



**Parks and Recreation Area
Design & Development Standards Manual**

**Revised October 2019
(adopted by Town Council 10/14/19)**

Table of Contents

Section 1: Introduction & Background	3
Section 2: Recreation Area/Park Acreage & Suitable Land Requirements	3
A. Acreage Calculation	3
B. Suitable Recreation Area/Park Land	4
C. Alternative Recreation Area/Park Land Proposal	4
Section 3: Trail Requirements – Residential & Commercial Development	5
Section 4: Recreation Area Plan (RAP)	5
A. RAP Process	5
B. RAP Technical & Design/Development Requirements	6
C. Exceptions to RAP Preparation & Construction of Recreation Areas	7
Section 5: Recreation Area Categories & Minimum Required Features	7
A. Neighborhood Park	7
a. 1.0 acre or less	7
b. 1.01 to 5 acres	8
c. 5.01 to 10 acres	8
B. Community Park	8
C. District Park	8
D. Regional Park	8
E. Linear Park/Greenway	9
F. Special Purpose Park	9
Section 6: Requirements for Recreation Area Transfer to Town Ownership	9
Section 7: Optional In-Lieu Fee	10
A. Eligibility	10
B. Provisions Related to In-Lieu Fees	11
C. Basis of Fee-Town’s Cost to Acquire & Construct Recreation Areas	11
Section 8: Contact Information	11
Attachment 1: Recreation Area Feature Descriptions and Specifications	

Section 1: Introduction & Background

The Parks and Recreation Area Design & Development Standards Manual (Manual) sets forth the standards and requirements for residential recreation areas and trail corridors. Sahuarita Town Code (STC) 18.69 and 18.71 establishes the basic requirements for submittal and review of a recreation area plan (RAP) for residential developments, and this Manual establishes the specific requirements for recreation areas. A recreation area is commonly referred to as a park, and, for the purposes of this Manual, the terms are interchangeable.

This Manual provides the standards that will achieve Town goals and provides information to developers for determining (a) the amount of land to be designated for park and recreation area purposes, and (b) the type of recreation facilities, also referred to as features, improvements or amenities, to be constructed on such land in order to provide the required recreation areas.

This Manual reflects the goals and characteristics of a municipal parks and recreation system, incorporates a review of Sahuarita's past, current, and projected park and recreation area expansion occurring as a result of new residential development, considers the quality of park and recreation area development in addition to the quantity of park and recreation area development, and recognizes the impact of Specific Plans and private recreation areas on the Town's overall ability to achieve park and recreation area goals for residents.

In 2008, the Town Council adopted the "Sahuarita Parks, Recreation, Trails and Open Space Master Plan", which set forth goals and implementation strategies for the overall system of park land and leisure services. In 2015, the Town Council adopted "Aspire 2035: Sahuarita's General Plan", which included updated goals and policies for parks, recreation and open space. Both of these plans state the importance of acquiring and constructing parks and recreation areas as new neighborhoods and residences are built. This Manual provides requirements for implementing the Town's adopted plans as related to residential developments and the parks and recreation areas that will provide quality of life services for residents.

Section 2: Recreation Area/Park Acreage & Suitable Land Requirements

Understanding and determining the required amount of recreation area/park acreage is one of the main components to satisfying the recreation area requirement. There are factors for both the quantity and the quality of land.

The Town of Sahuarita park standard for residential development is expressed as a ratio of acreage to population, and is 7 acres per 1,000 residents (7:1,000).

A. Acreage Calculation

Required recreational area acreage will include a calculation that uses the most recent official U.S. Census data for the average occupancy of dwelling units in the Town of Sahuarita. At the time of this update, the average occupancy is 2.37 residents per dwelling unit per the 2010 U.S. Census. Therefore, 422 dwelling units will yield 1,000 residents ($422 \times 2.37 = 1,000.14$, rounded to 1,000). The park standard is 7 acres for every 1,000 residents. One acre is 43,560 square feet; 7 acres equals 304,920 square feet ($43,560 \times 7 = 304,920$). Therefore, at the time of this update, the required recreation area for each dwelling unit is 723 square feet (304,920 divided

by 422 = 722.56, rounded to 723). Developers and staff are reminded that the average occupancy is subject to change based on new, official U.S. census data. The most recent official U.S. census data for Town of Sahuarita will be used for calculating the per unit acreage requirement.

In order to yield the total required square feet of recreation area for the development, multiply the number of dwelling units proposed in the residential development by the required recreation area for each dwelling unit and divide by 43,560 to translate the quantity from square feet to acres.

B. Suitable Recreation Area/Park Land

Larger recreation areas are capable of hosting a wider variety of desirable outdoor recreation features. However, it is not mandatory to plan the required square feet/acres in only one park, and developers may propose multiple recreation areas within the residential subdivision or development, keeping in mind the functionality of each park. Where multiple recreation areas are proposed, the total required recreation area acres will be used to determine if the minimum required features have been provided. The functionality of the proposed recreation area(s) and the proximity of the recreation area(s) to residents shall both be considered. Ideally, residents will have access to a recreation area within a 10 minute walk, or roughly half a mile, of their dwelling unit.

The land for a recreation area shall be suitable for recreation improvements that remain accessible to residents and capable of supporting a variety of park and recreation features. Acceptable land for a recreation area shall not include land designated as “no-build” space, such as flood plains, steep slopes, washes, deep retention basins, drainage ways, and utility easements, nor shall it include road rights of ways and bike lanes or sidewalks within the rights of ways. The goal of this Manual is to provide land with the primary purpose of supporting outdoor recreation for the residents of the residential subdivision or development.

The use of shallow retention basins to satisfy the requirement for recreation areas requires advance approval from the Parks and Recreation Director, the Town Engineer, and the Planning & Building Director. Design of the shallow retention basin must comply with standards established by the Pima County Flood Control District, and also include suitable recreation amenities as outlined in this Manual if proposed as a recreation area. Only the acreage within the proposed shallow retention basin that is clearly suitable and intended for recreation will be eligible towards fulfillment of the recreation area requirement.

C. Alternative Recreation Area/Park Land Proposal

A developer may desire to propose an alternative to the developed recreation area/park land requirement outlined in this Manual. Alternative recreation area/park land proposals must provide equal or greater value when compared to the standard recreation area/park land requirement in this Manual. Developers shall provide sufficient detail to describe the alternative proposal, and the determination of equal or greater value shall be within the reasonable discretion of the Parks and Recreation Director. The developer will be responsible for providing documentation, including, but not limited to, property appraisals, surveys, detailed

description of the land characteristics, and a RAP to demonstrate the value of the alternative recreation area/park land proposal.

Section 3: Trail Requirements – Residential & Commercial Development

- a. If a residential or commercial development is adjacent to a trail or trail corridor indicated on an adopted Town of Sahuarita trails master plan or the adopted Pima Regional Trail System Master Plan, the developer shall provide and construct an accessible connection to the trail from the recreation area in the residential development or an accessible connection to the trail from the commercial area, as applicable. The location and dimensions of the accessible trail connection shall be clearly indicated on the tentative plat or development plan.
- b. If a trail indicated on an adopted Town of Sahuarita trails master plan or the adopted Pima Regional Trail System Master Plan passes through the residential or commercial development, the developer shall provide and construct the trail segment. The location and dimensions of the trail shall be clearly indicated on the tentative plat or development plan.
- c. The design and construction of the trail connection or trail segment shall be consistent with this Manual, the Pima Regional Trail System Master Plan, and as approved by the Town of Sahuarita Parks and Recreation Director.
- d. Trail corridors and trail improvements that are indicated on an adopted Town of Sahuarita trails master plan or the adopted Pima Regional Trail System Master Plan can count towards the recreation area requirements for that residential development, subject to review for equivalency. The width, length and attributes of the trail are used to determine equivalency. A RAP is required for the trail improvements.
- e. Bicycle lanes and sidewalks on or along roadways do not qualify as recreation areas or trails; these are rights-of-way and transportation features.

Section 4: Recreation Area Plan (RAP)

A Recreation Area Plan (RAP) is a development requirement. The developer must provide a site plan describing in sufficient detail the recreation area/park and its features, and trail construction if applicable, for the proposed development.

A. RAP Process

1. The Developer shall meet with the Parks and Recreation Director and Planning and Zoning staff prior to RAP submittal to discuss the proposed residential development project and the recreation area(s).
2. Prior to RAP approval, the Developer shall request any desired optional in-lieu fee payments. Optional in-lieu fee requests are reviewed and approved by the Parks and Recreation Director in accordance with Section 7.
3. Prior to RAP approval, and if applicable, the Developer shall request in writing the desire for future transfer of ownership of a recreation area from the Developer to the Town.

Ownership transfer requests are reviewed by the Parks and Recreation Director in accordance with Section 6. The ownership transfer request, with supporting documentation and a recommendation from the Parks and Recreation Director, shall be forwarded to the Town Council for consideration.

4. The Developer shall prepare and submit a RAP in accordance with all applicable codes and this Manual.
5. The Developer shall prepare and submit a RAP with the Tentative Plat or Development Plan to the Planning and Zoning Division.
6. Planning and Zoning staff shall forward the RAP to the Parks and Recreation Director for review and comment.
7. The RAP shall require the approval of the Parks and Recreation Director before the Tentative Plat or Development Plan can be approved.

B. RAP Technical & Design/Development Requirements

1. Prepare narrative aspects of the RAP on 8.5" x 11" format; map exhibits shall be full size plan sets (24" x 36").
2. Briefly describe the target market for the residential development, which will help determine age-appropriate recreation features for the residents and guests.
3. Provide a simple map of the residential development and its location within the context of current Town limits and future Town annexation areas. Provide the location of all parks within one mile of the residential development, calculated from the development's boundaries.
4. Provide a concept drawing of the residential development.
5. Provide the total acreage of the residential development and the total number of each housing unit type, single family dwellings (SFD) and multifamily dwellings (MFD).
6. Indicate any known archeological and historical areas within the residential development.
7. Identify the location of the recreation area(s) within the residential development.
8. Identify all trail corridors and trails indicated in an adopted Town of Sahuarita trails master plan and in the adopted Pima Regional Trail System Master Plan that pass through or are adjacent to the residential development.
9. Identify the topography of the recreation area(s).
10. Identify the acreage and dimensions of the recreation area(s); show the mathematical calculations used to determine the size of the recreation area(s).
11. Provide a depiction of the recreation area(s) (concept plan view); identify all improvements to be provided, including access points and parking.
12. Design the recreation area(s) to include the minimum required features, or equivalent, described in Section 5.
13. Use the specifications provided in Attachment A, or equivalent, to design recreation features.
14. Design the recreation area(s) with an accessible link to the trails referenced in Section 3 that cross the site or are located adjacent to the site.
15. Design the recreation area(s) and trails in compliance with the A.D.A.
16. Design parking areas in compliance with STC 18.75.
17. Identify the entity responsible for maintenance of the recreation area(s).

18. Recreation area(s) shall be completed in accordance with the approved RAP and this Manual.
19. All recreation area(s) must be 50% complete by the time 50% of the units are complete, and the recreation area(s) shall be fully constructed and operational by the time 75% of the building permits have been issued.

C. Exceptions to RAP Preparation and Construction of Recreation Areas

1. Residential developments with 65 units or less. Developer may request an optional in-lieu payment of the per unit fee for all (100%) of the units. See Section 7.
2. Residential developments 66 units or more. Developer may request an optional in-lieu payment of the per unit fee for up to 35% of the units. See Section 7. (A RAP is still required for the portion of developed recreation area acreage.)

Section 5: Recreation Area Categories & Minimum Required Features

The Town of Sahuarita has established various categories of recreation areas, which are described in this section. A recreation area is commonly referred to as a park, and the terms are interchangeable. Residential recreation area development is most likely to focus on neighborhood and community park categories.

The stated minimum features, or equivalent substitutions that addresses the demographics of the community, are the minimum improvements that generally must be provided for the size and type of recreation area/park indicated on the RAP. Where multiple recreation areas are proposed, the total required recreation area acres will be used to determine if the minimum required features have been provided for the residential development.

This Manual anticipates that new and unique recreation amenities and trends will emerge over time, therefore, developers may propose alternative recreation areas and features that may benefit the community and its quality of life. Alternative proposals must provide equal or greater value when compared to the standard requirements. Developers shall provide sufficient detail to describe the alternative proposal, and the determination of equal or greater value shall be within the reasonable discretion of the Parks and Recreation Director.

A. Neighborhood Park

A neighborhood park is 10.0 acres or less. Features to be included in a neighborhood park are listed in each sub-set of the neighborhood park category.

1. Neighborhood Park – 1.0 Acre or Less

Also referred to as a "pocket park." Features include infrastructure (water, electricity), a drinking fountain, benches (2), waste receptacles (2), a bike rack, irrigation, landscape, hardscape (paved pathways), security lights, a covered/shaded play structure or age-appropriate play alternative.

2. Neighborhood Park - 1.01 to 5 Acres

Features include those listed for a pocket park, plus picnic tables (2-4), grills (2-4), one sport court (basketball, bocce, horseshoes, tennis, sand volleyball, pickleball, or similar) for every 2 acres or portion thereof, fitness stations (age-appropriate), multipurpose turf (25% site) or equivalent size synthetic turf, additional benches and waste receptacles (1 each for every 2 acres or portion thereof).

3. Neighborhood Park - 5.01 to 10 Acres

Features include those listed for a pocket park and a 1.01 to 5 Acre neighborhood park, plus restrooms (two, or male & female) with sewer connection, one ramada (14'x14') with picnic tables (2) and grill (1) for every 2 acres or portion thereof above 5, perimeter (looping) paved pathway, one additional covered/shaded play structure or age-appropriate alternative, swings or age-appropriate alternative, one additional sport court for every 2 acres or portion thereof above 5, one sport practice field, on-site parking.

B. Community Park

A community park is 10.01 to 40 acres. Features include those listed in all sub-sets of neighborhood parks, with quantities and sizes increased to distribute amenities and parking throughout the recreation area and provide sufficient access to outdoor recreation (one additional sport court for every 5 acres or portion thereof above 10, two additional restrooms for every 10 acres or portion thereof above 10, one additional play structure or age-appropriate alternative for every 10 acres or portion thereof above 10), plus one fenced, off leash dog area separated for two sizes of dog, one large ramada (30x30) with picnic tables (4-6) and large grill (1) for every 10 acres or portion thereof above 10, a skateboard area or equivalent, a spray ground/splash pad or equivalent, a community garden or alternative ornamental/pollinator garden, one sports field (softball or baseball diamond, soccer, football, or lacrosse field) for every 2,000 residents/844 units/14 acres. If Section 6 is applicable, parks 20 acres and larger reserve and indicate the footprint for a future maintenance yard/storage building and reserve and indicate the footprint for a future recreation center and its associated parking.

C. District Park

A district park is 40.01 to 100 acres. Features include those listed in all sub-sets of neighborhood parks and community park, plus a lighted, competition-quality, multi-field (4) sports complex, a BMX track or equivalent, a disc golf course or equivalent, and a minimum of two additional features to be proposed by the developer. If Section 6 is applicable, reserve and indicate the footprint for a future aquatic center and its associated parking.

D. Regional Park

A regional park exceeds 100 acres. A regional park may be urban, with features listed for a district park, or natural resource, with a focus on open space and trails, or a hybrid of both urban/developed and natural/undeveloped.

E. Linear Park/Greenway

A linear park is typically developed along a corridor, such as a watercourse (i.e., river, wash), roadway, utility easement, or abandoned railway, and is intended to provide outdoor recreation and fitness opportunities, as well as non-motorized transportation routes. A linear park may be referred to as a greenway when on land, or as a blueway when on water.

Features for a linear park/greenway include wide, paved pathways, bridges as necessary, on-site parking/staging areas, infrastructure (i.e., water, sewer, and electricity), unisex restrooms, landscape, irrigation, directional and interpretive signage, covered/shaded benches, waste receptacles, drinking fountains, fitness stations, fences, rails, or post-and-cable barriers, security lights, and linkage to adjacent parks, recreation areas and trails. Resting, comfort, and viewing features are spaced approximately every half mile. Entry nodes include covered/shaded play structures, ramadas with picnic tables and grills, and/or activity plazas.

Linear parks/greenways proposed to fulfill development requirements (in full or part) shall be constructed to Pima Regional Trail System Master Plan and Recreation Design standards, this Manual, and as approved by the Town of Sahuarita Parks and Recreation Director.

F. Special Purpose Park

A special purpose park (SPP) serves a specific recreational need and can be included within a larger park, or in some instances may be proposed to stand alone. Examples include, but are not limited to, skateboard park, equestrian center, remote control (RC) car track, BMX track, fishing lake, off leash dog park, or amphitheater. Golf courses are a category unto themselves, and for the purpose of this Manual, do not fulfill the requirement for the recreation area.

Section 6: Requirements for Recreation Area Transfer to Town Ownership

The decision to accept a proposal to transfer a recreation area into public ownership is at the sole discretion of the Sahuarita Town Council. A recreation area constructed pursuant to Sahuarita Town Code (STC) and this Manual may be transferred to Town of Sahuarita ownership upon completion as provided in this Manual. This option requires in-depth discussion between the developer and the Parks and Recreation Director during preparation of the RAP. The developer's ownership transfer request must be approved by the Town Council prior to RAP approval and recreation area construction, and is conditioned on the following requirements being met:

- a. Recreation area is a minimum of 10 acres.
- b. Recreation area is adjacent to, and is served by, either a collector or arterial roadway.
- c. The Parks and Recreation Director is included in the determination of an acceptable public participation process, and the developer facilitates public participation during the design development process.

- d. Construction plans and specifications for the recreation area are submitted to the Town for review, comment, approval, and permits. Construction drawings and specifications are submitted to the Town Parks and Recreation Director at the 30%, 60%, 90% and 100% stages for review.
- e. Developer includes Town staff in the inspection of project construction at critical milestones and in the acceptance of project construction.
- f. Developer provides a two-year warranty period for the recreation area.
- g. Developer provides a set of as-built plans for the recreation area and all applicable equipment manuals to the Town Parks and Recreation Department upon completion of the project.
- h. Recreation area is constructed in accordance with all applicable Town building codes, including outdoor lighting code and LED lighting policy, this Manual, approved plans, and the following:
 1. Turf and landscape is irrigated with fixtures and equipment consistent with the automated irrigation systems and Calsense controllers used by Town Parks and Recreation Department.
 2. Picnic, play structure and fitness areas are covered by shade structures.
 3. Dusk to dawn security lights are installed for safety and site monitoring.
 4. Low water-use, drought tolerant plants, preferably native, are used (see Arizona Department of Water Resources plant list).
 5. Sustainable and efficient components (i.e., water harvesting, remote control electronics) are included in the design.
 6. Structures are low maintenance and vandal resistant (i.e., concrete pathways, concrete sport courts).
 7. Restrooms and parking lots are sized for the planned use/capacity of the park.
 8. Sport courts and sport fields (i.e., basketball, volleyball, tennis, skate park, ball diamond, soccer field) are lit with fixtures and equipment consistent with the automated Musco lighting systems and controllers used by Town Parks and Recreation Department.
 9. Emergency and maintenance vehicle access is provided.
 10. Barriers (bollards, fences, post and cable) are installed to prevent unauthorized vehicle access.

Section 7: Optional In-Lieu Fee

A. Eligibility

Instead of providing the built recreation areas/parks, developers may request an optional in-lieu fee payment in two situations.

1. Residential developments with 65 units or less may request payment of an optional in-lieu fee for all units (100% of the units).
2. Residential developments with 66 units or more may request payment of an optional in-lieu fee for up to 35% of the units.

B. Provisions Related to In-Lieu Fees

1. In-lieu fees must be remitted to the Town for each residential unit when building permits are issued.
2. In-lieu fees received by the Town are restricted by the Town for park and recreation area acquisition, development or improvement.
3. The Town of Sahuarita retains sole authority regarding the location of a recreation area and the type of recreation features purchased or constructed with in-lieu fees.
4. In-lieu fees will be listed within STC 3.10 (Fee Schedule), as amended from time to time by the Town Council. Fees for payment will be calculated and remitted using the Fee Schedule.
5. The amount of the per unit in-lieu fee to be paid must be clearly set forth on the plat as a separate note.

C. Basis of Fee – Town’s Cost to Acquire & Construct Recreation Areas

The Town requires that recreation areas are provided by the developer in conjunction with residential development so that residents are not left waiting for quality of life amenities. Developers are able to provide parks and recreation areas at a lower cost than the Town due to economies of scale related to acquisition of large tracts of land and construction of infrastructure for the overall residential development.

In the absence of developer-provided recreation areas, optional in-lieu fees shall be set at a level that does not exceed the Town’s estimated cost for the Town to acquire and construct recreation area/park land.

