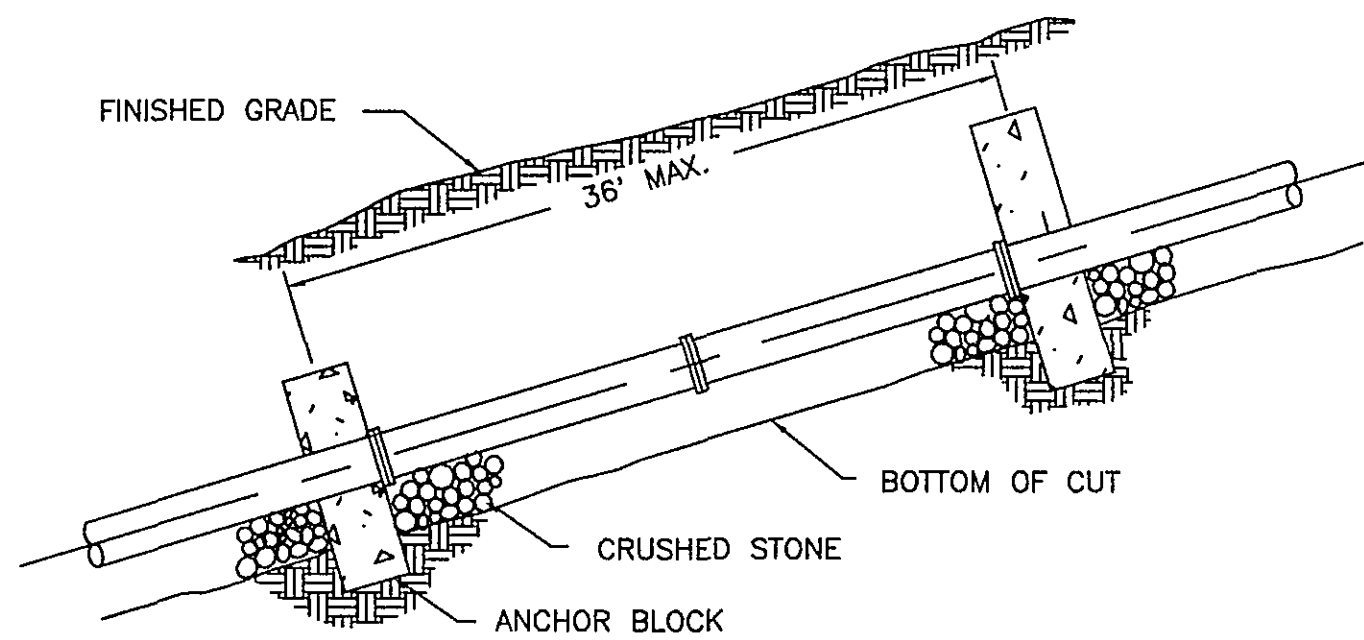


MAJOR DIVISIONS			LETTER SYMBOL	TYPICAL DESCRIPTIONS
Coarse Grained Soils More than 50% of Material by Weight is Coarser than No. 200 Sieve Size	Gravel and Gravelly Soils More than 50% of Coarse Fraction Retained on No. 4 Sieve	Clean Gravels 0-5% Fines*	GW	Fully-Graded Gravels, Gravel-Sand Mixtures, Little or No Fines
		Gravels with Fines >12% Fines*	GP	Gap or Uniform-Graded Gravels, Gravel-Sand Mixtures, Little or No Fines
			GM	Silty Gravels, Gravel-Sand Silt Mixtures
	Sand and Sandy Soils More than 50% of Coarse Fraction Passing No. 4 Sieve	Clean Sand 0-5% fines*	GC	Clayey Gravels, Gravel-Sand-Clay Mixtures
			SW	Well-Graded Sands, Gravelly Sands, Little or No Fines
		Sands with Fines >12% Fines	SP	Gap or Uniform Graded Sands, Gravelly Sands, Little or No Fines
