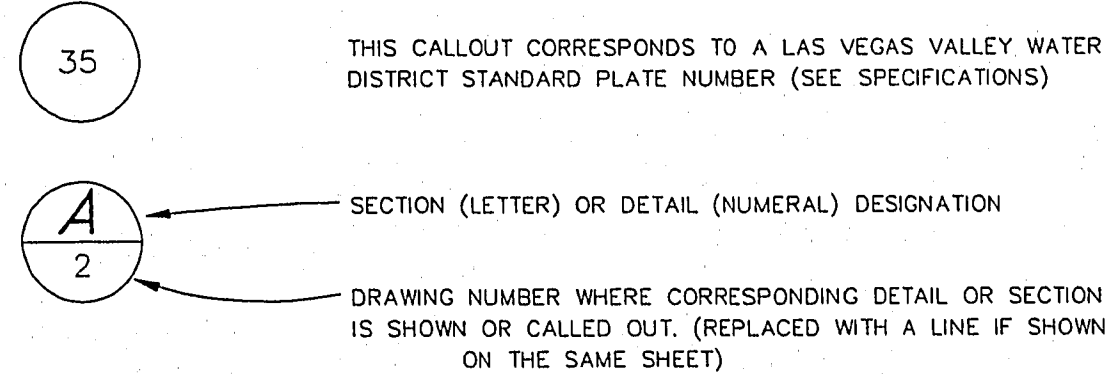


LIST OF ABBREVIATIONS

ABAN	ABANDON	ID	INSIDE DIAMETER	S/C	SAW CUT
ACP	ASBESTOS CEMENT PIPE	INST	INSTALLATION	SCCP	STEEL CYLINDER CONCRETE PIPE
A/C	AIR CONDITIONING	INSUL	INSULATION	SCH	SCHEDULE
AC	ASPHALTIC CONCRETE	JT	JOINT	SD	STORM DRAIN
A.F.F.	ABOVE FINISHED FLOOR	LEN	LENGTH OF CURVATURE	SEC	SECONDARY
APPO	APPROVED	LG	LONG	SECT	SECTION
ASSY	ASSEMBLY	LT	LIGHT	SHT	SHEET
A.S.T.M.	AMERICAN SOCIETY OF TESTING MATERIALS	L.V.W.D.	LAS VEGAS VALLEY WATER DISTRICT	S.N.W.S.	SOUTHERN NEVADA WATER SYSTEM
AUX	AUXILIARY	MOD	MODULUS	SOL	SOLENOID
AVAR	AIR VACUUM/AIR RELEASE VALVE	MORTAR	MORTAR COATED	SPEC/SPECS	SPECIFICATION(S)
AVE	AVENUE	MEAS	MEASUREMENT	SS	SQUARE
A.W.W.A.	AMERICAN WATER WORKS ASSOC.	MFG	MANUFACTURING	SS	SANITARY SEWER
AWG	AMERICAN WIRE GAUGE	MILLION	MILLION GALLONS PER DAY	SSTL	STAINLESS STEEL
BC	BACK OF CURB/BARE COPPER	MIL	MILIMETER	STD	STANDARD
BE	BELL END	MIL	MILIMETER	STL	STEEL
BK	BOOK	MIL	MILIMETER	STLT	STEEL TIGHT
BLDG	BUILDING	MIL	MILIMETER	S/W	SIDEWALK
BLVD	BOULEVARD	MIL	MILIMETER	TAN	TANGENT
BM	BENCHMARK	MIL	MILIMETER	T & B	TOP & BOTTOM
BMPH	BUMPED HEAD	MIL	MILIMETER	TBE	THREAD BOTH ENDS
BT	BOTTOM	MIL	MILIMETER	TC	TOP OF CURB
B&S	BELL & SPIGOT	MIL	MILIMETER	TD	TRENCH DRAIN
BV	BUTTERFLY VALVE	MIL	MILIMETER	TDH	TOTAL DYNAMIC HEAD
BW	BACK OF SIDEWALK	MIL	MILIMETER	TF	TOP OF FOOTING
C	CONDUIT	MIL	MILIMETER	TEMP	TEMPORARY
C.C.	CLARK COUNTY	MIL	MILIMETER	TGR	TOP OF GRATE
CL	CENTERLINE	MIL	MILIMETER	THD	THREADED
C.L.V.	CITY OF LAS VEGAS	MIL	MILIMETER	THK	THICK
CFM	CUBIC FEET PER MINUTE	MIL	MILIMETER	THN	TOP OF MANHOLE
CL2	CHLORINE	MIL	MILIMETER	TP	TOP OF PIPE
CLG	CEILING	MIL	MILIMETER	TR	TOP OF RIM
CMU	CONCRETE MASONRY UNIT	MIL	MILIMETER	TS	TOP OF SLAB
C.N.L.V.	CITY OF NORTH LAS VEGAS	MIL	MILIMETER	TST	TOP OF STEEL
CO	CLEANOUT	MIL	MILIMETER	TSW	TOP OF SIDEWALK
CONC	CONCRETE	MIL	MILIMETER	TW	TOP OF WALL