Example: The Town determines that the Town’s cost to acquire and construct recreation area/park land with minimum required features is \$300,000 per acre. The average occupancy per dwelling unit in this example is 2.37 residents. Therefore, in this example, the Town’s cost attributed to providing recreation areas for each dwelling unit would be \$4,976 ($\$300,000 \times 7 \text{ acres} = \$2,100,000$ divided by 422 units = \$4,976.30, rounded to \$4,976). The Town would set the fee no greater than \$4,976 per unit.

Fees are subject to change based on updated estimates of the Town’s cost to acquire and construct park land, changes in official U.S. Census data for average occupancy per dwelling unit, and Town Council fee adoption. Developers and staff shall refer to STC 3.10 to determine the fee to be used for in-lieu fee calculations and payments.

Section 8: Contact Information

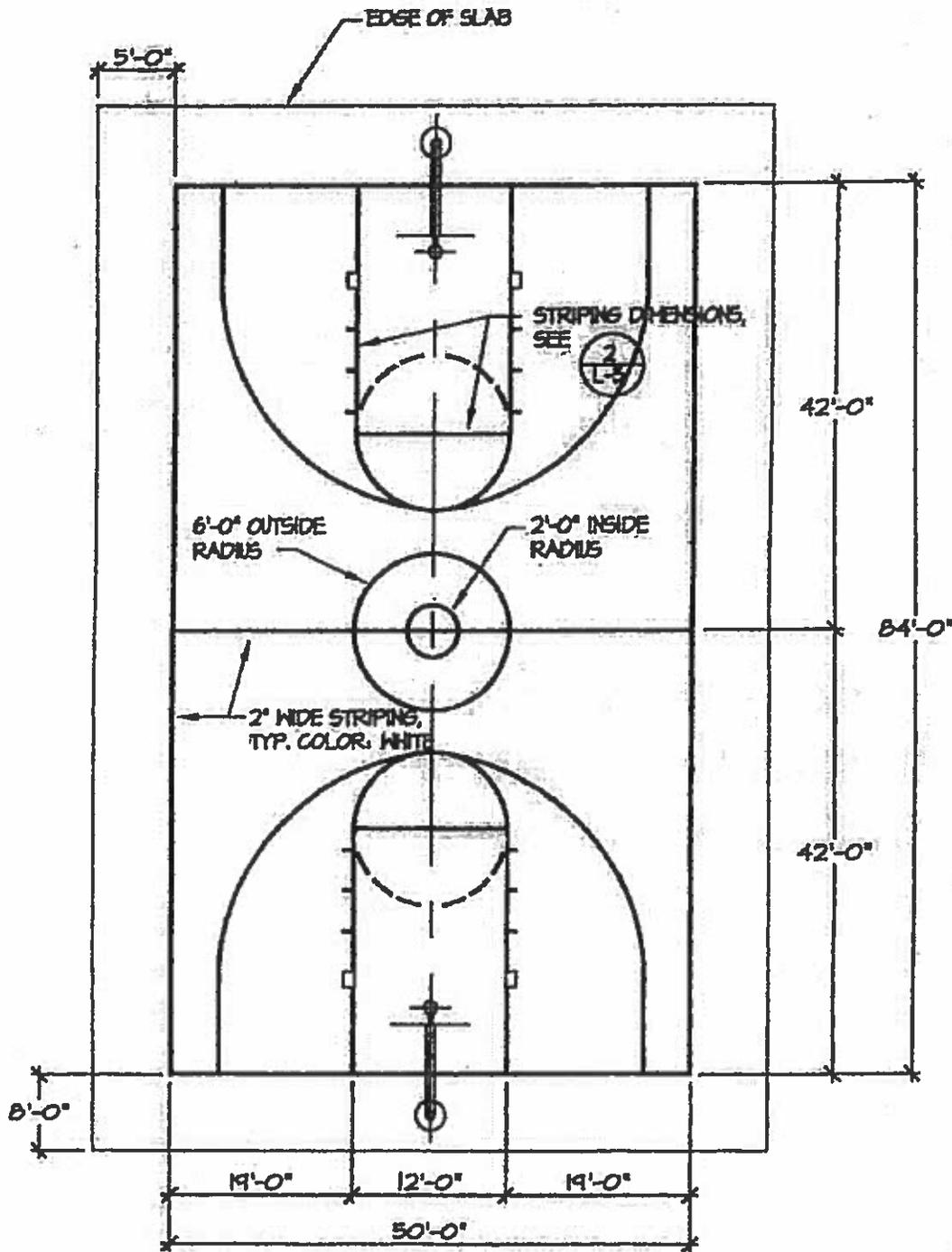
For questions regarding the Parks and Recreation Area Design & Development Standards Manual, contact:

Town of Sahuarita Parks & Recreation Department: (520) 822-8896
Town of Sahuarita Planning & Zoning Division: (520) 822-8852



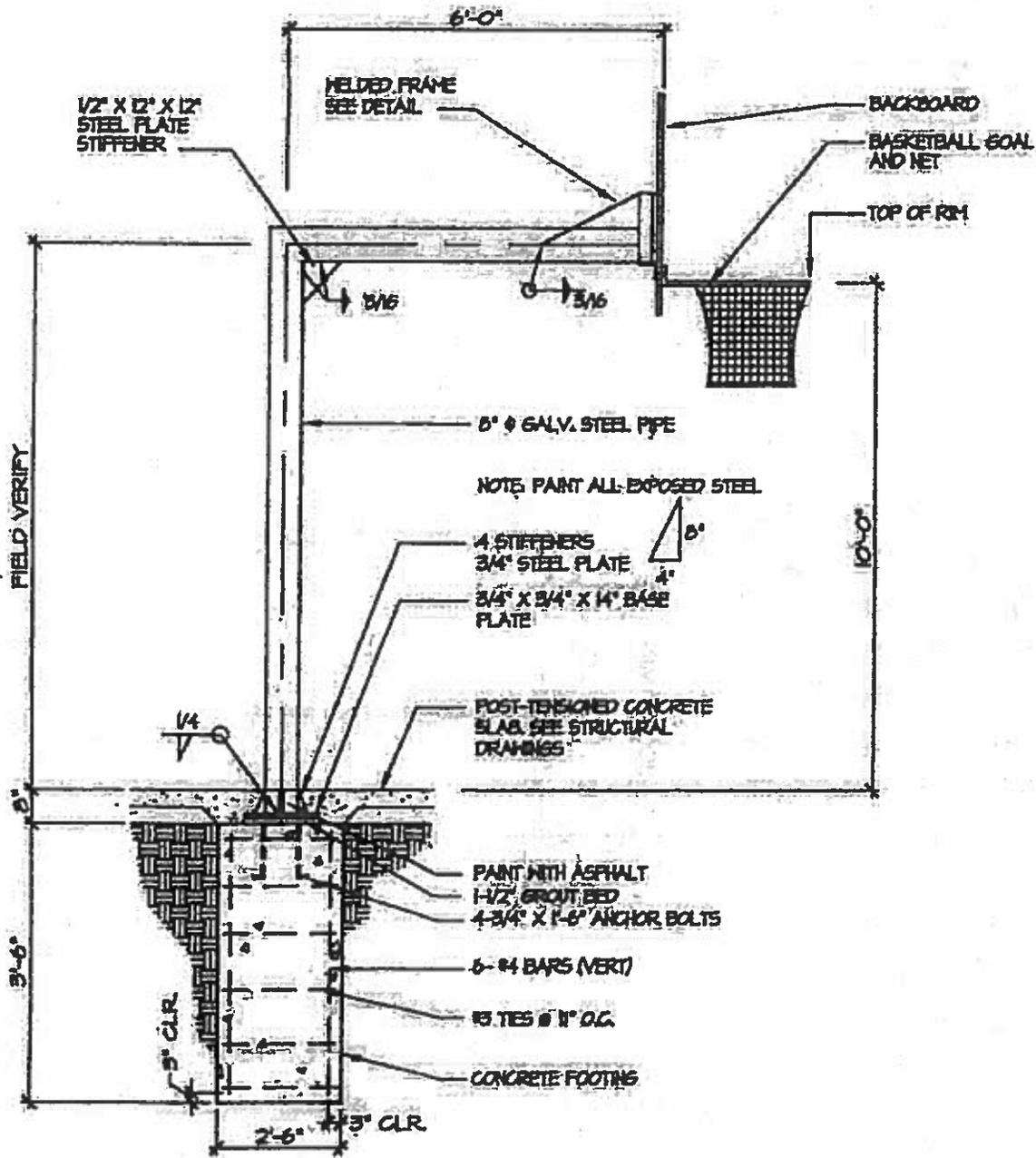
**Recreation Area
Feature Descriptions
and Specifications**

ATHLETIC FIELD LAYOUTS



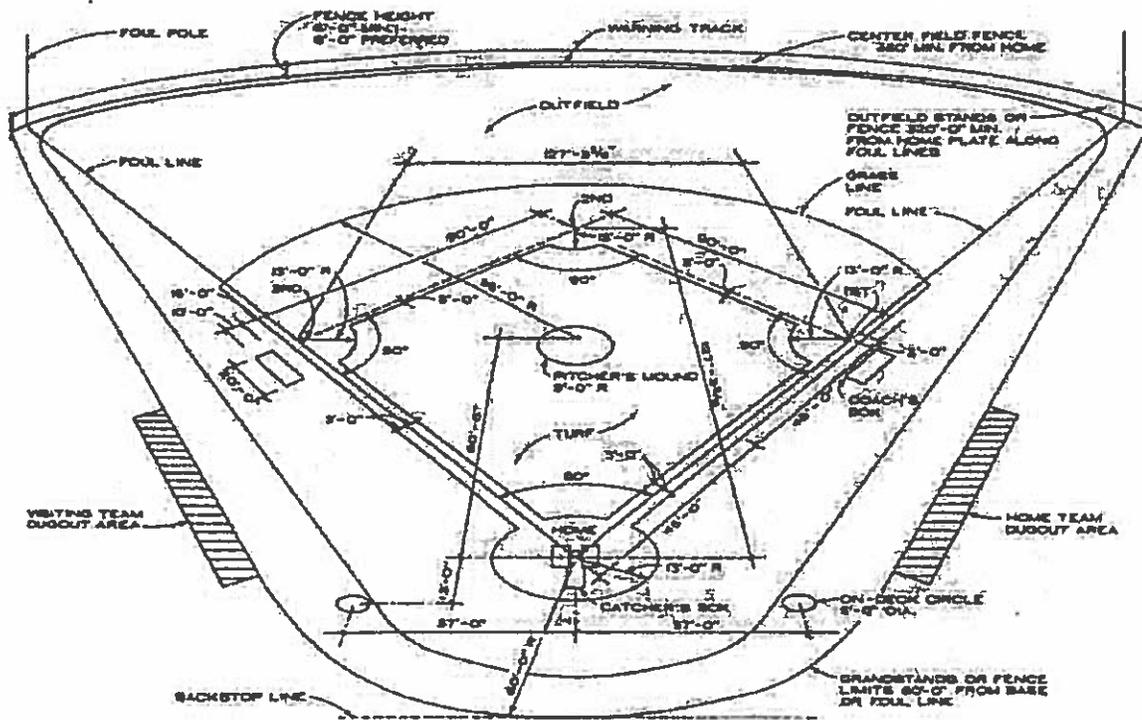
BASKETBALL COURT STRIPING PLAN
not to scale

ATHLETIC FIELD LAYOUTS



BASKETBALL AND BACKBOARD POST
not to scale

ATHLETIC FIELD LAYOUTS



-  5 1/2" DIAMETER
 -  5 3/8" DIAMETER
 -  5 1/2" DIAMETER
 -  2 1/8" TO 2 5/16" DIAMETER
- SOFTBALL
BASEBALL



NOTE: BASES ARE MADE OF WHITE CANVAS, FILLED WITH SOFT MATERIAL AND SECURED TO GROUND.
RST AND SRD



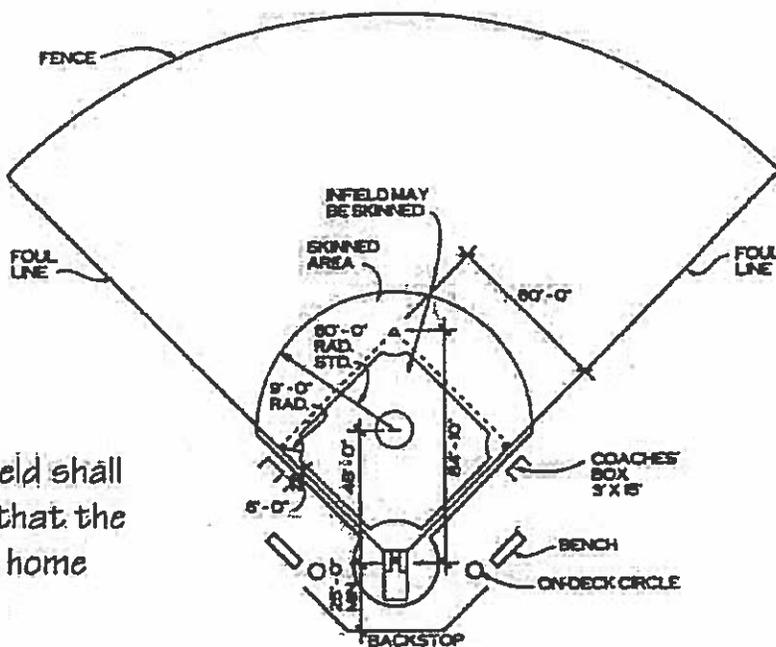
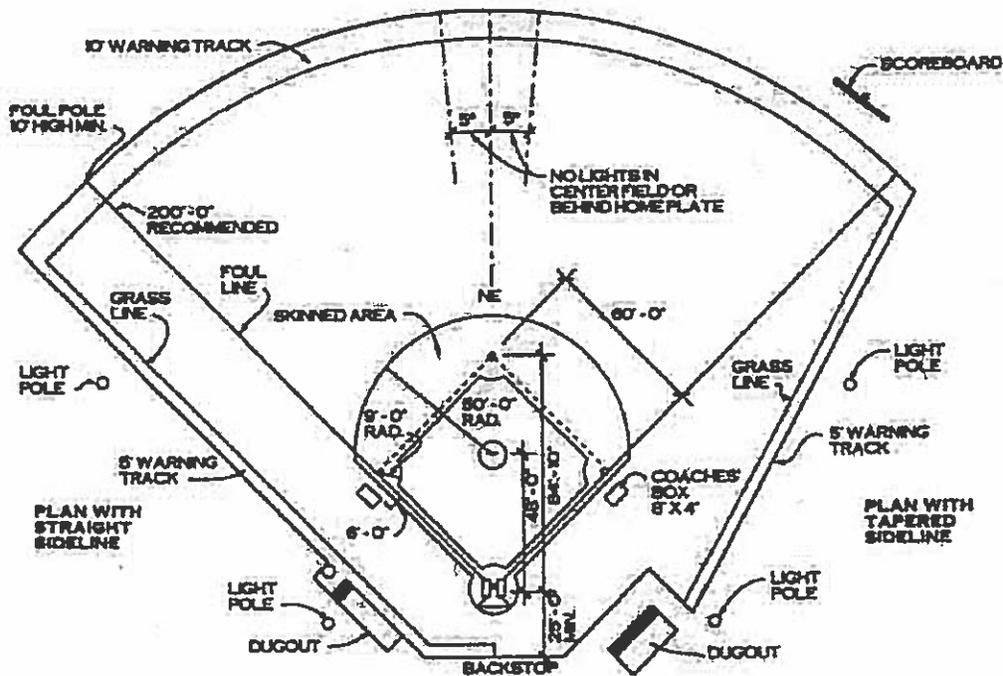
ORIENTATION- No standard - consider time of day for games; months when played; location of field, surrounding buildings and stands. East-northeast recommended by NCAA (home plate to center field)



FULL-SIZE BASEBALL

not to scale

ATHLETIC FIELD LAYOUTS



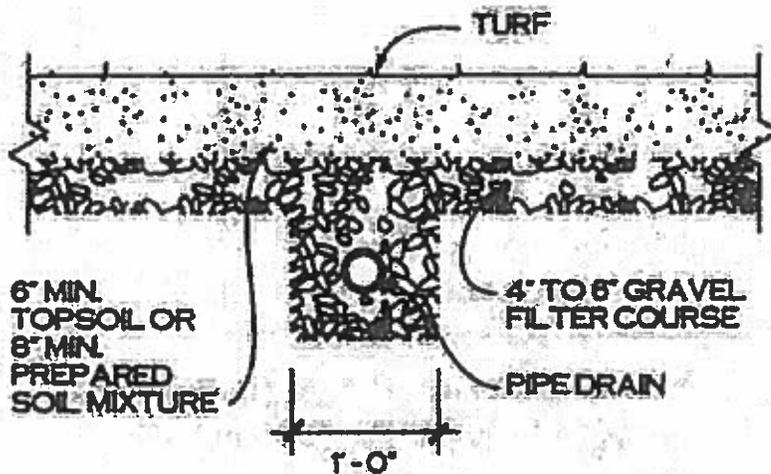
NOTE: The infield shall be graded so that the baselines and home plate are level



PLAN OF LITTLE LEAGUE BASEBALL FIELD

not to scale

ATHLETIC FIELD LAYOUTS



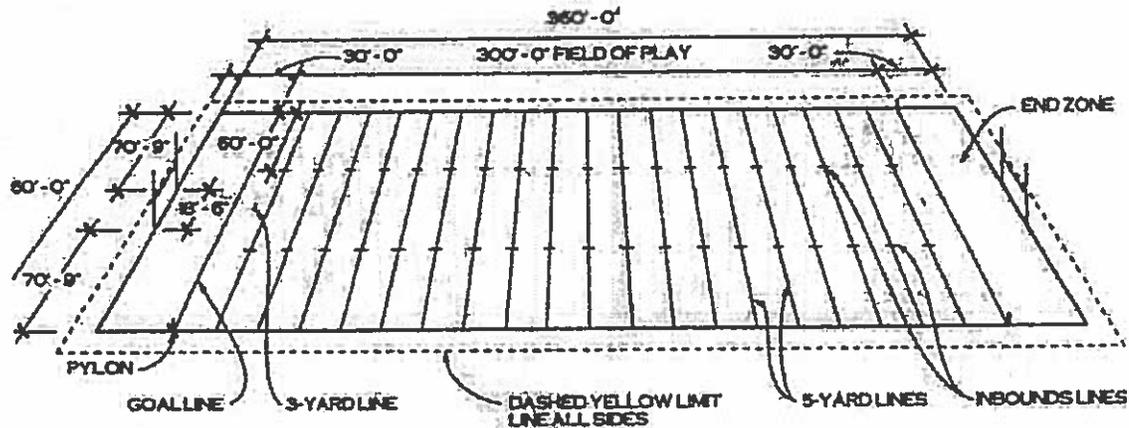
NOTES: Baselines should be level; if the diamond must pitch, the slope should not be more than 2% from third to first base or vice versa. The minimum slope of turf areas outside the skinned area is 1% when there is good subsoil drainage, 2.5% when drainage is poor.



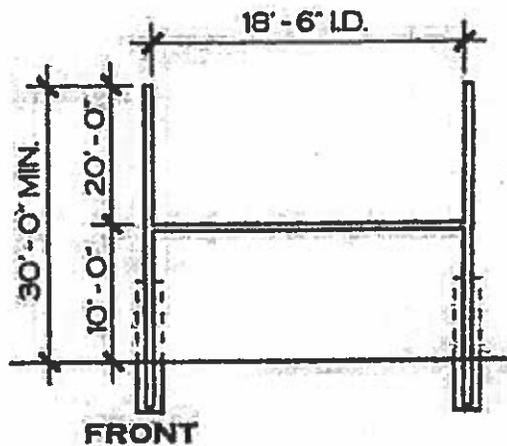
SECTION OF TURF AND SUBSOIL DRAIN

not to scale

ATHLETIC FIELD LAYOUTS



Playing field is 360 ft. long x 160 ft. wide. All field dimensions are 4 in' wide and are marked with a white, nontoxic material. All measurements are from the edge of the line closest to the center of the playing field. End zone markings should not overlap goal lines. Location of in-bound lines is 60 ft. (53 ft. 4 in. for high school) for college football. Marks should be 4 in. wide x 2 ft. long.