Fine Gravels Soils More than 50% of Material by Weight is Finer than No. 200 Sieve Size	Sils and Clays Low Compressibility Liquid Limit Less than 50%		SM	Silty Sands, Sand-Silt Mixtures
			SC	Clayey Sands, Sand-Clay Mixtures
			ML	Inorganic Silts and Very Fine Sands, Rock Flour, Silty or Clayey Fine Sands or Clayey Silts with Slight Plasticity
	Sils and Clays High Compressibility Liquid Limit Greater than 50%		CL	Inorganic Clays of Low to Medium Plasticity, Gravelly Clays, Sandy Clays, Silty Clays
			OL	Organic Silts and Organic Silty Clays of Low Plasticity
			MH	Inorganic Silts, Micaceous or Diatomaceous Fine Sands or Silty Soils
Highly Organic Soils			CH	Inorganic Clays of High Plasticity
			OH	Organic Clays of Medium to High Plasticity, Organic Silts
			PT	Peat, Humus, Swamp Soils with High Organic Contents

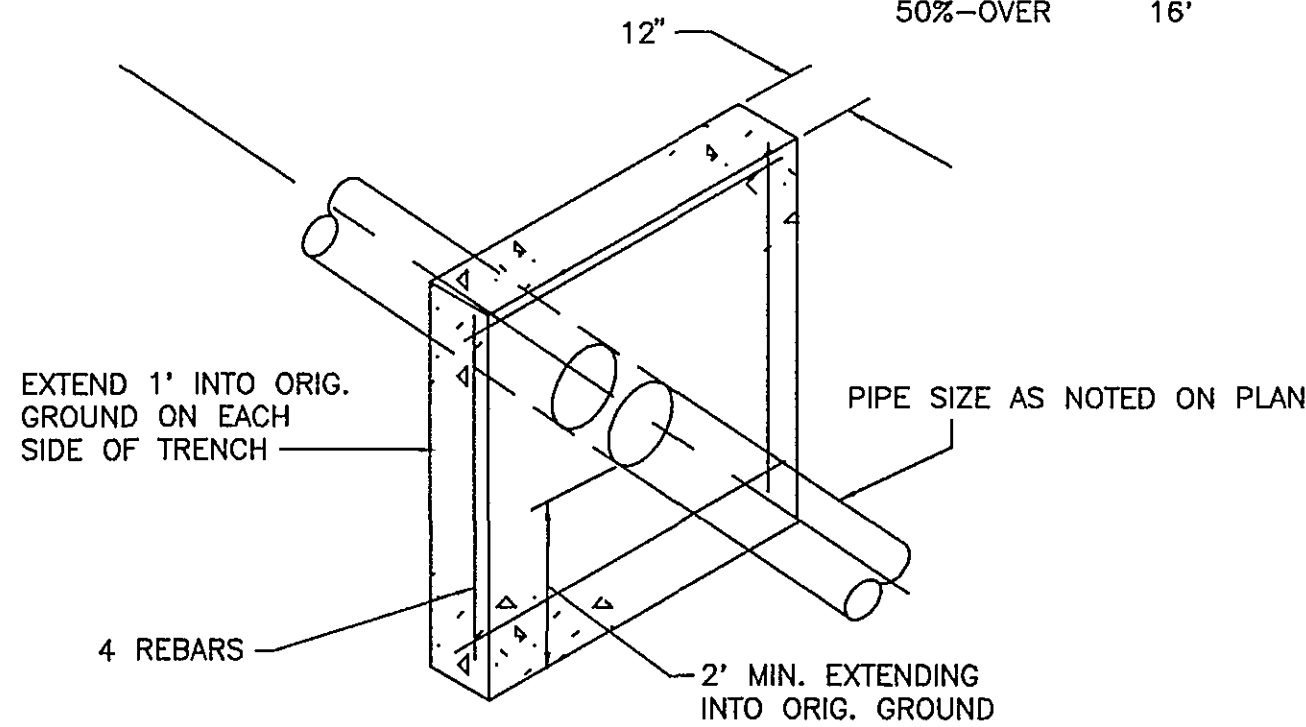
* For soils having 5 to 12% fines, use dual symbol such as SP-SM.

