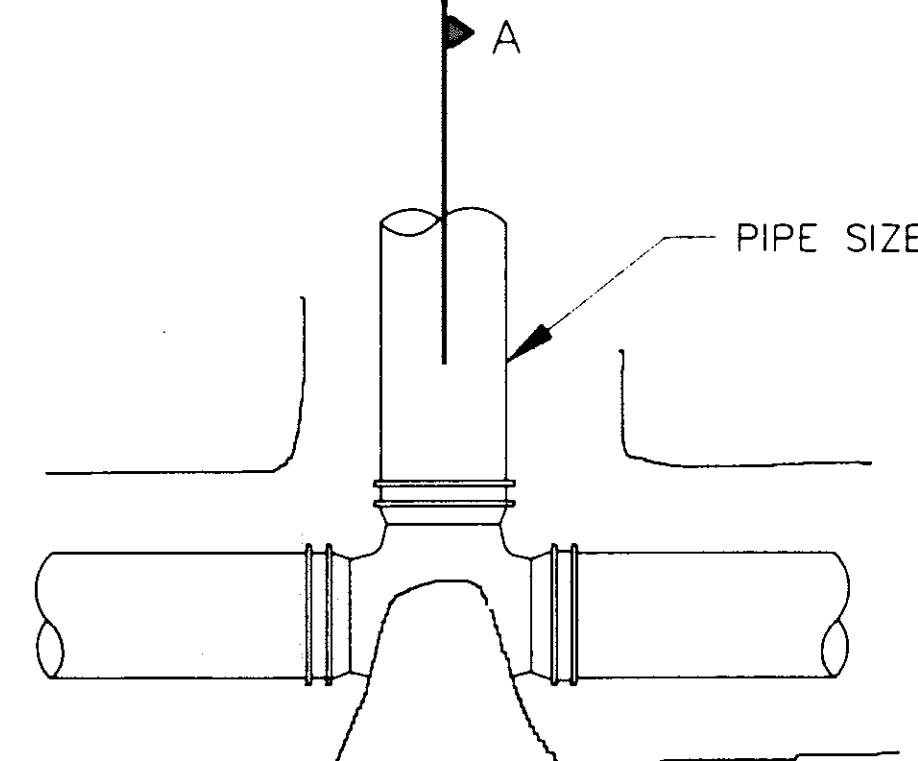


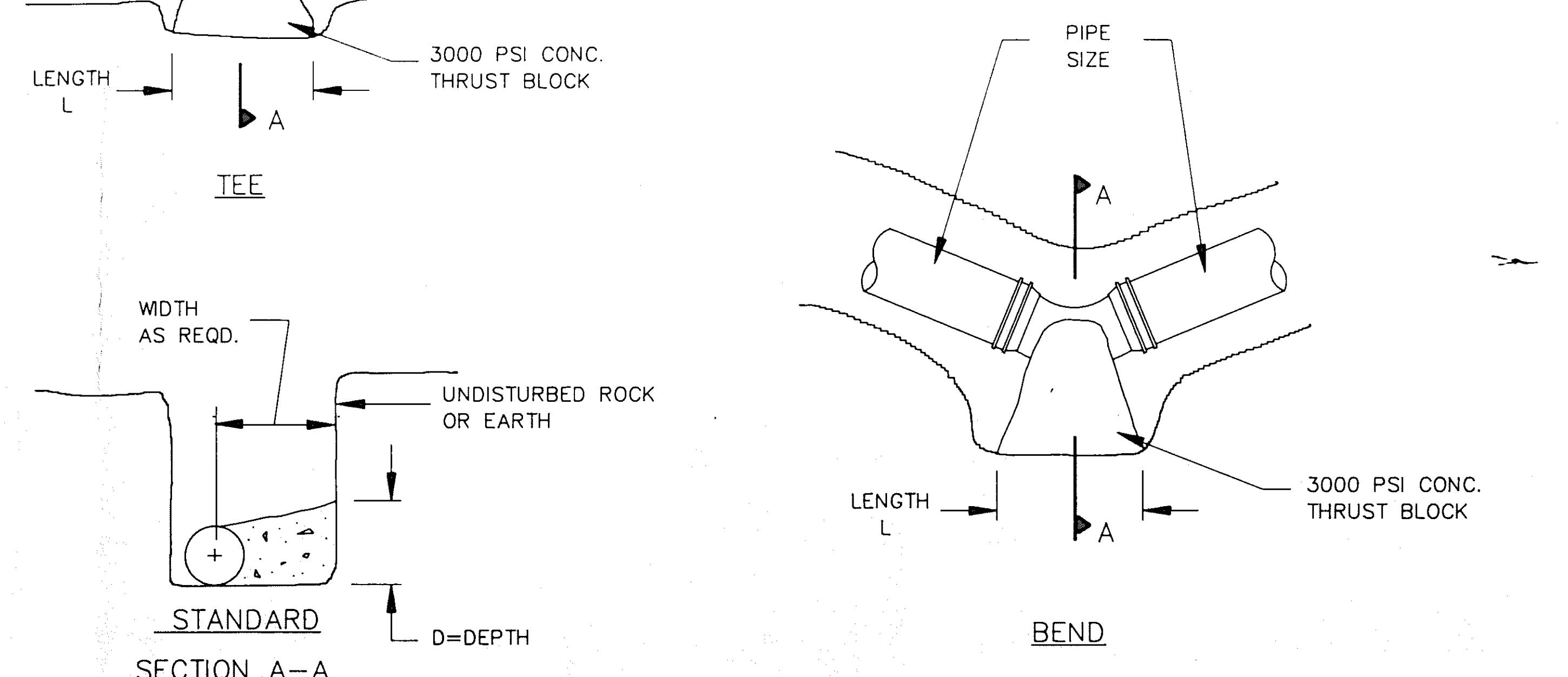
#### THRUST BLOCK NOTES

- FOR REQUIRED BEARING AREA DIMENSIONS D & L, SEE TABLE AT RIGHT. DIMENSIONS OF D & L OTHER THAN THOSE SHOWN IN THE TABLE MAY BE USED PROVIDED THEY YIELD A BEARING AREA EQUAL TO OR LARGER THAN THAT REQUIRED.
- CONCRETE NOT TO OVERLAP ANY JOINT.
- CONCRETE TO BE PLACED SO AS NOT TO INTERFERE WITH REMOVING OR INSTALLING ANY OF THE JOINING HARDWARE.
- APPROXIMATE VOLUME OF CONCRETE THRUST BLOCK:  

