

SANITARY SEWER MANHOLE SCHEDULE

MANHOLE #	TYPE	STATION	INVERT ELEVATION	DIAMETER	INVERT ELEVATION	INVERT ELEVATION
1	SD-1	9+94.97	2394.84	5' RT	2394.84	2394.84
2	SD-1	11+85.21	2398.31	5' RT	2398.31	2398.11
3	SD-1	14+74.00	2404.00	5' RT	2404.00	2398.32

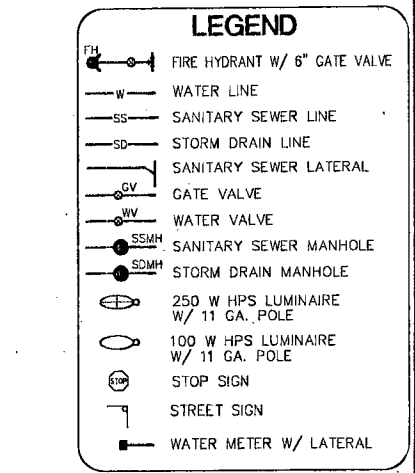
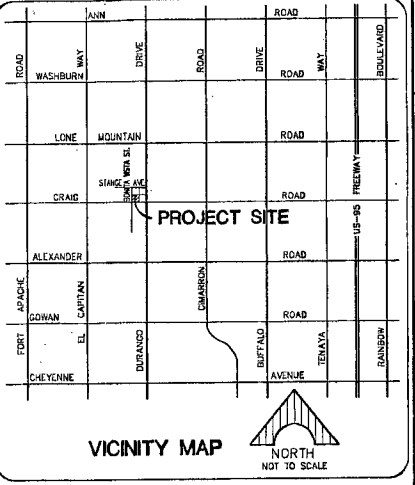
- ### WATER CONSTRUCTION NOTES
- INSTALL FIRE HYDRANT ASSEMBLY PER UDACS PLATE NO. 7
 - INSTALL CAP (SAME SIZE AS MAIN) AND 2" BLOW-OFF ASSEMBLY PER UDACS PLATE NO. 4A
 - INSTALL CAP (SAME SIZE AS MAIN)
 - NO ITEM
 - NO ITEM
 - INSTALL 8" GATE VALVE AS PER UDACS PLATE NO. 8
 - INSTALL 8" TEE & THRUST BLOCK PER UDACS PLATE NO. 5
 - INSTALL 8" CAP
 - INSTALL BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKERS ADJACENT TO THE FIRE HYDRANT EIGHT (8) FEET FROM THE FACE OF THE CURB ON HYDRANT SIDE.
 - INSTALL 1" TYPE "K" COPPER SERVICE LINE (PUBLIC UP TO METER)
 - INSTALL 1" WATER METER W/ BOX & COVER PER UDACS PLATE NO. 10
 - INSTALL 6"x1" SERVICE SADDLE AND CORP. STOP
 - INSTALL 8"x1" SERVICE SADDLE AND CORP. STOP
 - INSTALL 6" PVC (CL150, C900) WATER LINE (PUBLIC)
 - INSTALL 8" PVC (CL150, C900) WATER LINE (PUBLIC)

- ### SEWER CONSTRUCTION NOTES
- INSTALL STANDARD 48" DIA. ECCENTRIC MANHOLE NO. SD-1 PER DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS.
 - ALIGN WITH AND CONNECT TO LINES SHOWN ON PLUMBING PLANS, INSTALL 4" SS CAP
 - INSTALL 8" (PUBLIC SS MAIN) PER NO. SD-1A DCSWCS
 - INSTALL 4" (PRIVATE SS LATERAL) @ 5-2.00% MIN. PER NO. SD-17 DCSWCS
 - INSTALL 4" C900 PVC OR DIP (PRIVATE SS LATERAL) PER UDACS SEC. 2.19 @ 5-2.00% MIN. PER NO. SD-17 DCSWCS
 - INSTALL 8" SS CAP

ESTIMATE OF QUANTITIES

8" P.V.C. WATER LINE (PUBLIC) DNS=406 LF. + OFS=313 LF.	719	LF
6" P.V.C. WATER LINE (PUBLIC)	92	LF
STD. FIRE HYDRANT W/ 6" LAT. & 6" G.V. AS PER UDACS PLATE NO. 7 (PUBLIC)	2	EA
8" GATE VALVE	1	EA
2" BLOW-OFF ASSEMBLY PER UDACS PLATE NO. 4A	2	EA
8" CAP	1	EA
8" TEE	1	EA
8"x6" TEE	2	EA
8"x6" REDUCER	1	EA
1" WATER LATERALS	4	EA
1" WATER METER W/ BOX & COVER AS PER UDACS PLATE NO. 10	4	EA

