

The Turner Farm

Conceptual Development Plan



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Prepared by:

Fairfax County Park Authority

Planning & Development Division

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I. INTRODUCTION & BACKGROUND

A General Management Plan (GMP) for The Turner Farm was completed in May of 1999. The GMP provides direction for the conceptual planning stage of development. The park purpose, desired future visitor experience and park themes establish important guidelines for the Conceptual Development Plan (CDP).

The CDP for The Turner Farm describes the recommended improvements to existing facilities and recommendations for future park development. The CDP contains descriptions of the concept plan elements, design concerns and plans (maps) that indicate the general locations of recommended projects.

A. Park Purpose

The purpose of The Turner Farm (park) is to:

- Preserve and protect cultural and natural resources
- Provide a variety of passive and active recreational activities for all age groups

B. Desired Future Visitor Experience

- Visitors will be able to participate in a number of active and passive recreational activities.
- Visitors will be able to learn the brief history of the Nike missile program and the role this site played in the Cold War.
- Visitors will be able to experience community and cultural events.

C. Park Themes

The Turner Farm (park) themes

- Observatory Park (cultural history, education and recreation)
- Equestrian Park (recreation)
- Community Park (active and passive recreation)

D. Property Description

The Turner Farm is located at the intersection of Georgetown Pike (Route 193) and Springvale Road (Route 674) in Great Falls, Virginia, within the Dranesville Supervisory District. This community park is 52 acres in size and represents the recent merger of three park parcels; Turner Farm purchase, Defense Mapping Agency site and Lexington Estates Park.

E. Park Designation

The concept for The Turner Farm is envisioned as a community park that complements the agrarian history and eclectic interests of the Great Falls area. Community parks provide recreational activities conveniently located for short term visits. Proposed facilities would have minimal effects, while preserving the appearance of a dairy farm. The park would support uses that are fully compatible with the site: an observatory, equestrian and typical community park features.

Special Purpose parks provide indoor recreational activities that require specialized equipment or separate facilities, or should be separated from other facilities due to the nature of activities. The Special Purpose Park features and the Community Park features should both be represented at the park. Staff recommends The Turner Farm to be labeled with the Community Park designation and a Special Purpose Park designation overlay. This combination of designations will maintain the community's important historic and rural essence while serving as a focal point for the community.

F. Existing Facilities

The following facilities are currently existing at the Turner Farm.

Dairy Barn	Dairy House
Observatory	Utility Storage Bldg.
Communications Bldg.	Radar Tower
Barracks Bldg.	Restroom Bldg.
Mess Hall	Administrations Bldg.
Asphalt Entrance Road	Asphalt Parking Lot (50 spaces)

An independent building assessment and condition survey was performed to investigate the condition of all existing buildings on the former Defense Mapping Agency (DMA) and Turner Farm sites. The following summary highlights the condition of the major systems of the buildings:

- The structural systems appear to be in generally fair to good condition.
- The roof membranes appear to be in generally poor condition.
- The building exterior surfaces and interior finishes appear to be in generally fair to good condition with some areas in poor condition.
- The heating, ventilating and cooling systems appear to be in generally poor condition.
- The electrical systems appear to be in generally poor condition.

A survey was also performed to identify asbestos containing materials (ACM) and lead-in-paint. ACM was confirmed in six (6) of the eight (8) buildings on the DMA site. The Turner Farm barn and milk shed are both free of any ACM. Lead was also detected in paint on all of the buildings with the exception of the Observatory Building.

II. DESCRIPTION OF THE CONCEPTUAL DEVELOPMENT PLAN ELEMENTS

A. Elimination of Existing Facilities

Based on the findings stated under the Existing Conditions heading above and further study completed during the CDP, the following facilities are recommended for demolition:

- Sentry Post (2)
- Barracks Building
- Covered Concrete Walk
- Tractor/Implement Shed
- Communications Building
- Bath House/Restroom Building
- Mess Hall
- Administration Building
- Multi-Use Court
- Utility Pole/Transformer Pad

The only structures scheduled to remain include the observatory, radar tower and one un-named building (yet to be selected – to be utilized for historic interpretation).