$$V = \frac{LD (W+D) - ID}{81}$$
  
 WHERE:  
 V = VOLUME IN CUBIC YARDS  
 L = LENGTH OF BLOCK IN FEET  
 D = DEPTH OF BLOCK IN FEET  
 W = WIDTH OF BLOCK IN FEET  
 ID = INSIDE DIAMETER OF PIPE IN FEET
- VALUES FOR TEE ALSO APPLY TO END PLUGS, CAPS, AND TAPPING SLEEVES.
- REQUIRED BEARING AREAS ARE DUE TO THRUSTS CAUSED BY 100 PSI WORKING PRESSURE PLUS 50% (PSI) SURGE ALLOWANCE RESULTING IN 225 PSI TOTAL INTERNAL PRESSURE. NORMAL PIPE DIAMETER USED.
- REQUIRED BEARING AREAS ARE BASED ON ALLOWABLE SOIL BEARING CAPACITY OF 2000 LBS. PER SQUARE FOOT FOR SAND. DUE TO OTHER SOIL CONDITIONS ENCOUNTERED, BEARING AREAS MAY BE MODIFIED BY THE ENGINEER.
- IN MUCK, PEAT, OR RECENTLY PLACED FILL, ALL THRUST SHALL BE RESISTED BY PILES OR TIE RODS TO SOLID FOUNDATIONS, OR BY REMOVAL OF SUCH UNSTABLE MATERIAL AND REACEMENT BY DENSE, SUFFICIENT STAKING TO RESIST THE THRUSTS, ALL AS REQUIRED BY THE ENGINEER.

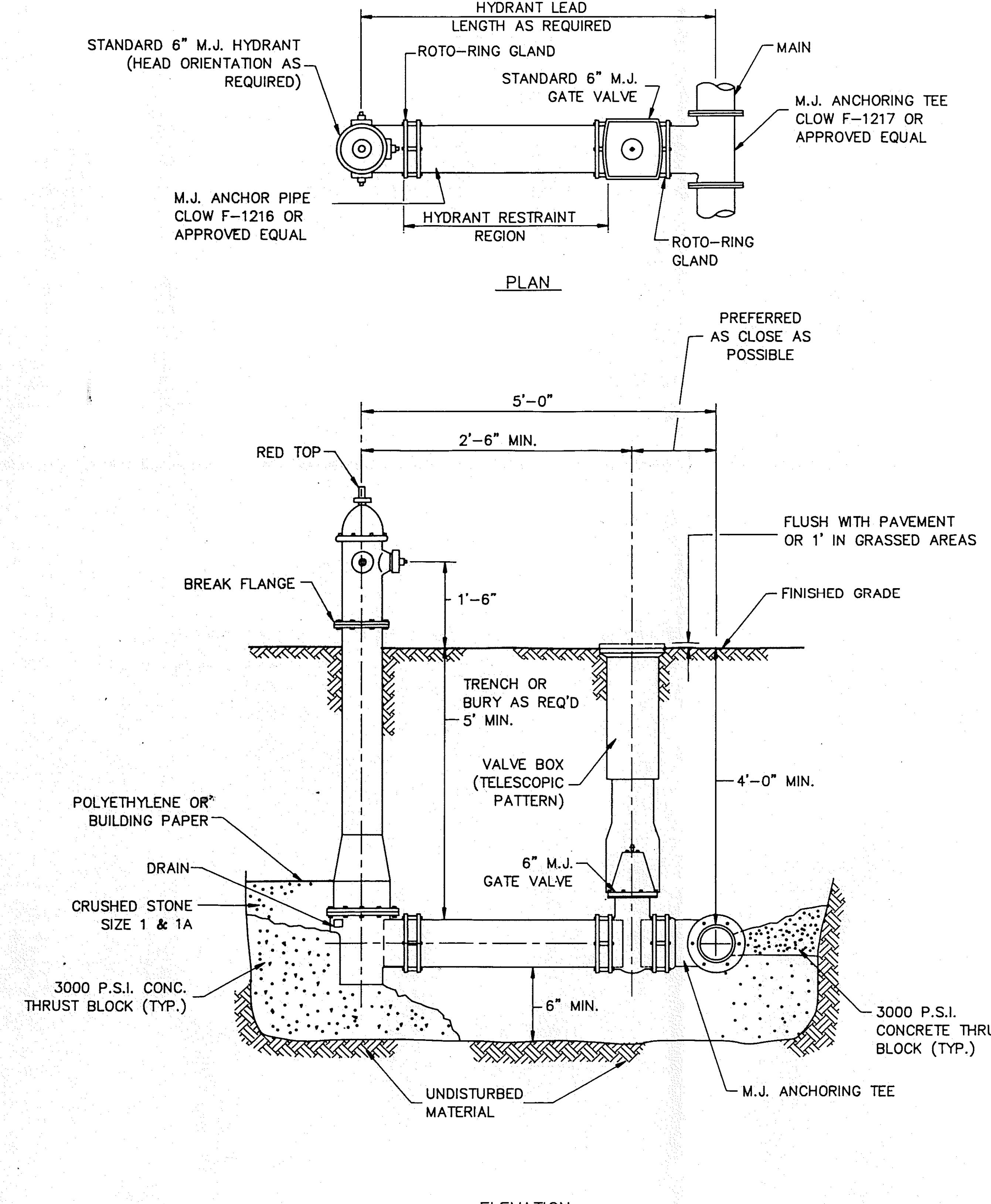


| REQUIRED BEARING AREAS & DIMENSIONS<br>FOR CONCRETE THRUST BLOCKS |   |                 |                         |                         |                         |                         |                         |                         |                         |           |
|---|---|-----------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-----------|
| PIPE<br>SIZE  | TEE (See Note 5)<br>AREA<br>(in.)<br>Sq.Ft. | Dimen.<br>D x L | AREA<br>Dimen.<br>D x L |           |
| 4   | 1.4   | 1.0 x 1.5       | 2.0                     | 1.0 x 2.0               | 1.1                     | 1.0 x 1.5               | 0.6                     | 0.5 x 1.5               | 0.3                     | 0.5 x 1.0 |
| 6   | 3.2   | 1.5 x 2.5       | 4.5                     | 2.0 x 2.5               | 2.4                     | 1.5 x 2.0               | 1.2                     | 1.0 x 1.5               | 0.6                     | 1.5 x 1.5 |
| 8   | 5.7   | 2.0 x 3.0       | 8.0                     | 2.0 x 4.0               | 4.3                     | 2.0 x 2.5               | 2.2                     | 1.5 x 1.5               | 1.1                     | 1.0 x 1.5 |
| 12  | 12.7  | 3.5 x 3.5       | 18.0                    | 4.0 x 4.5               | 9.7                     | 2.5 x 4.0               | 5.0                     | 2.0 x 2.5               | 2.5                     | 1.5 x 2.0 |



