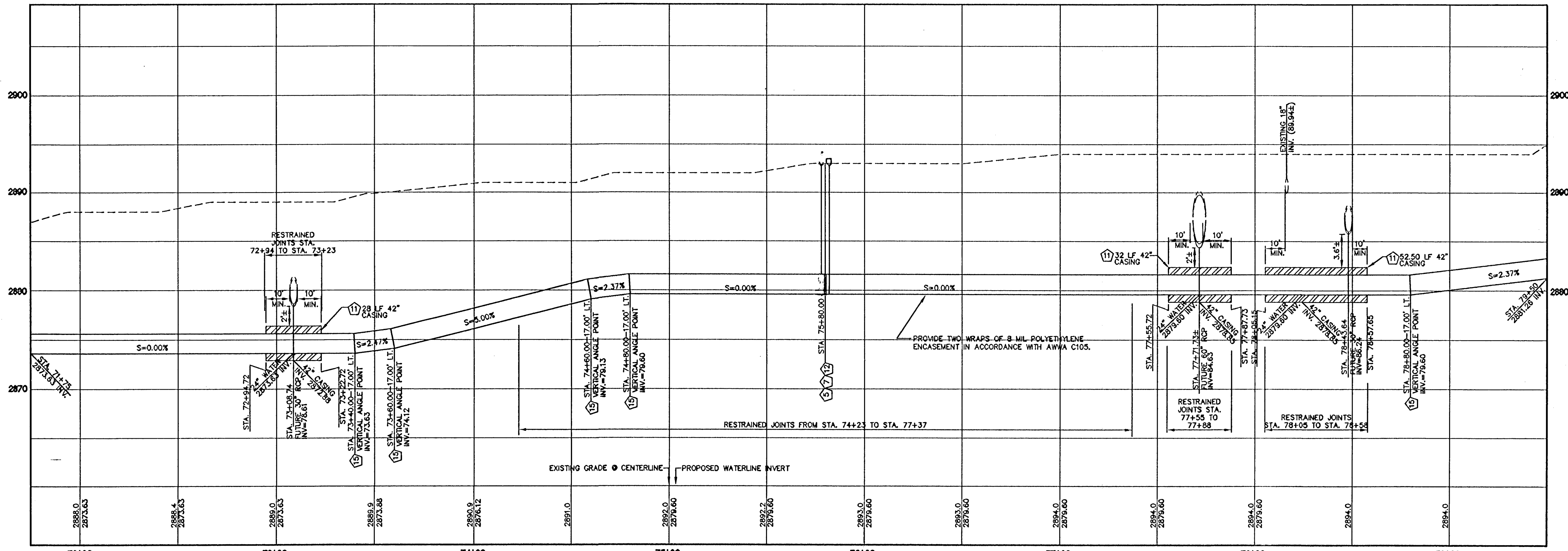


**SHAUMBER ROAD-STA. 71+75 TO STA. 79+50**  
SCALE: 1"=30' HORIZ

**NOTE**  
DURING CONSTRUCTION, 24" COVER OVER TOP OF WATERLINE MUST BE MAINTAINED AT ALL TIMES PER UDACS 2.08.04/PLATE 19.

**NOTE**  
REFER TO SHEET C2.13 THRU C2.15 FOR R/W, PATENT AND CONSTRUCTION EASEMENT INFORMATION.

As-built  
The Inc  
Deluge  
10-1-13



**PROFILE**  
SCALE: 1"=30' HORIZ  
1"=6' VERT.

**WATER MAIN JOINT DEFLECTION (DIP 24")**  
DIP PIPE SHALL BE DEFLECTED AT THE JOINT ONLY. THE MAXIMUM ALLOWABLE DEFLECTION SHALL BE ONE AND A HALF (1.5) DEGREE PER JOINT WITH A MINIMUM RADIUS OF CURVATURE OF 765 FEET, PER UDACS 2.07.03. FOR CHANGES IN DIRECTION EXCEEDING THE MAXIMUM ALLOWABLE JOINT DEFLECTION, FITTINGS SHALL BE USED.

INSTALL WATERLINE IN STEEL CASING PER UDACS PLATE NO. 22 AND 23. MINIMUM 18" CLEARANCE IS REQUIRED ABOVE THE TOP OF CASING. FROM THE UPPER BENDS THROUGHOUT THE LOWERED SECTION OF THE PIPE, DUCTILE IRON PIPE WITH RESTRAINED JOINTS IS REQUIRED. IN ADDITION, THRUST BLOCKS ARE TO BE INSTALLED AT THE UPPER BENDS. ANNUAL SPACE BETWEEN THE PIPE AND CASING SHALL BE FILLED WITH CLASS 1 G.S.M. SEE UDACS PLATE NO. 16, 17, 18 AND 19 FOR BEDDING AND BACKFILL REQUIREMENTS.

