



SUBMITTAL SHEET

4420 S. Decatur Blvd
Las Vegas Nevada 89103

Job: 13432
18.49874-JH Gowan North Buffalo Branch
Lone Mountain to Washburn

Contract# 18.49874-JH

Spec Section No.: 105
Submittal No.: 105-003
Revision: 0
Package No:
Package Revision:
Date: 02/20/19

Submittal Title: AsBuilt Drawings
Submittal Detail:

Contractor:
Las Vegas Paving

Project Manager:
Jeff Anderson

Reviewing Firm:
VTN/City of Las Vegas

Contractor's Stamp

Las Vegas Paving Corporation has verified that the equipment or material in this submittal meets all the requirements specified or shown in the Work and Contract Documents without exception.

Reviewer's Stamp

VTN NEVADA			
SHOP DRAWING REVIEW			
CHECKED FOR GENERAL AGREEMENT WITH PLANS & SPECIFICATIONS FABRICATING DIMENSIONS ARE THE RESPONSIBILITY OF THE CONTRACTOR.			
NO EXCEPTIONS TAKEN	☒	AMEND AND RESUBMIT	
MAKE CORRECTIONS NOTED	☐	REJECTED - RESUBMIT	
BY <u>Craig O'Donnell</u>		DATE <u>2/20/19</u>	

DEPARTMENT OF PUBLIC WORKS

Mayor:
CAROLYN G. GOODMAN

City Council:
LOIS TARKANIAN (Mayor Pro-Tem)
RICKI Y. BARLOW
STAVROS S. ANTHONY
BOB COFFIN
STEVEN G. SEROKA
MICHELE FIORE

City Manager:
SCOTT D. ADAMS

Director of Public Works:
DAVID N. BOWERS, P.E., P.T.O.E.

City Engineer:
ALLEN PAVELKA, P.E.



***GOWAN NORTH BUFFALO BRANCH
LONE MOUNTAIN TO WASHBURN***

Funded By:
CLARK COUNTY REGIONAL
FLOOD CONTROL DISTRICT

CITY OF LAS VEGAS
SANITATION FUND

Reviewed By:

CLV CITY ENGINEER 9-13-17
DATE

Jeff Kray 9.13.17
CLV PROJECT MANAGER DATE

CLV CITY TRAFFIC ENGINEER 9.13.17
DATE

CLV CONSTRUCTION MANAGER 9/13/17
DATE

Steve C. Paul 09/07/2017
CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT DATE

CLARK COUNTY DEPARTMENT OF PUBLIC WORKS 9/11/17
DATE

 Matthew Pedraza 24 Aug 2017
SOUTHWEST GAS CORPORATION DATE

Lisley A. Dine 8/24/17
CENTRAL TELEPHONE COMPANY OF NEVADA DATE

THE AFFIXED CENTURY LINK NEVADA APPROVAL DOES NOT ASSUME OR GUARANTEE LIABILITY FOR KNOWN OR UNKNOWN CONFLICTS WITH EXISTING OR PROPOSED IMPROVEMENTS. RESOLUTION OF ANY CONFLICT WILL BE ACCOMPLISHED PURSUANT TO LOCAL ORDINANCES, NEVADA REVISED STATUTES AND/OR PUBLIC UTILITY COMMISSION STANDARD REGULATIONS.

Nicholas J. Mancini, Jr. 8/29/17
COX COMMUNICATIONS LAS VEGAS, INC. DATE

Barbara Garrison 8.24.17
NV ENERGY - DISTRIBUTION DATE

NV ENERGY ACKNOWLEDGES THAT WE HAVE RECEIVED YOUR PLANS AND WILL PROVIDE SERVICE TO ALL ELECTRICAL NEEDS ASSOCIATED WITH THIS PROJECT. NV ENERGY RESERVES THE RIGHT TO ADDRESS ANY EXISTING OR FUTURE CONFLICTS ONCE THE FINAL DESIGN IS COMPLETED. THE NEW SERVICE AND THE RESOLUTION OF ANY CONFLICTS WILL BE ACCOMPLISHED PURSUANT TO THE NEVADA PUBLIC UTILITY COMMISSION'S RULES AND REGULATIONS.

APPROVED FOR CONSTRUCTION

[Signature]

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER

DATE: 9/18/17 PROJECT# 123778

SHEETS: CV-1, GN-1, GN-4, SD-1 TO SD-13, UT-1 TO UT-13, 123778
UT-14 TO UT-6, SDP-1 TO SDP-6.

APPROVED FOR CONSTRUCTION

K. J. J. J. 9/14/17

CITY OF LAS VEGAS FIRE DEPARTMENT DATE

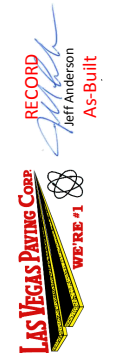
THE SIGNATURE ABOVE ACKNOWLEDGES THAT THE UTILITY COMPANY REPRESENTATIVE HAS REVIEWED THE PLANS, AND THAT TO THE BEST OF HIS OR HER KNOWLEDGE, THE UTILITY LINES ARE SHOWN IN THE CORRECT LOCATIONS AND ARE THE CORRECT SIZES, WHILE SUCH DATA HAS BEEN COLLECTED WITH REASONABLE CARE, THERE IS NO EXPRESSED OR IMPLIED GUARANTEE THAT THE LOCATIONS ARE EXACT. THE CONTRACTOR SHALL BEAR THE RESPONSIBILITY OF OBTAINING THE ACTUAL FIELD LOCATIONS.

THE SIGNATURE ABOVE FURTHER ACKNOWLEDGES THAT THE UTILITY COMPANY DOES NOT ANTICIPATE CONSTRUCTION OR MAINTENANCE IN THE PROJECT AREA FOR FIVE (5) YEARS IN CONFORMANCE WITH THE CLV NO-CUT POLICY.

CLV BID NO. 18.49874.JH

H# 49874

TITLE: SHEET:	GOWAN NORTH BUFFALO BRANCH LONE MOUNTAIN TO WASHBURN COVER SHEET		 3753 Howard Hughes Parkway, Suite 125 Las Vegas, NV 89169 Phone: 702-887-4100	DEPARTMENT OF PUBLIC WORKS CAPITAL PROJECT MANAGEMENT		DESIGNED BY: JS DRAWN BY: RM CHECKED BY: EH DATE: 8/17/17	
				REVISIONS		ND.	DATE:



PROJ# 123778 AGR:115933 QS:125-33-SE/SW XC 11343

SHEET

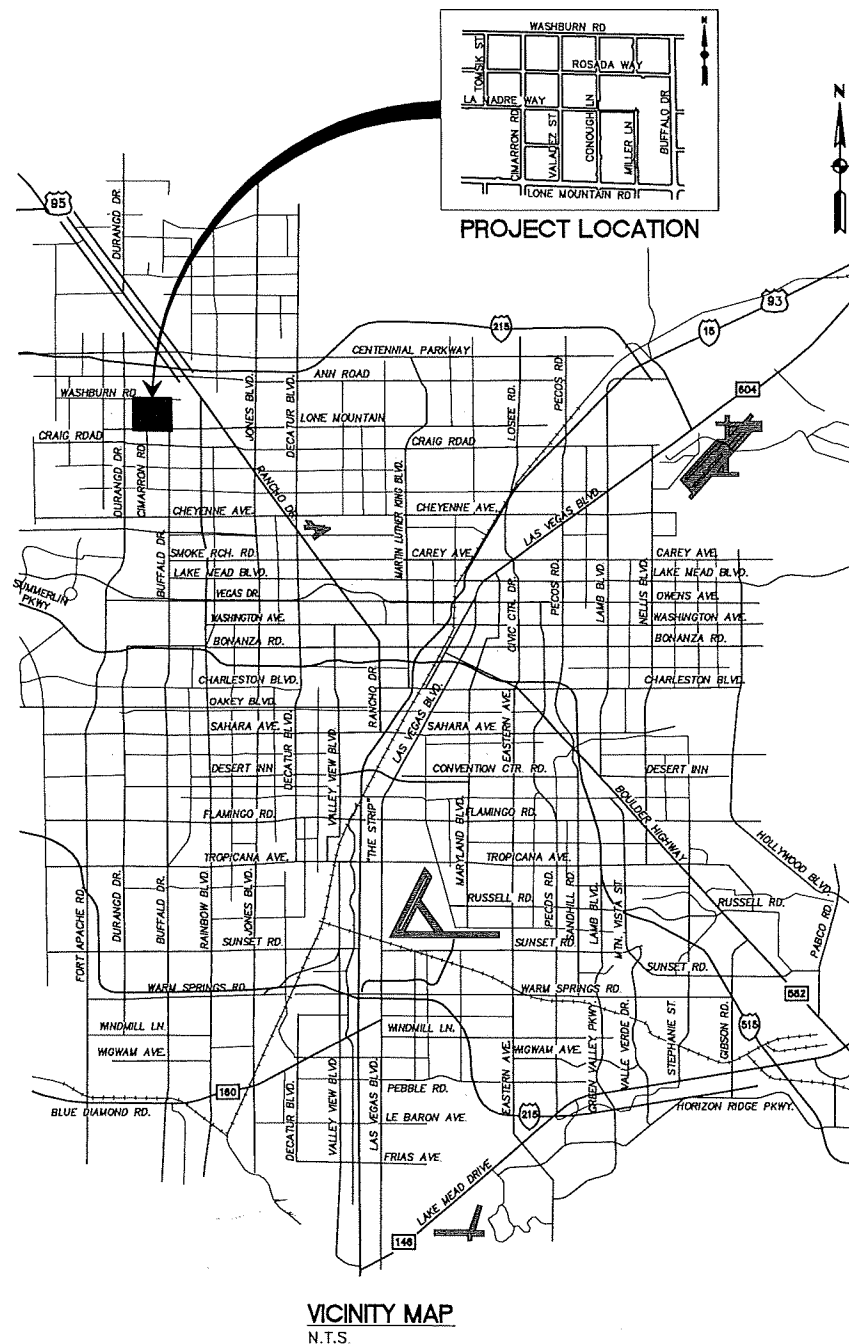
SHEET

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APPROVED FOR CONSTRUCTION

41 DISHARD: 598

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES

PROJECT # 1233778 FIRST APPROVED DATE: 9/18/17

DEPARTMENT OF PUBLIC WORKS CAPITAL PROJECT MANAGEMENT	DESIGNED BY: JS DRAWN BY: RM CHECKED BY: EH	DATE:
	No 125	



3753 Howard Hughes
Las Vegas, NV 89169
Phone: 702-697-5111

GOWAN NORTH BUFFALO BRANCH
LONE MOUNTAIN TO WASHBURN

TITLE: _____

SHEET: _____

PROFESSIONAL ENGINEER - STATE OF NEW YORK
SHOU-CHING HSU
Exp 04/30/18
CIVIL
No. 1A707
9/7/17

GN-1
2 of 89
DRAWING NO.
731-94

8/14/17 J:\31698-BUFFALO\5.0 PROJECT DATA\CADD\SHEETS\GENERAL NOTES\GN-2.DWG

- REVISÉD JULY 23, 2015 (CPM VERSION)

REVISÉD JULY 23, 2015 (CPM VERSION)

REVISÉ APRIL 13, 2015 (CPM VERSION)

REVISÉ JUNE 28, 2016 (CPM VERSION)

REVISÉD JULY 13, 2013



PROFESSIONAL ENGINEER-STATE OF NEVADA
SHOU-CHING HSU
Exp 08/30/78
CIVIL
No. 14707
9/7/77

GN-2
3 of 89
DRAWING NO.
731-94



1. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE LAS VEGAS FIRE AND RESCUE APPROVED FIRE CODE ORDINANCE #63329 FOR HYDRANT SPECIFICATIONS AND HYDRANT INSTALLATION SPECIFICATIONS.
2. ONLY FIRE HYDRANTS THAT ARE ON THE LAS VEGAS VALLEY WATER DISTRICT'S APPROVED PRODUCTS LIST ARE ALLOWED TO BE INSTALLED.
3. A PERMIT IS REQUIRED FROM LAS VEGAS FIRE AND RESCUE FOR THE INSTALLATION OF ANY FIRE WATER MAIN, FIRE HYDRANT, FIRE PERMITS AND CONTRACTORS MATERIAL TEST CERTIFICATE FOR UNDERGROUND PIPING FROM SHALL BE OBTAINED FROM THE FIRE PROTECTION ENGINEER BEFORE COMMENCEMENT OF WORK. IFC § 105.7.12
4. ON ANY RESIDENTIAL OR COMMERCIAL INSTALLATIONS, FIRE HYDRANTS SHALL BE INSTALLED AND FIRE APPARATUS ACCESS ROADS SHALL BE MAINTAINED BEFORE COMMENCEMENT OF ANY COMBUSTIBLE CONSTRUCTION. ALL FIRE HYDRANT SHALL BE IN GOOD WORKING ORDER AND SHALL BE CAPABLE OF DELIVERING THE REQUIRED FIRE FLOW. IFC § 3310, § 3312
5. TO IDENTIFY THE FIRE HYDRANT LOCATIONS, THE CONTRACTOR SHALL PLACE A BLUE REFLECTIVE MARKER AT THE CENTER LINE OF THE STREET ADJACENT TO THE FIRE HYDRANTS. IFC § S07.3.7
6. ALL UNDERGROUND INSPECTIONS, PRESSURE AND FLUSH VERIFICATIONS OF ALL FIRE HYDRANTS AND FIRE LINES, SHALL BE CONDUCTED BEFORE COVERING THE LINES. CENTER LOADING IS ACCEPTABLE FOR THE HYDRO TESTS WITH PRIOR FIRE PREVENTION APPROVAL. IFC § 105.3
7. ALL ON-SITE UNDERGROUND WATER MAINS AND MATERIALS SHALL BE U.L. LISTED, A.W.W.A APPROVED AND SHALL BE RATED FOR THE APPROPRIATE WORKING PRESSURE. IFC § 507.2.1, NFPA 24
8. PAINTING OF CURBS, FIRE HYDRANTS, PADS, PROTECTION OF FIRE HYDRANTS FROM PHYSICAL DAMAGE, AND ALL OTHER WORK NECESSARY PER PLANS SHALL BE COMPLETED BEFORE APPROVAL BY LAS VEGAS FIRE AND RESCUE, FIRE PREVENTION DIVISION. IFC § S07
9. PRIVATE HYDRANTS SHALL BE PAINTED RED. IFC § S07.5.7.1
10. PRIOR TO THE FINAL OCCUPANCY, A FIRE FLOW TEST SHALL BE WITNESSED BY LAS VEGAS FIRE AND RESCUE, FIRE PREVENTION DIVISION TO VERIFY AVAILABILITY OF THE REQUIRED FIRE FLOW. IFC § 507
11. FIRE HYDRANT SPACING SHALL BE AS FOLLOWS: IFC § C102
 - RESIDENTIAL - 300 FT UNSPRINKLERED; 600 FT SPRINKLERED.
 - COMMERCIAL - 300 FT UNSPRINKLERED; 400 FT SPRINKLERED.
12. WHERE THE WATER MAINS ARE EXTENDED ALONG STREETS OR NEW STREETS ARE INSTALLED WHERE FIRE HYDRANTS ARE NOT NEEDED FOR PROTECTION OF THE STRUCTURES, FIRE HYDRANTS SHALL BE INSTALLED AT A MAXIMUM OF 1000 FT SPACING TO PROVIDE FOR TRANSPORTATION HAZARDS, WHERE STREETS ARE PROVIDED WITH MEDIAN DIVIDERS OR HAVE FOUR (4) OR MORE TRAFFIC LANES AND HAVE A TRAFFIC COUNT OF MORE THAN 30,000 PER DAY, HYDRANTS ARE REQUIRED ON EACH SIDE OF THE STREET SPACED AT 500 FT ON AN ALTERNATING BASIS. IFC § C102.B
13. NO FIRE HYDRANTS SHALL BE LOCATED WITHIN THE RADIUS OF A CUL-DE-SAC OR WITHIN 20 FT OF THE END OF THE RADIUS OF THE CUL-DE-SAC.
14. FIRE HYDRANTS SHALL BE LOCATED WITHIN 6 FT OF ANY CURB RETURN, DRIVEWAY, POWER POLE, STREETLIGHT OR ANY OTHER OBSTRUCTION. IFC § C102.12
15. A MAXIMUM DISTANCE FROM A FIRE HYDRANT TO A ONE-TWO FAMILY DWELLING SHALL NOT EXCEED 300 FT, AS MEASURED BY AN APPROVED ROUTE. IFC § 102.4
16. THE MAXIMUM DISTANCE FROM A FIRE HYDRANT TO A FIRE DEPARTMENT CONNECTION (FDC) SHALL NOT EXCEED 100 FT, AS MEASURED BY AN APPROVED ROUTE. IFC § C102.7
17. THE MAXIMUM DISTANCE FROM A HYDRANT TO THE END OF A DEAD-END STREET SHALL NOT EXCEED 200 FT. IFC § C102.6
18. TWO (2) SOURCES OF SUPPLY ARE REQUIRED WHENEVER THERE IS 4 OR MORE FIRE HYDRANTS/SPRINKLER/INS ARE INSTALLED ON A SINGLE SYSTEM. SECTIONAL CONTROL VALVES SHALL BE INSTALLED SO THAT NO MORE THAN 2 FIRE HYDRANTS CAN BE OUT OF SERVICE DUE TO A BREAK IN A WATER MAIN. IFC § C104
19. ALL FIRE APPARATUS ACCESS ROADS SHALL BE PAVED TO PROVIDE ALL-WEATHER DRIVING CAPABILITIES, AND SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF THE FIRE APPARATUS. IFC § S032.3
20. THE GRADE/TO RISE FOR THE FIRE APPARATUS ACCESS ROADS SHALL NOT EXCEED 12% ANGLES OF APPROACH AND ANGLES OF DEPARTURE SHALL NOT EXCEED 6% FOR 25 FT PRIOR TO OR AFTER THE GRADE CHANGES ADJACENT TO THE STRUCTURES GRADIENT SHALL NOT EXCEED 6%. IFC § S032.7, S032.B
21. THE TURNING RADIUS OF THE FIRE APPARATUS ACCESS ROADS SHALL BE NO LESS THAN 52 FT OUTSIDE AND 28 FT INSIDE TURNING RADIUS. IFC § S032.4
22. VERTICAL CLEARANCE OF ALL FIRE APPARATUS ACCESS ROADS SHALL NOT BE LESS THAN 13FT 6 INS. IFC § S032.1
23. FIRE DEPARTMENT ACCESS ROADS SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF NOT LESS THAN 20 FT. PAVED WITH FLOW LINE WITH PARALLEL PARKING PERMITTED ON BOTH SIDES. NOT LESS THAN 32 FT WIDE, FLOW LINE TO FLOW LINE, WHERE PARKING IS PERMITTED ONLY ON ONE SIDE OF THE FIRE APPARATUS ACCESS ROAD, NOT LESS THAN 24 FT WIDE, FLOW LINE TO FLOW LINE, WHERE NO PARKING IS PERMITTED ON EITHER SIDE. FIRE LINES THROUGH PARKING LOTS SHALL BE NOT LESS THAN 24 FT. IFC § S032.1.1
24. A FIRE APPARATUS ACCESS ROAD SHALL BE REQUIRED WHERE ANY PORTION OF AN EXTERIOR WATER MAIN IS LOCATED MORE THAN 150 FT FROM A FIRE DEPARTMENT APPROVED VEHICLE ACCESS. THIS DISTANCE COULD BE INCREASED TO 250 FT IF THE BUILDING IS SPRINKLERED. IFC § S03.1.1
25. APPROVED SECONDARY FIRE APPARATUS ACCESS SHALL BE PROVIDED FOR 100 OR MORE DWELLING UNITS, ROADS/ WITH DEAD-ENDS OR WITH A SINGLE POINT OF ACCESS IN EXCESS OF 800 FT, COMMERCIAL AND INDUSTRIAL BUILDINGS AND BUILDINGS WITH FIRE LINES. SIGN 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 FT OR LESS THAN 6 FT FROM THE ROADWAY LEVEL. THE CURB ALONG OR ON THE PAVEMENT OR CEMENT (IF NO CURB IS PROVIDED) SHALL BE PAINTED WITH A RED WEATHER RESISTANT PAINT IN ADDITION TO THE SIGNS. IFC § S03.1.2
26. ELECTRICALLY CONTROLLED ACCESS GATES SHALL BE PROVIDED WITH AN APPROVED EMERGENCY VEHICLE DETECTOR/RECEIVER SYSTEM. SAID SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH IFC § S03.6 AND IFC APPENDIX M.

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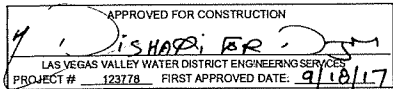
LAS VEGAS VALLEY WATER DISTRICT (LVVWD) STANDARD NOTES

LVVWD PROJECT # 123778

1. NO WORK SHALL BEGIN UNTIL THE WATER PLANS HAVE BEEN APPROVED FOR CONSTRUCTION BY THE LVVWD. FOLLOWING WATER PLAN APPROVAL, NOTICE SHALL BE GIVEN TO THE LVVWD COMMUNICATION SUPPORT CENTER (258-7171) TWO (2) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION. FOR FUTURE INSPECTIONS, NOTICE MUST BE GIVEN BY 2:00 P.M. THE BUSINESS DAY PRIOR TO THE REQUESTED LVVWD INSPECTION. WHEN REQUESTING INSPECTIONS, PLEASE REFER TO THE PROJECT# IDENTIFIED ABOVE.
2. ALL WORK SHALL CONFORM TO LVVWD STANDARD PLATES, DRAWINGS, AND SPECIFICATIONS, AND TO THE 2010 EDITION OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS). THE LATEST EDITION OF UDACS SHALL SUPERSEDE ANY CONFLICTS CONTAINED IN THE APPROVED DRAWINGS AND/OR SPECIFICATIONS.
3. ALL WORK, EXCEPT AS MODIFIED BY THESE PLANS OR BY NOTE 2 ABOVE, SHALL BE DONE IN ACCORDANCE WITH THE MOST RECENT DRAFT OR EDITION OF THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFFSITE IMPROVEMENT, CLARK COUNTY AREA.
4. A SINGLE PIPE MATERIAL SHALL BE USED THROUGHOUT THE PROJECT UNLESS OTHERWISE APPROVED BY THE LVVWD.
5. ALL SERVICE LATERALS TWO (2) INCHES IN DIAMETER AND SMALLER SHALL BE TYPE K COPPER TUBING WITH LVVWD APPROVED SERVICE SADDLES.
6. ALL WATER METER BOXES SHALL BE LOCATED OUTSIDE OF DRIVEWAY AREAS.
7. ALL VALVES SHALL BE LOCATED OUTSIDE OF DRIVEWAYS, VALLEY AND CURB GUTTERS.
8. ALL WATER AND STORM DRAIN OR SANITARY SEWER CROSSINGS SHALL CONFORM TO SECTION 2.22 OF THE 2010 EDITION OF THE UDACS.
9. ALL WATER FACILITIES SHALL BE FILLED, DISINFECTED, PRESSURE TESTED, FLUSHED, FILLED AND AN ACCEPTABLE WATER SAMPLE OBTAINED, PRIOR TO CONNECTION TO THE LVVWD DISTRIBUTION SYSTEM.
10. THE CONTRACTOR MUST OBTAIN ALL METERS TWO (2) INCHES AND SMALLER FROM LVVWD CENTRAL STORES. TELEPHONE 258-3152 OR 258-3802, TWO (2) WORKING DAYS PRIOR TO METER PICKUP.
11. ANY INTERRUPTION OF SERVICE MUST BE PERFORMED IN ACCORDANCE WITH UDACS SECTION 3.14.D1, AND APPROVED BY THE LVVWD INSPECTION DIVISION PRIOR TO SHUTDOWN. PROPER WRITTEN NOTIFICATION MUST BE GIVEN TO ALL AFFECTED CUSTOMERS.
12. ALL WATER FACILITY CONSTRUCTION MATERIALS USED MUST BE AS LISTED ON THE LVVWD PRE-APPROVED MATERIALS AND MANUFACTURER'S LISTING FOR NEW FACILITIES, LATEST REVISION, OR SPECIFICALLY APPROVED ON THESE PLANS.
13. TELEPHONE "CALL BEFORE YOU DIG" AT "B11" OR 1-BDD-227-2600
14. THE INSTALLATION OF LAS VEGAS VALLEY WATER DISTRICT (LVVWD) MUNICIPAL WATER FACILITIES WITHIN ALL STREETS IS ASSUMED TO BE IN COMPLIANCE WITH THE UNIFORM STANDARDS, INCLUDING THE PLACEMENT OF ASPHALT PAVING STREET SURFACES. ANY REPAIR WORK DONE BY THE LVVWD TO THE MUNICIPAL FACILITIES WILL INCLUDE THE PLACEMENT OF ANY APPROPRIATELY SIZED ASPHALT REPAIR PATCH ON THE STREET SURFACE.

ANY DECORATIVE PAVING SURFACE WITHIN THE STREET IS THE RESPONSIBILITY OF THE OWNER'S ASSOCIATION, OR THE INDIVIDUAL PROPERTY OWNERS IF NO OWNER'S ASSOCIATION IS IN EXISTENCE, OR THE AGENCY HAVING JURISDICTION. DECORATIVE SURFACE MATERIALS PLACED WITHIN THE TEN FOOT EASEMENT ADJUTING A PUBLIC OR PRIVATE STREET, IF DISTURBED BY THE LVVWD DURING THE REPAIR OR OPERATION OF ITS FACILITIES, WILL BE REPLACED BY LVVWD WITH AN APPROPRIATELY SIZED PLAIN FINISH CONCRETE PATCH. THE LVVWD WILL NOT RESTORE, AND WILL NOT BE RESPONSIBLE FOR THE RESTORATION OF, ANY DECORATIVE PAVING SURFACE WITHIN THE STREET. THE LVVWD WILL NOT ATTEMPT TO MATCH COLOR OR FINISH OF ANY ADJACENT MATERIALS.

15. TO COMPLY WITH THE FEDERAL SAFE DRINKING WATER ACT, ALL WATER WORKS BRASS PRODUCTS PROPOSED TO BE RELOCATED, OR INSTALLED AS NEW MUST BE INSTALLED WITH THE LEAD FREE APPROVED PRODUCT. THE OLD LEADED PRODUCT MAY NOT BE REUSED.



EXISTING UTILITY NOTES

1. THE FOLLOWING CLARK COUNTY UNDERGROUND FACILITIES MAY BE LOCATED IN YOUR PROJECT AREA. STREET LIGHTING, TRAFFIC SIGNALS, INTERCONNECT CABLE. YOU MUST CONTACT CLARK COUNTY TRAFFIC AT 455-7511 FOR LOCATIONS AT LEAST 48 HOURS PRIOR TO WORKING IN THE AREA. CLARK COUNTY IS NOT A MEMBER OF CALL BEFORE YOU DIG (UNDERGROUND SERVICE ALERT) AND CALL TO THAT ORGANIZATION DOES NOT RELIEVE YOU OF LIABILITY FOR CLARK COUNTY FACILITIES.
2. ALL STREET LIGHTING INSTALLATIONS EXCEPT AS NOTED ON THE STREET LIGHTING PLANS SHALL CONFORM TO THE IMPROVEMENT STANDARDS, DEPARTMENT OF PUBLIC WORKS, CLARK COUNTY, NEVADA, AND THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA.
3. EXISTING UTILITY LOCATIONS SHOWN HEREIN ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF EXISTING UNDERGROUND 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. ALL DISCREPANCIES MUST BE IMMEDIATELY REPORTED TO THE ENGINEER. CALL BEFORE YOU DIG: 1-800-227-2600.

NOTICE TO CONTRACTOR

1. CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFINED, INDEMNIFY AND HOLD DESIGN PROFESSIONALS HARMLESS FROM AND ALL LIABILITY, REAL OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONAL.
2. CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AND SHALL REPORT ALL DISCREPANCIES TO THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.
3. THE EXISTENCE AND APPROXIMATE LOCATION OF ANY UNDERGROUND FACILITIES SHOWN HEREON WERE OBTAINED FROM A SEARCH OF AVAILABLE RECORDS. THERE MAY, HOWEVER, BE EXISTING UTILITIES NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PROTECT THE UTILITIES OR STRUCTURES SHOWN HEREON AND ANY OTHERS NOT OF RECORD OR NOT SHOWN ON THESE PLANS.
4. (CCASD NOS. REFER TO "UNIFORM DRAWINGS FOR PUBLIC WORKS" CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA", LATEST EDITION, UNLESS OTHERWISE NOTED) (UDACS PLATE NOS. REFER TO "UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR WATER DISTRIBUTION SYSTEMS, CLARK COUNTY, NEVADA", LATEST EDITION, UNLESS OTHERWISE NOTED) (UDACS SD NOS. REFER TO "DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS, SOUTHERN NEVADA, LATEST EDITION, UNLESS OTHERWISE NOTED)
5. CONTRACTOR IS RESPONSIBLE FOR DUST AND EROSION CONTROL DURING CONSTRUCTION.

DEVIATIONS FROM STANDARDS

1. THERE ARE NO DEVIATIONS FROM APPLICABLE CITY OF LAS VEGAS STANDARDS, UNLESS STATED IN THE SPECIFICATIONS.

ABANDONMENT OF EXISTING SERVICE(S) - 2" AND SMALLER

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. 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 MAINS SHALL HAVE THE CORPORATION STOPS TURNED OFF AT THE MAIN, A MINIMUM OF TWELVE (12) INCHES OF THE LATERAL CUT OUT NEAR THE CORPORATION STOP. IF THE CORPORATION STOP IS DAMAGED BEYOND REPAIR OR PULLED FROM THE EXISTING WATER MAIN, THE MAIN SHALL BE REPAIRED BY AT THE CONTRACTOR'S EXPENSE, IN A MANNER APPROVED BY THE DISTRICT. IF THE CORPORATION STOP IS NOT WATER TIGHT, THE CONTRACTOR SHALL NOTIFY LVVWD COMMUNICATION SUPPORT CENTER AT (702-258-7171) FOR FURTHER DIRECTION. THE EXISTING METER(S) SHALL BE REMOVED AND DELIVERED TO THE DISTRICT. THE CONTRACTOR SHALL REMOVE THE EXISTING SERVICE METER BOX AND APPURTENANCES, FILL AND GRADE ANY AND ALL RESULTING VOIDS, AND REPLACE DR 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.

ABANDONED VALVES CUT AND CAP

ALL VALVES TO BE ABANDONEO SHALL BE ABANDONEO IN THE CLOSEO POSITION, UNLESS SHOWN OTHERWISE, BY REMOVING A MINIMUM OF THE TOP TWENTY-FOUR (24) INCHES OF THE VALVE BOX, AND THEN FILLING THE BOTTOM OF THE BOX WITH A MINIMUM OF EIGHT (8) INCHES OF SAND OR TYPE U AGGREGATE BASE. THE REMAINING PORTION OF THE VALVE BOX SHALL BE FILLED WITH CONCRETE HAVING A COMPRESSIVE STRENGTH OF AT LEAST TWO THOUSAND (2,000) PSI. THE LATERAL MUST BE CUT WITHIN ONE (1) FOOT OF THE ABANDONED VALVE, DR AS SHOWN ON PLANS, AND CAPPED. THE CONTRACTOR SHALL CUT THE EXISTING PIPE WHERE SHOWN ON THE DRAWING AND INSTALL A CAP COMPLETE WITH THRUST BLOCK. WHERE A JOINT OR COUPLING IN THE EXISTING PIPE IS UNCOVERED AT THE CUT AND CAP LOCATIONS, THE INSTALLATION OF A PLUG MAY BE PERMITTED WITH DISTRICT APPROVAL. A CONCRETE THRUST BLOCK SHALL BE INSTALLED AT ALL CAP OR PLUG LOCATIONS IN ACCORDANCE WITH THE PROVISIONS OF UDACS PLATE 31.

STORM WATER POLLUTION STANDARD PLANS NOTES

1. THE OWNER, SITE DEVELOPER, CONTRACTOR, AND/OR THEIR AUTHORIZED AGENTS SHALL EACH DAY REMOVE ALL SEDIMENT, MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN DISCHARGED TO, OR ACCUMULATED IN, THE PUBLIC RIGHTS OF WAY OF THE CITY OF LAS VEGAS AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS SITE DEVELOPMENT OR CONSTRUCTION PROJECT. SUCH MATERIALS SHALL BE PREVENTED FROM ENTERING THE FROM SEWER SYSTEM.
2. ADDITIONAL CONSTRUCTION SITE DISCHARGE BEST MANAGEMENT PRACTICES MAY BE REQUIRED OF THE OWNER AND HIS OR HER AGENTS DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE SUBMITTED PLAN DOES NOT MEET THE PERFORMANCE STANDARDS SPECIFIED IN THE CITY OF LAS VEGAS AND THE LAS VEGAS VALLEY CONSTRUCTION SITE BMP GUIDANCE MANUAL.
3. TEMPORARY OR PERMANENT STABILIZATION PRACTICES WILL BE INSTALLED ON DISTURBED AREAS AS SOON AS PRACTICABLE AND NO LATER THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. SOME EXCEPTIONS MAY APPLY; REFER TO THE NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR1000DD, SECTION III.A.5.
4. AT A MINIMUM, THE CONTRACTOR OR HIS AGENT SHALL INSPECT ALL DISTURBED AREAS, AREAS USED FOR STORAGE OF MATERIALS AND EQUIPMENT THAT ARE EXPOSED TO PRECIPITATION, VEHICLE ENTRANCE AND EXIT LOCATIONS, AND ALL BMPs WEEKLY, AND 24 HOURS AFTER ANY RAIN EVENT OF 0.5 INCHES OR MORE. THE CONTRACTOR OR HIS AGENT SHALL UPDATE OR MODIFY THE STORM WATER POLLUTION PREVENTION PLAN AS NECESSARY. SOME EXCEPTIONS TO WEEKLY INSPECTIONS MAY APPLY, SUCH AS SUSPENSION OF LAND DISTURBANCE ACTIVITIES. REFER TO THE NEVADA STORM WATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR1000DD, SECTION III.A.12.
5. ACCUMULATED SEDIMENT IN BMPs SHALL BE REMOVED WITHIN SEVEN DAYS AFTER A STORM WATER RUNOFF EVENT OR PRIOR TO THE NEXT ANTICIPATED STORM EVENT, WHICHEVER IS EARLIER. SEIMENT MUST BE REMOVED WHEN BMP DESIGN CAPACITY HAS REDUCED BY 50 PERCENT OR MORE.

