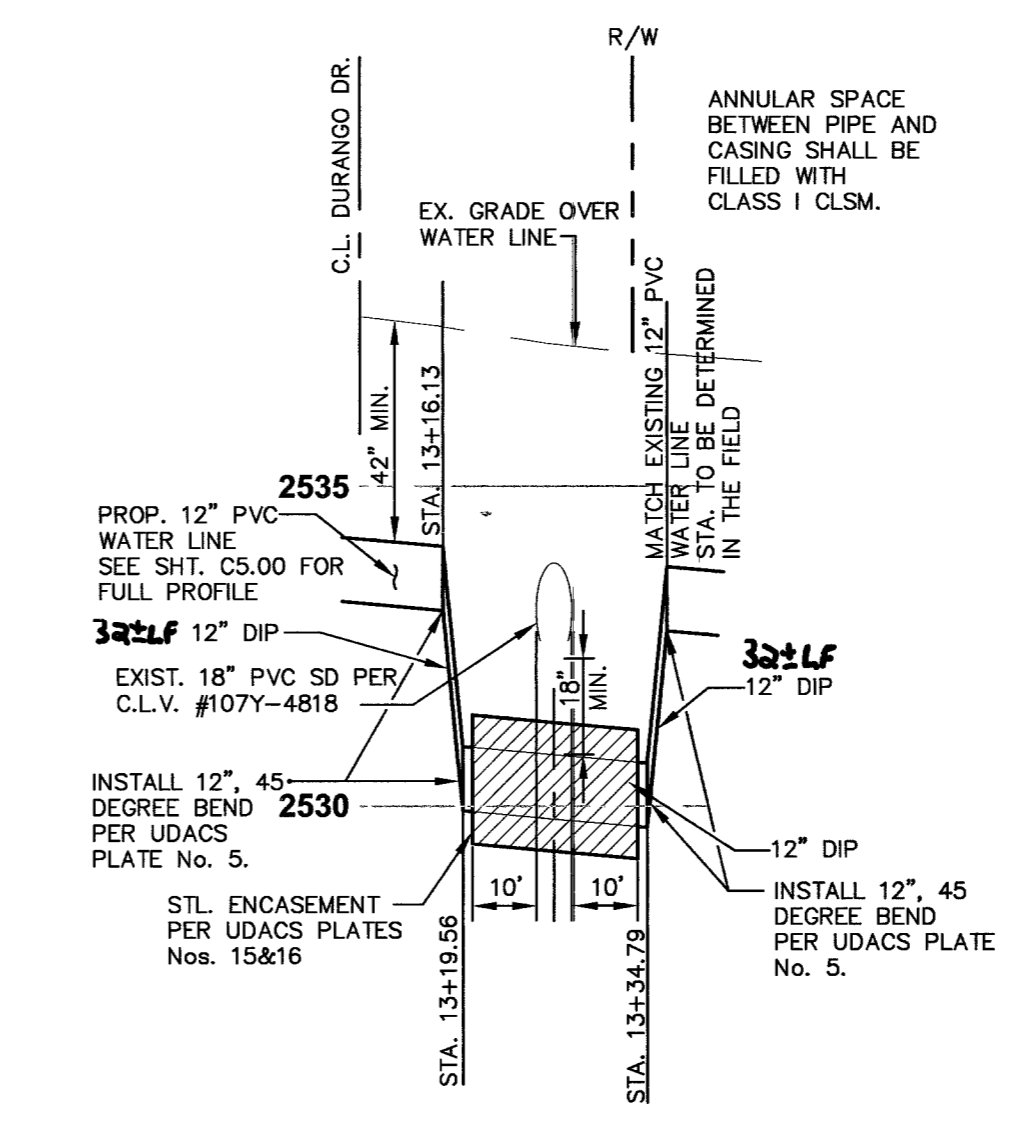


MANHOLE SCHEDULE:

#	NORTHING	EASTING	STATION	RIM	INV. (IN)	INV. (OUT)	TYPE
1	26816694.20	748592.61	5+01.15	37.01	28.03	27.83	II-60
2	26816659.99	748589.50	4+66.80	36.46	28.64	28.44	II-60
3	26816660.02	748543.92	4+21.22	37.91	29.27	29.07	II-60
4	26816660.15	748291.93	1+69.23	43.22	36.58±	36.38	II-60
5	26816660.19	748222.71	1+00.00	46.0	38.8±	38.60	II-60
EX	26816465.27	748624.32	12+30.97	38.1±	18.02	17.82	SEWER

