- B. New footing shall be set prior to asphalt paving. Post sleeves shall be set at finish grade elevation and protected during asphalt paving.
- C. All chain link fencing shall be removed and stored on site.
- D. Remove vertical line posts as needed for paving equipment access.
- E. Any fence posts footings heaved over the proposed finish grade shall be chiseled down to existing surface grade or below.

### 3.03 TENNIS POST'S SLEEVES, POSTS, AND NETS

- A. Tennis post foundations shall be situated to provide a clear distance between posts of fort-two feet (42') apart.
- B. Net post sleeves shall be installed with foundations of no less than twenty-four inches (24") in diameter at the top, no less than thirty inches (30") in diameter at the base, and no less than forty-eight inches (48") in depth
- C. Center strap anchor foundations shall be no less than twelve inches (12") in diameter at the top, no less than sixteen inches (16") at the base, and no less than twelve inches (12") in depth.
- D. Install tennis posts in sleeves, follow manufactures installation guidelines.
- E. Install tennis nets, follow manufactures installation guidelines.
- F. Install center straps, follow manufactures installation guidelines.

### 3.04 SURFACE PREPARATION

- A. Surface shall be thoroughly cleaned of all dirt, debris, and vegetation using floor scrapers, wire brooms, and mechanical blowers.
- B. All loose coatings shall be removed and disposed of legally off site.
- C. Cracks with vegetation shall be treated with herbicide. Cracks shall be routed with a mechanical crack router. All loose material and old or foreign crack filler shall be completely removed.
- D. Any oil or grease spots shall be scraped and treated to prevent bleeding through the tack coat.

### 3.05 CRACK FILLING

- A. Cracks shall be filled from bottom to top with acrylic patch crack filler. Special care shall be taken to assure all void space is filled. Multiple applications will be required to level crack filler with adjacent surface.
- B. Strictly follow manufactures mixture guidelines and moisture limitations.

### 3.06 TACK COAT/PRIMER

- A. Apply SS-1 asphalt emulsion over asphalt or remaining properly bonded coatings not less than 0.10 gallons per square yard. Excessive asphalt applications, or pooling, shall be swept with a broom to ensure proper bonding of the HMA. Install reinforcement grid after the asphalt emulsion has dried. If pick up occurs, wait until emulsion cures.
- B. Apply additional tack coat on Binder course prior to reinforcement grid placement.
- C. Strictly follow manufactures mixture guidelines and moisture limitations

### 3.07 REINFORCEMENT GRID

- A. Using a tractor, or manually, place grid to thoroughly dried primed surface.
- B. Grid to be applied over entire primed binder course.
- C. Roll grid with rubber tire roller to activate adhesive.
- D. Overlap grid widths a minimum of four inches (4").
- E. Grid must be installed under sufficient tension to reduce or eliminate ripples.

### 3.08 ASPHALT PAVING

#### A. BINDER COURSE

- a. Machine apply and compact HMA binder course to a compacted thickness of no less than two inches (2") over prepared and primed surface.
- b. HMA shall be free of marks, segregation and be placed to required uniform elevation with a smooth texture not showing tearing, shoving, or gouging.
- c. Paving equipment shall be equipped with auger extensions, and be self-propelled.
- d. Hand work shall be minimized to ensure the best possible finished surface.
- e. Rolling shall start as soon as the HMA can be compacted without displacement. Rolling shall continue until the HMA is thoroughly compacted and all roller marks have disappeared. Compact the HMA to a minimum in-place density of 94.0% of the Theoretical Maximum Specific Gravity.
- f. Binder course longitudinal joints shall be smooth and true; no deviation from level and true.
- g. Smoothness shall meet the requirements of no greater than one eighth inch (1/4") in ten feet (10').
- h. Binder course asphalt must be placed in one day, special care shall be taken to avoid cold seams.