CONT	CONTINUOUS	MIL	MILIMETER	(TYP.)	TYPICAL
COR	CORNER	MIL	MILIMETER	UG	UNDERGROUND
CORP	CORPORATION	MIL	MILIMETER	UNC	AMERICAN STANDARD UNIFIED
CPLG	COPING	MIL	MILIMETER	UNF	COARSE THREAD
CPVC	CHLORINATED POLYVINYL CHLORIDE	MIL	MILIMETER	UNIV	AMERICAN STANDARD UNIFIED
CU	COPPER	MIL	MILIMETER	U.N.O.	UNIVERSAL
D OR Δ	DELTA ANGLE	MIL	MILIMETER	U.P.C.	UNLESS NOTED OTHERWISE
DET	DETAIL	MIL	MILIMETER	U.S.C.	UNIFORM PLUMBING CODE
DI	DROP INLET/DUCTILE IRON	MIL	MILIMETER	U.S.G.S.	UNITED STATES COAST
DIA OR Ø	DIAMETER	MIL	MILIMETER	UTL	GEODETIC SURVEY
DIP	DUCTILE IRON PIPE	MIL	MILIMETER	UTL	UTILITIES
DISCH	DISCHARGE	MIL	MILIMETER	VCP	VITRIFIED CLAY PIPE
DIST	DISTRIBUTION	MIL	MILIMETER	VEL	VELOCITY
DV	DIVISION	MIL	MILIMETER	VERT	VERTICAL
D/W	DRIVEWAY	MIL	MILIMETER	VOL	VOLUME
DWG	DRAWING	MIL	MILIMETER	W	WITH
EA	EACH	MIL	MILIMETER	WD	WIDTH
EAC	EDGE OF ASPHALTIC CONCRETE	MIL	MILIMETER	WDM	WASTE DRAIN
EF	EACH FACE	MIL	MILIMETER	WL	WATER LINE
EL	EPOXY LINED	MIL	MILIMETER	WLD	WELDED
ELEC	ELECTRICAL	MIL	MILIMETER	W/O	WITHOUT
ELEV	ELEVATION	MIL	MILIMETER	W/P	WORK POINT / WEATHER PROOF
ELL	ELBOW	MIL	MILIMETER	WSP	WELDED STEEL PIPE
ESMT	EASEMENT	MIL	MILIMETER	WTR	WATER
EW	EACH WAY	MIL	MILIMETER	YD	YARD
EXIST	EXISTING	MIL	MILIMETER	YLD	YIELD
FECL	FUSION EPOXY COATED & LINED	MIL	MILIMETER	XARM	CROSS ARM
FEL	FUSION EPOXY LINED	MIL	MILIMETER	XSECT	CROSS SECTION
FG	FINISHED FLOOR	MIL	MILIMETER		
FG	FINISHED GRADE	MIL	MILIMETER		
FH	FIRE HYDRANT	MIL	MILIMETER		
FL	FLOWLINE	MIL	MILIMETER		
FLG	FLANGE	MIL	MILIMETER		
FT	FEET	MIL	MILIMETER		
FTG	FOOTING	MIL	MILIMETER		
G	GAS/GROUND	MIL	MILIMETER		
GA	GAUGE	MIL	MILIMETER		
GAL	GALLON	MIL	MILIMETER		
GALV	GALVANIZED	MIL	MILIMETER		
GB	GRADE BREAK	MIL	MILIMETER		
GND	GROUND	MIL	MILIMETER		
GRD	GRADE	MIL	MILIMETER		
GRT	GRATE	MIL	MILIMETER		
GV	GATE VALVE	MIL	MILIMETER		
HORIZ	HORIZONTAL	MIL	MILIMETER		
HWY	HIGHWAY	MIL	MILIMETER		
HYD	FIRE HYDRANT	MIL	MILIMETER		