- ### LVVWD STANDARD NOTES
- #### LVVWD PROJECT # 109303
- NO WORK SHALL BEGIN UNTIL THE WATER PLANS HAVE BEEN APPROVED FOR CONSTRUCTION BY THE LVVWD. FOLLOWING WATER PLAN APPROVAL, NOTICE SHALL BE GIVEN TO THE LVVWD COMMUNICATION SUPPORT CENTER (258-7171) TWO (2) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION. FOR FUTURE INSPECTIONS, NOTICE MUST BE GIVEN BY 2:00 P.M. THE BUSINESS DAY PRIOR TO THE REQUESTED LVVWD INSPECTION. WHEN REQUESTING INSPECTIONS, PLEASE REFER TO THE PROJECT # IDENTIFIED ABOVE.
 - ALL WORK SHALL CONFORM TO LVVWD STANDARD PLANS, DRAWINGS, AND SPECIFICATIONS, AND TO THE 2003 EDITION OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS).
 - ALL WORK, EXCEPT AS MODIFIED BY THESE PLANS OR BY NOTE 2 ABOVE, SHALL BE DONE IN ACCORDANCE WITH THE MOST RECENT EDITION OF THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENT, CLARK COUNTY AREA.
 - A SINGLE PIPE MATERIAL SHALL BE USED THROUGHOUT THE PROJECT UNLESS OTHERWISE APPROVED BY THE LVVWD.
 - ALL SERVICE LATERALS TWO (2) INCHES IN DIAMETER AND SMALLER SHALL BE TYPE K COPPER TUBING WITH LVVWD APPROVED SERVICE SADDLES.
 - ALL WATER METER BOXES SHALL BE LOCATED OUTSIDE OF DRIVEWAY AREAS.
 - ALL VALVES SHALL BE LOCATED OUTSIDE OF DRIVEWAYS, VALLEY AND CURB GUTTERS.
 - ALL WATER AND STORM DRAIN OR SANITARY SEWER CROSSINGS SHALL CONFORM TO SECTION 2.19 OF THE 2003 EDITION OF THE UDACS.
 - ALL WATER FACILITIES SHALL BE FILLED, DISINFECTED, PRESSURE TESTED, FLUSHED, FILLED, AND AN ACCEPTABLE WATER SAMPLE OBTAINED, PRIOR TO CONNECTION TO THE LVVWD DISTRIBUTION SYSTEM.
 - THE CONTRACTOR MUST OBTAIN ALL METERS TWO (2) INCHES AND SMALLER FROM LVVWD CENTRAL STORES. TELEPHONE 258-3152 OR 258-3802, TWO (2) WORKING DAYS PRIOR TO METER PICKUP.
 - ANY INTERRUPTION OF SERVICE MUST BE PERFORMED IN ACCORDANCE WITH UDACS 3.13.01, AND APPROVED BY THE LVVWD INSPECTION DIVISION PRIOR TO SHUTDOWN. PROPER WRITTEN NOTIFICATION MUST BE GIVEN TO ALL AFFECTED CUSTOMERS.
 - ALL WATER FACILITY CONSTRUCTION MATERIALS USED MUST BE AS LISTED ON THE LVVWD PRE-APPROVED MATERIALS AND MANUFACTURER'S LISTING FOR NEW FACILITIES, LATEST REVISION, OR SPECIFICALLY APPROVED ON THESE PLANS.
 - TELEPHONE "CALL BEFORE YOU DIG" AT 1-800-227-2600.

