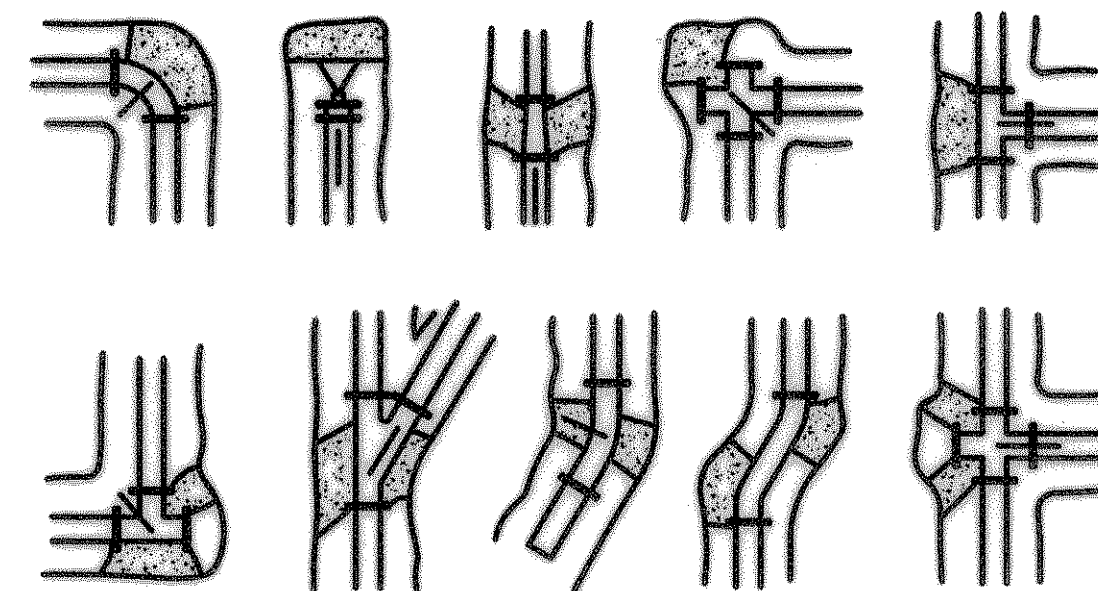


SINGLE SERVICE CONNECTION
 Not To Scale



TYPICAL THRUST BLOCKING DETAILS

TYPICAL THRUST BLOCKING DETAILS

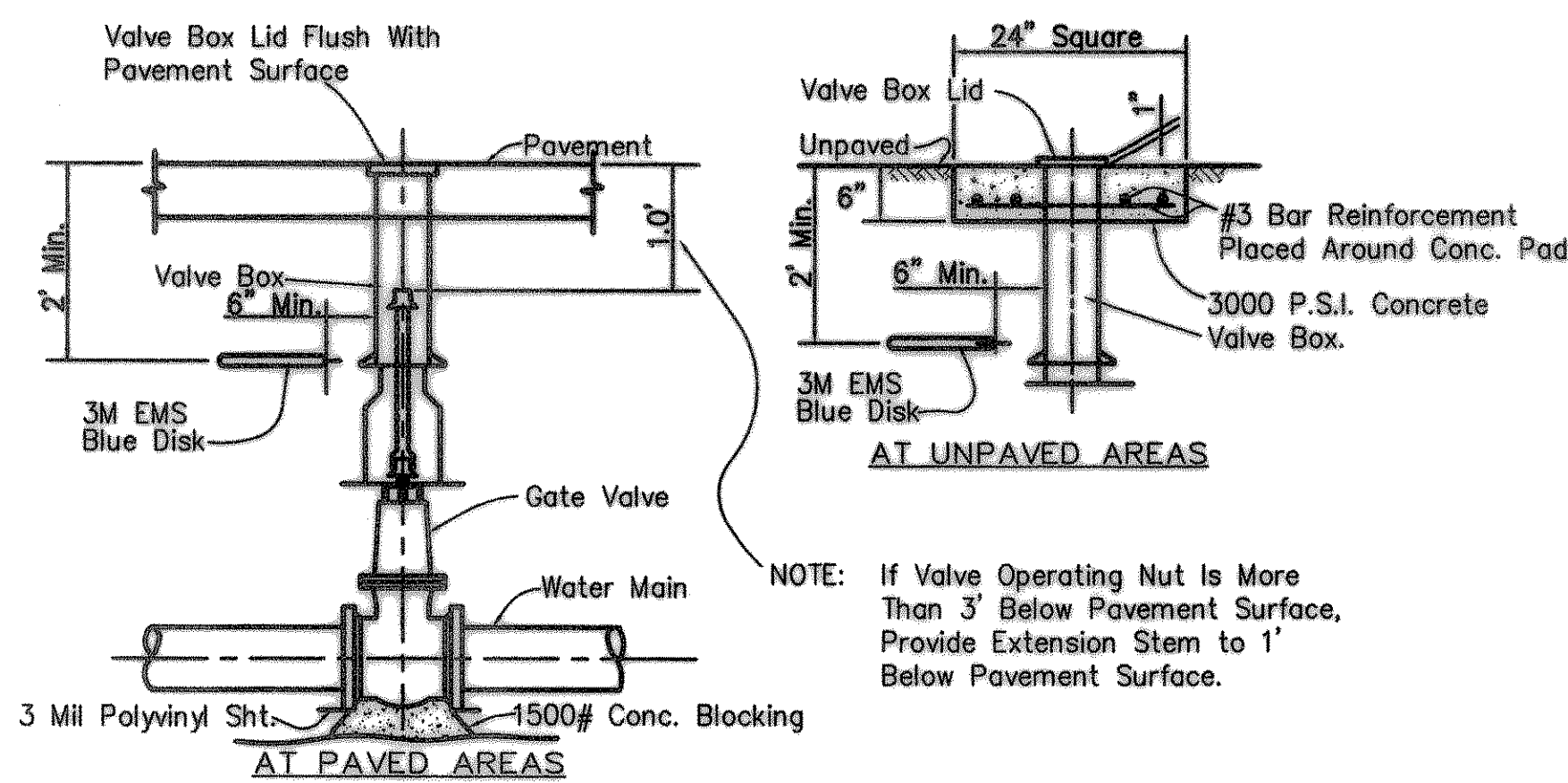
NOTES:

- The earth bearing surface shall be undisturbed material. Keep all joints free from concrete. Thrust block to be constructed of 1,500 P.S.I. (20 day) concrete and placed as shown on "Typical Blocking Details" above.
- It shall be the responsibility of the contractor to install adequate thrust blocking. The HORIZONTAL BLOCKING TABLE shows the minimum thrust blocking area required (in square feet) bearing against undisturbed trench wall.
- All fittings shall be blocked regardless of the angle or direction, except as noted in the chart.
- Soil bearing strength is assumed to be 2,000 P.S.F. site conditions may vary which will require modifications to the blocking calculations.

HORIZONTAL BLOCKING TABLE

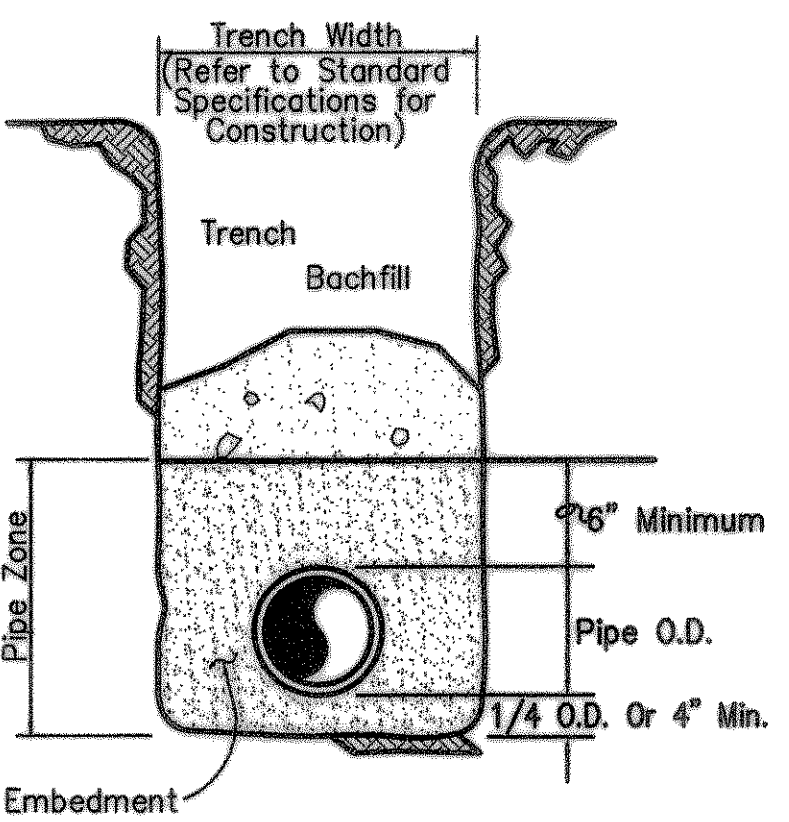
| PIPE SIZE (IN.) | THRUST (POUNDS) DEAD END AND TEE | BLOCKING (SQUARE FEET) | | | | | |
|-----------------|----------------------------------|------------------------|----------|----------|--------------|--------------|------------|
| | | DEAD END AND TEE | 90° BEND | 45° BEND | 22-1/2' BEND | 11-1/4' BEND | 5' DEFLECT |
| 4 | 2,450 | 1.23 | 1.73 | 0.94 | 0.50 | 0.50 | 0.50 |
| 6 | 5,513 | 2.76 | 3.90 | 2.11 | 1.08 | 0.54 | 0.50 |
| 8 | 9,802 | 4.90 | 6.93 | 3.75 | 1.91 | 0.96 | 0.50 |
| 10 | 15,315 | 7.66 | 10.83 | 5.86 | 2.99 | 1.50 | 0.67 |
| 12 | 22,054 | 11.03 | 15.59 | 8.43 | 4.30 | 2.16 | 0.96 |