- UTILITY GENERAL NOTES:**
- CONTRACTOR TO LOCATE AND VERIFY SIZE, LINE TYPE, CONDITION, DEPTH, PRESSURE, AND LOCATION OF ALL EXISTING UTILITY LINES WITHIN THE CONSTRUCTION AREA PRIOR TO CONSTRUCTION. THE CIVIL ENGINEER SHALL BE CONTACTED ONCE THE UTILITY LINE IS LOCATED.
 - THESE DRAWINGS MAY NOT INDICATE ALL EXISTING BURIED UTILITY LINES. CONTRACTOR IS TO EXERCISE EXTREME CAUTION DURING EXCAVATION IN ORDER TO AVOID MAKING CONTACT WITH ANY EXISTING UTILITY LINES. IF UTILITY LINES ARE DAMAGED BY THE CONTRACTOR, SUCH DAMAGE SHALL BE REPLACED TO THE SATISFACTION OF THE OWNER AT THE CONTRACTOR'S EXPENSE.
 - CONTRACTOR TO SAWCUT AND REMOVE EXISTING ASPHALT AND CONCRETE AS NECESSARY FOR UTILITY TRENCHES, BACKFILL AND PATCH ALL TRENCHES AS INDICATED ON DETAILS AND/OR ACCORDING TO THE GOVERNING ENTITY.
 - THE FIRE SAFETY CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING THE SIZE OF PIPING THAT IS REQUIRED TO CONNECT FROM THE FIRE WATER LOOP TO THE FIRE SPRINKLER RISER. LINE SIZE SHOWN FOR INFORMATION PURPOSES ONLY.
 - CONTRACTOR TO VERIFY UTILITY STUB LOCATIONS AND SIZE WITH PLUMBING PLANS PRIOR TO INSTALLATION OF NEW UTILITIES.
 - ALL DIMENSIONS TO UTILITIES ARE TO CENTERLINE OF PIPE UNLESS INDICATED OTHERWISE.
 - THE EXISTING GAS LINE LOCATIONS SHOWN ON THESE PLANS ARE APPROXIMATIONS ONLY.
 - ALL WATER FACILITIES CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE "UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR WATER DISTRIBUTION SYSTEMS" (U.D.A.C.S.), LATEST EDITION.
 - FDC SHALL BE INTERCONNECTED TO BUILDING SPRINKLER SYSTEMS.
 - FIRE CODE REQUIREMENTS: TWO SOURCES OF WATER SUPPLY ARE REQUIRED WHENEVER THERE ARE MORE THAN THREE (3) FIRE HYDRANTS INSTALLED ON A SINGLE SYSTEM.
 - NEVADA BY DESIGN (NBD) HAS PROVIDED UTILITY INFORMATION BASED ON THE MOST CURRENT DATA AVAILABLE FOR THE CONTRACTOR'S INFORMATION. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF UNDERGROUND UTILITIES SHOWN OR NOT SHOWN ON THESE PLANS WITH RESPECT TO LINE AND GRADE PRIOR TO CONSTRUCTION.
 - ALL ONSITE UTILITY FACILITIES ARE PRIVATE AND ALL OFFSITE UTILITY FACILITIES ARE PUBLIC.
 - MANUFACTURER OF WATERMANS TO BE C-900 OR EQUIVALENT.
 - VERIFY AND LOCATE ALL EXISTING UTILITIES WITHIN PROJECT WORK AREA.
 - ALL ABOVE GROUND UTILITY APPURTENANCES WILL BE PLACED A MINIMUM OF THREE (3) FEET FROM THE BACK OF SIDEWALK AND WILL BE IN CONFORMANCE WITH TITLE 19.12.040



WATERLINE CROSSING

PROFILE SCALES:
VERTICAL: 1"=3'
HORIZONTAL: 1"=30'

FIRE FLOW CALCULATIONS:

* DENOTES WORST CASE

BUILDING:	BUILDING #1	*BUILDING #2	BUILDING #3
FIRE FLOW REQUIREMENT @ 20 PSI RESIDUAL PRESSURE (GPM):	1500	1500	1500
SQUARE FOOTAGE (SQ FT):	5000	6062	2513
LARGEST AREA BETWEEN 4-HOUR AREA SEPARATION WALLS (SQ FT):	N/A	N/A	N/A
BUILDING HEIGHT (FT):	24'-6"	26'	25'-9"
NUMBER OF STORIES:	1	1	1
TYPE OF CONSTRUCTION:	VB	VB	VB
OCCUPANCY:	M	M	A2
HIGH PILED STORAGE:	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
FULL AUTOMATIC FIRE SPRINKLER SYSTEM:	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

Reviewed By: *[Signature]* Date: 3/26/07
Vegas Fire Dept.

