

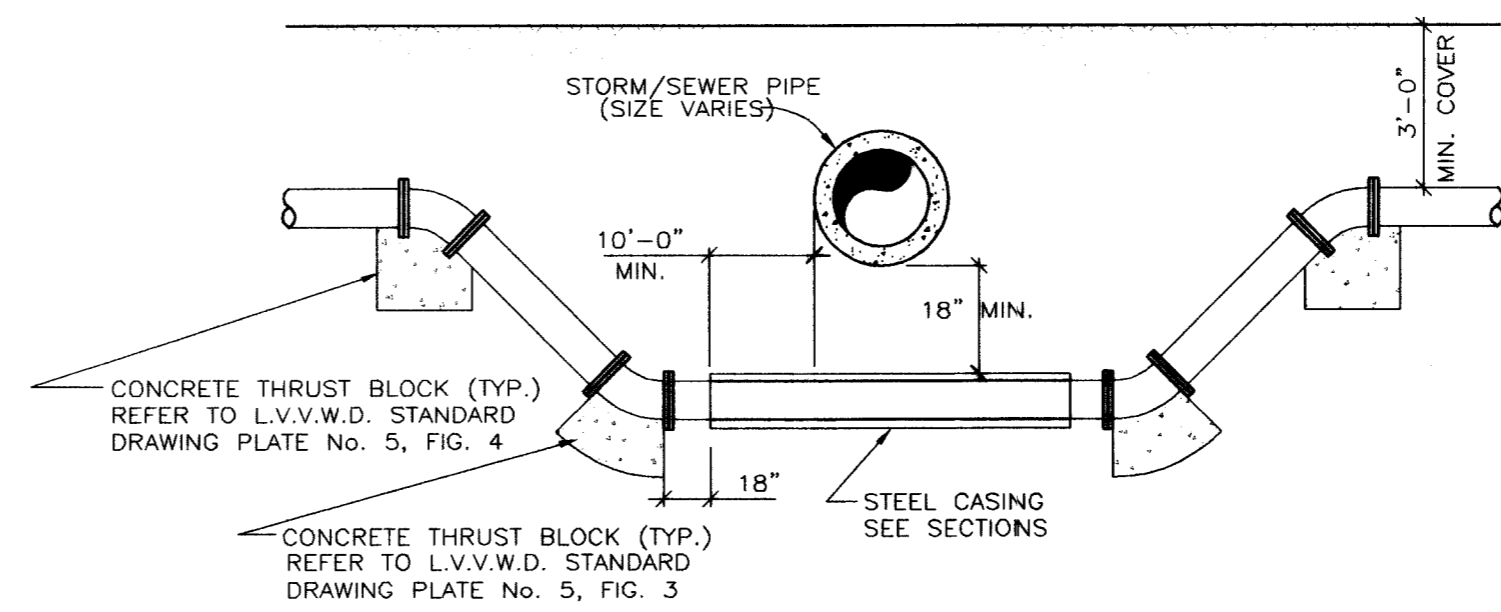
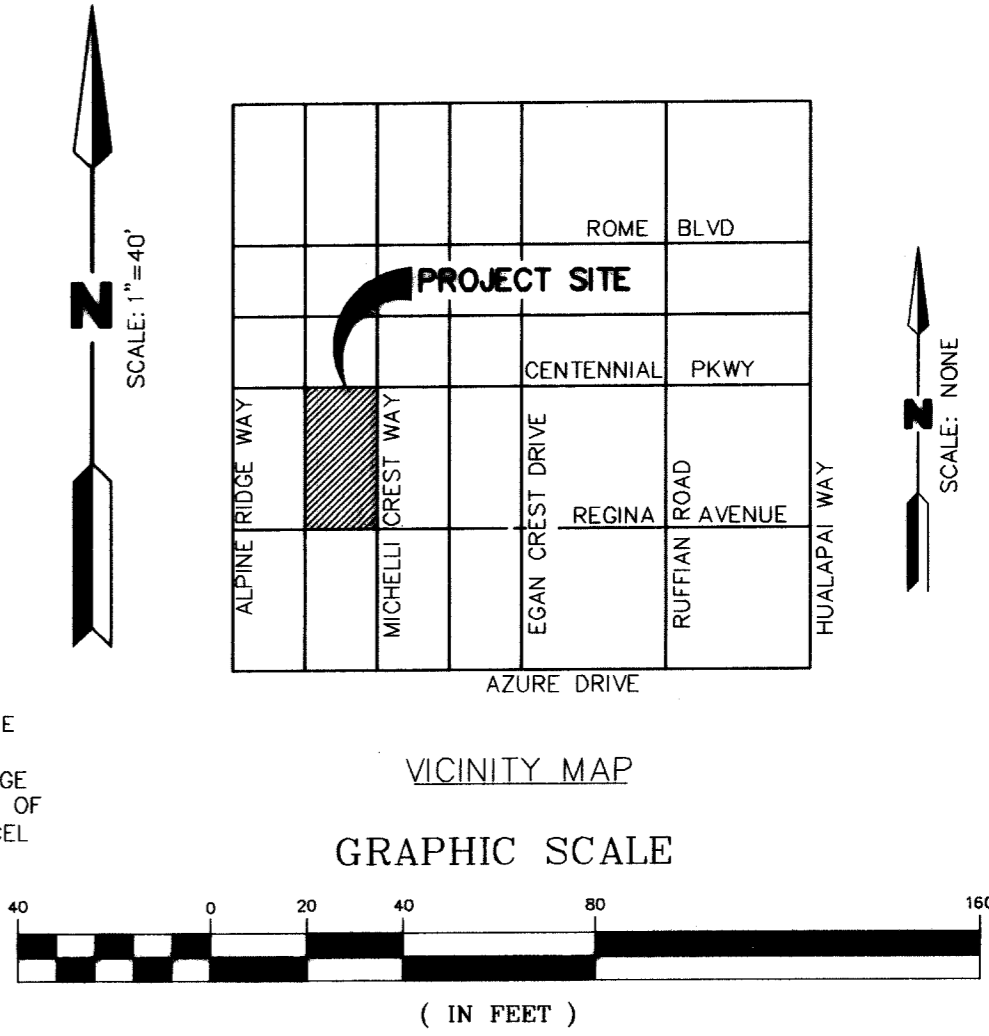
LEGAL DESCRIPTION
 THE EAST HALF (E 1/2) OF THE NORTHWEST QUARTER (NW 1/4) OF THE NORTH HALF (N 1/2) OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 25, TOWNSHIP 19 SOUTH, RANGE 59 EAST, M.D.B. & M. APN # 126-25-501-002