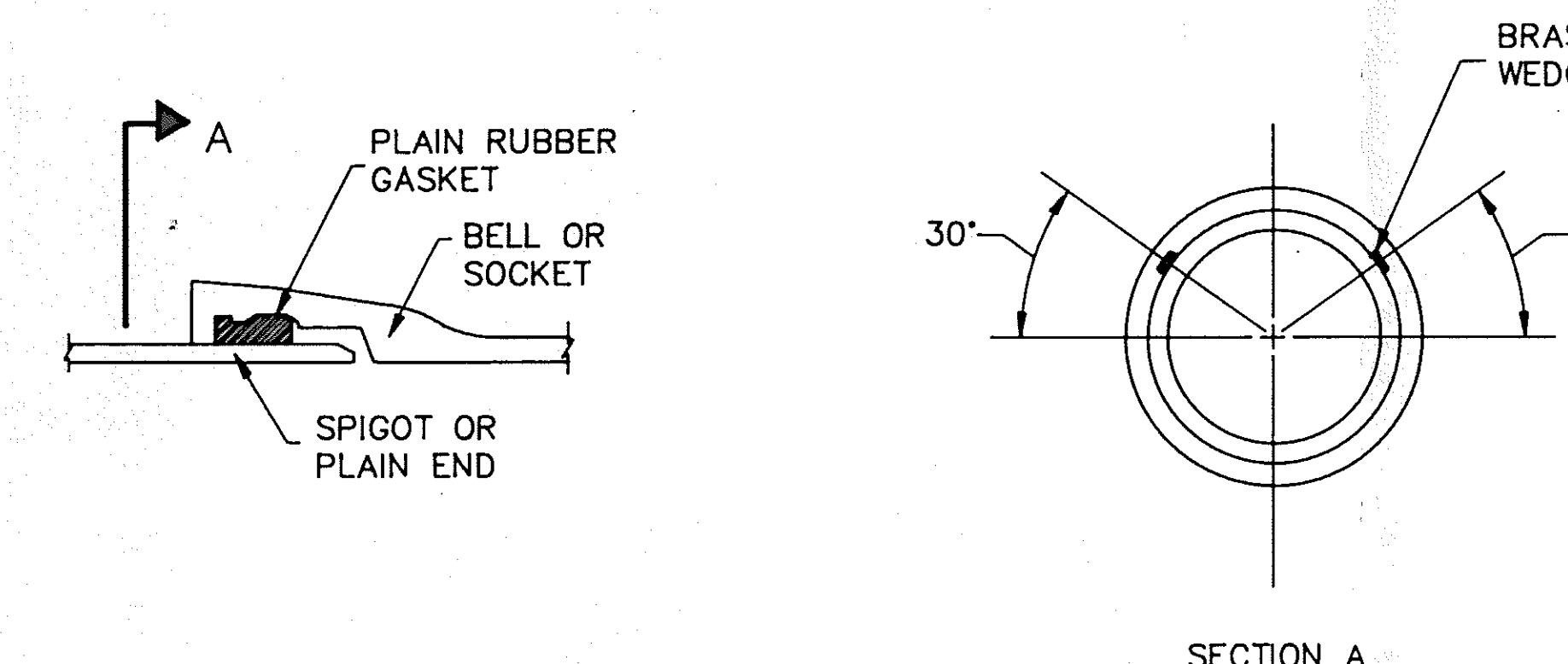
#### I THRUST BLOCK DETAILS

NO SCALE



#### 2 HYDRANT INSTALLATION DETAIL

NO SCALE