B. Description of New Plan Elements

1. Founder's Wall

A low lying, aesthetic wall of paving bricks featuring as many as 1,000 name-engraved units blended with plain-surface bricks in three subtle colors, red being the dominant color. The wall would be developed by volunteers to serve as a lasting tribute and to commemorate all those who were involved in the acquisition of the land and development of this park. The wall's functional characteristics will serve to deflect automobile headlights away from the observatory area.

2. Observatory Facilities

The Analemma Society, a private interest group based in Great Falls, is working toward a public/private partnership with the Park Authority for the development of recreational/educational astronomy programs, to raise monies to support these programs and to oversee technical direction of the site through a network of volunteers that range from individuals to public schools to universities.

As written by Mr. Charles H. Olin, founder of the Analemma Society, "The views through a telescope stimulate our imagination in a way nothing else can. Children who grow up being able to see these views will be indelibly enriched; this experience will live with them throughout their life. In this age of outer space travel, our future depends upon an appreciation and understanding of our celestial neighbors. This unique opportunity is available on this site."

a. Celestial Observatory

The observatory structure, built in the 1960's by the United States Government, is recommended for adaptive re-use. Considering the currently deteriorating condition of the observatory's concrete block outer shell, replacement is recommended. The observatory dome, a steel panel rotating dome with a retractable opening, should be re-used on the new building. The massive concrete pedestal (telescope platform) within the observatory should remain untouched. Replacement of the building shell is imperative to also address accessibility to the dome area and to reconfigure space for optimal use.

At the outset, the observatory will house a 16" Newtonian reflecting telescope, electrically driven, with a capability of conventional and digital photography. This size telescope is often found in universities; it is not a common amateur telescope. It is possible to view the Moon in great detail, clearly see the moons of Jupiter and Saturn and the far more distant planets. Galaxies 56 million light years distant can also be seen. The telescope will be on loan to the Analemma Society by Mr. Charles H. Olin for an indefinite time or until a permanent telescope is installed. The Society is now seeking a 24" reflector telescope.

b. Radio Telescope Observatory

A radio telescope sees the stars as well during the day as the night. Important studies of the Moon and some planets can also be made with this device. The existing radio telescope structure located behind the observatory, built during the same era, is also recommended for adaptive re-use. In this structure, the corrugated metal facade and chain link security structure would be replaced with a more aesthetically pleasing material. A second, smaller radio telescope is envisioned for development within the general area.

c. Support Buildings

Support buildings for observatory operations are recommended in order to provide space for an orientation area prior to viewing sessions through the telescope. The space should also be utilized for displays of astronomical equipment such as telescopes and optics. An administration/information section with brochures should be developed. A summer program for children and parents to make their own sundials and telescopes should be held in a workshop room. One room should be used as a library containing sky charts and related reference materials.

New construction is preferred to provide space for approved programs. This will compensate for the loss of building space caused by the demolition of the deteriorated Defense Mapping Agency (DMA) buildings. The new building cluster, envisioned to be one story in size, should contain space for administration activities, classrooms, auditorium, gallery, meeting rooms, restrooms and storage space. The structure is recommended for development in phases with a combined

area not-to-exceed 30,000 square feet, to be built as private and/or public funding becomes available.

A former DMA building (to be selected) was recommended as the site for an interpretive exhibit to house displays regarding the role of anti-aircraft missiles (in protecting the Washington area) and a 'Cold War Museum' display area. The 'Cold War Museum' display could include historically significant items, artifacts and memorabilia that deal with other aspects of the Cold War, such as espionage of the Soviet bloc as well as Western Allies, as advocated by Francis Gary Powers Jr. In addition, ideas also include interpretation of the true mission of the Defense Mapping Agency for a period of 30 years at this location; the development of a system to make accurate maps of Earth's surface and remote accurate determination of latitude and longitude.

d. Garden Area

- **Analemma Dial**

This is a sundial whose hour points fall along the curve of an ellipse oriented East to West. A gnomon, or rod, is moved to the appropriate day of the month in blocks places along the minor axis. The time of day is then read along the ellipse. This dial will be located in a sunny location in the garden behind the observatory.

