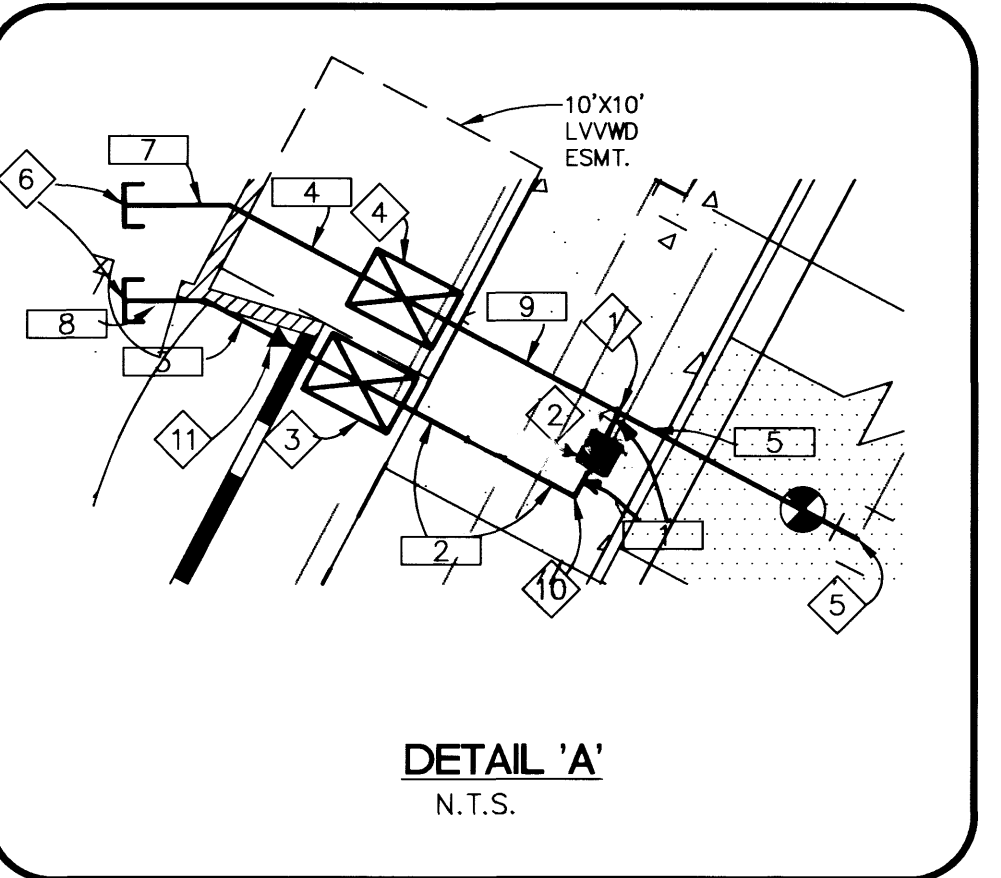


STORM DRAIN TABLE

PIPE	DIA (IN)	LF	SLOPE
1	6"	32	1.0%

PROJECT NAME: **SHADETREE SHELTER**
 SWT C4
 This project water plan complies with the Las Vegas Valley Water District's technical requirements. However, this water plan is **NOT APPROVED FOR CONSTRUCTION** at this time and this signature does not provide or imply a water commitment.
 LVVWD DATE: 01/04/00



REDUCED PRESSURE PRINCIPLE ASSEMBLY (1) 2"
 APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED PER THE UDACS PLATE NO. 11A. NO WATER SHALL BE TAKEN FROM A SERVICE REQUIRING BACKFLOW PREVENTION UNTIL THE REDUCED PRESSURE PRINCIPLE ASSEMBLY HAS BEEN SUCCESSFULLY TESTED BY THE LVVWD.
 ANY BLOCK 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.