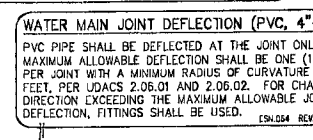
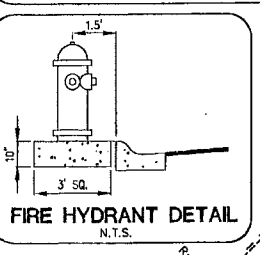


FIRE FLOW INFORMATION BLOCK

USE/OCCUPANCY: R-3
 TYPE OF CONSTRUCTION (RC): V - N
 FIRE FLOW: 1750 GPM @ 20 PSI
 AUTOMATIC FIRE SPRINKLERS: YES/NO
 NFPA 13: 1.3R, 1.3D
 ESFR: YES/NO
 SQUARE FOOTAGE: 5,000± SQ. FT.
 LARGEST AREA BETWEEN 4 HOUR WALLS: N/A
 BUILDING HEIGHT: 35 FEET [TWO (2) STOREY]
 # OF STORES INCLUDING BASEMENT: TWO (2)
 HIGH PILED COMBUSTIBLE STORAGE: YES/NO
 # OF HYDRANTS INSTALLED: TWO (2) NA
 EXPOSURES: N/A
 ROOF CONSTRUCTION: CONCRETE TILE

- ### CC FIRE DEPT. GENERAL NOTES
- ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE 2005 CLARK COUNTY FIRE CODE, AND THE 2002 EDITION OF NATIONAL FIRE PROTECTION ASSOCIATION PAMPHLET #24.
 - FIRE HYDRANTS AND WATER SUPPLIES FOR FIRE PROTECTION SHALL BE MADE SERVICEABLE PRIOR TO AND DURING THE TIME OF CONSTRUCTION IN ACCORDANCE WITH SECTION 901.3 OF THE 2005 CLARK COUNTY FIRE CODE.
 - IF DURING CONSTRUCTION IT BECOMES NECESSARY TO CLOSE ANY CONTROL VALVE OR PLACE A HYDRANT OUT OF SERVICE, THE CLARK COUNTY FIRE DEPARTMENT MUST BE CONTACTED.
 - PAINTING OF CURBS AND/OR STRIPING OF ASPHALT AREAS AND PROTECTION OF HYDRANTS FROM PHYSICAL INJURY SHALL BE PER THE FIRE HYDRANT INSTALLATION SPECIFICATIONS OF THE FIRE PREVENTION BUREAU.
 - NO FIRE HYDRANT SHALL BE LOCATED WITHIN 25 FEET OF ANY STRUCTURE, OR 5 FEET OF A DRIVEWAY, POWER POLE, LIGHT STANDARD, OR ANY OTHER OBSTRUCTION. FOR WALL, FENCE AND PLANTER LOCATIONS, A PERIMETER AROUND THE HYDRANT MEASURING A MINIMUM OF 3 FEET FROM ITS EXTERIOR SHALL BE MAINTAINED CLEAR OF ALL OBSTRUCTION AT ALL TIMES.
 - AT ALL TIMES DURING CONSTRUCTION SUITABLE EMERGENCY VEHICLE ACCESS ROADS MUST BE MAINTAINED. ROADWAYS MUST BE SMOOTH, COMPACTED AND CAPABLE OF SUPPORTING THE IMPOSED LOADS OF ALL EMERGENCY VEHICLES.
 - PRIOR TO ACCEPTANCE OF ANY FIRE SERVICE MAIN, A SATISFACTORY HYDROSTATIC TEST WITH PIPING JOINTS UNCOVERED MUST BE CONDUCTED. APPROVED PLANS, AN INSTALLATION PERMIT AND A CONTRACTOR'S MATERIALS AND TEST CERTIFICATE MUST BE PROVIDED AT TIME OF INSPECTION. CALL CDD INSPECTION HOTLINE AT 226-8991 TO SCHEDULE INSPECTIONS.
 - FIRE HYDRANTS SHALL BE LOCATED 4' TO 7' FROM BACK OF CURB.
 - BLUE REFLECTIVE MARKERS MUST BE INSTALLED BEFORE FINAL HYDRANT ACCEPTANCE CAN BE ATTAINED [2005 CLARK COUNTY FIRE CODE, SEC. 901.4.3].
 - APPROVED (PUBLIC) FIRE HYDRANTS FOR THIS PROJECT ARE:
 - KENNEDY - GUARDIAN MODELS KB1A AND KB1D
 - MUELLER - SUPER CENTURION 250 MODEL A-423
 - CLOW - MEDALLION MODEL F-254BLVD
 - TROY VALVE - PATRIOT MODEL P18100 NEVADA HYDRANT

- ### CITY OF LAS VEGAS 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. STREET 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. MAINS SHALL REQUIRE SPECIAL PROCEDURES. IN LINE "Y" 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 (0.10) 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 PVC PIPE WHICH ALLOWS FOR PIPE DEFLECTION AT THE JOINTS.