FIRE HYDRANT RELOCATION AND LATERAL ABANDONMENT

WHERE SHOWN ON THE DRAWING(S), THE CONTRACTOR SHALL ABANDON THE EXISTING FIRE HYDRANT(S) BY REMOVING BOTH THE UPPER AND LOWER BARRELS OF THE FIRE HYDRANT SO THAT NO PORTION OF THE REMAINING FIRE HYDRANT ASSEMBLY IS CLOSER THAN (2) FEET TO THE EXISTING GRADE. FIRE HYDRANTS SHALL BE TESTED PRIOR TO AND AFTER RELOCATION UNDER THE DIRECTION OF THE DISTRICT TO ENSURE QUALITY OF THE FIRE HYDRANT(S). THE EXISTING HYDRANT SHALL BE INSTALLED AT THE NEW LOCATION AS INDICATED ON THE DRAWING, IN ACCORDANCE WITH UDACS PLATE 4D. THE EXISTING VALVE SHALL BE ABANDONED IN A CLOSED POSITION, UNLESS SHOWN OTHERWISE BY REMOVING A MINIMUM OF THE TOP TWENTY-FOUR (24) INCHES OF THE VALVE BOX, AND THEN FILLING THE BOTTOM OF THE BOX WITH A MINIMUM OF EIGHT (8) INCHES OF SAND OR TYPE II AGGREGATE BASE. THE REMAINING PORTION OF THE VALVE BOX SHALL BE FILLED WITH CONCRETE HAVING A COMPRESSIVE STRENGTH OF AT LEAST TWO-THOUSAND (2,000) PSI. THE LATERAL SHALL BE CUT WITHIN ONE (1) FOOT OF THE ABANDONED VALVE, OR AS SHOWN ON PLANS, AND CAPPED, WHERE A JOINT OR COUPLING IN THE EXISTING PIPE IS UNCOVERED AT THE CUT AND CAP LOCATION, THE INSTALLATION OF A PLUG MAY BE INSTALLED AT ALL CUT AND CAP LOCATIONS IN ACCORDANCE WITH THE PROVISIONS OF UDACS PLATE 31.

CLARK COUNTY GENERAL NOTES

1. ALL CONSTRUCTION AND TRAFFIC SIGNAL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE "UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA", AND APPENDICES. THE MANUAL CAN BE FOUND HERE: [HTTP://RCTWS.RCTSNV.COM/MP0/STREETS/V4_STREETS_SPECIFICATIONS_CFM](http://rctws.rctsnv.com/MP0/STREETS/V4_STREETS_SPECIFICATIONS_CFM).
2. PER SPECIAL PROVISIONS SECTION 637.03.03, PLEASE REFER TO THE "THE LAS VEGAS VALLEY CONSTRUCTION SITE BEST MANAGEMENT PRACTICES GUIDANCE MANUAL", SECTION 3.5.1 FOR THE STORMWATER MANAGEMENT NOTES AND APPENDIX B FOR THE VARIOUS REQUIRED CHECKLISTS. THE MANUAL CAN BE FOUND HERE: [HTTP://RFCD.PIMA.GOV/P00/LID/PDfs/2D-NV-LAS-VEGAS-VALLEY-CONSTRUCTION-SITE-BMP-GUIDANCE-MANUAL-2009.PDF](http://rfcd.pima.gov/P00/LID/PDfs/2D-NV-LAS-VEGAS-VALLEY-CONSTRUCTION-SITE-BMP-GUIDANCE-MANUAL-2009.PDF).
3. ALL UTILITY LOCATIONS ON THESE PLANS ARE APPROXIMATE. CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL UTILITIES LIKELY TO BE AFFECTED AND TO PROTECT IN PLACE, ALL UTILITIES SHOWN HEREIN. THE CONTRACTOR SHALL DETERMINE THE LOCATION AND DEPTH OF SUSPECTED UTILITY INTERFERENCES, AND SHALL FURNISH INFORMATION ON THE SAME TO THE ENGINEER, NOT LESS THAN TEN (10) DAYS PRIOR TO THE ANTICIPATED IMPACT OF THESE SUSPECTED INTERFERENCES ON HIS WORK. IF CONFLICTS EXIST, THE CONTRACTOR WILL IMMEDIATELY CONTACT THE ENGINEER AND PROVIDE THE ENGINEER WITH ALL THE NECESSARY DATA SUCH AS ELEVATIONS, HORIZONTAL LOCATIONS, ETC., AND PROVIDE THE ENGINEER WITH SKETCHES INDICATING THE PROPOSED IMPROVEMENT AND THE UTILITY CONFLICT. THE ENGINEER WILL EXAMINE AND REVIEW ALL THE DATA AND SKETCHES PROVIDED, AND WILL PROVIDE THE CONTRACTOR WITH AN ALTERNATIVE DESIGN WITHIN FIVE (5) DAYS AFTER RECEIPT OF DATA AND SKETCHES.
4. CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES AT LEAST SEVENTY-TWO (72) HOURS PRIOR TO BEGINNING CONSTRUCTION.
5. SIGNATURES SHOWN ON THE COVER OF THESE PLANS, BY THE LOCAL UTILITY COMPANIES DOES NOT ASSUME OR GUARANTEE THEIR LIABILITY FOR KNOWN OR UNKNOWN CONFLICTS WITH EXISTING OR PROPOSED IMPROVEMENTS. RESOLUTION OF ANY CONFLICTS WILL BE ACCOMPLISHED PURSUANT TO LOCAL ORDINANCES, NEVADA REVISED STATUTES AND/OR PUBLIC UTILITY COMMISSION RULES AND REGULATIONS.
6. THE CONTRACTOR SHALL COORDINATE WITH THE NV ENERGY COMPANY, CENTRAL TELEPHONE COMPANY, DBA CENTURYLINK, LOCAL CABLE COMPANY AND THE SOUTHWEST GAS CORPORATION FOR THE RELOCATION OF UNDERGROUND OR OVERHEAD UTILITIES THAT INTERFERE WITH THE REQUIRED IMPROVEMENTS AS SHOWN ON THE PLANS.
7. CONTRACTOR SHALL CALL SOUTHWEST GAS AT 702-651-2111 FOR STANDBY WHEN EXCAVATING OVER OR NEAR HIGH PRESSURE GAS LINES.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE VERTICAL ADJUSTMENT OF ALL LAS VEGAS VALLEY WATER DISTRICT FACILITIES AND CLARK COUNTY WATER RECLAMATION DISTRICT MANHOLES TO FINISHED GRADE AS INDICATED ON THE PLANS OR IN THE SPECIAL PROVISIONS UNLESS OTHERWISE INDICATED.
9. ALL SANITARY SEWER LINES SHOWN ON THESE PLANS ARE CLARK COUNTY WATER RECLAMATION DISTRICT PUBLIC LINES, UNLESS OTHERWISE NOTED. ALL CROWD SANITARY SEWER MANHOLE ADJUSTMENTS SHALL BE PER DSCWCS SD-4 AND SD-5 AND SECTION 63D OF THE PROJECT SPECIFICATIONS.
10. THE CONTRACTOR SHALL NOT REMOVE TREES, SHRUBS, LAWNS, WALLS, FENCES, SIGNS, STRUCTURE, LIGHTS OR ANY OTHER IMPROVEMENTS OUTSIDE THE RIGHT-OF-WAY EXCEPT WHERE REQUIRED TO DO SO BY THE CONTRACT DRAWINGS OR AS DIRECTED BY THE ENGINEER.
11. EXACT LOCATIONS OF ALL SAWCUT LINES SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER. THOSE SAWCUTS THAT ARE LONGITUDINAL TO THE ROADWAY MAY BE WHEEL CUT WITH EQUIPMENT AS APPROVED BY THE ENGINEER. ALL OTHER SAWCUTS SHALL BE MADE BY A ROTARY SAW.
12. IF THE IMPROVEMENTS NECESSITATE THE OBLITERATION, TEMPORARY OBSTRUCTION, TEMPORARY REMOVAL, OR RELOCATION OF ANY EXISTING TRAFFIC PAVEMENT MARKING REQUIRED TO REMAIN, SUCH PAVEMENT MARKING SHALL BE RESTORED OR REPLACED WITH LIKE MATERIALS TO THE SATISFACTION OF THE COUNTY TRAFFIC MANAGER.
13. FAST INTERCONNECT CABLE POLICY IS IN EFFECT. INTERCONNECT/FIBER OPTIC CABLE MUST BE MAINTAINED AT ALL TIMES. CONTRACTOR SHALL PROVIDE TEMPORARY OVERHEAD INTERCONNECT/FIBER OPTIC CABLE WHILE PERMANENT CABLE IS BEING RELOCATED. TEMPORARY AERIAL INSTALLATION MUST BE ACCEPTABLE TO THE COUNTY TRAFFIC MANAGER AND TO FAST. ANY DAMAGE TO THIS CABLE IS DEEMED AN EMERGENCY BY FAST, CITY OF LAS VEGAS, CLARK COUNTY AND NDDOT AND MUST BE REPAIRED IMMEDIATELY TO FAST ACCEPTANCE. DAMAGES MAY BE ASSESSED AGAINST THE CONTRACTOR AFTER 24 HOURS HAS ELAPSED FROM THE TIME OF BREAK OR DAMAGE. \$2,500 PER DAY DAMAGES WILL BE ASSESSED AFTER TWENTY-FOUR (24) HOURS HAS ELAPSED FROM THE TIME OF BREAK OR DAMAGE TO COPPER WIRED INTERCONNECT CABLE AND \$7,500 PER DAY FOR DAMAGE TO FIBER OPTIC CABLE.
14. ALL STORM DRAIN MANHOLE ACCESS COVERS SHALL HAVE A MINIMUM DIAMETER OF THIRTY (30") INCHES.
15. THE CONTRACTOR SHALL NOT BE ALLOWED TO CLOSE MORE THAN ONE CONSECUTIVE BUS STOP ON THE SAME SIDE OF THE STREET. TEMPORARY CLOSURES SHALL BE PWD (PERSON'S WITH DISABILITY) ACCESSIBLE BEFORE ANY BUS STOP CAN BE CLOSED. THE CONTRACTOR SHALL NOTIFY CARL SCARBROUGH AT (702) 676-1608 OR ERIC TRAASDAHL AT (702) 676-1633, AT LEAST SEVEN WORKING DAYS IN ADVANCE.
16. THE CONTRACTOR SHALL SUBMIT A BUS STOP CLOSURES SCHEDULE WITH THE TRAFFIC CONTROL PLAN. THE BUS STOP CLOSURE SCHEDULE SHALL IDENTIFY SPECIFIC DURATIONS AND TIMES OF THE DAY FOR ALL PROPOSED BUS STOP CLOSURES. BUS STOP CLOSURES ARE NOT TO EXCEED TWO CONSECUTIVE STOPS AT ONE TIME, OR MORE THAN 1,000 FEET AT A TIME. PERSONS WITH DISABILITIES SHALL HAVE ACCESS TO BUS STOPS. THE CONTRACTOR SHALL PROVIDE A 100 FOOT LONG BY 10 FEET WIDE GRAVELED TURN OUT AT TEMPORARY BUS STOPS.

REVISIONS		DESIGNED BY: JS		DATE: 9/17/17	
		DRAWN BY: RM		CHECKED BY: EH	
		NO.		DATE:	
		DESCRIPTION		APPROVED	
DEPARTMENT OF PUBLIC WORKS CAPITAL PROJECT MANAGEMENT					
3755 Howard Hughes Parkway, Suite 305 Phoenix, AZ 85018-2800					
GENERAL NOTES					
TITLE: GOWAN NORTH BUFFALO BRANCH LONE MOUNTAIN TO WASHBURN					
SHEET: 9/17/17					
GN-4 5 of 89 DRAWING NO 731-94					

PROJ: 123778 AG: 115833 QS: 125-35-SESW XC 11343



FOR GOWAN NORTH BUFFALO BRANCH STORM DRAIN PROJECT
SECTION 33 OF TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA

I, MICHAEL A. CONSTABLE, A PROFESSIONAL LAND SURVEYOR
LICENSED IN THE STATE OF NEVADA, CERTIFY THAT:

1. THIS MAP REPRESENTS THE RESULTS OF A SURVEY CONDUCTED UNDER MY DIRECT SUPERVISION AT THE INSTANCE OF THE CITY OF LAS VEGAS.

2. THE LANOS SURVEYED LIE WITHIN SECTION 33 OF TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.O.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA.

3. THIS MAP COMPLIES WITH THE APPLICABLE STATE STATUTES AND ANY LOCAL ORDINANCES IN EFFECT ON THE DATE THAT THE SURVEY WAS COMPLETED ON MARCH 12, 2015.

4. THE MONUMENTS DEPICTED ON THE PLAT ARE OF THE CHARACTER SHOWN, OCCUPY THE POSITIONS INDICATED AND ARE OF SUFFICIENT DURABILITY.

MICHAEL A. CONSTABLE
PROFESSIONAL LAND SURVEYOR
NEVADA CERTIFICATE NO. 12749



PARCEL MAP FILE 18,	PAGE 32	PLAT BOOK 04,	PAGE 25
PARCEL MAP FILE 21,	PAGE 57	PLAT BOOK 04,	PAGE 88
PARCEL MAP FILE 22,	PAGE 93	PLAT BOOK 47,	PAGE 90
PARCEL MAP FILE 51,	PAGE 08	PLAT BOOK 57,	PAGE 100
PARCEL MAP FILE 54,	PAGE 44	PLAT BOOK 69,	PAGE 40
PARCEL MAP FILE 64,	PAGE 08	PLAT BOOK 93,	PAGE 71
PARCEL MAP FILE 65,	PAGE 17	PLAT BOOK 113,	PAGE 10
PARCEL MAP FILE 68,	PAGE 21	PLAT BOOK 114,	PAGE 48
PARCEL MAP FILE 71,	PAGE 80	PLAT BOOK 119,	PAGE 18
PARCEL MAP FILE 88,	PAGE 81	PLAT BOOK 137,	PAGE 18
PARCEL MAP FILE 92,	PAGE 35	PLAT BOOK 146,	PAGE 70

RECORD OF SURVEY FILE 101, PAGE 47

	FOUND MONUMENT AS NOTED
	FOUND REFERENCE MONUMENT AS NOTED
RM	REFERENCE MONUMENT
BR	BRASS GAP
AL	ALUMINUM CAP
(m)	MEASURED VALUE
	CENTERLINE
	RIGHT OF WAY LINE
	SECTIONLINE

GRIIO NORTH AS DEFINED BY THE CENTRAL MERIDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS AND LAS VEGAS HIGH ELEVATION ZONES, NORTH AMERICAN DATUM OF 1983; SAJO MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN. THE REFERENCE FRAME BEING NAO 83 (2011) EPOCH 2010

DATUM/REFERENCE FRAME: NAD83 (2011) EPOCH 2010.0

MAPPING PROJECTION PARAMETERS

SYSTEM: NEVADA COORDINATE REFERENCE SYSTEM (NCRS)

ZONE: LAS VEGAS ZONE

PROJECTION TYPE: TRANSVERSE MERCATOR

STANDARD PARALLEL (AND LATITUDE OF ORIGIN): 3616507"N

LONGITUDE OF CENTRAL MERIDIAN: 114°58'00"W

LINEAR UNIT: US SURVEY FOOT (SFT)

FALSE NORTING: 656,166,666.7 SFT (200,000,000 M)

FALSE EASTING: 628,083,333.3 SFT (100,000,000 M)

SCALE FACTOR AT CENTRAL MERIDIAN: 1.0001 (EXACT)

ANY SUBSEQUENT CHANGES TO THIS MAP SHOULD BE EXAMINED AND MAY BE DETERMINED BY REFERENCE TO THE COUNTY RECORDER'S CUMULATIVE MAP INDEX. N.R.S. 27B.5695

SHEET 1 OF 3

SECTION 33 OF TOWNSHIP 19 SOUTH, RANGE 60 EAST,
M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA.



5820 S. Eastern Avenue, Suite 200
 Las Vegas, Nevada 89119
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www.slane-group.com

Stanley Consultants INC.

NO. 00634
Filed at the request of
STANLEY CONSULTANTS, INC.
Date 4/6/15 At 10:13
File 195 Page 0013
of Surveys

Official Records Book 20150406
Clark County, Nevada Records
Oebbie Conway, Recorder
Fee: 44.00 Deputy GWC

THE PURPOSE OF THIS SURVEY IS TO MEMORIALIZE THE EXISTING CENTERLINE MONUMENTATION AS FOUND. THIS SURVEY PROVIDES THE BASIS TO REPLACE MONUMENTS IN THEIR CURRENT POSITIONS THAT MAY BE LOST DUE TO FUTURE CONSTRUCTION IMPROVEMENTS AUTHORIZED BY THE CITY OF LAS VEGAS.

1) BEARINGS AND DISTANCES SHOWN ON THIS SHEET ARE MEASURED VALUES BETWEEN FOUND MONUMENT LOCATIONS AND AN ALIQUOT BREAKDOWN WAS USED TO DETERMINE THE RECORD INFORMATION AS SHOWN ON SUBSEQUENT SHEETS.

2.) ALL TIE-DISTANCES SHOWN FROM REFERENCE MONUMENTS ARE "AS STAMPED".

[illegible]DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECT MANAGEMENT

GOWAN NORTH BUFFALO BRANCH
LONE MOUNTAIN TO WASHBURN

TITLE:

	S
	6
	DRAW 73

DESIGNED BY: JS
DRAWN BY: RM
CHECKED BY: JM
DATE: 9/7/17

7753 Howard Hughes Parkway, Suite 135
Las Vegas, NV 89169

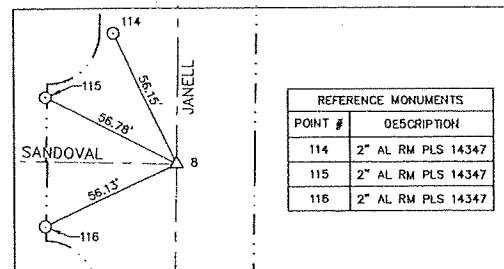
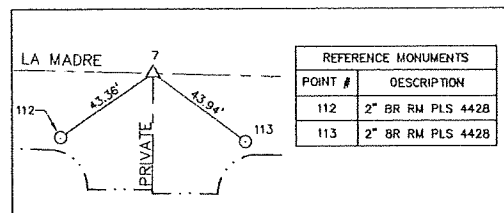
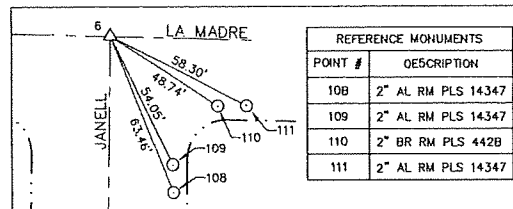
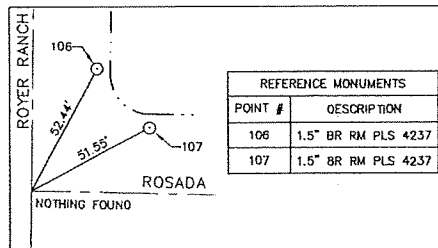
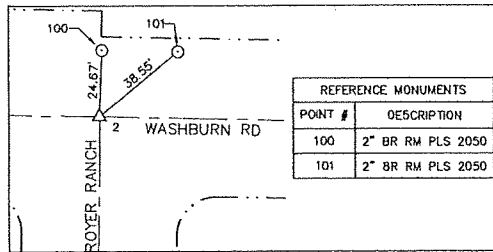
SURVEY CONTROL PLAN

LAS VEGAS PAVING CORP.
WE'RE #1

RECORD
Jeff Anderson
AS-BUILT

J:\31688-BUFFALO BRANCH\PROJECT DATA\ADJUSTMENTS\SURVEY CONTROL\SC-2.DWG
8/15/17

RECORD OF SURVEY
FOR GOWAN NORTH BUFFALO BRANCH STORM DRAIN PROJECT
SECTION 33 OF TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA

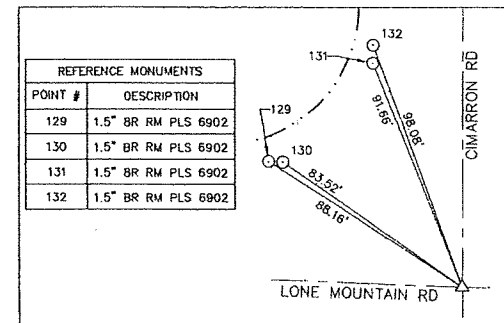
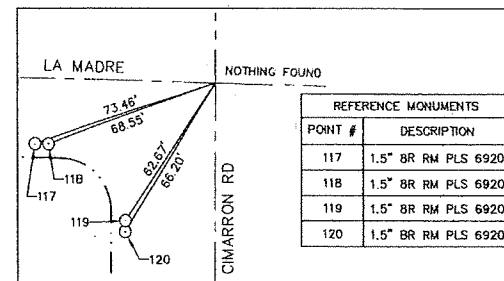
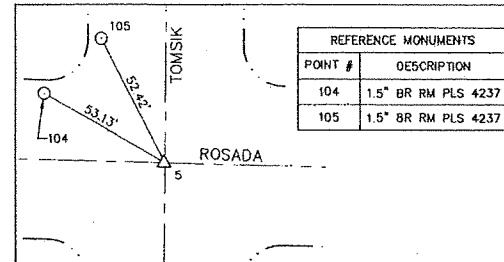
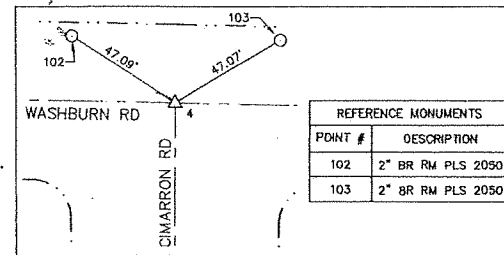
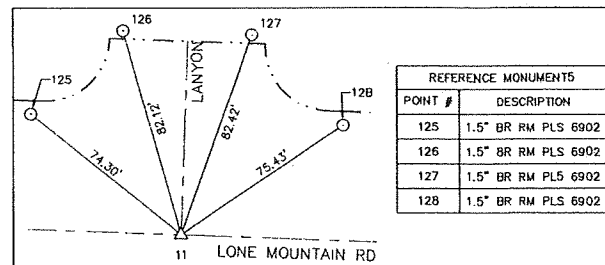
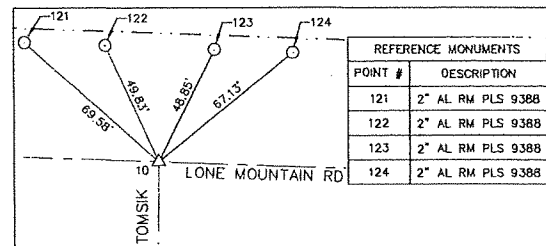


CONTROL			
POINT #	NORTHING	EASTING	DESCRIPTION
1	658374.173	235996.969	2" BRASS CAP IN WELL PLS 7008
2	658346.163	237354.321	BRASS CAP STEM
3	658332.156	238033.042	2" ALCAP ILLEGIBLE
4	658318.142	238712.161	2" BRASS CAP IN WELL PLS 2050
5	657656.735	238026.211	2" ALCAP ILLEGIBLE
6	656998.061	237506.565	2" ALCAP PLS 4428
7	656980.704	237681.936	2" ALCAP PLS 4428
8	656481.722	237498.566	2" ALCAP PLS 14347
9	655706.555	235927.022	2" BRASS CAP IN WELL PLS 7008
10	655630.028	238006.024	2" ALCAP ILLEGIBLE
11	655621.076	238249.225	2" ALCAP PLS 8902
12	655604.519	238699.024	2.5" BRASS CAP IN WELL PLS 6902

LEGEND

- △ FOUND MONUMENT AS NOTED
- FOUND REFERENCE MONUMENT AS NOTED
- RM REFERENCE MONUMENT
- BR BRASS CAP
- AL ALUMINUM CAP
- (m) MEASURED VALUE
- CENTERLINE
- RIGHT OF WAY LINE
- SECTIONLINE

LINE	LENGTH	BEARING
L1	243.37	N87°53'31"W
L2	450.10	N87°53'31"W
L5	185.45	S88°20'41"E



NOTE
ALL TIE DISTANCES SHOWN FROM REFERENCE MONUMENTS ARE "AS STAMPED".

SHEET 2 OF 3

Stanley Consultants INC.
5820 S. Eastern Avenue, Suite 200
Las Vegas, Nevada 89119
(702) 369-9306 Fax (702) 369-9793
www.stanleygroup.com

REVISIONS	NO.	DATE	DESCRIPTION	APPRO

DESIGNED BY: JS
DRAWN BY: RM
CHECKED BY: JM
DATE: 8/7/17

3753 Howard Hughes Parkway, Suite 105
Las Vegas, NV 89169
Phone: 702.897.4900

TITLE: GOWAN NORTH BUFFALO BRANCH
LONE MOUNTAIN TO WASHBURN

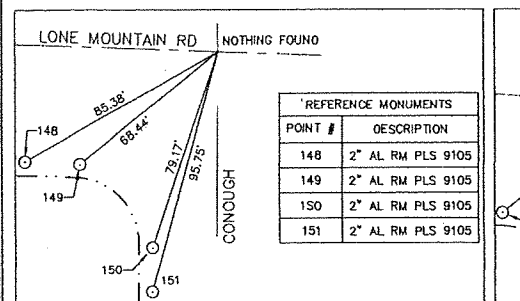
SHEET: SURVEY CONTROL PLAN

SC-2
7 of 89
DRAWING NO.
731-94

RECORD
LAS VEGAS PAVING CORP.
Jeff Anderson
As-Built

FOR GOWAN NORTH BUFFALO BRANCH STORM DRAIN PROJECT

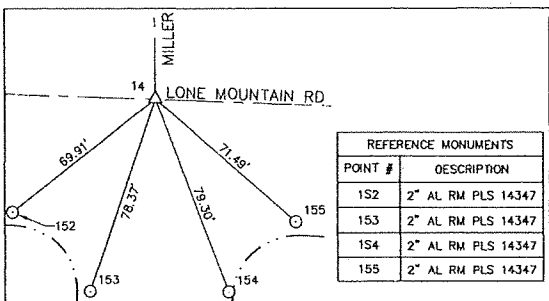
SECTION 33 OF TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA



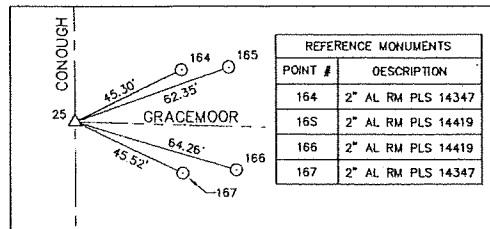
REFERENCE MONUMENTS	
POINT #	DESCRIPTION
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149	2" AL RM PLS 9105
150	2" AL RM PLS 9105
151	2" AL RM PLS 9105

LEGEND

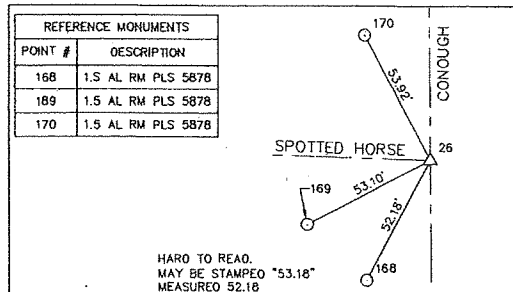
△	FOUND MONUMENT AS NOTED
○	FOUND REFERENCE MONUMENT AS NOTED
RM	REFERENCE MONUMENT
BR	BRASS CAP
AL	ALUMINUM CAP
(m)	MEASURED VALUE
---	CENTERLINE
-----	RIGHT OF WAY LINE
=====	SECTIONLINE



REFERENCE MONUMENTS	
POINT #	DESCRIPTION
1S2	2" AL RM PLS 14347
153	2" AL RM PLS 14347
1S4	2" AL RM PLS 14347
155	2" AL RM PLS 14347

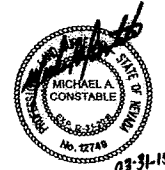


REFERENCE MONUMENTS	
POINT #	DESCRIPTION
164	2" AL RM PLS 14347
165	2" AL RM PLS 14419
166	2" AL RM PLS 14419
167	2" AL RM PLS 14347



REFERENCE MONUMENTS	
POINT #	DESCRIPTION
168	1.5 AL RM PLS 5878
189	1.5 AL RM PLS 5878
170	1.5 AL RM PLS 5878

NOTE
ALL THE DISTANCES SHOWN FROM REFERENCE
MONUMENTS ARE "AS STAMPEO".



SHEET 3 OF 3

 5820 S. Eastern Avenue, Suite 200
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(702) 369-9396 Fax (702) 369-9395
www.stanleygroup.com

Stanley Consultants INC.

[illegible]DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECT MANAGEMENT

DESIGNED BY: JS
DRAWN BY: RM
CHECKED BY: JM
DATE: 9/7/17



3753 Howard Hughes
Las Vegas, NV 89169
Phone: 702-687-8111

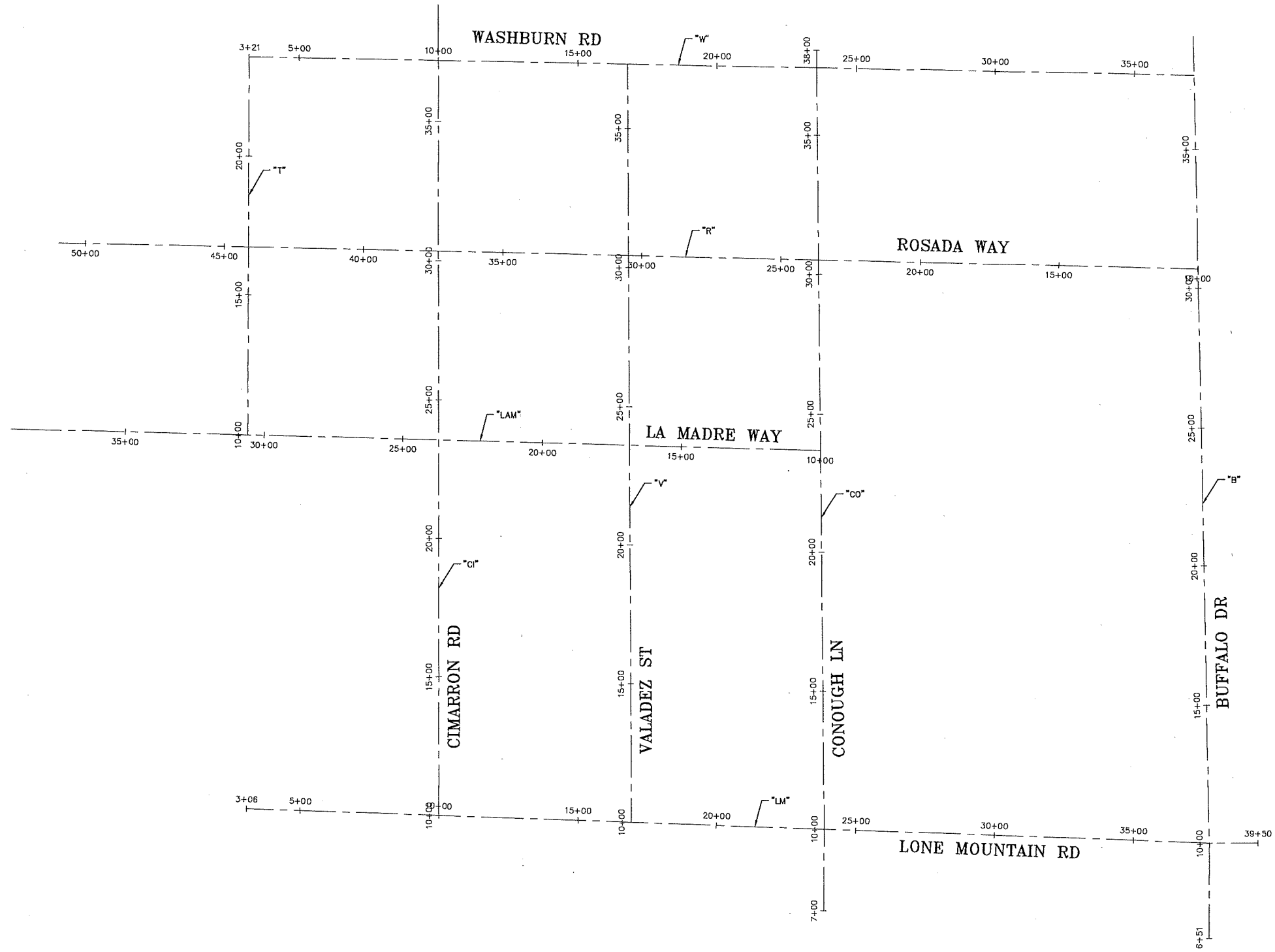
**GOWAN NORTH BUFFALO BRANCH
LONE MOUNTAIN TO WASHBURN**

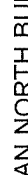
SURVEY CONTROL PLAN

TITLE: _____

SHEET: _____

SC-3
8 of 89
DRAWING NO.
731-94



	TITLE: GOWAN NORTH BUFFALO BRANCH LONE MOUNTAIN TO WASHBURN				DEPARTMENT OF PUBLIC WORKS CAPITAL PROJECT MANAGEMENT		REVISIONS	
	SHEET: ALIGNMENT PLAN				DESIGNED BY: JS DRAWN BY: RM CHECKED BY: JM		DATE: 9/7/17	
Sheet HC-1 9 of 89 DRAWING NO. 731-94		3250 Montebello Parkway, Suite 105 Las Vegas, NV 89168 Phone: 702-897-8100						

"B"				
STATION	NORTHING	EASTING	DISTANCE	BEARING
6+51.49 POB	655153.39	241470.00		
			348.509	N 0° 20' 24" E
10+00.00 PT	655501.90	241472.07		
			1381.007	N 0° 55' 52" W
23+81.01 PT	656882.72	241449.62		
			689.950	N 0° 55' 43" W
30+70.96 PT	657572.58	241438.44		
			690.331	N 0° 57' 15" W
37+61.29 PT	658262.82	241426.95		
			140.202	N 0° 56' 11" W
39+01.49 POB	658403.00	241424.65		

"CI"				
STATION	NORTHING	EASTING	DISTANCE	BEARING
10+00.00 POB	655604.52	238699.02		
			2713.655	N 0° 16' 39" E
37+13.65 PT	658318.14	238712.16		
			203.564	N 0° 16' 03" E
39+17.22 POB	658521.70	238713.11		