DETAIL CALLOUT LEGEND



GENERAL NOTES

- ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE "UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA", LATEST ISSUE, THE "UNIFORM STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION, CLARK COUNTY AREA, NEVADA", LATEST ISSUE, AND OTHER APPLICABLE APPROVED STANDARDS ISSUED BY THE CONTROLLING AGENCY; THE UNIFORM BUILDING CODE; AND ALL LOCAL CITY CODES AND ORDINANCES APPLICABLE, EXCEPT AS NOTED ON THIS SHEET AS "DEVIATIONS FROM STANDARDS".
- THE EXISTENCE AND LOCATION OF ANY OVERHEAD OR UNDERGROUND UTILITY LINES, PIPES, OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A RESEARCH OF THE AVAILABLE RECORDS. EXISTING UTILITIES ARE LOCATED ON PLANS ONLY FOR THE CONVENIENCE OF THE CONTRACTOR. EXISTING UTILITY SERVICE LATERALS MAY NOT BE SHOWN ON THE PLANS. THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, LOCATE ALL UNDERGROUND AND OVERHEAD INTERFERENCES WHICH MAY AFFECT HIS OPERATION DURING CONSTRUCTION AND SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO SAME. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING NEAR OVERHEAD OR UNDERGROUND POWER, GAS AND / OR OTHER UTILITIES SO AS TO SAFELY PROTECT ALL PERSONNEL AND EQUIPMENT, AND SHALL BE RESPONSIBLE FOR ALL COSTS AND LIABILITY IN CONNECTION THEREWITH.
- THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING UTILITY LINES, STRUCTURES, AND STREET IMPROVEMENTS WHICH ARE TO REMAIN IN PLACE, FROM DAMAGE, AND ALL SUCH IMPROVEMENTS OR STRUCTURES DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED SATISFACTORY TO THE CITY ENGINEER OR OWNING UTILITY COMPANY AT THE EXPENSE OF THE CONTRACTOR.
- ALL CONSTRUCTION SHALL BE AS SHOWN ON THESE PLANS, ANY REVISION SHALL HAVE THE PRIOR WRITTEN APPROVAL OF THE CITY ENGINEER.
- TYPE V CEMENT SHALL BE USED IN ALL OFF-SITE CONCRETE WORK. CONCRETE TO BE 3000 P.S.I. MINIMUM @ 28 DAYS. MIX DESIGN TO BE APPROVED BY THE QUALITY CONTROL DIVISION PRIOR TO USE ON THE PROJECT.
- PERMITS ARE REQUIRED FOR ANY WORK IN THE PUBLIC RIGHT OF WAY. THE CONTRACTOR SHALL SECURE ALL PERMITS AND INSPECTIONS REQUIRED FOR THIS CONSTRUCTION.
- EXPANSION JOINTS REQUIRED, MAXIMUM EVERY 300' IN EXTRUDED TYPE CURB.
- AC PAVEMENT TO BE 1/2" ABOVE LIP OF ALL GUTTERS AFTER COMPACTION, EXCEPT AT SIDEWALK RAMPS.
- APPLY FOG SEAL ONLY AFTER ALL CORRECTIONS AND ADJUSTMENTS HAVE BEEN MADE.
