

STRUCTURE LIST

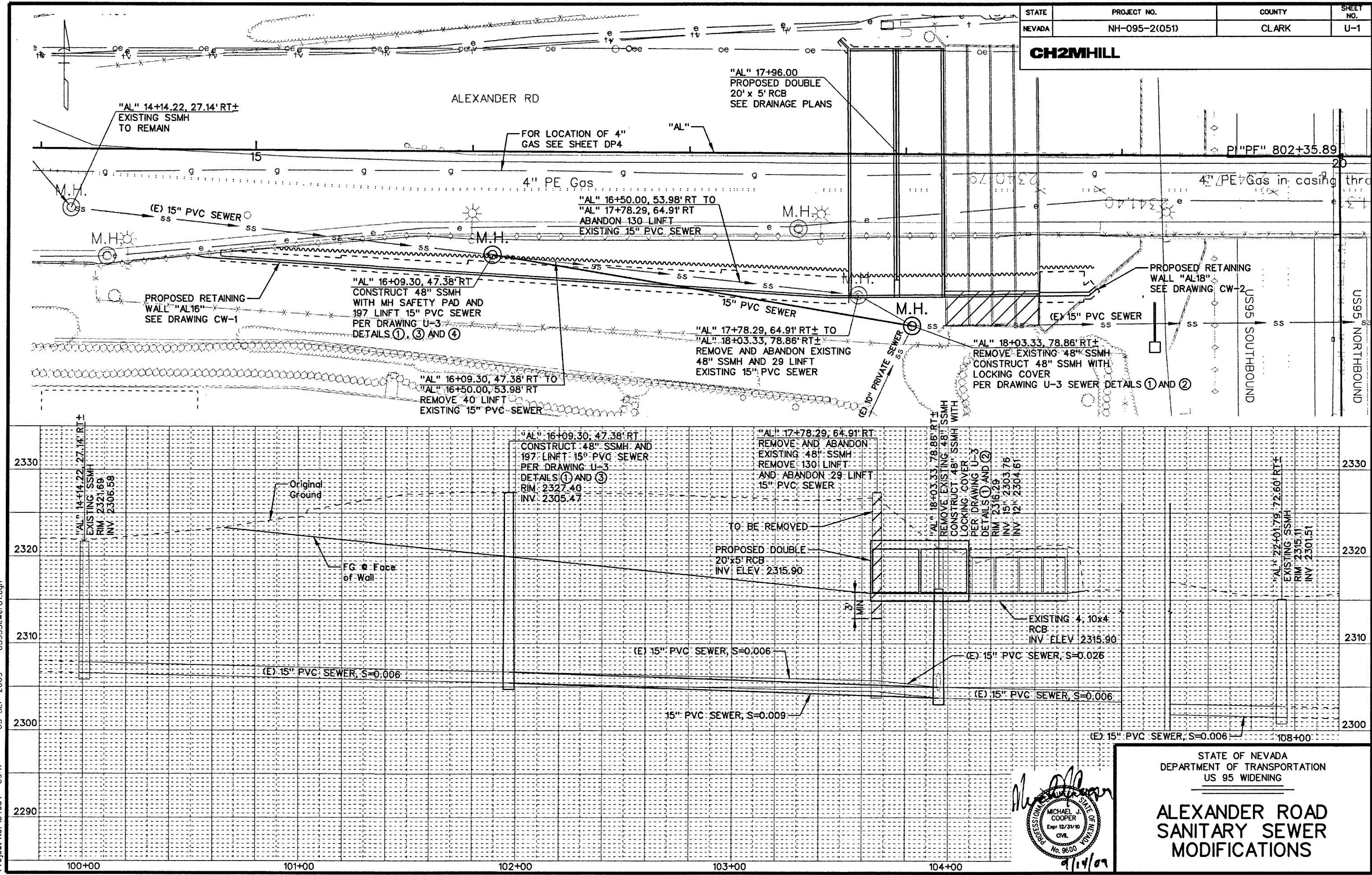
STRUCTURE LIST

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EXISTING 6' X 3' RCB WITH HEADWALL, 47.6' LT. REMOVE EXISTING HEADWALL AND EXTEND 10.0' LT TO "XS1E" 299+84, 58.4' LT (UIE = 2609.25', LIE = 2598.75'). CONSTRUCT TYPE I HEADWALL, LT (15 DEGREE SKEW).	"XS1E" 299+82
Sub Total (Sheets DS31A-40A)	
Sub Total (Sheets From DS1A-42A)	
USE TOTAL	