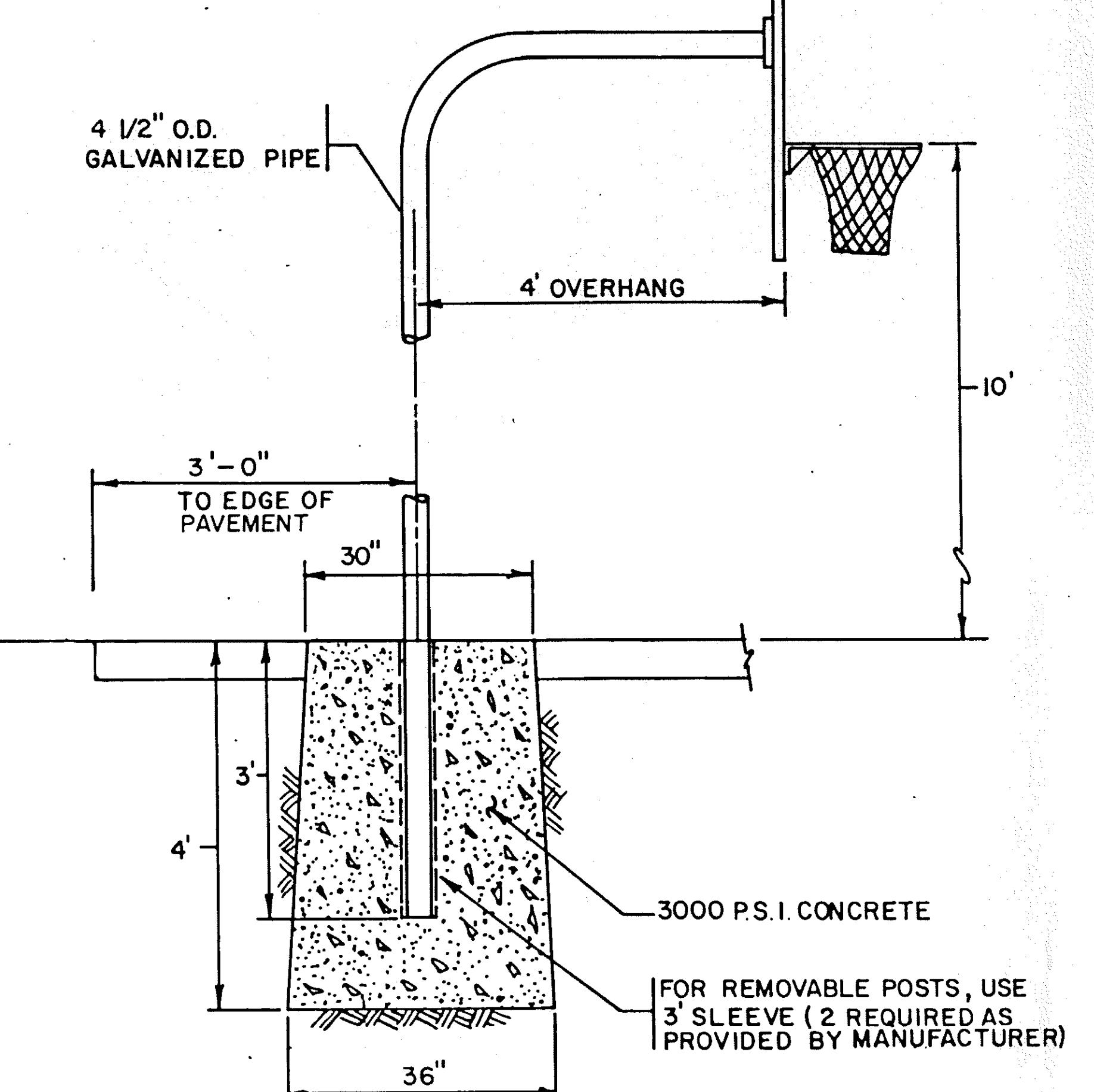


#### 3 TYPICAL JOINT DETAILS

NO SCALE

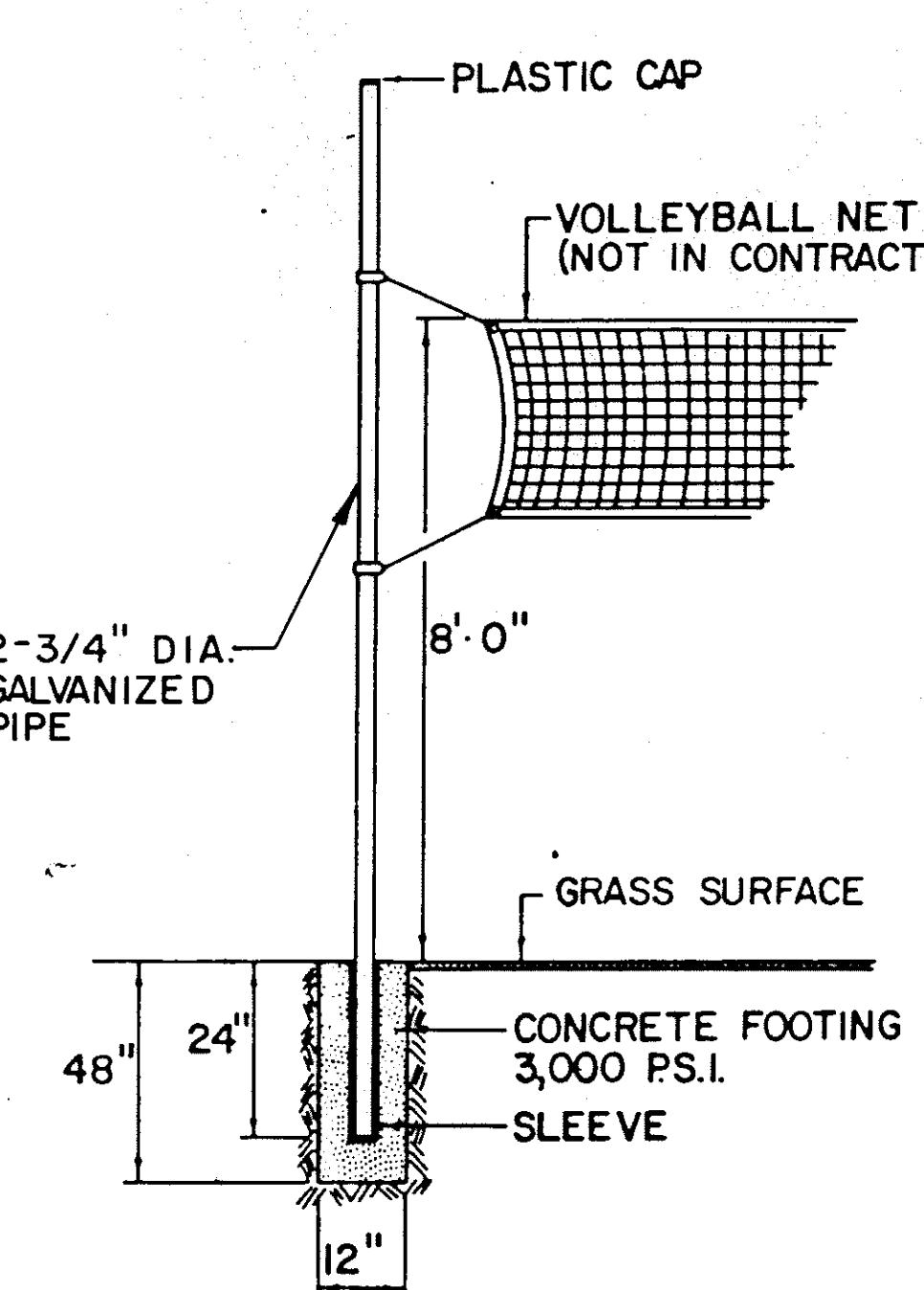
#### 5 BASKETBALL BACKBOARD DETAIL

NO SCALE