"CO"				
STATION	NORTHING	EASTING	DISTANCE	BEARING
7+00.00 POB	655253.22	240082.92		
			300.000	N 0° 30' 08" E
10+00.00 PT	655553.21	240085.54		
			342.343	N 0° 20' 05" W
13+42.34 PT	655895.55	240083.54		
			310.254	N 0° 20' 05" W
16+52.60 PT	656205.79	240081.73		
			715.901	N 0° 20' 05" W
23+68.50 PT	656921.68	240077.55		
			684.454	N 0° 20' 05" W
30+52.95 PT	657606.12	240073.55		
			684.367	N 0° 20' 05" W
37+37.32 PT	658290.48	240069.55		
			62.682	N 0° 20' 05" W
38+00.00 POB	658353.16	240069.19		

"LAM"				
STATION	NORTHING	EASTING	DISTANCE	BEARING
10+00.00 POB	656921.68	240077.55		
			686.268	N 88° 20' 17" W
16+86.27 PT	656941.59	239391.57		
			1700.344	N 88° 20' 41" W
33+86.61 PT	656990.70	237691.94		
			185.448	N 88° 20' 41" W
35+72.06 PT	656996.06	237506.57		
			338.011	N 88° 22' 50" W
39+10.07 POB	657005.61	237168.69		

"LM"				
STATION	NORTHING	EASTING	DISTANCE	BEARING
3+06.36 POB	655630.03	238006.02		
			243.369	S 87° 53' 31" E
5+49.73 PT	655621.08	238249.22		
			450.104	S 87° 53' 31" E
9+99.83 PT	655604.52	238699.02		
			693.604	S 87° 53' 58" E
16+93.43 PT	655579.10	239392.16		
			693.869	S 87° 51' 42" E
23+87.30 PT	655553.21	240085.54		
			693.723	S 87° 54' 03" E
30+81.02 PT	655527.80	240778.80		
			693.747	S 87° 51' 37" E
37+74.77 PT	655501.90	241472.07		
			175.227	N 89° 58' 53" E
39+50.00 POB	655501.95	241647.29		

"R"				
STATION	NORTHING	EASTING	DISTANCE	BEARING
9+99.79 POB	657572.58	241438.44		
			535.880	N 88° 35' 32" W
15+35.67 PT	657585.75	240902.72		
			146.770	N 88° 35' 32" W
16+82.44 PT	657589.35	240756.00		
			682.651	N 88° 35' 32" W
23+65.09 PT	657606.12	240073.55		
			2047.969	N 88° 35' 02" W
44+13.05 PT	657656.74	238026.21		
			682.251	N 88° 35' 01" W
50+95.30 POB	657673.60	237344.17		

"V"				
STATION	NORTHING	EASTING	DISTANCE	BEARING
10+00.00 POB	655579.10	239392.16		
			2725.214	N 0° 01' 39" W
37+25.21 POB	658304.31	239390.86		

"W"				
STATION	NORTHING	EASTING	DISTANCE	BEARING
3+20.74 POB	658332.16	238033.04		
			679.263	S 88° 49' 04" E
10+00.00 PT	658318.14	238712.16		
			678.837	S 88° 49' 45" E
16+78.84 PT	658304.27	239390.86		
			678.837	S 88° 50' 09" E
23+57.68 PT	658290.48	240069.55		
			678.837	S 88° 49' 57" E
30+36.51 PT	658276.65	240748.25		
			678.837	S 88° 49' 57" E
37+15.35 PT	658262.82	241426.95		

REVISIONS				
NO.	DATE	DESCRIPTION	APPD	

DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECT MANAGEMENT



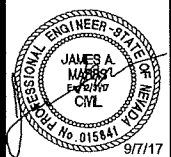
DESIGNED BY: JS
DRAWN BY: RM
CHECKED BY: JM
DATE: 9/7/17

GOWAN NORTH BUFFALO BRANCH
LONE MOUNTAIN TO WASHBURN

TITLE:

HORIZONTAL ALIGNMENT DATA

SHEET:



Sheet
HC-2
10 of 89
DRAWING NO.
731-94

REMOVALS

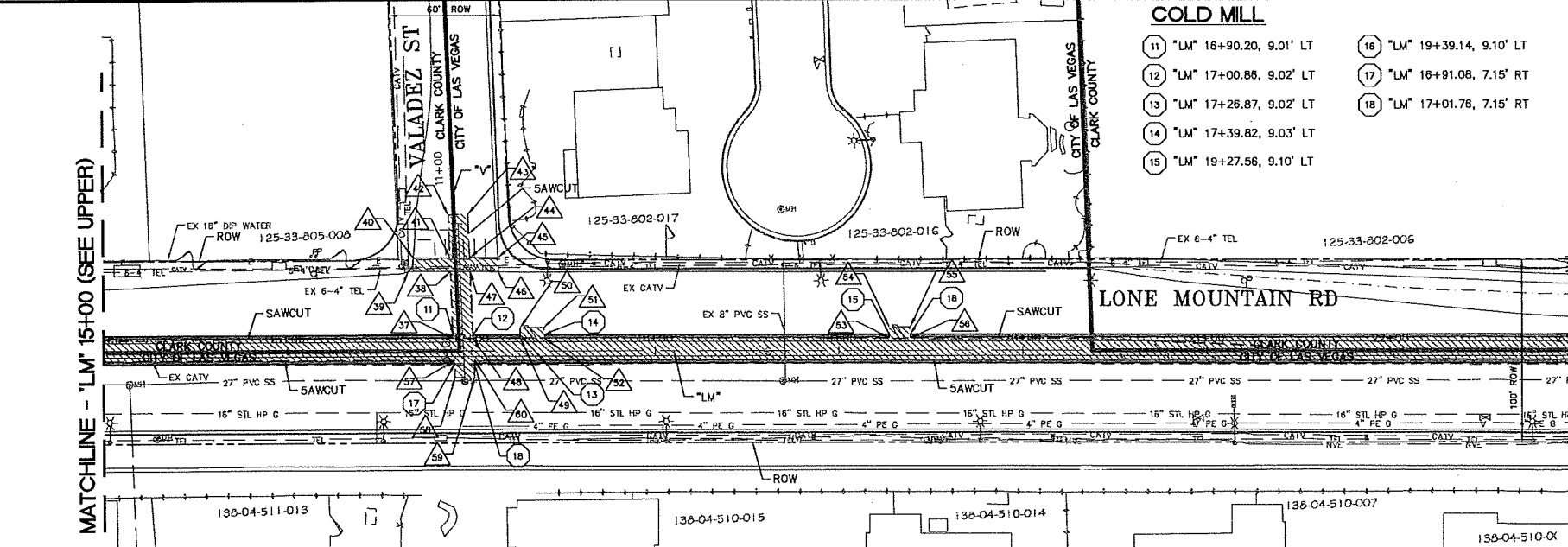
- "LM" 10+09.83, 63.28' LT TO
"LM" 10+67.86, 44.26' LT
- "LM" 10+68.71, 44.08' LT

ROADWAY EXCAVATION

- "LM" 7+23.42, 42.71' LT
- "LM" 7+23.42, 19.69' LT
- "LM" 7+77.03, 19.69' LT
- "LM" 7+77.03, 4.99' RT
- "LM" 8+55.67, 42.66' LT
- "LM" 8+55.67, 64.82' LT
- "LM" 8+68.54, 64.67' LT
- "LM" 8+69.44, 57.84' LT
- "LM" 8+78.19, 57.82' LT
- "LM" 8+78.19, 50.03' LT
- "LM" 9+26.33, 50.15' LT
- "LM" 9+26.33, 42.86' LT
- "CI" 11+05.76, 33.00' LT
- "CI" 11+05.81, 39.74' LT
- "CI" 12+02.16, 40.02' LT
- "CI" 12+02.21, 5.61' LT
- "CI" 10+70.73, 5.56' RT
- "LM" 10+54.21, 16.54' LT
- "LM" 10+90.22, 16.17' LT
- "LM" 10+90.22, 7.18' LT
- "LM" 14+34.63, 7.10' LT
- "LM" 14+34.63, 13.10' LT
- "LM" 14+45.77, 13.09' LT
- "LM" 14+45.77, 7.09' LT
- "LM" 9+34.71, 4.98' RT
- "LM" 9+34.71, 10.98' RT
- "LM" 9+50.26, 10.98' RT
- "LM" 9+50.26, 4.98' RT
- "LM" 10+19.47, 4.98' RT
- "LM" 10+19.47, 25.87' RT
- "LM" 10+33.30, 25.74' RT
- "LM" 10+33.30, 4.98' RT
- "LM" 11+08.17, 4.99' RT
- "LM" 11+08.17, 10.99' RT
- "LM" 11+17.85, 10.99' RT
- "LM" 11+17.85, 4.99' RT

COLD MILL

- "LM" 10+90.22, 9.18' LT
- "LM" 14+34.63, 9.10' LT
- "LM" 14+45.77, 9.09' LT
- "LM" 7+77.03, 6.99' RT
- "LM" 9+34.71, 6.98' RT
- "LM" 9+50.26, 6.98' RT
- "LM" 10+19.47, 6.98' RT
- "LM" 10+33.30, 6.98' RT
- "LM" 11+08.17, 6.99' RT
- "LM" 11+17.85, 7.17' RT



ROADWAY EXCAVATION

- "V" 16+90.27, 7.01' LT
- "V" 10+43.71, 2.89' LT
- "V" 10+44.52, 25.82' LT
- "V" 10+51.89, 22.77' LT
- "V" 10+51.25, 2.89' LT
- "V" 10+74.67, 2.88' LT
- "V" 10+74.66, 7.79' RT
- "V" 10+50.80, 7.78' RT
- "V" 10+50.13, 23.19' RT
- "V" 10+42.58, 23.19' RT
- "V" 10+43.34, 7.78' RT
- "LM" 17+26.87, 7.02' LT
- "LM" 17+26.87, 12.95' LT
- "LM" 17+39.82, 12.92' LT
- "LM" 17+39.82, 7.03' LT
- "LM" 19+27.56, 7.10' LT
- "LM" 17+00.94, 7.02' LT
- "LM" 17+26.87, 13.10' LT
- "LM" 19+27.56, 13.10' LT
- "LM" 19+39.14, 13.10' LT
- "LM" 19+39.14, 7.10' LT
- "LM" 16+91.08, 5.15' RT
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- "LM" 17+01.76, 14.69' RT
- "LM" 17+01.76, 5.15' RT

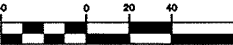
BASIS OF BEARINGS

GRID NORTH AS DEFINED BY THE CENTRAL MERIDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS AND LAS VEGAS HIGH ELEVATION ZONES, NORTH AMERICAN DATUM OF 1983. SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN, THE REFERENCE FRAME BEING NAD 83 (2011) EPOCH 2010

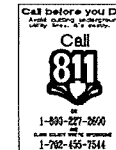
BENCHMARK

CITY OF LAS VEGAS BENCHMARK: 8LV9033E4 RIVET AND PLATE IN TOP OF CURB ON THE NORTH SIDE OF WASHBURN ROAD AT BUFFALO DRIVE, 2008 ADJUSTMENT
ELEV. = 720.418 (METRIC)
2363.57 (US SURVEY FEET)

GRAPHIC SCALE



1 inch = 40 ft.



REMOVAL ITEMS:

- REMOVE RCP
- REMOVE RCB
- REMOVE MANHOLE
- REMOVE DROP INLET
- REMOVE EXISTING RCB PLUC
- REMOVE SANITARY SEWER

GAS LINE NOTES:

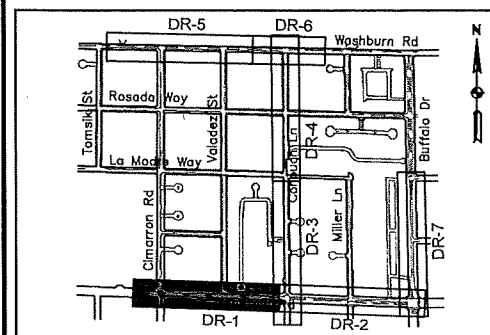
- CAUTION: HIGH PRESSURE GAS LINE
- CALL SOUTHWEST GAS AT 702-651-2111 FOR STANDBY WHEN EXCAVATING OVER OR NEAR HIGH PRESSURE GAS LINES.

NOTES:

- SEE UTILITY PLANS FOR UTILITY REMOVALS AND RELOCATIONS.
- SEE SIGNING AND MARKING PLANS FOR SIGN REMOVAL AND RELOCATION.
- PROTECT IN PLACE OR INSTALL MONUMENT AS REQUIRED.
- EXISTING FEATURES SHALL BE PROTECTED IN PLACE UNLESS OTHERWISE SPECIFIED IN THE CONTRACT SPECIFICATIONS OR DRAWINGS.

LEGEND:

- LIMITS OF ROADWAY EXCAVATION, INCLUDES REMOVAL OF PAVEMENT, CURB & GUTTER, SIDEWALK, DRIVEWAY, VALLEY CUTTER, MEDIAN ISLAND AND STRIPING.
- COLD MILL



KEY MAP

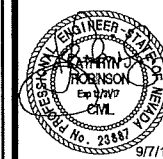
REV	DATE	DESCRIPTION	APPD

DESIGNED BY: JS
DRAWN BY: RM
CHECKED BY: EH
DATE: 9/7/17



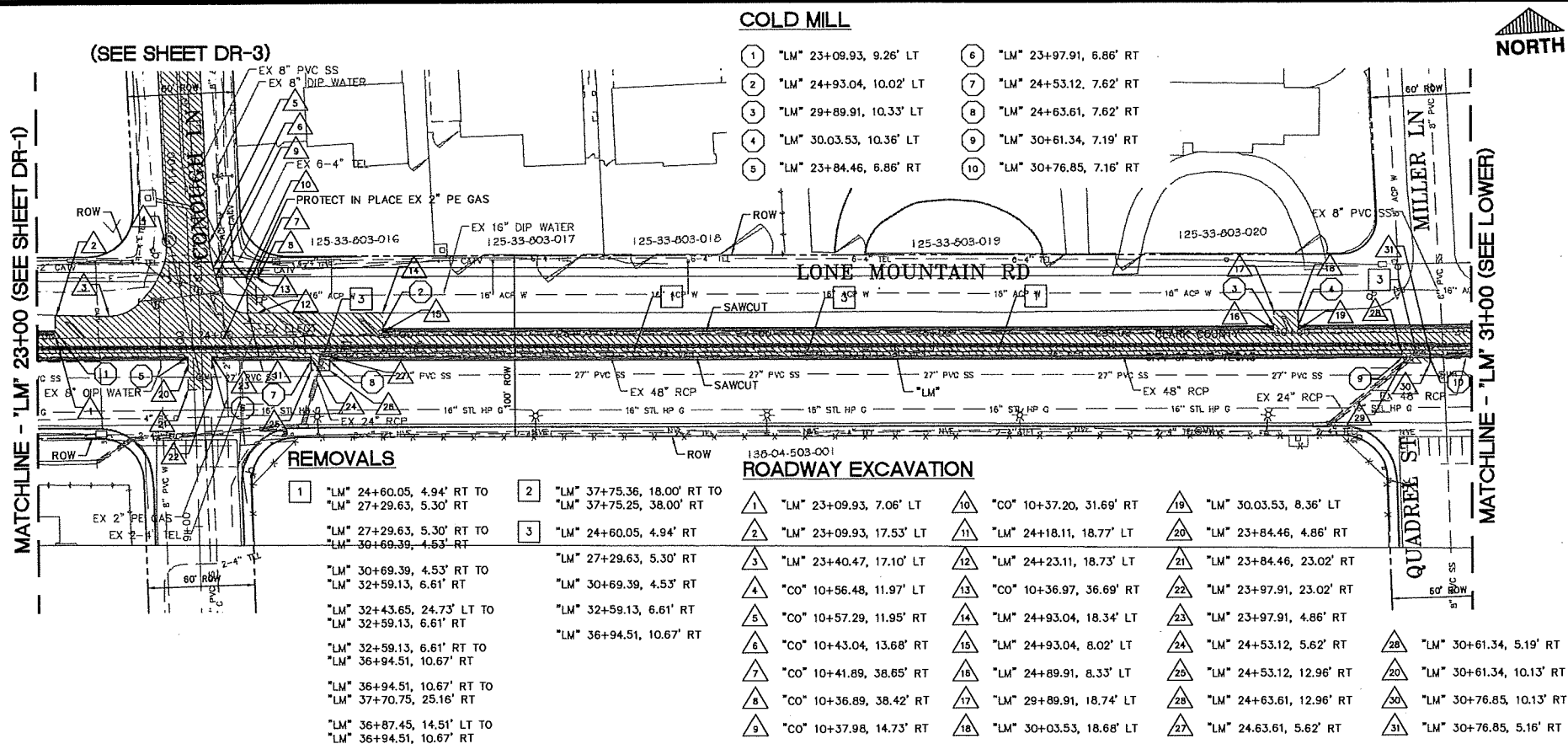
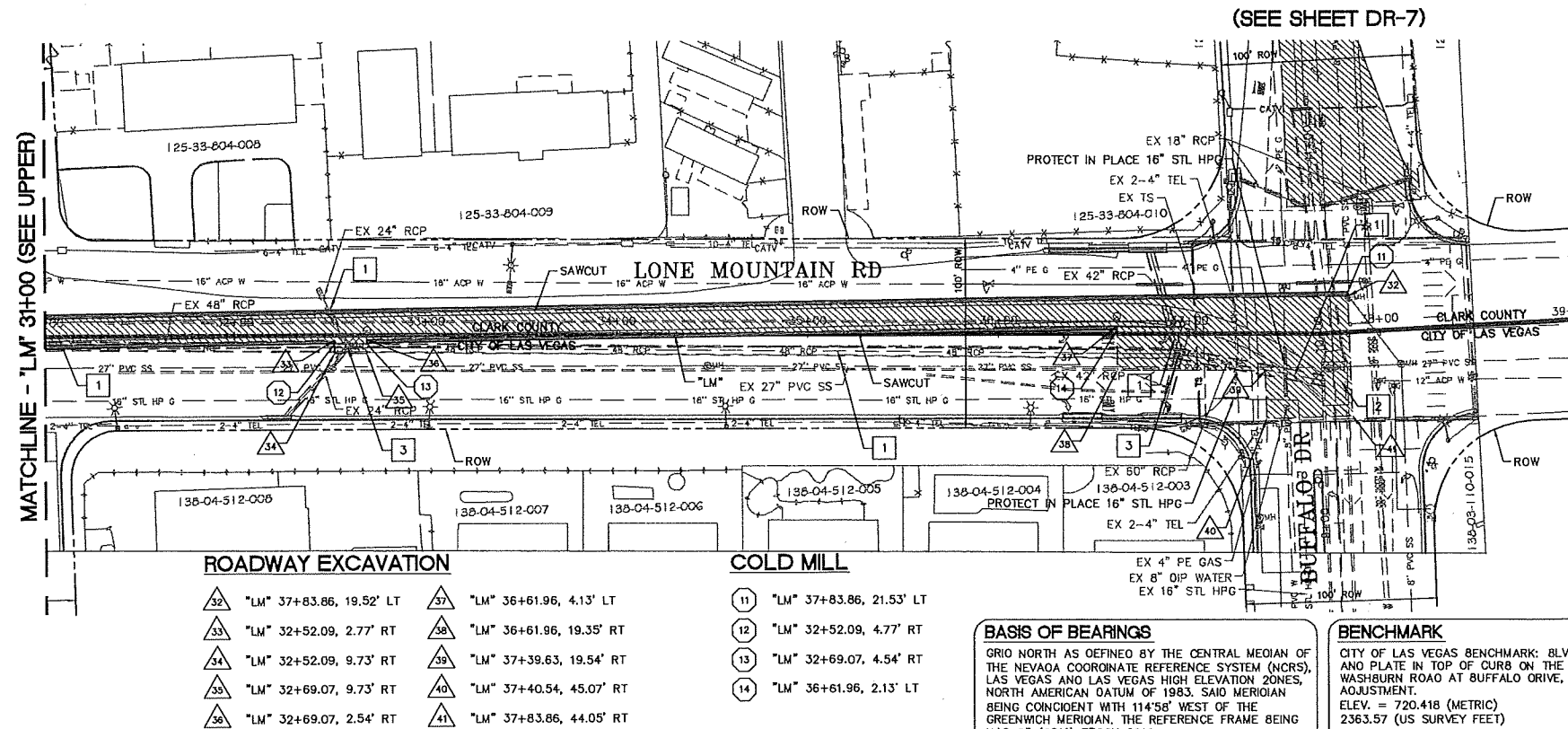
DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECT MANAGEMENT

TITLE: SHEET:



DR-1
11 of 89
DRAWING NO
731-94





9/10/17 LV1008-BUFFALO 0 PROJECT DATA/ADD SHEETS/REMOVAL DR-3.DWG

REMOVALS

- 3 "CO" 11+67.41, 4.65' RT
"CO" 15+08.96, 5.05' RT
- 6 "CO" 10+49.85, 4.52' RT TO
"CO" 11+67.44, 4.53' RT
"CO" 11+67.44, 4.53' RT TO
"CO" 15+08.96, 5.05' RT

ROADWAY EXCAVATION

- | | |
|------------------------------|-----------------------------|
| 1 "CO" 12+74.42, 11.85' LT | 11 "CO" 15+12.58, 35.79' RT |
| 2 "CO" 12+92.48, 14.63' LT | 12 "CO" 15+31.49, 35.81' RT |
| 3 "CO" 13+25.07, 21.90' LT | 13 "CO" 15+31.97, 27.75' RT |
| 4 "CO" 13+46.89, 25.59' LT | 14 "CO" 15+46.36, 11.97' RT |
| 5 "CO" 14+72.10, 12.10' RT | 15 "CO" 15+00.88, 23.07' LT |
| 6 "CO" 14+86.43, 20.09' RT | 16 "CO" 15+00.89, 25.11' LT |
| 7 "CO" 14+92.23, 35.78' RT | 17 "CO" 15+19.74, 22.95' LT |
| 8 "CO" 15+01.96, 35.78' RT | 18 "CO" 15+19.75, 28.09' LT |
| 9 "CO" 14+96.56, 180.19' RT | 19 "CO" 15+39.58, 28.08' LT |
| 10 "CO" 15+07.22, 180.58' RT | 20 "CO" 15+39.57, 22.82' LT |

(SEE SHEET DR-1)

(SEE SHEET DR-2)

REMOVALS

- 3 "CO" 16+43.58, 4.93' RT
"CO" 20+24.79, 5.32' RT
- 6 "CO" 15+08.96, 5.05' RT TO
"CO" 16+43.58, 4.93' RT
"CO" 16+43.58, 4.93' RT TO
"CO" 20+24.79, 5.32' RT
"CO" 15+08.96, 5.05' RT TO
"CO" 15+02.09, 174.24' RT
"CO" 16+43.58, 4.93' RT TO
"CO" 16+45.32, 203.67' LT

ROADWAY EXCAVATION

- | | | |
|------------------------------|-----------------------------|-----------------------------|
| 21 "CO" 16+29.94, 22.84' LT | 28 "CO" 16+47.40, 30.83' LT | 31 "CO" 18+74.79, 22.10' RT |
| 22 "CO" 16+29.99, 30.73' LT | 29 "CO" 16+75.56, 30.89' LT | 32 "CO" 18+89.26, 11.36' RT |
| 23 "CO" 16+40.34, 30.79' LT | 30 "CO" 16+75.41, 23.04' LT | 33 "CO" 20+27.78, 22.89' LT |
| 24 "CO" 16+41.89, 210.87' LT | 31 "CO" 18+13.46, 11.07' LT | 34 "CO" 20+27.79, 24.59' LT |
| 25 "CO" 16+48.75, 210.87' LT | 32 "CO" 18+32.19, 22.23' RT | 35 "CO" 21+05.67, 22.33' LT |

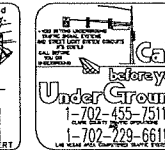
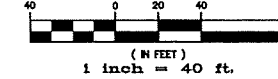
BASIS OF BEARINGS

GRID NORTH AS DEFINED BY THE CENTRAL MEDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS AND LAS VEGAS HIGH ELEVATION ZONES, NORTH AMERICAN DATUM OF 1983, SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN, THE REFERENCE FRAME BEING NAD 83 (2011) EPOCH 2010

BENCHMARK

CITY OF LAS VEGAS BENCHMARK: BLV9033E4 RIVET AND PLATE IN TOP OF CURB ON THE NORTH SIDE OF WASHBURN ROAD AT BUFFALO DRIVE, 2DD8 ADJUSTMENT
ELEV. = 720.41B (METRIC)
2363.57 (US SURVEY FEET)

GRAPHIC SCALE



REMOVAL ITEMS:

- 1 REMOVE RCP
- 2 REMOVE RCB
- 3 REMOVE MANHOLE
- 4 REMOVE DROP INLET
- 5 REMOVE EXISTING RCB PLUG
- 6 REMOVE SANITARY SEWER

GAS LINE NOTES:

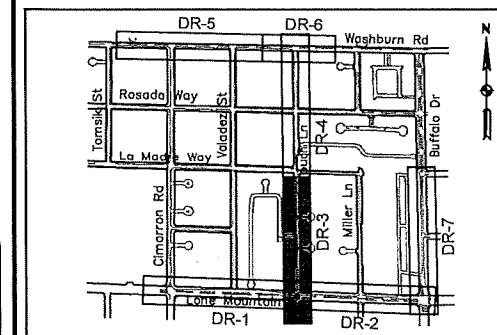
1. CAUTION: HIGH PRESSURE GAS LINE
2. CALL SOUTHWEST GAS AT 702-651-2111 FOR STANDBY WHEN EXCAVATING OVER OR NEAR HIGH PRESSURE GAS LINES.

NOTES:

1. SEE UTILITY PLANS FOR UTILITY REMOVALS AND RELOCATIONS.
2. SEE SIGNING AND MARKING PLANS FOR SIGN REMOVAL AND RELOCATION.
3. PROTECT IN PLACE OR INSTALL MONUMENT AS REQUIRED.
4. EXISTING FEATURES SHALL BE PROTECTED IN PLACE UNLESS OTHERWISE SPECIFIED IN THE CONTRACT SPECIFICATIONS OR DRAWINGS.

LEGEND:

- LIMITS OF ROADWAY EXCAVATION INCLUDES REMOVAL OF PAVEMENT, CURB & GUTTER, SIDEWALK, DRIVEWAY, VALLEY GUTTER, MEDIAN ISLAND AND STRIPING.
- COLD MILL



KEY MAP

REVISIONS	NO.	DATE	DESCRIPTION	APP'D

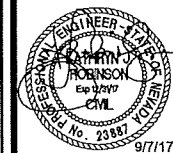
DESIGNED BY: JS
DRAWN BY: RM
CHECKED BY: EH

DATE: 9/7/17



DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECT MANAGEMENT

TITLE: GOWAN NORTH BUFFALO BRANCH
LONE MOUNTAIN TO WASHBURN

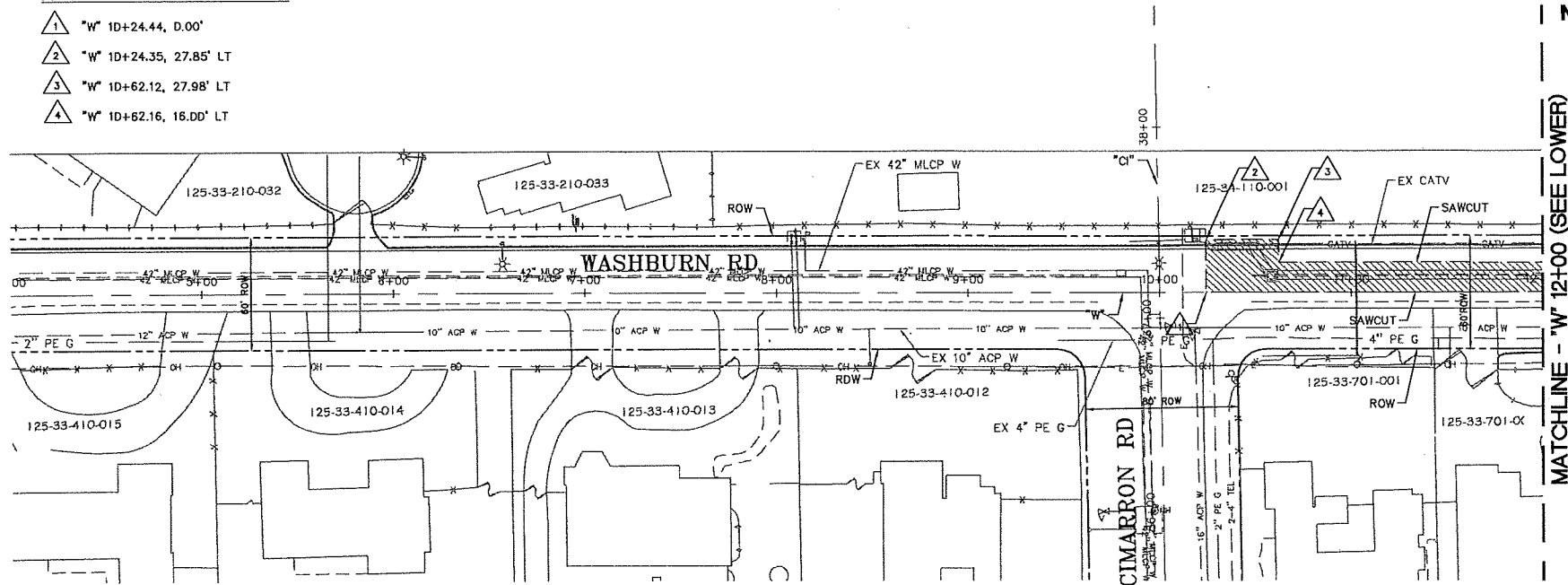


DR-3
13 of 89
DRAWING NO.
731-94



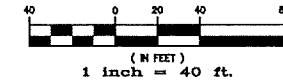
ROADWAY EXCAVATION

- 1 "W" 1D+24.44, D.00'
- 2 "W" 1D+24.35, 27.85' LT
- 3 "W" 1D+62.12, 27.98' LT
- 4 "W" 1D+62.16, 16.00' LT



MATCHLINE - "W" 12+00 (SEE LOWER)

GRAPHIC SCALE



REMOVAL ITEMS:

- 1 REMOVE RCP
- 2 REMOVE RCB
- 3 REMOVE MANHOLE
- 4 REMOVE DROP INLET
- 5 REMOVE EXISTING RCB PLUG
- 6 REMOVE SANITARY SEWER

GAS LINE NOTES:

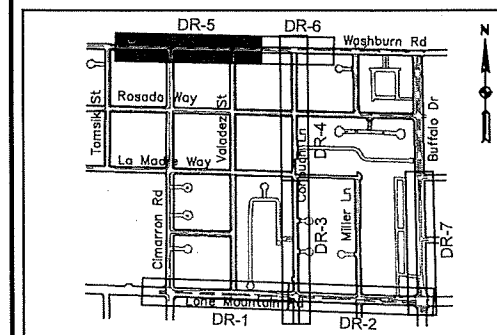
1. CAUTION: HIGH PRESSURE GAS LINE
2. CALL SOUTHWEST GAS AT 702-651-2111 FOR STANDBY WHEN EXCAVATING OVER OR NEAR HIGH PRESSURE GAS LINES.

NOTES:

1. SEE UTILITY PLANS FOR UTILITY REMOVALS AND RELOCATIONS.
2. SEE SIGNING AND MARKING PLANS FOR SIGN REMOVAL AND RELOCATION.
3. PROTECT IN PLACE OR INSTALL MONUMENT AS REQUIRED.
4. EXISTING FEATURES SHALL BE PROTECTED IN PLACE UNLESS OTHERWISE SPECIFIED IN THE CONTRACT SPECIFICATIONS OR DRAWINGS.

