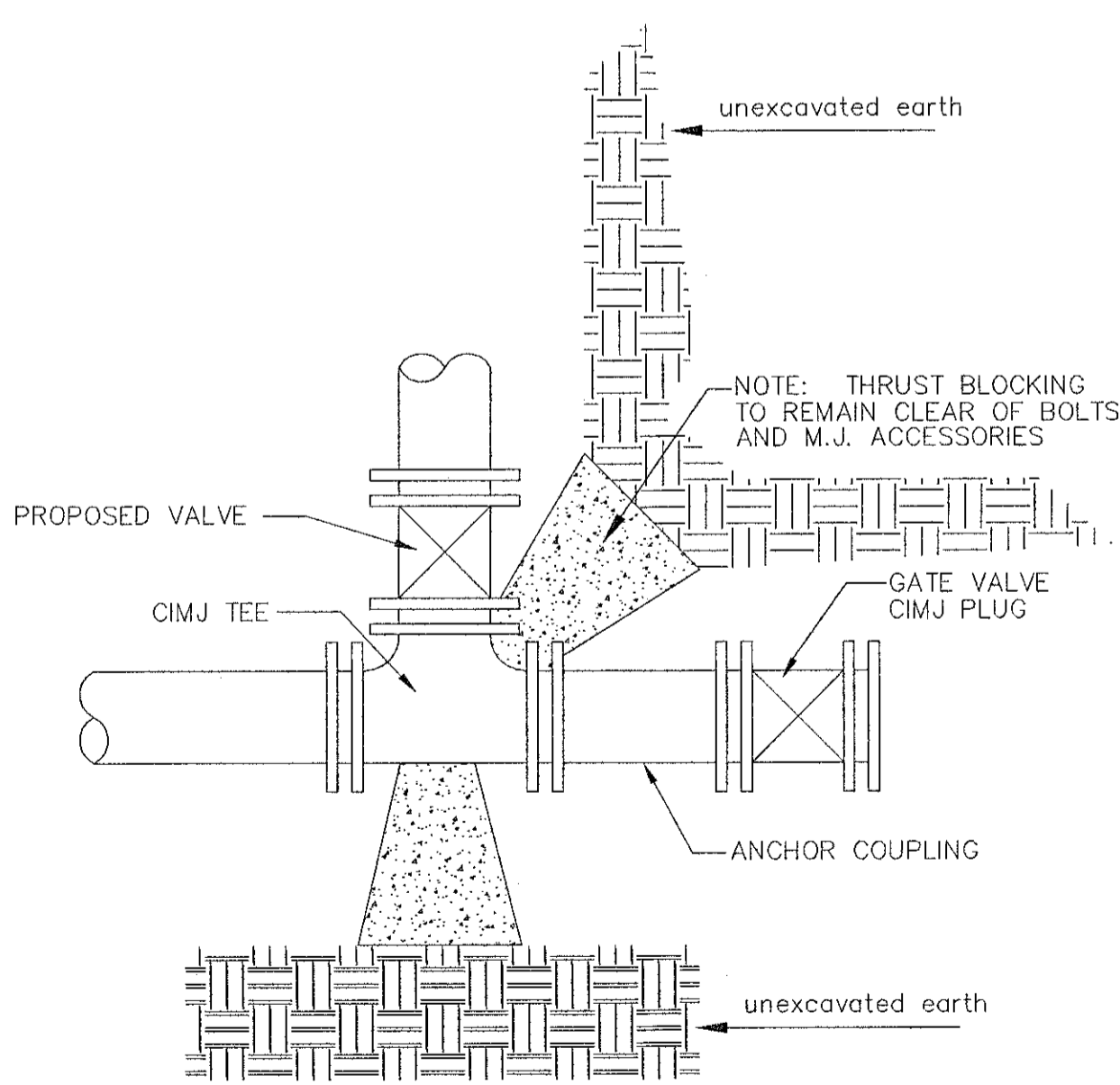


TRENCH COMPACTION IN ROAD RIGHT-OF-WAY

REINFORCED CONCRETE ENCASEMENT OF SANITARY SEWER

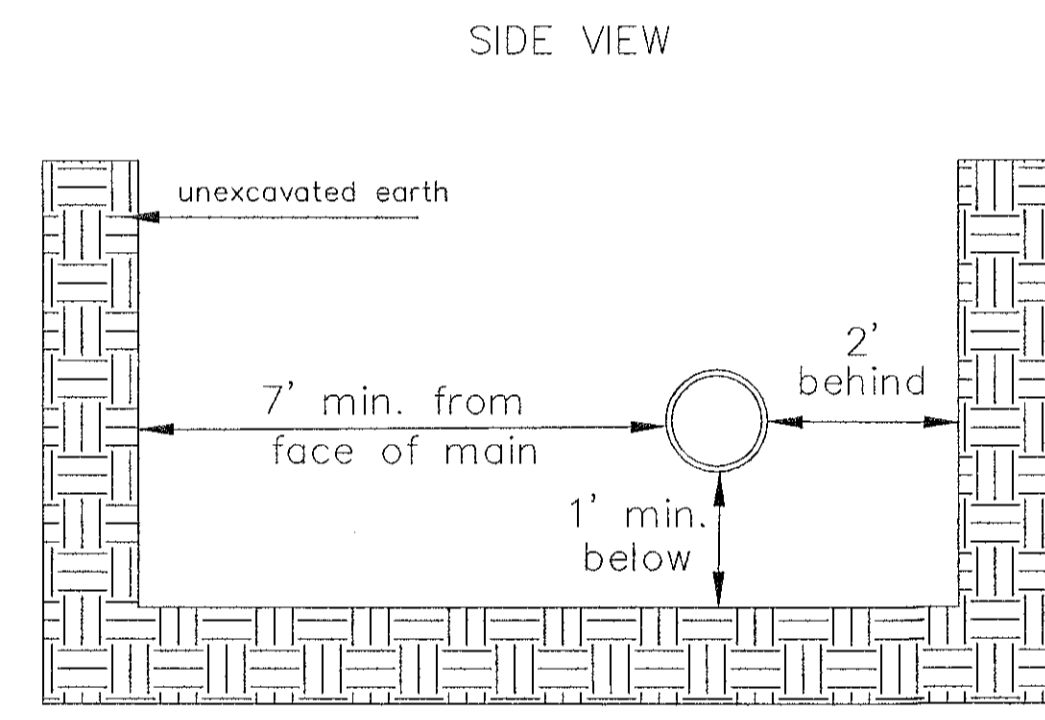
| PIPE SIZE | THRUST AT FITTINGS IN TONS - AT 150#/IN <sup>2</sup> P |      |       |         |         |       |
|-----------|--|------|-------|---------|---------|-------|
|           | PLUG   | 90°  | 45°   | 22 1/2° | 11 1/4° | TEE   |
| 6"        | 2.8  | 3.95 | 2.15  | 1.09    | .55     | 2.8   |
| 8"        | 4.9  | 6.95 | 3.75  | 1.90    | .96     | 4.9   |
| 12"       | 11.4   | 16.1 | 8.75  | 4.45    | 2.25    | 11.4  |
| 16"       | 20.15  | 28.5 | 15.4  | 7.85    | 3.95    | 20.15 |
| 20"       | 31.15  | 44.0 | 23.85 | 12.15   | 6.10    | 31.15 |
| 24"       | 44.55  | 63.0 | 34.1  | 17.4    | 8.75    | 44.55 |