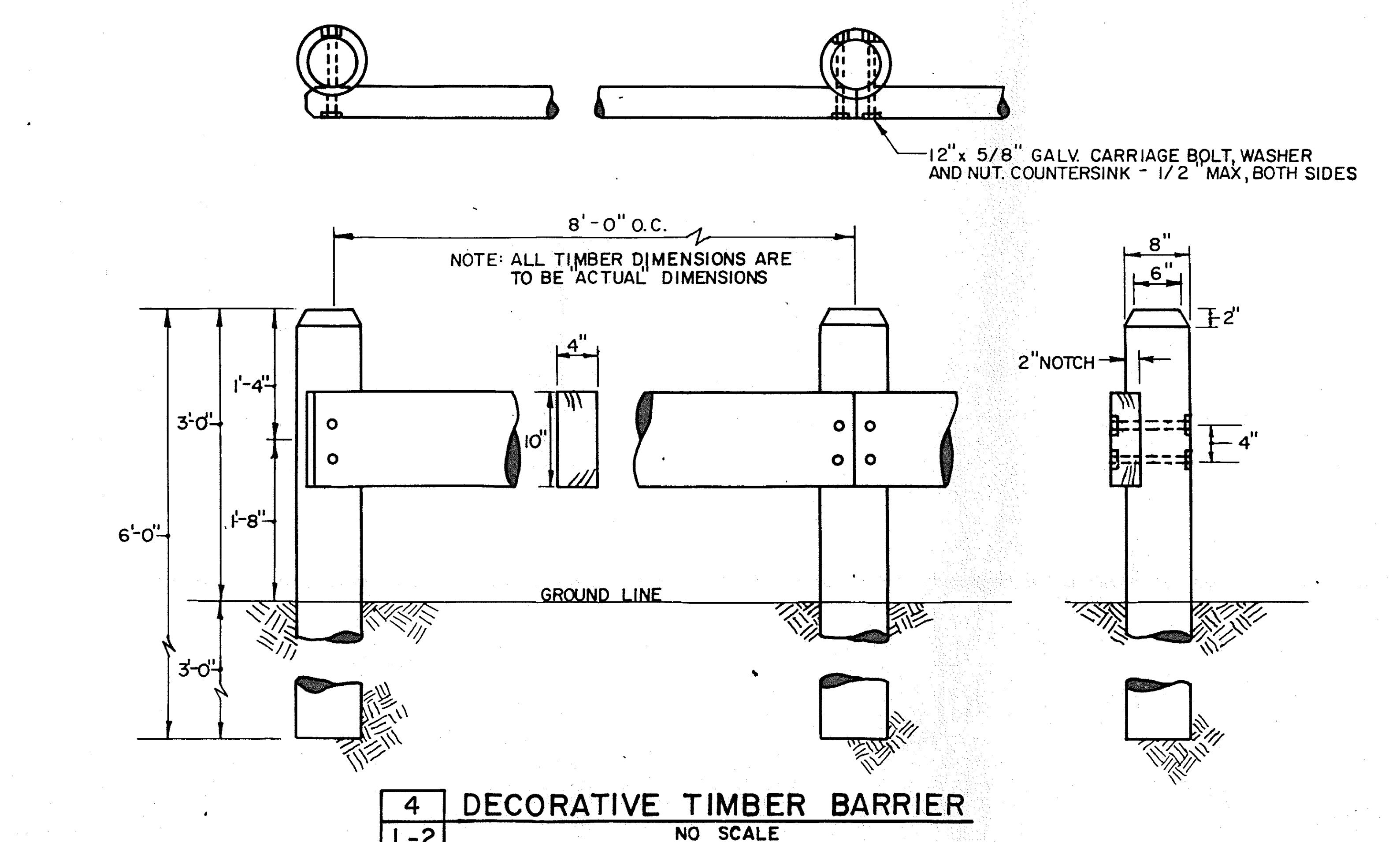
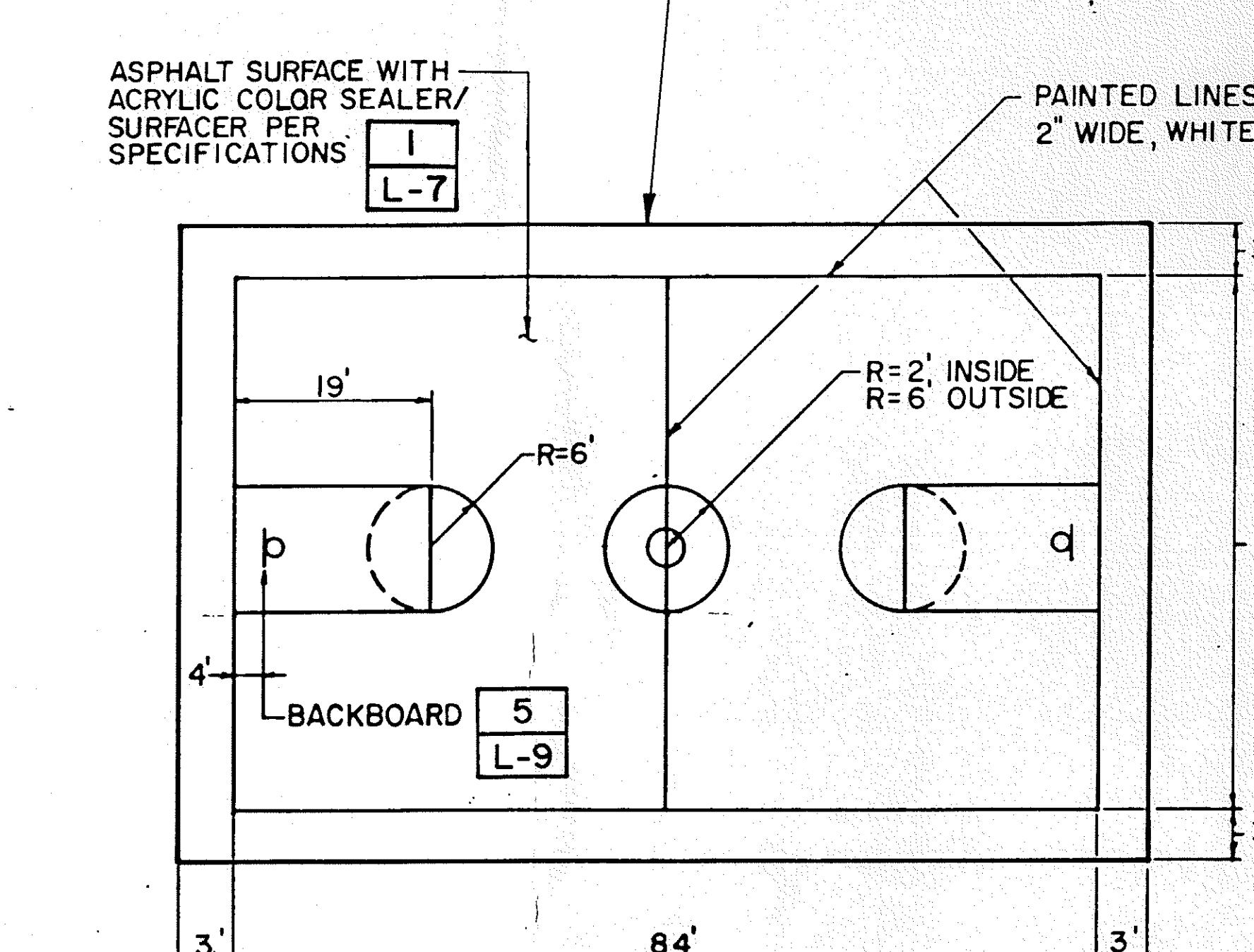
#### 8 VOLLEYBALL NET & POST DETAIL