ABANDONMENT OF EXIST. SERVICES - 2" AND SMALLER
 (1) 1" ACCT # 20891, METER # 236028
 THE CONTRACTOR SHALL NOTIFY THE INSPECTION DIVISION AT THE LVVWD (702-258-3227) 48 HOURS PRIOR TO THE REQUESTED REMOVAL TIME TO ALLOW THE DISTRICT TO TAKE THE FINAL METER READING OF THE METER. AFTER THE FINAL READING, THE CONTRACTOR MAY THEN BEGIN REMOVAL PROCEDURES FOR THE AFFECTED SERVICE AS FOLLOWS:
 EXISTING SERVICE LATERALS THAT ARE TO BE ABANDONED FROM THE EXISTING WATER MAIN, SHALL HAVE THE CORPORATION STOP TURNED OFF AT THE MAIN, A MINIMUM OF 12" OF THE LATERAL CUT OUT NEAR THE CORPORATION STOP AND A BRASS CAP INSTALLED ON THE CORPORATION STOP. IF THE CORPORATION STOP IS DAMAGED BEYOND REPAIR OR PULLED FROM THE EXISTING WATER MAIN, THE MAIN SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, IN A MANNER APPROVED BY THE LVVWD. IF THE CORPORATION STOP IS NOT WATER TIGHT, THE CONTRACTOR SHALL NOTIFY LVVWD COMMUNICATION SUPPORT CENTER (702-258-7171) FOR FURTHER DIRECTION.
 THE CONTRACTOR SHALL REMOVE THE EXISTING SERVICE METER BOX AND APPURTENANCES. FILL AND GRADE ANY AND ALL RESULTING VOIDS AND REPLACE OR RESTORE TO ORIGINAL CONDITIONS OR BETTER. ALL LANDSCAPING, IRRIGATION SYSTEMS, CONCRETE, SIDEWALKS, ASPHALT, OR ANY OTHER ITEMS DAMAGED OR REMOVED DURING THE REMOVAL OF THE EXISTING SERVICE METER BOX.

STATIC PRESSURE
 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. PRVS ARE THE DEVELOPER'S RESPONSIBILITY AND WILL NOT BE INSPECTED OR INCLUDED IN THE ACCEPTANCE OF LVVWD FACILITIES.

FIRE HYDRANT INSTALLATION
 FIRE HYDRANT(S) TO BE INSTALLED IN ACCORDANCE WITH THE UDACS STANDARD PLATE NO. 7

NEVADA DEPARTMENT OF TRANSPORTATION
 AN APPROVED NDOT OCCUPANCY PERMIT SHALL BE OBTAINED THROUGH THE DISTRICT PRIOR TO ANY CONSTRUCTION WITHIN THE NDOT RIGHT-OF-WAY.

TRAFFIC CONSTRUCTION NOTES
 (1) MODIFY EXIST STREET LIGHT FOUNDATION PER CCASD #325
 (2) INSTALL #3 1/2 PULL BOX.
 (3) INTERCEPT EXISTING STREETLIGHT CIRCUIT, INSTALL #3 1/2 PULLBOX AND REPULL CONDUCTORS.
 (4) INSTALL 1 1/4" CONDUIT W/ 2- #4 AND 1- #8 THW WIRE
 (5) INSTALL 1 1/4" CONDUIT W/ PULL STRING
 (6) EXIST. 1 1/4" CONDUIT
 NOTE: ALL WORK ASSOCIATED WITH THIS/ THESE STREETLIGHTS SHALL BE DONE UNDER THE DIRECT SUPERVISION OF THE CITY OF LAS VEGAS ELECTRICAL SHOP. ANY QUESTIONS CALL 229-6331

QUANTITIES

PUBLIC		PRIVATE	
2" COPPER WL	7 LF	2" PVC WL	3 LF
6" PVC WL	47 LF	6" PVC WL	10 LF
2" METER	1 EA	3" PVC WL	10 LF
2" RPPA	1 EA	3"x2" REDUCER	1 EA
6" "N" PATTERN DCDA	1 EA		
6"x6" MJ WET TAPPING SLEEVE & GATE VALVE	1 EA		
2" SERVICE SADDLE	1 EA		
FIRE HYDRANT ASSEMBLY	1 EA		
2" 90° ELBOW	1 EA		
16"x6" MJ WET TAPPING SLEEVE & GATE VALVE	1 EA		