UNIFIED SOIL CLASSIFICATION SYSTEM



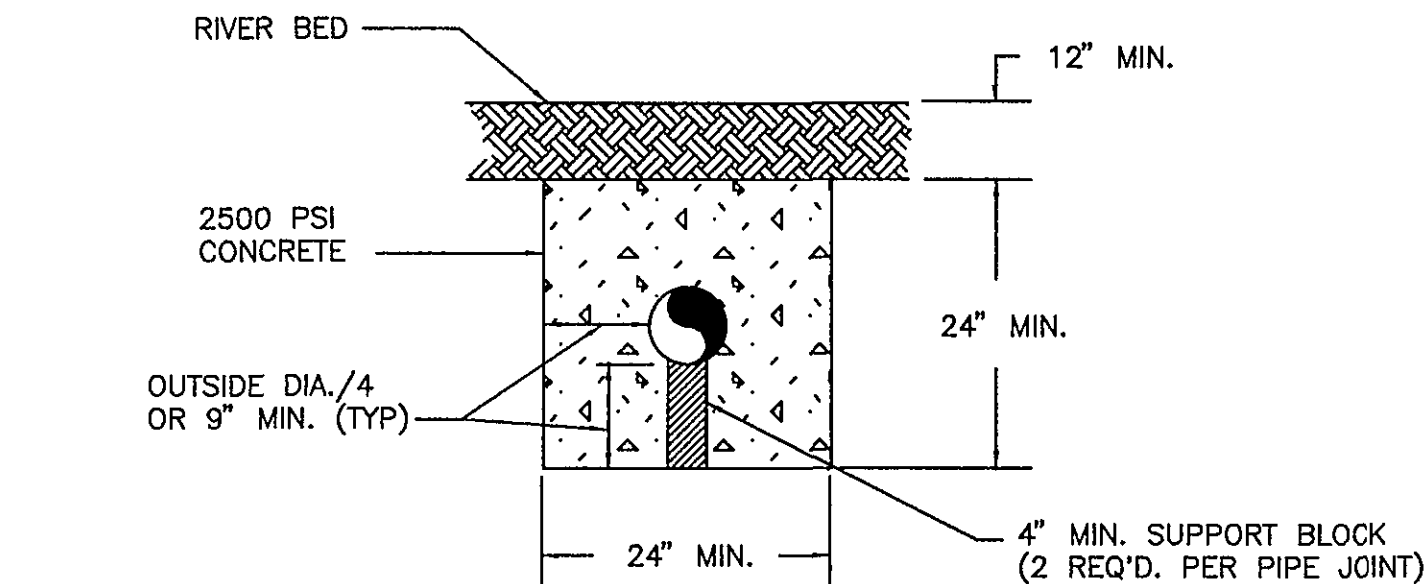
SLOPE ANCHOR SPACING

SLOPE	SPACING
20%-35%	36'
35%-50%	24'
50%-OVER	16'