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NH-095-2(051)	CLARK	U-1

CH2MHILL



Project No. 154964 09:17 03-SEP-2009 US95Sewer01.dgn

9/14/09
 PROFESSIONAL ENGINEER
 MICHAEL J. COOPER
 Exp. 12/31/10
 CIVIL
 No. 9600

STATE OF NEVADA
 DEPARTMENT OF TRANSPORTATION
 US 95 WIDENING
**ALEXANDER ROAD
 SANITARY SEWER
 MODIFICATIONS**

ALEXANDER ROAD SANITARY SEWER MODIFICATIONS
SEE DRAWING U-1

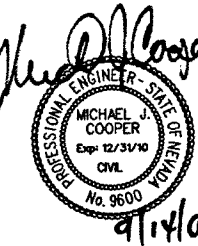
"AL" 14+14.22, 27.14 RT	EXISTING SSMH TO REMAIN
"AL" 16+09.30, 47.38 RT	CONSTRUCT 48" SSMH AND 197 LINFT 15" PVC SEWER PER DRAWING U-3, DETAIL 1, 3 AND 4
"AL" 16+09.30, 47.38 RT TO "AL" 16+50.00, 53.98 RT	REMOVE 40 LINFT EXISTING 15" PVC SEWER
"AL" 16+50.00, 53.98 RT TO "AL" 17+78.29, 64.91 RT	ABANDON 130 LINFT EXISTING 15" PVC SEWER
"AL" 17+78.29, 64.91 RT TO "AL" 18+03.33, 78.86 RT	REMOVE AND ABANDON EXISTING 48" SSMH AND 29 LINFT EXISTING 15" PVC SEWER
"AL" 18+03.33, 78.86 RT	REMOVE EXISTING 48" SSMH CONSTRUCT 48" SSMH WITH LOCKING COVER PER DRAWING U-3, DETAIL 1 AND 2
"AL" 22+01.79, 72.60 RT	EXISTING SSMH TO REMAIN

LONE MOUNTAIN ROAD SANITARY SEWER MODIFICATIONS
SEE DRAWING U-2

"LMnt" 16+70.08, 62.9 RT	EXISTING SSMH TO REMAIN
"LMnt" 17+99.22, 69.18 RT	CONSTRUCT 60" SSMH PER DRAWING U-3, DETAIL 1
"LMnt" 17+99.22, 69.18 RT TO "LMnt" 18+79.16, 71.73 RT	REMOVE AND REPLACE 80 LINFT 21" PVC SEWER PER SHEET U-3, DETAIL 3 SLOPE = 0.005
"LMnt" 18+54.53, 71.87 RT	EXISTING SSMH TO BE REMOVED
"LMnt" 18+76.74, 73.45 LT	EXISTING SSMH, PROTECT IN PLACE SEE DRAWING CW-3 FOR DETAILS
"LMnt" 18+79.16, 71.73 RT	CONSTRUCT 60" SSMH PER DRAWING U-3, DETAIL 1
"LMnt" 21+44.60, 70.23 RT	EXISTING SSMH TO REMAIN

CITY OF LAS VEGAS
STANDARD SEWER NOTES

- All construction and materials shall be in accordance with the latest edition of the Design and Construction Standards for Wastewater Collection Systems and the Uniform Standard Specifications for Public Works' Construction Off-Site Improvements, Clark County Area, Nevada, as amended. It will be the responsibility of the Contractor to be aware of the contents of the above specifications.
- It shall be the Contractor's responsibility to perform construction as per plans. Any additions, deletions, or changes shall first meet with the approval of the City Engineer.
- Chisel "S" or "G" in curbs where sewer or gas laterals pass under the curb.
- Polyvinyl (PVC) sewer pipe shall meet ASTM D-3034 SDR 35 specifications, installed with sand bedding and backfill of Type II aggregate base.
- All manholes paved in streets eighty (80') foot R/W and larger shall have concrete collars. Streets less than eighty (80') foot R/W will require retrofit if paving does not conform to city standards at the manhole.
- Tee saddles shall be used to connect sewer laterals to existing main lines up to twelve inch (12") diameter. Connections to fifteen inch (15") or larger mains shall require special procedures. In line "Y" 's shall be used on lines twelve inches (12") or above.
- Water mains shall be protected in accordance with LVVWD Standards whenever a sewer main crosses over a water main or the sewer is less than eighteen inch (18") under a water main.
- All Contractors installing sewer mains that will be under the jurisdiction of the City of Las Vegas must be State of Nevada Class "A" Contractors.
- The City of Las Vegas will not accept any sewer mains which have a vertical deflection of more than one tenth (0.1) of a foot from the approved construction plans at any location. Sewer mains found to exceed this tolerance will have to be repaired or removed or replaced to the satisfaction of the City Engineer prior to acceptance by the City of Las Vegas.
- Installation of curved sewer requires the use of C-900 pipe which allows for pipe deflection at the joints.