- **Other Sundials**

Sundials provide the perfect solution for one to gain knowledge of Earth's motion and time. Sundials display both rotation and revolution of Earth and define Earth's orientation explaining the seasons.

A sundial garden with trails is recommended in an open area of the site behind the proposed buildings. There are approximately 30 different kinds of sundials used by past cultures. All describe the motion of the Earth as well as tell time.

e. Solar System Scale Model

A scale model of the solar system is recommended in an open area south of the park entrance road. This model would include interpretive signage along with markers buried at ground level that indicates the relative positions of the sun to planets Mercury, Venus, Earth, Mars, Jupiter, etc.

f. Elevation Benchmarks

There are three or four existing elevation benchmarks, accurate to within a millimeter, marking the center of the Earth. These benchmarks are utilized for an ongoing study by several U.S. Government agencies and should be preserved, both for their use and for interpretation.

g. Observatory Site Security

Security of the observatory site is recommended and can be accomplished with re-establishment of a chain link fence enclosure. This enclosure, however, should utilize black vinyl fabric. This fabric choice is used on tennis courts found in many parks for its ability to visually blend-in with its surroundings. The perimeter area of the fence should cover observatory functions but in a smaller area than the current facility.

3. General Equestrian Facilities & Farm Features

The equestrian features envisioned for The Turner Farm are traditional to the classic equestrian disciplines of dressage, jumping, and riding cross-country, providing venues for horse and rider training and for informal local schooling. In addition, a bridle trail will enable pleasure riding over a wide area of the park. The required equestrian facilities will, to the extent possible, have multiple or overlapping uses and be designed in harmony with existing environmental features. The positioning of riding rings and their associated facilities will aim at preserving the aura of a rural farm, retaining existing agrarian features and characterized by quietness and isolation even during periods of peak use.

a. Barn

A dairy barn on the property is constructed with gambrel framing and covered with a standing seam sheet metal roof. Beveled wood siding covers the lower walls, which are punctuated with a series of wooden windows. A unitized pre-cast concrete silo is located at the southwest corner and connected to the barn. The concrete floor inside the barn was poured with troughs (or "French drains") designed to aid in washing out the milking area.

The barn is recommended for adaptive re-use by equestrians. Local Pony Clubs, for instance, could have indoor lessons and "knowdown" drills (lectures and discussions). Repairs such as pipe column replacement, where required, limited wood siding and trim repairs, eliminating or covering the concrete (dairy operation) slab, upgrade of the electrical system, to name a few, will be required to stabilize the facility so it can be employed for shelter, daytime-use horse stalls, meetings, equipment storage, etc. Public use codes will apply for occupancy approval depending on the final end-use and will warrant further analysis.

Since the length of stay by small groups in the barn area may be for more than a few hours during the day, a restroom facility is recommended. This facility should be a stand-alone structure similar to those typically found in parks. As a temporary measure, portable facilities could be utilized until permanent facilities are built.

Adequate and conveniently placed water sources, perhaps at the barn and the riding rings, should be provided for the horses and ponies brought to the Farm. Lockable, frost-free water hydrants will be required, as all of the equestrian features are exposed to the elements.