- CURB & GUTTER WITH A GRADE OF LESS THAN FOUR TENTHS OF ONE PERCENT SHALL BE WATER TESTED AS SOON AS POSSIBLE AFTER CONSTRUCTION. ANY CURB AND GUTTER FOUND TO BE UNACCEPTABLE TO THE CITY SHALL BE REMOVED AND REPLACED.
- SIDEWALK RAMPS SHALL BE CONSTRUCTED IN EACH QUADRANT OF AN INTERSECTION PER STANDARD DRAWING 235. EXACT LOCATION OF RAMPS MAY BE ADJUSTED IN THE FIELD BY A CITY INSPECTOR.
- CONTRACTOR SHALL PROVIDE ALL NECESSARY HORIZONTAL AND VERTICAL TRANSITIONS BETWEEN NEW CONSTRUCTION AND EXISTING SURFACES TO PROVIDE FOR PROPER DRAINAGE AND FOR INGRESS AND EGRESS TO NEW CONSTRUCTION. THE EXTENT OF TRANSITIONS TO BE SHOWN ON PLANS, OR AS DESIGNATED IN THE FIELD BY A CITY INSPECTOR.
- ALL GRADING WORK SHALL CONFORM TO THE SOILS REPORT AS PREPARED BY THE SOILS ENGINEER AND APPROVED BY THE CITY ENGINEER, AND AS SHOWN ON THESE PLANS.
- EXACT LOCATION OF ALL SAWCUT LINES MAY BE DETERMINED IN THE FIELD BY A CITY OF LAS VEGAS INSPECTOR IF LOCATION ON PLANS IS NOT CLEARLY SHOWN, OR EXISTING PAVEMENT CONDITION REQUIRES RELOCATION.
- THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PROTECT EXISTING PERMANENT SURVEY MONUMENTS. ANY MONUMENTS DISTURBED SHALL BE REPLACED AND ADJUSTED PER AVAILABLE RECORDS IN ACCORDANCE WITH N.E.S. STATUTE NO. 625.550.
- UTILITY COMPANY METER BOXES, MANHOLE LIDS, VALVE COVERS, ETC. SHALL BE LOCATED OUT OF DRIVEWAYS, DRIVEWAY APRONS, FLOWLINES, AND CROSS GUTTERS UNLESS WRITTEN APPROVAL IS GRANTED BY THE UTILITY COMPANY AND THE CITY ENGINEER.
- WALL NOTES:
A. ALL WALLS, NEW OR EXISTING, ARE ONLY SHOWN FOR THE PURPOSE OF GRADING RELATIONSHIPS.
B. THE STRUCTURAL AND ARCHITECTURAL DESIGN OF ALL WALLS (RETAINING OR NON-RETAINING) MUST BE APPROVED BY THE CITY OF LAS VEGAS BUILDING DEPARTMENT.
- ASPHALT MIX DESIGN MUST BE SUBMITTED AND APPROVED BY THE CITY ENGINEER PRIOR TO THE PLACEMENT OF ASPHALT ON CITY STREETS.
- CONCRETE FLOOR SLABS SHALL BE 6" THICK CONCRETE REINFORCED WITH #4'S AT 12" O.C., U.N.O.
- FOR TYPICAL REINFORCING AT CMU WALL OPENINGS, SEE DETAIL (TYP. U.N.O.)
- FOR TYPICAL REINFORCING AT CMU WALL INTERSECTIONS, SEE DETAIL (TYP. U.N.O.)
- BOTTOM OF FOOTINGS SHALL BEAR AGAINST STRUCTURAL FILL AS DIRECTED BY THE SOILS ENGINEER.
- ALL CMU WALLS AT THIS LEVEL SHALL BE 8" CMU REINFORCED WITH #5'S AT 32" O.C. VERT. (TYP. U.N.O.) PLACE VERTICAL REINFORCING IN SAME CELLS AS FOOTING DOWELS. SOLID GROUT ALL CELLS.

