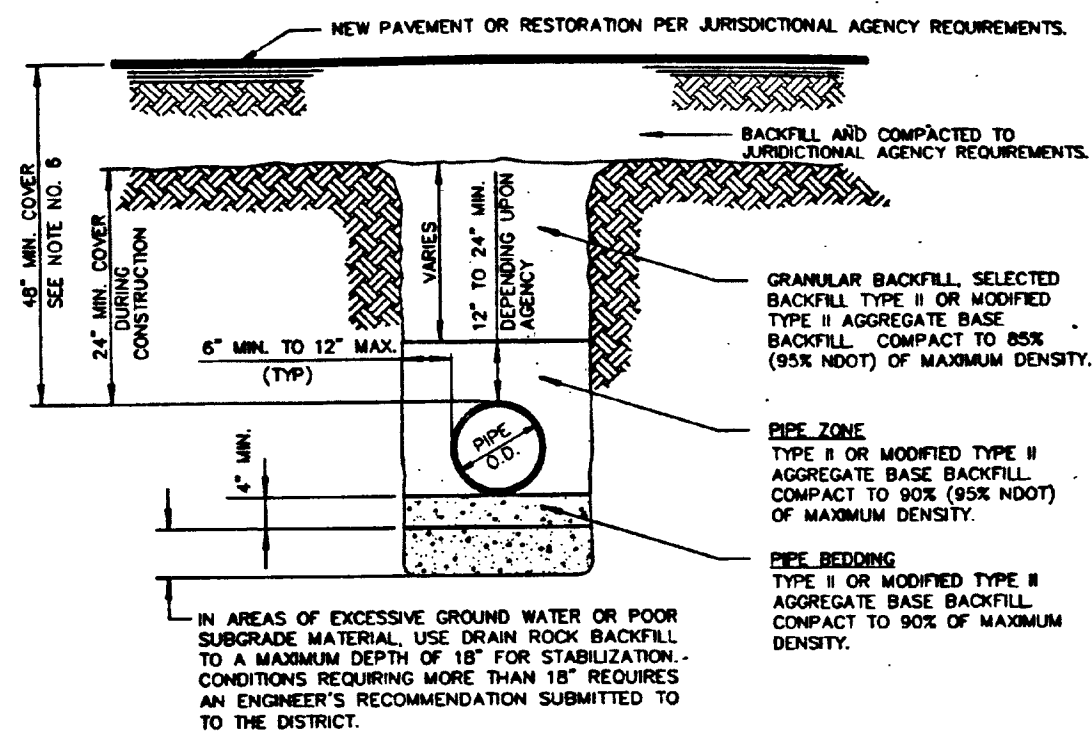


UNIFORM DESIGN STANDARDS FOR
WATER DISTRIBUTION SYSTEMS

NOTES:

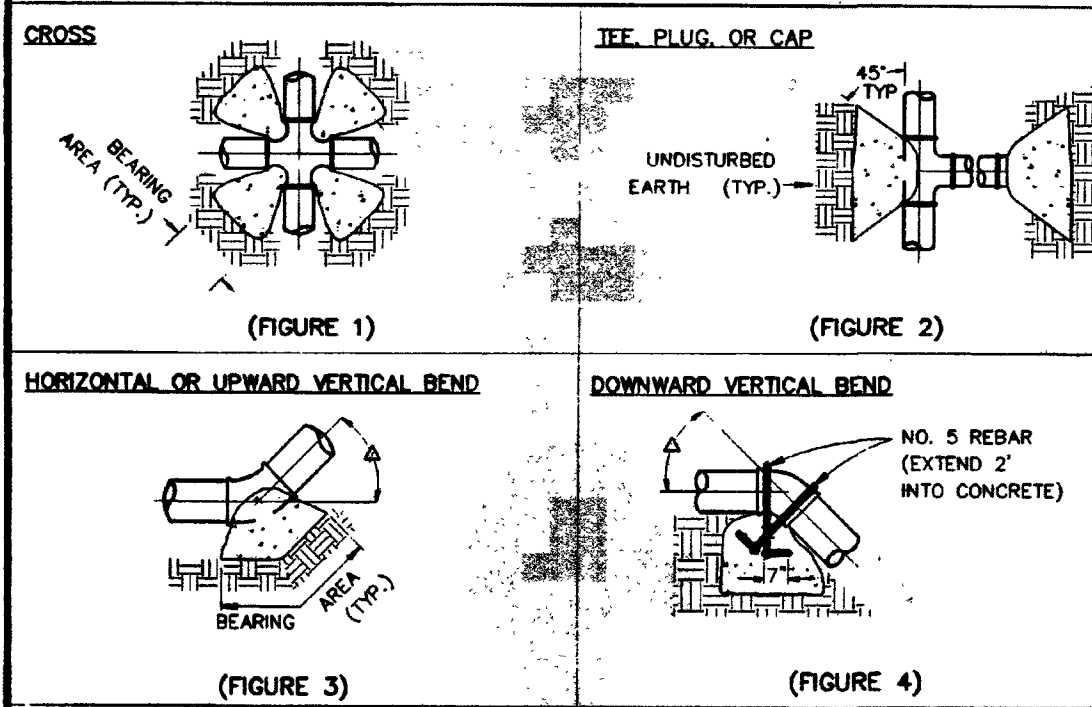
1. ACCEPTABLE METHODS OF COMPACTION
 - A. BEDDING AND PIPE ZONE AREAS: FLOODING AND JETTING, IF AGENCY APPROVED, OR MECHANICAL COMPACTION (NOT RIGHT-OF-WAY, MECHANICAL COMPACTION ONLY).
 - B. ABOVE PIPE ZONE: FLOODING AND JETTING OR MECHANICAL COMPACTION (NOT RIGHT-OF-WAY, MECHANICAL COMPACTION ONLY).
2. TRENCH EXCAVATION SHALL COMPLY WITH THE CURRENT REGULATIONS AS DETERMINED BY THE NEVADA OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION.
3. REFERENCE: UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS CLARK COUNTY AREA, NEVADA, LATEST EDITION OR IMPROVEMENT STANDARDS DEPARTMENT OF PUBLIC WORKS, CLARK COUNTY NEVADA, LATEST EDITION, AS APPLICABLE.
4. FOR PIPE LOCATOR RIBBON AND TYPICAL INSTALLATION SEE UDS PLATE NO. UDS27.
5. REFER TO THE UNIFORM DESIGN STANDARDS FOR WATER DISTRIBUTION SYSTEMS, TABLE E, "BACKFILL MATERIALS" FOR AGGREGATE TYPES AND SIZES.
6. FOR NOMINAL PIPE DIAMETERS 12" OR LESS A 42" MINIMUM COVER IS ALLOWED.