LEGEND:

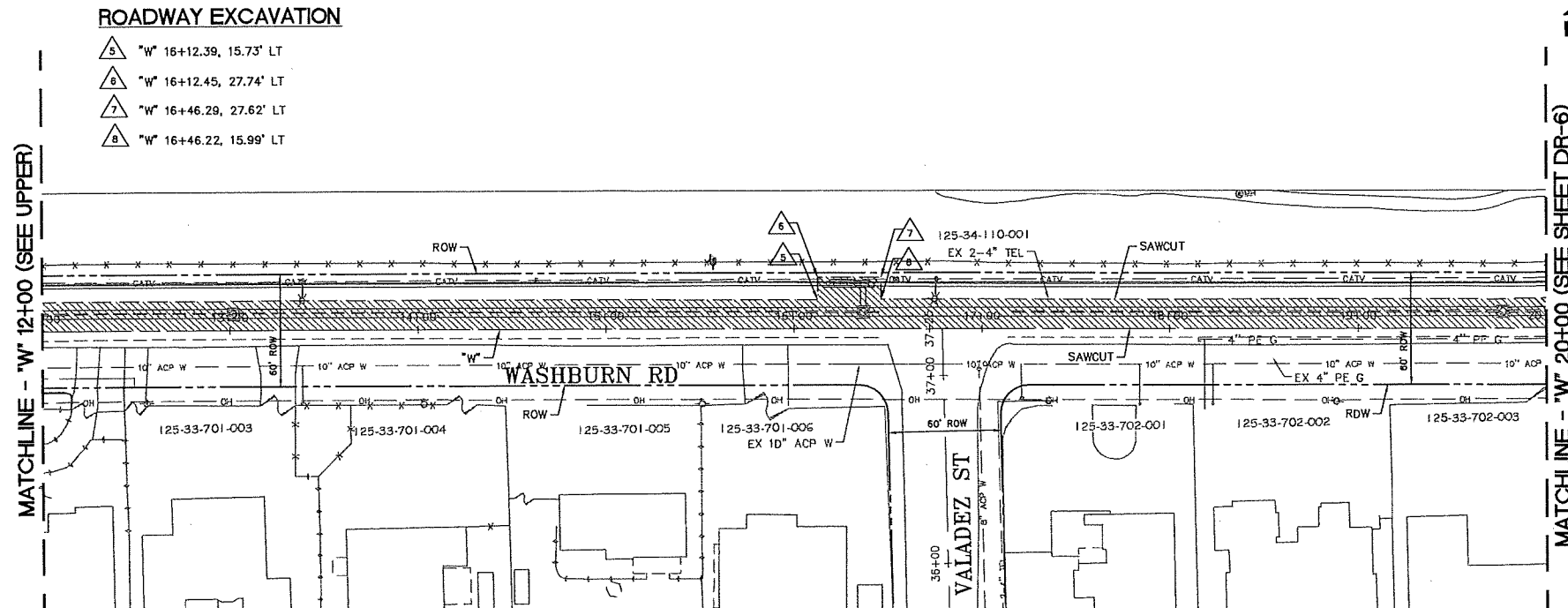
- LIMITS OF ROADWAY EXCAVATION. INCLUDES REMOVAL OF PAVEMENT, CURB & GUTTER, SIDEWALK, DRIVEWAY, VALLEY GUTTER, MEDIAN ISLAND AND STRIPING.
- COLD MILL



KEY MAP

ROADWAY EXCAVATION

- 5 "W" 16+12.39, 15.73' LT
- 6 "W" 16+12.45, 27.74' LT
- 7 "W" 16+46.29, 27.62' LT
- 8 "W" 16+46.22, 15.99' LT



MATCHLINE - "W" 20+00 (SEE SHEET DR-6)

BASIS OF BEARINGS

GRID NORTH AS DEFINED BY THE CENTRAL MEDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS AND LAS VEGAS HIGH ELEVATION ZONES, NORTH AMERICAN DATUM OF 1983. SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN. THE REFERENCE FRAME BEING NAD 83 (2011) EPOCH 2010

BENCHMARK

CITY OF LAS VEGAS BENCHMARK: BLV9D33E4 RIVET AND PLATE IN TOP OF CURB ON THE NORTH SIDE OF WASHBURN ROAD AT BUFFALO DRIVE, 2008 ADJUSTMENT.
ELEV. = 720.418 (METRIC)
2363.57 (US SURVEY FEET)

NO.	DATE	DESCRIPTION	APPROVED

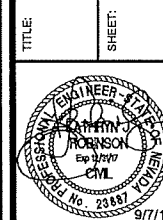
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DRAWN BY: RM
CHECKED BY: EH

DATE: 9/7/17



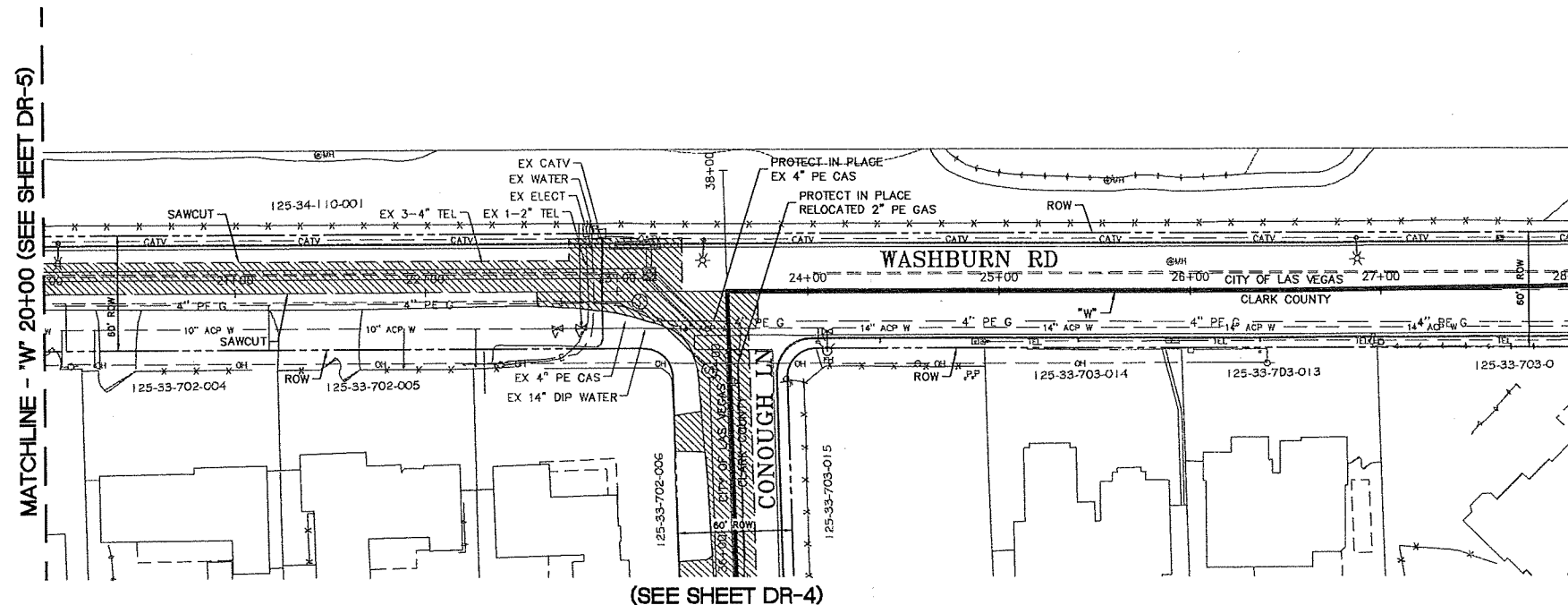
TITLE: GOWAN NORTH BUFFALO BRANCH
LONE MOUNTAIN TO WASHBURN

SHEET: REMOVAL PLAN
"W" 7+00 TO 20+00



DR-5
15 of 89
DRAWING NO.
731-94



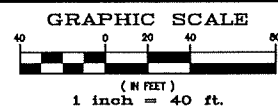


BASIS OF BEARINGS

GRID NORTH AS DEFINED BY THE CENTRAL MEDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS AND LAS VEGAS HIGH ELEVATION ZONES, NORTH AMERICAN DATUM OF 1983. SAIL MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN, THE REFERENCE FRAME BEING NAD 83 (2011) EPOCH 2010

BENCHMARK

CITY OF LAS VEGAS BENCHMARK: 8LV9D33E4 RIVET
AND PLATE IN TOP OF CURB ON THE NORTH SIDE OF
WASHBURN ROAD AT BUFFALO DRIVE, 2008
ADJUSTMENT.
ELEV. = 72D.41B (METRIC)
2383.57 (US SURVEY FEET)



REMOVAL ITEMS:

- 1 REMOVE RCP
- 2 REMOVE RCB
- 3 REMOVE MANHOLE
- 4 REMOVE DROP INLET
- 5 REMOVE EXISTING RCB PLUG
- 6 REMOVE SANITARY SEWER

GAS LINE NOTES:

1. CAUTION: HIGH PRESSURE GAS LINE
2. CALL SOUTHWEST GAS AT 702-651-2111 FOR STANDBY WHEN EXCAVATING OVER OR NEAR HIGH PRESSURE GAS LINES.

NOTES:

1. SEE UTILITY PLANS FOR UTILITY REMOVALS AND RELOCATIONS.
2. SEE SIGNING AND MARKING PLANS FOR SIGN REMOVAL AND RELOCATION.
3. PROTECT IN PLACE OR INSTALL MONUMENT AS REQUIRED.
4. EXISTING FEATURES SHALL BE PROTECTED IN PLACE UNLESS OTHERWISE SPECIFIED IN THE CONTRACT SPECIFICATIONS OR DRAWINGS.

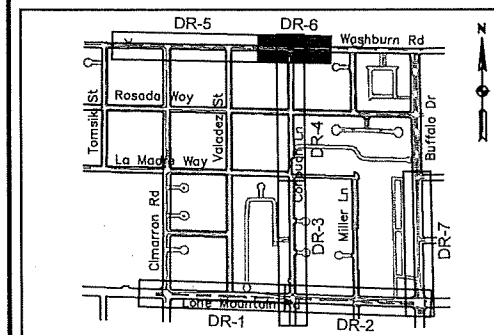
LEGEND:



LIMITS OF ROADWAY EXCAVATION. INCLUDES REMOVAL OF PAVEMENT, CURB & GUTTER, SIDEWALK, DRIVEWAY, VALLEY GUTTER, MEDIAN ISLAND AND STRIPING.



COLD MILL



KEY MAP

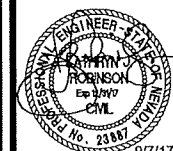
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CAPITAL PROJECT MANAGEMENT

DESIGNED BY: JS
DRAWN BY: RM
CHECKED BY: EH

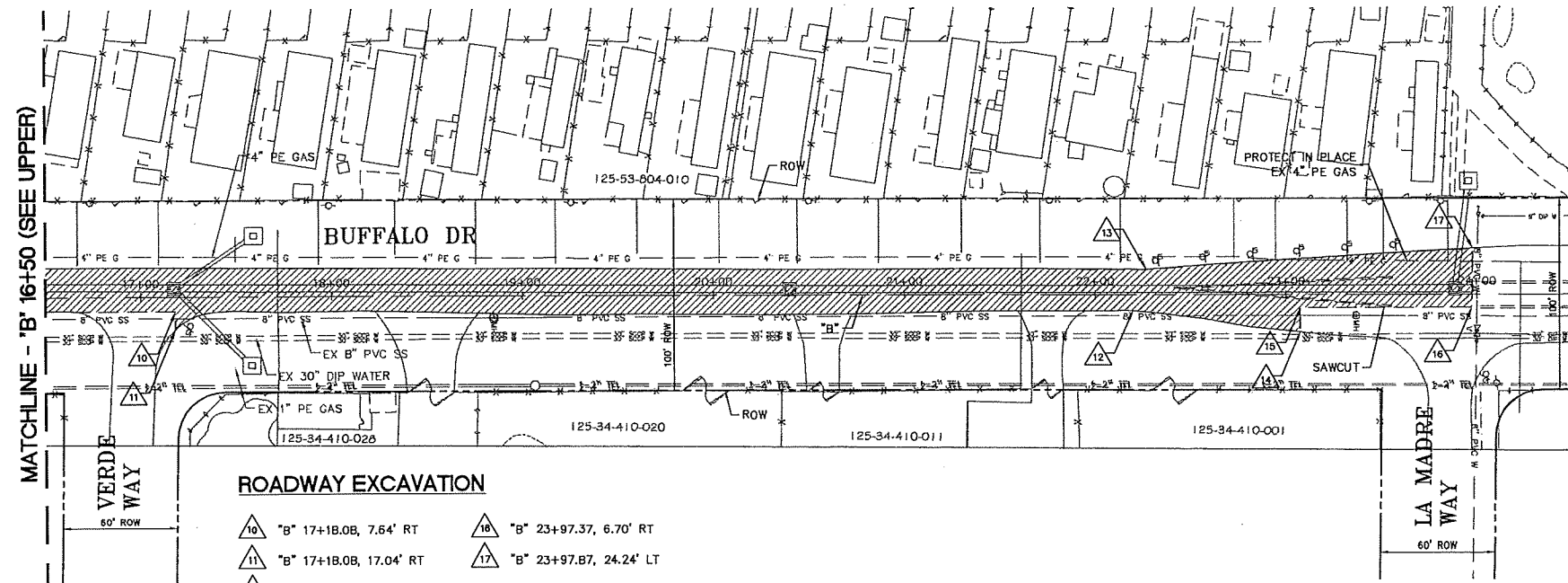
3753 Howard Hughes Parkway, Suite 135
Las Vegas, NV 89169

**GOWAN NORTH BUFFALO BRANCH
LONE MOUNTAIN TO WASHBURN**

REMOVAL PLAN
"W" 20+00 TO 28+00



DR-6
16 of 89
DRAWING NO.
731-94



ROADWAY EXCAVATION

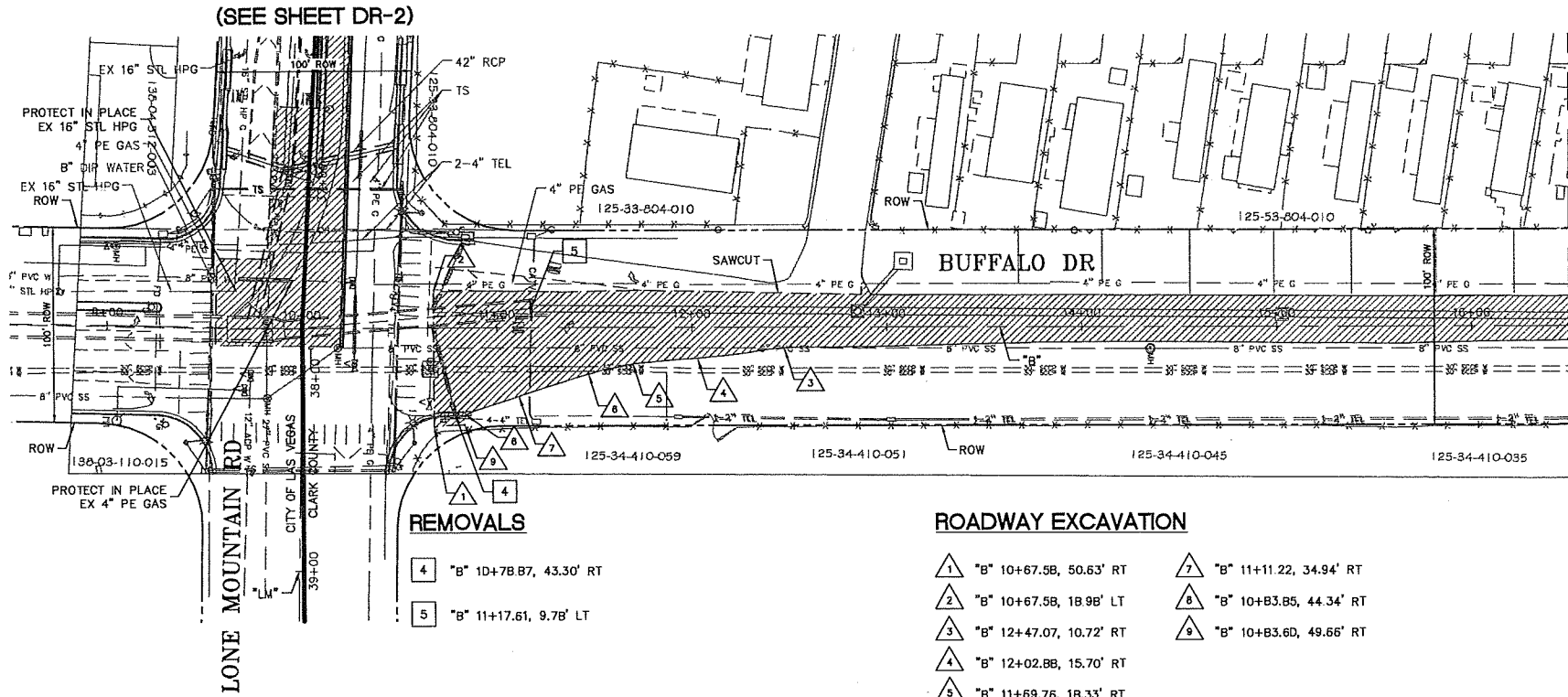
- | | |
|----------------------------|----------------------------|
| 10 "B" 17+18.08, 7.64' RT | 16 "B" 23+97.37, 6.70' RT |
| 11 "B" 17+18.08, 17.04' RT | 17 "B" 23+97.87, 24.24' LT |
| 12 "B" 22+19.68, 8.21' RT | |
| 13 "B" 22+26.74, 13.18' LT | |
| 14 "B" 23+07.56, 19.34' RT | |
| 15 "B" 23+07.56, 6.71' RT | |

BASIS OF BEARINGS

GRID NORTH AS DEFINED BY THE CENTRAL MEDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS AND LAS VEGAS HIGH ELEVATION ZONES, NORTH AMERICAN DATUM OF 1983, SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN, THE REFERENCE FRAME BEING NAD 83 (2011) EPOCH 2010

BENCHMARK

CITY OF LAS VEGAS BENCHMARK: BLV9D33E4 RIVET AND PLATE IN TOP OF CURB ON THE NORTH SIDE OF WASHBURN ROAD AT BUFFALO DRIVE, 20DB ADJUSTMENT, ELEV. = 720.418 (METRIC) 2363.57 (US SURVEY FEET)



REMOVALS

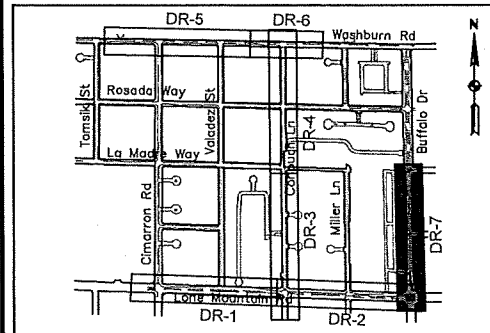
- | |
|---------------------------|
| 4 "B" 1D+78.87, 43.30' RT |
| 5 "B" 11+17.61, 9.78' LT |

ROADWAY EXCAVATION

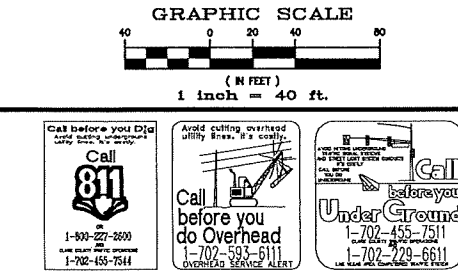
- | | |
|---------------------------|---------------------------|
| 1 "B" 10+67.58, 50.63' RT | 7 "B" 11+11.22, 34.94' RT |
| 2 "B" 10+67.58, 18.98' LT | 8 "B" 10+B3.85, 44.34' RT |
| 3 "B" 12+47.07, 10.72' RT | 9 "B" 10+B3.6D, 49.66' RT |
| 4 "B" 12+02.88, 15.70' RT | |
| 5 "B" 11+69.76, 18.33' RT | |
| 6 "B" 11+46.95, 23.63' RT | |



MATCHLINE - 'B' 16+50 (SEE LOWER)



KEY MAP



REMOVAL ITEMS:

- 1 REMOVE RCP
- 2 REMOVE RCB
- 3 REMOVE MANHOLE
- 4 REMOVE DROP INLET
- 5 REMOVE EXISTING RCB PLUG
- 6 REMOVE SANITARY SEWER

GAS LINE NOTES:

1. CAUTION: HIGH PRESSURE GAS LINE
2. CALL SOUTHWEST GAS AT 702-651-2111 FOR STANDBY WHEN EXCAVATING OVER OR NEAR HIGH PRESSURE GAS LINES.

NOTES:

1. SEE UTILITY PLANS FOR UTILITY REMOVALS AND RELOCATIONS.
2. SEE SIGNING AND MARKING PLANS FOR SIGN REMOVAL AND RELOCATION.
3. PROTECT IN PLACE OR INSTALL MONUMENT AS REQUIRED.
4. EXISTING FEATURES SHALL BE PROTECTED IN PLACE UNLESS OTHERWISE SPECIFIED IN THE CONTRACT SPECIFICATIONS OR DRAWINGS.

LEGEND:

- LIMITS OF ROADWAY EXCAVATION, INCLUDES REMOVAL OF PAVEMENT, CURB & GUTTER, SIDEWALK, DRIVEWAY, VALLEY GUTTER, MEDIAN ISLAND AND STRIPING.
- COLO MILL

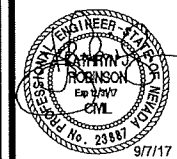
NO.	DATE	DESCRIPTION	APPROVED

DESIGNED BY: JS
DRAWN BY: RM
CHECKED BY: EH
DATE: 9/7/17



TITLE: GOWAN NORTH BUFFALO BRANCH
LONE MOUNTAIN TO WASHBURN

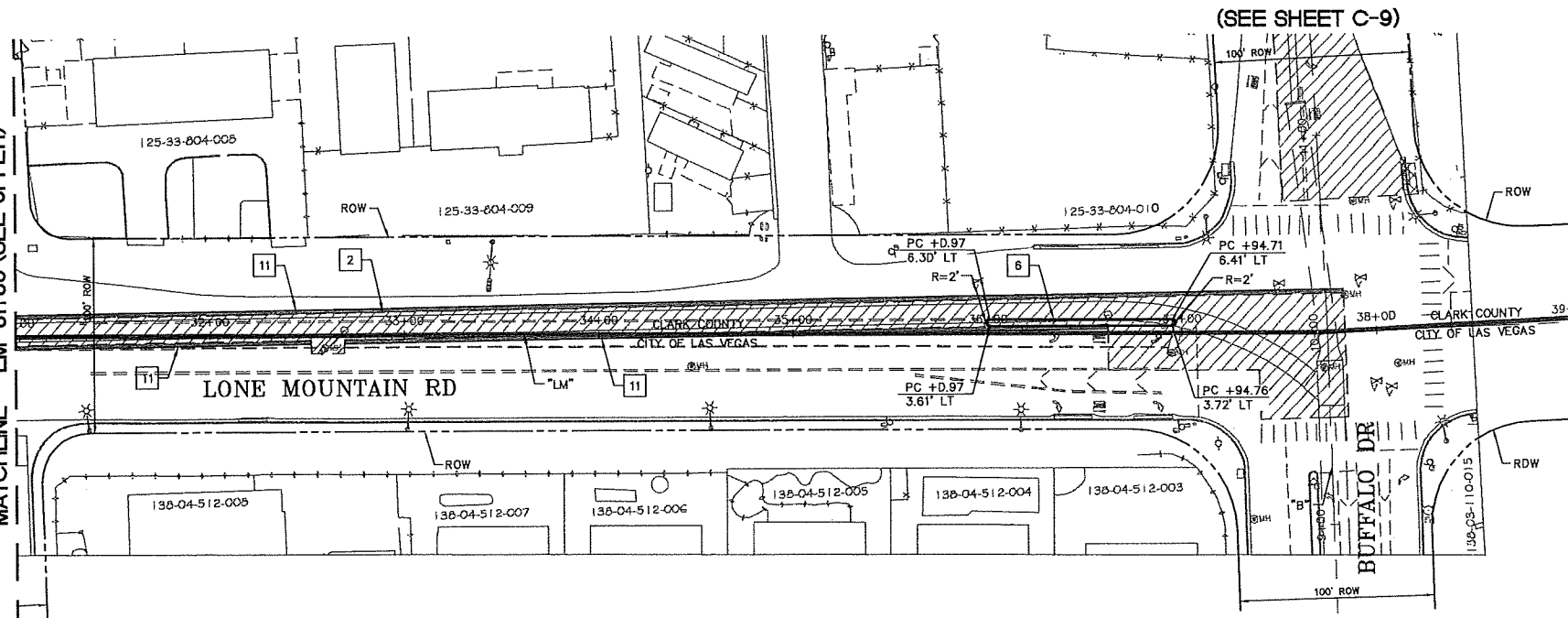
SHEET: REMOVAL PLAN
"B" 9+00 TO 24+50



DR-7
17 of 89
DRAWING NO.
731-94

9/10/17 J:\31688-BUFFALO-SD PROJECT\DATA\ADD\SHEETS\CONSTRUCTION\2.DWG

MATCHLINE - "LM" 31+00 (SEE UPPER)



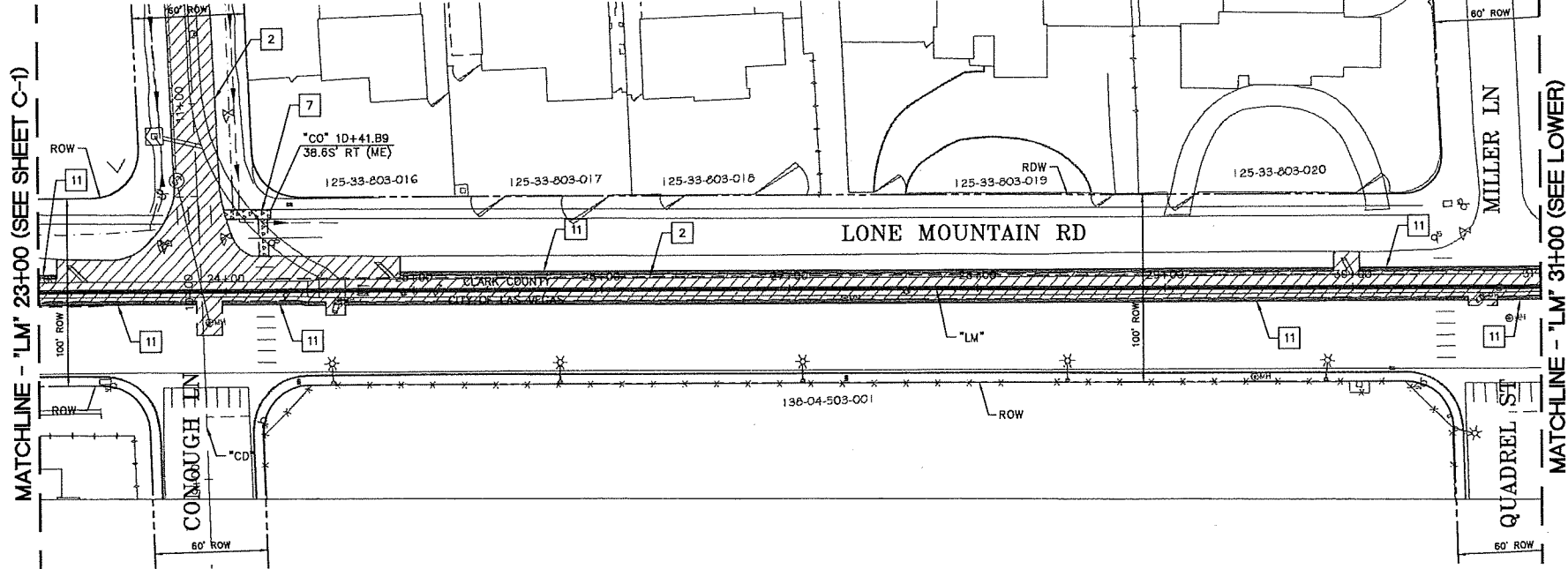
BASIS OF BEARINGS
GRID NORTH AS DEFINED BY THE CENTRAL MEDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS AND LAS VEGAS HIGH ELEVATION ZONES, NORTH AMERICAN DATUM OF 1983, SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN, THE REFERENCE FRAME BEING NAD 83 (2011) EPOCH 2010

BENCHMARK
CITY OF LAS VEGAS BENCHMARK: 8LV9D33E4 RIVET AND PLATE IN TOP OF CURB ON THE NORTH SIDE OF WASHBURN ROAD AT BUFFALO DRIVE, 2008
ELEV. = 720.418 (METRIC)
2363.57 (US SURVEY FEET)



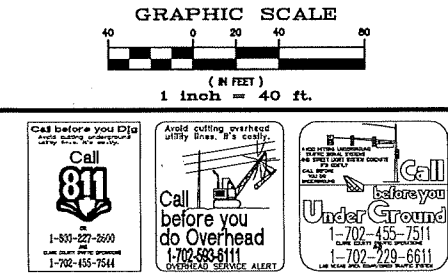
(SEE SHEET C-9)

(SEE SHEET C-3)



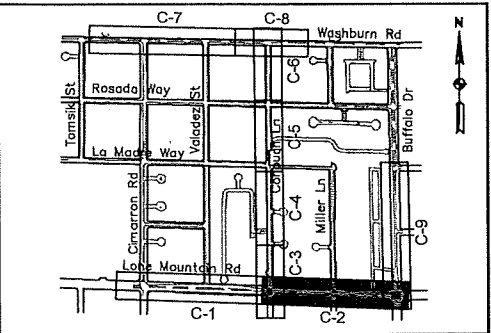
MATCHLINE - "LM" 23+00 (SEE SHEET C-1)

MATCHLINE - "LM" 31+00 (SEE LOWER)



- CONSTRUCTION NOTES:**
1. CONSTRUCT EARTHEN SWALE PER PLAN. DISTURBED LANDSCAPE SHALL BE REPLACED IN KIND.
 2. RECONSTRUCT PAVEMENT - SEE TY SHEETS FOR STRUCTURAL SECTION. SEE DR SHEETS FOR LIMITS OF PAVEMENT REMOVAL. THE LIMITS OF NEW PAVEMENT SHALL MATCH THE LIMITS OF SAWCUT (STA/OFF) OF THE EXISTING PAVEMENT.
 3. CONSTRUCT LANDSCAPE, TYPE L CONCRETE CURB, AND GUTTER PER USDOCA DWG. NO. #216. THIS WORK IS ASSOCIATED WITH INSTALLATION OF PROPOSED DROP INLETS AND WATER METERS AND SHALL NOT BE PAID FOR SEPARATELY.
 4. CONSTRUCT CONCRETE SIDEWALK, TYPE L CURB, AND GUTTER PER USDOCA DWG. NO. #234 AND #216. THIS WORK IS ASSOCIATED WITH INSTALLATION OF PROPOSED DROP INLETS AND WATER METERS AND SHALL NOT BE PAID FOR SEPARATELY.
 5. CONSTRUCT CONCRETE VALLEY GUTTER PER USDOCA DWG. NO. 22B.
 6. CONSTRUCT RAISED MEDIAN ISLAND PER USDOCA DWG. NO. 218, PCC MEDIAN.
 7. CONSTRUCT PEDESTRIAN PAVEMENT; SEE SHEET TY-3.
 8. CONSTRUCT MODIFIED APRON AND GRADING PER DETAIL ON SHEET D-11.
 9. RECONSTRUCT PAVED DRIVE, SEE TY SHEETS.
 10. CONSTRUCT 4" AC CURB; SEE SHEET TY-3.
 11. PLACE 2" PBS - SEE TY SHEETS FOR STRUCTURAL SECTION. SEE DR SHEETS FOR LIMITS OF COLD MILLING. THE LIMITS OF 2" PBS SHALL MATCH THE LIMITS OF COLD MILLING OF THE EXISTING PAVEMENT.

- LEGEND:**
- FLOWLINE
 - SWALE CROSS SECTION
 - SAWCUT LINE
 - LIMIT OF PAVEMENT REPLACEMENT
 - LIMIT OF CONCRETE SIDEWALK, TYPE L CURB AND GUTTER REPLACEMENT
 - LIMIT OF CONCRETE VALLEY CUTTER REPLACEMENT
 - LIMIT OF SAFE ROUTE TO SCHOOL PAVEMENT REPLACEMENT
 - 2" PBS
 - (ME) MATCH EXISTING

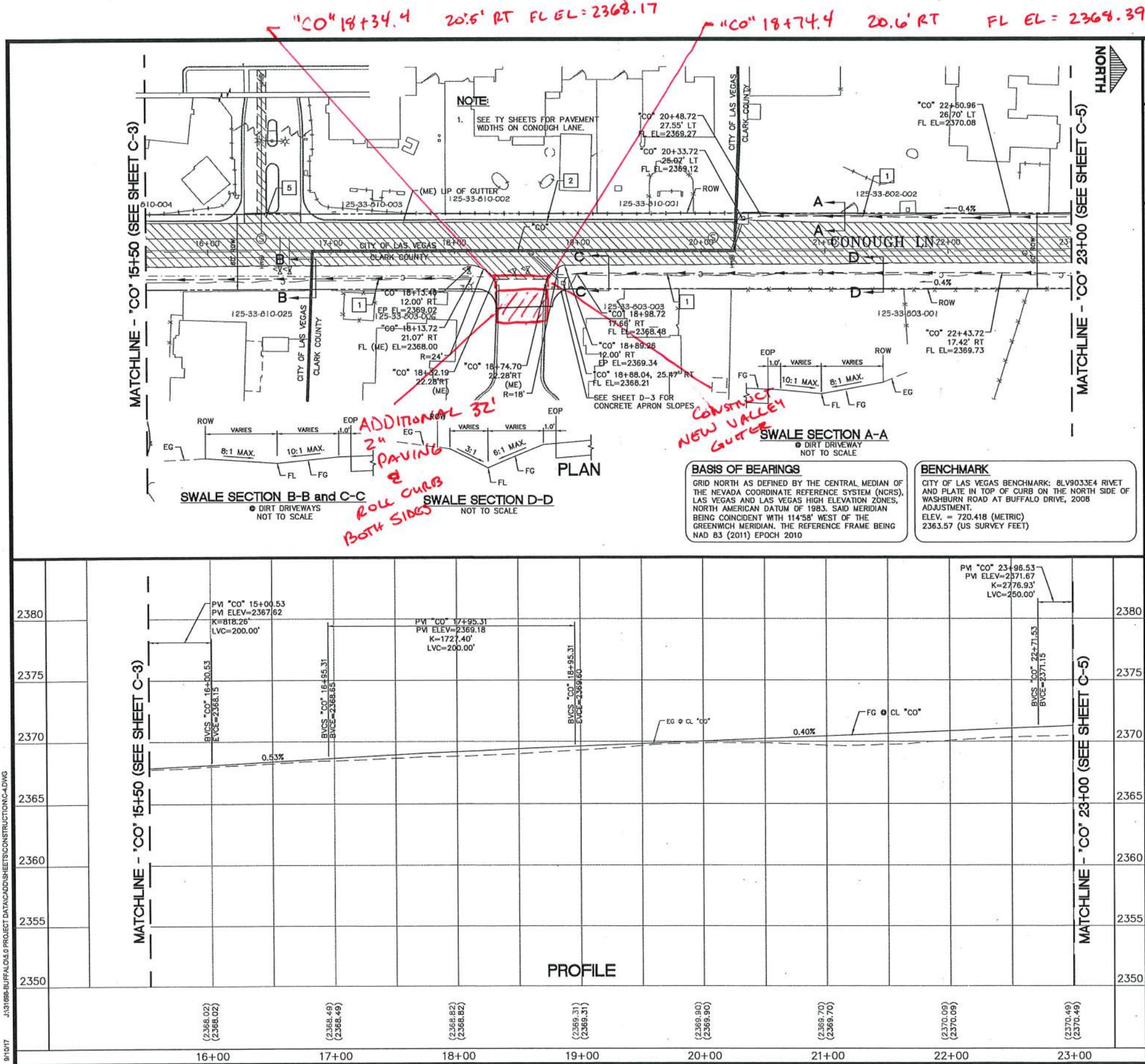


KEY MAP

REVISIONS				DEPARTMENT OF PUBLIC WORKS CAPITAL PROJECT MANAGEMENT			
NO.	DATE	DESCRIPTION	APPD	DESIGNED BY: NP	DRAWN BY: RM	CHECKED BY: JAM	DATE: 9/7/17
				3125 Toward Virginia Parkway, Suite 135 Las Vegas, NV 89169 Phone: 702-697-6100			
				GOWAN NORTH BUFFALO BRANCH LONE MOUNTAIN TO WASHBURN			
				CONSTRUCTION PLAN "LM" 23+00 TO 39+00			
				C-2 19 of 89 DRAWING NO. 731-94			



9/10/17 J:\31688-BUFFALO\5.0 PROJECT DATA\ADD SHEETS\CONSTRUCTION\4.DWG



GRAPHIC SCALE
1 inch = 40 ft.