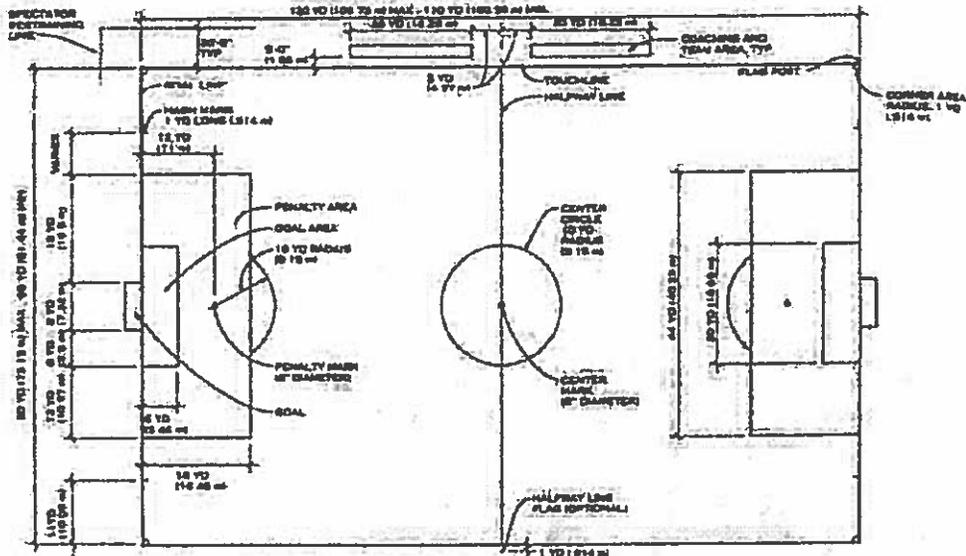


Goalposts should be padded to a height of 6 ft. Color of posts should be yellow or white.

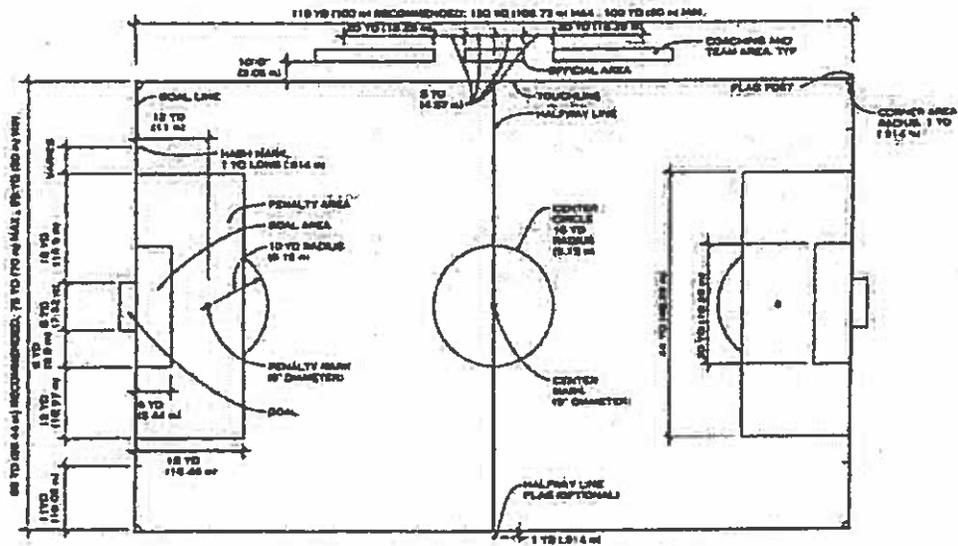


FOOTBALL- National Collegiate Athletic Association
not to scale

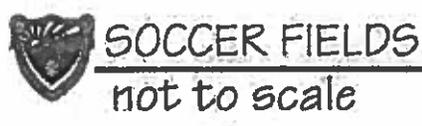
ATHLETIC FIELD LAYOUTS



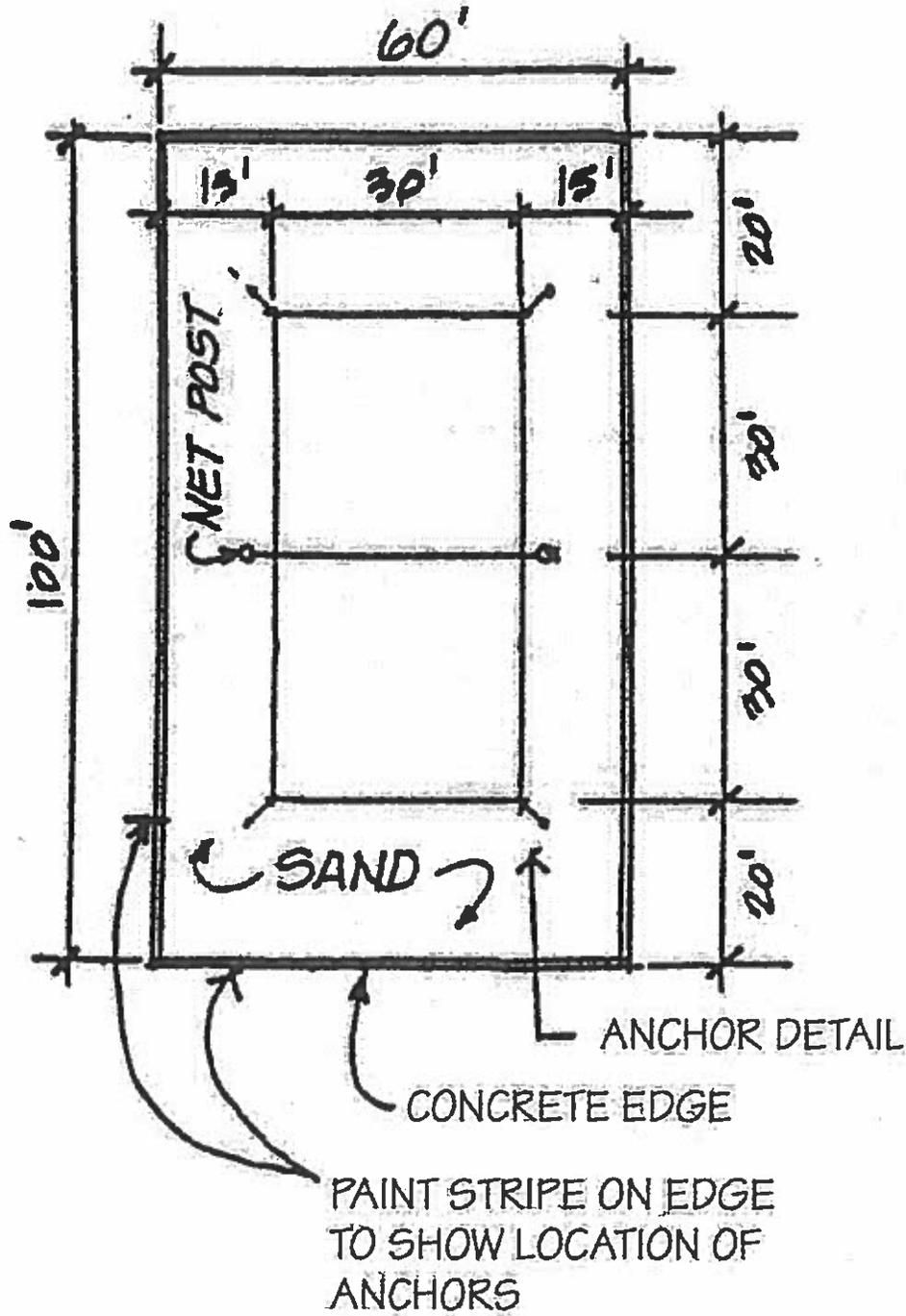
NCAA SOCCER- Recommended field dimensions are 75 yd. (90m.) wide x 120 yd. (109.73 m.) long. Field markings should be 4 in. (0.10 m.) wide.



HIGH SCHOOL SOCCER- Recommended field dimensions for middle school soccer are 55 yd. (50m.) wide x 100 yd. long. Field markings should be 4 in. (0.10 m.) wide.



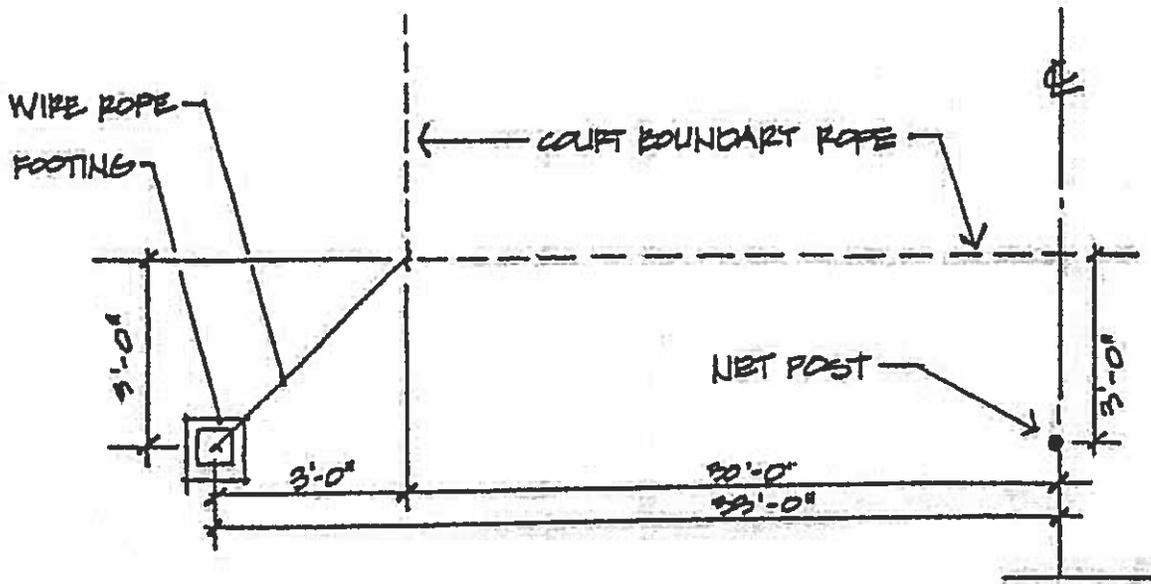
ATHLETIC FIELD LAYOUTS



SAND VOLLEYBALL COURT LAYOUT

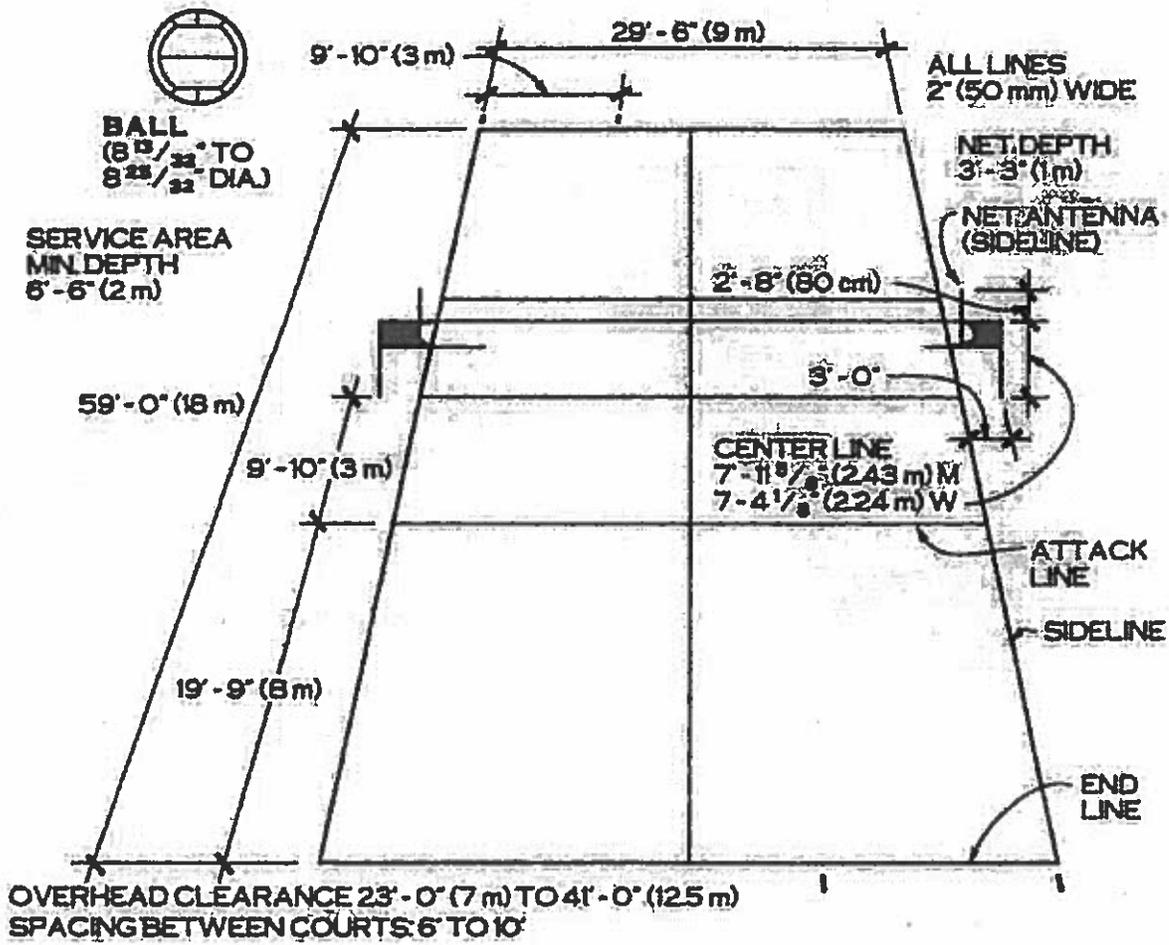
not to scale

ATHLETIC FIELD LAYOUTS



SAND VOLLEYBALL COURT ROPE ANCHOR PLAN VIEW
not to scale

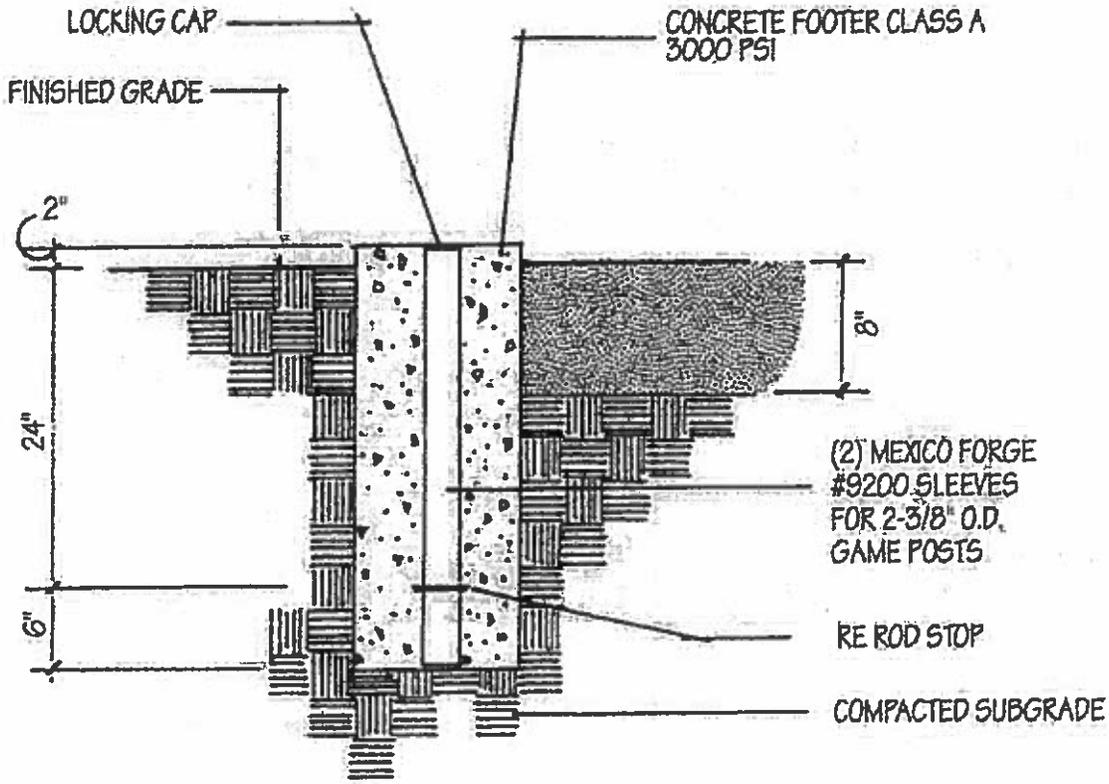
ATHLETIC FIELD LAYOUTS



VOLLEYBALL

not to scale

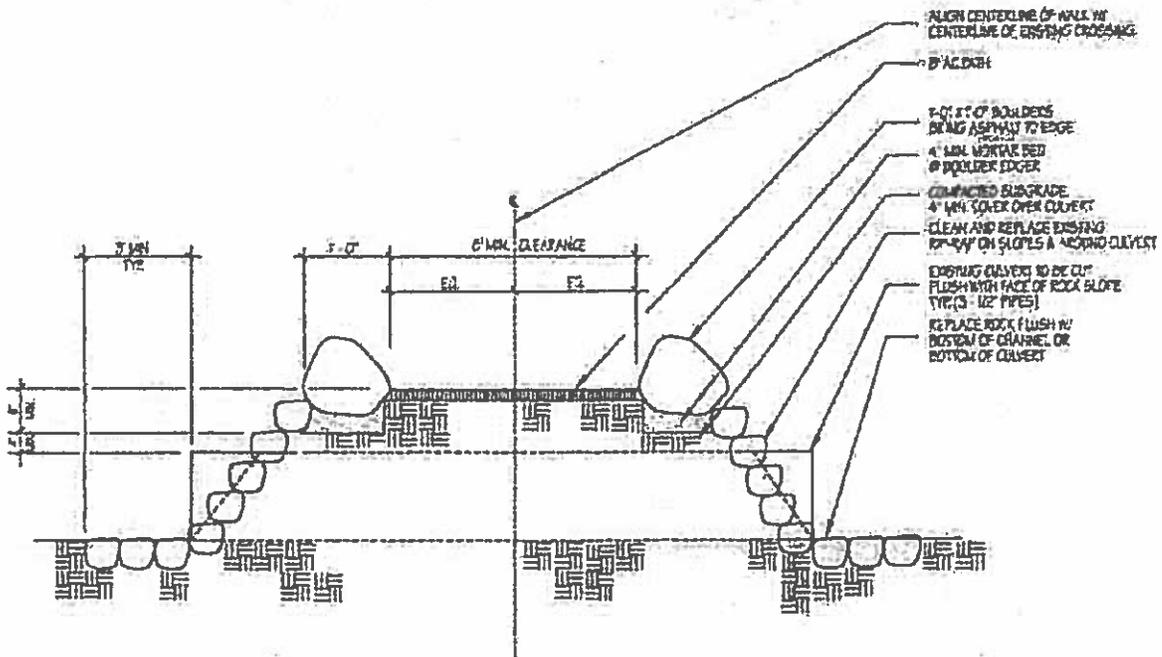
ATHLETIC FIELD LAYOUTS



GAME SLEEVE DETAIL

not to scale

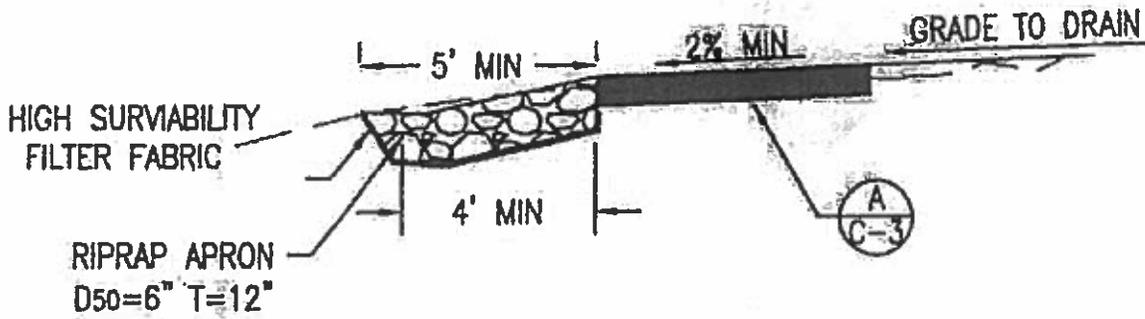
EROSION CONTROL



RIP RAP DETAIL

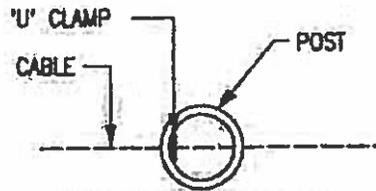
not to scale

EROSION CONTROL



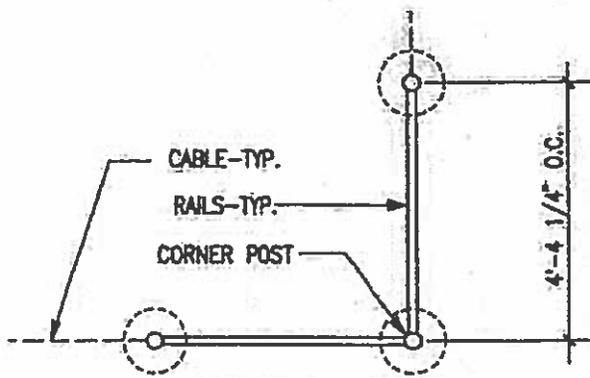
RIP RAP APRON DETAIL
not to scale

GATES AND FENCES

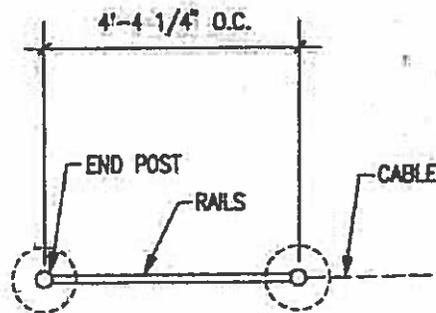


CABLE TO BE DRAWN TAUT
WITH A 'U' CLAMP AROUND CABLE
INSIDE OF EVERY 5TH POST IN LINE.