#### B. SURFACE COURSE

- a. Machine apply and compact HMA Surface course to a compacted thickness of no less than one and one half inches (1.5") over reinforcement grid.
- b. HMA shall be free of marks, segregation and be placed to required uniform elevation with a smooth texture not showing tearing, shoving, or gouging.
- c. Paving equipment shall be equipped with auger extensions, and be self-propelled.
- d. Hand work shall be minimized to ensure the best possible finished surface.
- e. Rolling shall start as soon as the HMA can be compacted without displacement. Rolling shall continue until the HMA is thoroughly compacted and all roller marks have disappeared. Compact the HMA to a minimum in-place density of 94.0% of the Theoretical Maximum Specific Gravity.
- f. Surface course longitudinal joints shall be smooth and true; no deviation from level and true.
- g. Smoothness shall meet the requirements of no greater than one eighth inch (1/8") in ten feet (10').
- h. Surface course asphalt must be placed in one day, special care shall be taken to avoid cold seams.

### 3.09 FENCING

- A. Three to four inches (3"-4") shall be removed from the overall height of the chain link fabric to allow for the added elevation of the surface. Exposed cut ends shall be knuckled uniformly.
- B. Chain link shall be reinstalled including all wire, ties, and hardware to properly fasten to fence structure.
- C. Chain link shall be situated to allow three quarters of an inch to one and one half inch (3/4"-1.5") clearance at the bottom.
- D. Chain link shall be installed following the asphalt paving and prior to the color surface applications.

- E. Replace any vertical line posts removed for equipment access.

### 3.10 COURT DEPRESSIONS "BIRDBATHS"

- A. Testing: Surface shall be flooded with water by rain or manually with clean water. Surface shall be allowed to drain for 45-60 minutes in sunlight at 70°F. Remaining depressions holding enough water to cover a five cent piece (American Nickel) shall be marked.
- B. Apply acrylic patch binder mix to depressions and strike off with a straight edge. Before the product begins to dry, feather edges using a trowel, putty knife, or similar method.
- C. Repeat testing and acrylic patch binder applications as needed to eliminate or reduce depressions to within tolerance.
- D. Sand and pre-coat as needed to assure repairs are not visible following acrylic surface applications.
- E. Strictly follow manufactures mixture guidelines and weather limitations.

### 3.11 ACRYLIC FILLER COAT(S) (RESURFACER)

- A. Two (2) coats of properly textured acrylic resurfacer shall be applied to entire surface. Special care shall be taken to keep a wet edge and remain consistent.
- B. When surface is completely dry, surface shall be inspected for, ridges, bumps, and debris. Any inconsistencies shall be corrected prior to color coat applications.
- C. Strictly follow manufactures mixture guidelines and weather limitations.

### 3.12 ACRYLIC COLOR PLAYING SURFACE

- A. Complete a thorough inspection, remove any bumps or ridges in resurfacer coats, and clean surface of all loose dirt, leaves, or other debris.
- B. If the surface is to receive multiple colors, apply chalk lines to distinguish the court area from the perimeter area. Follow USTA guidelines for court dimensions.
- C. Colors and their placement shall be determined by the owner. Colors and the placement of the colors shall be verified by the owner prior color applications.
- D. Textured acrylic color surface shall be applied in two (2) applications with a 50 durometer rubber squeegee. No application should be made until the previous application is thoroughly dry.
- E. Strictly follow manufactures guidelines and weather limitations.

### 3.13 LINE PAINTING

- A. Lines shall be carefully laid out in accordance with the ASBA guidelines.
- B. Masking tape shall be applied and rolled to result in a two inch (2") wide width unless otherwise stated.
- C. Masked lines shall be primed with acrylic line primer to seal the void between the textured surface and masking tape edge.
- D. One (1) coat of textured white line paint shall be applied by brush or roller. **NO SPRAY APPLICATIONS PERMITTED.**

### 3.14 PROTECTION

- A. Erect temporary barriers to protect coatings during drying and curing.
- B. Lock gates to prevent use until acceptance by the owner.

### 3.15 CLEAN UP

- A. Site shall be cleared of all construction debris, all waste shall be disposed of offsite in accordance with local, state and federal regulations.
- B. Remove all barriers and locks.