NO SCALE



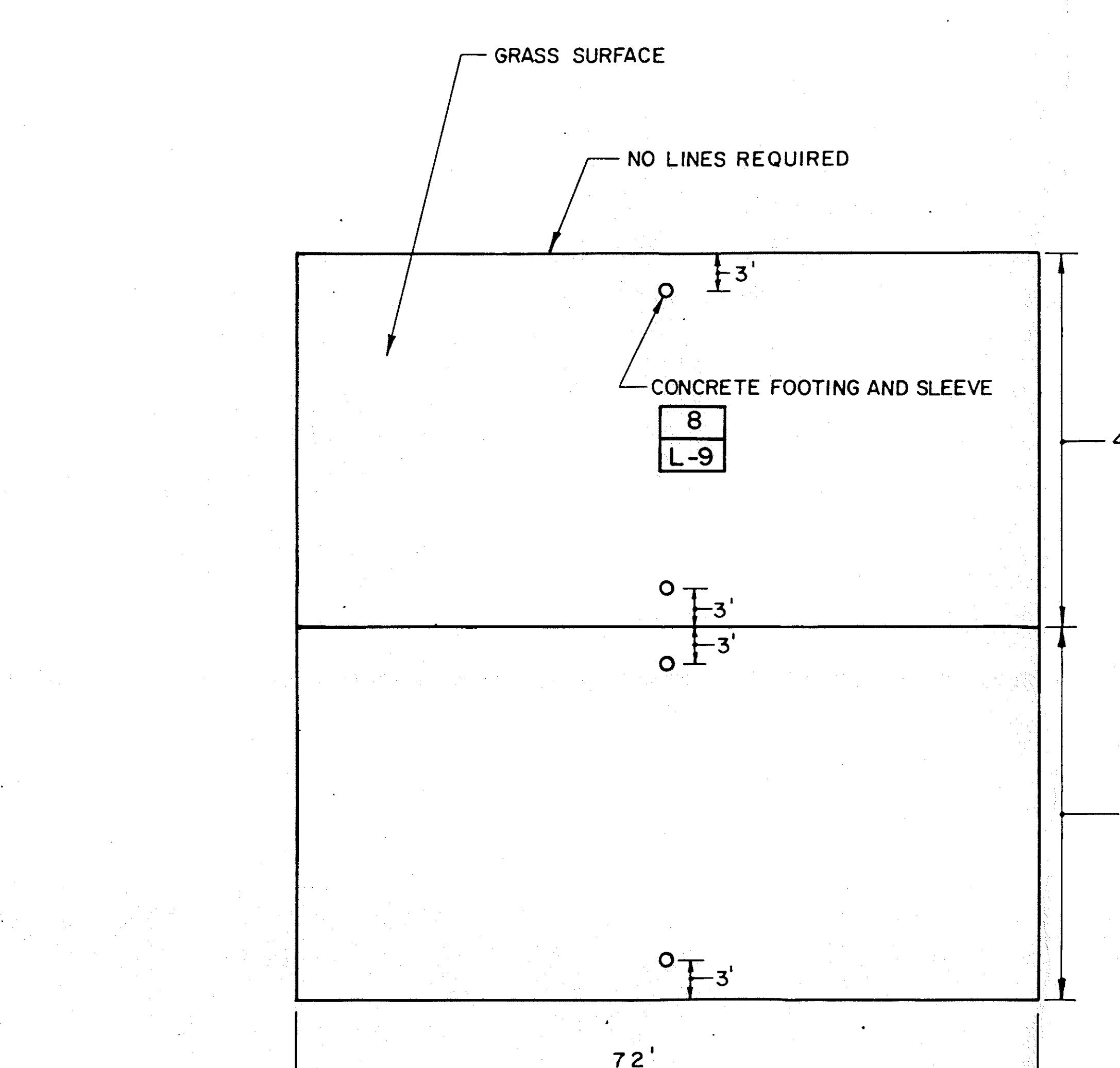
#### 9 BASKETBALL COURT LAYOUT

NO SCALE