NOT TO SCALE

FILE NAME: UDS004
DRAWN BY: B.V.
CHECKED BY: C.M.M.

TRENCH SECTION BACKFILL SPECIFICATION
PAVED AREAS
(STREET R/W GREATER THAN 60')

UDS PLATE NO. 6C
SHEET 1 OF 1

UNIFORM DESIGN STANDARDS FOR
WATER DISTRIBUTION SYSTEMS

GENERAL NOTES:

COAT AND WRAP ALL METAL SURFACE IN ACCORDANCE WITH SECTION 3. PROTECTIVE COATINGS. ALL CONCRETE SHALL BE 2000 P.S.I. MINIMUM, 28-DAY COMPRESSIVE STRENGTH. CONCRETE IS TO BE PLACED IN UNDISTURBED EARTH. TABLE BELOW DENOTES MINIMUM BEARING AREA OR VOLUME OF THRUST BLOCK. SPECIAL DESIGN, BY A NRE, FOR EACH INSTALLATION IS REQUIRED IF ALLOWABLE SOIL BEARING CAPACITY IS LESS THAN 3000 P.S.F. ALL INSTALLATION SURFACES NOT BEARING AGAINST UNDISTURBED EARTH SHALL BE FORMED.

PIPE I.D.	FIGURE 1	BEARING AREA IN SQUARE FEET				CONC./CU.YDS.			
		FIGURE 3, Δ	FIGURE 4, Δ	FIGURE 3, Δ	FIGURE 4, Δ	FIGURE 3, Δ	FIGURE 4, Δ	FIGURE 3, Δ	FIGURE 4, Δ
4"	2	2	1	1	1	1.0	0.5	0.5	0.5
6"	2	3	4	2	1	1.5	1.0	0.5	0.5
8"	3	5	7	4	2	1	2.5	1.5	1.0
10"	4	8	10	6	3	1	4.0	2.5	1.5
12"	5	10	14	8	4	2	5.0	3.0	1.5
14"	10	20	24	12	7	4	8.5	4.5	2.5
16"	12	24	30	16	10	5	11.0	6.0	3.0
18"	12	24	30	16	10	5	11.0	6.0	3.0
20"	14	28	40	20	12	6	14.0	8.0	4.0

NOT TO SCALE

FILE NAME: UDS005
DRAWN BY: B.V.
CHECKED BY: C.M.M.