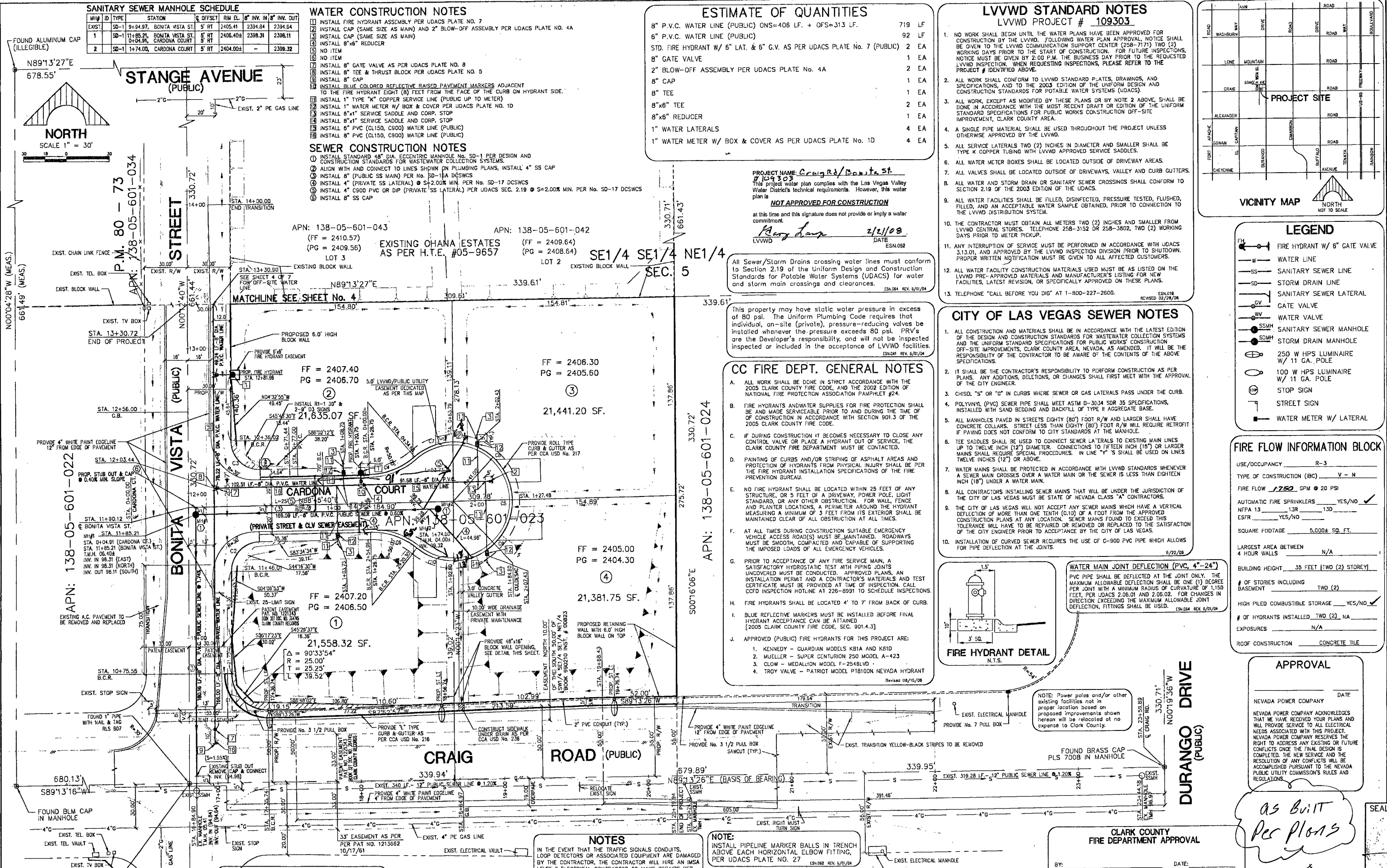


APPROVAL

NEVADA POWER COMPANY DATE: _____
 NEVADA POWER COMPANY ACKNOWLEDGES THAT WE HAVE RECEIVED YOUR PLANS AND WILL PROVIDE SERVICE TO ALL ELECTRICAL NEEDS ASSOCIATED WITH THIS PROJECT. NEVADA POWER COMPANY RESERVES THE RIGHT TO ADDRESS ANY EXISTING OR FUTURE CONFLICTS ONCE THE FINAL DESIGN IS COMPLETED. THE NEW SERVICE AND THE RESOLUTION OF ANY CONFLICTS WILL BE ACCOMPLISHED PURSUANT TO THE NEVADA PUBLIC UTILITY COMMISSION'S RULES AND REGULATIONS.

