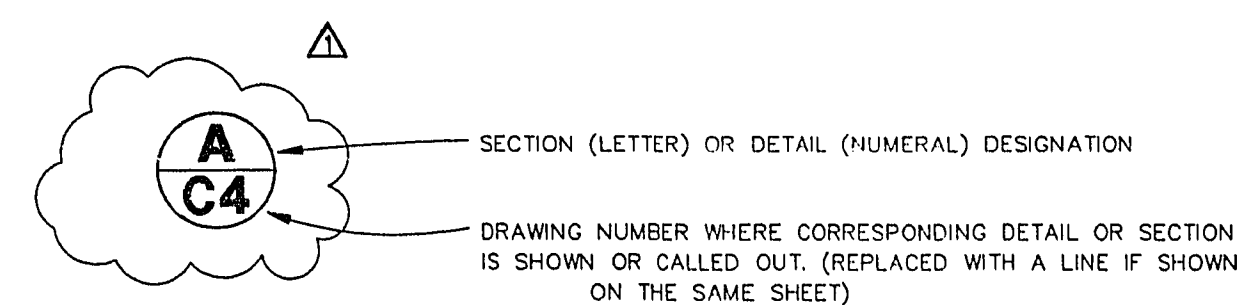


LIST OF ABBREVIATIONS

ABAN	ABANDON	ID	INSIDE DIAMETER	S/C	SAW CUT
ACP	ASBESTOS CEMENT PIPE	INST	INSTALL	SCCP	STEEL CYLINDER CONCRETE PIPE
A/C	AIR CONDITIONING	INSUL	INSULATION	SCH	SCHEDULE
AC	ASPHALTIC CONCRETE	IT	JOINT	SD	STORM DRAIN
AF	APPROVED	LG	LENGTH	SEC	SECOND/SECONDARY
APPD	APPROVED	LT	LENGTH	SECT	SECTION
ASSY	ASSEMBLY	LT	LENGTH	SH	SHEET
ASTM	AMERICAN SOCIETY OF TESTING MATERIALS	LT	LENGTH	SHS	SOUTHERN NEVADA
AUX	AUXILIARY	LT	LENGTH	SOL	SOLENOID
AVAR	AIR VACUUM/AIR RELEASE VALVE	LT	LENGTH	SPEC/SPECS	SPECIFICATION(S)
AWE	AVENUE	LT	LENGTH	SS	SQUARE
AWWA	AMERICAN WATER WORKS ASSOC.	LT	LENGTH	SS	SANITARY SEWER
AWG	AMERICAN WIRE GAUGE	LT	LENGTH	SS	STAINLESS STEEL
BC	BACK OF CURB/BARE COPPER	LT	LENGTH	STD	STANDARD
BCR	BEGINNING OF CURB RETURN	LT	LENGTH	STL	STEEL
BE	BELL END	LT	LENGTH	STLT	STREET LIGHT
BK	BOOK	LT	LENGTH	S/W	SIDEWALK
BLDG	BUILDING	LT	LENGTH	TAN	TANGENT
BLVD	BOULEVARD	LT	LENGTH	T & B	TOP & BOTTOM
BM	BENCHMARK	LT	LENGTH	TBE	TOP OF BOTH ENDS
BMPH	BUMP HEAD	LT	LENGTH	TC	TOP OF CURB
BOT	BOTTOM	LT	LENGTH	TD	TRENCH DRAIN
BAS	BELL & SPIGOT	LT	LENGTH	TDH	TOTAL DYNAMIC HEAD
BV	BUTTERFLY VALVE	LT	LENGTH	TF	TOP OF FOOTING
BW	BACK OF SIDEWALK	LT	LENGTH	TEMP	TEMPORARY
C	CONDUIT	LT	LENGTH	TGR	TOP OF GRATE
C & G	CURB AND GUTTER	LT	LENGTH	THD	THREADED
CL	CLARK COUNTY	LT	LENGTH	THK	THICK
CL OR	CENTERLINE	LT	LENGTH	THM	TOP OF MANHOLE
CLV	CITY OF LAS VEGAS	LT	LENGTH	TP	TOP OF PIPE
CFM	CUBIC FEET PER MINUTE	LT	LENGTH	TR	TOP OF RIM
CL	CHLORINE	LT	LENGTH	TS	TOP OF SLAB
CLG	CEILING	LT	LENGTH	TST	TOP OF STEEL
CMU	CONCRETE MASONRY UNIT	LT	LENGTH	TSW	TOP OF SIDEWALK
ONLY	CITY OF NORTH LAS VEGAS	LT	LENGTH	TW	TOP OF WALL