THRUST BLOCK INSTALLATION

UDS PLATE NO. 5
SHEET 1 OF 1

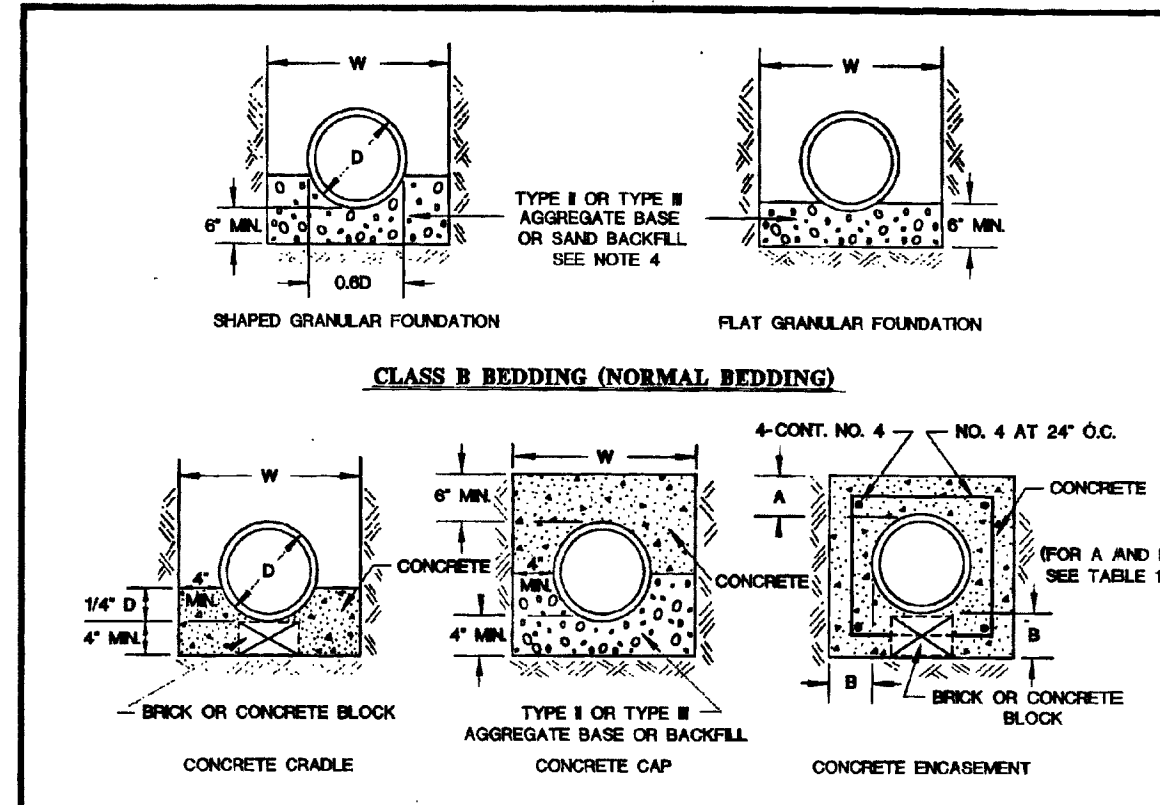


TABLE 1

PIPE SIZE	PIPE	PIPE	PIPE	PIPE
SIZE	SIZE	SIZE	SIZE	SIZE
4"	4"	4"	4"	4"
6"	6"	6"	6"	6"
8"	8"	8"	8"	8"
10"	10"	10"	10"	10"
12"	12"	12"	12"	12"
14"	14"	14"	14"	14"
16"	16"	16"	16"	16"
18"	18"	18"	18"	18"
20"	20"	20"	20"	20"

D = OUTSIDE DIAMETER OF PIPE
W = OUTSIDE DIAMETER OF PIPE + 24" MAXIMUM

NOTES:

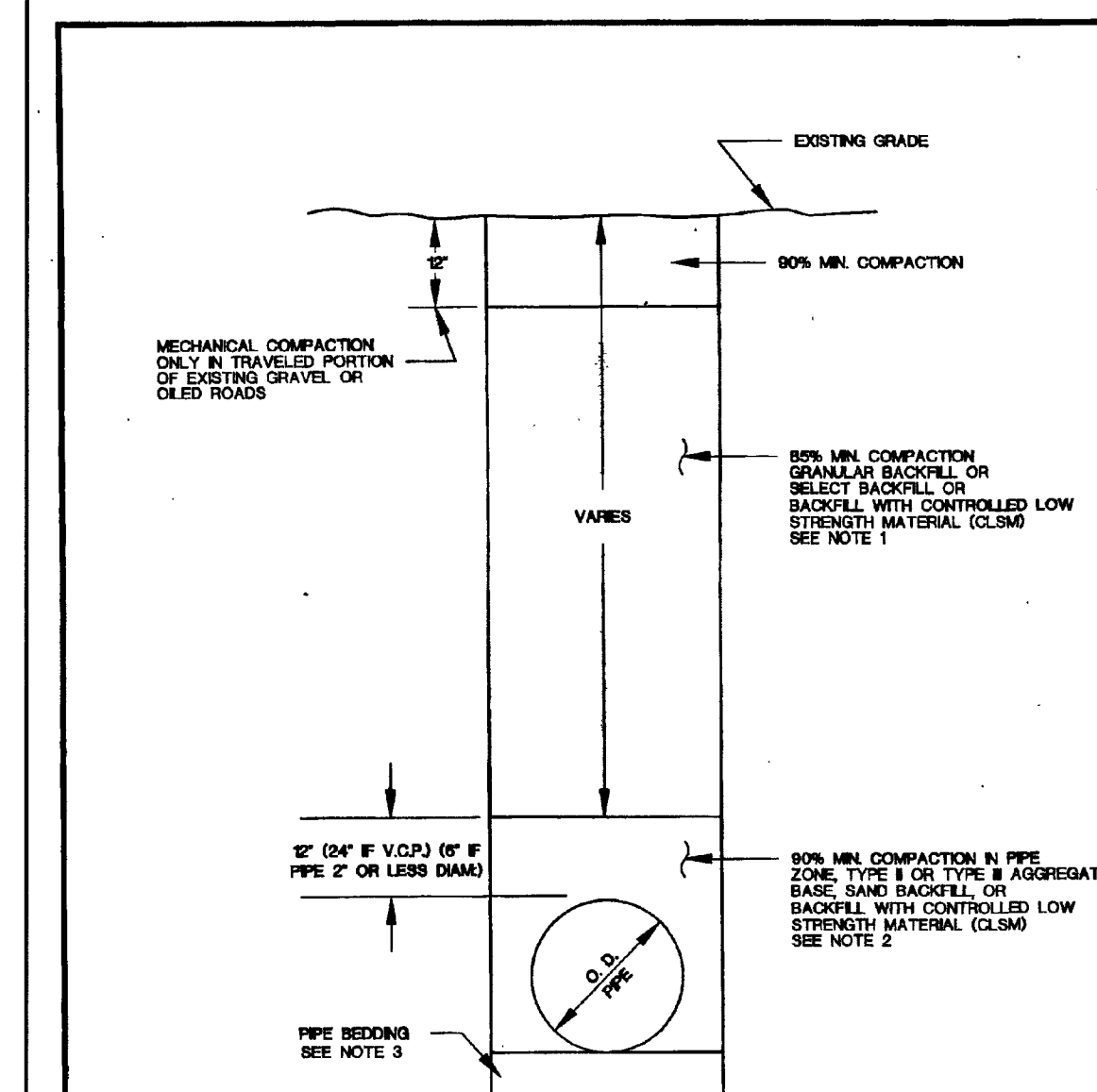
1. PIPE BEDDING TO BE COMPACTED TO AT LEAST 90% OF MAXIMUM DENSITY.
2. BEDDING THICKNESS IF BEDDING MATERIAL TO BE CONSTRUCTED UNDER THE BARREL, SUBGRADE TO BE EXCAVATED TO PROVIDE 2" CLEARANCE UNDER THE BELL.
3. OTHER BEDDING METHODS MAY BE SPECIFIED OR APPROVED.
4. CRUSHED ROCK MAY BE USED FOR PIPE BEDDING ONLY IF MATERIAL USE HAS BEEN SPECIFICALLY APPROVED BY THE GOVERNING AGENCY.