An internal gravel access driveway should be developed to the barn area from the end of the existing asphalt road that starts at the Springvale Road entrance. A gravel parking area large enough to accommodate 30 vehicles with horse trailers and 30 regular spaces should be developed adjacent to the barn. An overflow parking area should be developed at the edge of open fields near the barn to accommodate an additional 15 parking spaces during periods of peak use.

b. Bridle Trails

Used for leisurely pleasure riding, bridle trails are planned as one of the main equestrian features. The main bridle trail will parallel the Farm's perimeter to the extent possible, and a few secondary trails will traverse the park. The bridle trails will be suitable for horseback riding or horse driving. An all-weather, dust-free surface, such as pulverized bluestone, is desirable for the main trail and mowed strips or packed-earth pathways should suffice for the secondary trails. Ideally, however, pleasure horseback riding should not be confined to the bridle trails, so that the Park's users can enjoy riding over a wide area, recapturing what was commonplace in the area's many farms well into the 20th Century.

c. Cross-Country Course

Designed to challenge horse and rider over rugged, natural terrain and obstacles, cross-country riding has roots in two activities, hunting and wars, of centuries past. While challenging their users in less lethal ways, today's cross-country courses employ natural land features as well as jumps, such as logs, split-rail fencing, earth banks, gullies, water hazards--that complement their settings. The existing grass fields are well suited for sections of cross-country riding, particularly where natural copses of trees enhance the view and interest of the course. Sections of the Farm's cross-country course also could accommodate horse driving. A designer of the cross-country course will volunteer his expertise during the Project Implementation Phase of the project.

d. Riding Rings

The equestrian facilities suggested for development within the center of the Farm will be used for dressage and jumping. They comprise sites for horse and rider training and for conducting small-scale, informal local schooling competitions, such as those held by children belonging to area pony clubs. In addition, a lungeing ring, or round pen, is required for the secure exercising and training of horses and ponies, as well as for use by beginning riders.

Three distinct equestrian related facilities are suggested at this time, all of them positioned distantly from the Farm's perimeter: a large multi-purpose riding ring, a dressage arena, and a lungeing ring. Three-board fencing (comparable to that described in "f. Perimeter Fence," below) is standard for riding and lungeing rings, whereas the dressage arena can be defined by heavy lumber, such as railroad ties, laid end-to-end on level ground. Each of the three described facilities should have a level, all-weather, dust-free surface, possibly consisting of a sand base topped by pulverized bluestone. However, the exact footing materials

to be applied should be investigated to ensure optimum durability, quietness, low maintenance, and freedom from dust and mud.

Used mainly by hunter and jumper riders, the fenced ring should be rectangular, 200 by 300 feet. Other activities, such as polo exhibitions and animal care demonstrations also might use this ring. Ideally, the fenced ring should be positioned in a site that would enable the future addition of a shed-type roof, to make the facility suitable for year-round use, if warranted by the park's patronage levels and with community support.

A variety of jumps, used by riders to exercise and train their horses, will be required for use within the fenced ring. The most common device is assembled from pressure-treated lumber components that can be configured in various ways and adjusted in height. These jumps generally consist of movable standards (used in pairs), 5- or 6-feet high and drilled to support hangers that in turn hold each end of a 10- or 12-foot wooden rail. Brush boxes filled with natural or artificial foliage and low walls (made of lumber) also are popular with hunter/jumper riders and are used to set up varying courses within the ring.

The dressage arena would be smaller, about 66 by 198 feet, and the lungeing ring must be a round enclosure, 5-feet high and at least 66 feet in diameter.

e. Perimeter Fence

A traditional three- or four-board plank fence, commonplace to Virginia's farms and estates even today, is proposed to define the equestrian area, to contain horses that might break loose, and to reduce possible intrusion by motorized vehicles, such as motorcycles or all-terrain vehicles which are prohibited in parks. The proposed new fence would protect horses and riders from the area's busy traffic, as well as prevent encroachment into neighboring residential yards. The fence can be placed near the property line with pedestrian "walk-throughs," spaced at convenient intervals and designed to enable non-vehicular transit into the Farm by neighboring residents. The fence will generally be juxtaposed with a 50 ft. wide buffer of open space before any park facilities are located. The buffer along Runaway Lane should be increased to 100 ft. to deal with slope and stream issues.