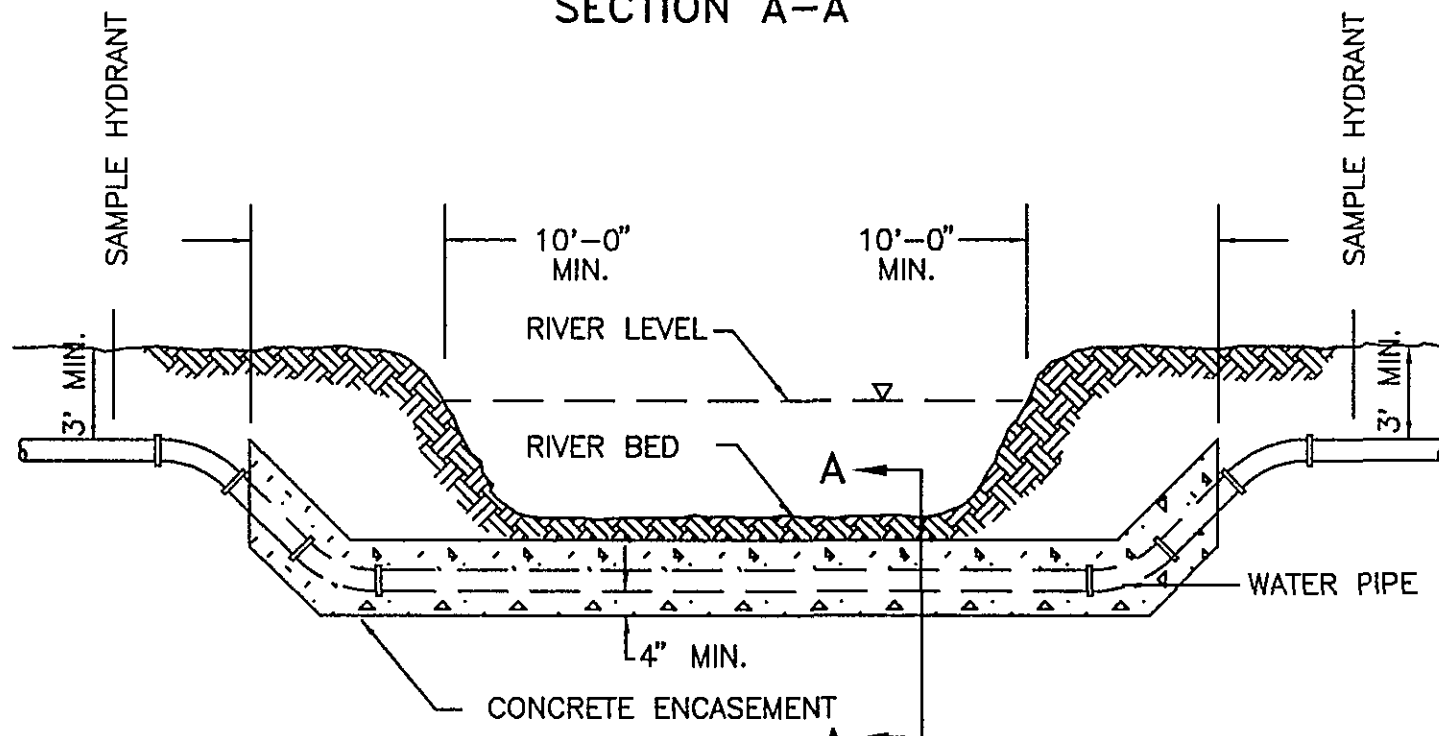


ANCHOR BLOCK DETAIL

NTS

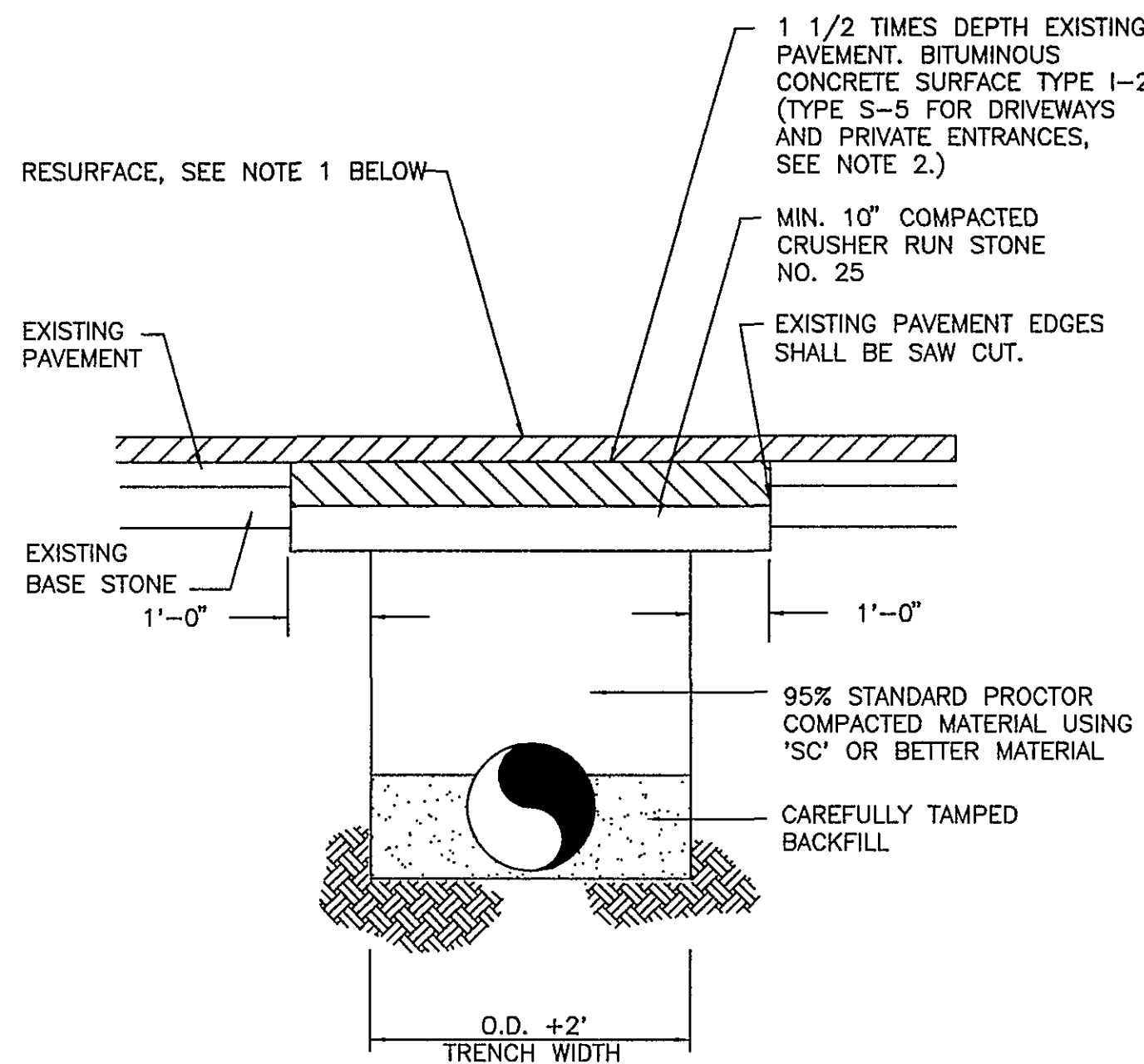


SECTION A-A



RIVER CROSSING DETAIL

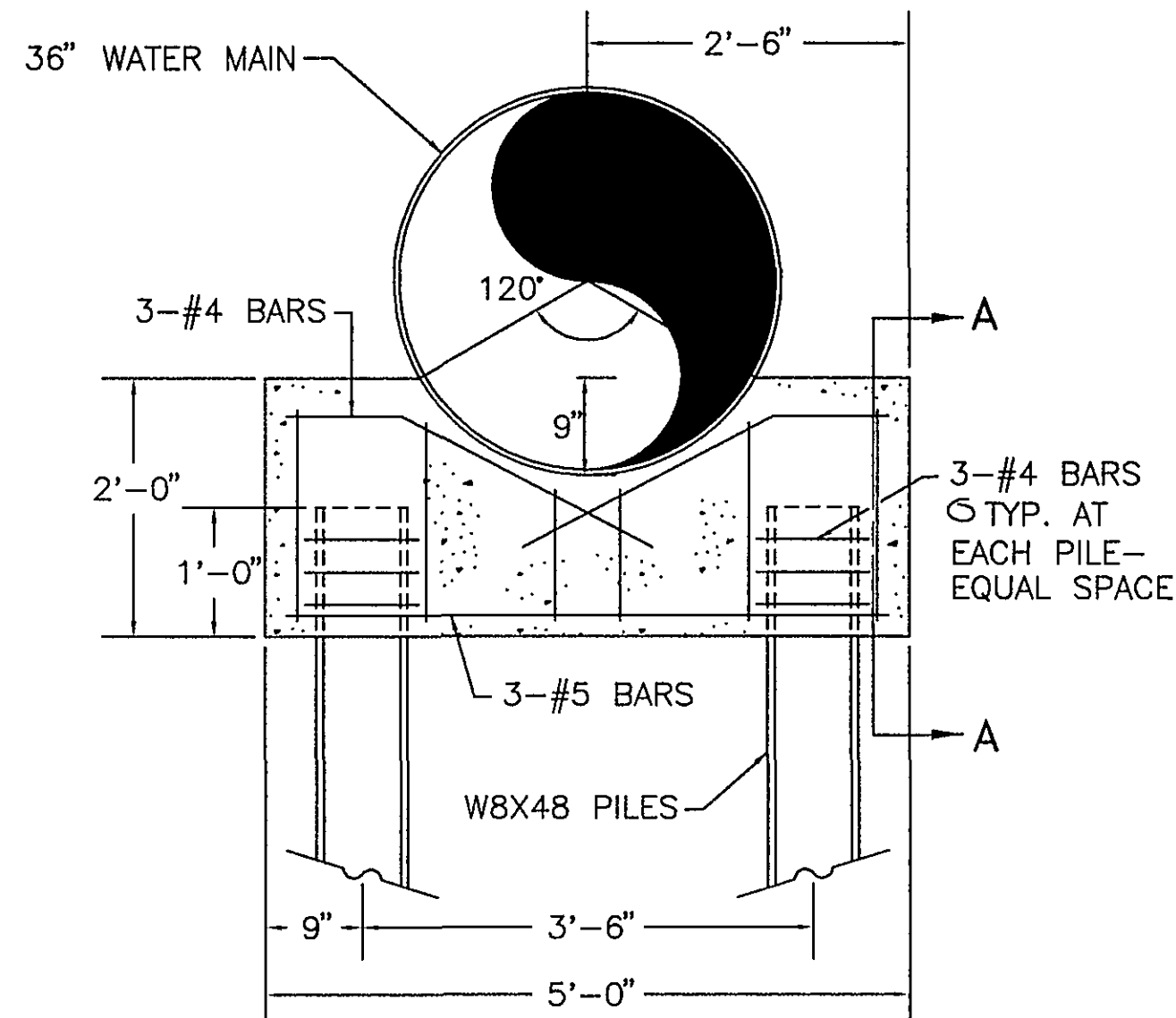
NTS