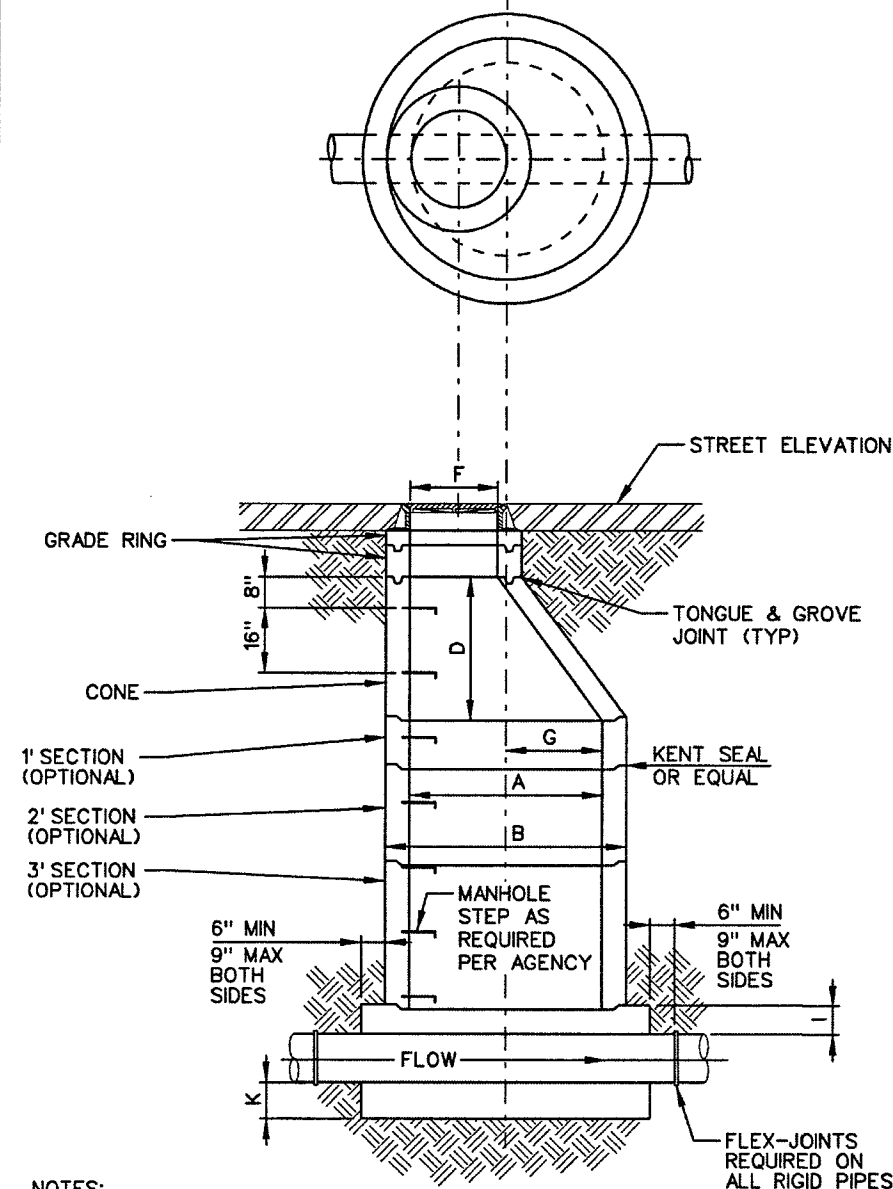


STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION
US 95 WIDENING

SANITARY SEWER
MODIFICATION NOTES

Project No. 154964 09:17 US95Sewer03.dgn 03-SEP-2009

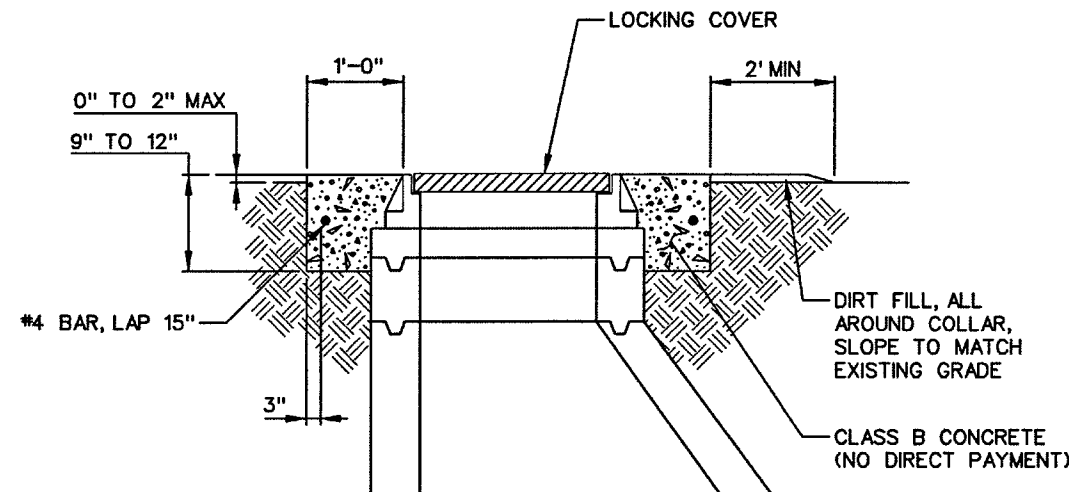