- OFFSITE WATER KEY NOTES**  
NOT ALL ITEMS ARE USED ON THIS SHEET
1. INSTALL 24"-22.5' BEND.
  2. DEFLECT PIPE JOINT HORIZONTALLY 1.5" MAX. PER UDACS 2.07.03.
  3. INSTALL 24"x12" TEE.
  4. INSTALL 24" CAP & 2" BLOWOFF PER UDACS PLATE NO. 36.
  5. INSTALL 24" RESILIENT WEDGE GATE VALVE PER DETAIL, SHEET C8.02.
  6. INSTALL 24"-11.25' BEND.
  7. INSTALL BLOW-OFF ASSEMBLY PER DETAIL, SHEET C8.02.
  8. INSTALL PIPE LOCATOR PER DETAIL 1 ON SHEET C8.04.
  9. INSTALL PIPE IN TRENCH PER DETAIL 2 ON SHEET C8.04.
  10. INSTALL PIPE IN TRENCH PER DETAIL 3 ON SHEET C8.04.
  11. INSTALL CASING PER UDACS PLATE 22 AND 23.
  12. INSTALL AIR VALVE ASSEMBLY PER DETAIL, SHEET C8.03.
  13. INSTALL CATHODIC PROTECTION TEST STATION PER DETAILS, SHEET C8.05.
  14. INSTALL 24"-45' BEND. ROLL DOWN TO ACHIEVE BOTH VERTICAL ANGLE AND HORIZONTAL ANGLE.
  15. DEFLECT PIPE JOINT VERTICALLY 1.5" MAX. PER UDACS 2.07.03.

**WATER MAIN NOTE**  
DUCTILE IRON PIPE SHALL BE INSTALLED IN ACCORDANCE WITH AWWA C600, "INSTALLATION OF DUCTILE IRON PIPE MAINS AND THEIR APPURTENANCES," AND THE MANUFACTURER'S RECOMMENDATIONS.

**BASIS OF BEARING**  
NORTH 00°05'54" WEST, BEING THE BEARING OF THE WEST LINE OF THE EAST HALF (E 1/2) OF THE NORTHWEST QUARTER (NW 1/4) OF SECTION 36 TOWNSHIP 19 SOUTH, RANGE 59 EAST, AS SHOWN ON A MAP ON FILE IN THE CLARK COUNTY, NEVADA RECORDER'S OFFICE AS FILE 89, PAGE 3 OF SURVEYS.

**BENCHMARK**  
CITY OF LAS VEGAS BENCHMARK 5L99 36M  
A RIVET AND PLATE IN A FENCE POST BASE AT THE SOUTHWEST CORNER OF ALPINE RIDGE AND HAMMER LANE  
ELEVATION = 2851.24 FEET (869.059 METERS) NAVD 1988 DATUM

**CLARK COUNTY DEPARTMENT OF PUBLIC WORKS DEVELOPMENT REVIEW**  
ACCEPTANCE OF PLANS FOR FILING  
By *Alex Boshman* 12/12/11

ACCEPTANCE OF THESE PLANS FOR FILING 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 AND/OR SPECIFICATIONS. CLARK COUNTY SHALL BE HELD FREE FROM DAMAGES WHICH MAY RESULT FROM THE CONSTRUCTION OF THE IMPROVEMENTS FROM THE ENGINEERING DESIGN DEPICTED HEREIN.

NOTE: POWER POLES AND/OR OTHER EXISTING FACILITIES NOT IN PROPER LOCATION BASED ON PROPOSED IMPROVEMENTS SHOWN HEREON WILL BE RELOCATED AT NO EXPENSE TO CLARK COUNTY.

**APPROVED FOR CONSTRUCTION**  
*Don Gregory*  
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER

PROJECT NO. 116679 DATE 12/01/11

REVISIONS

REV	DESCRIPTION	DATE	BY

**DISCLAIMER 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 AND OVERHEAD 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  
Avoid cutting underground utility lines.  
1-800-367-2600  
CLARK COUNTY UTILITY OPERATIONS  
1-702-455-7544

Avoid overhead power line contact  
Call before you OVERHEAD  
1-702-227-2929  
NEVADA POWER DIVISION AND SAFETY SERVICES DEPARTMENT

CALL BEFORE YOU DIG  
UNDERGROUND  
1-702-251-1111  
CLARK COUNTY UTILITY OPERATIONS  
1-702-455-7544

**KEY MAP**

VERNON R. HARKINS  
EXP. 8/30/13  
CIVIL  
NO. 009898

PROJECT NO. 1549  
DESIGN REVIEW  
DATE: OCTOBER 31, 2011  
DRAWN BY: [blank]  
CHECKED BY: [blank]  
SUBMITTAL  
DATE: [blank]  
PROJECT NO. 08-516

**CONSULTING ENGINEERS, INC.**  
6742 West Russell Road, Suite 200  
Las Vegas, NV 89118  
(702) 734-2928  
(702) 481-2206 FAX

**L. E. NELSON**  
STRUCTURAL  
DESIGN  
SAFETY

**CLARK COUNTY SCHOOL DISTRICT**  
DESIGN MANAGEMENT / PLANNING AND DESIGN  
4170 MCLEIDD DRIVE  
LAS VEGAS, NEVADA 89121

**CCSD NORTHWEST SATELLITE TRANSPORTATION FACILITY**  
DRAWING TITLE  
**PLAN AND PROFILE-OFFSITE WATER**

**KG A ARCHITECTURE**  
9075 West Diablo Drive, Third Floor 1701 Directors Boulevard, Suite 770  
Las Vegas, Texas 78744  
Austin, Nevada 89148  
702.367.6900  
www.KGAarchitecture.com

SHEET NO. **C4.23**  
SHEET 52 OF 83  
CLV #11249 715-188  
HTE #11-19927