CONC	CONCRETE	LT	LENGTH	(TYP)	TYPICAL
CONT	CONTINUOUS	LT	LENGTH	US	UNDERGROUND
COR	CORNER	LT	LENGTH	UNC	AMERICAN STANDARD UNIFIED
CORP	CORPORATION	LT	LENGTH	UNF	AMERICAN STANDARD UNIFIED
CPG	COPPER	LT	LENGTH	UNIV	UNIVERSAL
CPVC	CHLORINATED POLYVINYL CHLORIDE	LT	LENGTH	UNO	UNLESS NOTED OTHERWISE
OU	COPPER	LT	LENGTH	UPC	UNIFORM PLUMBING CODE
D OR	DELTA ANGLE	LT	LENGTH	USGS	UNITED STATES COAST
DET	DETAIL	LT	LENGTH	UTIL	UTILITY
DI	DIAMETER	LT	LENGTH	W	WITH
DI OR	DIAMETER	LT	LENGTH	WD	WIDTH
DIP	DUCTILE IRON PIPE	LT	LENGTH	WDR	WASTE DRAIN
DISCH	DISCHARGE	LT	LENGTH	WL	WATER LINE
DIST	DISTRIBUTION	LT	LENGTH	WLD	WELDED
DIV	DIVISION	LT	LENGTH	W/O	WITHOUT
D/W	DRIVEWAY	LT	LENGTH	W/P	WORK POINT / WEATHER PROOF
DWG	DRAWING	LT	LENGTH	WSP	WELDED STEEL PIPE
EA	EACH	LT	LENGTH	WTR	WATER
EAC	EDGE OF ASPHALTIC CONCRETE	LT	LENGTH	YD	YARD
EF	EACH FACE	LT	LENGTH	YLD	YIELD
EL	EPOXY LINED	LT	LENGTH	XARM	CROSS ARM
ELEC	ELECTRICAL	LT	LENGTH	XMFR	CROSS ARM
ELEV	ELEVATION	LT	LENGTH	XSECT	CROSS SECTION
ELL	ELBOW	LT	LENGTH		
ESMT	EASEMENT	LT	LENGTH		
EW	EACH WAY	LT	LENGTH		
EXIST	EXISTING	LT	LENGTH		
FECL	FUSION EPOXY COATED & LINED	LT	LENGTH		
FEL	FUSION EPOXY LINED	LT	LENGTH		
FF	FINISHED FLOOR	LT	LENGTH		
FG	FINISHED GRADE	LT	LENGTH		
FH	FIRE HYDRANT	LT	LENGTH		
FL	FLOWLINE	LT	LENGTH		
FLG	FLANGE	LT	LENGTH		
FRP	FIRE RETARDANT POLYESTER RESIN	LT	LENGTH		
FT	FEET	LT	LENGTH		
FTG	FOOTING	LT	LENGTH		
G	GAS/GROUND	LT	LENGTH		
GA	GALLON	LT	LENGTH		
GALV	GALVANIZED	LT	LENGTH		
GB	GRADE BREAK	LT	LENGTH		
GND	GROUND	LT	LENGTH		
GRT	GRATE	LT	LENGTH		
GV	GATE VALVE	LT	LENGTH		
HORIZ	HORIZONTAL	LT	LENGTH		
HWY	HIGHWAY	LT	LENGTH		
HYD	FIRE HYDRANT	LT	LENGTH		