POST PLAN VIEW



CORNER UNIT-PLAN VIEW



END POST-PLAN VIEW

INSTALL END POST CONFIGURATION AT
ALL TERMINUS POINTS TO POST & CABLE RUNS.

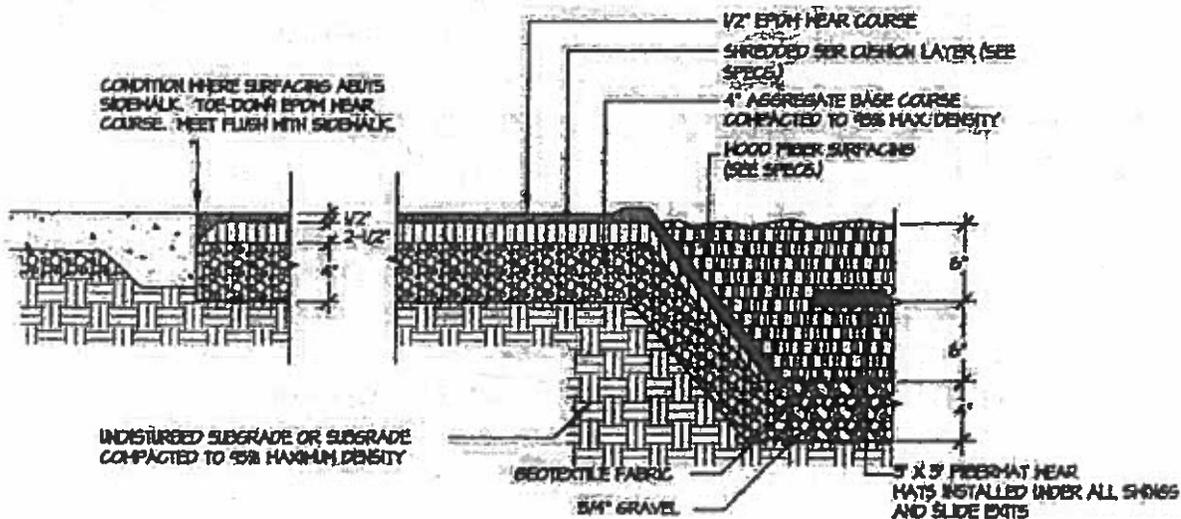


POST AND CABLE DETAIL
not to scale

PLAYGROUNDS

NOTES:

1. HOOD FIBER SURFACING TO BE INSTALLED OVER ENTIRE PLAYGROUND AREA EXCEPT WHERE POURED-IN-PLACE RUBBER RESILIENT SAFETY SURFACING OCCURS.
2. TOTAL THICKNESS OF RESILIENT SAFETY SURFACING IS BASED ON THE MAXIMUM FALL HEIGHT OF THE PLAY EQUIPMENT.
3. RESILIENT SAFETY SURFACES WEAR COURSE COLOR SHALL BE 50% BLACK AND 50% COLORS AS SELECTED BY THE OWNER'S REPRESENTATIVE.
4. CONTRACTOR IS RESPONSIBLE FOR THE EXCAVATION AND PREPARATION OF THE AREA TO RECEIVE THE RESILIENT SAFETY SURFACING TO MANUFACTURER'S RECOMMENDATIONS.
5. SEE ALSO THE SPECIFICATIONS FOR ADDITIONAL RESILIENT SAFETY SURFACING REQUIREMENTS.



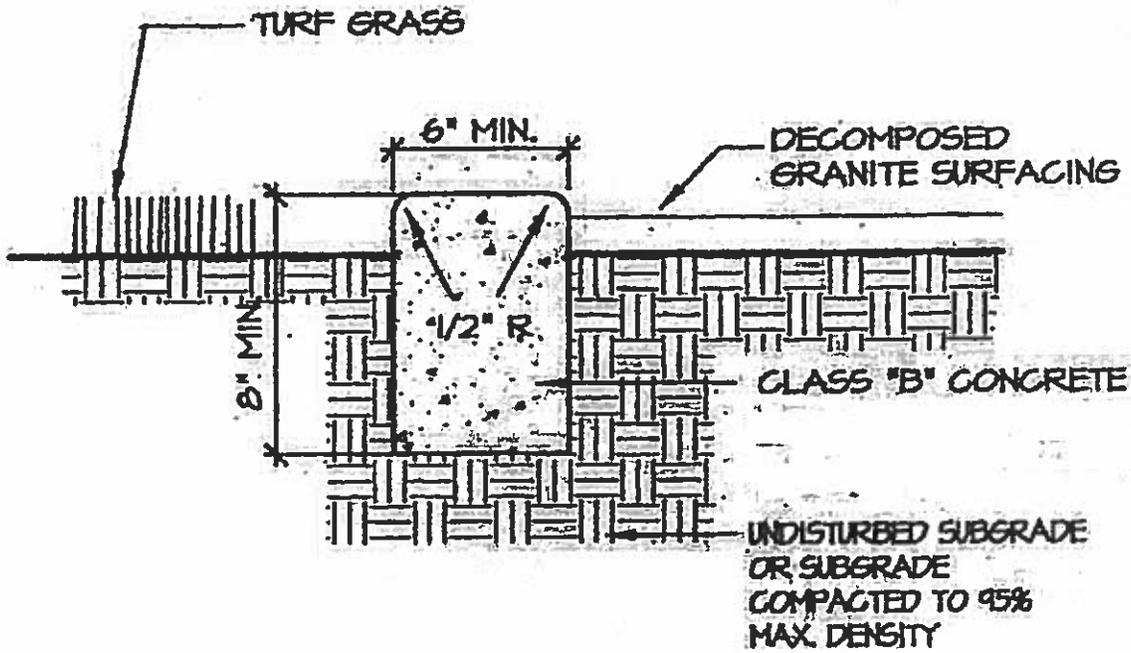
RESILIENT SAFETY SURFACING DETAIL

not to scale

PLAYGROUNDS

NOTES:

1. PROVIDE EXPANSION JOINTS EVERY 40' O.C. MAX.
AND CONTROL JOINTS EVERY 10' MAX.



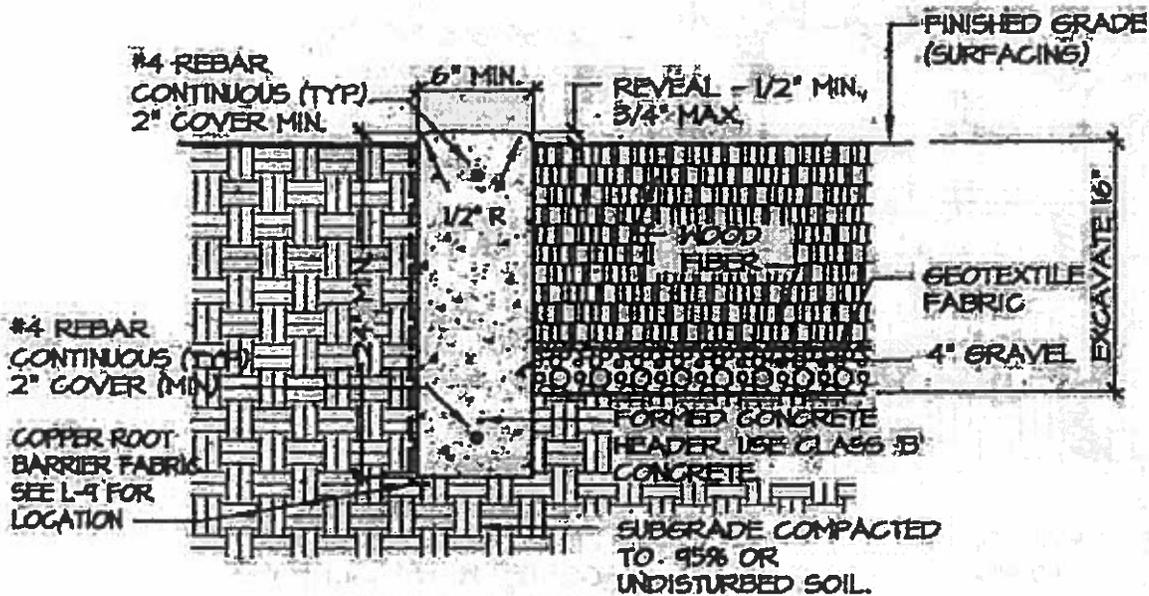
CONCRETE HEADER AT EDGE OF TURF

not to scale

PLAYGROUNDS

NOTES

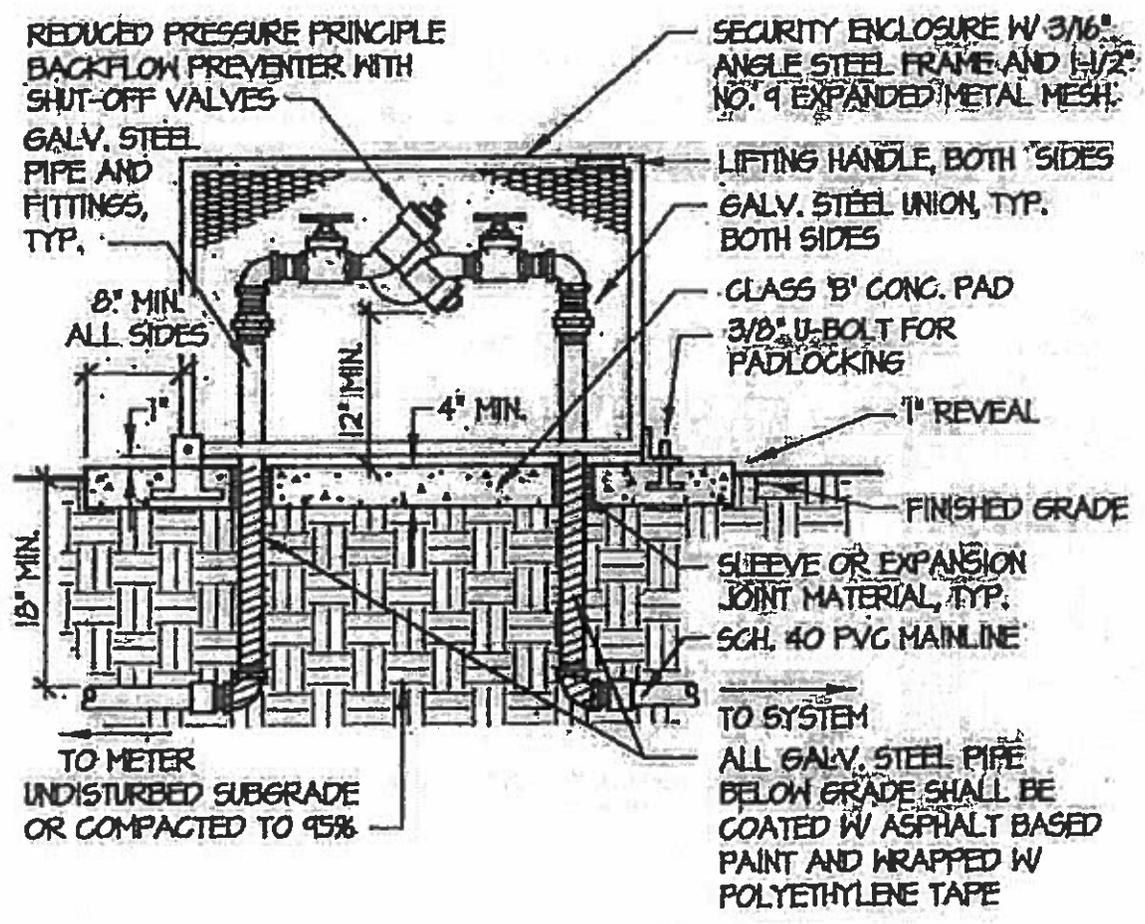
1. PROVIDE EXPANSION JOINTS EVERY 40' MAX AND CONTROL JOINTS EVERY 10' MAX.
2. TOP OF CONCRETE EDGER SHALL MEET FLUSH WHEREVER IT CONTACTS OTHER PAVEMENT OR CURBS. PROVIDE 1/2" BITUMINOUS JOINT FILLER WHEREVER EDGER MEETS EXISTING CONSTRUCTION.



CONCRETE EDGER AT PLAYGROUND

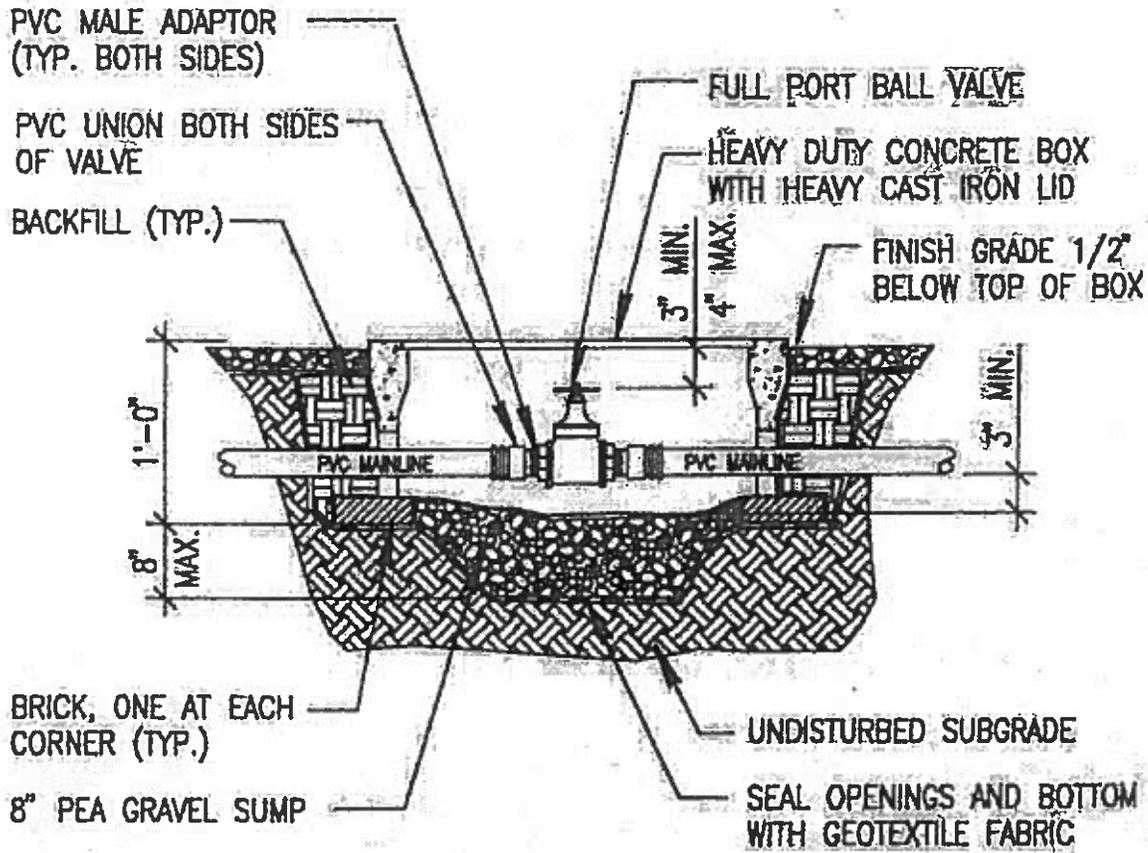
not to scale

PLUMBING AND IRRIGATION



 **BACKFLOW PREVENTER IN SECURITY ENCLOSURE**
not to scale

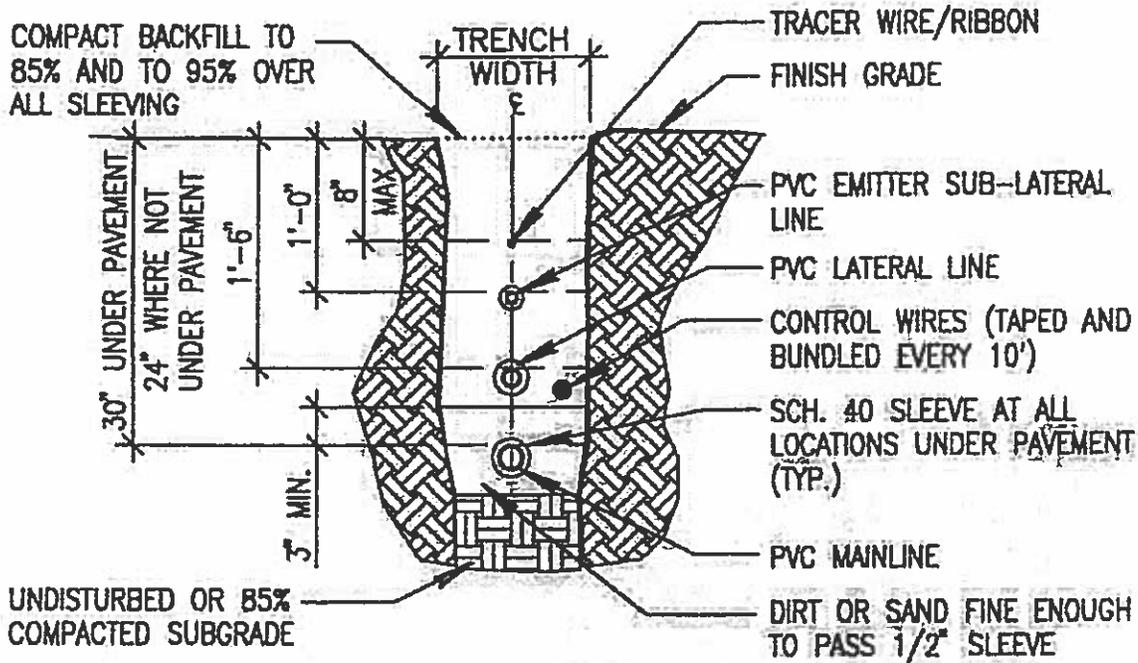
PLUMBING AND IRRIGATION



ISOLATION VALVE

not to scale

PLUMBING AND IRRIGATION



NOTES:

1. ALL PIPE SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. NO PIPE OR WIRE SHALL BE LOCATED UNDER PAVING UNLESS IT IS SLEEVED.
3. COLOR TRACER WIRE/RIBBON TO BE RUN ALONG DITCH ALIGNMENT AT CENTERLINE OF PIPES (6"-8" DEEP). AN EXPOSED LOOP IN THE TRACER WIRE/RIBBON SHALL BE PROVIDED AT ALL VALVES, PULL BOXES, AND THE END OF ALL SLEEVES. TRACER WIRE SHALL BE #16 GREEN COATED COPPER WIRE.



IRRIGATION TRENCHING

not to scale

PLUMBING AND IRRIGATION

NOTE: USE TEFLON TAPE ON ALL THREADED CONNECTIONS.

PLASTIC VALVE BOX W/
COVER AND EXTENSION(S)
AS REQUIRED

1/2" REVEAL

10" MIN.