OPEN CUT ROAD and CROSSING DETAIL

NTS

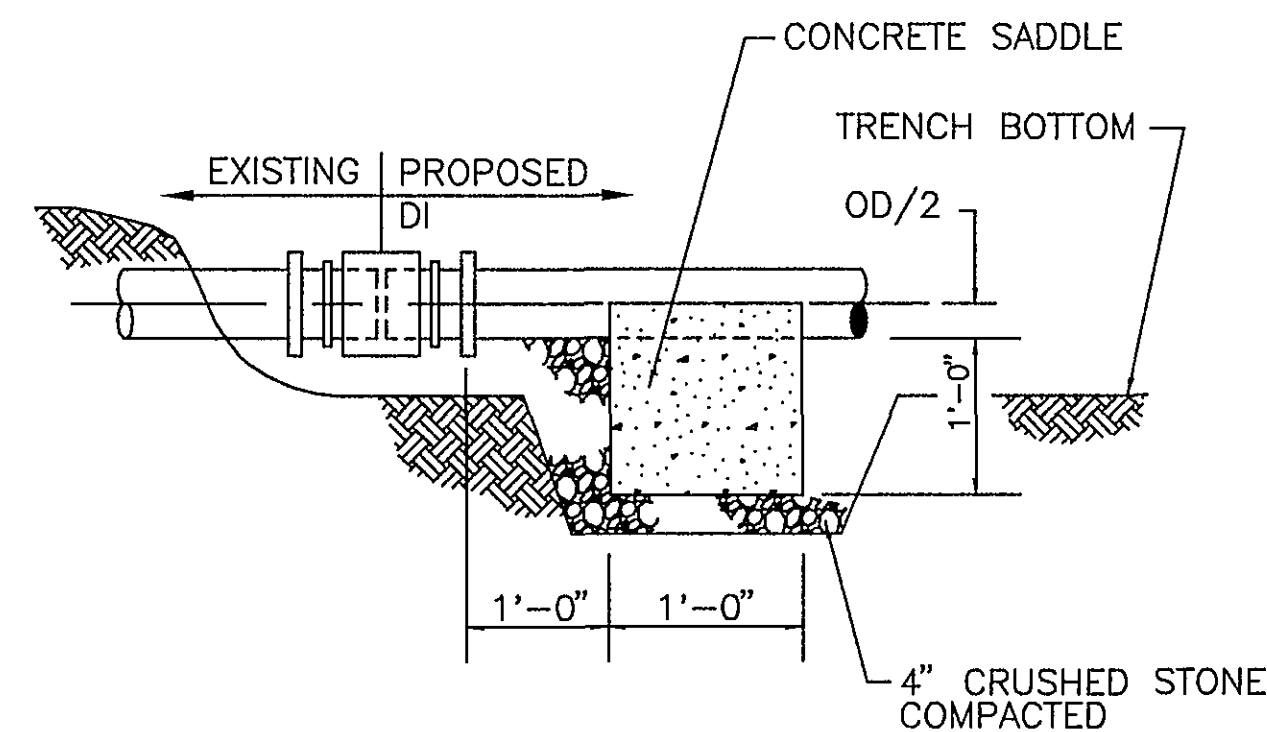
- NOTES:
- 1) ALL PAVED SURFACES OWNED BY THE STATE SHALL BE RESURFACED 25' EACH SIDE OF CUT, AS PER V.D.O.T. SPECIFICATIONS. ALL PAVED ROADWAYS OWNED BY THE CITY OF ROANOKE, AND CUT BY THE CONTRACTOR SHALL HAVE THE TRENCH WIDTH PLUS FIVE FEET ON EACH SIDE OF THE CUT RESURFACED TO A COMPACTED THICKNESS OF 1.5"
 - 2) THIS DETAIL ALSO APPLIES TO ALL PAVED DRIVEWAYS AND ENTRANCES- EXCLUDING 25' RESURFACING EACH WAY.
 - 3) WHERE EXISTING SURFACE IS GRAVEL, REPLACEMENT SURFACE TO BE CRUSHER RUN STONE NO. 25.
 - 4) MAXIMUM DEPTH OF ASPHALT TRENCH PATCH IS 6 INCHES COMPACTED.