DETAIL CALLOUT LEGEND



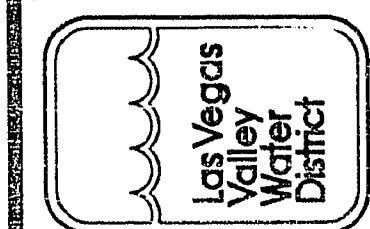
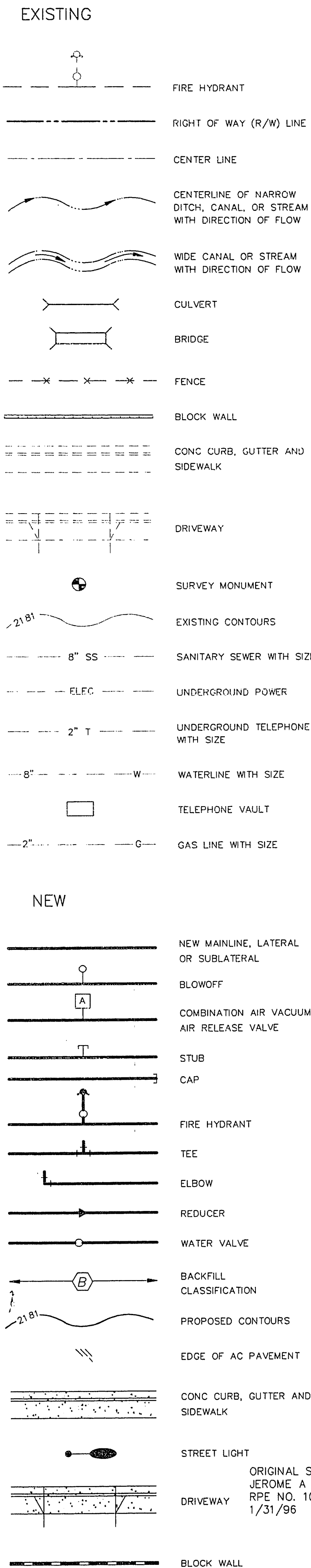
CITY OF LAS VEGAS GENERAL NOTES

- 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 SHEET 1 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 PSI 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 NRS 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 CHANNEL SLABS SHALL BE 6" THICK CONCRETE REINFORCED WITH #4'S AT 12" OC, UNO
- FOR TYPICAL REINFORCING AT CMU WALL OPENINGS, SEE DETAIL (TYP UNO)
- 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" OC VERT (TYP UNO) PLACE VERTICAL REINFORCING IN SAME CELLS AS FOOTING DOWELS. SOLID GROUT ALL CELLS.