LAS VEGAS VALLEY WATER DISTRICT NOTES
LVVWD PROJECT #23793

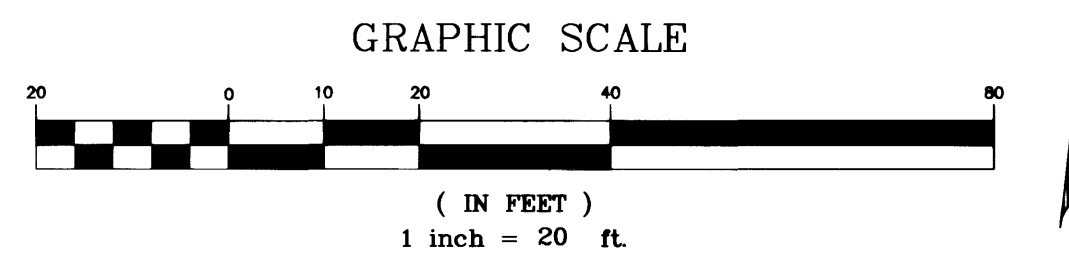
- NO WORK SHALL BEGIN UNTIL THE WATER PLANS HAVE BEEN RELEASED FOR CONSTRUCTION BY THE LVVWD. FOLLOWING WATER PLAN APPROVAL, FORTY-EIGHT (48) HOUR NOTICE SHALL BE GIVEN TO THE LVVWD COMMUNICATION SUPPORT CENTER (258-7171) PRIOR TO THE START OF CONSTRUCTION. NOTICE MUST BE GIVEN BY 2:00 P.M. THE BUSINESS DAY PRIOR TO A LVVWD INSPECTION. WHEN REQUESTING INSPECTIONS, PLEASE REFER TO THE PROJECT NUMBER IDENTIFIED ABOVE.
- ALL WORK SHALL CONFORM TO LVVWD STANDARD PLATES, DRAWINGS, AND SPECIFICATIONS, AND THE UNIFORM DESIGN & CONSTRUCTION STANDARDS FOR WATER DISTRIBUTION SYSTEMS (UDACS), LATEST EDITION.
- ALL WORK, EXCEPT AS MODIFIED BY THESE PLANS OR BY NOTE 2, SHALL BE DONE IN ACCORDANCE WITH THE MOST CURRENT DRAFT OR 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 INCHES (2") IN DIAMETER AND SMALLER SHALL BE 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, GUTTERS, CURBS AND ALLEY GUTTERS.
- THE FOLLOWING REQUIREMENTS MUST BE MET IN THE EVENT A WATER LINE AND A SANITARY SEWER OR STORM SEWER LINE CROSS:
 A MINIMUM EIGHTEEN INCH (18") VERTICAL SEPARATION (OUTSIDE TO OUTSIDE) MUST BE MAINTAINED WHEN THE WATER LINE IS INSTALLED OVER THE SANITARY OR STORM SEWER LINE. IF THE VERTICAL SEPARATION CANNOT BE MAINTAINED OR THE WATER LINE MUST BE PLACED UNDER THE SANITARY OR STORM SEWER LINE, THE SANITARY OR STORM SEWER LINE MUST BE CONSTRUCTED WITH ONE OF THE FOLLOWING OR, AS SHOWN ON THESE PLANS:
 A. POTABLE WATER SUPPLY QUALITY MATERIAL.
 B. ENCASMENT, WITH FOUR INCH (4") CONCRETE (MINIMUM)
 C. SLEEVING WITH POTABLE WATER SUPPLY QUALITY PIPE.
 EACH PROVISION MUST EXTEND ALONG THE SANITARY OR STORM SEWER, ON EITHER SIDE OF THE WATER MAIN, A MINIMUM 10 FOOT (10') DISTANCE PERPENDICULAR TO THE EXTERIOR OF MAIN.
- WARNING TAPE SHALL BE REQUIRED OVER ALL MAINS, ALL SIX INCH (6") DIAMETER AND LARGER SERVICE LATERALS, AND ANY SERVICE LATERAL NOT INSTALLED PERPENDICULAR TO THE MAIN IN ACCORDANCE WITH STANDARD PLATE NO. 27.
- ALL WATER FACILITIES SHALL BE FILLED, DISINFECTED, PRESSURE TESTED, FLUSHED, FILLED AND AN ACCEPTABLE WATER SAMPLE OBTAINED PRIOR TO CONNECTION TO THE LVVWD'S DISTRIBUTION SYSTEM.
- THE CONTRACTOR MUST OBTAIN ALL METERS TWO INCHES (2") AND SMALLER FROM LVVWD CENTRAL STORES. TELEPHONE 258-3152 FORTY-EIGHT (48) HOURS PRIOR TO PICKUP.
- CONSTRUCTION MAY INTERRUPT SERVICE, WITH LVVWD APPROVAL AND PROPER NOTIFICATION, BETWEEN THE HOURS OF 10 PM AND 6 AM, SUNDAY THROUGH THURSDAY. CIRCUMSTANCES THAT MAY REQUIRE TEMPORARY SERVICE FEED MUST HAVE PRIOR LVVWD APPROVAL.
- ALL WATER FACILITY CONSTRUCTION MATERIALS USED MUST BE AS LISTED ON THE LVVWD'S PRE-APPROVED MATERIALS AND MANUFACTURERS LISTING FOR NEW FACILITIES, LATEST REVISION, OR SPECIFICALLY APPROVED ON THESE PLANS.