208 TRENCH EXCAVATION & BACKFILL
302 AGGREGATE BASE COURSES
501 CONCRETE
506 REINFORCEMENT STEEL

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

PIPE TRENCH BEDDING METHODS

DATE 5-17-01 DWG. NO. 505 PAGE NO. 125



NOTES:

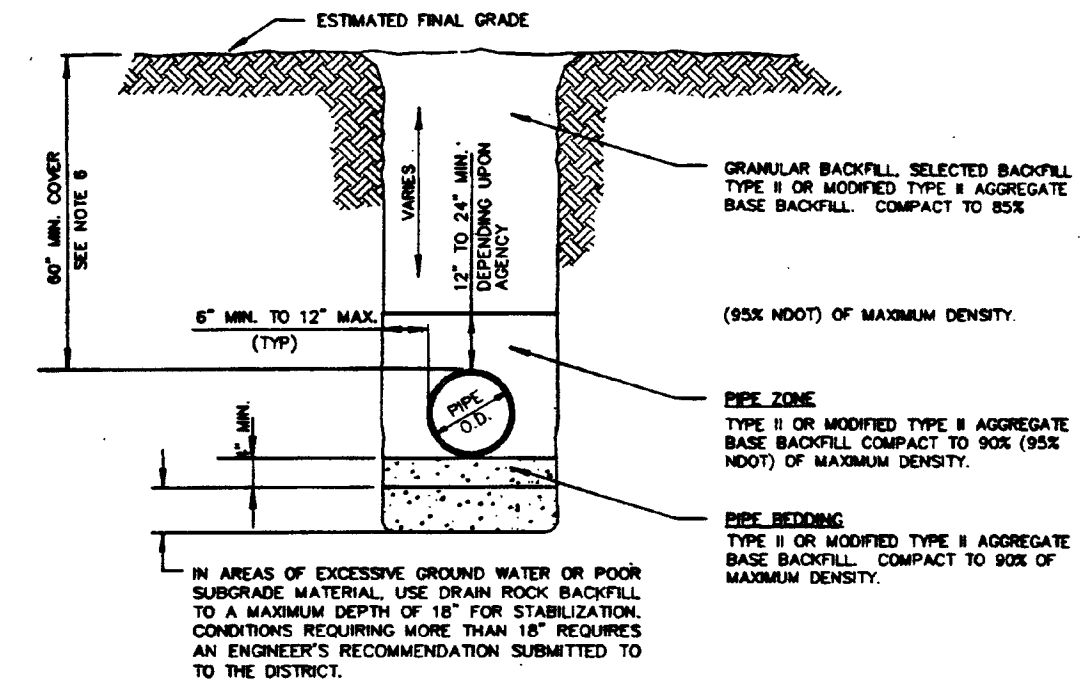
1. NO STONES OR LUMPS GREATER THAN 3" PERMITTED IN TRENCH 2' OR LESS IN WIDTH.
2. TRENCH WIDTH, BEDDING AND PIPE ZONE REQUIREMENTS FOR UTILITY INSTALLATIONS SHALL CONFORM TO THE RESPECTIVE AGENCY REQUIREMENTS.
3. CRUSHED ROCK MAY BE USED FOR PIPE BEDDING ONLY IF MATERIAL USE HAS BEEN SPECIFICALLY APPROVED BY THE GOVERNING AGENCY. SEE STANDARD DRAWING NO. 506 FOR PIPE BEDDING METHODS.
4. LAS VEGAS VALLEY WATER DISTRICT REQUIRES PIPE BEDDING AND BACKFILL WITHIN THE PIPE ZONE TO BE OF THE SAME MATERIAL.