ELECTRIC REMOTE
CONTROL MASTER
VALVE, SIZE AS NOTED

FINISHED GRADE

SCHEDULE 80 PVC
UNION, TYP. OF 2

SCHEDULE 80 PVC
MALE ADAPTER,
TYP. OF 2

SCH. 40 PVC MAINLINE

VALVE TO BE FIRMLY
SUPPORTED BY A 4" DEEP
(3/4" ϕ) GRAVEL BED

BRICK, TYPICAL
OF FOUR, ONE AT
EACH CORNER

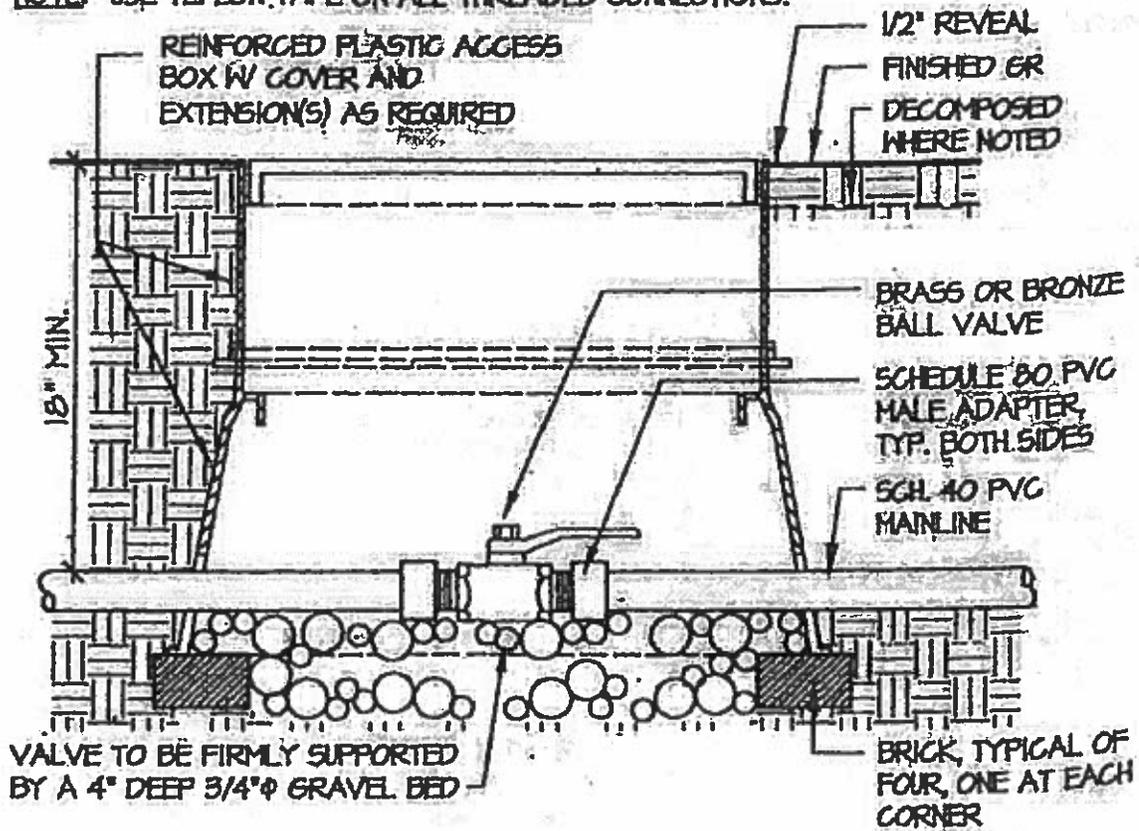


MASTER VALVE ASSEMBLY

not to scale

PLUMBING AND IRRIGATION

NOTE: USE TEFLON TAPE ON ALL THREADED CONNECTIONS.



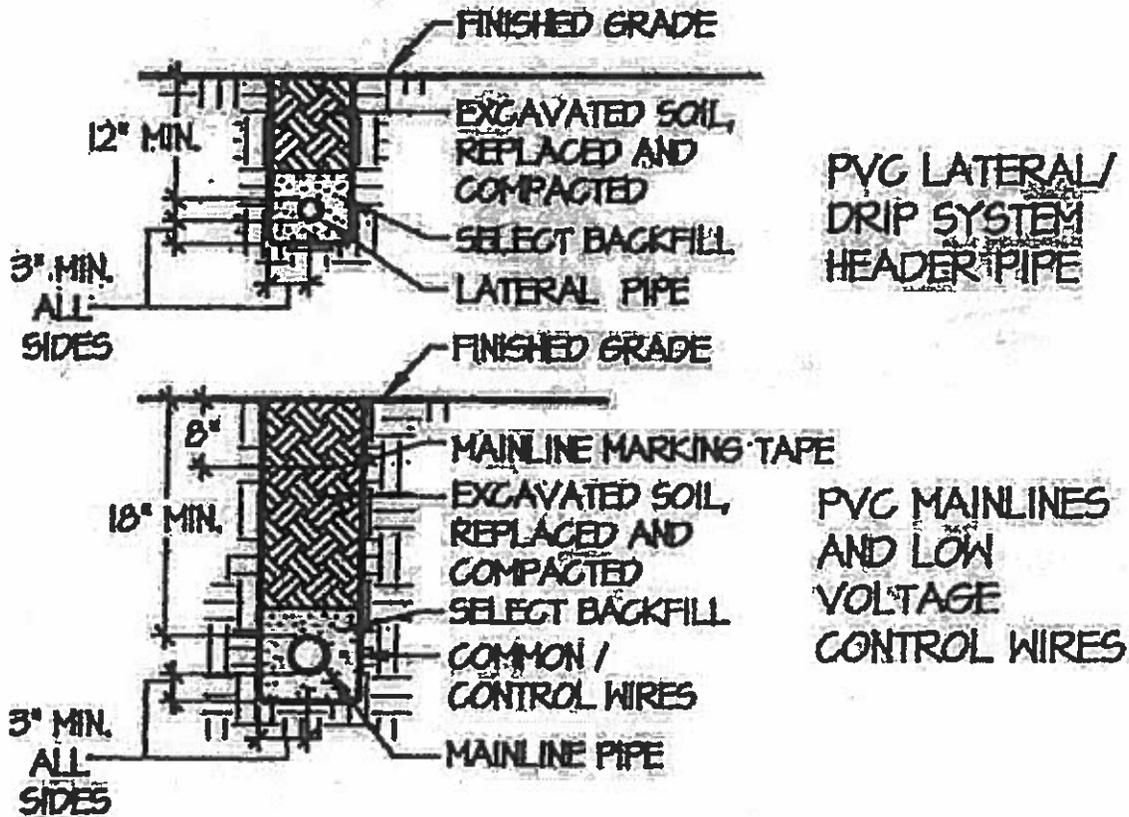
MAINLINE ISOLATION (BALL) VALVE

not to scale

PLUMBING AND IRRIGATION

NOTES:

1. SELECT BACKFILL SHALL BE SAND OR SOIL FREE OF ROCKS AND STONES LARGER THAN 1/2" DIA.
2. BACKFILL MATERIAL SHALL BE WATERED IN AND COMPACTED TO DENSITY OF ADJACENT UNDISTURBED SOIL.

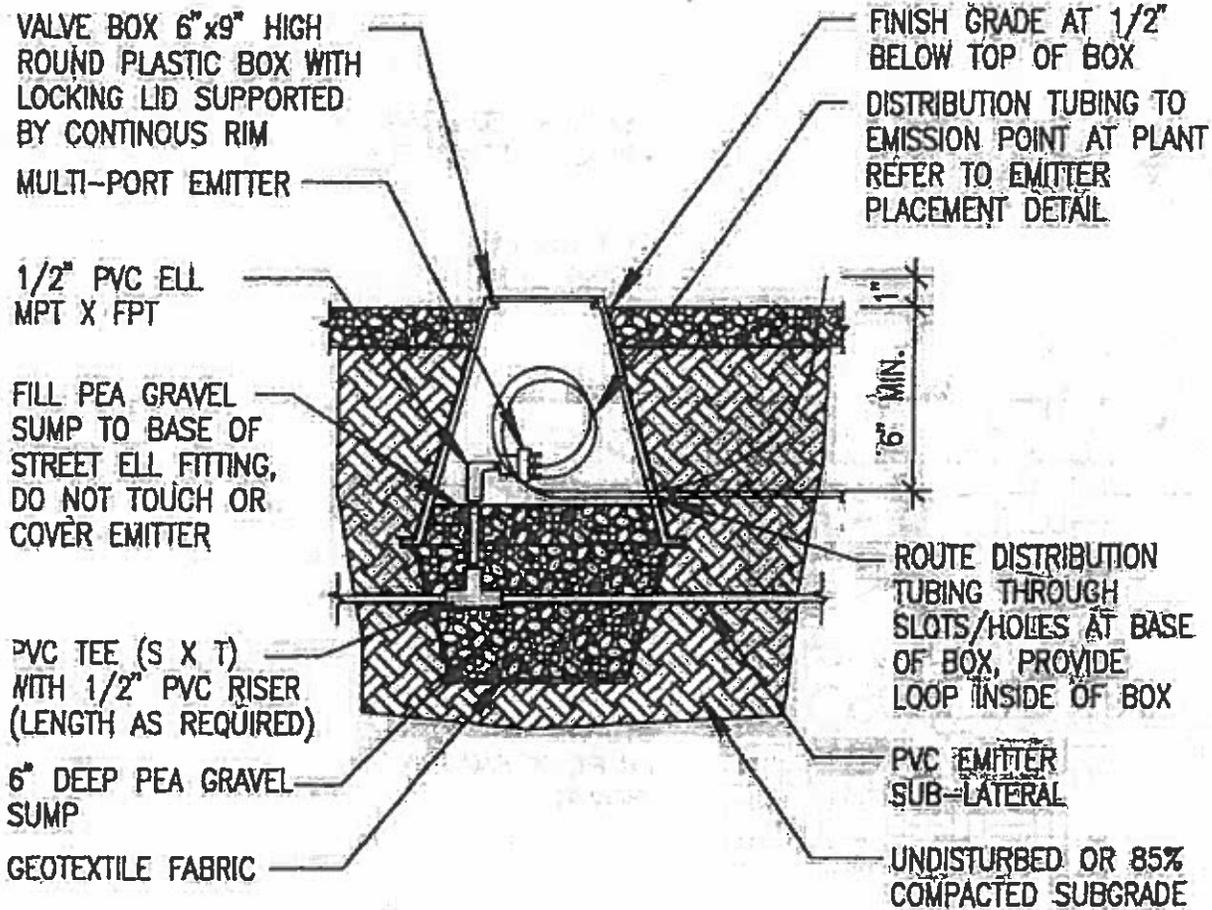


TRENCHING AND PIPE INSTALLATION-
 LATERALS AND MAINLINES WITH MARKING TAPE



not to scale

PLUMBING AND IRRIGATION



NOTES:

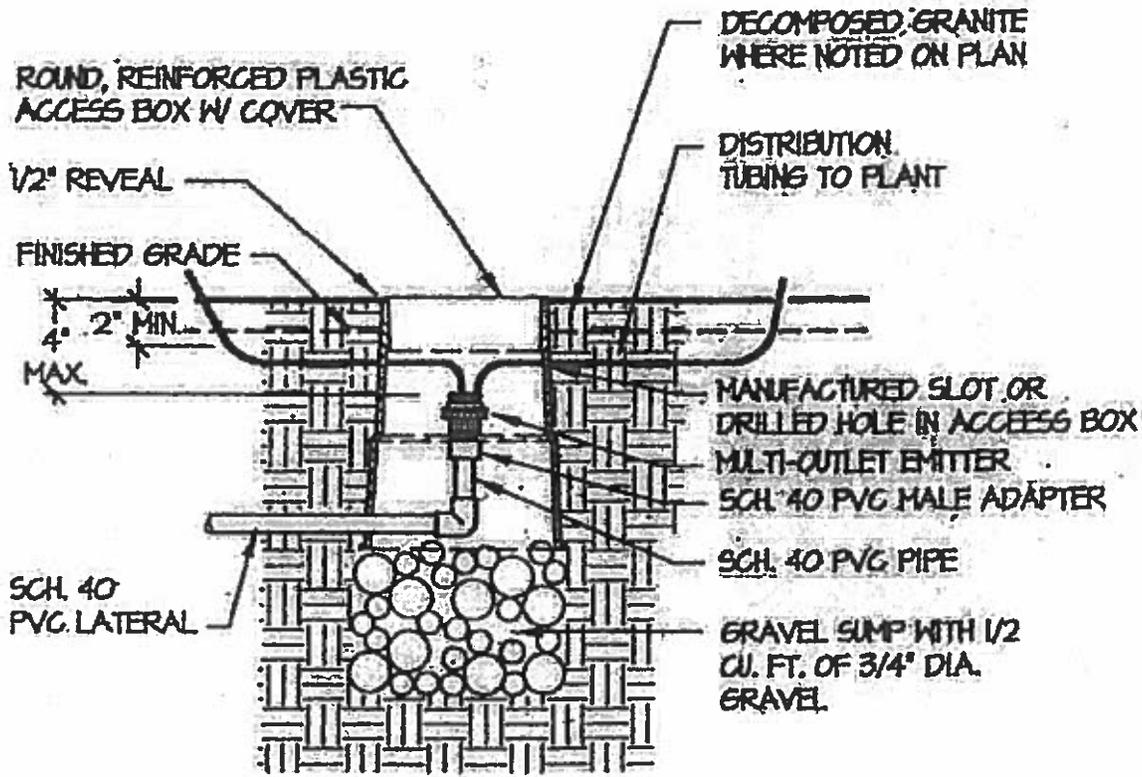
1. REFER TO SPECIFICATIONS FOR PIPING MATERIALS AND REQUIREMENTS.
2. REFER TO PLANT SCHEDULE FOR NUMBER OF OUTLETS AND GPH PER PLANT.



MULTI-OUTLET EMITTER ON PVC LATERAL

not to scale

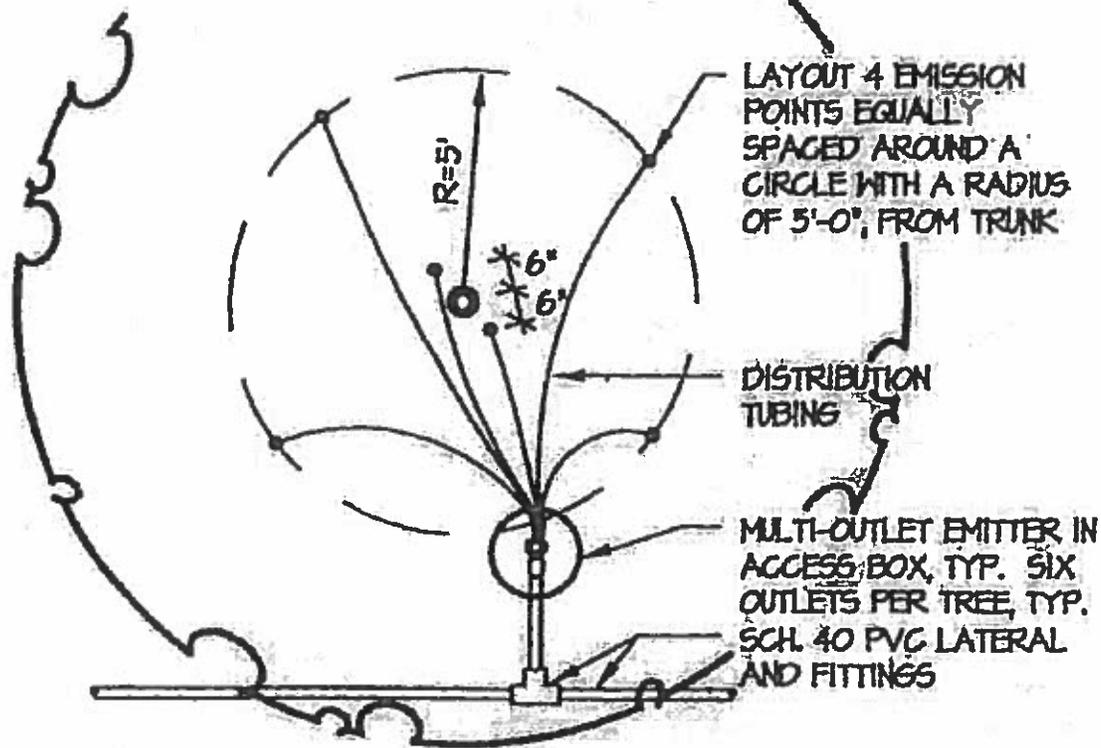
PLUMBING AND IRRIGATION



MULTI-OUTLET EMITTER
not to scale

PLUMBING AND IRRIGATION

NOTE: LAYOUT DISTRIBUTION TUBING AS SHOWN AND LOCATE DISCHARGE POINT 12" ABOVE FINISHED GRADE.

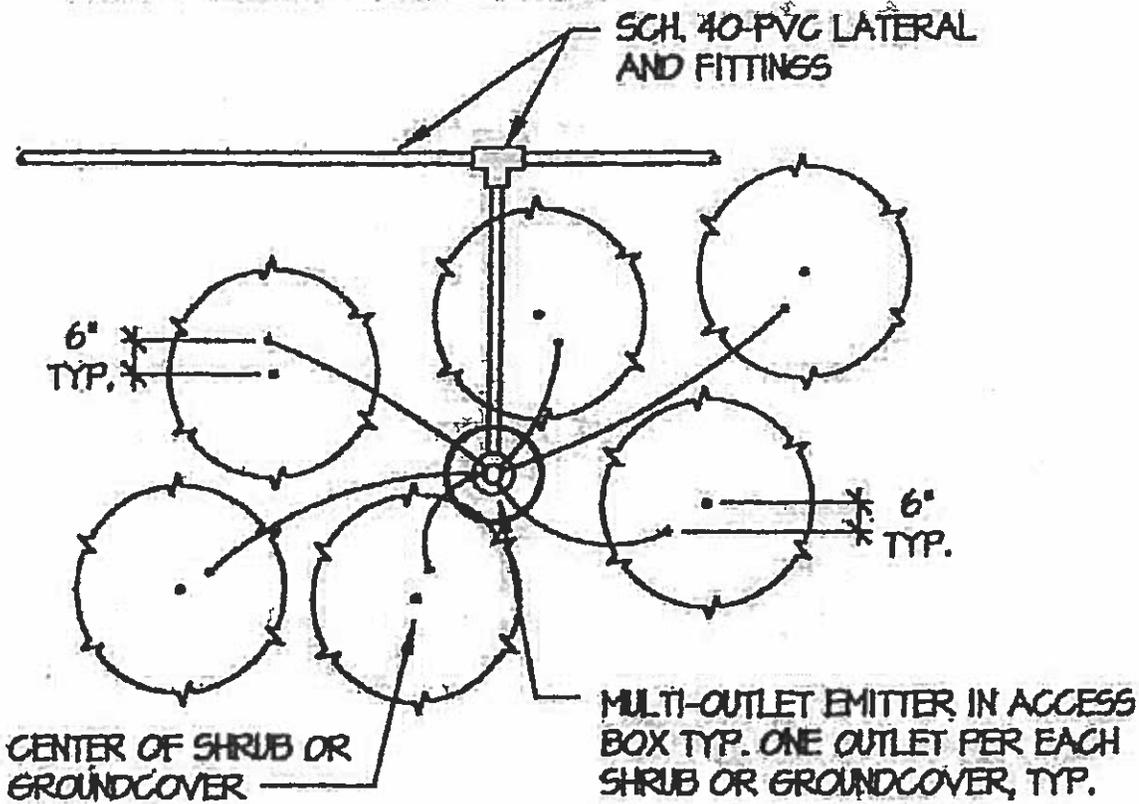


EMITTER DISTRIBUTION LAYOUT AT TREE - SIX OUTLET
not to scale

PLUMBING AND IRRIGATION

NOTES:

1. LENGTH OF DISTRIBUTION TUBING SHALL NOT EXCEED 8'-0".
2. LAYOUT DISTRIBUTION TUBING AS SHOWN AND LOCATE DISCHARGE POINT 4" ABOVE FINISHED GRADE.