APPROVED FOR CONSTRUCTION
 LAS VEGAS VALLEY WATER DISTRICT DATE: 2-14-00

NEVADA DEPARTMENT OF TRANSPORTATION
 ALL NDOT STATIONS ON MAIN STREET ARE IN METERS.

SEWER CONSTRUCTION NOTES
 (1) CONSTRUCT SEWER BACK WATER VALVE PER DCSWCS #SD-29

SEWAGE CONTRIBUTION
 AVERAGE FLOW: = 250 GPD/ERU
 = 650 GPD
 = 0.45 GPM
 PEAK FLOW: = (0.45 GPM)(3.4)
 = 1.53 GPM
 NOTE: CONTRACTOR TO VERIFY SEWER MAIN INVERT IN FIELD.
 THE ON-SITE WATER LINES AND APPURTENANCES ARE PRIVATE FACILITIES NOT TO BE OPERATED OR MAINTAINED BY THE CITY OF NORTH LAS VEGAS



CITY OF LAS VEGAS BENCHMARK
 2LV01 22SSE6 ELEV.= 580.6177 METERS (1904.91 FT.) NAVD 88
 RIVET AND PLATE IN TOP OF CURB, NORTHEAST RETURN OF OWENS AVE. AND MAIN ST.

- INSTALL FIRE DEPARTMENT CONNECTION**
- WATER CONSTRUCTION NOTES**
- INSTALL 2" SERVICE SADDLE PER UDACS PLATE #1D.
 - INSTALL 2" METER PER UDACS PLATE #1D.
 - INSTALL 2" RPPA PER UDACS PLATE #11A.
 - INSTALL 6" "N" PATTERN DCDA PER UDACS PLATE #20B.
 - INSTALL 16"x6" WET TAPPING SLEEVE & 6" TAPPING VALVE PER UDACS SECTION 3.13. THRUST BLOCKS PER UDACS PLATE #5.
 - FOR CONTINUATION, REFER TO MECHANICAL DRAWINGS.
 - INSTALL FIRE HYDRANT & APPURTENANCES PER UDACS PLATE #7
 - INSTALL 6"x6" MECHANICAL JOINT TAPPING SLEEVE & TAPPING GATE VALVE WITH THRUST BLOCKS PER UDACS PLATE #5.
 - SAWCUT AND REPLACE PER CCASD #504
 - INSTALL 2" 90° ELBOW
 - INSTALL 3"x2" REDUCER

WATER TABLE

PIPE NO.	SIZE (IN)	TYPE OF PIPE	LF
1	2	SCH 40	1
2	2	SCH 40	8
3	3	SCH 40	6
4	6	C900	6
5	6	C900	11
6	6	C900	28
7	6	C900	4
8	3	SCH 40	4
9	6	C900	8

SEWER TABLE

PIPE	DIA (IN)	LF	SLOPE (%)
1	8	14	9.5%
2	8	13	9.5%

NOTE: ALL SEWER TO BE SDR 35 PVC
 NOTE: CONTRACTOR TO VERIFY SEWER MAIN INVERT IN FIELD & NOTIFY ENGINEER OF ANY DISCREPANCIES.

FIREFLOW DATA
 FIRE FLOW REQUIREMENT IS : 2000 gpm AT 20 PSI RESIDUAL PRESSURE.
 BASED ON:
 SQUARE FOOTAGE : 35,500 SQUARE FEET
 STATIC PRESSURE: 71.9
 TYPE OF CONSTRUCTION : III-N
 FULL AUTOMATIC FIRE SPRINKLER SYSTEM : YES
 REVIEWED BY: [Signature]
 DATE: 1/4/00

Call before you Overhead
 1-702-593-6111
 NEVADA POWER OVERHEAD SAFETY SERVICES DEPARTMENT

Call before you Dig
 1-800-227-2600

REVISION

NO. 18	DATE 4/15/00	BY	REVISION
1			INSTALL FIRE DEPARTMENT CONNECTION
2			INSTALL FIRE DEPARTMENT CONNECTION

CONSULTING ENGINEERS OF NEVADA, INC.
 CALDWELL RICHARDS SORESEN
 6700 S. PARADISE RD., # A-1
 LAS VEGAS, NEVADA 89119
 PHONE (702) 897-2626
 FAX (702) 897-2626

UTILITY PLAN FOR SHADETREE SHELTER

SHEET 12-99 OF 07 SHEETS
 DRAWN BY: STAFF
 DESIGNED BY: CK
 CHECKED BY: KS
 PROJECT NO: 30-22838
 SCALE: 1" = 20' VERT.
 DATE: 12-99

CRS
 CIVIL
 KRISTINA L. SWALLOW
 12/30/99

107-V3181