CONSTRUCTION NOTES:

LEGEND:

KEY MAP

REVISIONS

DESIGNED BY: NP
DRAWN BY: RM
CHECKED BY: JAM
DATE: 9/7/17

DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECT MANAGEMENT

GOWAN NORTH BUFFALO BRANCH
LONE MOUNTAIN TO WASHBURN

CONSTRUCTION PLAN AND RPROFILE
"CO" 15+50 TO 23+00

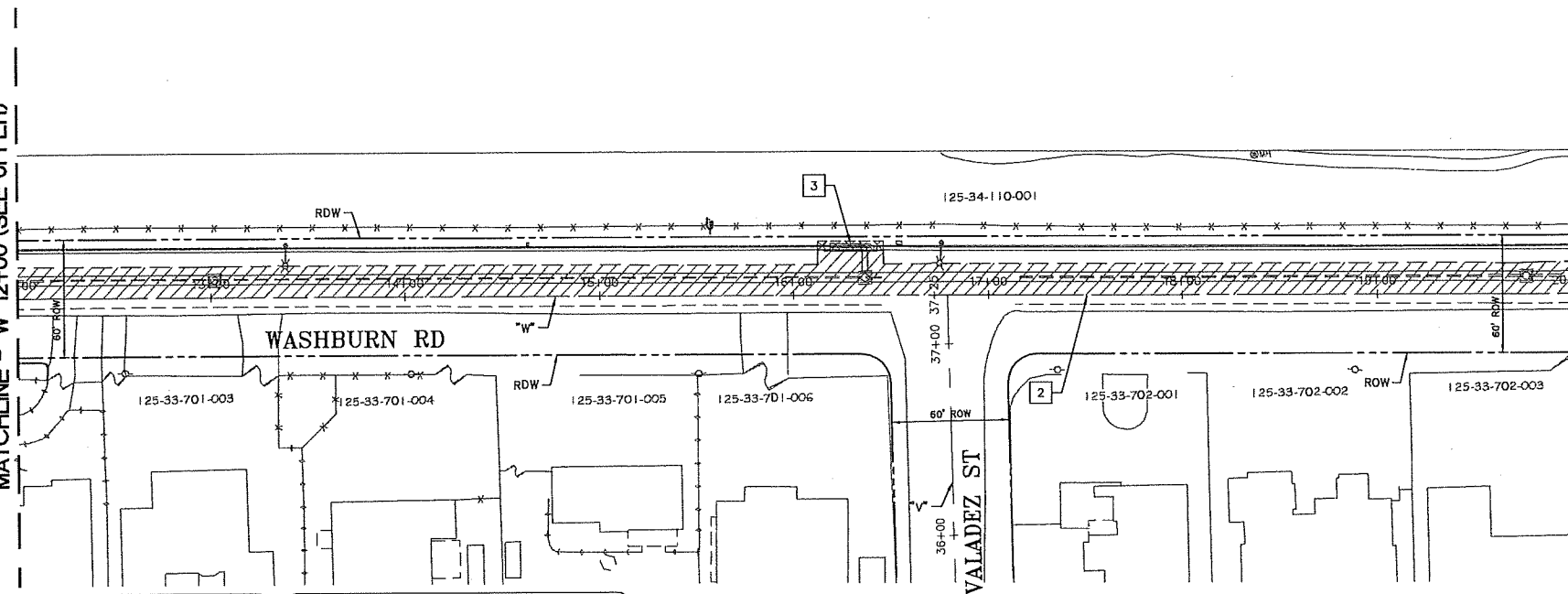
C-4
21 of 89
DRAWING NO.
731-94

9/7/17

RECORD
LAS VEGAS PAVING CORP.
Jeff Anderson
As-Built

9/10/17 J:\31008-BUFFALO-SD PROJECT\DATA\CD\SHS\CONSTRUCTION\CD7.DWG

MATCHLINE - "W" 12+00 (SEE UPPER)



BASIS OF BEARINGS

GRID NORTH AS DEFINED BY THE CENTRAL MEDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS AND LAS VEGAS HIGH ELEVATION ZONES, NORTH AMERICAN DATUM OF 1983, SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN, THE REFERENCE FRAME BEING NAD 83 (2011) EPOCH 2010

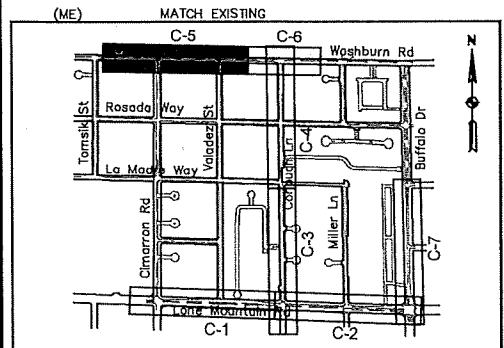
BENCHMARK

CITY OF LAS VEGAS BENCHMARK: BLV9D33E4 RIVET AND PLATE IN TOP OF CURB ON THE NORTH SIDE OF WASHBURN ROAD AT BUFFALO DRIVE, 2008 ADJUSTMENT, ELEV. = 720.418 (METRIC) 2363.57 (US SURVEY FEET)



MATCHLINE - "W" 20+00 (SEE SHEET C-8)

- LEGEND:**
- FLOWLINE
 - SWALE CROSS SECTION
 - SAWCUT LINE
 - LIMIT OF PAVEMENT REPLACEMENT
 - LIMIT OF CONCRETE SIDEWALK, TYPE L CURB AND GUTTER REPLACEMENT
 - LIMIT OF CONCRETE VALLEY GUTTER REPLACEMENT
 - LIMIT OF SAFE ROUTE TO SCHOOL PAVEMENT REPLACEMENT
 - 2" PBS



KEY MAP

GRAPHIC SCALE



1 inch = 40 ft.



CONSTRUCTION NOTES:

1. CONSTRUCT EARTHEN SWALE PER PLAN. DISTURBED LANDSCAPE SHALL BE REPLACED IN KIND.
2. RECONSTRUCT PAVEMENT - SEE TY SHEETS FOR STRUCTURAL SECTION. SEE DR SHEETS FOR LIMITS OF PAVEMENT REMOVAL. THE LIMITS OF NEW PAVEMENT SHALL MATCH THE LIMITS OF SAWCUT (STA/OFF) OF THE EXISTING PAVEMENT.
3. CONSTRUCT LANDSCAPE, TYPE L CONCRETE CURB, AND GUTTER PER USDCCA DWG. NO. #216. THIS WORK IS ASSOCIATED WITH INSTALLATION OF PROPOSED DROP INLETS AND WATER METERS AND SHALL NOT BE PAID FOR SEPARATELY.
4. CONSTRUCT CONCRETE SIDEWALK, TYPE L CURB, AND GUTTER PER USDCCA DWG. NO. #216. THIS WORK IS ASSOCIATED WITH INSTALLATION OF PROPOSED DROP INLETS AND WATER METERS AND SHALL NOT BE PAID FOR SEPARATELY.
5. CONSTRUCT CONCRETE VALLEY CUTTER PER USDCCA DWG. NO. 228.
6. CONSTRUCT RAISED MEDIAN ISLAND PER USDCCA DWG. NO. 218, PCC MEDIAN.
7. CONSTRUCT PEDESTRIAN PAVEMENT; SEE SHEET TY-3.
8. CONSTRUCT MODIFIED APRDN AND GRADING PER DETAIL DN SHEET D-11.
9. RECONSTRUCT PAVED DRIVE, SEE TY SHEETS.
10. CONSTRUCT 4" AC CURB; SEE SHEET TY-3.
11. PLACE 2" PBS - SEE TY SHEETS FOR STRUCTURAL SECTION. SEE DR SHEETS FOR LIMITS OF COLD MILLING. THE LIMITS OF 2" PBS SHALL MATCH THE LIMITS OF COLD MILLING OF THE EXISTING PAVEMENT.

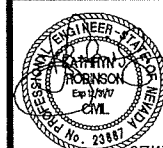
REVISIONS	NO.	DATE	DESCRIPTION	APPD

DESIGNED BY: NP
DRAWN BY: RM
CHECKED BY: JAM
DATE: 9/7/17

3155 Howard Hughes Parkway, Suite 105
Phoenix, AZ 85018
Phone: 702-997-4100

GOWAN NORTH BUFFALO BRANCH
LONE MOUNTAIN TO WASHBURN

CONSTRUCTION PLAN
"W" 7+00 TO 20+00



C-7

24 of 89
DRAWING NO.
731-94



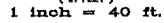


GRID NORTH AS DEFINED BY THE CENTRAL MERIDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS AND LAS VEGAS HIGH ELEVATION ZONES, NORTH AMERICAN DATUM OF 1983, SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN. THE REFERENCE FRAME BEING NAD 83 (2011) EPOCH 2010

CITY OF LAS VEGAS BENCHMARK: BLV9033E4 RIVET
AND PLATE IN TOP OF CURB ON THE NORTH SIDE OF
WASHBURN ROAD AT BUFFALO DRIVE, 200B
ADJUSTMENT.
ELEV. = 720.41B (METRIC)
2363.57 (US SURVEY FEET)



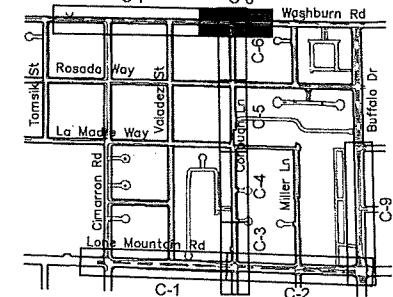
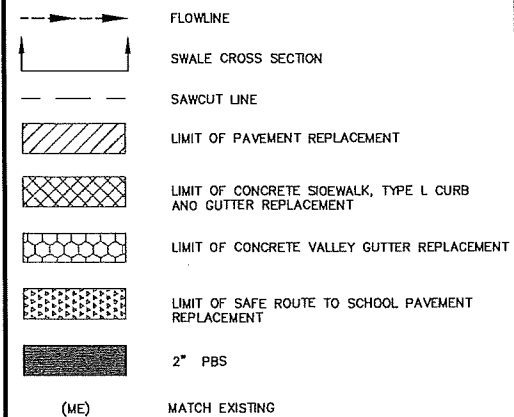
NORTH



CONSTRUCTION NOTES:

1. CONSTRUCT EARTHEN SWALE PER PLAN. DISTURBED LANDSCAPE SHALL BE REPLACED IN KIND.
2. RECONSTRUCT PAVEMENT -- SEE TY SHEETS FOR STRUCTURAL SECTION. SEE OR SHEETS FOR LIMITS OF PAVEMENT REMOVAL. THE LIMITS OF NEW PAVEMENT SHALL MATCH THE LIMITS OF SAWCUT (STA/OFF) OF THE EXISTING PAVEMENT.
3. RECONSTRUCT LANDSCAPE, TYPE L CONCRETE CURB, AND GUTTER PER USODCA OWG NO. #216. THIS WORK IS ASSOCIATED WITH INSTALLATION OF PROPOSED OROP INLETS AND WATER METERS AND SHALL NOT BE PAID FOR SEPARATELY.
4. CONSTRUCT CONCRETE SIDEWALK, TYPE L CURB, AND GUTTER PER USODCA OWG NO. #234 AND #216. THIS WORK IS ASSOCIATED WITH INSTALLATION OF PROPOSED OROP INLETS AND WATER METERS AND SHALL NOT BE PAID FOR SEPARATELY.
5. CONSTRUCT CONCRETE VALLEY GUTTER PER USODCA OWG. NO. 22B.
6. CONSTRUCT RAISED MEDIAN ISLAND PER USODCA OWG. NO. 21B, PCC MEDIAN.
7. CONSTRUCT PEDESTRIAN PAVEMENT; SEE SHEET TY-3.
8. CONSTRUCT MODIFIED APRON AND GRADING PER DETAIL ON SHEET O-11.
9. RECONSTRUCT PAVED DRIVE, SEE TY SHEETS.
10. CONSTRUCT 4" AC CURB; SEE SHEET TY-3.
11. PLACE 2" PBS -- SEE TY SHEETS FOR STRUCTURAL SECTION. SEE DR SHEETS FOR LIMITS OF COLO MILLING. THE LIMITS OF 2" PBS SHALL MATCH THE LIMITS OF COLO MILLING OF THE EXISTING PAVEMENT.

LEGEND:



KEY MAP

[illegible]DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECT MANAGEMENT

DESIGNED BY: NP
DRAWN BY: RM
CHECKED BY: JAM
DATE: 9/7/17

DE
CA



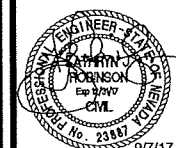
3753 Howard Hughes Parkway, Suite 135
Las Vegas, NV 89169
Phone: 702.897-5100

GOWAN NORTH BUFFALO BRANCH
LONE MOUNTAIN TO WASHBURN

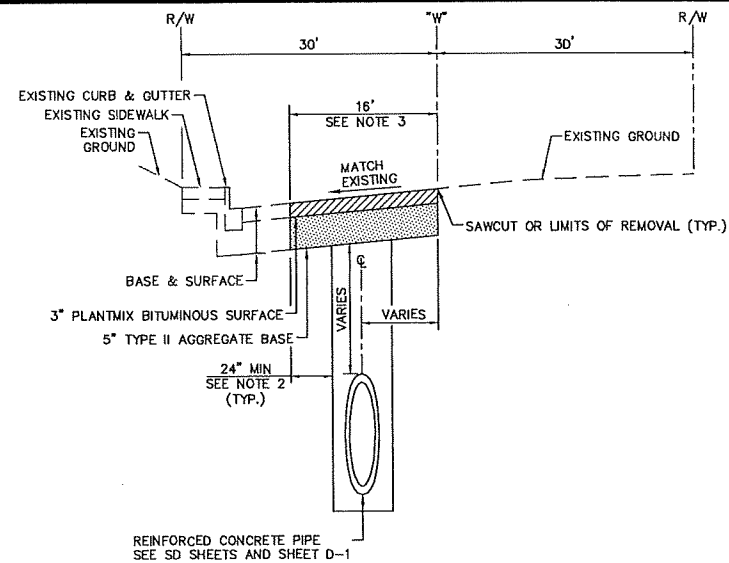
CONSTRUCTION PLAN
"W" 20+00 TO 28+00

TITLE: _____

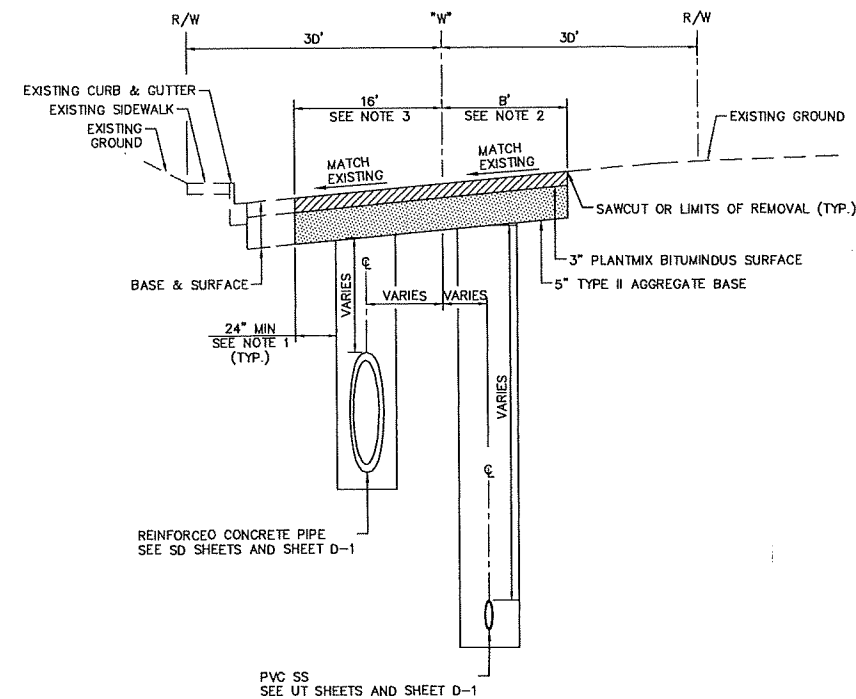
SHEET: _____



C-8
25 of 89
DRAWING NO.
731-94



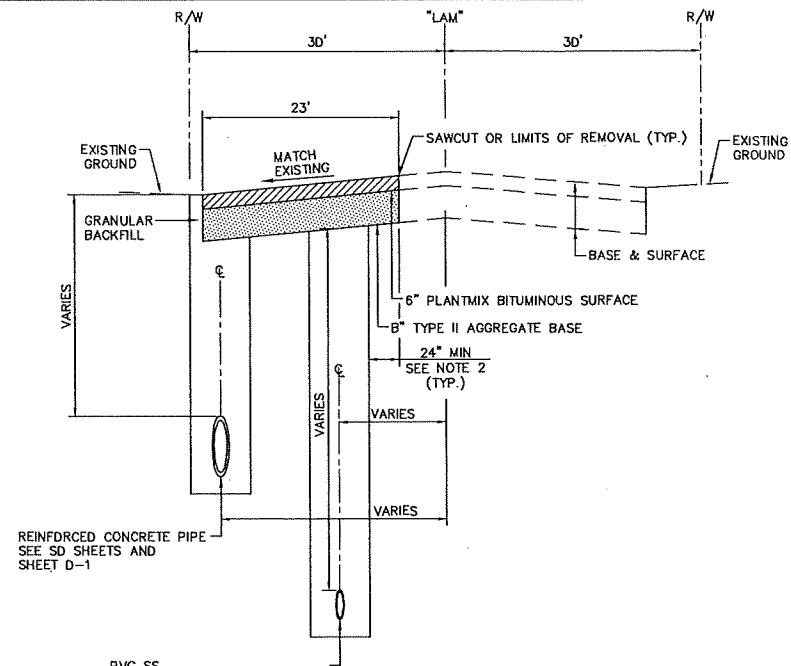
"W" 9+74.34 TO "W" 22+58.48



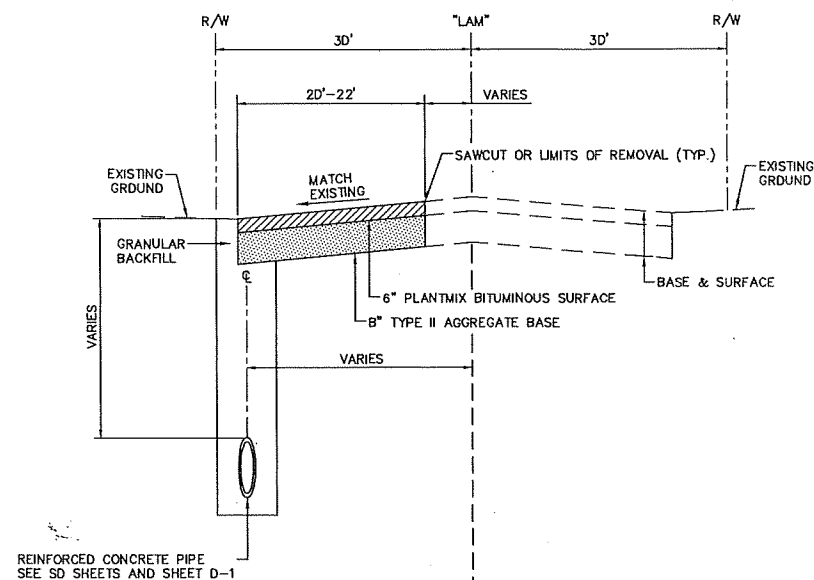
"W" 22+58.48 TO "W" 23+34.75

WASHBURN

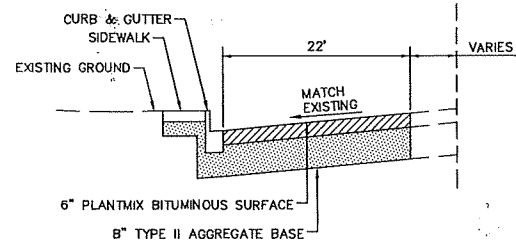
"W" 9+74.34 TO "W" 23+34.75



"LAM" 10+22.13 TO "LAM" 10+44.12



"LAM" 10+44.12 TO "LAM" 11+70.42



"LAM" 11+70.42 TO "LAM" 12+00.00

LA MADRE

"LAM" 10+22.13 TO "LAM" 12+00.00

- NOTES:

1. SAWCUT 24" MIN FROM EDGE OF TRENCH.
2. WHEN REMAINING PAVEMENT WIDTH IS LESS THAN 5', REMOVE TO EDGE OF PAVEMENT
3. SEE DR AND G SHEETS FOR LIMITS OF PAVEMENT REMDVAL AND RECONSTRUCTION FDR LATERALS.

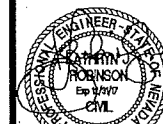
REVISIONS					
NO.	DATE:	DESCRIPTION	APP'D		

DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECT MANAGEMENT

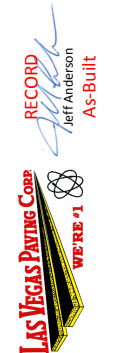
GOWAN NORTH BUFFALO BRANCH
LONE MOUNTAIN TO WASHBURN

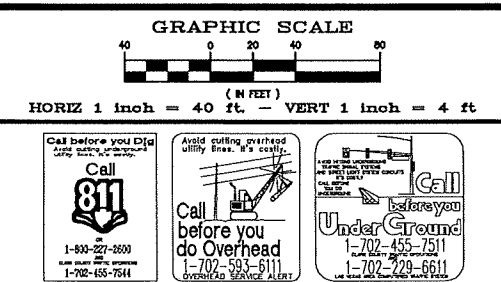
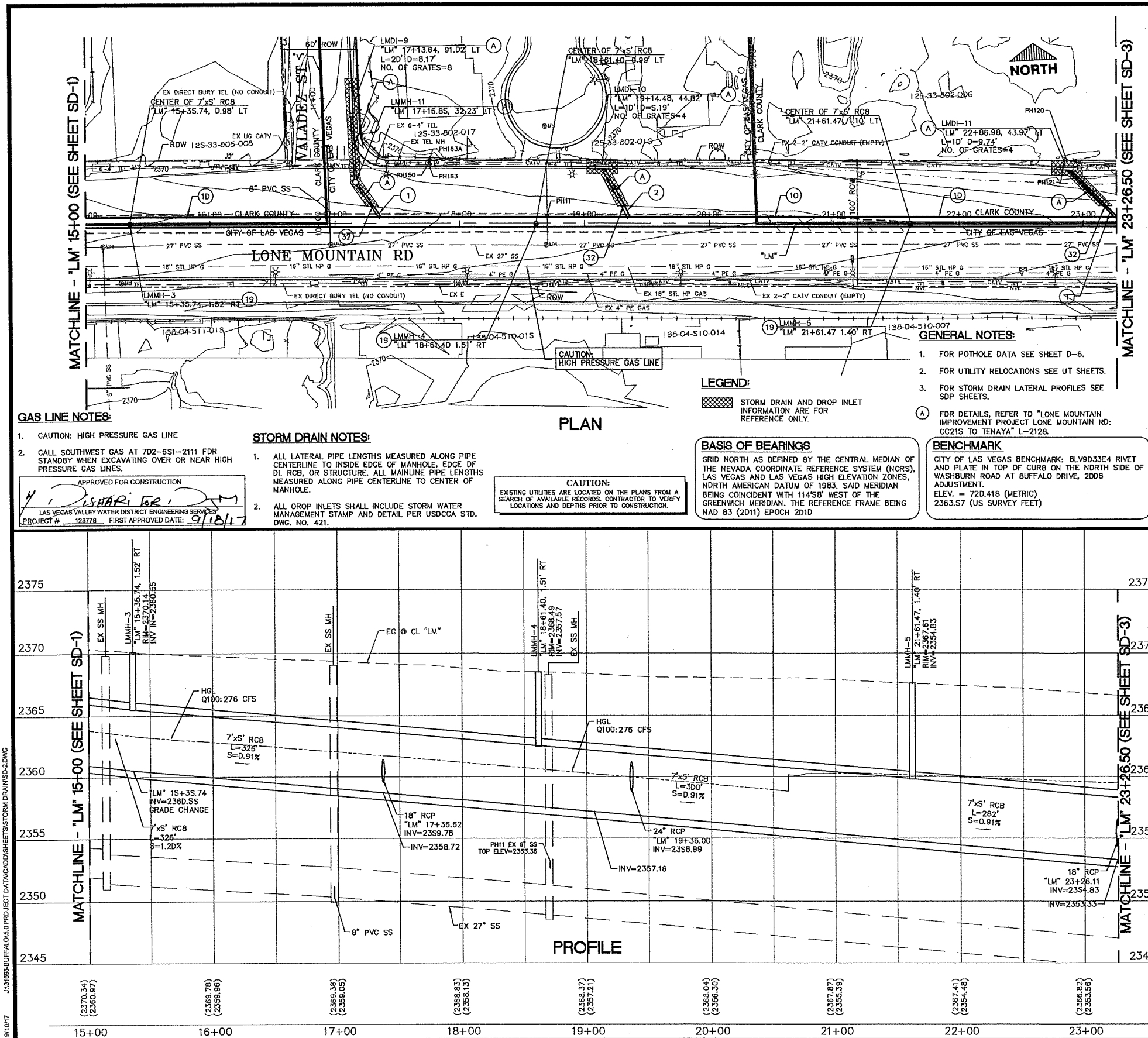
TITLE: _____

SHEET: _____



TY-2
28 of 89
DRAWING NO.
731-94

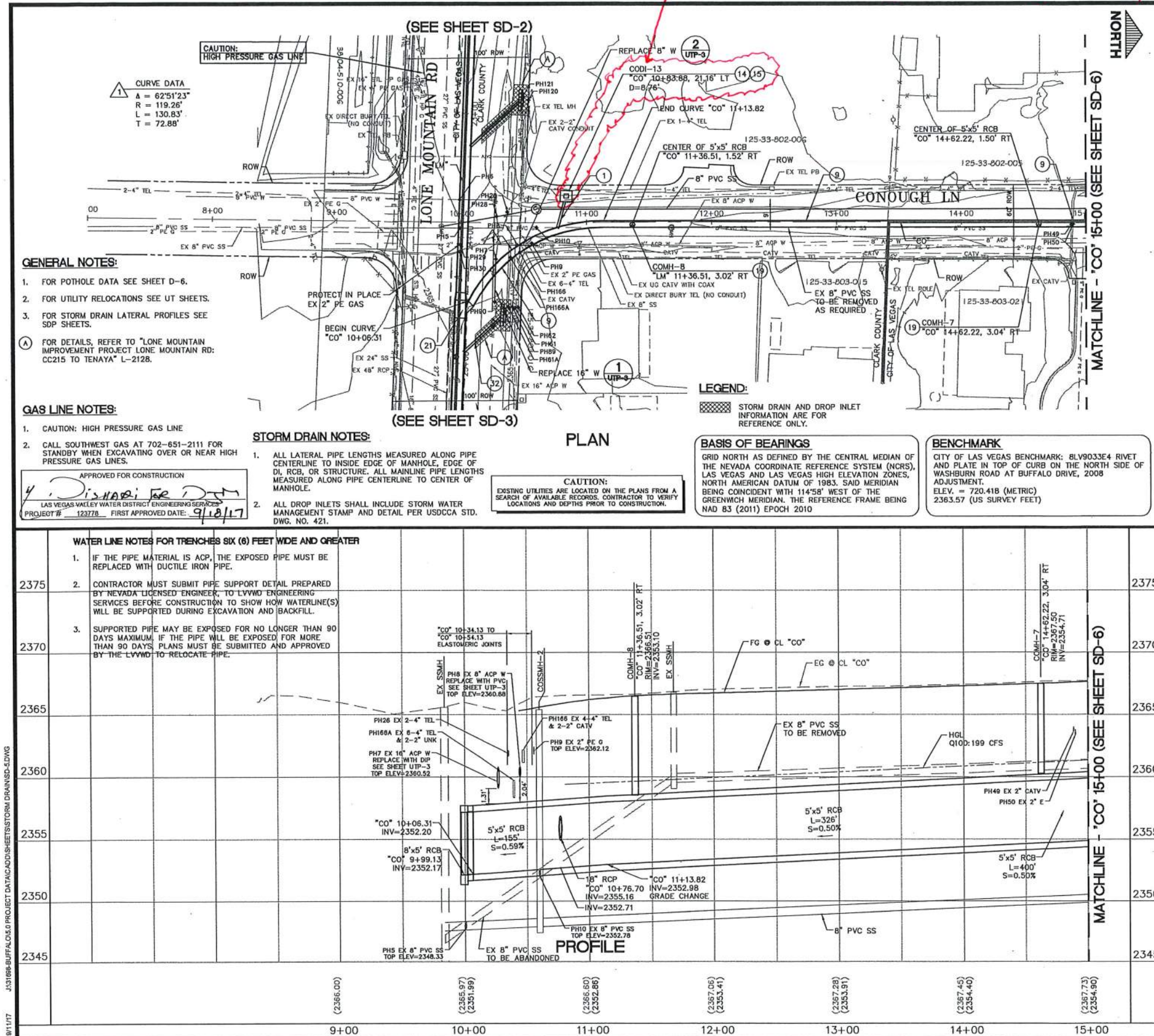




- ### STORM DRAIN CONSTRUCTION ITEMS

	TITLE: GOWAN NORTH BUFFALO BRANCH LONE MOUNTAIN TO WASHBURN			DEPARTMENT OF PUBLIC WORKS CAPITAL PROJECT MANAGEMENT		REVISIONS	
	SHEET: STORM DRAIN PLAN AND PROFILE "LM" 15+00 TO 23+26.50			DESIGNED BY: JS DRAWN BY: RM CHECKED BY: EH		DATE: 9/7/17	
SD-2 32 of 89 DRAWING NO. 731-94		3725 Howard Hughes Parkway, Suite 125 Las Vegas, NV 89169 Phone: 702.799.2500 Fax: 702.799.2500 www.msp.com					

DI# CODI-13 was capped at the grate. By: Lone Mt Road improvements



GRAPHIC SCALE
HORIZ 1 inch = 40 ft. - VERT 1 inch = 4 ft.

Call before you Dig
Call 811
1-800-227-8200
1-702-455-7511
1-702-455-7544

Call before you do Overhead
Under Ground
1-702-455-7511
1-702-455-7544

STORM DRAIN CONSTRUCTION ITEMS

1. CONSTRUCT 18 INCH RCP (CLASS III)
2. CONSTRUCT 24 INCH RCP (CLASS III)
3. CONSTRUCT 30 INCH RCP (CLASS III)
4. CONSTRUCT 36 INCH RCP (CLASS III)
5. CONSTRUCT 42 INCH RCP (CLASS III)
6. CONSTRUCT 48 INCH RCP (CLASS III)
7. CONSTRUCT 24"x36" HERCP (CLASS III, 30" EQUIVALENT)
8. CONSTRUCT 36"x60" HERCP (CLASS III, 48" EQUIVALENT)
9. CONSTRUCT 5'x5' RCB
10. CONSTRUCT 7'x5' RCB
11. CONSTRUCT 8'x5' RCB
12. CONSTRUCT 36 INCH C905
13. CONSTRUCT TYPE DM DROP INLET PER USDOCA STD. DWG. 412.1
14. CONSTRUCT MODIFIED TYPE 2B INLET PER DETAIL ON SHEET D-3
15. CONSTRUCT CONCRETE APRON PER DETAIL ON SHEET D-3
16. CONSTRUCT 48 INCH TYPE I MANHOLE PER USDOCA STD. DWG. 403
17. CONSTRUCT 48 INCH TYPE II STORM DRAIN MANHOLE PER USDOCA STD. DWG. 405
18. CONSTRUCT 60 INCH TYPE III STORM DRAIN MANHOLE PER USDOCA STD. DWG. 406
19. CONSTRUCT PRECAST RCB ACCESS MANHOLE PER DETAIL ON SHEET D-4
20. CONSTRUCT TRANSITION STRUCTURE 7'x5' RCB TO 8'x5' RCB PER DETAIL ON SHEET D-8
21. CONSTRUCT JUNCTION STRUCTURE 5'x5' RCB TO 8'x5' RCB PER DETAIL ON SHEET D-8
22. CONSTRUCT JUNCTION STRUCTURE 8'x5' RCB TO 11'x5' RCB PER DETAIL ON SHEET D-7
23. CONSTRUCT CONCRETE COLLAR PER DETAIL ON SHEET D-5
24. CONNECT EXISTING RCP TO DROP INLET OR RCB PER DETAIL ON SHEET D-5
25. CONSTRUCT 24 INCH C905
26. CONSTRUCT RCB END CAP PER DETAIL ON SHEET D-5
27. CONNECT RCP TO RCB END CAP PER DETAIL ON SHEET D-9
28. CONSTRUCT JUNCTION STRUCTURE 48 INCH RCP TO 5'x5' RCB PER DETAIL ON SHEET D-10
29. CONSTRUCT 18 INCH C905
30. CONSTRUCT TRENCH DRAIN PER DETAIL ON SHEET D-2
31. CONSTRUCT GRATED AND HINGED MANHOLE LID PER DETAIL ON SHEET D-6
32. CONSTRUCT BRICK AND MORTAR OR PRECAST END CAP PER DETAIL ON SHEET D-5

KEY MAP

SD-9 SD-10 SD-11 Washburn Rd
Tomak St Rosado Way Valdez St SD-8
La Monte Way SD-7
Miller Ln SD-6
SD-5 SD-4
SD-12 SD-13 SD-3 SD-2 SD-1

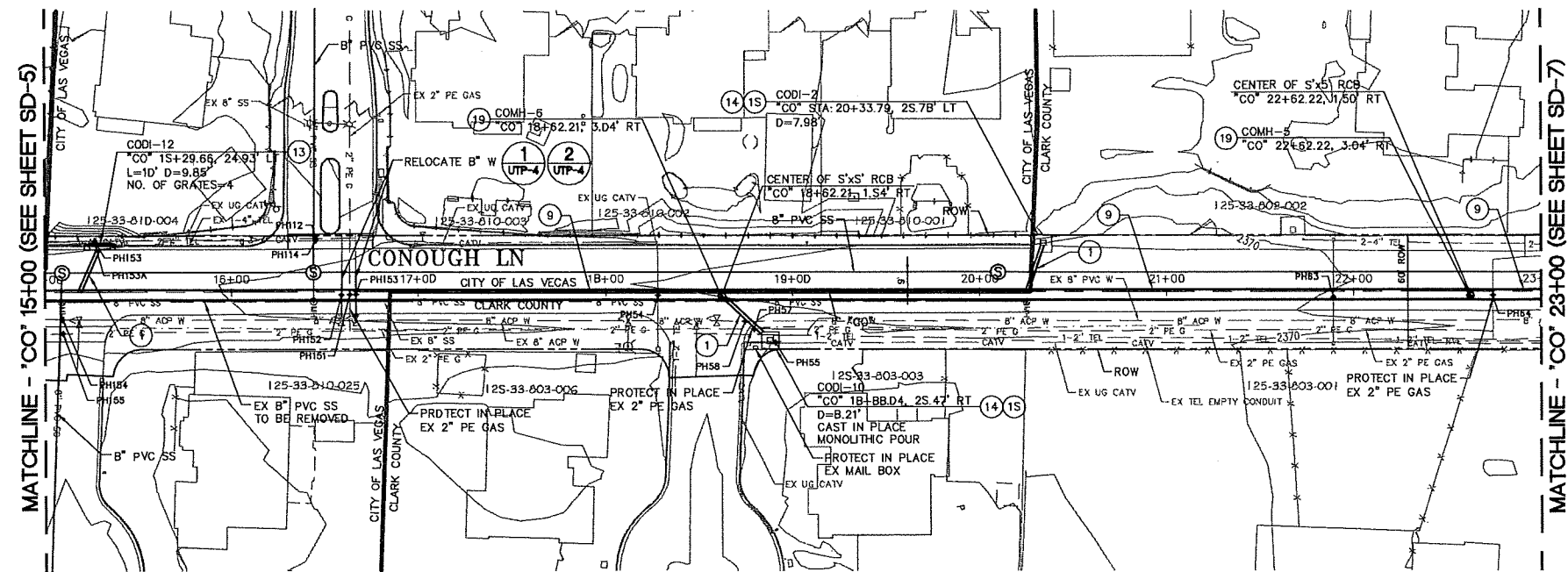
DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECT MANAGEMENT

DESIGNED BY: JS
DRAWN BY: RM
CHECKED BY: EH
DATE: 9/7/17

GOWAN NORTH BUFFALO BRANCH
LONE MOUNTAIN TO WASHBURN
STORM DRAIN PLAN AND PROFILE
'CO' 9+00 TO 15+00

SD-5
35 of 89
DRAWING NO.
731-94

PROJ# 123778 AGR:119533 QS:125-33-SE/USW XC 11343



CAUTION:
EXISTING UTILITIES ARE LOCATED ON THE PLANS FROM A
SEARCH OF AVAILABLE RECORDS. CONTRACTOR TO VERIFY
LOCATIONS AND DEPTHS PRIOR TO CONSTRUCTION.