EMITTER DISTRIBUTION TUBING LAYOUT AT SHRUBS
not to scale

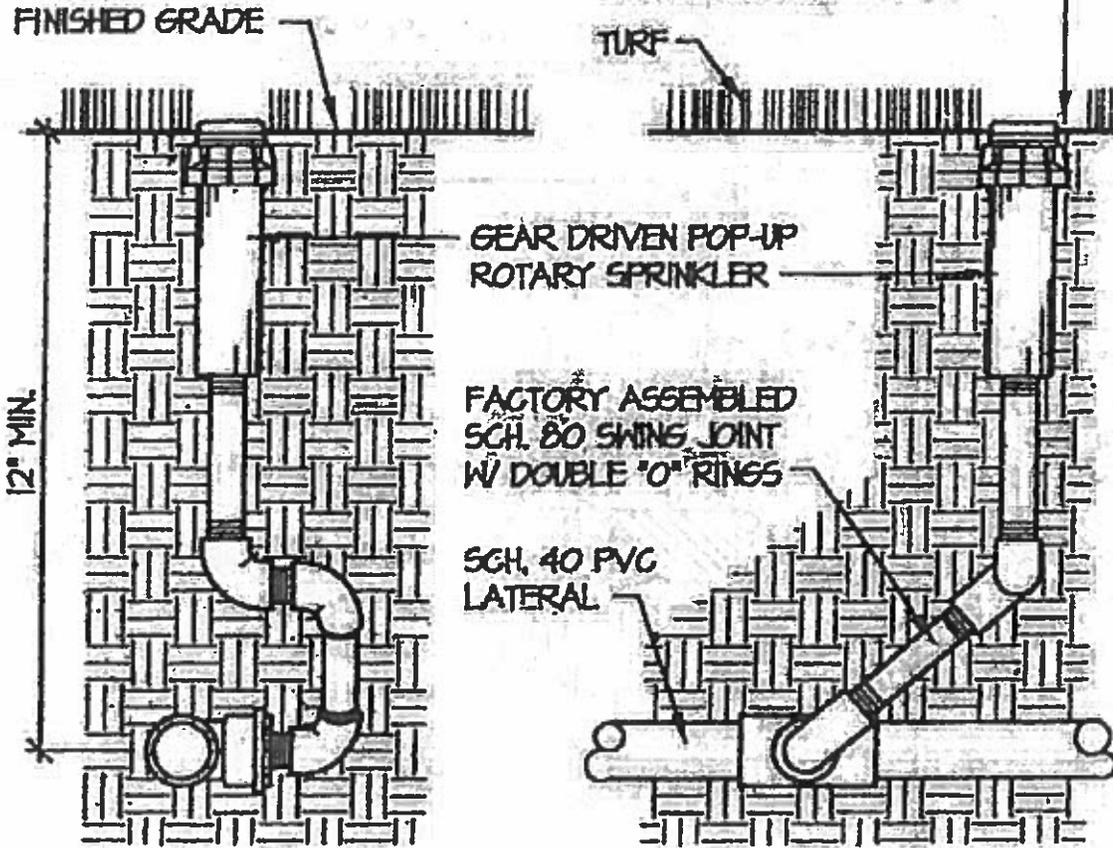
PLUMBING AND IRRIGATION

NOTE:

1. SET SPRINKLER HEAD A MINIMUM OF 2" FROM ANY ADJACENT PAVING OR EDGER.

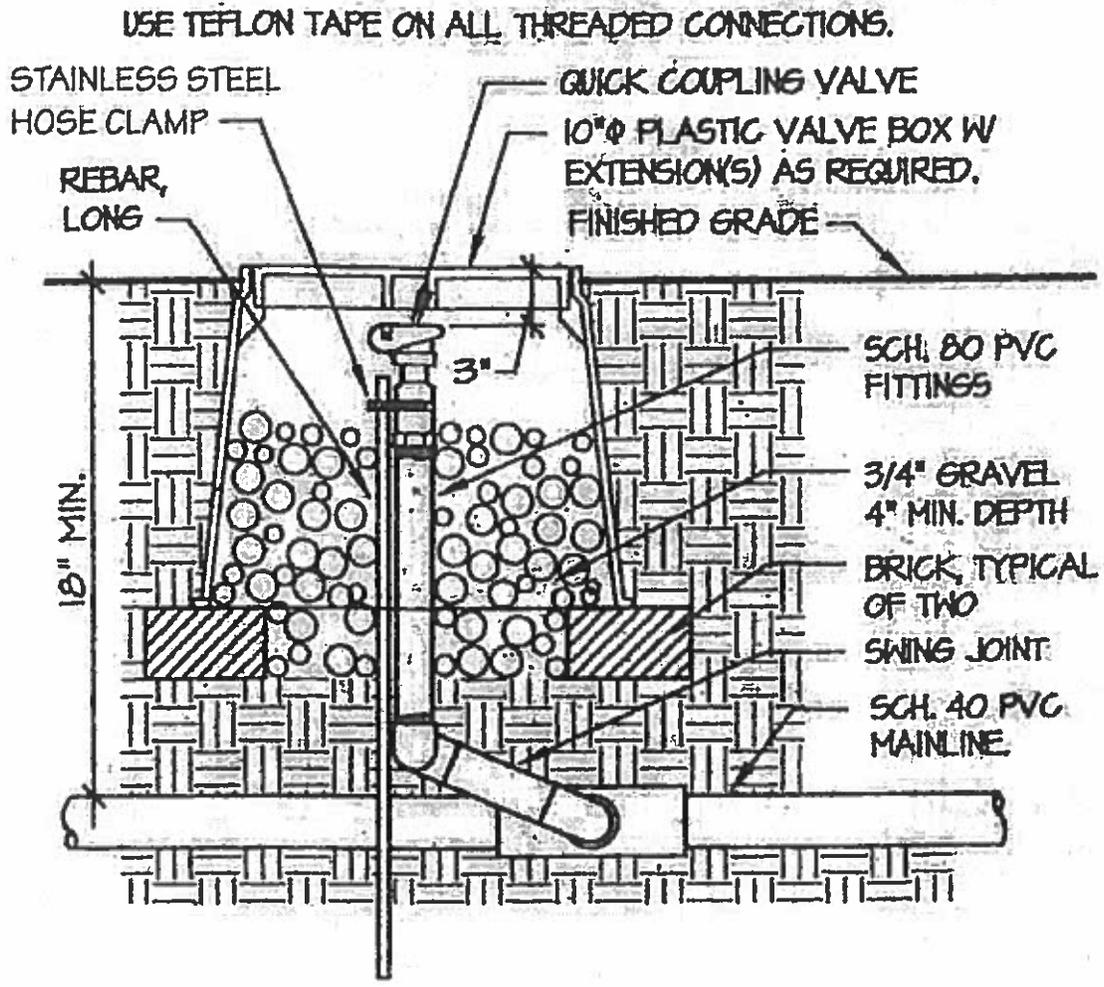
2. SWING JOINT: PIPE SIZE EQUAL TO SPRINKLER INLET SIZE

SET TOP OF SPRAY HEAD 1/4" ABOVE FINISHED GRADE



GEAR DRIVEN POP-UP SPRAY
not to scale

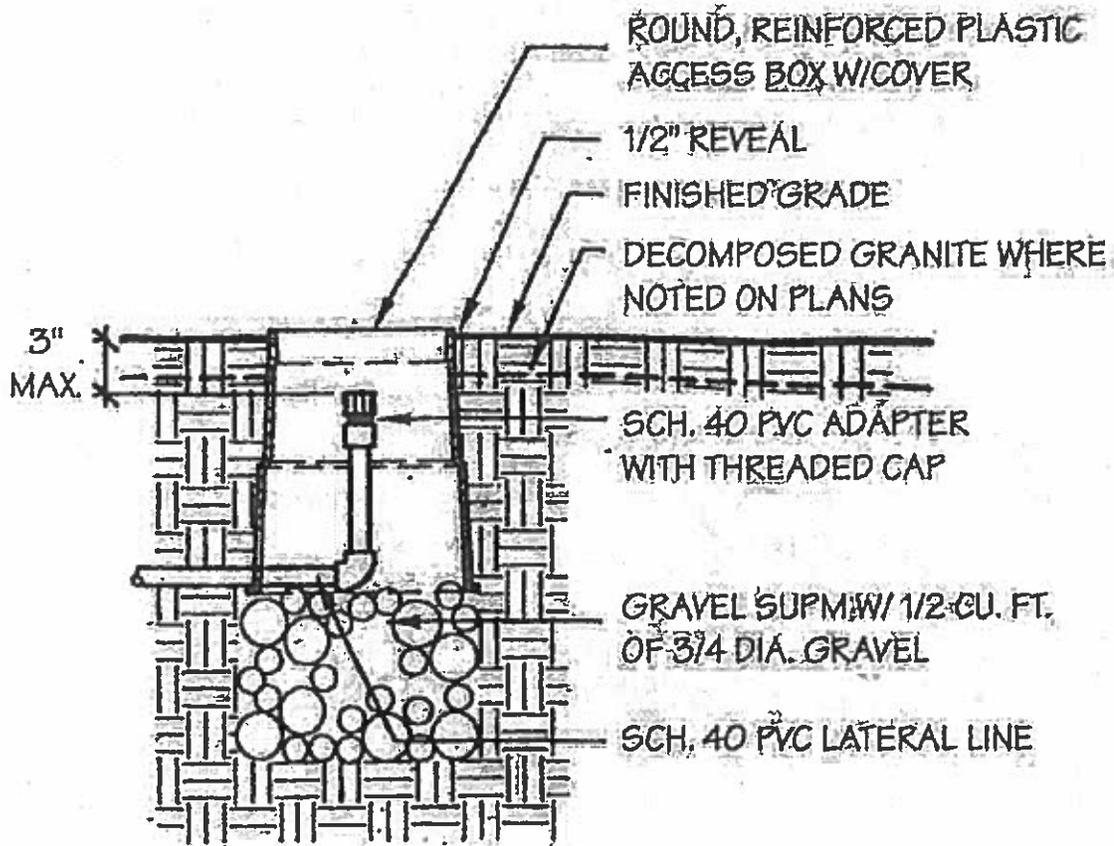
PLUMBING AND IRRIGATION



QUICK COUPLING VALVE ASSEMBLY

not to scale

PLUMBING AND IRRIGATION

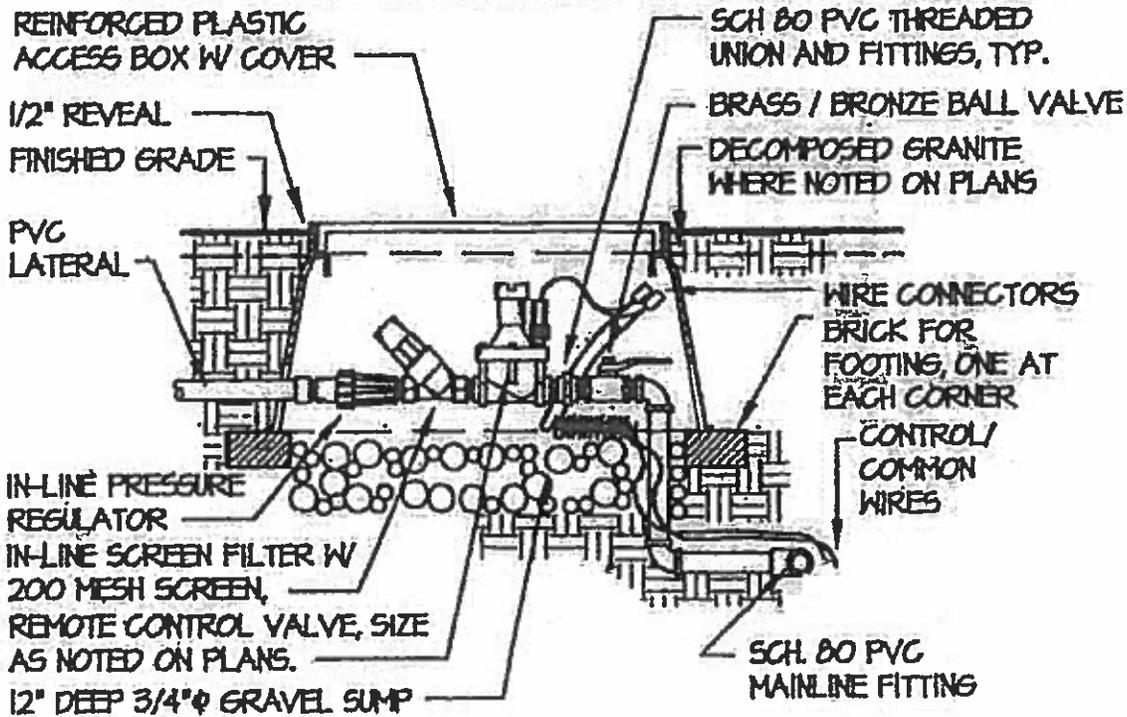


FLUSH CAP (PVC) IN ACCESS BOX

not to scale

PLUMBING AND IRRIGATION

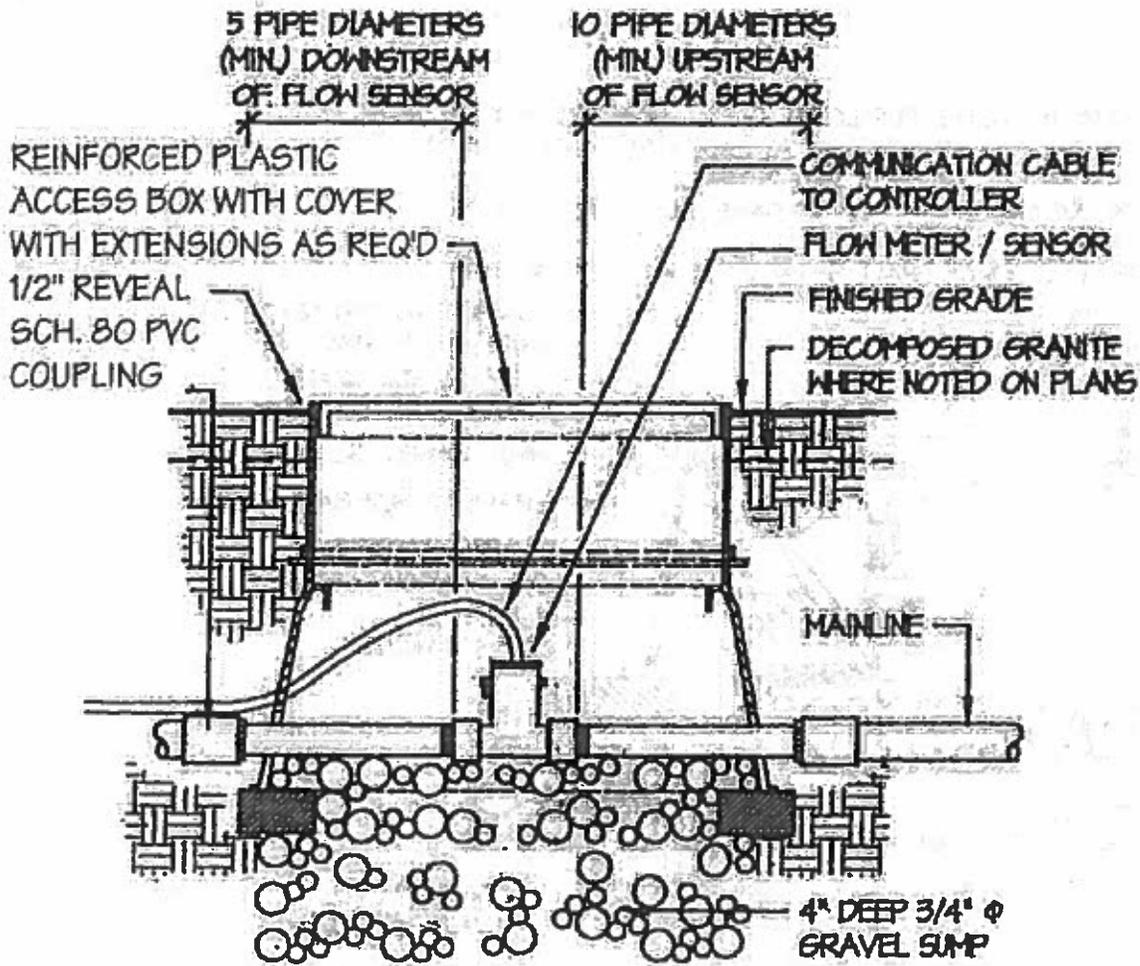
- NOTES:**
1. ALL WIRES TO BE INSTALLED PER LOCAL CODE. TAPE AND BUNDLE WIRES EVERY 20'. PROVIDE EXPANSION COIL AT EACH WIRE CONNECTION IN VALVE BOX (WRAP AROUND 1/2" Ø PIPE 15 TIMES).
 2. COMPACT SOIL AROUND VALVE BOX TO SAME DENSITY AS ADJACENT UNDISTURBED SOIL.
 3. ALL THREADED PVC JOINTS SHALL BE WRAPPED WITH TEFLON TAPE.



REMOTE CONTROL VALVE ASSEMBLY - DRIP ZONE

not to scale

PLUMBING AND IRRIGATION

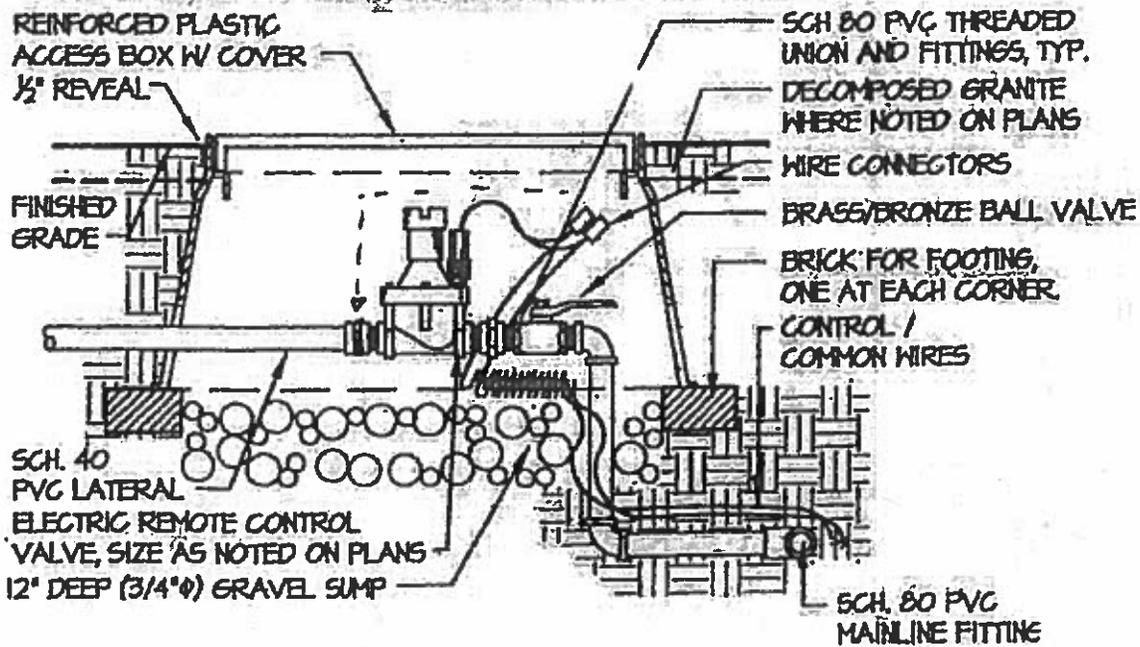


FLOW METER / SENSOR ASSEMBLY
not to scale

PLUMBING AND IRRIGATION

NOTES:

1. ALL WIRES TO BE INSTALLED PER LOCAL CODE. TAPE AND BUNDLE WIRES EVERY 20'. PROVIDE EXPANSION COIL AT EACH WIRE CONNECTION IN VALVE BOX (WRAP AROUND 1/2" Ø PIPE 15 TIMES).
2. COMPACT SOIL AROUND VALVE BOX TO SAME DENSITY AS ADJACENT UNDISTURBED SOIL.
3. ALL THREADED PVC JOINTS SHALL BE WRAPPED WITH TEFLON TAPE.

