

4. ACCEPTED METHODS OF COMPACTION

A. BEDDING AND PIPE ZONE AREAS:

1. FLOORING AND SETTING APPROVED, OR-
WAY, MECHANICAL COMPACTION ONLY.

B. AROUND PIPE ZONE:

1. FLOORING AND SETTING OR MECHANICAL COMPACTION
(NOT RIGHT-OF-WAY; MECHANICAL COMPACTION ONLY)

**5. TRENCH EXCAVATION SHALL COMPLY WITH THE
CURRENT REGULATIONS AS DETERMINED BY THE
NEVADA OCCUPATIONAL SAFETY AND HEALTH
ADMINISTRATION**

**6. REFERENCE: UNIFORM STANDARD SPECIFICATIONS
FOR PUBLIC UTILITIES CONSTRUCTION, SIXTH
EDITION, APPROPRIATE CLAUSE NUMBER, AS NEVADA
LATEST EDITION OR IMPROVEMENT STANDARDS
DEPARTMENT OF PUBLIC UTILITIES, AS NEVADA
LATEST EDITION, AS APPLICABLE**

**7. FOR PIPE LOCATION MARKER AND TYPICAL INSTALLATION
SEE UDS PLATE NO. 10527**

**8. REFER TO THE UNIFORM DESIGN STANDARDS FOR
WATER DISTRIBUTION SYSTEMS, TABLE E, "BACKFILL
MATERIALS" FOR AGGREGATE TYPES AND GRADES**

**9. FOR NOMINAL PIPE DIAMETERS 12" OR LESS
12" MINIMUM COVER**

FILE NAME: UDS05C	TRENCH SECTION BACKFILL SPECIFICATION PAVED AREAS (STREET R/W GREATER THAN 60')
DRAWN BY: BY	
CHECKED BY: C.M.M.	

UDS PLATE
60
SHEET 1

CROSS

BEARING AREA (TYP.)

45° TYP.

UNDISTURBED EARTH (TYP.)

(FIGURE 1)

HORIZONTAL OR UPWARD VERTICAL BEND

(FIGURE 3)

CROSS

45° TYP.

UNDISTURBED EARTH (TYP.)

(FIGURE 2)

DOWNWARD VERTICAL BEND

NO. 5 REBAR (EXTEND 2' INTO CONCRETE)

(FIGURE 4)

COAT AND WRAP ALL EXTERNAL SURFACE IN ACCORDANCE WITH SECTION 3, PROTECTIVE COATINGS. ALL CONCRETE SHALL BE 2000 P.S.I. MINIMUM, 28 - DAYS 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 NRP, FOR EACH INSTALLATION IS REQUIRED IF ALLOWABLE SOIL BEARING CAPACITY IS LESS THAN 3000 P.S.F. ALL VERTICAL SURFACES NOT BEARING AGAINST UNDISTURBED EARTH SHALL BE FORMED.

		BEARING AREA IN SQUARE FEET					CONC./CU. YDS.	
PIPE I.D.	FIGURE	FIGURE	FIGURE 3			FIGURE 4		
	1	2	90°	45°	22½°	45°	22½°	
4"	2	2	2	1	1	1	0.5	0.5
6"	2	3	4	2	1	1	1.5	1.0
8"	3	5	7	4	2	1	2.5	1.5
10"	4	8	10	6	3	1	4.0	2.5
12"	5	10	14	8	4	2	5.0	3.0
16"	10	20	24	12	7	4	8.5	4.5
18"	12	24	30	16	10	5	11.0	6.0
20"	14	28	40	20	12	6	14.0	8.0

FILE NAME: UDS05	THRUST BLOCK INSTALLATION
DRAWN BY: B.V.	
CHECKED BY:	
C.M.H.	

UDS PLATE NO.
5
SHEET 1 OF 1

PIPE SIZE			PIPE SIZE		
B	A	A	B	B	A
6"	4"	4"	24"	8"	6"
8"	4"	4"	27"	7"	6"
10"	4"	4"	30"	8"	6"
12"	4"	4"	33"	8"	6"
15"	4"	4"	36"	9"	6"
18"	5"	5"	39"	9"	6"
21"	5"	5"	42"	10"	6"

Ø = OUTSIDE DIAMETER OF PIPE

NOTES:

1. PIPE BEDDING TO BE COMPACTED TO AT LEAST 90% OF MAXIMUM DENSITY.
2. INDICATED THICKNESS OF 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.