The perimeter fence's posts should consist of "pressure-treated" pine, whether "half-rounds" or four-by-fours, for durability. The standard spacing between posts is 8 feet. Fence boards can consist either of rough oak or pressure-treated pine, 6 inches wide and 1 inch thick, installed in 16-foot lengths across three posts for durability and strength. The standard height of these fences is about 50 inches, and the fence boards are fastened to their posts with non-corrosive screws or galvanized nails. Fencing materials can be allowed to weather, developing a light gray color, or they can be stained (dark brown or black) or painted white, similar to others in the community. While adding

durability and enhancing the fence's appearance, finishing the materials generally requires greater maintenance than natural weathering. A standard metal bar park gate is recommended at the entrance to the equestrian area.

f. Facility Management

Equestrian facilities should be managed during daily use. Scheduling of group events, such as pony club activities or schooling shows, should be accomplished with volunteer groups under an Adopt-a-Park agreement.

4. Therapeutic Riding for People with Disabilities—The *Lift Me Up!* Program

Lift Me Up! is a therapeutic riding program dedicated to helping children and adults with physical, mental and/or emotional disabilities improve both their physical and mental well being. By combining the unique and special presence of the horse and skills and caring of our registered instructors, we have been able to help hundreds of people gain confidence, patience and invaluable self-esteem.

Source: www.liftmeup.org

Founded in 1975, *Lift Me Up!* (LMU) has a varied staff of instructors, including licensed occupational and physical therapists and people with equestrian backgrounds, enabling it to offer a variety of services using a horse.

From the outset, this not-for-profit program has been based in Great Falls, Virginia. LMU is accredited by the North American Riding for the Handicapped Association, whose website (www.narha.org) offers detailed information about the methods and benefits of therapeutic riding.

Presently, the LMU program operates on privately owned property about a mile from the Turner Farm Park. The acquisition of a permanent site--affording opportunities for program expansion and facility upgrading, including an indoor riding arena--has been a long-term LMU goal. The facilities envisioned for Turner Farm would be specifically designed for individuals with disabilities, enabling LMU to enhance its nationally renowned program and to extend its services to individuals on its waiting list.

The LMU goals for program expansion and improvement have been in abeyance because of the scarcity and high cost of suitable private land. The availability of a permanent "home" on public land, coupled with a judicious application of LMU's building-fund resources, potentially makes it possible to attain these goals.

a. All-Weather Riding Arena

An indoor riding facility, at minimum 85 by 150 feet in size and built using materials and colors that harmonize with The Turner Farm, would be the centerpiece of the LMU program. Designed by an expert architect, the arena and its associated facilities would incorporate specialized features required to accommodate individuals with varying kinds and degrees of disability, and it would conform to pertinent guidelines of the Americans with Disabilities Act, the Fairfax County Building Code, and the NARHA.

The horse-mounting area adjacent to the arena will require a wheelchair ramp, and the surface of the path leading from the parking area to this ramp should be suitable for wheelchair transit.

When not in use for the LMU program, the indoor arena will be available for use by the general equestrian population. It is likely, however, that a substantially larger arena would be needed to suit the needs of general riders.

b. Associated Facilities

Stalls next to the arena, or physically attached to it, will be required to hold and prepare the LMU horses for therapy sessions. A meeting room will be needed for use by riders, parents, volunteers, and staff. A lockable equipment storage room will be necessary as well.

The LMU horses will be trailered from their boarding stables to The Turner Farm for scheduled therapy sessions. When not in use at the Farm, the horses will be held in a small paddock with a "run-in" shed for shelter. Given that older, placid horses are preferred for use in therapy programs, it is important to allow the horses freedom of movement rather than confining them in stalls.