BASED ON 2,000 P.S.F. SOIL BEARING CAPACITY AND 195 P.S.I. LINE PRESSURE (150 P.S.I. WORKING PRESSURE PLUS 30% FOR WATER HAMMER.)



NOTE: If Valve Operating Nut Is More Than 3' Below Pavement Surface, Provide Extension Stem to 1' Below Pavement Surface.

TYPICAL GATE VALVE AND BOX EXTENSION STEM DETAIL
 Not To Scale

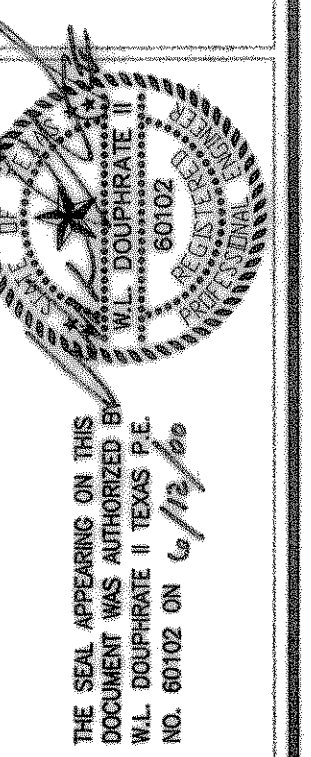


GRANULAR, TYPE 3, EMBEDMENT: Pit run granular embedment material shall be free flowing sand or mixed sand and pea gravel free from large stones, clay and organic material. The material may be an inferior grade of pit run or blow sand not normally considered satisfactory for concrete aggregate and may be used directly from pits without processing, provided it complies with the qualities described herein. The material shall be such that when wet it will not form a mud ball or tend to cling together. The material shall have 100% passing one inch (1") sieve, and the plasticity index of that part passing the 40 sieve is obtained from the City.

PIPE EMBEDMENT DETAIL-WATER

RECORD DRAWINGS:

THE INTENT OF THE OWNER AND ENGINEER WAS TO CONSTRUCT THESE FACILITIES ACCORDING TO THESE PLANS AS APPROVED BY THE CITY OF _____ THE LINES AND GRADES WERE SET ON THE GROUND FOR CONSTRUCTION ACCORDING TO SAID PLANS. THE CITY OF _____ INSPECTED THE CONSTRUCTION. THE OWNER NOR ENGINEER DID NOT VERIFY LINES OR GRADES AFTER CONSTRUCTION. WE ARE NOT AWARE OF ANY CHANGES OR REVISIONS TO THESE PLANS DURING CONSTRUCTION EXCEPT AS NOTED



DOUPHRADE & ASSOCIATES, INC.
 ENGINEERING - PROJECT MANAGEMENT - SURVEYING
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DETAILS
CREEKSIDE VILLAGE, PHASE II
CITY OF ROCKWALL
COUNTY OF ROCKWALL

| | |
|----------|----------|
| REVISION | W.L.D. |
| CHECKED | K.E.B. |
| DRAWN | 4/10/00 |
| DATE | 9960DET5 |
| PROJECT | 21C |
| | OF |
| | 21 |