208 TRENCH EXCAVATION & BACKFILL
302 AGGREGATE BASE COURSES

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

TRENCH BACKFILL - UNPAVED AREAS AND AREAS OUTSIDE EXISTING OR FUTURE PROPOSED STREET RIGHT-OF-WAY

DATE 5-17-01 DWG. NO. 502 PAGE 122

UNIFORM DESIGN STANDARDS FOR
WATER DISTRIBUTION SYSTEMS

NOTES:

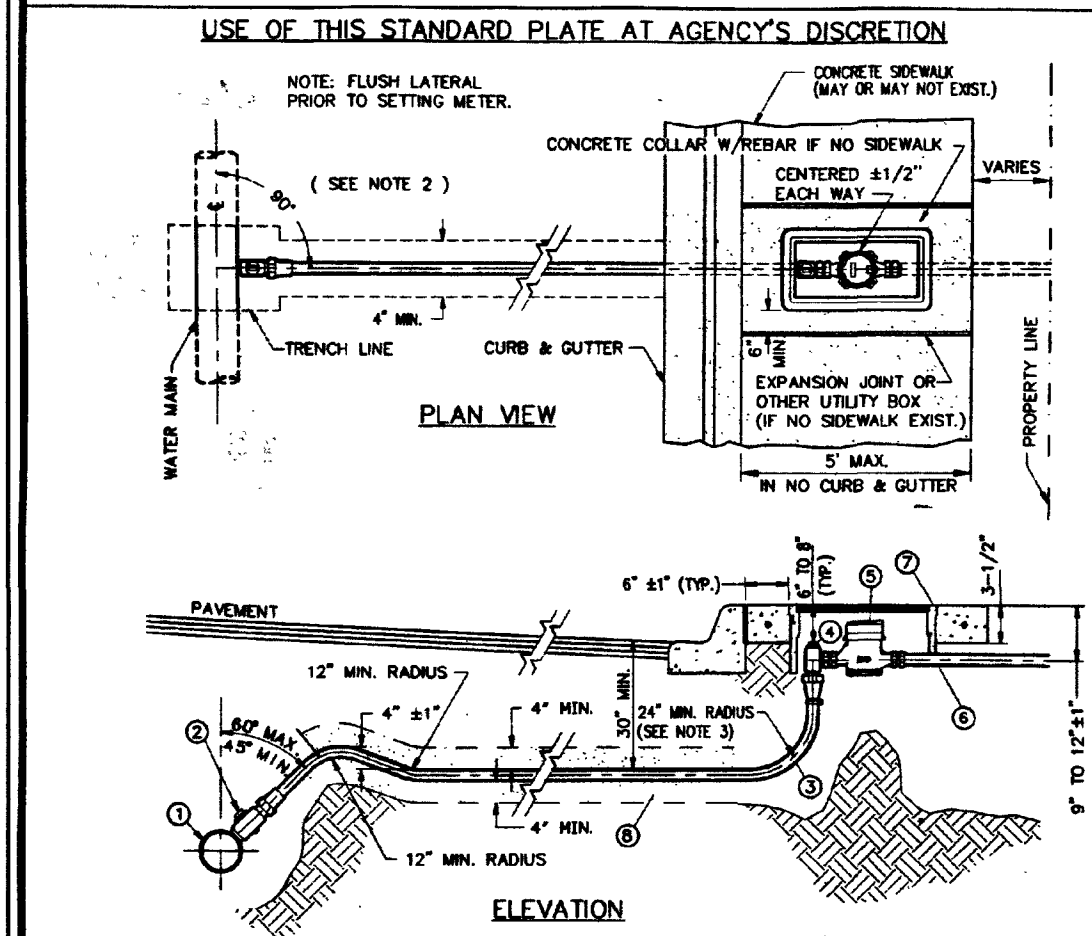
1. ACCEPTABLE METHODS OF COMPACTION
 - A. BEDDING AND PIPE ZONE AREAS: FLOODING AND JETTING, IF AGENCY APPROVED, OR MECHANICAL COMPACTION (NOT RIGHT-OF-WAY, MECHANICAL COMPACTION ONLY).
 - B. ABOVE PIPE ZONE: FLOODING AND JETTING OR MECHANICAL COMPACTION (NOT RIGHT-OF-WAY, MECHANICAL COMPACTION ONLY).
2. TRENCH EXCAVATION SHALL COMPLY WITH THE CURRENT REGULATIONS AS DETERMINED BY THE NEVADA OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION.
3. REFERENCE: UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS CLARK COUNTY AREA, NEVADA, LATEST EDITION OR IMPROVEMENT STANDARDS DEPARTMENT OF PUBLIC WORKS, CLARK COUNTY NEVADA, LATEST EDITION, AS APPLICABLE.
4. FOR PIPE LOCATOR RIBBON AND TYPICAL INSTALLATION SEE UDS PLATE NO. UDS27.
5. REFER TO THE UNIFORM DESIGN STANDARDS FOR WATER DISTRIBUTION SYSTEMS, TABLE E, "BACKFILL MATERIALS" FOR AGGREGATE TYPES AND SIZES.
6. DURING CONSTRUCTION AT LEAST 24" MUST BE MAINTAINED FROM PIPE CROWN TO GRADE.