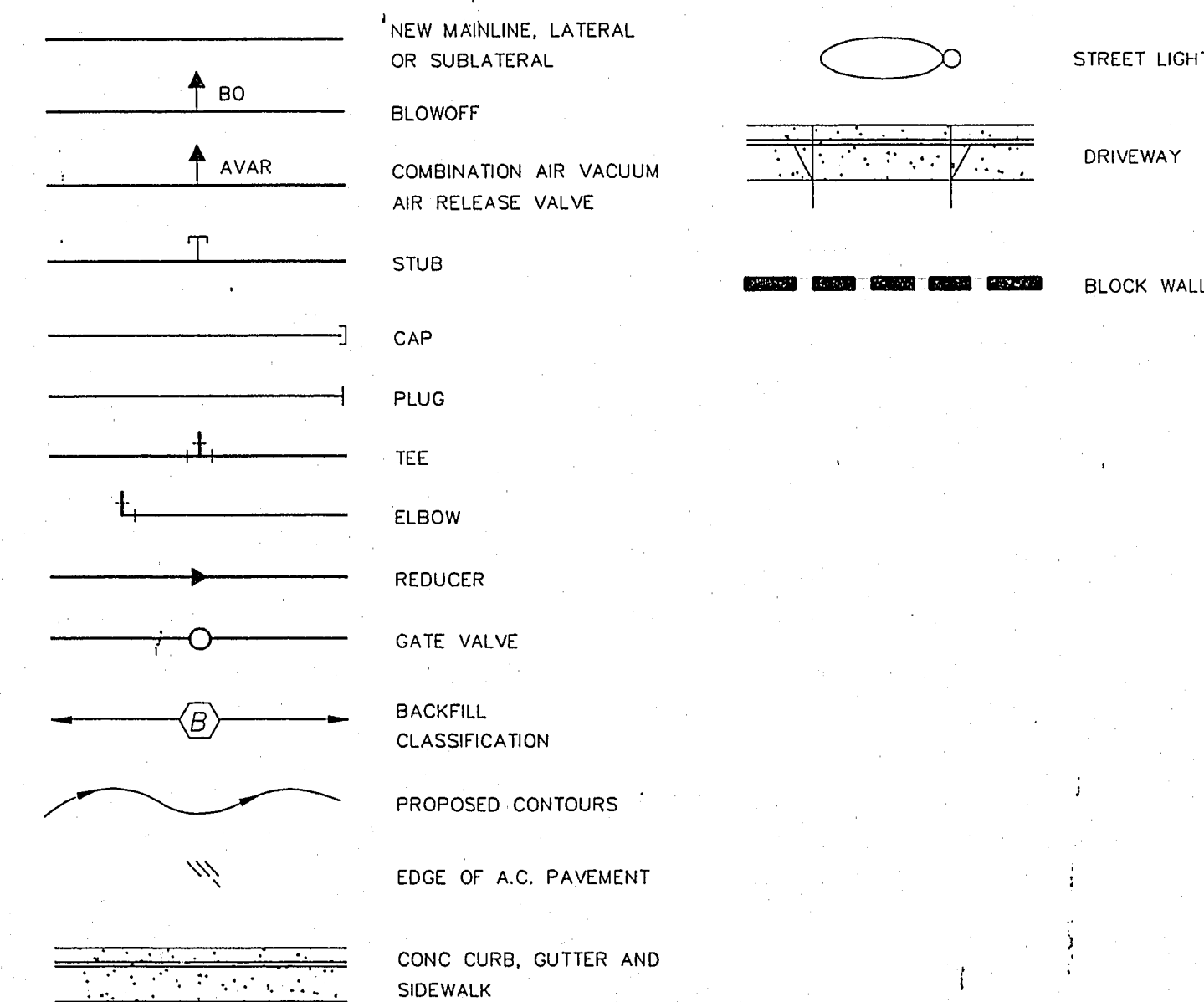
DEVIATIONS FROM STANDARDS

NO DEVIATIONS FROM APPLICABLE CITY OF LAS VEGAS STANDARDS.