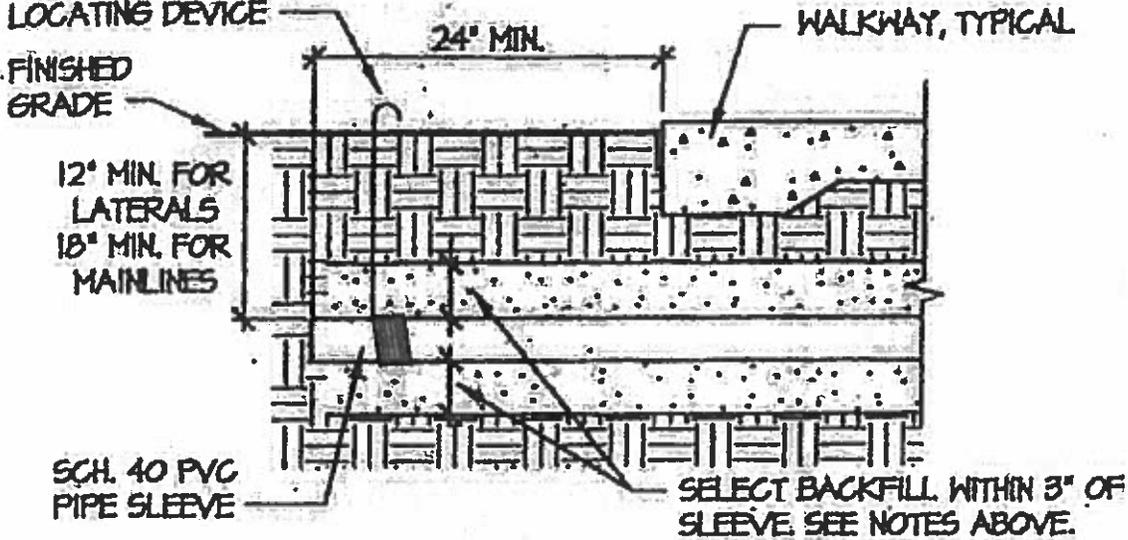


SPRAY ZONE REMOTE CONTROL VALVE

not to scale

PLUMBING AND IRRIGATION

WRAP #12 GA. GALVANIZED WIRE AROUND EACH END OF SLEEVE (10 WRAPS MIN) AND EXTEND TO SURFACE AS A LOCATING DEVICE

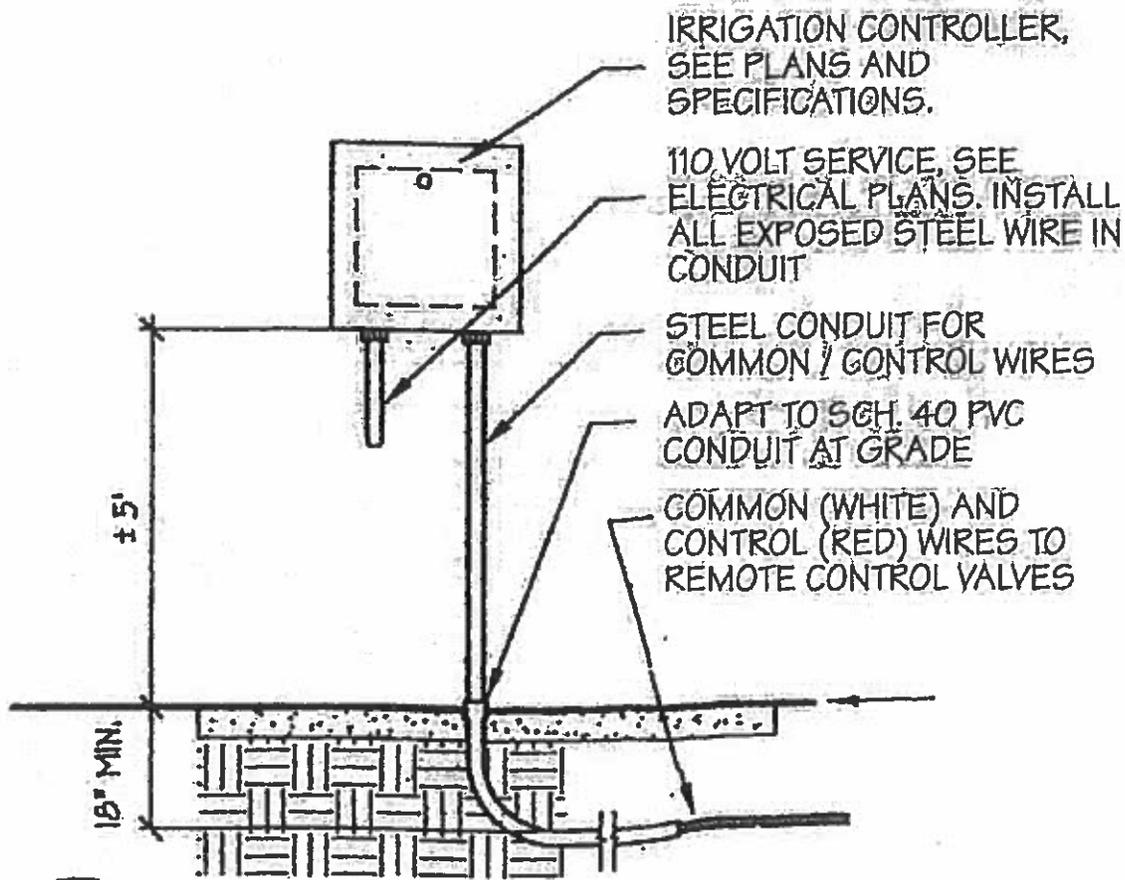


SLEEVE UNDER WALKWAY

not to scale

PLUMBING AND IRRIGATION

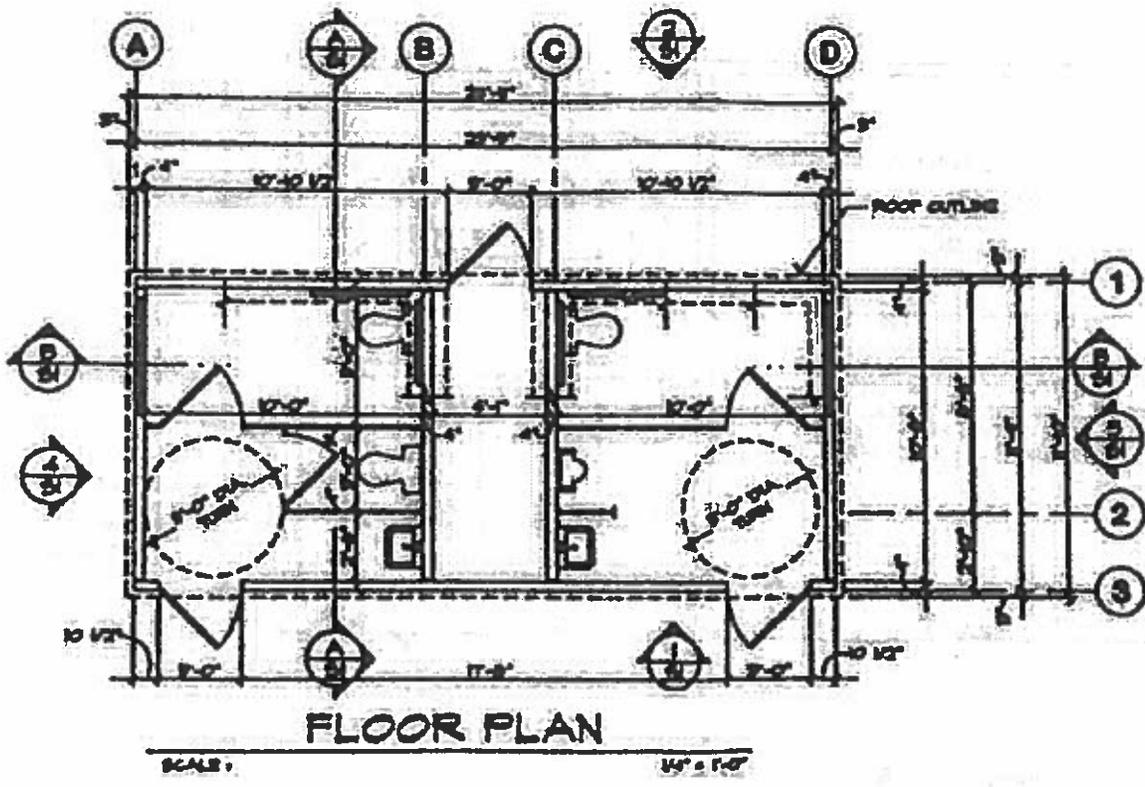
NOTE: COORDINATE INSTALLATION OF IRRIGATION CONTROLLER WITH OWNER'S REPRESENTATIVE. BEFORE INSTALLATION, OBTAIN APPROVAL FOR CONTROLLER LOCATION AND WIRE ROUTING.



IRRIGATION CONTROLLER INSTALLATION

not to scale

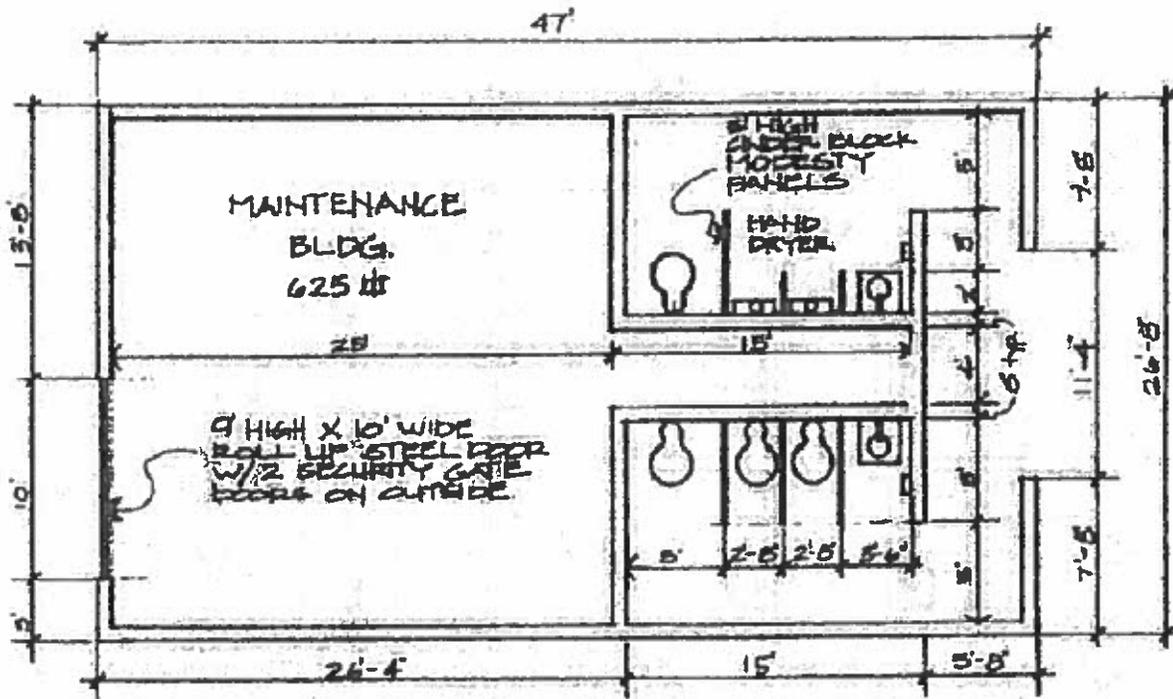
RESTROOMS



RESTROOM FLOOR PLAN

not to scale

RESTROOMS



NOTES:

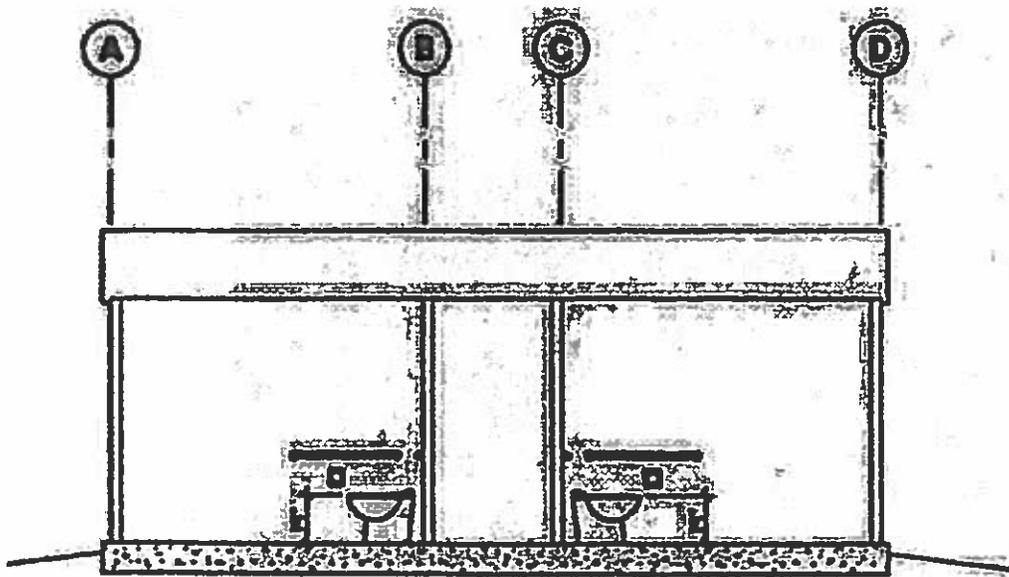
1. ALL EXTERIOR WALLS TO BE SPLIT FACE BLOCK.
2. ALL INTERIOR WALLS TO BE SMOOTH CINDER BLOCK - PAINTED OR COLOR TO MATCH EXTERIOR WALLS.
3. ALL FIXTURES TO BE WALL MOUNTED INSTITUTIONAL STAINLESS AND SHALL MEET ALL HANDICAPE SPECIFICATIONS, UNLESS OTHERWISE AGREED TO BY THE PARKS & RECREATION DEPARTMENT. (FLOOR MOUNTED MAYBE ACCEPTABLE)



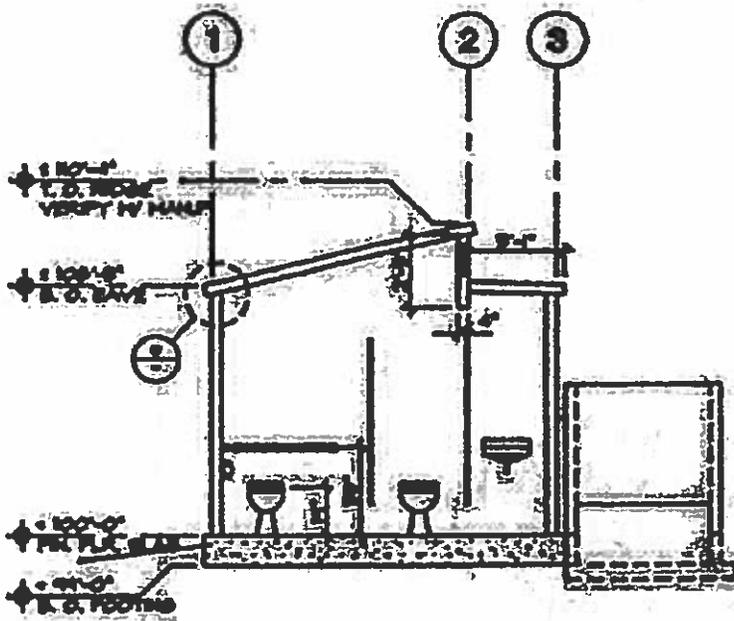
RESTROOM WITH STORAGE AREA

not to scale

RESTROOMS



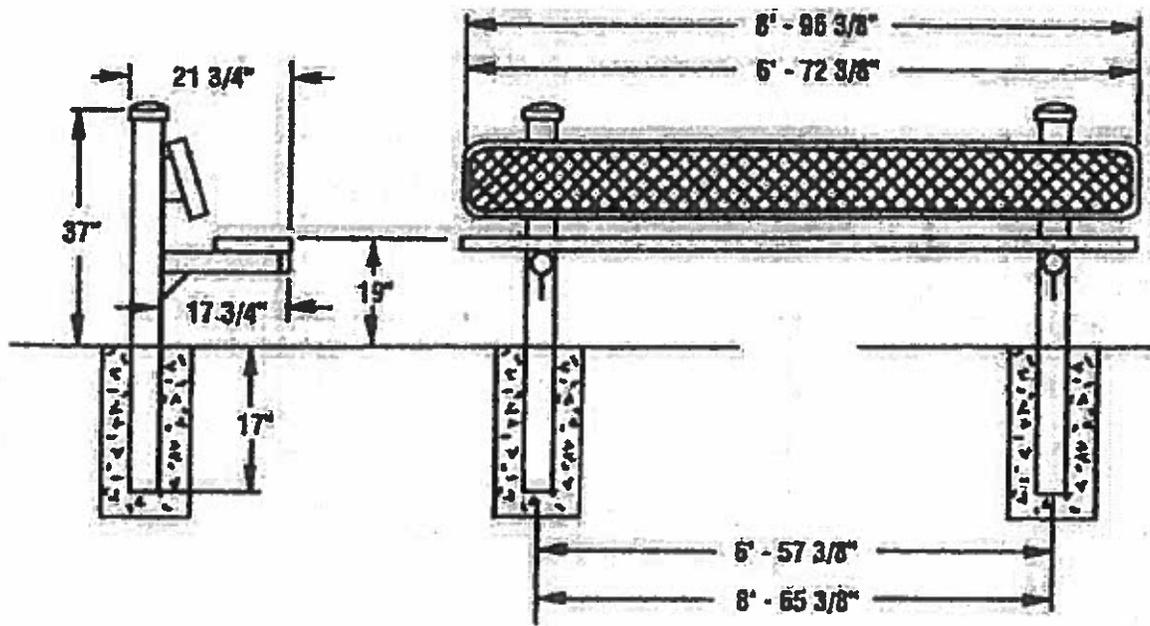
NOTE:
TOILET ACCESSORIES TO
BE PER ADA REQUIREMENTS
TYPICAL.