NOT TO SCALE

FILE NAME: UDS004
DRAWN BY: B.V.
CHECKED BY: C.M.M.

TRENCH SECTION BACKFILL SPECIFICATION
UNPAVED AREAS

UDS PLATE NO. 6A
SHEET 1 OF 1

UNIFORM DESIGN STANDARDS FOR
WATER DISTRIBUTION SYSTEMS

LEGEND:

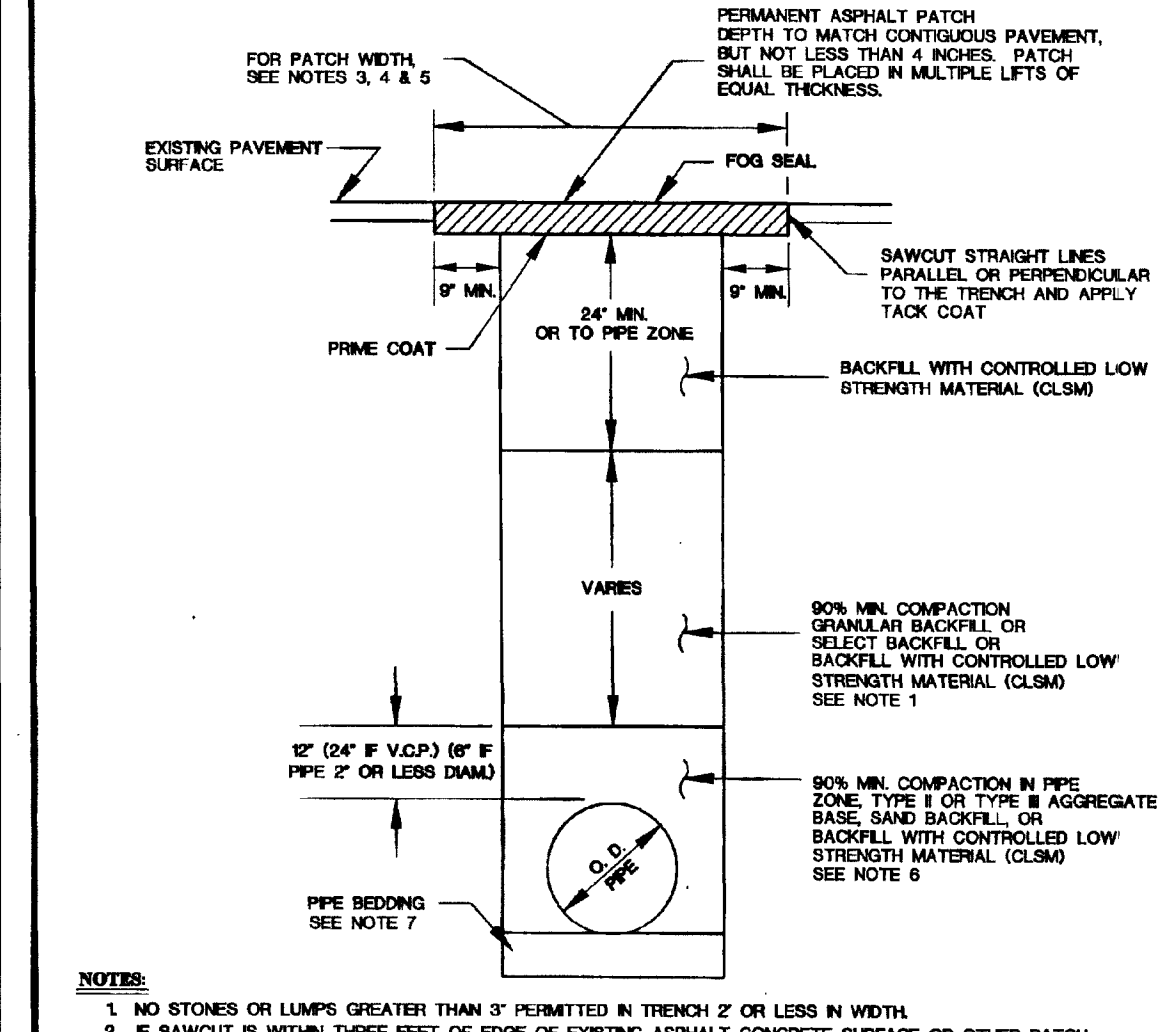
1. ONE COUPLING IS ALLOWED BETWEEN THE CORPORATION STOP AND THE ANGLE METER STOP, IF THE TOTAL LATERAL LENGTH IS GREATER THAN 40 FEET.
2. CUL-DE-SAC SERVICE LATERALS MUST FOLLOW THE MOST DIRECT ROUTE POSSIBLE BETWEEN SERVICE SADDLE AND ANGLE METER STOP. HORIZONTAL BENDING RADIUS ALLOWED FOR 1" TUBING IS 12" MIN. AND 24" MIN. FOR 1 1/2" AND 2" TUBING. MAXIMUM DEFLECTION ANGLE ALLOWED IS 90°.
3. IF A 24" MIN. RADIUS CAN NOT BE MAINTAINED AN APPROPRIATE SIZE 90° COMPRESSION OR FLARED CONNECTION SHOULD BE USED.
4. USE OF 5/8 METERS NOT APPROVED BY ALL AGENCIES.
5. FLUSH LATERAL PRIOR TO SETTING METER.