APPROVED FOR CONSTRUCTION

41 DISHARI ER. JM

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES

PROJECT # 123778 FIRST APPROVED DATE: 9/18/17

STORM DRAIN NOTES:

1. ALL LATERAL PIPE LENGTHS MEASURED ALONG PIPE CENTERLINE TO INSIDE EDGE OF MANHOLE, EDGE OF DI, RCB, OR STRUCTURE. ALL MAINLINE PIPE LENGTH MEASURED ALONG PIPE CENTERLINE TO CENTER OF MANHOLE.
2. ALL DRDP INLETS SHALL INCLUDE STORM WATER MANAGEMENT STAMP AND DETAIL PER USDOCA STD. O.W.G. NO. 421.

GENERAL NOTES:

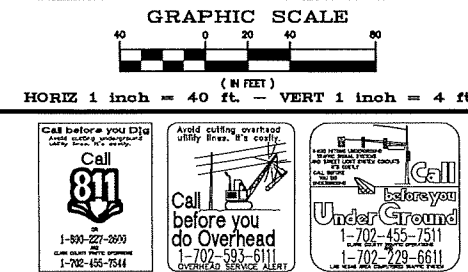
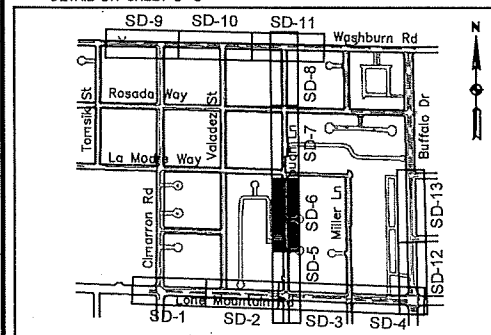
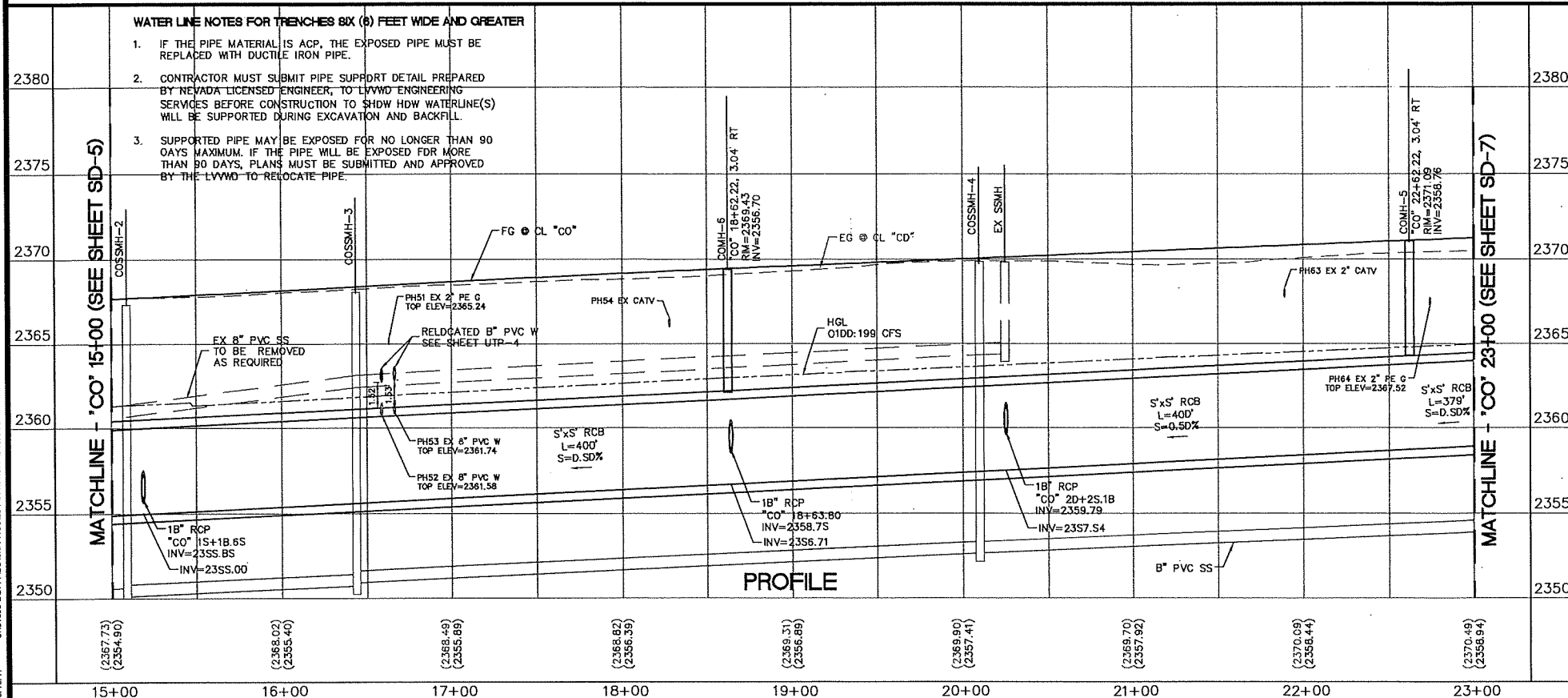
1. FOR POTHOLE DATA SEE SHEET D-6.
2. FOR UTILITY RELOCATIONS SEE UT SHEETS
3. FOR STORM DRAIN LATERAL PROFILES SEE
SDP SHEETS.

BASIS OF BEARINGS

GRID NORTH AS DEFINED BY THE CENTRAL MEDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS AND LAS VEGAS HIGH ELEVATION ZONES, NORTH AMERICAN DATUM OF 1983. SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN. THE REFERENCE FRAME BEING NAD 83 (2011) EPOCH 2010

BENCHMARK

CITY OF LAS VEGAS BENCHMARK: BLV9033E4 RIVET
AND PLATE IN TOP OF CURB ON THE NORTH SIDE OF
WASHBURN ROAD AT BUFFALO DRIVE, 200B
ADJUSTMENT.
ELEV. = 72D.41B (METRIC)
2363.S7 (US SURVEY FEET)



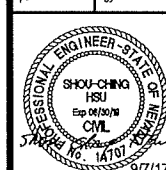
STORM DRAIN CONSTRUCTION ITEMS

- (1) CONSTRUCT 1B INCH RCP (CLASS III)
- (2) CONSTRUCT 24 INCH RCP (CLASS III)
- (3) CONSTRUCT 30 INCH RCP (CLASS III)
- (4) CONSTRUCT 36 INCH RCP (CLASS III)
- (5) CONSTRUCT 42 INCH RCP (CLASS III)
- (6) CONSTRUCT 48 INCH RCP (CLASS III)
- (7) CONSTRUCT 24"x36" HERCP (CLASS III, 30" EQUIVALENT)
- (8) CONSTRUCT 36"x60" HERCP (CLASS III, 48" EQUIVALENT)
- (9) CONSTRUCT S'XS' RCB
- (10) CONSTRUCT 7'XS' RCB
- (11) CONSTRUCT B'XS' RCB
- (12) CONSTRUCT 36 INCH C9DS
- (13) CONSTRUCT TYPE DM DROP INLET PER USDCCA STD. DWG. 412.1
- (14) CONSTRUCT MODIFIED TYPE 2B INLET PER DETAIL ON SHEET D-3
- (15) CONSTRUCT CONCRETE APRON PER DETAIL ON SHEET D-3
- (16) CONSTRUCT 48 INCH TYPE I MANHOLE PER USDCCA STD. DWG. 403
- (17) CONSTRUCT 48 INCH TYPE II STORM DRAIN MANHOLE PER USDCCA STD. DWG. 405
- (18) CONSTRUCT 60 INCH TYPE III STORM DRAIN MANHOLE PER USDCCA STD. DWG. 406
- (19) CONSTRUCT PRECAST RCB ACCESS MANHOLE PER DETAIL ON SHEET D-4
- (20) CONSTRUCT TRANSITION STRUCTURE 7'XS' RCB TO B'XS' RCB PER DETAIL ON SHEET D-8
- (21) CONSTRUCT JUNCTION STRUCTURE S'XS' RCB TO B'XS' RCB PER DETAIL ON SHEET D-8
- (22) CONSTRUCT JUNCTION STRUCTURE B'XS' RCB TO 11'XS' RCB PER DETAIL ON SHEET D-7
- (23) CONSTRUCT CONCRETE COLLAR PER DETAIL ON SHEET D-5
- (24) CONNECT EXISTING RCP TO DROP INLET OR RCB PER DETAIL ON SHEET D-5
- (25) CONSTRUCT 24 INCH C9DS
- (26) CONSTRUCT RCB END CAP PER DETAIL ON SHEET D-5
- (27) CONNECT RCP TO RCB END CAP PER DETAIL ON SHEET D-9
- (28) CONSTRUCT JUNCTION STRUCTURE 48 INCH RCP TO S'XS' RCB PER DETAIL ON SHEET D-10
- (29) CONSTRUCT 1B INCH C9DS
- (30) CONSTRUCT TRENCH DRAIN PER DETAIL ON SHEET D-2
- (31) CONSTRUCT GRATED AND HINGED MANHOLE LID PER DETAIL ON SHEET D-6
- (32) CONSTRUCT BRICK AND MORTAR DR PRECAST END CAP PER DETAIL ON SHEET D-5

DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECT MANAGEMENT

**GOWAN NORTH BUFFALO BRANCH
LONE MOUNTAIN TO WASHBURN
STORM DRAIN PLAN AND PROFILE**

TITLE:



SD-6
36 of 89
DRAWING NO.
731-94

STATE OF NEW JERSEY
9/7/17
PROJ#-123778 AGR-115933 QS-125-33-SE/SW XC 11343

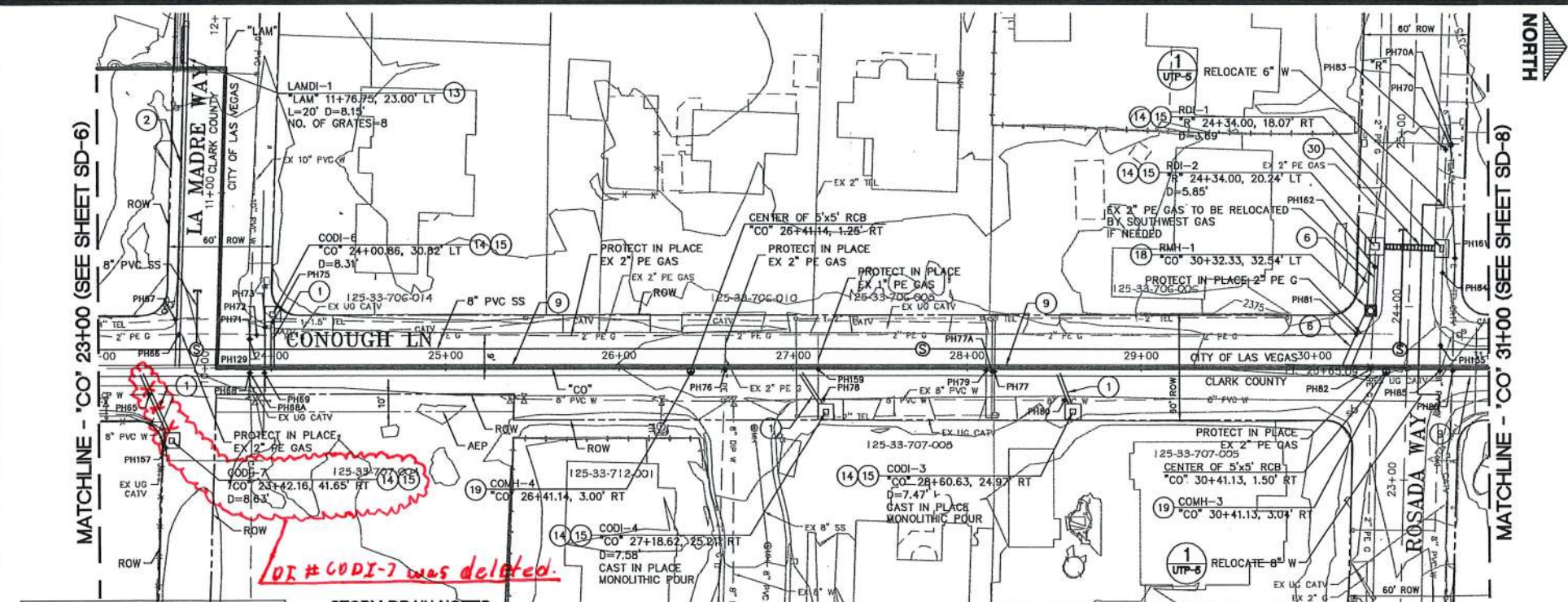
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MATCHLINE - 'CO' 23+00 (SEE SHEET SD-6)

MATCHLINE - 'CO' 23+00 (SEE SHEET SD-6)

MATCHLINE - 'CO' 31+00 (SEE SHEET SD-8)

MATCHLINE - 'CO' 31+00 (SEE SHEET SD-8)



CAUTION:
EXISTING UTILITIES ARE LOCATED ON THE PLANS FROM A SEARCH OF AVAILABLE RECORDS. CONTRACTOR TO VERIFY LOCATIONS AND DEPTHS PRIOR TO CONSTRUCTION.

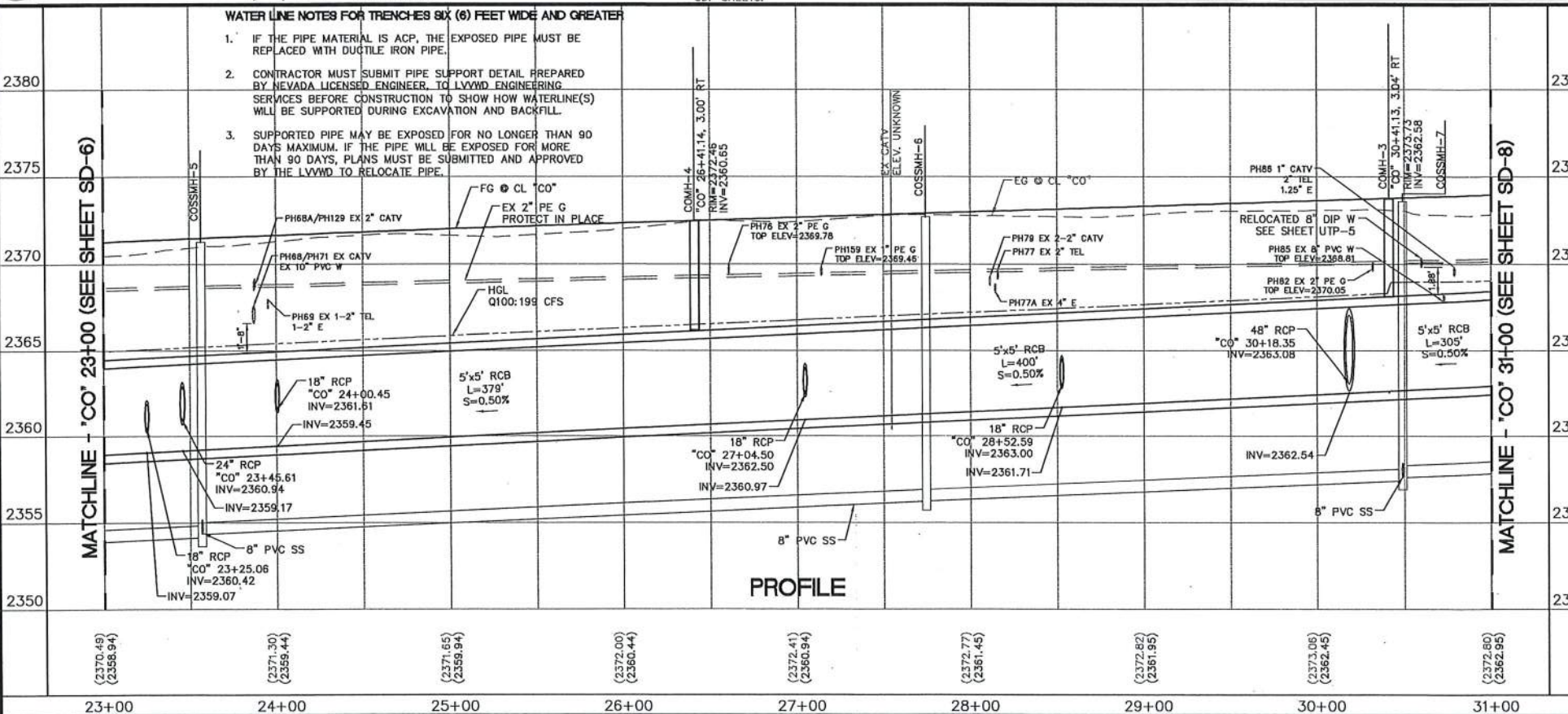
APPROVED FOR CONSTRUCTION
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT # 123778 FIRST APPROVED DATE: 9/18/17

- STORM DRAIN NOTES:**
- ALL LATERAL PIPE LENGTHS MEASURED ALONG PIPE CENTERLINE TO INSIDE EDGE OF MANHOLE, EDGE OF DI, RCB, OR STRUCTURE. ALL MAINLINE PIPE LENGTHS MEASURED ALONG PIPE CENTERLINE TO CENTER OF MANHOLE.
 - ALL DROP INLETS SHALL INCLUDE STORM WATER MANAGEMENT STAMP AND DETAIL PER USDOCA STD. DWG. NO. 421.

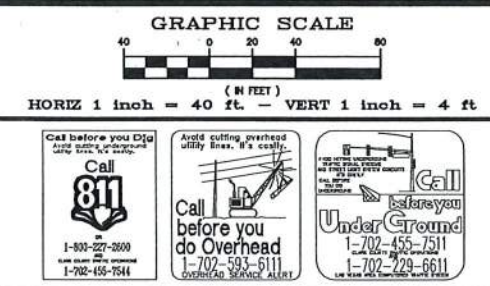
- GENERAL NOTES:**
- FOR POTHOLE DATA SEE SHEET D-6.
 - FOR UTILITY RELOCATIONS SEE UT SHEETS.
 - FOR STORM DRAIN LATERAL PROFILES SEE SDP SHEETS.

BASIS OF BEARINGS
GRID NORTH AS DEFINED BY THE CENTRAL MEDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS AND LAS VEGAS HIGH ELEVATION ZONES, NORTH AMERICAN DATUM OF 1983, SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN, THE REFERENCE FRAME BEING NAD 83 (2011) EPOCH 2010

BENCHMARK
CITY OF LAS VEGAS BENCHMARK: BLV9033E4 RIVET AND PLATE IN TOP OF CURB ON THE NORTH SIDE OF WASHBURN ROAD AT BUFFALO DRIVE, 2008 ADJUSTMENT.
ELEV. = 720.418 (METRIC)
2363.57 (US SURVEY FEET)

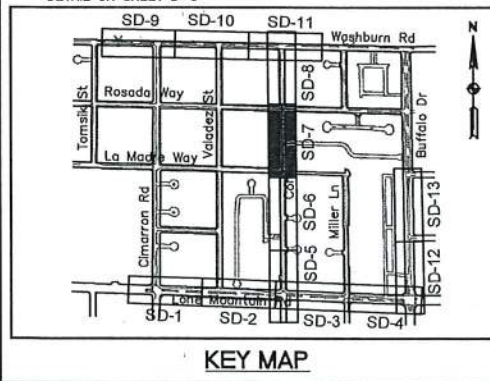


- WATER LINE NOTES FOR TRENCHES SIX (6) FEET WIDE AND GREATER**
- IF THE PIPE MATERIAL IS ACP, THE EXPOSED PIPE MUST BE REPLACED WITH DUCTILE IRON PIPE.
 - CONTRACTOR MUST SUBMIT PIPE SUPPORT DETAIL PREPARED BY NEVADA LICENSED ENGINEER TO LVWD ENGINEERING SERVICES BEFORE CONSTRUCTION TO SHOW HOW WATERLINE(S) WILL BE SUPPORTED DURING EXCAVATION AND BACKFILL.
 - SUPPORTED PIPE MAY BE EXPOSED FOR NO LONGER THAN 90 DAYS MAXIMUM. IF THE PIPE WILL BE EXPOSED FOR MORE THAN 90 DAYS, PLANS MUST BE SUBMITTED AND APPROVED BY THE LVWD TO RELOCATE PIPE.



STORM DRAIN CONSTRUCTION ITEMS

- CONSTRUCT 18 INCH RCP (CLASS III)
- CONSTRUCT 24 INCH RCP (CLASS III)
- CONSTRUCT 30 INCH RCP (CLASS III)
- CONSTRUCT 36 INCH RCP (CLASS III)
- CONSTRUCT 42 INCH RCP (CLASS III)
- CONSTRUCT 48 INCH RCP (CLASS III)
- CONSTRUCT 24"x36" HERCP (CLASS III, 30" EQUIVALENT)
- CONSTRUCT 36"x60" HERCP (CLASS III, 48" EQUIVALENT)
- CONSTRUCT 5'x5' RCB
- CONSTRUCT 7'x5' RCB
- CONSTRUCT 8'x5' RCB
- CONSTRUCT 36 INCH C905
- CONSTRUCT TYPE DM DROP INLET PER USDOCA STD. DWG. 412.1
- CONSTRUCT MODIFIED TYPE 2B INLET PER DETAIL ON SHEET D-3
- CONSTRUCT CONCRETE APRON PER DETAIL ON SHEET D-3
- CONSTRUCT 48 INCH TYPE I MANHOLE PER USDOCA STD. DWG. 403
- CONSTRUCT 48 INCH TYPE II STORM DRAIN MANHOLE PER USDOCA STD. DWG. 405
- CONSTRUCT 60 INCH TYPE III STORM DRAIN MANHOLE PER USDOCA STD. DWG. 406
- CONSTRUCT PRECAST RCB ACCESS MANHOLE PER DETAIL ON SHEET D-4
- CONSTRUCT TRANSITION STRUCTURE 7'x5' RCB TO 8'x5' RCB PER DETAIL ON SHEET D-8
- CONSTRUCT JUNCTION STRUCTURE 5'x5' RCB TO 8'x5' RCB PER DETAIL ON SHEET D-8
- CONSTRUCT JUNCTION STRUCTURE 8'x5' RCB TO 11'x5' RCB PER DETAIL ON SHEET D-7
- CONSTRUCT CONCRETE COLLAR PER DETAIL ON SHEET D-5
- CONNECT EXISTING RCP TO DROP INLET OR RCB PER DETAIL ON SHEET D-5
- CONSTRUCT 24 INCH C905
- CONSTRUCT RCB END CAP PER DETAIL ON SHEET D-5
- CONNECT RCP TO RCB END CAP PER DETAIL ON SHEET D-9
- CONSTRUCT JUNCTION STRUCTURE 48 INCH RCP TO 5'x5' RCB PER DETAIL ON SHEET D-10
- CONSTRUCT 18 INCH C905
- CONSTRUCT TRENCH DRAIN PER DETAIL ON SHEET D-2
- CONSTRUCT GRATED AND HINGED MANHOLE LID PER DETAIL ON SHEET D-6
- CONSTRUCT BRICK AND MORTAR OR PRECAST END CAP PER DETAIL ON SHEET D-5

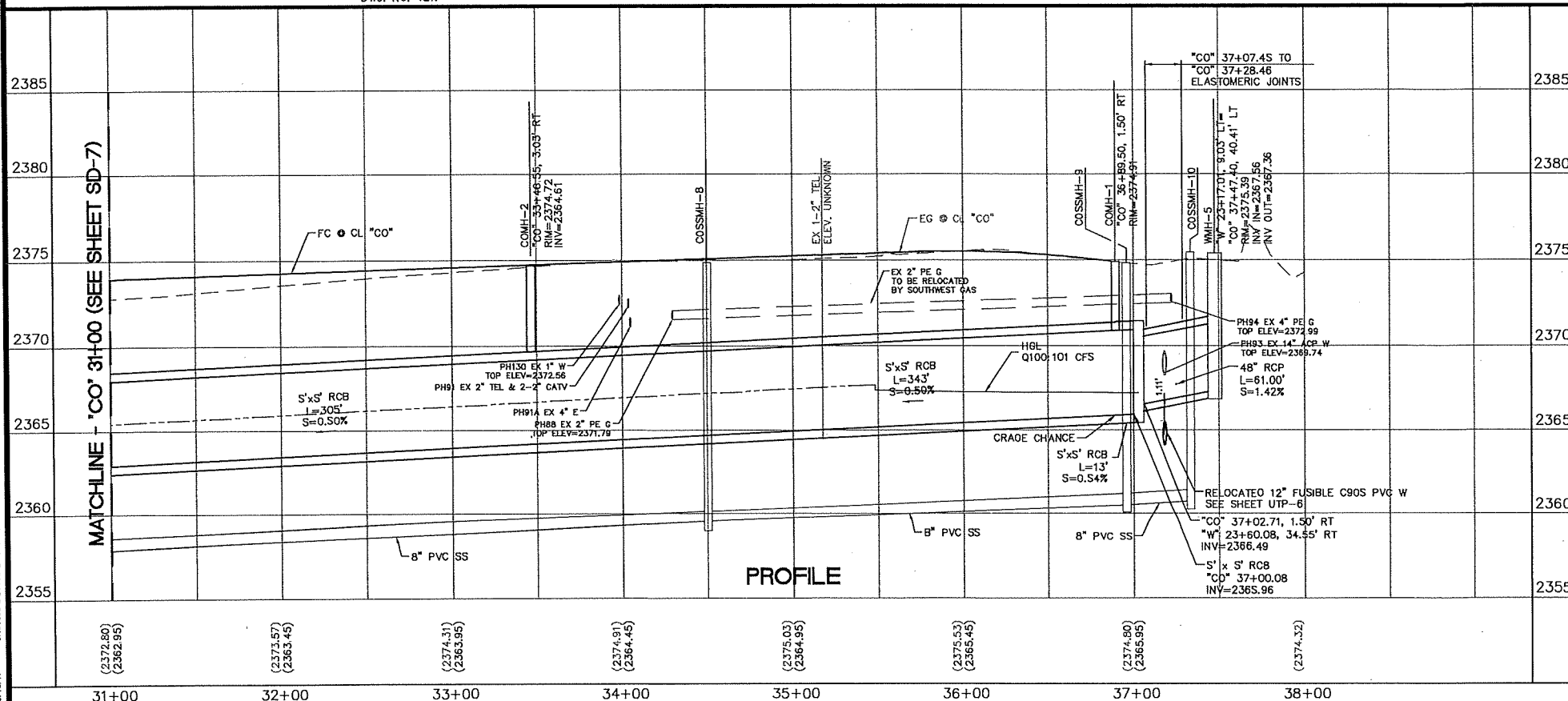


REVISIONS		DESIGNED BY: JS	CHECKED BY: BH	DATE: 9/7/17
DEPARTMENT OF PUBLIC WORKS CAPITAL PROJECT MANAGEMENT		GOWAN NORTH BUFFALO BRANCH LONE MOUNTAIN TO WASHBURN		
TITLE: SD-7		SHEET: 37 of 89		
DRAWING NO. 731-94		PROJECT: 123778 AGR119933 QS125-33-SE/SW XC11943		



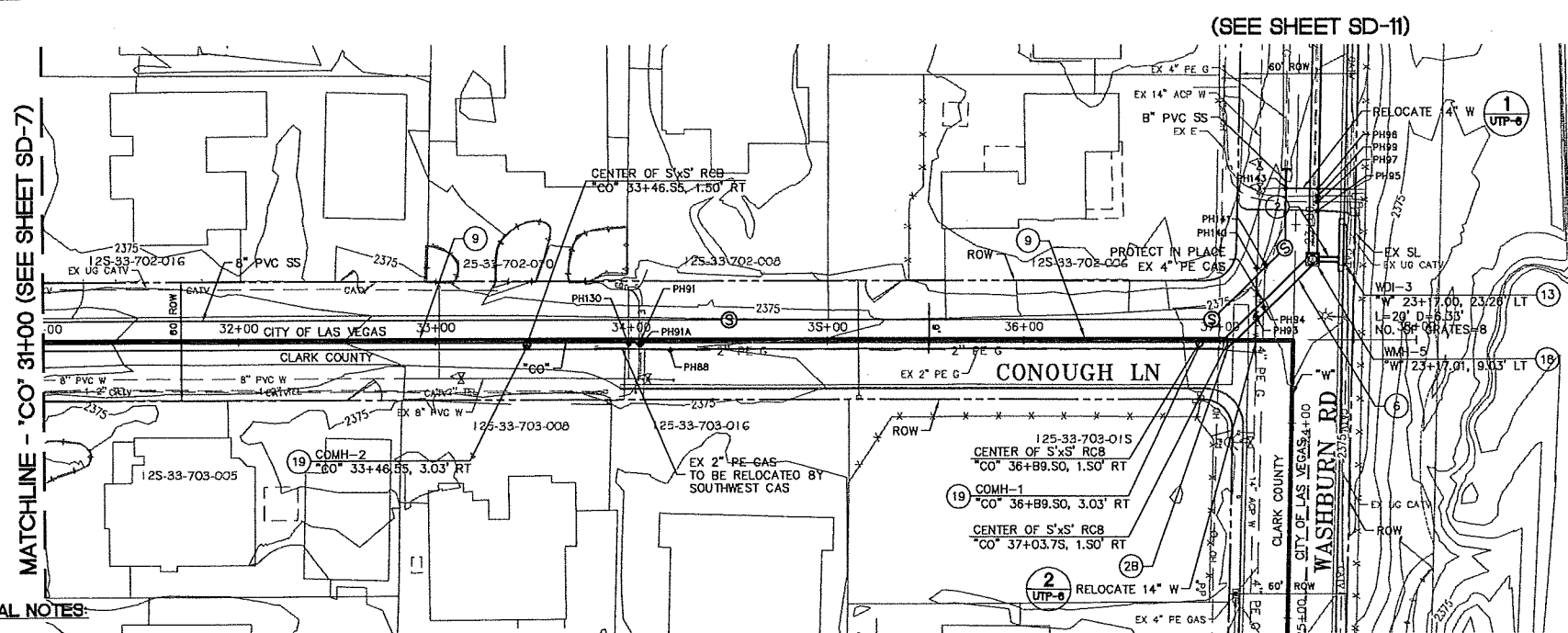
9/10/17 J:\10188-BUFFALO-05.0 PROJECT DATA\ADD SHEETS\STORM DRAIN\SD-8.DWG

MATCHLINE - 'CO' 31+00 (SEE SHEET SD-7)



PROFILE

MATCHLINE - 'CO' 31+00 (SEE SHEET SD-7)



PLAN

GENERAL NOTES:

- FOR POTHOLE DATA SEE SHEET D-6.
- FOR UTILITY RELOCATIONS SEE UT SHEETS.
- FOR STORM DRAIN LATERAL PROFILES SEE SDP SHEETS.