PUBLIC UTILITY QUANTITIES

8" PVC (WATER)	28 L.F.
8" TEE	3 EA.
FIRE HYDRANT	1 EA.
1-1/2" COPPER	34 L.F.
1" COPPER	21 L.F.
1-1/2" METER	3 EA.
1" METER	1 EA.
12" PVC (WATER)	144 L.F.
12" 45 DEG. BENDS	6 EA.
8" DCCA	1 EA.
1-1/2" RPPA	3 EA.
1" RPPA	1 EA.

PRIVATE UTILITY QUANTITIES

8" PVC (WATER)	428 L.F.
8" TEE	1 EA.
8" ELBOW	1 EA.
FIRE HYDRANT	1 EA.
ONSITE MANHOLE	1 EA.
1-1/2" PVC	377 L.F.
8" PVC (SEWER)	500 L.F.
CLEANOUTS	8 EA.
2" PVC	140 L.F.
6" PVC (SEWER)	95 L.F.

BENCHMARK:

CITY OF LAS VEGAS VERTICAL CONTROL POINT "01V90 17N2S" BEING A RIVET PLATE IN THE TOP OF CURB AT THE SOUTHWEST CORNER OF GRAND TETON AND DURANGO.
ELEVATION: 2539.74 (FEET)
774.1140 (METERS)
CITY OF LAS VEGAS VERTICAL CONTROL v.2003 BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

BASIS OF BEARINGS:

NORTH 00°05'38" EAST, BEING THE EAST LINE OF THE SOUTHEAST QUARTER (SE 1/4) OF THE SOUTHEAST QUARTER (SE 1/4) OF SECTION 8, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA AS SHOWN IN FILE 86 OF SURVEYS, AT PAGE 75, OFFICIAL RECORDS OF CLARK COUNTY, NEVADA.

SAFETY ALERT

Call before you dig
Underground utility lines. It's costly.

Call before you dig
CLARK COUNTY TRAFFIC OPERATIONS
1-702-455-7511

Call before you dig
LAS VEGAS AREA COMPUTERIZED TRAFFIC SYSTEM
1-702-229-6611

Call before you dig
1-800-227-2600

WATER NOTES:

- INSTALL 1-1/2" RPPA PER U.D.A.C.S. PLATE No. 11A.
- INSTALL 8" DOUBLE CHECK DETECTOR ASSEMBLY ABOVE FINISH GRADE, ON A 4"x6"x8" CONCRETE PAD PER U.D.A.C.S. PLATE No. 11C.
- REMOVE CAP AND BLOW OFF PER UDACS PLATE No. 4A, NOTE NO. 1, AND CONNECT TO EXISTING MAIN.
- INSTALL 8"x8" TEE PER U.D.A.C.S. PLATE No. 5.
- INSTALL 1 1/2" SERVICE SADDLE PER U.D.A.C.S. PLATE No. 1D.
- INSTALL 1 1/2" METER PER U.D.A.C.S. PLATE No. 1D.
- INSTALL 8", 90 DEGREE BEND PER U.D.A.C.S. PLATE No. 5.
- INSTALL 1" METER PER U.D.A.C.S. PLATE No. 1D.
- INSTALL 1" RPPA PER U.D.A.C.S. PLATE No. 11A.
- INSTALL 12"x8" TEE PER U.D.A.C.S. PLATE No. 5.
- INSTALL 1" SERVICE SADDLE PER U.D.A.C.S. PLATE No. 1D.
- SEE LANDSCAPE PLANS FOR CONTINUATION.
- REFER TO MECHANICAL, PLUMBING AND FIRE SPRINKLER PLANS FOR CONTINUATION.
- INSTALL 6" FIRE HYDRANT ASSEMBLY (INCLUDE 6" GATE VALVE) PER U.D.A.C.S. PLATE No. 7. PROVIDE A MINIMUM OF 3' CLEARANCE AROUND FIRE HYDRANT.