BUILDING SECTION- TWO VIEWS

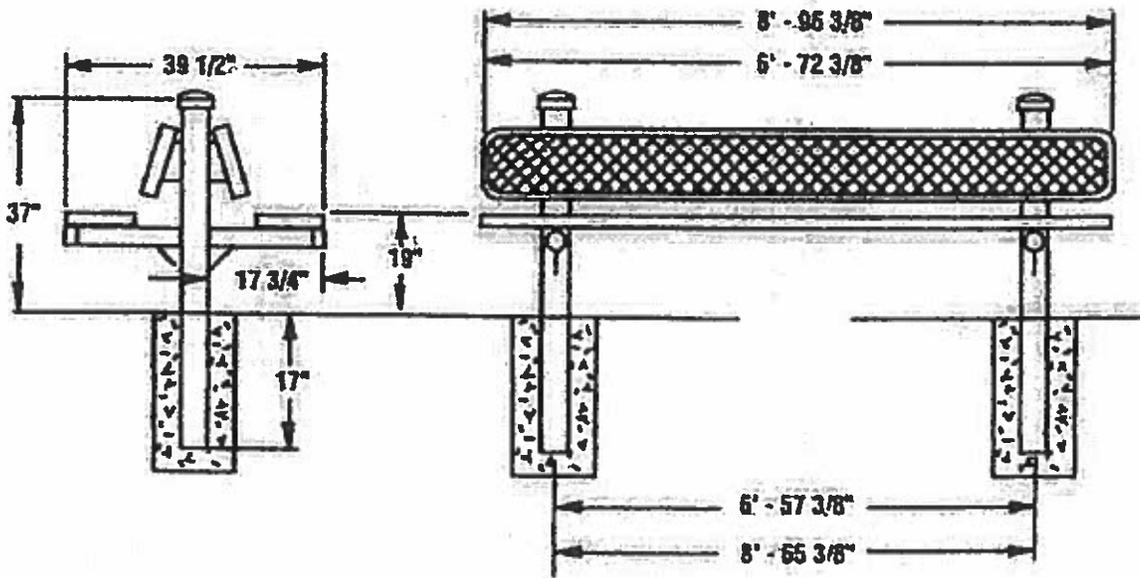
not to scale

SITE FURNISHINGS



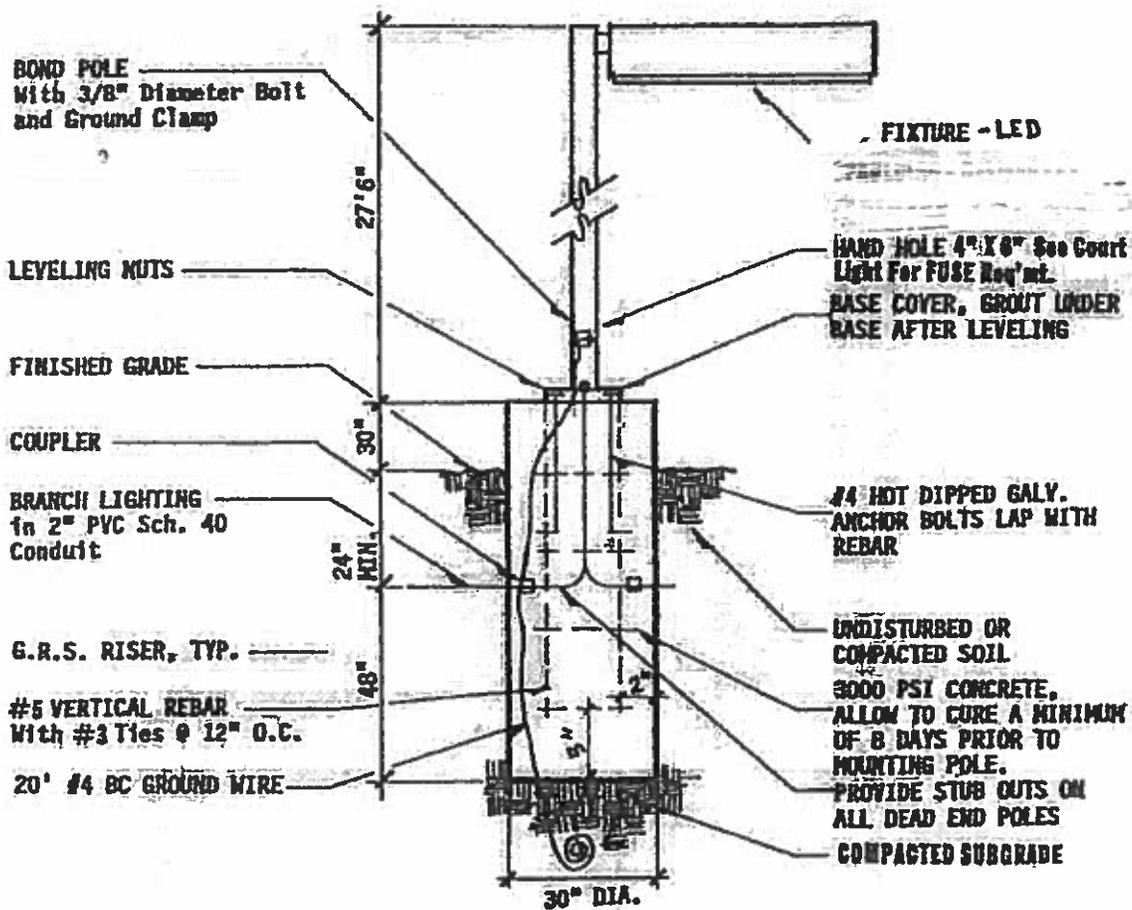
SINGLE BENCH
not to scale

SITE FURNISHINGS



DOUBLE BENCH
not to scale

SITE FURNISHINGS

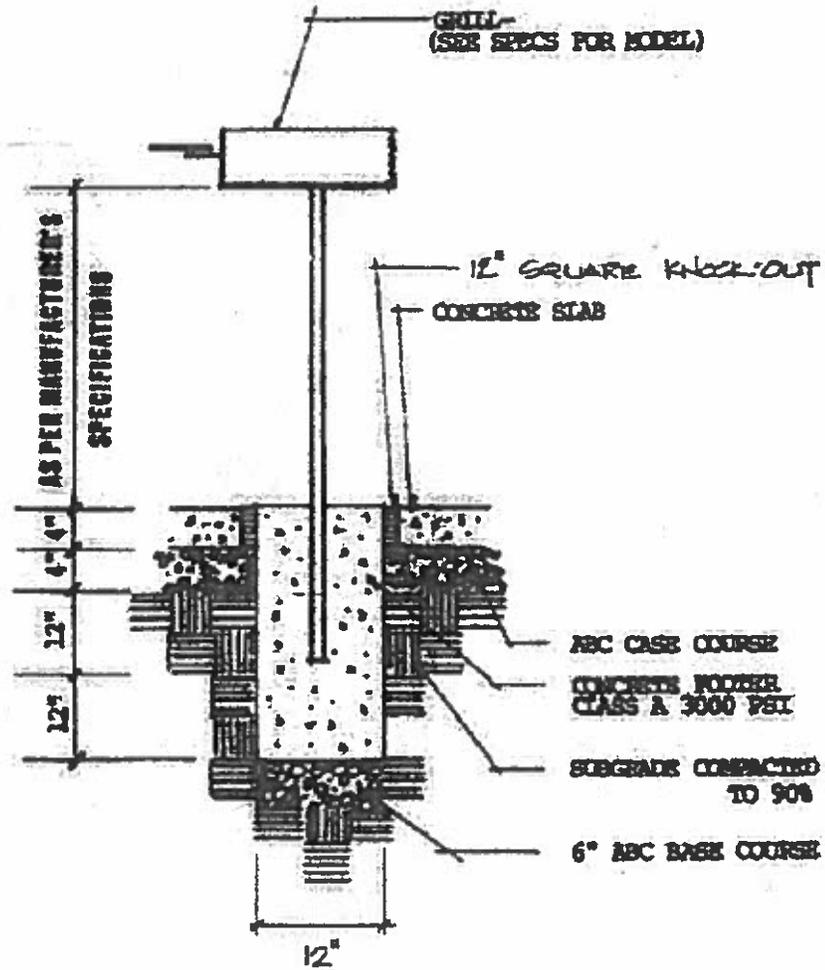


LIGHT POLE DETAIL

not to scale

SITE FURNISHINGS

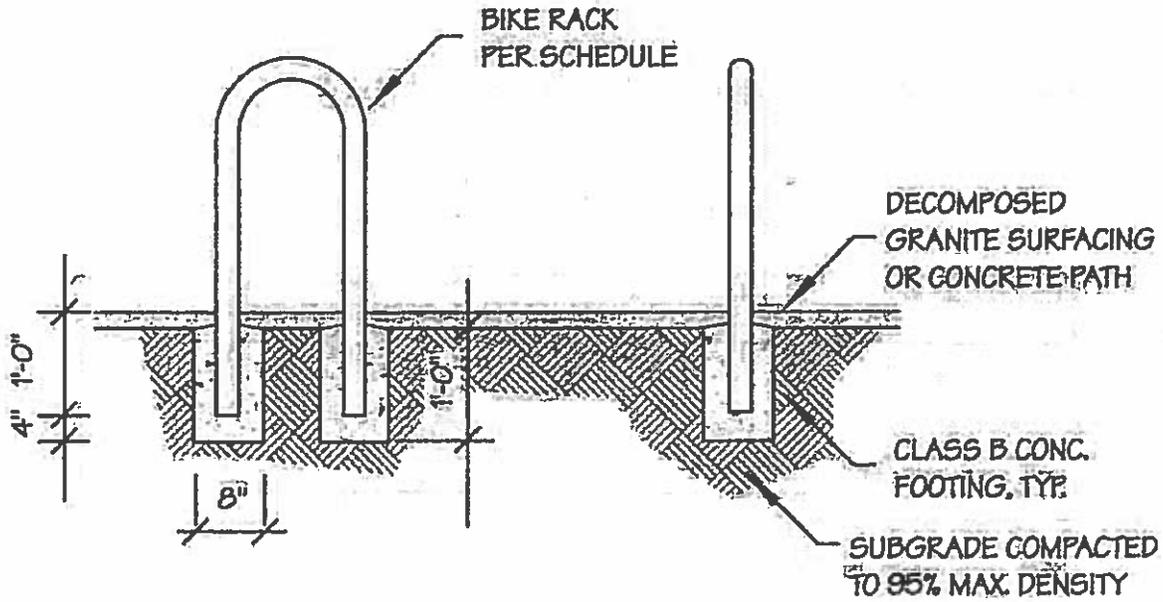
NOTE: GRILL LEG TO BE ENCASED IN A SCH. 40 4" STEEL PIPE CONTINUOUS WELD AT BOTTOM OF GRILL. 4" STEEL PIPE AND



SINGLE GRILL FOOTING DETAIL

not to scale

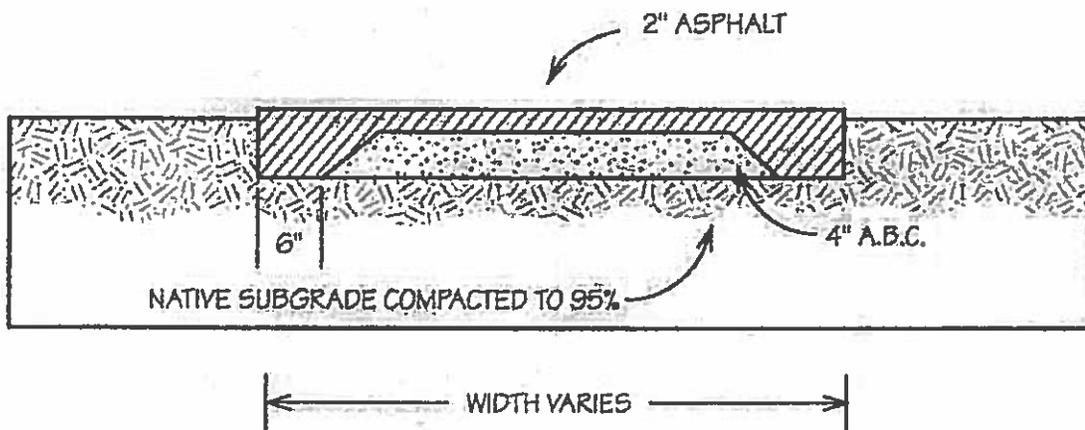
SITE FURNISHINGS



BIKE RACK DETAIL
not to scale

TRAILS

PAVED PATHWAY DETAIL - MINIMUM SPECIFICATIONS



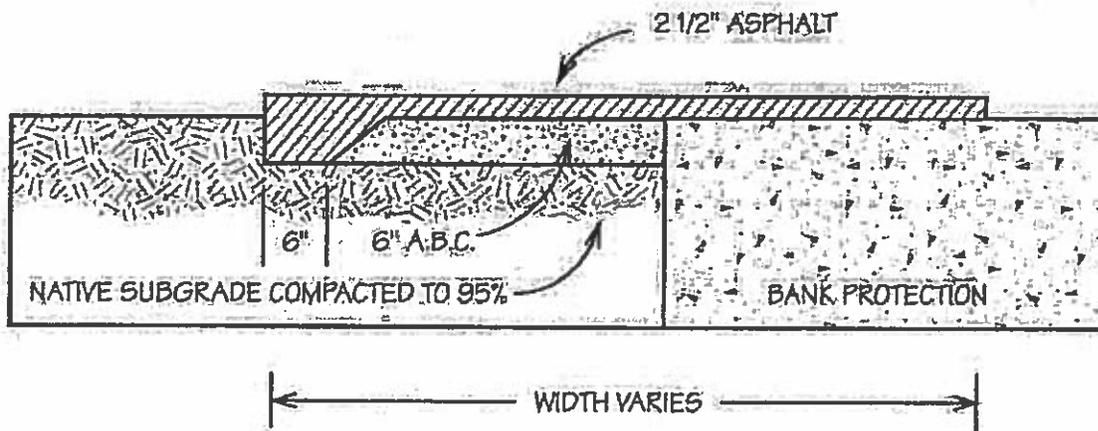
TRAIL ONLY: ADD 1' BUFFER EACH SIDE FOR EQUIVALENCY CALCULATIONS



PAVED PATHWAY DETAIL MINIMUM SPECIFICATIONS
not to scale

TRAILS

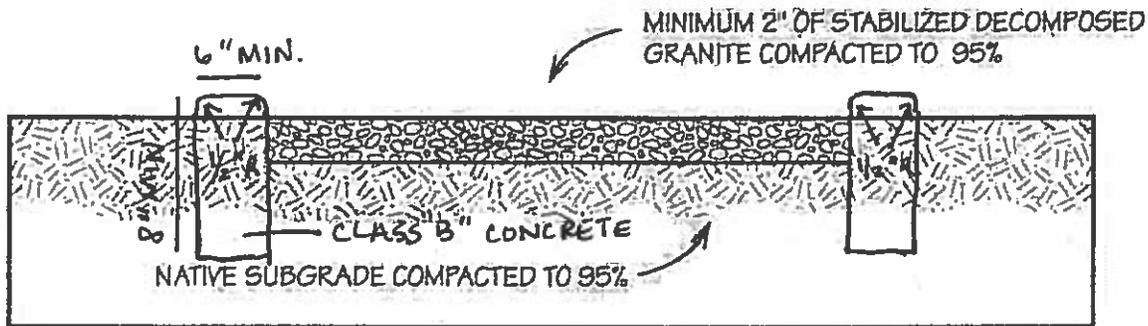
PAVED PATHWAY DETAIL - MINIMUM SPECIFICATIONS for RIVER PARK PATHWAYS PARTIALLY CONSTRUCTED OVER BANK PROTECTION



PAVED PATHWAY DETAIL MINIMUM SPECIFICATIONS
not to scale

TRAILS

D.G. PATHWAY DETAIL - MINIMUM SPECIFICATIONS



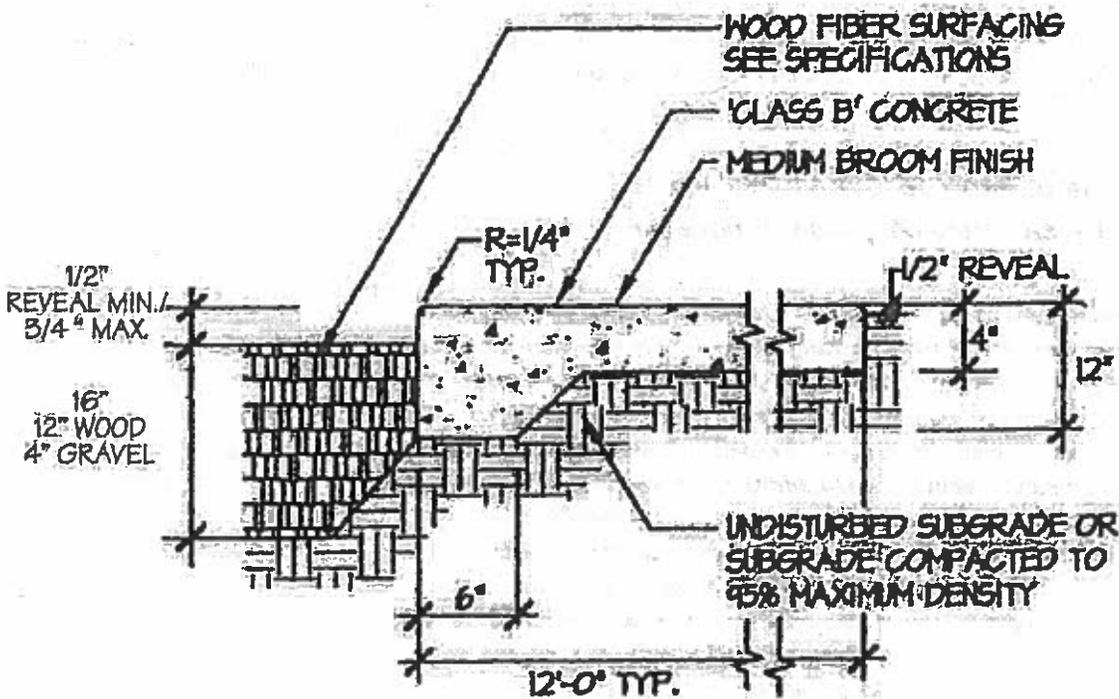
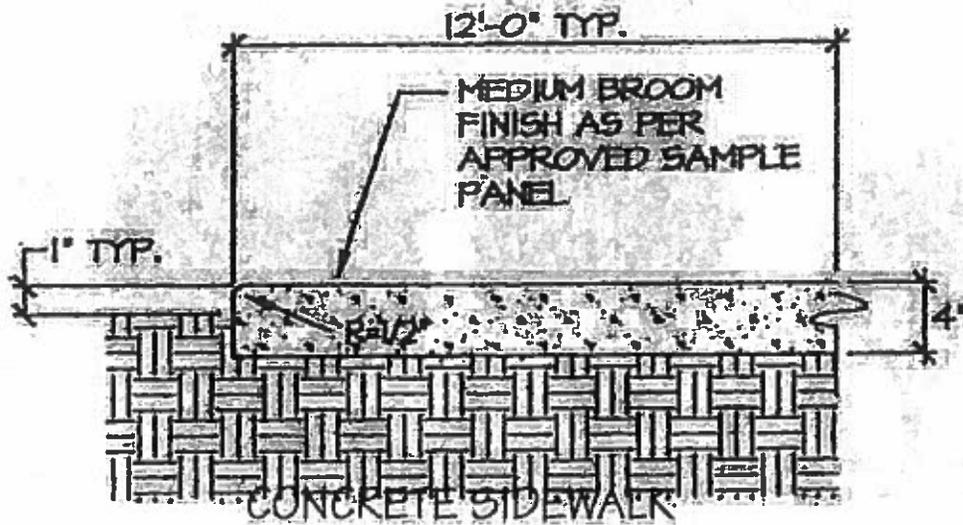
NOTES: PROVIDE EXPANSION JOINTS EVERY 40' O.C. MAX.
AND CONTROL JOINTS EVERY 10' MAX.

TRAIL ONLY: ADD CONCRETE HEADER EACH SIDE &
INCLUDE IN EQUIVALENCY CALCULATIONS



D.G. PATHWAY DETAIL - MINIMUM SPECIFICATIONS
not to scale

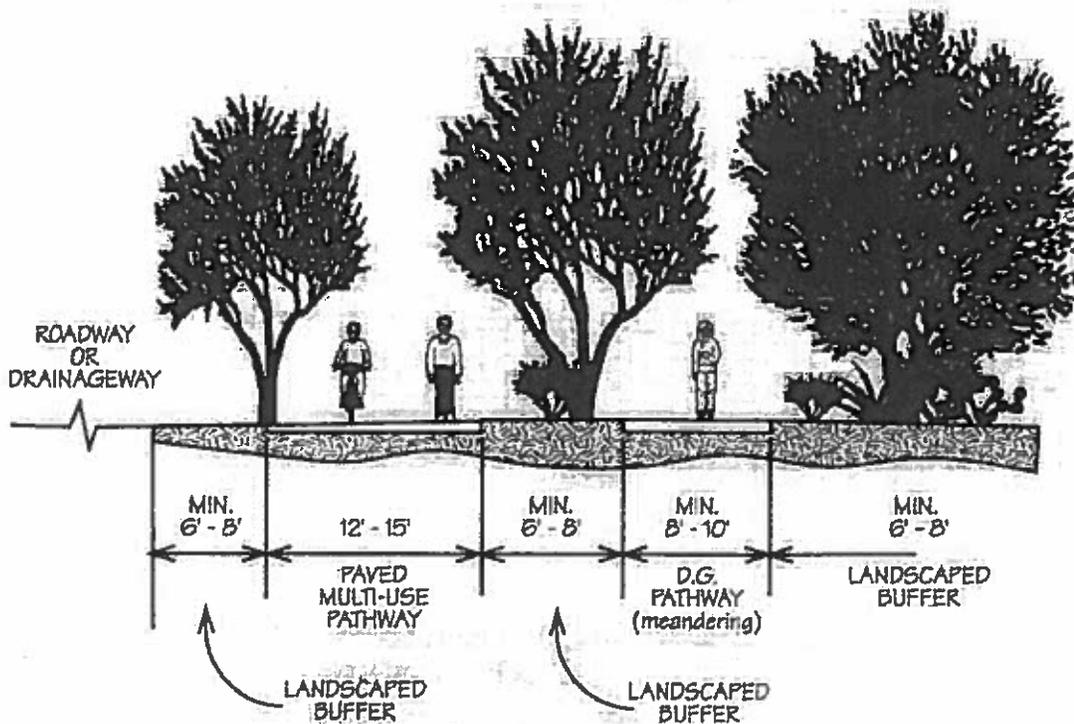
TRAILS



CONCRETE SIDEWALK (& PLAYGROUND DETAIL)
not to scale

TRAILS

LINEAR PARK GREENWAY



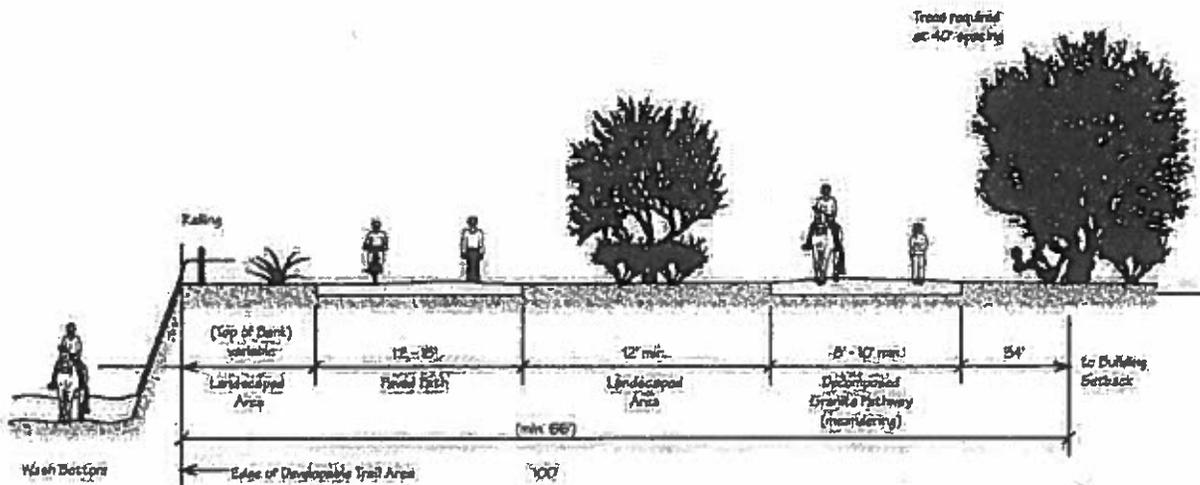
NOTE: Standards expressed are minimums.
Landscaped areas should be wider if possible.

- Minimum corridor width is 50' for pathways constructed to this standard.
- Corridor shall be kept as far from existing and/or future roadways as possible. Corridor may be partially located in a public right-of-way only with the approval of appropriate parks and transportation officials. At least 50% of the corridor shall be located outside of the public right-of-way to ensure minimum quality of experience and safety for trail users.
- Paved path may meander gently to add additional interest (maintain sightlines).
- Trees should be located a minimum of 6' from paths if possible.
- Maintain 2' clear areas along the sides of each path to enhance safety.
- Keep trees at least 10' from buried sewer lines (if applicable).
- Signage should be located a minimum of 3' from the edge of paths for safety.
- Paths should be constructed with slight crowns (slope not to exceed 2%) to enhance drainage and direct runoff to landscaped areas.



LINEAR PARK GREENWAY
not to scale

TRAILS



NOTE: Standards expressed are minimums. Landscaped areas should be wider if possible.

- Minimum corridor width for river parks is 100', unless an exception is approved by parks officials to accommodate site constraints.
- Paved path may meander gently to add additional interest (maintain sightlines).
- Trees should be located a minimum of 6' from paths if possible.
- Maintain 2' clear areas along the sides of each path to enhance safety.
- Keep trees at least 10' from buried sewer lines (if applicable).
- Signage should be located a minimum of 3' from the edge of paths for safety.
- Paths should be constructed with slight crowns (slope not to exceed 2%) to enhance drainage and direct runoff to landscaped areas.



RIVER PARK CROSS SECTION

Not to scale