APPROVED FOR CONSTRUCTION
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT # 123778 FIRST APPROVED DATE 9/18/17

STORM DRAIN NOTES:

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CAUTION:
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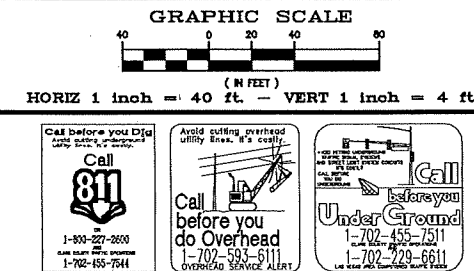
BASIS OF BEARINGS

GRID NORTH AS DEFINED BY THE CENTRAL MEDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS AND LAS VEGAS HIGH ELEVATION ZONES, NORTH AMERICAN DATUM OF 1983. SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN. THE REFERENCE FRAME BEING NAD 83 (2011) EPOCH 2010

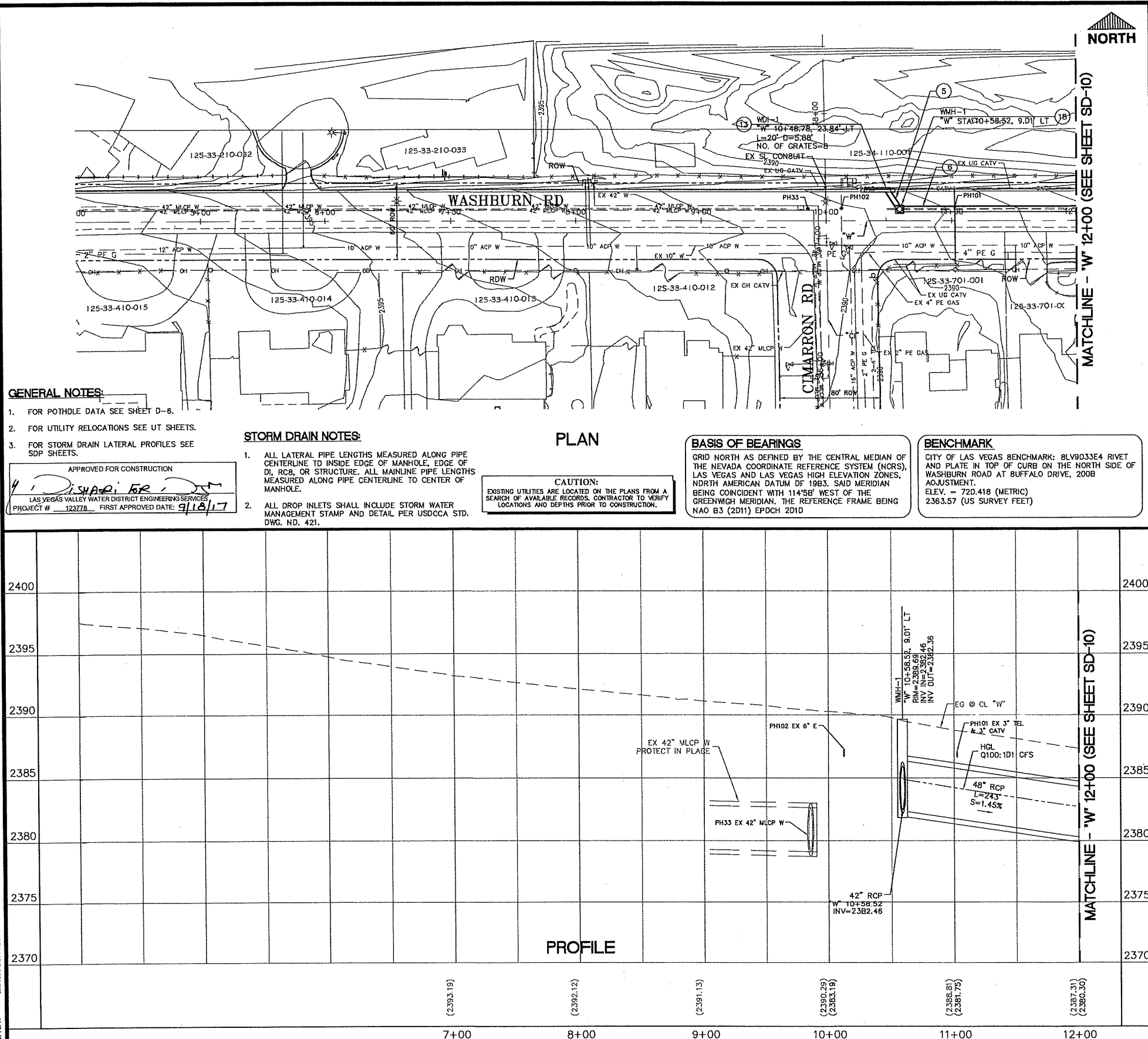
BENCHMARK

CITY OF LAS VEGAS BENCHMARK: 8LV9033E4 RIVET AND PLATE IN TOP OF CURB ON THE NORTH SIDE OF WASHBURN ROAD AT BUFFALO DRIVE, 2008 ADJUSTMENT.
ELEV. = 720.418 (METRIC)
2363.57 (US SURVEY FEET)

(SEE SHEET SD-11)



9/10/17 J:\31998-BUFFALO-05-D PROJECT DATA\ADD SHEETS\STORM DRAIN\SD-9.DWG



GRAPHIC SCALE

(IN FEET)

HORIZ 1 inch = 40 ft. - VERT 1 inch = 4 ft

Call before you Dig

Call 811

1-800-227-2800

1-702-455-7511

1-702-455-7511

Call before you do Overhead

Call 811

1-800-227-2800

1-702-455-7511

1-702-455-7511

Under Ground

Call 811

1-800-227-2800

1-702-455-7511

1-702-455-7511

STORM DRAIN CONSTRUCTION ITEMS

- CONSTRUCT 18 INCH RCP (CLASS III)
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- CONSTRUCT 38"x60" HERCP (CLASS III, 48" EQUIVALENT)
- CONSTRUCT 5'x5' RCB
- CONSTRUCT 7'x5' RCB
- CONSTRUCT 8'x5' RCB
- CONSTRUCT 36 INCH C9D5
- CONSTRUCT TYPE DM DROP INLET PER USDOCA STD. DWG. 412.1
- CONSTRUCT MODIFIED TYPE 28 INLET PER DETAIL ON SHEET D-3
- CONSTRUCT CONCRETE APRON PER DETAIL ON SHEET D-3
- CONSTRUCT 48 INCH TYPE I MANHOLE PER USDOCA STD. DWG. 403
- CONSTRUCT 48 INCH TYPE II STORM DRAIN MANHOLE PER USDOCA STD. DWG. 405
- CONSTRUCT 60 INCH TYPE III STORM DRAIN MANHOLE PER USDOCA STD. DWG. 406
- CONSTRUCT PRECAST RCB ACCESS MANHOLE PER DETAIL ON SHEET D-4
- CONSTRUCT TRANSITION STRUCTURE 7'x5' RCB TO 8'x5' RCB PER DETAIL ON SHEET D-8
- CONSTRUCT JUNCTION STRUCTURE 5'x5' RCB TO 8'x5' RCB PER DETAIL ON SHEET D-8
- CONSTRUCT JUNCTION STRUCTURE 8'x5' RCB TO 11'x5' RCB PER DETAIL ON SHEET D-7
- CONSTRUCT CONCRETE COLLAR PER DETAIL ON SHEET D-5
- CONNECT EXISTING RCP TO DROP INLET OR RCB PER DETAIL ON SHEET D-5
- CONSTRUCT 24 INCH C9D5
- CONSTRUCT RCB END CAP PER DETAIL ON SHEET D-5
- CONNECT RCP TO RCB END CAP PER DETAIL ON SHEET D-9
- CONSTRUCT JUNCTION STRUCTURE 48 INCH RCP TO 5'x5' RCB PER DETAIL ON SHEET D-10
- CONSTRUCT 18 INCH C9D5
- CONSTRUCT TRENCH DRAIN PER DETAIL DN SHEET O-2
- CONSTRUCT GRATED AND HINGED MANHOLE LID PER DETAIL ON SHEET D-6
- CONSTRUCT BRICK AND MORTAR OR PRECAST END CAP PER DETAIL DN SHEET D-5

REVISIONS

NO.	DATE	DESCRIPTION	APPD

DESIGNED BY: JS

DRAWN BY: RM

CHECKED BY: EH

DATE: 9/17/17

DEPARTMENT OF PUBLIC WORKS

CAPITAL PROJECT MANAGEMENT

GOWAN NORTH BUFFALO BRANCH

LONE MOUNTAIN TO WASHBURN

STORM DRAIN PLAN AND PROFILE

"W" 7+00 TO 12+00

SD-9

39 of 89

DRAWING NO. 731-94

SHOU-CHING HSU

Exp 04/20/19

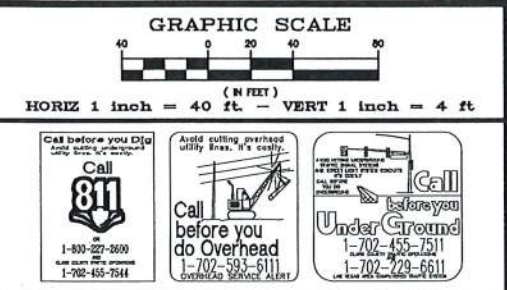
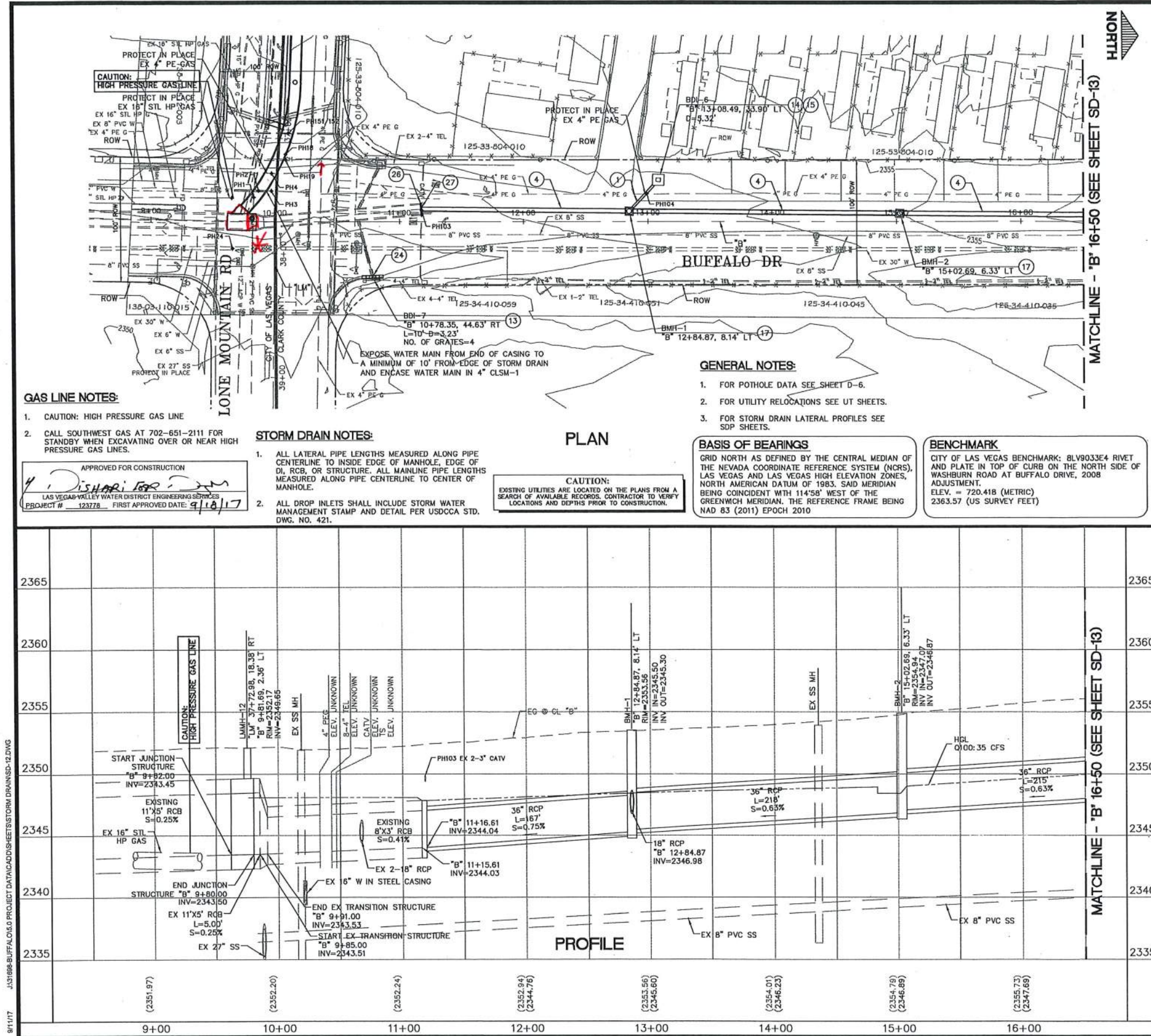
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9/17/17

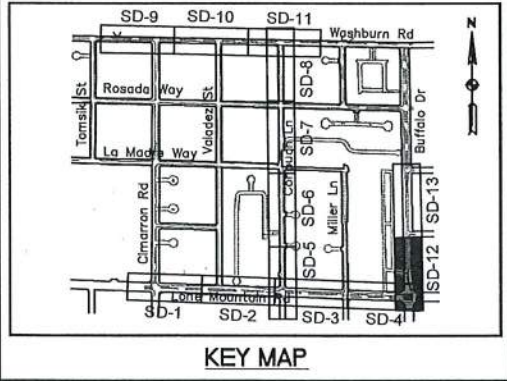
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AGR-119933

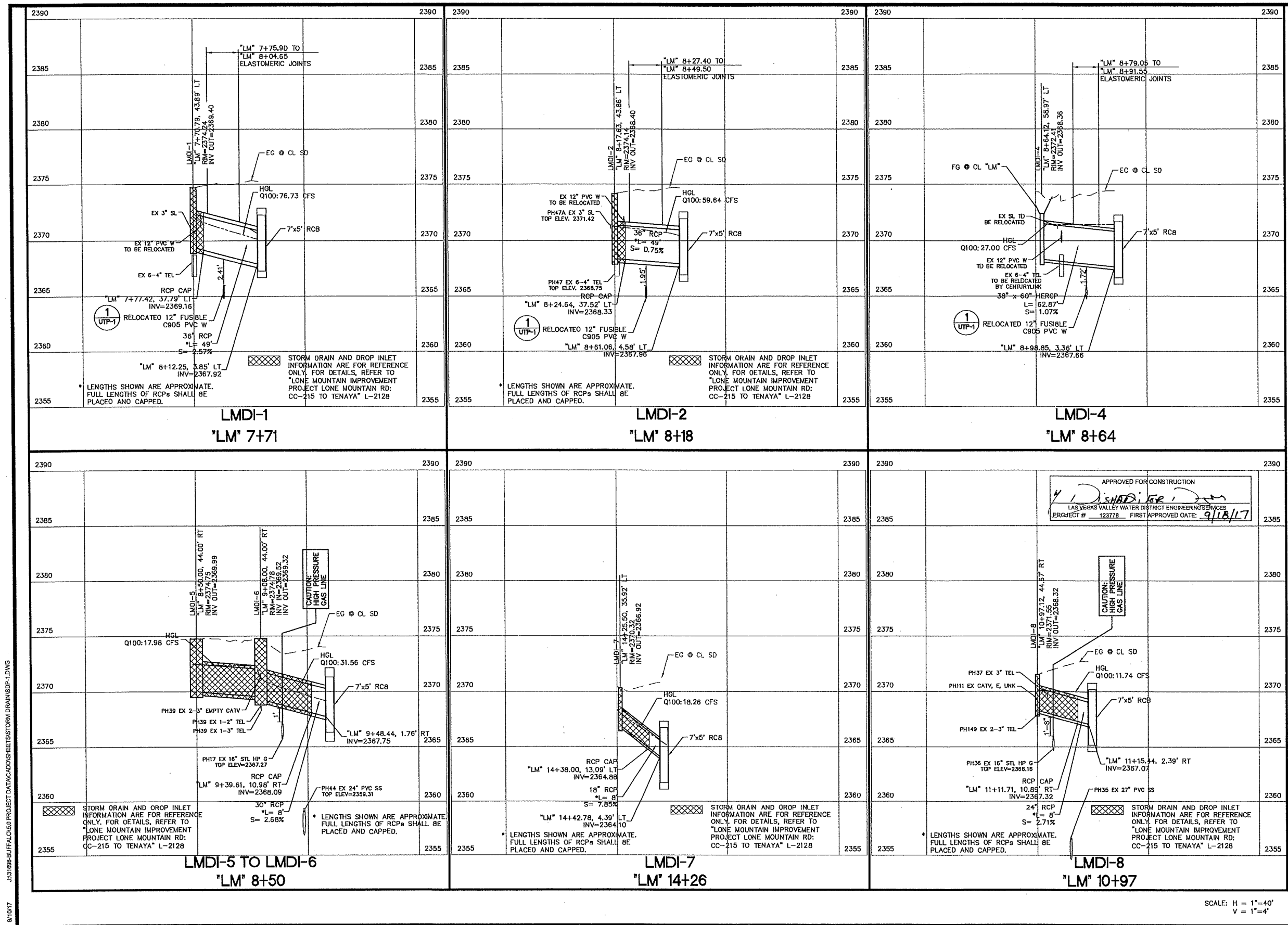
05-12-53-SE/SW XC 11943



- STORM DRAIN CONSTRUCTION ITEMS**
1. CONSTRUCT 18 INCH RCP (CLASS III)
 2. CONSTRUCT 24 INCH RCP (CLASS III)
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 4. CONSTRUCT 36 INCH RCP (CLASS III)
 5. CONSTRUCT 42 INCH RCP (CLASS III)
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 10. CONSTRUCT 7'x5' RCB
 11. CONSTRUCT 8'x5' RCB
 12. CONSTRUCT 36 INCH C905
 13. CONSTRUCT TYPE DM DROP INLET PER USDOCA STD. DWG. 412.1
 14. CONSTRUCT MODIFIED TYPE 2B INLET PER DETAIL ON SHEET D-3
 15. CONSTRUCT CONCRETE APRON PER DETAIL ON SHEET D-3
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 19. CONSTRUCT PRECAST RCB ACCESS MANHOLE PER DETAIL ON SHEET D-4
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 22. CONSTRUCT JUNCTION STRUCTURE 8'x5' RCB TO 11'x5' RCB PER DETAIL ON SHEET D-7 **SEE CHANGES**
 23. CONSTRUCT CONCRETE COLLAR PER DETAIL ON SHEET D-5
 24. CONNECT EXISTING RCP TO DROP INLET OR RCB PER DETAIL ON SHEET D-5
 25. CONSTRUCT 24 INCH C905
 26. CONSTRUCT RCB END CAP PER DETAIL ON SHEET D-5
 27. CONNECT RCP TO RCB END CAP PER DETAIL ON SHEET D-9
 28. CONSTRUCT JUNCTION STRUCTURE 48 INCH RCP TO 5'x5' RCB PER DETAIL ON SHEET D-10
 29. CONSTRUCT 18 INCH C905
 30. CONSTRUCT TRENCH DRAIN PER DETAIL ON SHEET D-2
 31. CONSTRUCT GRATED AND HINGED MANHOLE LID PER DETAIL ON SHEET D-6
 32. CONSTRUCT BRICK AND MORTAR OR PRECAST END CAP PER DETAIL ON SHEET D-5



NO.	DATE	DESCRIPTION	APPROVED
1	9/7/17	DESIGNED BY: JS DRAWN BY: RM CHECKED BY: EH	
REVISIONS			
DEPARTMENT OF PUBLIC WORKS CAPITAL PROJECT MANAGEMENT			
GOWAN NORTH BUFFALO BRANCH LONE MOUNTAIN TO WASHBURN			
STORM DRAIN PLAN AND PROFILE "B" 9+00 TO 16+50			
SD-12 42 of 89 DRAWING NO. 731-94			



	TITLE: GOWAN NORTH BUFFALO BRANCH LONE MOUNTAIN TO WASHBURN	 DEPARTMENT OF PUBLIC WORKS CAPITAL PROJECT MANAGEMENT	REVISIONS				
			NO.	DATE:	DESCRIPTION	APPD	
	SHEET: DRAINAGE PROFILES (SHEET 1 OF 6)	 3725 Homewood Village Parkway, Suite 135 Baltimore, Maryland 21208 Phone: 702-887-8100	DESIGNED BY: JS DRAWN BY: LS CHECKED BY: EH			DATE: 9/7/17	
SDP-1 44 of 89 DRAWING NO. 731-94							

LAS VEGAS PAVING CORP.

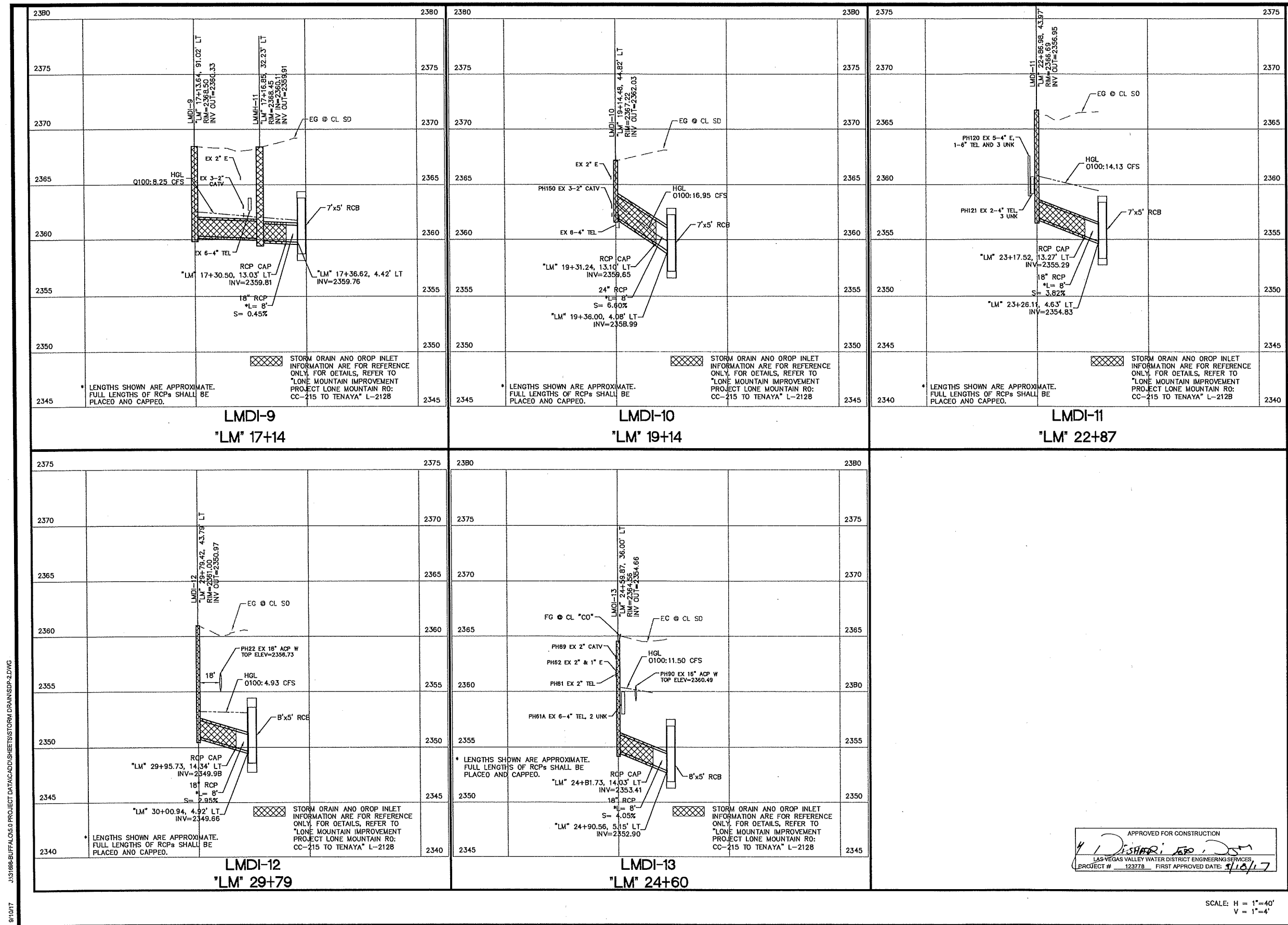
WE'RE #1

RECORD

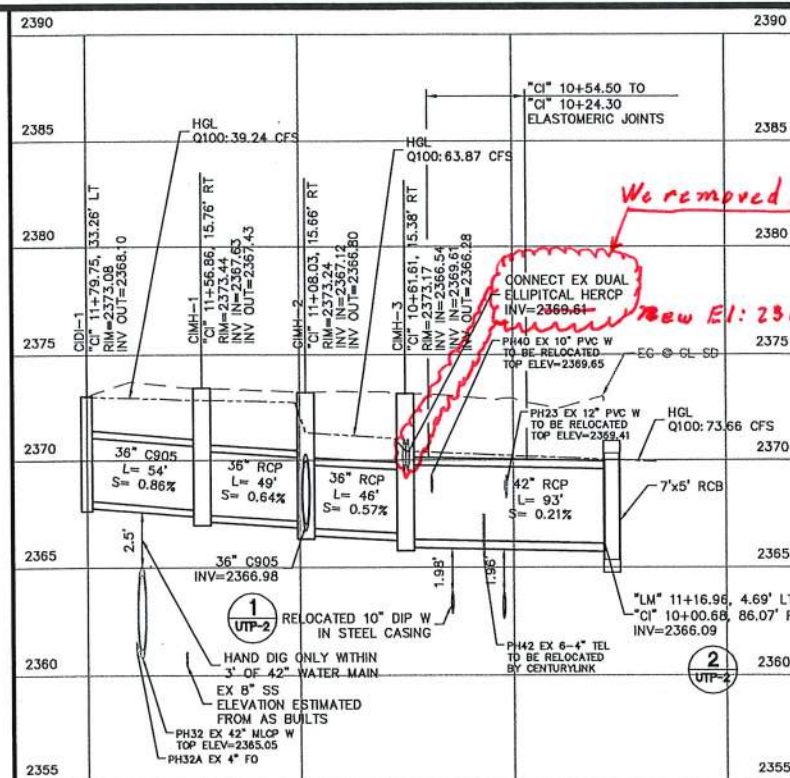
 Jeff Anderson
As-Built

SCALE: H = 1"=40'
V = 1"=4'

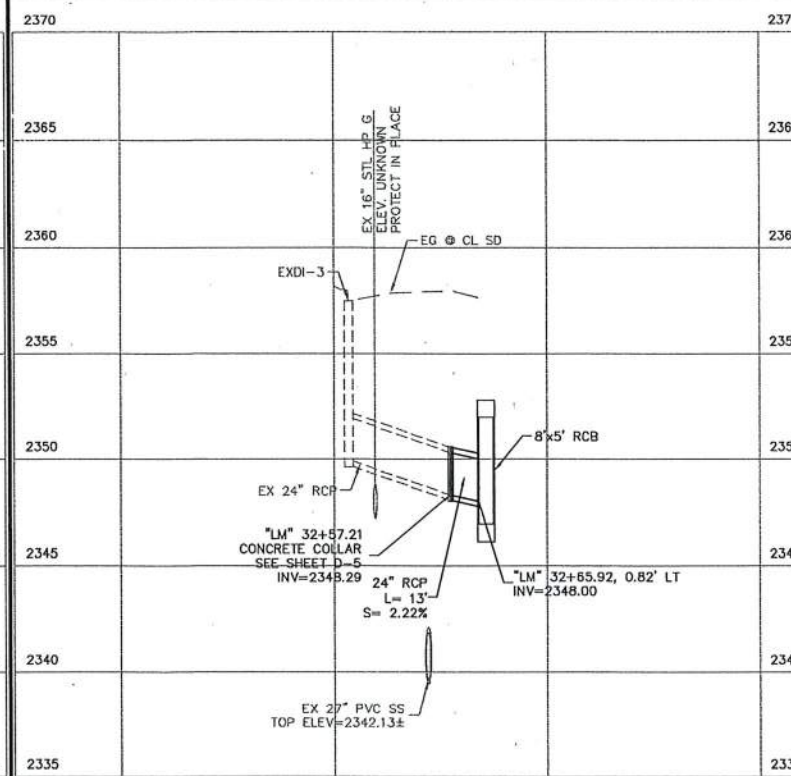
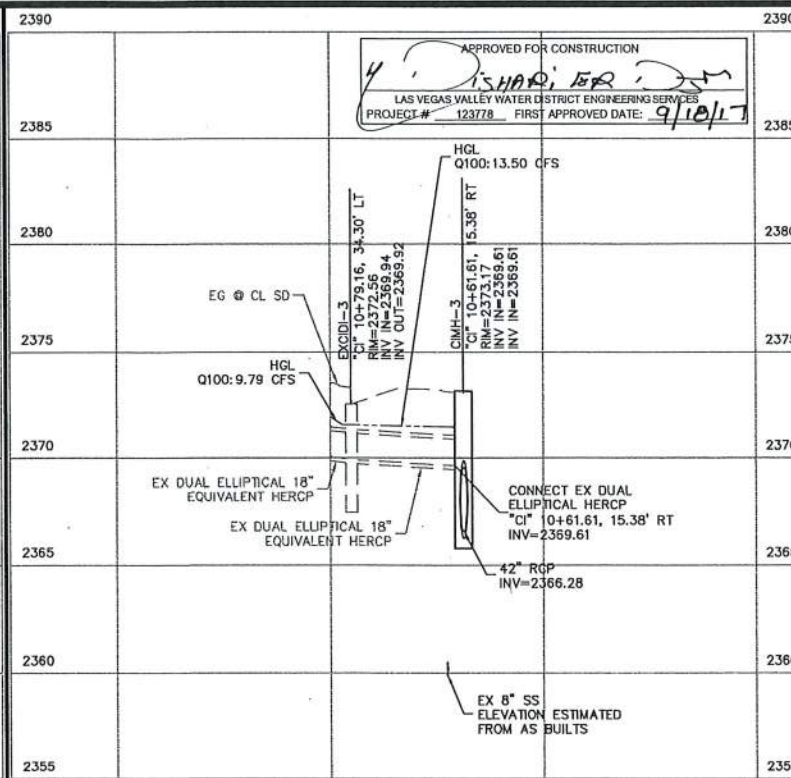
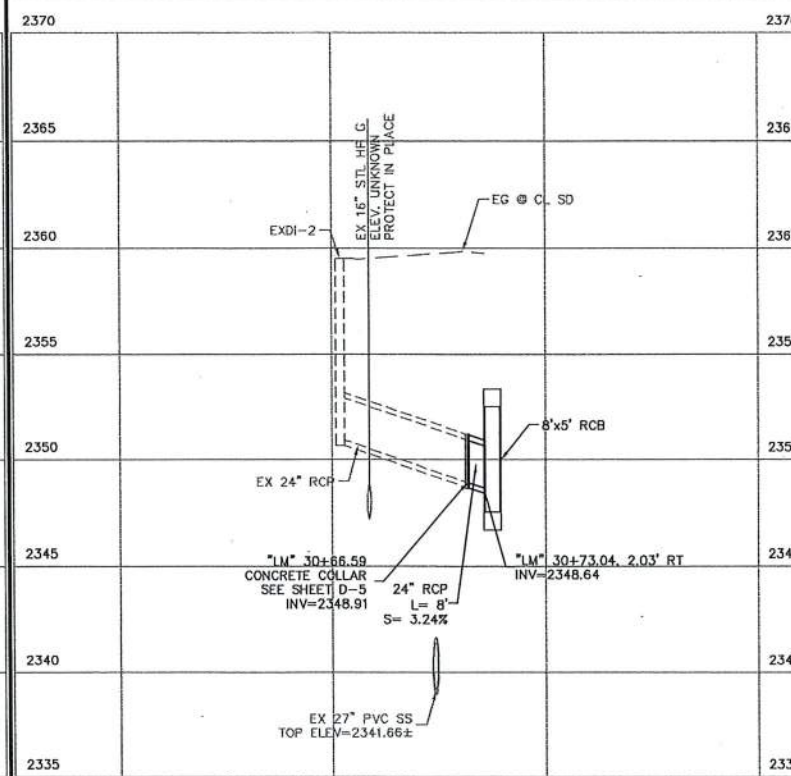
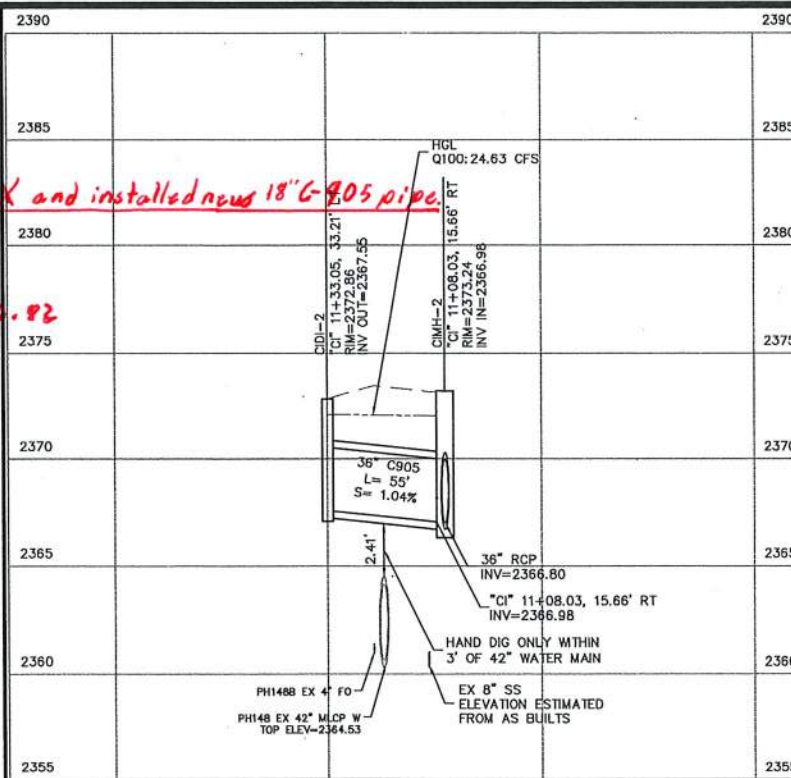
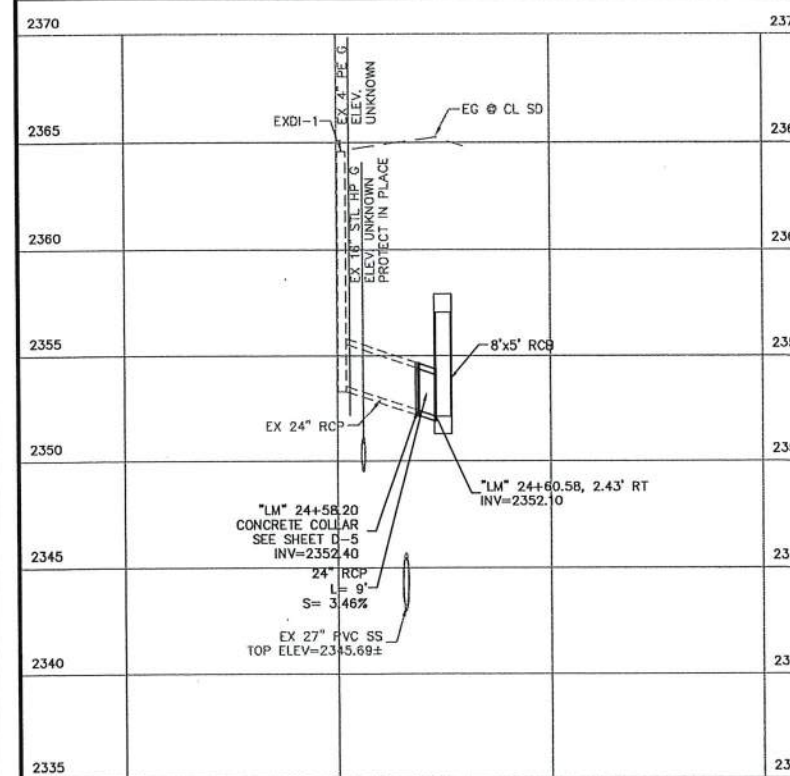
PROJ.#:123778 AGR:115933 QS:125-33-SE/SW XC 11343