With respect to LMU's vehicle parking requirements, it is possible that a successful program expansion effort, leading to group-therapy sessions, would require space suitable for up to six riders' cars and up to as many as ten vehicles belonging to staff/volunteers. This parking also should accommodate a trailer and vehicle for transporting the LMU horses.

c. Site Location

To assist in the selection of a specific site for the indoor arena and its associated facilities, the LMU Directors will consult an architect with expertise in these kinds of venues. Given the modest land-area requirements for its program, but recognizing the importance of the aesthetic effects of the arena and its parking requirements for the Park as a whole, the LMU Directors will welcome advice during the site selection process from the Park Authority staff and other Turner Farm stakeholders. Generally, the facility should be located to the east of the dairy barn and should include exterior/interior accessible restrooms within the structure.

d. Facility Management

The LMU officers and staff will be responsible for managing and overseeing the day-to-day operation of the indoor arena and its associated facilities and for scheduling program activities, as well as for the transportation and care of the horses used in the LMU program. The program will also be subject to a public/private partnership agreement with the Park Authority for use of the land.

5. Playground/Totlot

This facility should be located in the community park area of the site in an area under shade trees, if possible and should provide for 2 distinct play groups, one for children ages 2 – 5 and a second group of children ages 5 – 12. Play events that allow for social interaction, role playing and cognitive achievement, to name a few, should be included. Permanent shock-absorbent surfacing should be installed to provide for safety and accessibility of the area. Benches and picnic tables should also be included.

6. Picnic Area

A picnic area with a permanent picnic pavilion with ten tables and six grills should be sited in the open area north of the former administration building to be used by all park users. An asphalt trail should connect to one of the tables and grills in order to make that area accessible for persons with disabilities.

7. Jogging Trail

A natural surface jogging trail should be located in the southern and eastern areas of the park. The loop trail should be of sufficient distance to provide interest to the user and should include exercise stations along its path to allow for cardiovascular workouts, weather permitting.

8. Running Track

A running track with a synthetic dustless surface is recommended in an open, level area south of the park entrance road near Springvale Road. The track should measure between 320 & 400 meters in length to provide a 4 or 5 lap measured mile distance. A croquet court, with a grass area measuring 84 ft. by 105 ft., should be situated in the open center area of the track. The court, featuring very short grass, would not have any permanent equipment installed and should appear to the passerby as simply an open, grass infield for the running track.

9. Parking Area

The existing 50 space parking area located on the former DMA site should remain. Asphalt resurfacing and line painting is recommended. An additional parking lot sized to accommodate 25 cars should be located adjacent to this existing lot for a total of 75 spaces. In addition, overflow parking areas should be established in open grassed areas to accommodate visitors during peak use periods.