NOT TO SCALE

FILE NAME: UDS005
DRAWN BY: B.V.
CHECKED BY: C.M.M.

NEW SERVICE INSTALLATION WITH SINGLE ANGLE METER STOPS
COMMERCIAL OR RESIDENTIAL GREATER TO 1/4 ACRE GROSS
5/8", 3/4", 1", 1-1/2" AND 2" METER SIZES

UDS PLATE NO. 1D
SHEET 1 OF 1



NOTES:

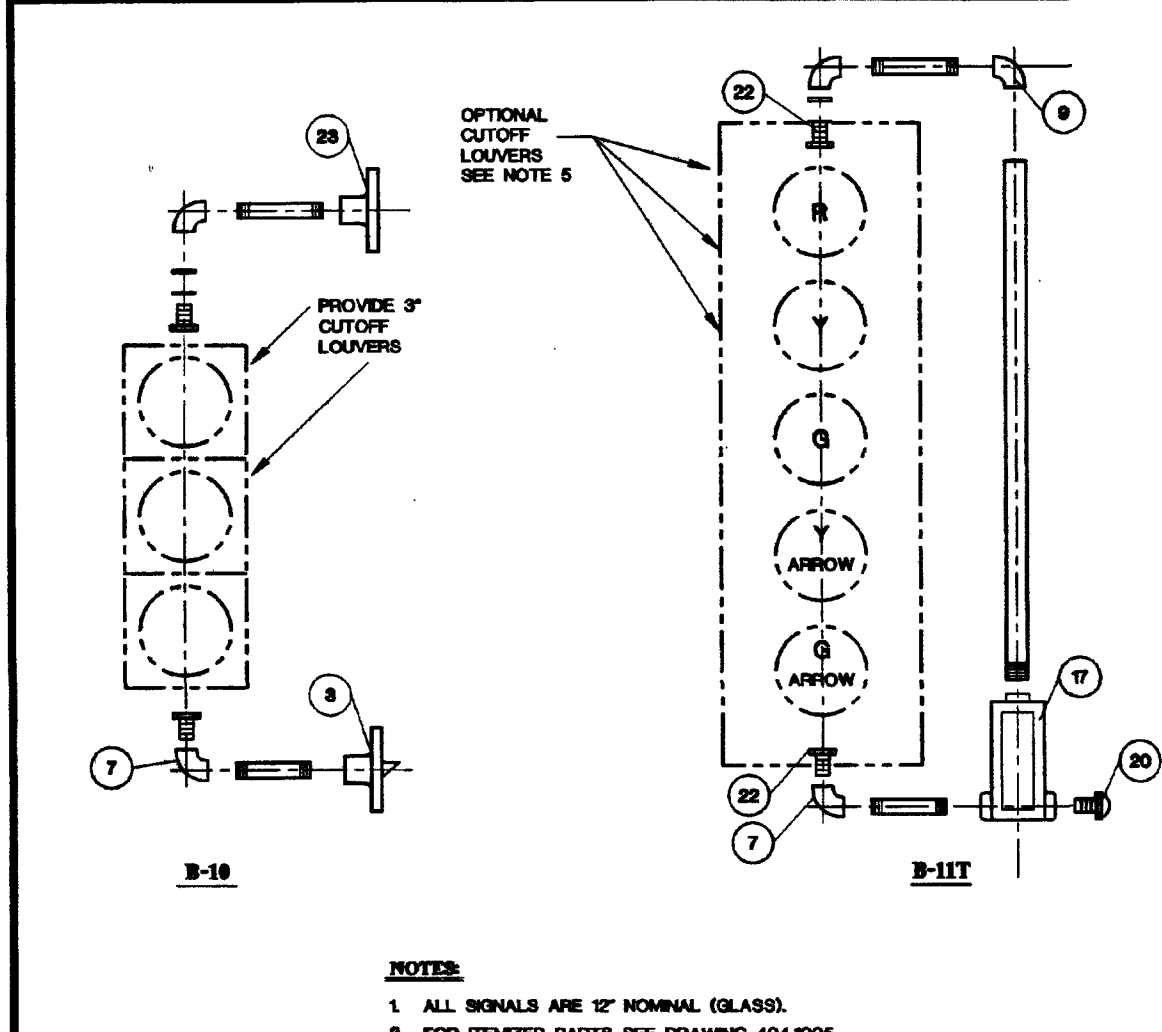
1. NO STONES OR LUMPS GREATER THAN 3" PERMITTED IN TRENCH 2' OR LESS IN WIDTH.
2. IF SAWCUT IS WITHIN THREE FEET OF EDGE OF EXISTING ASPHALT CONCRETE SURFACE OR OTHER PATCH, REMOVE EXISTING PAVEMENT TO THAT EDGE AND REPLACE ENTIRE SECTION.
3. TRANSVERSE PATCHES SHALL BE WITHIN 14 FEET MINIMUM SURFACING TO ACCOMMODATE MECHANICAL PLACEMENT, ROLLING AND COMPACTION PER UNIFORM STANDARD SPECIFICATION SECTION 404.03.1.
4. LONGITUDINAL PATCHES SHALL BE ONE TRAVEL LANE IN WIDTH. SAWCUTS ARE TO BE MADE AT THE EDGE OF THE TRAVEL LANE.
5. FOR CONDUIT TRENCHES 8 INCHES WIDE OR LESS WITHIN 2 FEET OF THE CURB PATCHES SHALL EXTEND A MINIMUM OF 4 FEET FROM LP OF GUTTER AND PAVEMENT SHALL BE REMOVED TO CURB AND GUTTER WIDTH SHALL BE SUFFICIENT TO ACCOMMODATE MECHANICAL PLACEMENT USING AGENCY APPROVED SPREADER BOX OR PAVING MACHINE ROLLING AND COMPACTION PER UNIFORM STANDARD SPECIFICATION SECTION 404.03.1. SAWCUT SHALL NOT BE PLACED IN WHEEL PATH AREA.
6. TRENCH WIDTH, BEDDING AND PIPE ZONE REQUIREMENTS FOR UTILITY INSTALLATIONS SHALL CONFORM TO THE RESPECTIVE AGENCY REQUIREMENTS.
7. CRUSHED ROCK MAY BE USED FOR PIPE BEDDING ONLY IF MATERIAL USE HAS BEEN SPECIFICALLY APPROVED BY THE GOVERNING AGENCY. SEE STANDARD DRAWING NO. 506 FOR PIPE BEDDING METHODS.
8. LAS VEGAS VALLEY WATER DISTRICT REQUIRES PIPE BEDDING AND BACKFILL WITHIN THE PIPE ZONE TO BE OF THE SAME MATERIAL.