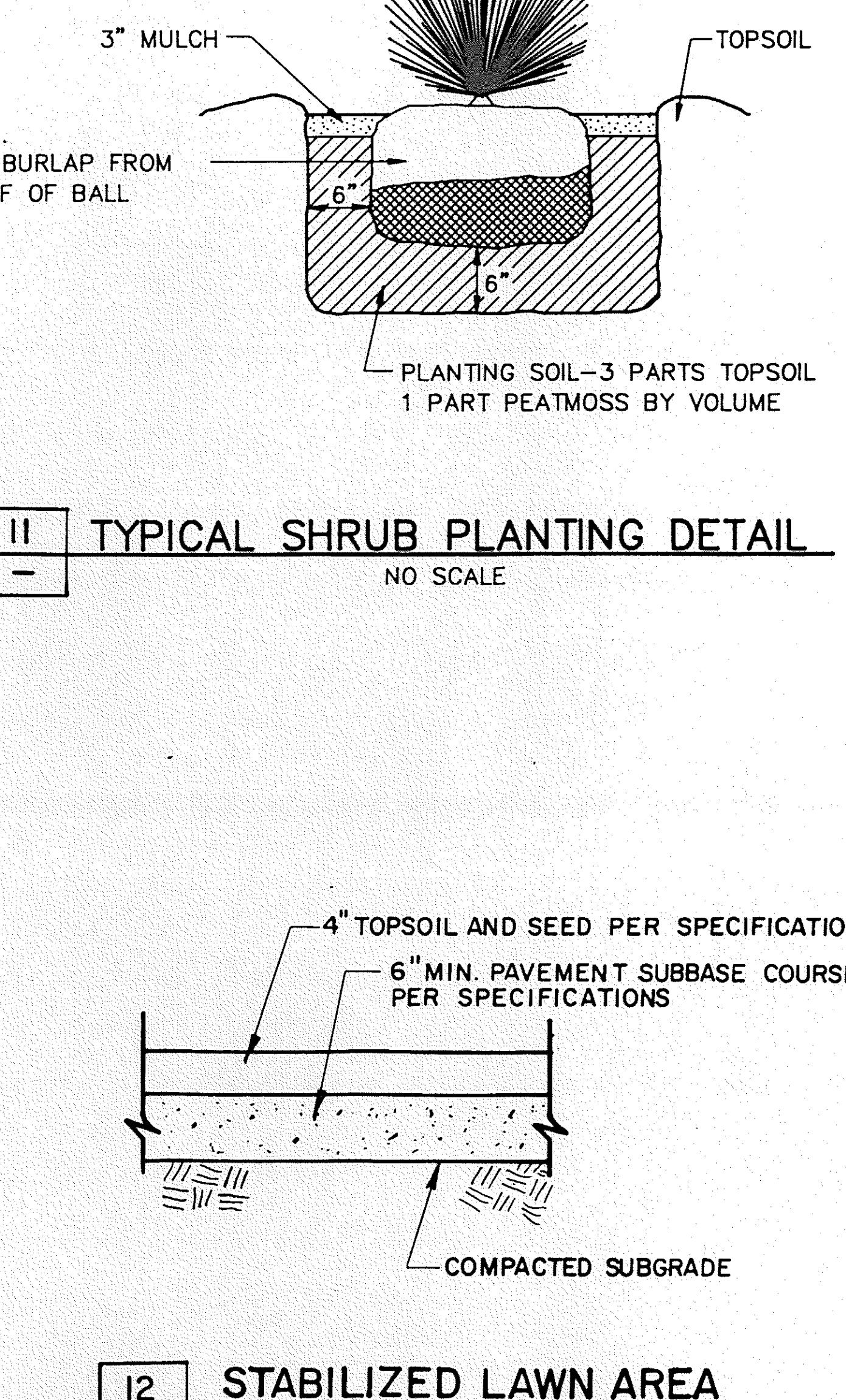
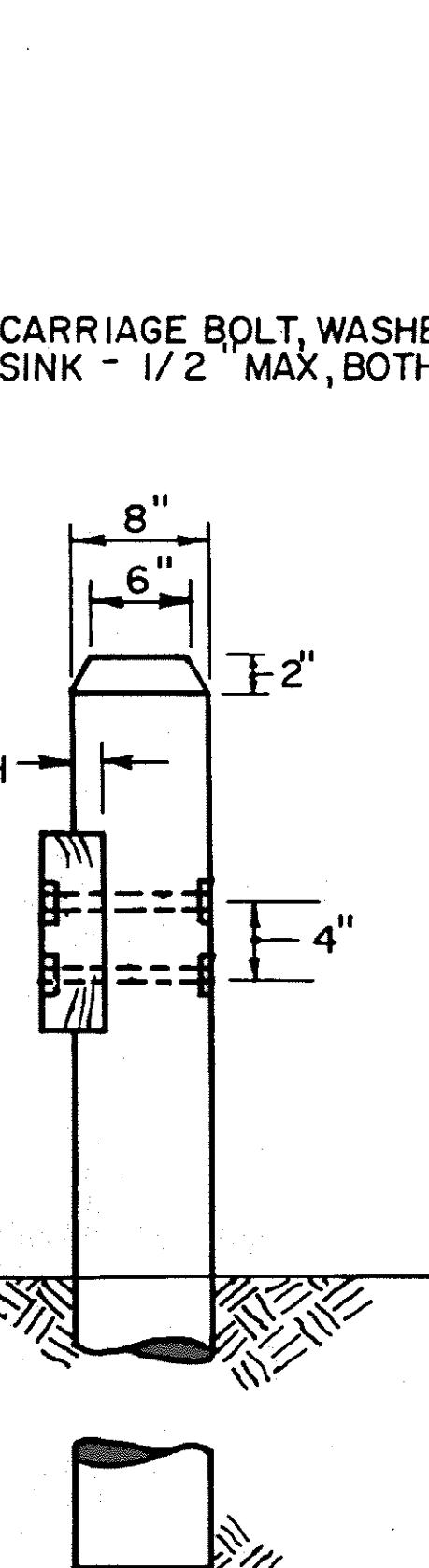
#### 4 DECORATIVE TIMBER BARRIER