FIRE DEPARTMENT NOTES

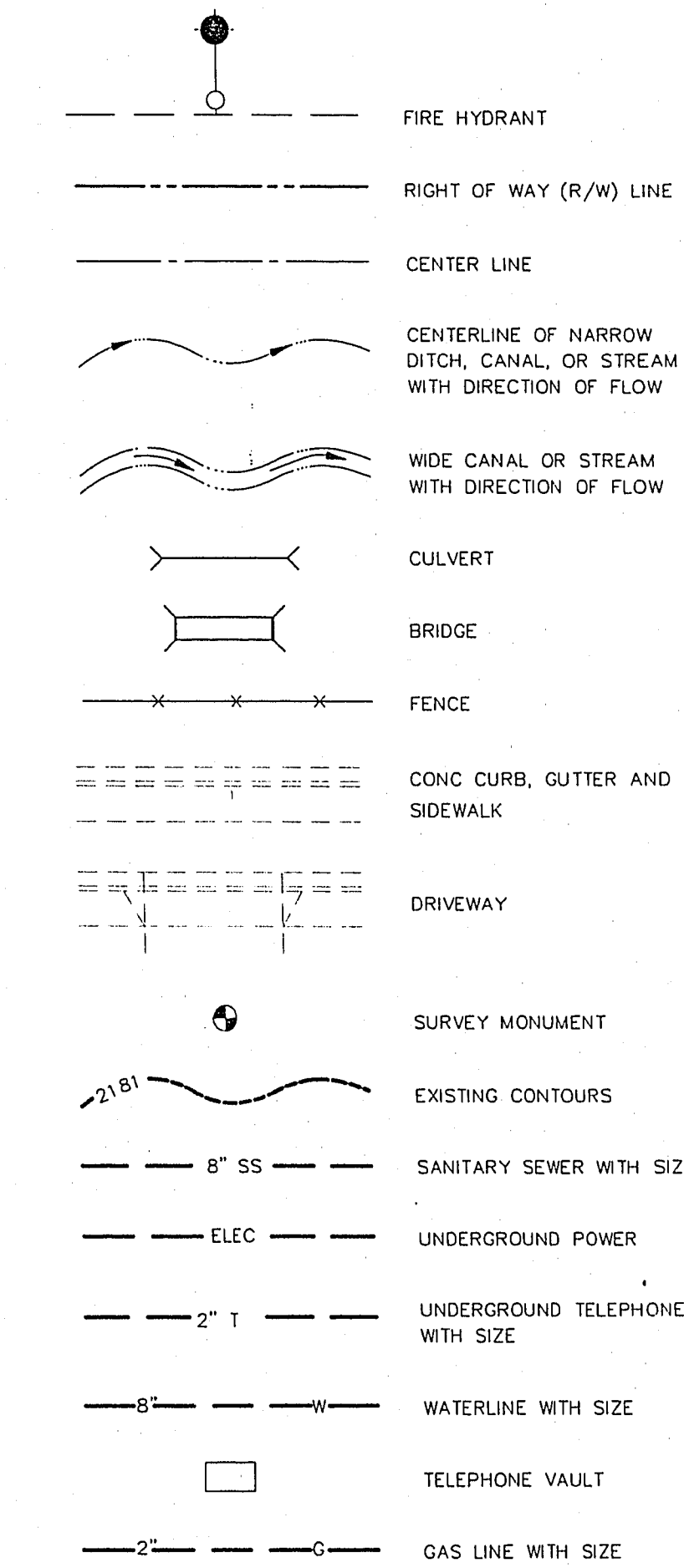
- ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE CITY OF LAS VEGAS FIRE DEPARTMENT "HYDRANT SPECIFICATIONS", "HYDRANT INSTALLATION SPECIFICATIONS" AND ORDINANCE #3677.
- AUTHORIZED HYDRANTS FOR THIS PROJECT ARE:
A. KENNEDY GUARDIAN
B. MUELLER A-423 CENTURIAN
C. CLOW MODEL 2546 MEDALLION
- ON ANY NEW HOME OR BUILDING INSTALLATION, ACCESSIBLE FIRE HYDRANTS SHALL BE INSTALLED BEFORE COMBUSTIBLE CONSTRUCTION COMMENCES AND SAID FIRE HYDRANTS SHALL BE IN GOOD WORKING ORDER WITH AN ADEQUATE WATER SUPPLY.
- CONTRACTOR SHALL PLACE A BLUE REFLECTIVE MARKER AT CENTERLINE OF STREET ADJACENT TO FIRE HYDRANT AS REQUIRED IN ORDINANCE #3677 TO IDENTIFY FIRE HYDRANT LOCATIONS.
- CALL THE LAS VEGAS BUILDING DEPARTMENT AT 229-2071 FOR UNDERGROUND INSPECTION, PRESSURE AND FLUSH VERIFICATION OF ALL FIRE HYDRANTS AND FIRE LINES BEFORE COVERING.
- PAINTING OF THE CURBS AND HYDRANT AND ANY WORK NECESSARY FOR PROTECTION OF HYDRANTS FROM PHYSICAL DAMAGE PER ORDINANCE #3677 SHALL BE COMPLETED BEFORE APPROVAL BY THE CITY OF LAS VEGAS FIRE DEPARTMENT.
- A PERMIT IS REQUIRED FROM THE FIRE DEPARTMENT FOR ON-SITE WATER LINE AND HYDRANT. THE PERMIT AND CONTRACTORS MATERIAL AND TEST CERTIFICATE FOR UNDERGROUND PIPING FORM SHALL BE OBTAINED FROM THE FIRE PROTECTION ENGINEER PRIOR TO ANY WORK BEGINNING.
- A FLOW TEST MUST BE WITNESSED BY THE FIRE DEPARTMENT PRIOR TO OCCUPANCY FOR VERIFICATION OF REQUIRED ON-SITE WATER SUPPLY.