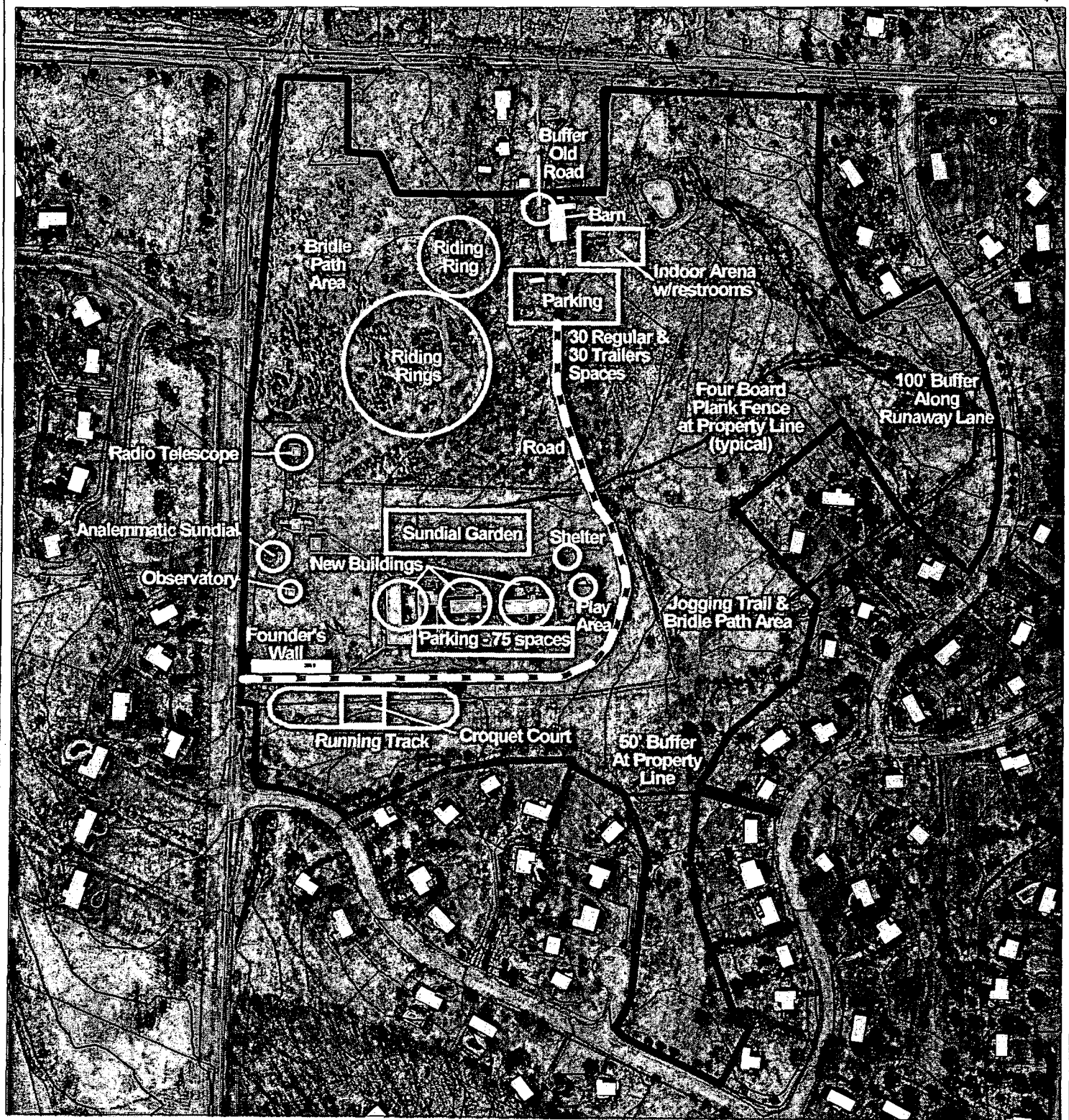
10. Countywide Trail Plan

The Countywide Trail Plan was adopted in 1976 by the Board of Supervisors as part of the Comprehensive Plan of Fairfax County adopted under the provisions of Title 15.1, Chapter 11, Va. Code, as amended. The plan indicates an equestrian trail alignment starting on Cavalcade Street at the intersection of Man O' War Lane and continuing northward through parkland to Georgetown Pike. A second connection begins at the intersection of Cavalcade Street and Springvale Road

and travels eastward into and terminates in the park. This information is included on the CDP as a County requirement for consideration during the Project Implementation Phase. Natural surface (grass) alignments are recommended but can be upgraded to a 6 ft. wide compacted stone and bluestone dust trail if conditions warrant. It is noted that equestrian trails on the Countywide Trail Plan also accommodate pedestrian use.

C. Design Concerns:

1. Demolition of recommended buildings and existing chain link fence should be top priority for development of the site.
2. Create a management plan for dealing with observatory/equestrian activities at the park. Approval of use agreements with the appropriate groups should be part of the planning process.
3. Create a natural resource management plan for the park to deal with the management of open areas.
4. Care should be taken to gain approval of all plans that affect the transcontinental pipeline easement within the park.
5. Strongly recommend completion of those stone dust trail sections currently not built along the Transcontinental Pipeline easement between these two parks to facilitate access from all local neighborhoods to both sites.



200 0 200 400 600 800 Feet



The Turner Farm

Conceptual Development Plan

July 2000