BENCHMARK
 CLARK COUNTY BENCHMARK NO. 1090 30N4 BEING A RIVET & SQUARE ALUMINUM PLATE IN THE SE CORNER OF ELEC CABINET BASE 200 FEET SOUTH AND 40 FEET WEST OF CENTENNIAL PKWY AND GRAND CANYON DR.

ELEVATION = 819.508 METERS (2688.67 U.S. SURVEY FEET) NAVD83 DATUM
 METERS X (1/200) = U.S. SURVEY FEET

1. THE ELEVATIONS SHOWN HEREON ARE BASED ON FEET.

BASIS OF BEARINGS
 THE BASIS OF BEARINGS FOR THIS PROJECT IS THE SOUTH LINE OF THE NORTHWEST QUARTER (NW 1/4) OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 25, TOWNSHIP 19 SOUTH, RANGE 59 EAST, M.D.M., THE SAME LINE ALSO BEING THE CENTERLINE OF AZURE DRIVE AND BEARS SOUTH 89°11'11" WEST AS PER PARCEL MAP FILE 66, PAGE 44, OFFICIAL RECORDS, CLARK COUNTY, NEVADA.

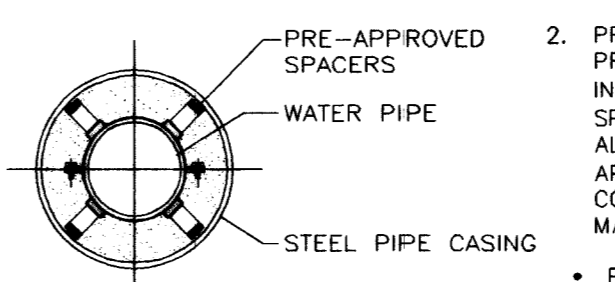


- WHERE THE WATER LINE IS LESS THAN 18" OVER THE SEWER LINE WHERE THE WATER LINE IS UNDER THE SEWER LINE AND WHERE THE HORIZONTAL SEPARATION, AS REQUIRED BY THE WATER SUPPLY REGULATIONS, CANNOT BE MAINTAINED BECAUSE OF PHYSICAL OBSTRUCTIONS, THE WATER LINE SHALL BE PROTECTED BY CONSTRUCTION OF THE STORM/SEWER LINE AS FOLLOWS:
1. THE STORM/SEWER MAIN MUST BE CONSTRUCTED OF WATER SUPPLY QUALITY MATERIALS MEETING AWWA STANDARDS.
 2. THE WATER MAIN SHALL BE D.I.P. WITH RESTRAINED JOINTS. INSTALL IN A STEEL CASING WHICH EXTENDS 10' ON EACH SIDE OF THE CROSSING.
 3. THE STORM/SEWER MAIN OR WATER MAIN (DEPENDING ON THE FIELD CONDITIONS) SHALL BE TOTALLY ENCASED IN A MINIMUM OF FOUR (4) INCHES OF CEMENTS SLURRY (300 PSI±) FOR A DISTANCE OF TEN (10) FEET ON EACH SIDE OF THE CROSSING ONLY WITH AGENCY APPROVAL. ENCASEMENT WILL NOT BE PERMITTED FOR ASBESTOS CEMENT PIPE.
- EACH OF THESE PROVISIONS SHALL ALSO BE EXTENDED FOR OTHER THAN 90 DEGREE CROSSING TO THE POINT AT WHICH THE TEN FOOT SEPARATION BETWEEN THE WATER AND SEWER LINE IS ACHIEVED (10/SINE OF CROSSING ANGLE).

STORM/SEWER WATER CROSSING DETAIL

DI CARRIER PIPE

PIPE SIZE	CASING ID
6"	16"
8"	18"
10"	20"
16"	30"
24"	42"



1. STEEL PIPE CASING SHALL BE FABRICATED FROM A MINIMUM OF 1/4" THICK STEEL PLATES, CONFORMING TO THE REQUIREMENTS OF ASTM A283, GRADE B, C, OR D. ALL JOINTS SHALL BE WELDED. INTERIOR JOINTS SHALL BE GROUNDED TO A SMOOTH FINISH. ALL WELDING SHALL BE PERFORMED IN ACCORDANCE WITH AWWA C201. AWWA STANDARD FOR FABRICATED ELECTRICALLY STEEL PIPE. COATINGS FOR STEEL CASING ARE NOT REQUIRED.
2. PIPE CASING SHALL BE LAID TRUE TO LINE AND GRADE WITH NO BENDS OR CHANGES IN GRADE FOR THE LENGTH OF THE CASING.
3. THE PIPE SHALL BE SUPPORTED AT EACH END OF EACH JOINT WITH SPACERS, AFTER INSTALLATION OF THE PIPE. THE CASING SHALL BE SEALED AT BOTH ENDS WITH CASING END SEALS.

**TYPICAL CASING SECTION
 STORM/SEWER WATER CROSSING
 AND TYPICAL CASING DETAILS**

ABANDON VALVE CUT & CAP

ALL VALVES TO BE ABANDONED IN THE CLOSED POSITION, UNLESS SHOWN OTHERWISE, BY FILLING WITH SAND UP TO THE TOP OF THE OPERATING NUT. THEN REMOVE A MINIMUM OF THE TOP 12 INCHES OF THE VALVE BOX AND FILL THE REMAINING PORTION OF THE VALVE BOX WITH CONCRETE HAVING A COMPRESSIVE STRENGTH OF AT LEAST 3,000 PSI. THE CONTRACTOR SHALL CUT THE EXISTING PIPE WITHIN 3' OF THE ABANDONED VALVE OR WHERE SHOWN ON THE PLANS AND INSTALL A CAP. WHERE A JOINT OR COUPLING IN THE EXISTING PIPE IS UNCOVERED AT THE CAP AND CAP LOCATION, THE INSTALLATION OF A PLUG MAY BE PERMITTED WITH THE DISTRICT APPROVAL. THE CONTRACTOR SHALL INSTALL A CONCRETE THRUST BLOCK IN ACCORDANCE TO THE PROVISIONS OF THE UDACS PLATE NO. 5 AT ALL CAP OR PLUG LOCATIONS.

NOTE
 INSTALL PIPELINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING, PER MANUFACTURER INSTRUCTIONS.

DISCLAIMER NOTE

EXISTING UTILITY LOCATIONS SHOWN HEREIN ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION. ALL DISCREPANCIES MUST BE IMMEDIATELY REPORTED TO THE ENGINEER. CALL BEFORE YOU DIG: 1-800-227-2600.