207 BACKFILL
208 TRENCH EXCAVATION & BACKFILL
302 AGGREGATE BASE COURSES
401 BITUMINOUS PAVEMENT
406 PRIME COAT
407 FOG SEAL

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

TRENCH BACKFILL WITH CONTROLLED LOW STRENGTH MATERIAL (CLSM) PAVED AREAS (STREETS GREATER THAN 60' R/W)

DATE 5-17-01 DWG. NO. 504 PAGE 124



NOTES:

1. ALL SIGNALS ARE 12" NOMINAL (GLASS).
2. FOR ITIMIZED PARTS SEE DRAWING 404.10.05.
3. FOR ARROW LENS SEE DRAWING 404.10.10.
4. SEE PLANS FOR BACKPLATE REQUIREMENTS.
5. OPTIONAL 3" CUTOFF LOUVERS ON RED, YELLOW AND GREEN BALL INDICATORS ON S-SECTION HEADS MAY BE PROVIDED AS DIRECTED BY THE TRAFFIC ENGINEER.

207 BACKFILL
208 TRENCH EXCAVATION & BACKFILL
302 AGGREGATE BASE COURSES
401 BITUMINOUS PAVEMENT
406 PRIME COAT
407 FOG SEAL

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

SIGNAL ASSEMBLIES
B-10, B-11T

DATE 5-12-04 DWG. NO. 404.1027 SHEET 1 OF 1

NO.	REV.	DATE	BY	APP.	DATE
1					
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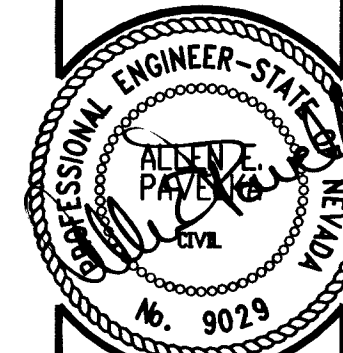
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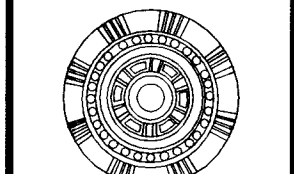
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STAMP DATE: 5-14-03

EXP. DATE: 12/31/03

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CITY OF LAS VEGAS
FIRE STATION NO. 5
CONSTRUCTION DETAILS VII

CITY OF LAS VEGAS
FIRE STATION NO. 5
CONSTRUCTION DETAILS VII

SHEET
C-18
18 OF 23 SHEETS
PROJECT ID
630.V27-2