CLARK COUNTY FIRE DEPARTMENT APPROVAL

DATE: _____
 APPROVAL OF THESE PLANS SHALL NOT BE CONSTRUED TO BE A PERMIT FOR, OR AN APPROVAL OF, ANY VIOLATION OF ANY OF THE PROVISIONS OF THE STATE OR COUNTY LAWS.
 FIRE FLOW 2,250 GPM AT 20 PSI RESIDUAL.
 APPROVED FOR CONSTRUCTION
 LAS VEGAS VALLEY WATER DISTRICT (SHEETS 3, 4 & 5)
 PROJECT # 109303



- ### NOTES
- REPLACE ALL TRAFFIC CONTROL DEVICES (SIGNS OR PAVEMENT MARKINGS) UNDER CLARK COUNTY JURISDICTION THAT ARE DISTURBED, DESTROYED, MOVED OR MODIFIED BY TRENCHING ACTIVITY TO CLARK COUNTY SATISFACTION. ALL MATERIALS USED SHALL MEET CLARK COUNTY'S SPECIFICATIONS, OR WILL BE AN APPROVED EQUIVALENT.
 - CONTRACTOR SHALL CONTACT CLARK COUNTY TRAFFIC OPERATIONS @ 455-7511 TO SCHEDULE COUNTY TRAFFIC STAFF TO LOCATE UNDERGROUND STREETLIGHTING AND SIGNAL FACILITIES IN THE PROJECT AREA. A MINIMUM OF 48 HOURS NOTICE IS REQUIRED PRIOR TO THIS OPERATION. HOURS OF OPERATION ARE: 8:30 AM-3:00 PM, MONDAY TO FRIDAY, EXCLUDING HOLIDAYS.

UTILITY NOTE

UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL 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.

Call before you Dig
 Call before you Overhead
 Call before you UnderGround

1-800-227-2600
 1-702-227-2929
 1-702-455-7511
 1-702-432-5300

NOTES

IN THE EVENT THAT THE TRAFFIC SIGNALS CONDUITS, LOOP DETECTORS OR ASSOCIATED EQUIPMENT ARE DAMAGED BY THE CONTRACTOR, THE CONTRACTOR WILL HERE AN IMMA LEVEL II ELECTRICAL CONTRACTOR TO MAKE REPAIRS PER UNIFORM SPECIFICATION NO. 623 C.01.02.

CURVE DATA

CURVE	RADIUS	LENGTH	TANGENT	DELTA
C1	20.00'	31.42'	19.36'	88°58'20"
C2	20.00'	31.77'	20.38'	91°01'40"

BASIS OF BEARING

THE BEARING OF SOUTH 89°13'26" WEST, BEING THE BEARING OF THE CENTERLINE OF CRAIG ROAD, AS SHOWN BY A MAP ON FILE IN THE CLARK COUNTY RECORDER'S OFFICE AS FILE 134, PAGE 80 OF RECORD OF SURVEYS.

BENCHMARK

REF. NO. 45, RIVET AND ALUMINUM PLATE, STAMPED CITY OF LAS VEGAS BM NO. BLVD 4/4 IN TOP OF CURB, ON THE NORTHEAST CORNER OF CRAIG ROAD AND DURANGO DRIVE NEAR THE P.C. OF CRAIG ROAD.
 ELEVATION = 2394.94 FEET (1988 NAVD)
 729.880 METERS

CLV APPROVAL

DESCRIPTION

REV. DATE

DELUVA, INC.
 ENGINEERING • PLANNING • SURVEYING
 2675 SOUTH JONES BOULEVARD, STE. 104, LAS VEGAS, NV 89146, (702) 255-6242

SHEET CONTENTS:
 PROPOSED SEWER LINE EXTENSION
 (CRAIG ROAD/BONITA VISTA STREET, N/E)
 APN: 138-05-601-023
 UTILITY PLAN

SEAL

DATE: 2/12/08

exp. 12/31/08

SHEET 3 OF 5 SHEETS

CLV DWG. # 307V1024

Project # 25852

Project # 109303

Project # 25852

-SEWER AS-BUILT-