SPECIFICATION REFERENCE		UNIFORM STANDARD DRAWINGS CLARK COUNTY AREA	
208	TRENCH EXCAVATION & BACKFILL	PIPE TRENCH BEDDING METHODS	
302	AGGREGATE BASE COURSES		
601	CONCRETE		
505	REINFORCEMENT STEEL		
		DATE 12-14-00	DWG. NO. 505
			PAGE NO. 125

1. ACCEPTABLE METHODS OF COMPACTION

A. BEFORE AND AFTER PIPE ZONE AREAS

1. LETTING, IF AGENCY APPROVED, OF MECHANICAL COMPACTION (NOT RIGHT-OF-WAY MECHANICAL COMPACTION ONLY)

B. AFTER PIPE ZONE

1. FLOORING AND LETTING OF MECHANICAL COMPACTION (NOT RIGHT-OF-WAY MECHANICAL COMPACTION ONLY)

2. TRINCH EXCAVATION SHALL COMPLY WITH THE FOLLOWING REQUIREMENTS:

1. NEVADA DEPARTMENT OF PUBLIC SAFETY AND HEALTH ADMINISTRATION.

3. REFERENCE: UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE

1. CONSTRUCTION CLAIM ARE IN COMPLIANCE WITH LATEST EDITION OR IMPROVEMENT STANDARDS DEPARTMENT OF PUBLIC SAFETY AND HEALTH ADMINISTRATION, LATEST EDITION, AS APPLICABLE.

4. FOR PIPE LOCATOR PROBES AND TYPICAL INSTALLATION, SEE UDOT PLATE NO. 10027.

5. REFER TO THE UNIFORM DESIGN STANDARDS FOR THE CONSTRUCTION OF PIPE AND TRENCHING MATERIALS FOR APPROPRIATE TYPES AND SIZES.

6. DURING CONSTRUCTION AT LEAST 3" MUST BE MAINTAINED FROM PIPE CROWN TO GRADE.

FILE NAME: UDS06A	TRENCH SECTION BACKFILL SPECIFICATION UNPAVED AREAS
DRAWN BY: BY	
CHECKED BY: C.M.M.	

UDS PLATE NO
6A
SHEET 1 OF 1

USE OF THIS STANDARD PLATE AT AGENCY'S DISCRETION

Note: FLUSH LATERAL PRIOR TO SETTING METER.

PLAN VIEW

- (SEE NOTE 2)
- TRENCH LINE
- CURB & GUTTER
- CONCRETE COLLAR W/ REBAR IF NO SIDEWALK EACH WAY
- CENTERED ±1/2" EACH WAY
- EXPANSION JOINT OR OTHER UTILITY BOX (IF NO SIDEWALK EXIST.)
- ±5' MAX.
- IN NO CURB & GUTTER
- VARIABLES
- PROPERTY LINE

ELEVATION

- PAVEMENT
- 12" MIN. RADIUS
- LIFE MARK AS SHOWN
- 6" MIN.
- 8" x 1"
- 24" MIN. RADIUS (SEE NOTE 3)
- 4" MIN.
- 12" MIN. RADIUS
- 9" TO 12-3/4"
- 6" ±1" (TYP.)
- 7"
- ①
- ②
- ③
- ④

[illegible]

FILE NAME: USD01D	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
DRAWN BY: B.V.	
CHECKED BY: C.M.M.	

UDS PLATE NO
1D
SHEET 1 OF 1

IF SAWCUT IS WITHIN THREE FEET OF EDGE OF EXISTING ASPHALT CONCRETE SURFACE OR OTHER PATCH, SAWCUT SHALL BE PLACED IN THE CENTER OF THAT PATCH.

TRANSVERSE PATCHES SHALL BE WIDTH 14 FEET MINIMUM SUFFICIENT TO ACCOMMODATE MECHANICAL ROLLERS AND COMPACTOR PNEUMATIC TYRE UNIFORM STANDARD SPECIFICATION SECTION 4103.01.

LONGITUDINAL PATCHES SHALL BE ONE TIE IN EACH DIRECTION IN THE SAWCUT, TO THE FULL WIDTH OF THE TRAVEL LANE.

TRANSVERSE PATCHES 18 INCHES WIDER OR LESS THAN 2 FEET OF THE CURB, PATCHES SHALL EXTEND A MINIMUM OF 4 FEET FROM LIP OF GUTTER AND PAVEMENT SHALL BE REMOVED TO THE FULL WIDTH OF THE PATCH. TRANSVERSE PATCHES SHALL BE PLACED IN THE SAWCUT, ROLLING AND COMPACTOR PNEUMATIC TYRE UNIFORM STANDARD SPECIFICATION SECTION 4103.01. SAWCUT SHALL BE PLACED IN THE WHEEL PAIR.

TRENCH WIDTH, BEDDING AND PIPE ZONE REQUIREMENTS FOR UTILITY INSTALLATIONS SHALL BE THE SAME AS THE RESPECTIVE AREA OF THE PROJECT. EXISTING ROCKS SHALL NOT BE USED IN PIPE ZONE UNLESS SPECIFICALLY PRE-APPROVED BY THE GOVERNING AGENCY.