WATER NOTES: (cont.)

- INSTALL 12", 45 DEGREE BEND PER UDACS PLATE No. 5.
- CONSTRUCT WATERLINE PER UDACS PLATE No. 15 & 16.
- INSTALL 1-1/2" X 2" REDUCER

SEWER NOTES:

- CONSTRUCT 48" DIA. STANDARD ECCENTRIC MANHOLE PER D.C.W.C.S. DWG. No. SD-1. INSTALL CONCRETE COLLARS PER SD-2.
- INSTALL CLEANOUT PER PLAN WITH NEENAH H-20 TRAFFIC LOAD RATED COVERS OR APPROVED EQUAL.
- INSTALL 1500 GAL. GREASE INTERCEPTOR PER PLUMBING PLAN.
- REFER TO MECHANICAL AND PLUMBING PLANS FOR CONTINUATION.
- INSTALL 6" X 4" REDUCER.

STORM DRAIN NOTES:

- INSTALL 4" TYPE "CM" DROP INLET PER DETAIL 7-09.00.
- 60" STORM DRAIN MANHOLE
- CAP EXISTING STORM DRAIN (SIZE AS NOTED)

INSTALLATION OF DOUBLE CHECK DETECTOR ASSEMBLY (1)-8":

THE DOUBLE CHECK DETECTOR ASSEMBLIES SHALL BE INSTALLED IN ACCORDANCE WITH THE U.D.A.C.S. PLATE No. 11C.

ANY BLOCK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AROUND THE OUTSIDE OF THE EASEMENT(S) TO ALLOW THE DISTRICT DIRECT ACCESS FROM THE ADJACENT RIGHT-OF-WAY.

EASEMENTS SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION.

INSTALLATION OF REDUCED PRESSURE PRINCIPLE ASSEMBLY (3) 1-1/2", (1) 1" PLATE 11A:

APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED PER THE U.D.A.C.S. PLATE No. 11A. NO WATER SHALL BE TAKEN FROM A SERVICE REQUIRING BACK FLOW PREVENTION UNTIL THE REDUCED PRESSURE PRINCIPLE ASSEMBLY HAS BEEN SUCCESSFULLY TESTED BY THE LVVWD.

ANY BLOCK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AROUND THE OUTSIDE OF THE EASEMENT(S) TO ALLOW THE DISTRICT DIRECT ACCESS FROM THE ADJACENT RIGHT-OF-WAY.

EASEMENTS SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION.

L.V.V.W.D. APPROVAL

L.V.V.W.D. _____ DATE _____

PROJECT No. 113287

THIS PROPERTY MAY HAVE STATIC WATER PRESSURE IN EXCESS OF 80 PSI. THE UNIFORM PLUMBING CODE REQUIRES THAT INDIVIDUAL, ON-SITE (PRIVATE), PRESSURE-REDUCING VALVES BE INSTALLED WHENEVER THE PRESSURE EXCEEDS 80 PSI. PRV'S ARE THE DEVELOPER'S RESPONSIBILITY, AND WILL NOT BE INSPECTED OR INCLUDED IN THE ACCEPTANCE OF LVVWD FACILITIES. ESN.041 REV. 6/1/04

SEWER CALCULATIONS:

DAILY AVERAGE: 0.0014 MGD
PEAK FLOW: 0.0046 MGD

CL OR SURVEY LINE	EASEMENT LINE	DEMO. SURFACE	MANHOLES & DESCRIPTIONS	CAP	DESCRIPTION:	BO VALVE	CLEAN OUT	FDC	FIRE HYDRANT	GATE VALVE	REDUCER	100W HPS STREETLIGHT	150W HPS STREETLIGHT	200W HPS STREETLIGHT	250W HPS STREETLIGHT	400W HPS STREETLIGHT	5' CONTOUR LINE	1' CONTOUR LINE	EDGE OF PMT.	"A" TYPE CURBS	"L" TYPE CURBS	WALLS	FENCES	SPT ELEVATIONS	SIGNS
---	---	---	⊙ = SANITARY SEWER ⊙ = ELECTRICAL	---	EXISTING:	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	---	---	---	---	---	---	---	---	---
---	---	---	⊙ = STORM DRAIN ⊙ = TELEPHONE	---	PROPOSED:	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	---	---	---	---	---	---	---	---	---