TYPICAL THRUST BLOCKS

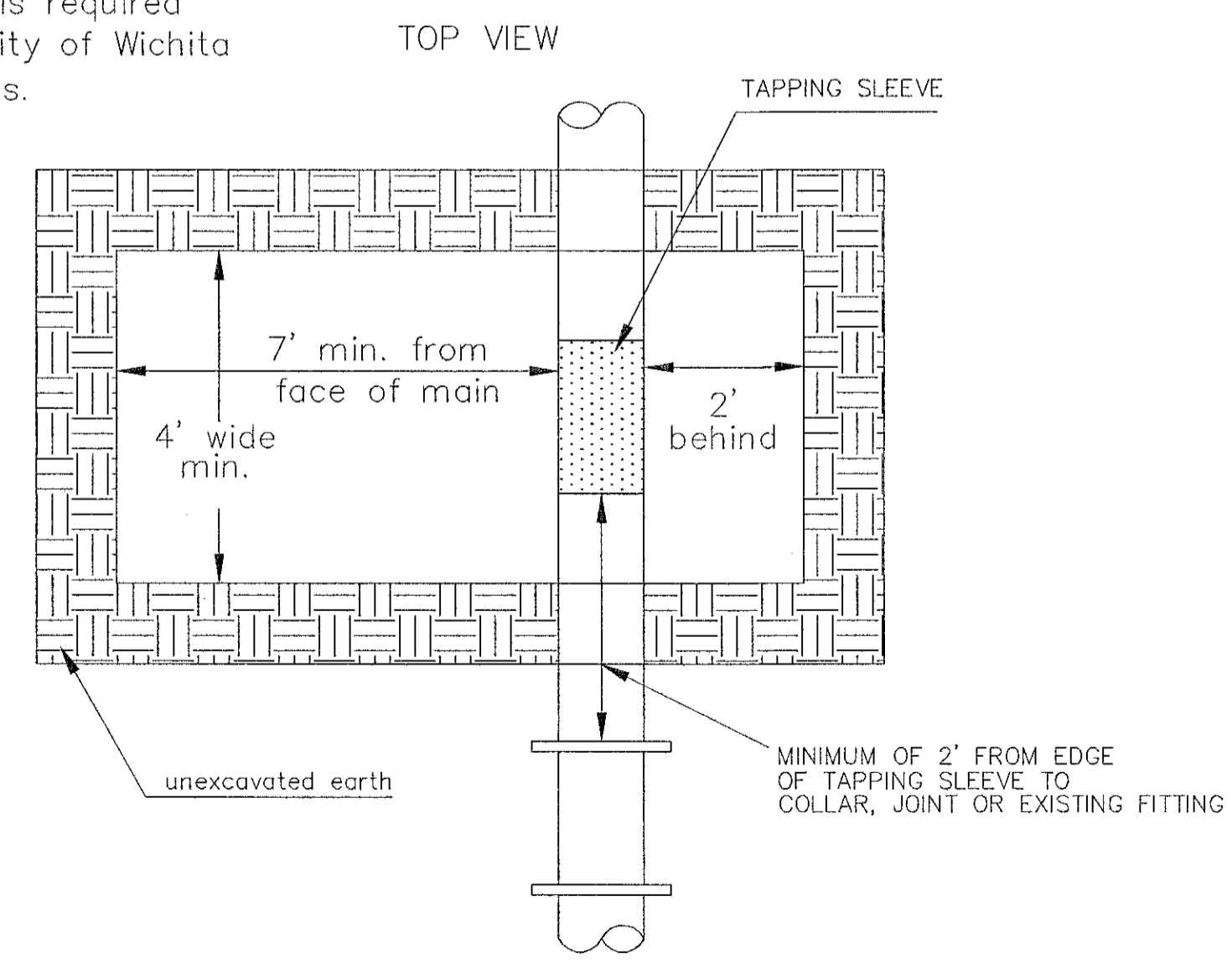


KEY BLOCK DETAIL

\* PLANS GOVERN UNLESS OTHERWISE NOTED ON PLANS

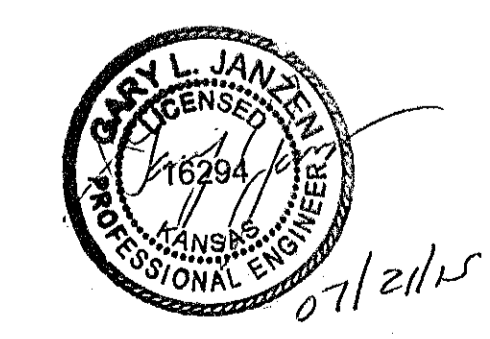
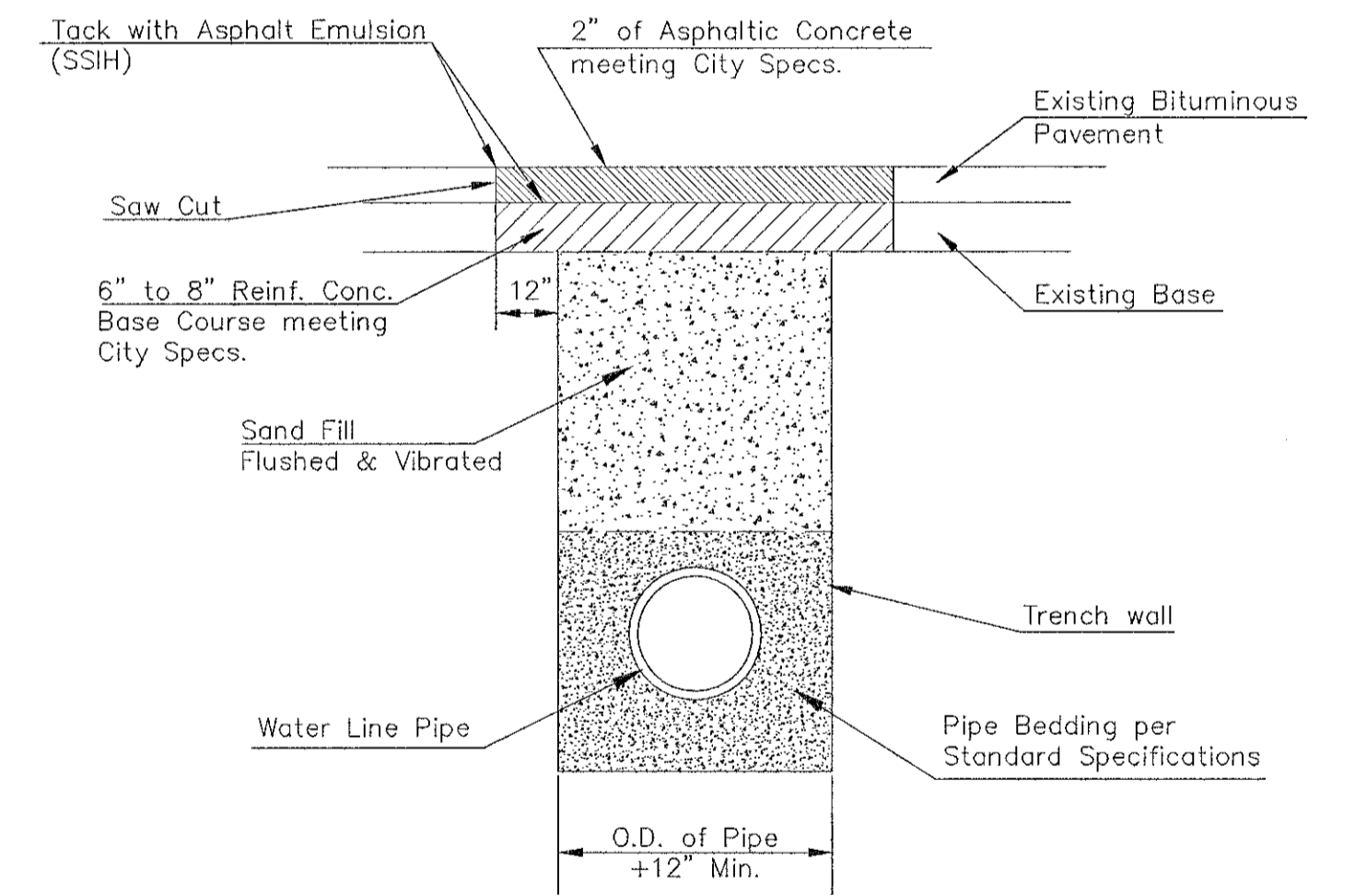


Note: When shoring is required it is to be per The City of Wichita Standard Specifications.



EXCAVATION FOR WET TAP

PAVEMENT REPLACEMENT & TRENCH COMPACTION UNDER EXISTING AND PROPOSED CITY ROADS



|  |  |  |  |                      |      |
|--|--|--|--|----------------------|------|
| <p>CITY OF WICHITA<br/>PUBLIC WORKS &amp; UTILITIES ENGINEERING DIVISION</p>   |  |  | <p>MISCELLANEOUS WATER DETAILS</p> <p>CITY ENGINEER<br/><b>GARY JANZEN, P.E.</b></p> |                      |      |
|  |  |  | PROJECT NUMBER<br>448-90908  | OCA NUMBER<br>810019 | DATE |
| CITY ENGINEER'S OFFICE<br>CITY HALL - SEVENTH FLOOR<br>455 NORTH MAIN STREET<br>WICHITA, KANSAS 67202-1620<br>(316) 268-4501 |  |  | SHEET<br><b>3 of 14</b>  |                      |      |

REVISED: JULY 2015