SPECIFICATION REFERENCE		UNIFORM STANDARD DRAWINGS CLARK COUNTY AREA	
207	BACKFILL	TRENCH BACKFILL WITH FLOWABLE BACKFILL PAVED AREAS (STREETS GREATER THAN 60' R/W)	
208	TRENCH EXCAVATION & BACKFILL		
302	AGGREGATE BASE COURSES		
401	BITUMINOUS PAVEMENT		
406	PRIME COAT		
407	FOG SEAL	DATE 5-13-99 DWG. NO. 504	PAGE 124

Diagram illustrating the cross-section of a trench or road construction, showing various layers and compaction requirements:

- EXISTING GRADE**: Indicated at the top right of the diagram.
- 80% MIN. COMPACTION**: Indicated for the layer immediately below the existing grade.
- MECHANICAL COMPACTION ONLY IN TRAVELED PORTION OF EXISTING GRAVEL OR OILED ROADS**: A note pointing to the 80% min. compaction layer.
- VARIES**: A vertical double-headed arrow indicating the variable depth of the middle layer.
- 85% MIN. COMPACTION GRANULAR BACKFILL OR SELECT BACKFILL OR FLOWABLE BACKFILL (SEE NOTE 1)**: Indicated for the layer below the variable layer.
- 12" (24" IF V.C.P.) (6" IF PIPE 2" OR LESS DIA.)**: Indicated for the layer below the 85% min. compaction layer.
- 80% MIN. COMPACTION IN PIPE ZONE, TYPE 8 AGGREGATE BASE, SAND BACKFILL, OR FLOWABLE BACKFILL (SEE NOTE 2)**: Indicated for the layer below the 12" layer.
- BEDDING PER STANDARD DRAWING NO. 505**: Indicated for the bottom layer of the trench.
- 12" DIA.**: A circular detail showing a cross-section of a pipe with a diameter of 12 inches.

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. CRUSHED ROCK SHALL NOT BE USED IN PIPE ZONE UNLESS SPECIFICALLY PRE-APPROVED BY THE GOVERNING AGENCY.

SPECIFICATION REFERENCE		UNIFORM STANDARD DRAWINGS CLARK COUNTY AREA		
208	TRENCH EXCAVATION & BACKFILL	TRENCH BACKFILL - UNPAVED AREAS AND AREAS OUTSIDE EXISTING OR FUTURE PROPOSED STREET RIGHT-OF-WAY		
302	AGGREGATE BASE COURSES			
		DATE 5-13-99	DWG. NO. 502	PAGE 122

RECORD DRAWINGS
AS-BUILT INFORMATION WAS
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Diagram illustrating the required loading pad and bus shelter pad dimensions. The diagram shows a cross-section of a sidewalk area with various dimensions and labels:

- LENGTH VARIES**: Indicated by a dashed line at the top.
- 5' MIN**: Minimum width dimension on the top left.
- 2' TYP**: Typical width dimension for the central area.
- 15' MAX**: Maximum width dimension for the central area.
- 10' MAX**: Maximum width dimension for the area to the right of the central area.
- 5' MAX**: Maximum width dimension for the area to the right of the 10' MAX section.
- OPTIONAL SIDEWALK RAMP SEE NOTE 1**: Label pointing to a ramped section on the right.
- BUS SHELTER PAD (BY OTHERS)**: Label pointing to a shaded rectangular area.
- REQUIRED LOADING PAD**: Label pointing to a shaded rectangular area.
- ADDITIONAL AREA REQUIRED BEHIND SIDEWALK FOR LOADING PAD**: Label pointing to a shaded area below the main sidewalk.

1. SIDEWALK RAMP MAY BE REQUIRED TO BE CONSTRUCTED IN THOSE LOCATIONS WHERE THE BUS STOP WOULD OTHERWISE BE INACCESSIBLE AS DEFINED BY THE AMERICANS WITH DISABILITIES ACT. SEE DRAWING NO. 233, SHEET 4 OF 6 FOR SIDEWALK RAMP DETAILS.
2. ADDITIONAL RIGHT-OF-WAY OR EASEMENT IS REQUIRED FOR LOADING PAD AND VARIABLE HEIGHT CURB AT BACK OF SIDEWALK RAMP.
3. AGGREGATE BASE AND CONCRETE FOR LOADING PAD SHALL BE THE SAME AS REQUIRED FOR SIDEWALK.

SPECIFICATION REFERENCE		UNIFORM STANDARD DRAWINGS CLARK COUNTY AREA	
302	AGGREGATE BASE	BUS STOP LOADING PAD AND OPTIONAL SIDEWALK RAMP	
501	CONCRETE		
502	CONCRETE STRUCTURES		
		DATE 6-9-94 DWG. NO. 234.2	PAGE 40.2