TABLE OF DIMENSIONS													ALLOWABLE
SIZE	A	B	C	D	E	F	G	H	I	J	K		PIPE SIZE
48	48	60	12	36	-	22	26	-	4	-	9		8" TO 15"
60	60	72	12	58	-	22	38	-	6	-	12		18" TO 30"



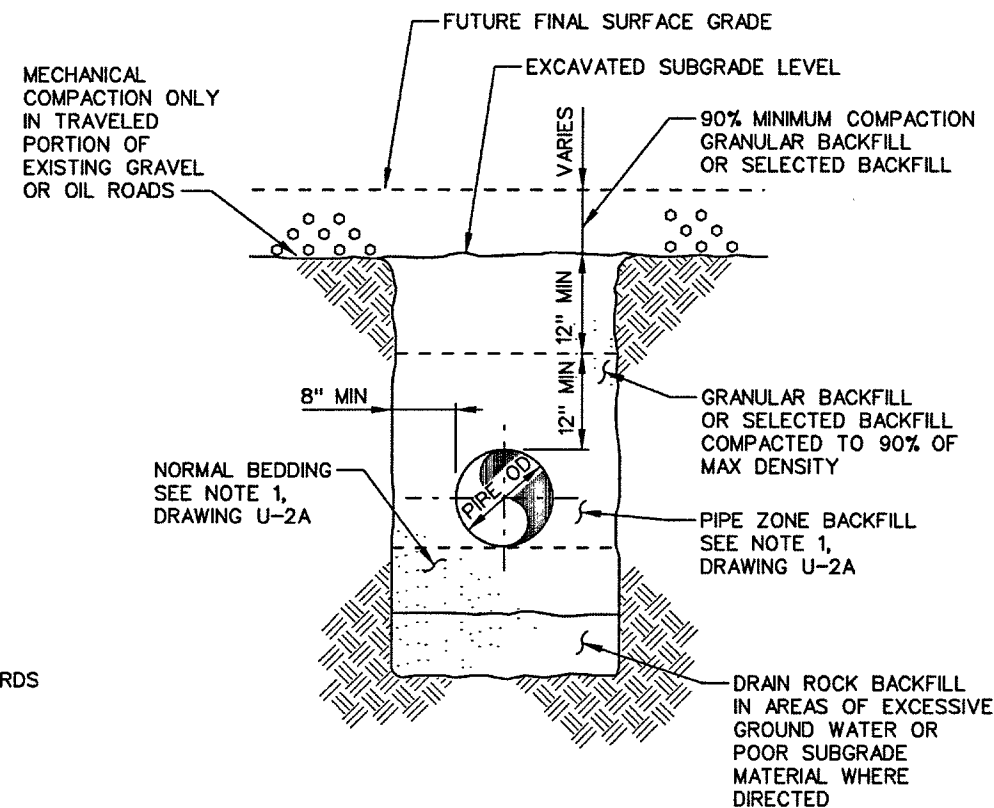
NOTES:

1. PRECAST CONCRETE SECTIONS SHALL CONFORM TO A.S.T.M. DESIGNATION C-478 LAST AMENDED. ALL CEMENT TO BE TYPE V
2. MANHOLE BASES MAY BE SQUARE
3. ALL MANHOLE STEPS SHALL FACE 180° FROM OUTGOING INVERT WHEN REQUIRED.
4. BASES SHALL BE 3000* CONCRETE PER SECTION 4.8.2: DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS (DCSWS).
5. IN UNSTABLE SOIL CONDITIONS A SECOND PIPE JOINT IS REQUIRED WITHIN 3' OF THE MANHOLE CONNECTION.
6. ON FIVE & SIX FOOT DIA MANHOLES THE REDUCER OR TRANSITION MUST BE PLACED DIRECTLY BENEATH THE CONE.
7. WHEN PRECAST MANHOLE BASES ARE USED OR UNSTABLE SOIL CONDITIONS ARE ENCOUNTERED A MINIMUM OF 4" OF CRUSHED ROCK WILL BE PLACED UNDER THE MANHOLE BASE.

1 ECCENTRIC MANHOLE



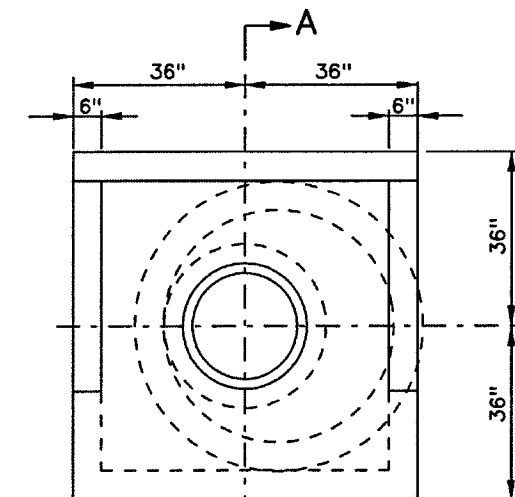
2 LOCKING MANHOLE CONCRETE COLLAR



3 TYPICAL TRENCH SECTION

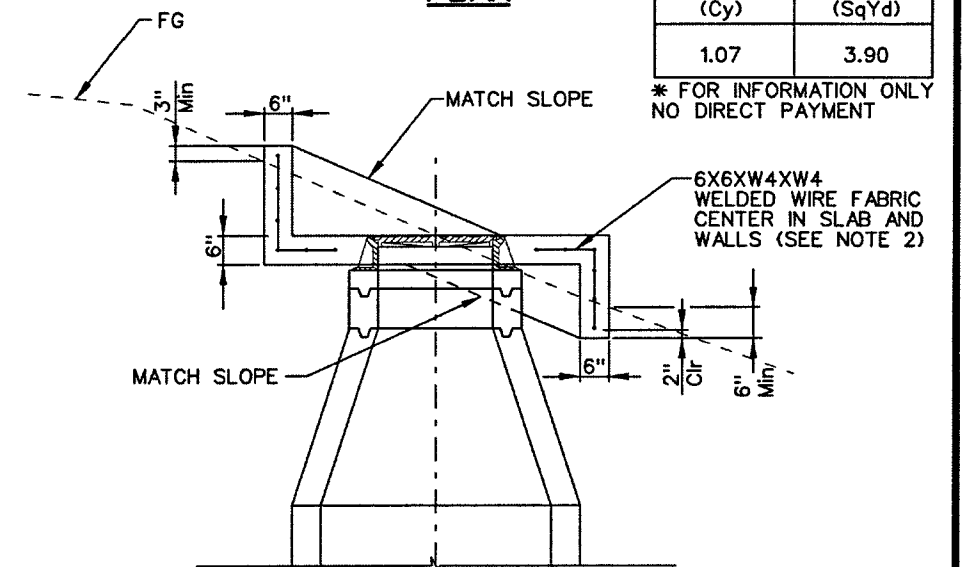
STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NH-095-2(051)	CLARK	U-3

CH2MHILL



* BILL OF MATERIALS	
CONCRETE (Cy)	MESH REINF (SqYd)
1.07	3.90

* FOR INFORMATION ONLY NO DIRECT PAYMENT

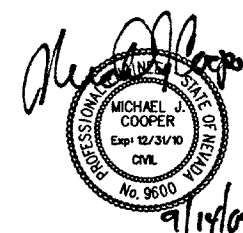


SECTION A-A

NOTES:

1. ALL CONCRETE SHALL BE CLASS A MODIFIED, (MINOR)
2. REINFORCEMENT TO CLEAR MANHOLE BY 2 INCHES.

4 MANHOLE SAFETY PAD



STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION
US 95 WIDENING

SANITARY SEWER
DETAILS