- ALL ON-SITE FIRE MAIN MATERIALS MUST BE U.L. LISTED AND A.W.W.A. APPROVED.
- FIRE HYDRANT SPACING:
RESIDENTIAL - 500 FEET UNSPRINKLERED, 600 FEET SPRINKLERED
COMMERCIAL, INCLUDING MULTI-FAMILY - 300 FEET UNSPRINKLERED, 400 FEET SPRINKLERED.
- NO FIRE HYDRANT SHALL BE LOCATED WITHIN THE REQUIRED RADIUS OF A CUL-DE-SAC OR WITHIN 20 FEET OF THE PERIMETER OF THE RADIUS OF THE CUL-DE-SAC.
- NO FIRE HYDRANT SHALL BE LOCATED WITHIN 6 FEET OF ANY CURB RETURN, DRIVEWAY, POWER POLE, STREET LIGHT OR ANY OTHER OBSTRUCTION.
- NOT MORE THAN 2 HYDRANTS CAN BE OUT OF SERVICE DUE TO A SINGLE MAIN BREAK.
- THE TURNING RADIUS FOR ANY FIRE APPARATUS ACCESS ROAD AND/OR FIRE LANE, PUBLIC OR PRIVATE SHALL BE NOT LESS THAN 45 FEET OUTSIDE RADIUS AND 22 FEET INSIDE RADIUS.
- A FIRE APPARATUS ROAD SHALL BE REQUIRED WHEN ANY PORTION OF AN EXTERIOR WALL OF THE FIRST STORY IS LOCATED MORE THAN 150 FEET FROM A FIRE DEPARTMENT VEHICLE ACCESS. (SEE EXCEPTIONS IN UFC 91 SECTION 10.207).
- ALL DEAD END FIRE APPARATUS ACCESS ROADS AND/OR FIRE LANES PUBLIC OR PRIVATE IN EXCESS OF 150 FEET IN LENGTH SHALL BE PROVIDED WITH AN APPROVED TURNAROUND AREA. SEE ORDINANCE #3677.
- ELECTRICALLY CONTROLLED ACCESS GATES SHALL BE PROVIDED WITH AN APPROVED EMERGENCY VEHICLE DETECTOR/RECEIVER SYSTEM. SAID SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF LAS VEGAS GUIDELINES FOR AUTOMATIC EMERGENCY VEHICLE ACCESS GATES.