NO SCALE



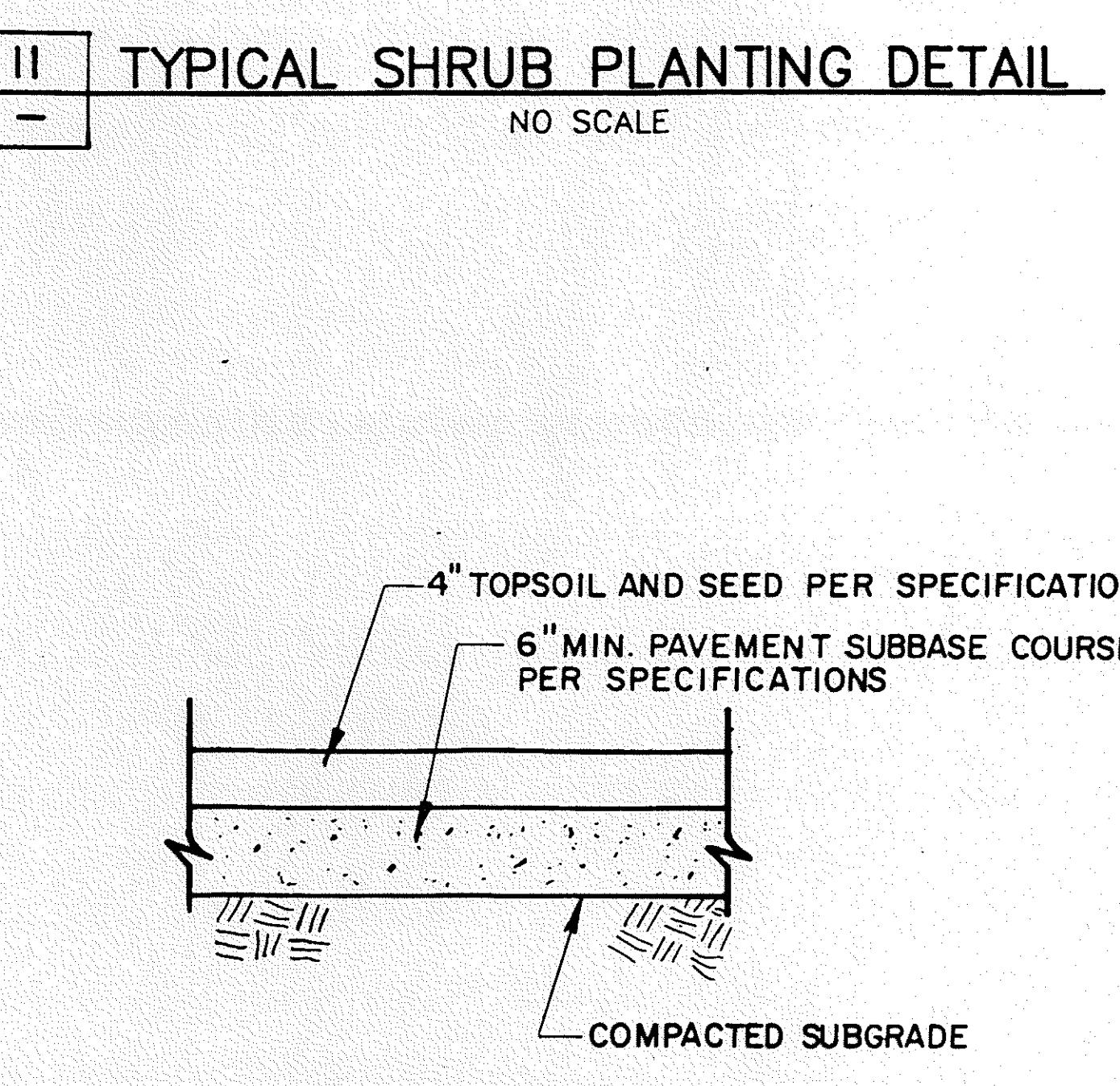
#### 7 VOLLEYBALL COURT LAYOUT

NO SCALE



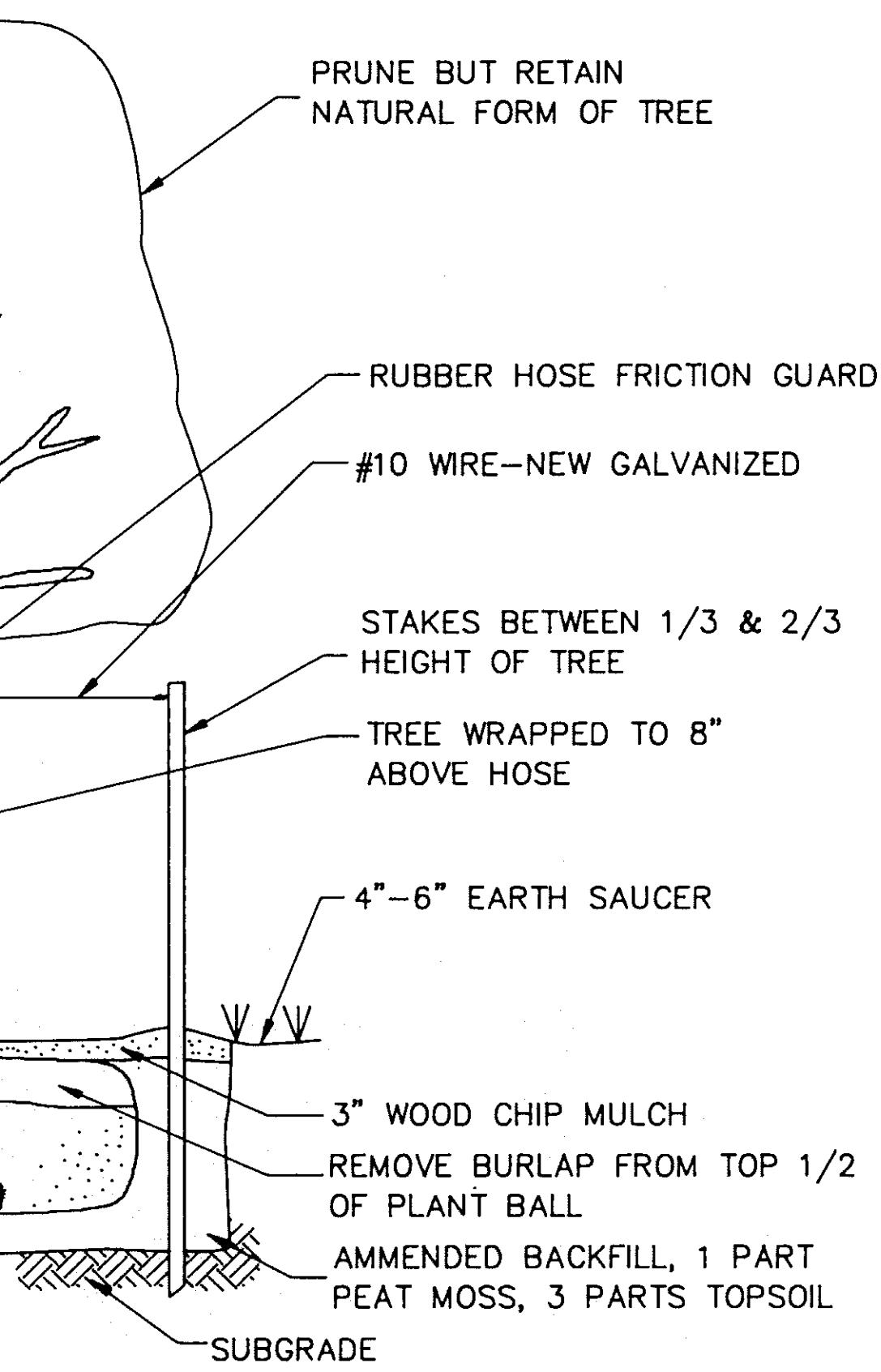
#### 10 PLANTING & STAKING DETAIL

AUSTRIAN PINE: PINUS NIGRA  
6' HT.-9' HT. - USE 2 STAKES, 1/2 HT. OF TREE + 2'  
NO SCALE



#### 12 STABILIZED LAWN AREA

L-3 NO SCALE



#### 6 DECIDUOUS TREE DETAIL PLANTING & STAKING DETAIL

NO SCALE