**FIRE FLOW DATA
 UFC APPENDIX III-A as amended**

CONSTRUCTION CLASSIFICATION	TOTAL FLOOR AREA OF ALL LEVELS	TOTAL FLOOR AREA OF ALL LEVELS	TYPE V-N
CONSTRUCTION TYPE	3900 SF	NO	3900 SF
PERCENT REDUCTION	0%	R-3	R-3
ESTIMATED FIRE FLOW	1750 GPM	TYPE V-N	1750 GPM

Call before you Dig.
 1-800-227-2600

Call before you Overhead.
 1-702-593-6111

- LEGEND**
- PROPERTY LINE
 - STREET CENTER LINE
 - EXISTING CURB
 - PROPOSED CURB
 - EXISTING EDGE OF A.C. PAVEMENT
 - PROPOSED SEWER LINE
 - PROPOSED WATER LINE
 - PROPOSED SEWER MANHOLE
 - EXISTING SEWER MANHOLE
 - PROPOSED FIRE HYDRANT
 - EXISTING FIRE HYDRANT
 - EXISTING OVERHEAD POWER
 - PROPOSED GATE VALVE
 - EXISTING GATE VALVE
 - EXISTING WATER LINE
 - EXISTING SEWER LINE
 - 6" SEWER LATERAL W/ WYE
 - EXISTING STREET LIGHT
 - 150 W HPS STREET LIGHT
 - 400 W HPS STREET LIGHT
 - CONSTRUCTION NOTE
 - WATER OR SEWER CAP
 - BACK WATER VALVE

CONSTRUCTION NOTES

1. INSTALL 3/4" WATER SERVICE PER UDACS PLATE #10
2. INSTALL 8" MECHANICAL JOINT AND TAPPING TEE W/ 8" TAPPING VALVE
3. INSTALL 45° BEND-VERTICAL PER UDACS PLATE #5
4. INSTALL 45° BEND-HORIZONTAL PER UDACS PLATE #5
5. INSTALL 90° BEND-HORIZONTAL PER UDACS PLATE #5
6. INSTALL 8" TEE PER UDACS PLATE #5
7. INSTALL 8" GATE VALVE PER UDACS PLATE #8
8. INSTALL 6" GATE VALVE PER UDACS PLATE #8
9. INSTALL 2" MANUAL BLOWOFF PER UDACS PLATE #4
10. REMOVE CAP AND BLOWOFF, REMOVE COPORATION STOP AND INSTALL PLUG. CONNECT TO EX. MAIN.
11. INSTALL 8"x6" TEE PER UDACS PLATE #5
12. INSTALL FIRE HYDRANT ASSEMBLY PER UDACS PLATE #7 W/ 14 LF ~ 6" PVC WATERLINE
13. EXISTING VALVED OUTLET PER CONTRACT 887
14. INSTALL 1" WATER SERVICE PER UDACS PLATE #10
15. TRENCH FOR WATERLINE PER UDACS PLATE #5C
16. INSTALL T-Lock LINING PER CCSD SECTION 2.2.9
17. ABANDON EXISTING SEWER LATERAL PER CCSD SECTION 3.14.1
18. INSTALL BACK WATER VALVE PER CCSD #50-29
19. INSTALL 8"x6" REDUCER PER UDACS PLATE #5
20. INSTALL 12"x8" REDUCER PER UDACS PLATE #5
21. INSTALL 12"x8" TEE PER UDACS PLATE #5
22. INSTALL 12" GATE VALVE PER UDACS PLATE #8
23. INSTALL 18" STEEL CASING PER DETAIL THIS SHEET

WRIGHT CIVIL ENGINEERS, INC.
 3565 E. POST ROAD, STE 107
 LAS VEGAS, NEVADA 89120
 TEL (702) 636-6960 FAX (702) 636-6961

CLARK COUNTY FIRE DEPARTMENT
 CLARK COUNTY FIRE DEPARTMENT
 APPROVAL OF THESE PLANS SHALL NOT BE CONSTRUED TO BE A PERMIT FOR, OR APPROVAL FOR, ANY VIOLATION OF ANY OF THE PROVISIONS OF THE STATE OR COUNTY LAWS. FIRE FLOW 1750 GPM RESIDUAL.

JEREMY S. McCay
 CIVIL
 Exp. 12/31/23

UTILITY & FIRE ACCESS PLAN
CENTENNIAL HEIGHTS
RESIDENTIAL SUBDIVISION

U1
 SHEET 7 OF 8 SHEETS
 DRAWING NO. 02-37281