NEW PLAN AND PROFILE

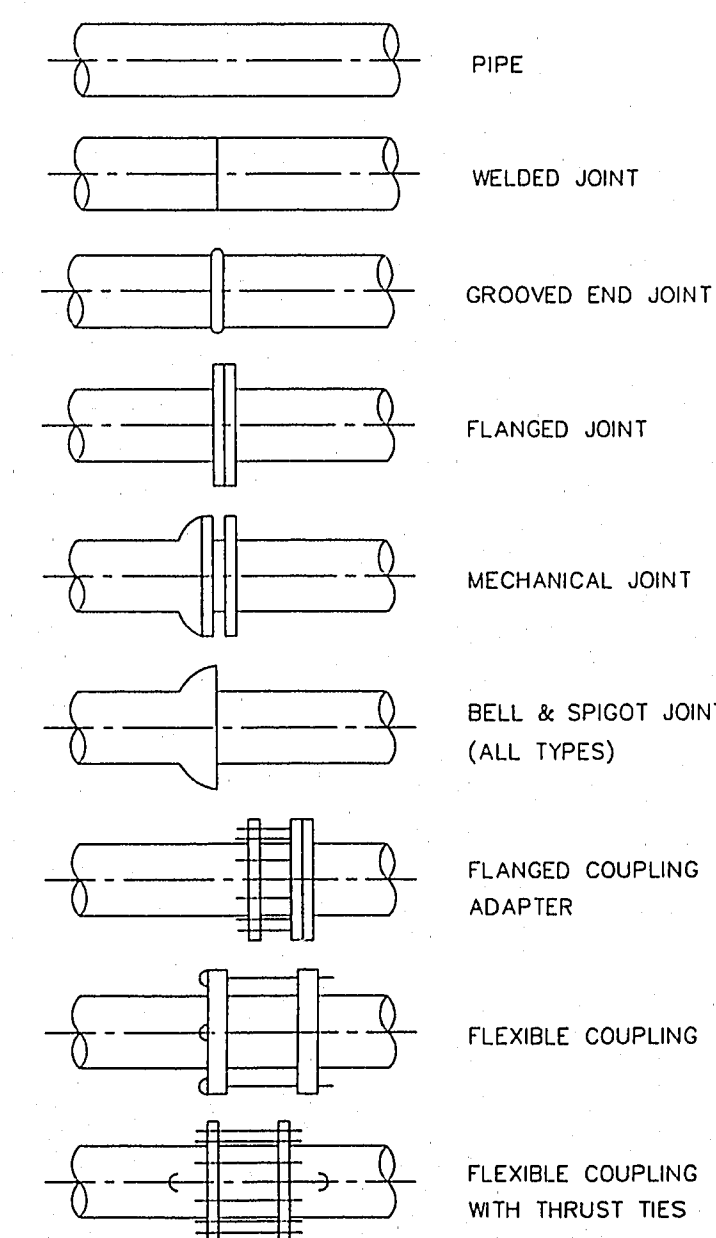


SYMBOL LEGENDS

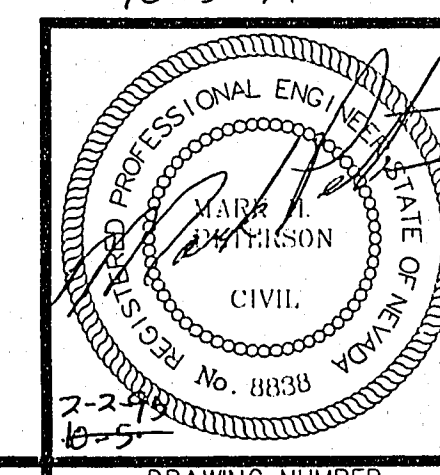
EXISTING PLAN AND PROFILE



MECHANICAL PIPING



Original signed
10-5-94



LAS VEGAS VALLEY WATER DISTRICT
3700 WEST CHARLESTON BOULEVARD
LAS VEGAS, NEVADA

EQUIP WELL NOS. 90 AND 95
SYMBOLS, ABBREVIATIONS AND
GENERAL NOTES

DRAWING NUMBER
713
REF. SHEET NO. C2
SHEET 2 OF 29