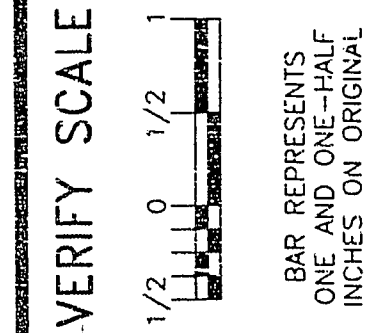
CITY OF LAS VEGAS FIRE DEPARTMENT NOTES

- ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE CITY OF LAS VEGAS FIRE DEPARTMENT "HYDRANT SPECIFICATIONS", "HYDRANT INSTALLATION SPECIFICATIONS" AND ORDINANCE #3944.
- AUTHORIZED HYDRANTS FOR THIS PROJECT ARE:
A KENNEDY GUARDIAN
B MUELLER A-423 CENTURIAN
C GLOW 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 #3944 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 HYDRANTS AND ANY WORK NECESSARY FOR PROTECTION OF HYDRANTS FROM PHYSICAL DAMAGE PER ORDINANCE #3944 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 FIRE HYDRANT. THE PERMIT AND CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FOR UNDERGROUND PIPING FORM SHALL BE OBTAINED FROM THE FIRE PROTECTION ENGINEER PRIOR TO ANY WORK BEGINNING.
- PRIVATE FIRE HYDRANTS SHALL BE PAINTED RED.
- 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 UL LISTED AND AWWA APPROVED.
- FIRE HYDRANT SPACING:
RESIDENTIAL - 500 FEET UNSPRINKLERED, 1000 FEET SPRINKLERED
COMMERCIAL, INCLUDING MULTI-FAMILY - 300 FEET UNSPRINKLERED, 600 FEET SPRINKLERED.
- WHERE NEW WATER MAINS ARE EXTENDED ALONG STREETS, WHERE HYDRANTS ARE NOT NEEDED FOR PROTECTION OF STRUCTURES, FIRE HYDRANTS SHALL BE SPACED AT MAXIMUM 1,000 FOOT SPACING TO PROVIDE FOR TRANSPORTATION HAZARDS.
- 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.
- TWO SOURCES OF SUPPLY ARE REQUIRED WHENEVER THERE ARE 4 OR MORE FIRE HYDRANTS INSTALLED ON A SINGLE SYSTEM.
- NOT MORE THAN 2 HYDRANTS CAN BE OUT OF SERVICE DUE TO A SINGLE MAIN BREAK.
- FIRE APPARATUS ACCESS ROADS SHALL HAVE AN UNOBSTRUCTED WIDTH OF NOT LESS THAN 20 FEET PROVIDED NO PARKING IS ALLOWED, NOT LESS THAN 28 FEET IF PARALLEL PARKING IS ALLOWED ON ONE SIDE, AND NOT LESS THAN 36 FEET IF PARALLEL PARKING IS ALLOWED ON BOTH SIDES. VERTICAL CLEARANCE SHALL BE NOT LESS THAN 13 FEET 6 INCHES.
- 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 94, SECTION 902.2)
- 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 #3944.
- ACCESS ROADS SHALL BE MARKED BY PLACING APPROVED SIGNS AT THE START OF THE DESIGNATED FIRE LANE, ONE SIGN AT THE END OF THE FIRE LANE AND WITH SIGNS AT INTERVALS OF 100 FEET ALONG ALL DESIGNATED FIRE LANES. SIGNS TO BE PLACED ON BOTH SIDES OF AN ACCESS ROADWAY IF NEEDED TO PREVENT PARKING ON EITHER SIDE. SIGNS TO BE INSTALLED NO HIGHER THAN 10 FEET OR LESS THAN 6 FEET FROM ROADWAY LEVEL. THE CURBS ALONG OR ON THE PAVEMENT OF CEMENT IF CURB IS NOT PRESENT, SHALL BE PAINTED WITH A RED WEATHER RESISTANT PAINT IN ADDITION TO THE SIGNS.
- ELECTRICALLY CONTROLLED ACCESS GATES SHALL BE PROVIDED WITH AN APPROVED EMERGENCY VEHICLE DETECTOR/RECOVER SYSTEM. SAID SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF LAS VEGAS GUIDELINES FOR AUTOMATIC EMERGENCY VEHICLE ACCESS GATES.

SYMBOL LEGENDS



**LAS VEGAS VALLEY
WATER DISTRICT**
1001 S. VALLEY VIEW BOULEVARD
LAS VEGAS, NEVADA 89153
(702) 870-2011



SYMBOLS, ABBREVIATIONS AND GENERAL NOTES

EQUIP WELL NOS. 116 AND 117

REVISIONS PER CLV COMMENTS

DATE: 02/14/96 11:32

PROJECT: 10618

CONTRACT: 789

DRAWN BY: J.P. KIRKS
CHECKED BY: G.E. WILSON
RECOMMENDED BY: J.P. KIRKS

DATE: 10/10/95
DATE: 11/15/95

R.P.E. NO. DATE: 10618 10/10/95

RECEIVED BY: JEROME A. STUEBE
DATE: 10/10/95

CONTRACT NUMBER: 789

DRAWING NUMBER C2
SHEET 2 OF 34