SECTION A-A

PILE CAP DETAIL

NTS



COUPLING EQUAL TO FERNCO:

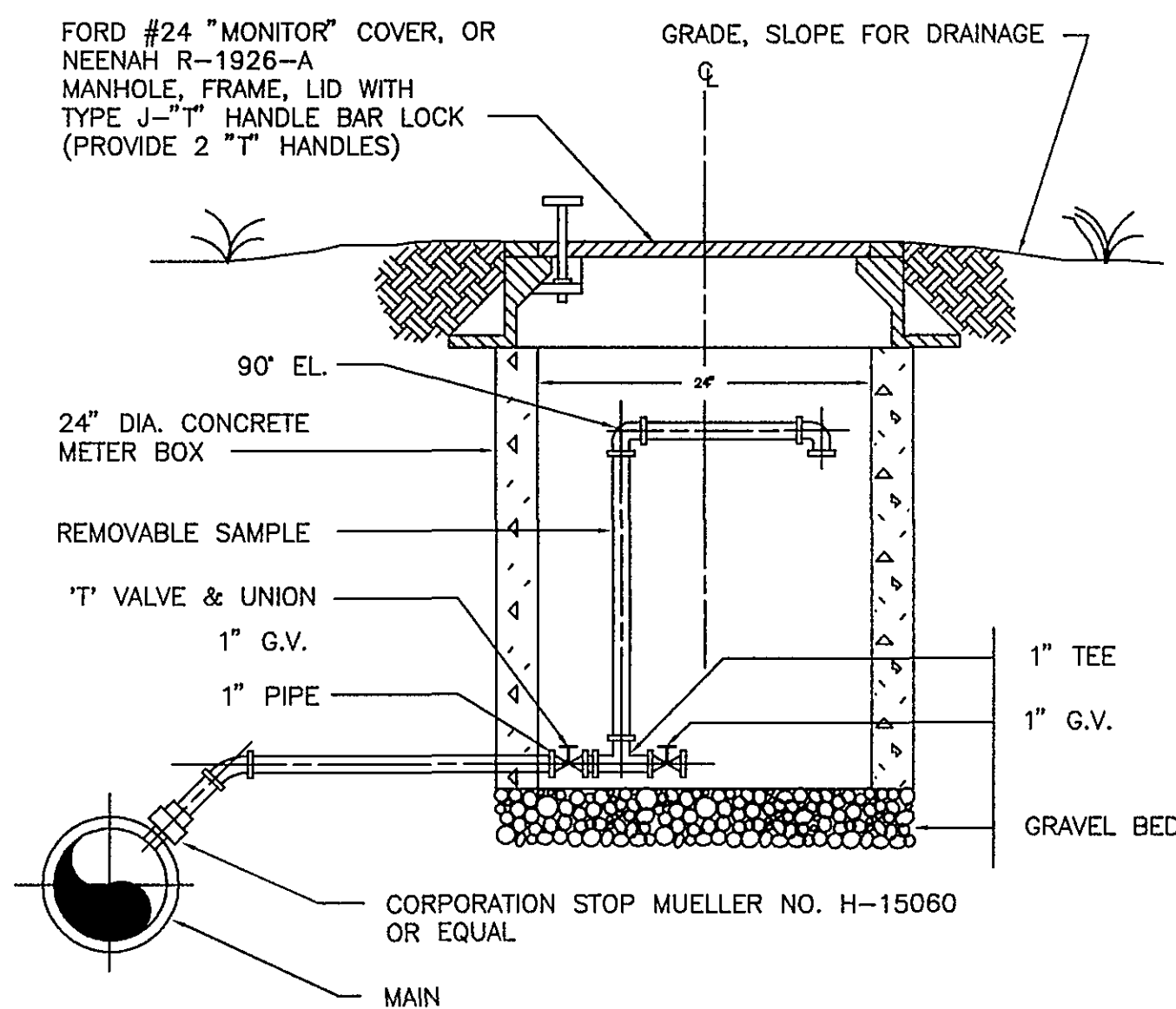
SERIES 1051 WHEN EXISTING IS ASBESTOS CEMENT

SERIES 1002 WHEN EXISTING IS VITRIFIED CLAY

SERIES 1006 WHEN EXISTING IS CONCRETE

TYPICAL SEWER LINE COUPLING DETAIL

NTS



TYPICAL SAMPLE HYDRANT

NTS

AS BUILT