 SDP-2 45 of 89 DRAWING NO. 731-94	TITLE: GOWAN NORTH BUFFALO BRANCH LONE MOUNTAIN TO WASHBURN		 DEPARTMENT OF PUBLIC WORKS CAPITAL PROJECT MANAGEMENT	REVISIONS							
	SHEET: DRAINAGE PROFILES (SHEET 2 OF 6)			DESIGNED BY: JS DRAWN BY: LS CHECKED BY: EH DATE: 9/7/17							
				3753 Howard Highway Parkway, Suite 125 Buffalo, NY 14225 Phone: 732-897-8100 Fax: 732-897-8101							



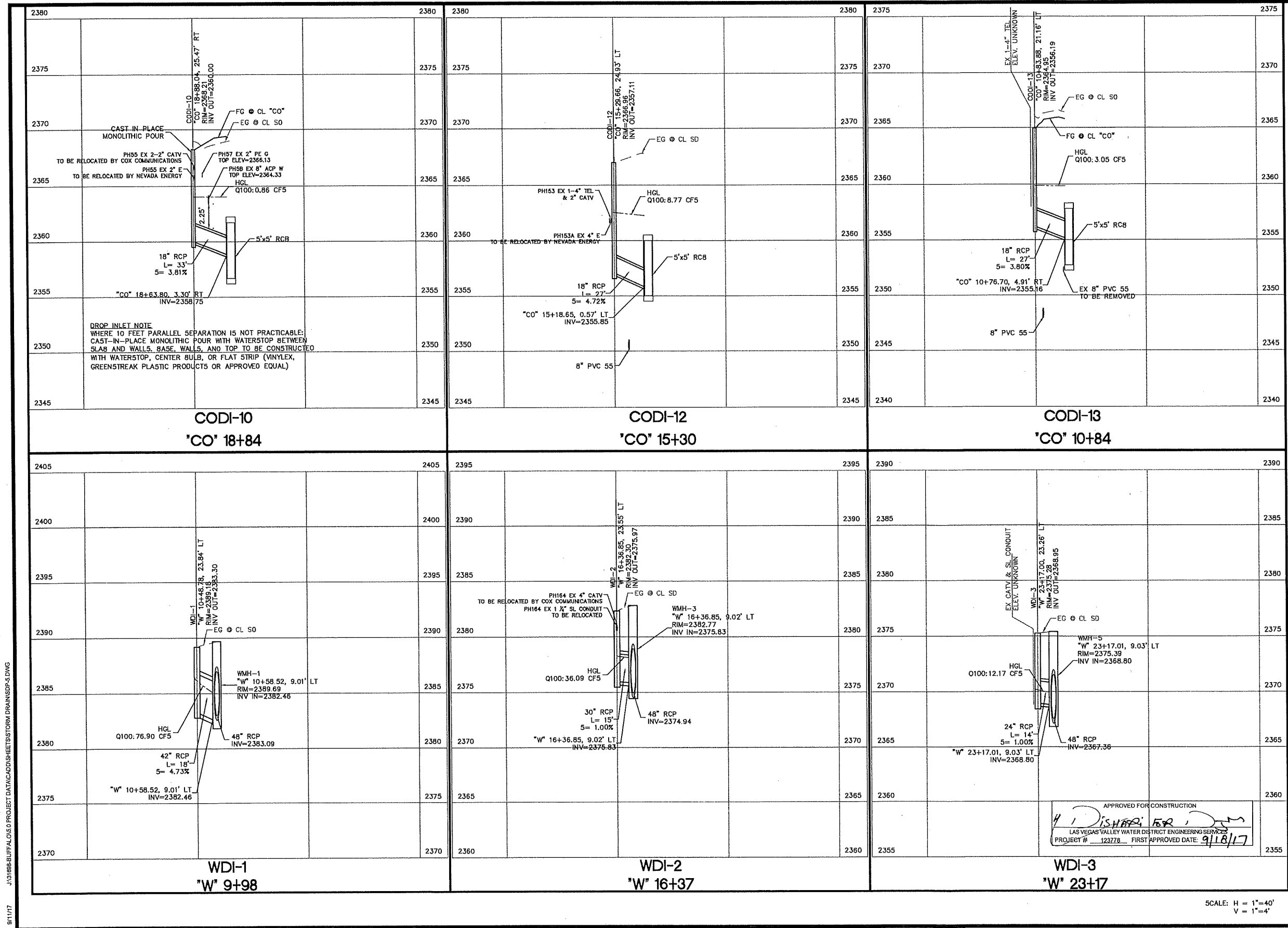
CIDI-1 TO CMH-3
"CI" 11+80 TO "CI" 10+62



SCALE: H = 1"=40'
V = 1"=4'

	TITLE: GOWAN NORTH BUFFALO BRANCH LONE MOUNTAIN TO WASHBURN	 DEPARTMENT OF PUBLIC WORKS CAPITAL PROJECT MANAGEMENT	DESIGNED BY: JS DRAWN BY: LS CHECKED BY: EH DATE: 9/7/17	NO. _____ DATE: _____ DESCRIPTION _____ APPD _____
	SHEET: DRAINAGE PROFILES (SHEET 3 OF 6)			
SDP-3 46 of 89 731-94				

8/11/17 J:\1088-BUFFALO-0 PROJECT DATA\DWG\DRS\STORM DRAIN\SDP-5.DWG



SCALE: H = 1"=40'
V = 1"=4'

REVISIONS				
NO.	DATE	DESCRIPTION	APPD.	

DESIGNED BY: JS
DRAWN BY: LS
CHECKED BY: EH
DATE: 9/7/17

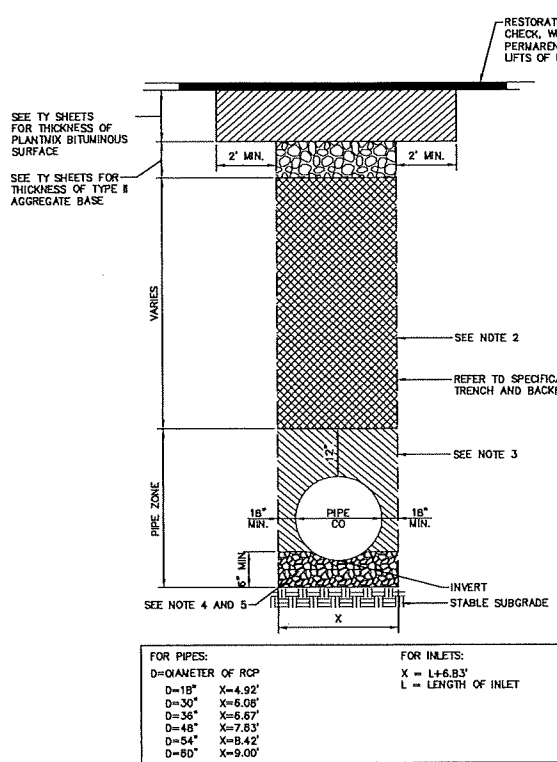
DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECT MANAGEMENT
wsp
3755 Howard Hughes Parkway, Suite 135
Las Vegas, NV 89169
Phone: 702.307.4100

TITLE: GOWAN NORTH BUFFALO BRANCH
LONE MOUNTAIN TO WASHBURN
SHEET: DRAINAGE PROFILES
(SHEET 5 OF 6)

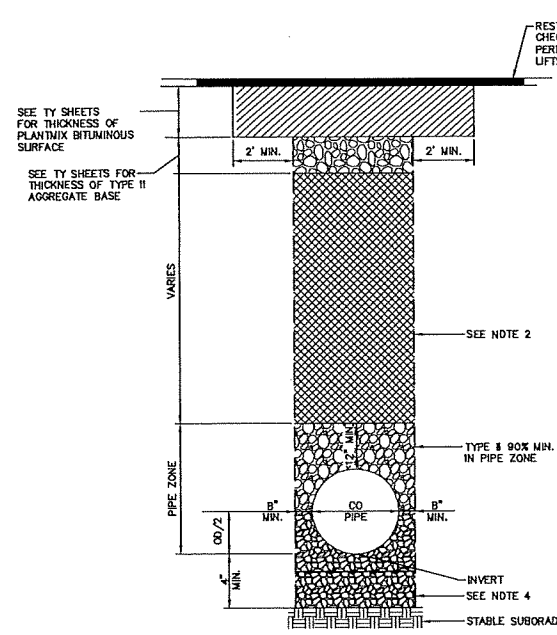
APPROVED FOR CONSTRUCTION
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT # 123778 FIRST APPROVED DATE: 9/18/17

SDP-5
48 of 89
DRAWING NO.
731-94

9/10/17 J:\1698-BUFFALO-03-PROJECT DATA\03-05-SHEETS\DETAILS-1.DWG



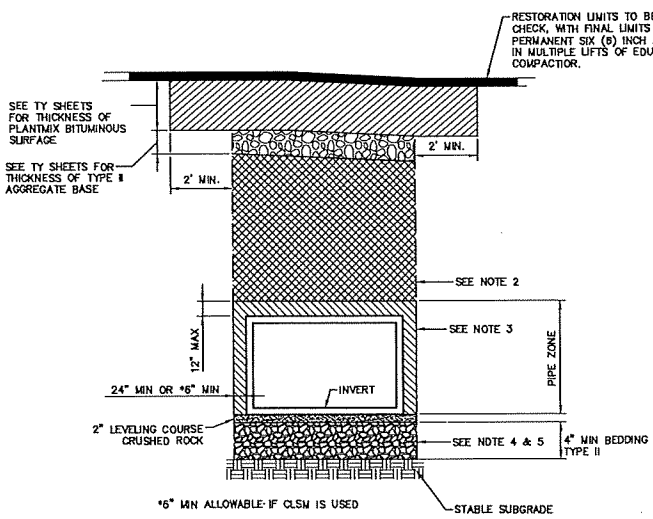
STORM DRAIN-RCP
TYPICAL TRENCH SECTION (USDCCA)
NOT TO SCALE



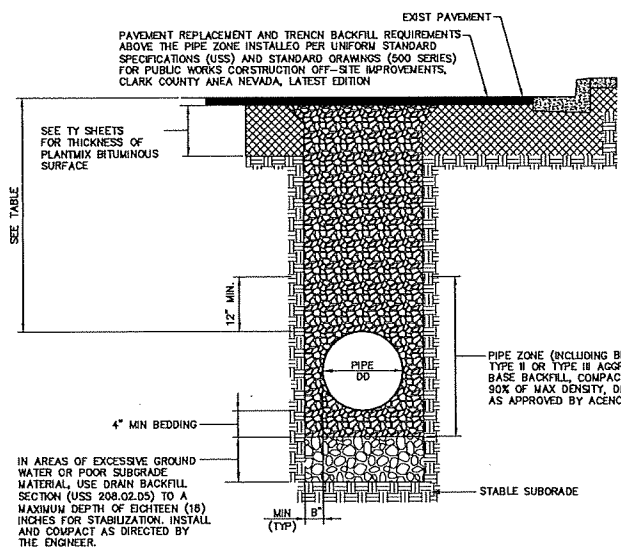
SANITARY SEWER
TYPICAL TRENCH SECTION
NOT TO SCALE

STORM DRAIN RCP NOTES:

- SEE SD SHEETS FOR PLAN AND PROFILE, SEE OR SHEETS FOR SAWCUT LIMITS.
- SELECTED BACKFILL OR GRANULAR BACKFILL APPLIED IN LIFTS OF NO MORE THAN 8" (EIGHT INCHES) AND COMPACTED TO 90 PERCENT OF MAXIMUM DRY DENSITY PER ASTM D1557.
- BACKFILL IN PIPE ZONE MAY BE TYPE II OR CLSM
TYPE II
A TRENCH WIDTH OF EIGHTEEN (18) INCHES MINIMUM FROM THE OUTSIDE EDGE OF THE PIPE SHALL BE UTILIZED WHEN TYPE II IS USED AS BACKFILL IN THE PIPE ZONE.
TYPE II BACKFILL TO BE APPLIED IN LIFTS NO MORE THAN 8" (EIGHT INCHES) AND COMPACTED TO 90 PERCENT OF MAXIMUM DRY DENSITY.
CLSM
A TRENCH WIDTH OF SIX (6) INCHES MINIMUM FROM THE OUTSIDE EDGE OF THE PIPE SHALL BE UTILIZED WHEN CLSM IS USED AS BACKFILL IN THE PIPE ZONE.
CLSM BACKFILL SHALL BE PLACED FROM BEDDING UP TO THE TOP OF PIPE AND TO TWELVE (12) INCHES MAXIMUM ABOVE THE PIPE. THE CONTRACTOR HAS THE OPTION OF PLACING ABOVE THE PIPE, CLSM OR UTILIZING BACKFILL AS NOTED IN NOTE 2 ABOVE.
- FOLLOWING ANY REQUIRED DEWATERING, OVEREXCAVATION OF THE SUBGRADE TO A MINIMUM OF EIGHT (8) INCHES BELOW THE PROPOSED BOTTOM OF RCP WILL BE REQUIRED WHERE SOFT, LOOSE, EXPANSIVE, AND CEMENTED SOILS ARE ENCOUNTERED. THE EXPOSED LOOSE AND EXPANSIVE SOILS SHOULD BE COMPACTED TO A MINIMUM OF 90 PERCENT MAXIMUM DRY DENSITY, PER ASTM D1557. COMPACTION MAY BE ELIMINATED IF CEMENTED SOILS ARE ENCOUNTERED. IN THE EVENT SOFT SOIL LAYERS ARE ENCOUNTERED WHICH CANNOT BE COMPACTED TO 90 PERCENT MAXIMUM DRY DENSITY AND DO NOT PROVIDE A SUFFICIENTLY STABLE WORKING PLATFORM, CLEAN, ANGULAR, ONE (1) TO ONE AND A HALF (1 1/2) INCH, CRUSHED ROCK MAY BE WORKED INTO THE SOFT STRATA UNTIL A STABLE WORKING PLATFORM IS ACHIEVED. THE ENGINEER/OWNER WILL DECIDE AS TO THE SUFFICIENCY AND/OR ADEQUACY OF A STABLE WORKING PLATFORM. NOT THE CONTRACTOR. CARE SHOULD BE TAKEN TO ENSURE THAT THE CRUSHED ROCK PENETRATES THE SOIL MATRIX, AND THAT VOID SPACES BETWEEN CRUSHED ROCK DO NOT REMAIN. ONCE A STABLE WORKING PLATFORM HAS BEEN ESTABLISHED, A BEDDING LAYER CONSISTING OF A MINIMUM SIX (6) INCHES THICKNESS OF TYPE II MATERIAL, PLACED IN SIX (6) TO EIGHT (8) INCH LOOSE LIFTS AND COMPACTED TO 95 PERCENT MAXIMUM DRY DENSITY, SHOULD BE PLACED TO BRING THE SUBGRADE TO PROPOSED RCP ELEVATION.
- PROTECT TRENCH SIDES IN ACCORDANCE WITH CLARK COUNTY STANDARD SPECIFICATIONS SECTION 208.03.01.
- TRENCHING AND SHORING OPERATIONS SHOULD BE CONDUCTED IN ACCORDANCE WITH SECTION 10 NOS. 1928.650 THROUGH 1928.652 OF THE STATE OF NEVADA OCCUPATIONAL SAFETY AND HEALTH STANDARDS FOR THE CONSTRUCTION INDUSTRY (WITH AMENDMENTS AS OF AUGUST 1991) AND IN ACCORDANCE WITH 29 CFR PART 1926, OCCUPATIONAL SAFETY AND HEALTH STANDARDS-EXCAVATIONS, FINAL RULE (OCT 31 1989). SAFETY OF CONSTRUCTION PERSONNEL IS RESPONSIBILITY OF CONTRACTOR.
- FOR ADDITIONAL DETAILS REFER TO UNIFORM STANDARD DRAWINGS CLARK COUNTY ANEA DWG-NO 503.



STORM DRAIN-RCP
TYPICAL TRENCH SECTION
NOT TO SCALE



RELOCATED WATERLINE
TYPICAL TRENCH SECTION
NOT TO SCALE

SANITARY SEWER NOTES:

- SEE UT SHEETS FOR PLAN AND PROFILES.
- SELECTED BACKFILL OR GRANULAR BACKFILL APPLIED IN LIFTS OF NO MORE THAN SIX (6) INCHES AND COMPACTED TO 90 PERCENT OF MAXIMUM DENSITY PER ASTM D1557.
- FOR ADDITIONAL DETAILS REFER TO DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS 2010, DWG NO. SD-16 TO SD-18.
- BEDDING TO BE FOUR (4) INCHES OF GRANULAR MATERIAL ONE (1) INCH MINUS CRUSHED ROCK OR TYPE II.
- TRENCHING AND SHORING OPERATIONS SHOULD BE CONDUCTED IN ACCORDANCE WITH SECTION 10 NOS. 1926.650 THROUGH 1926.652 OF THE STATE OF NEVADA OCCUPATIONAL SAFETY AND HEALTH STANDARDS FOR THE CONSTRUCTION INDUSTRY (WITH AMENDMENTS AS OF AUGUST 1991) AND IN ACCORDANCE WITH 29 CFR PART 1926, OCCUPATIONAL SAFETY AND HEALTH STANDARDS-EXCAVATIONS, FINAL RULE (OCT 31 1989). SAFETY OF CONSTRUCTION PERSONNEL IS RESPONSIBILITY OF CONTRACTOR.

STORM DRAIN RCB NOTES:

- SEE SD SHEETS FOR PLAN AND PROFILE, SEE OR SHEETS FOR SAWCUT LIMITS.
- SELECTED BACKFILL OR GRANULAR BACKFILL APPLIED IN LIFTS OF NO MORE THAN 8" (EIGHT INCHES) AND COMPACTED TO 90 PERCENT OF MAXIMUM DRY DENSITY PER ASTM D1557.
- THE CONTRACTOR SHALL TAKE INTO ACCOUNT THE EFFECTS OF BUOYANCY FORCES ON THE BOX CULVERT AS NECESSARY, WHEN BACKFILLING THE STORM DRAIN BOX CULVERT TRENCH. SEE SPECIAL PROVIDORS SECTION 270 DEWATERING.
BACKFILL IN PIPE ZONE MAY BE TYPE II OR CLSM
TYPE II
A TRENCH WIDTH OF TWENTY FOUR (24) INCHES MINIMUM FROM THE OUTSIDE EDGE OF THE BOX CULVERT SHALL BE UTILIZED WHEN TYPE II IS USED AS BACKFILL IN THE PIPE ZONE.
TYPE II BACKFILL TO BE APPLIED IN LIFTS NO MORE THAN 8" (EIGHT INCHES) AND COMPACTED TO 90 PERCENT OF MAXIMUM DRY DENSITY.
CLSM
A TRENCH WIDTH OF SIX (6) INCHES MINIMUM FROM THE OUTSIDE EDGE OF THE BOX CULVERT SHALL BE UTILIZED WHEN CLSM IS USED AS BACKFILL IN THE PIPE ZONE.
CLSM BACKFILL SHALL BE PLACED FROM BEDDING UP TO THE TOP OF BOX CULVERT AND TO TWELVE (12) INCHES MAXIMUM ABOVE THE BOX CULVERT. THE CONTRACTOR HAS THE OPTION OF PLACING ABOVE THE BOX CULVERT, CLSM OR UTILIZING BACKFILL AS NOTED IN NOTE 2 ABOVE.
- FOLLOWING ANY REQUIRED DEWATERING, OVEREXCAVATION OF THE SUBGRADE TO A MINIMUM OF EIGHT (8) INCHES BELOW THE PROPOSED BOTTOM OF RCB WILL BE REQUIRED WHERE SOFT, LOOSE, EXPANSIVE, AND CEMENTED SOILS ARE ENCOUNTERED. THE EXPOSED LOOSE AND EXPANSIVE SOILS SHOULD BE COMPACTED TO A MINIMUM OF 90 PERCENT MAXIMUM DRY DENSITY, PER ASTM D1557. COMPACTION MAY BE ELIMINATED IF CEMENTED SOILS ARE ENCOUNTERED. IN THE EVENT SOFT SOIL LAYERS ARE ENCOUNTERED WHICH CANNOT BE COMPACTED TO 90 PERCENT MAXIMUM DRY DENSITY AND DO NOT PROVIDE A SUFFICIENTLY STABLE WORKING PLATFORM, CLEAN, ANGULAR, ONE (1) TO ONE AND A HALF (1 1/2) INCH, CRUSHED ROCK MAY BE WORKED INTO THE SOFT STRATA UNTIL A STABLE WORKING PLATFORM IS ACHIEVED. THE ENGINEER/OWNER WILL DECIDE AS TO THE SUFFICIENCY AND/OR ADEQUACY OF A STABLE WORKING PLATFORM. NOT THE CONTRACTOR. CARE SHOULD BE TAKEN TO ENSURE THAT THE CRUSHED ROCK PENETRATES THE SOIL MATRIX, AND THAT VOID SPACES BETWEEN CRUSHED ROCK DO NOT REMAIN. ONCE A STABLE WORKING PLATFORM HAS BEEN ESTABLISHED, A BEDDING LAYER CONSISTING OF A MINIMUM SIX (6) INCHES THICKNESS OF TYPE II MATERIAL, PLACED IN SIX (6) TO EIGHT (8) INCH LOOSE LIFTS AND COMPACTED TO 95 PERCENT MAXIMUM DRY DENSITY, SHOULD BE PLACED TO BRING THE SUBGRADE TO PROPOSED RCB ELEVATION.
- OVEREXCAVATION AND THE RESULTING BEDDING LAYER SHOULD BE INCREASED TO A MINIMUM OF TWENTY FOUR (24) INCHES IN AREAS WHERE SEVERELY EXPANSIVE SOILS ARE ENCOUNTERED, OR SLABS OR STRUCTURES EXHIBIT A BEARING PRESSURE LESS THAN 500 PSF. EXPANSIVE SOIL IS DEFINED PER SECTION 1802.3.2 OF THE INTERNATIONAL BUILDING CODE AND SECTION R403.1.5.
- PROTECT TRENCH SIDES IN ACCORDANCE WITH CLARK COUNTY STANDARD SPECIFICATIONS SECTION 208.03.01.
- TRENCHING AND SHORING OPERATIONS SHOULD BE CONDUCTED IN ACCORDANCE WITH SECTION 10 NOS. 1926.650 THROUGH 1926.652 OF THE STATE OF NEVADA OCCUPATIONAL SAFETY AND HEALTH STANDARDS FOR THE CONSTRUCTION INDUSTRY (WITH AMENDMENTS AS OF AUGUST 1991) AND IN ACCORDANCE WITH 29 CFR PART 1926, OCCUPATIONAL SAFETY AND HEALTH STANDARDS-EXCAVATIONS, FINAL RULE (OCT 31 1989). SAFETY OF CONSTRUCTION PERSONNEL IS RESPONSIBILITY OF CONTRACTOR.

ROW (FEET)	PIPE DIAMETER (INCHES)	MINIMUM DEPTH OF COVER (INCHES)
SIXTY (60) OR LESS	TWELVE (12) AND SMALLER	FORTY-TWO (42)
SIXTY (60) OR LESS	GREATER THAN TWELVE (12)	SIXTY (60)
GREATER THAN SIXTY (60)	TWELVE (12) AND SMALLER	FORTY-EIGHT (48)
GREATER THAN SIXTY (60)	GREATER THAN TWELVE (12)	SIXTY (60)
GREATER THAN SIXTY (60)	GREATER THAN SIXTEEN (16)	SEVENTY-TWO (72) MINIMUM

WATERLINE NOTES:

- REFERENCES:
UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS CLARK COUNTY AREA NEVADA, LATEST EDITION (USS AND USD REFERENCES)
INTERAGENCY QUALITY ASSURANCE COMMITTEE (IOAC)
- ACCEPTABLE METHODS OF COMPACTION
A. BEDDING AND PIPE ZONE AREAS
MECHANICAL COMPACTION OR CLSM I (AS APPROVED BY AGENCY)
B. ABOVE PIPE ZONE
MECHANICAL COMPACTION OR CLSM I
MECHANICAL COMPACTION ONLY FOR A MINIMUM OF TOP SIXTEEN (16) INCHES IN PAVED AREAS (AS APPROVED BY AGENCY)
- CONTRACTOR SHALL ADHERE TO ALL LOCAL, STATE AND FEDERAL SAFETY STANDARDS.
- DURING CONSTRUCTION TWENTY FOUR (24) INCH MINIMUM COVER MUST BE MAINTAINED FROM TOP OF PIPE TO GRADE.
- MINIMUM COVER IS REFERENCED TO FUTURE FINISHED FINAL GRADES AT PIPE OR TOP OF CASING UNLESS OTHERWISE SHOWN IN PROFILE DRAWINGS.
- DIAGONAL PAVEMENT REPLACEMENT IS NOT PERMITTED.
- PLACE/INSTALL PIPE LOCATOR RIBBON AND LOCATOR BALLS PER UDACS PLATE 15. (AS REQUIRED BY AGENCY)
- INSTALL CONCRETE DAMS AT MAXIMUM INTERVALS OF 400' TO THE HEIGHT OF THE DRAIN ROCK. (AS REQUIRED BY AGENCY)
- SEE UDACS STD PLATE NO. 17 AND 19

LEGEND

- PERMANENT ASPHALT PATCH
- TYPE II AGGREGATE BASE
- SELECT OR GRANULAR BACKFILL
- CLSM OR TYPE II BACKFILL
- BEDDING

REVISIONS

NO.	DATE	DESCRIPTION	APPROVED

DESIGNED BY: JS
DRAWN BY: RM
CHECKED BY: EH
DATE: 9/7/17

DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECT MANAGEMENT

9/7/17
2703 Main Street, Suite 205
Las Vegas, NV 89109
Phone: 702-497-2400

DRAINAGE DETAILS

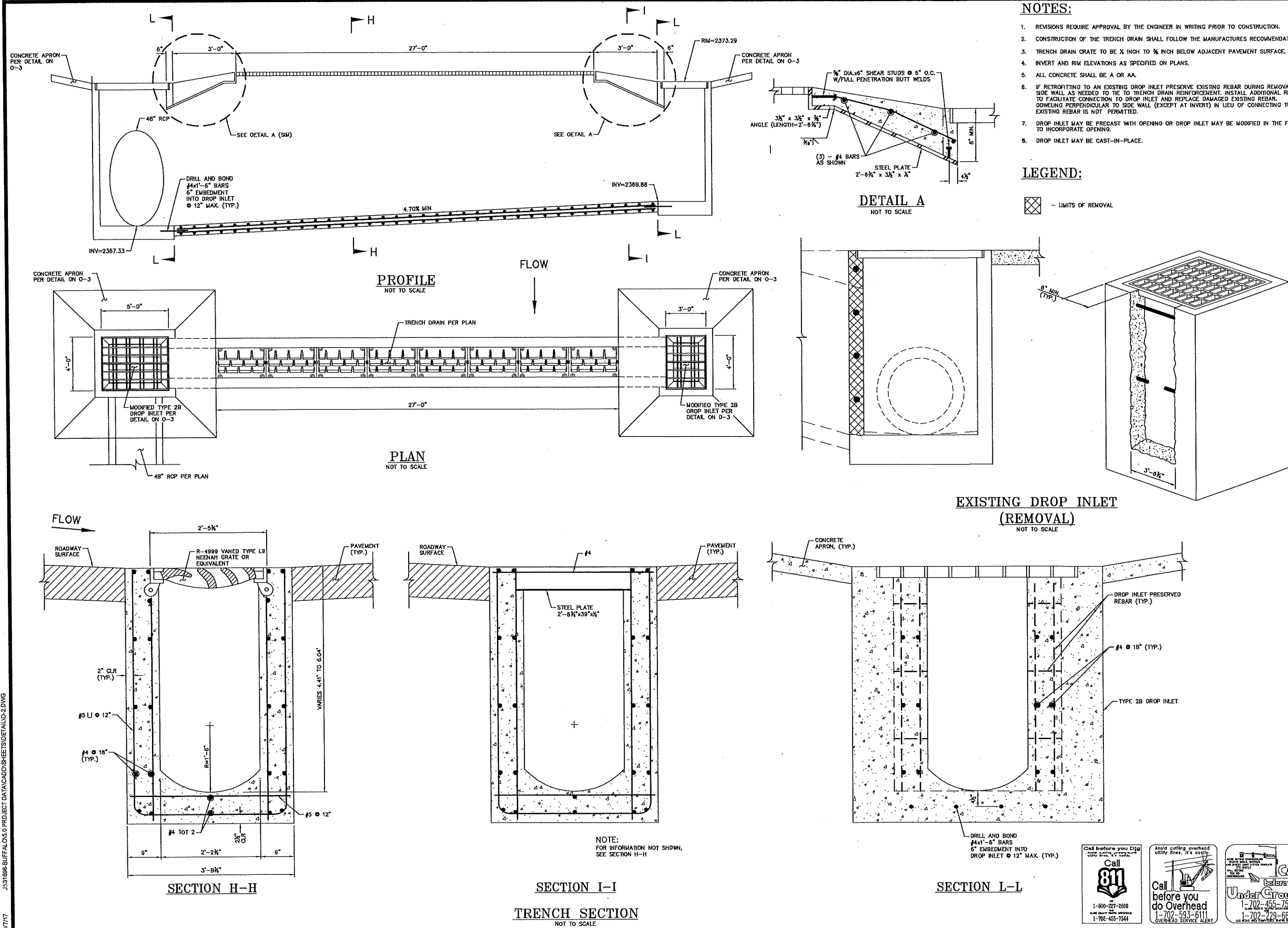
GOV. NORTH BUFFALO BRANCH
LONE MOUNTAIN TO WASHBURN

9/7/17

SHOU-CHING HSU
Exp 04/30/16
CIVIL
9/7/17

D-1
50 of 89
DRAWING NO.
731-94

9/7/17 J:\31688-BUFFALO\03 PROJECT DATA\DWG\SHEETS\DETAIL-D-2.DWG



REVISIONS	DATE	DESCRIPTION	APPD

DESIGNED BY: JS	DATE: 9/7/17
DRAWN BY: RM	
CHECKED BY: EH	

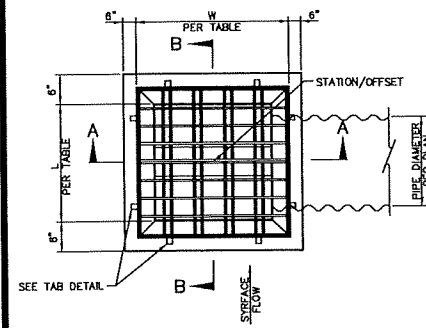
3753 Howard Hughes Parkway, Suite 135 Phoenix, AZ 85018 Phone: 602.497.8100

DEPARTMENT OF PUBLIC WORKS CAPITAL PROJECT MANAGEMENT
--

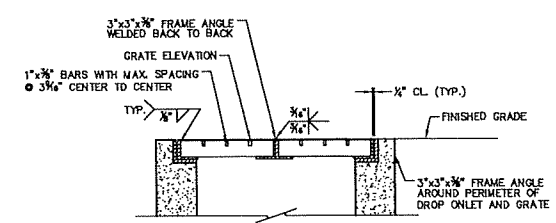
TITLE: GOWAN NORTH BUFFALO BRANCH LONE MOUNTAIN TO WASHBURN
SHEET: DRAINAGE DETAILS

9/7/17
D-2
51 of 89
DRAWING NO. 731-94

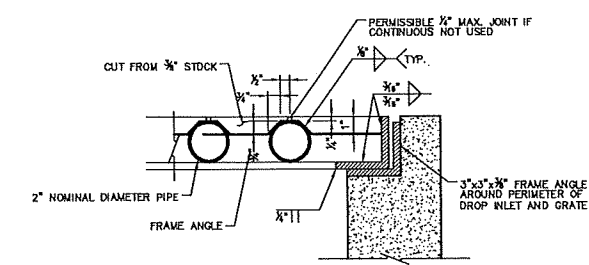
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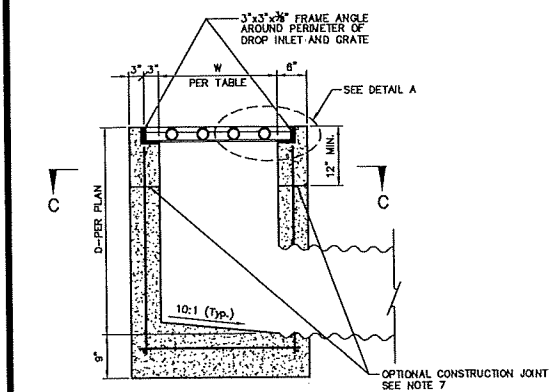
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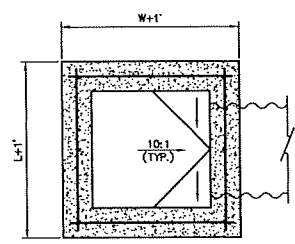
SECTION B-B



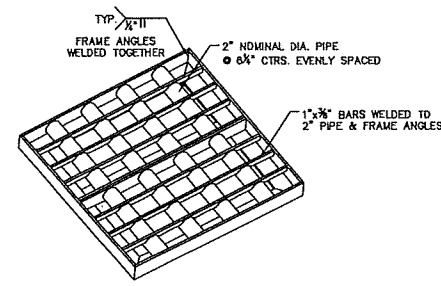
DETAIL A



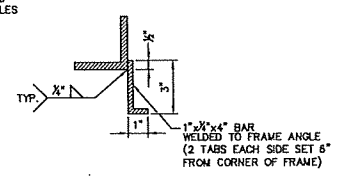
SECTION A-A



SECTION C-C



GRATE DETAIL



TAB DETAIL

MODIFIED TYPE 2B DROP INLET
NOT TO SCALE

DI NAME	STATION / OFFSET	DROP INLET			CONCRETE APRON							
		L (ft)	W (ft)	H (ft)	NORTH		SOUTH		EAST		WEST	
					A (ft)	S (%)	A (ft)	S (%)	A (ft)	S (%)	A (ft)	S (%)
8DI-1	"8" 23+95.73, 59.12' LT	4	2	0.75	3	25	3	25	3.5	22	3.5	25
8DI-4	"8" 17+59.39, 32.07' LT	2.5	2	0.36	3	11	3	12	3	12	3	12
8DI-5	"8" 17+58.28, 36.01' RT	2.5	2	0.06	3	2	3	2	3	2	3	2
8DI-6	"8" 13+08.49, 33.90' LT	2.5	2	0.36	3	12	3	12	3	12	3	12
CODI-10	"CO" 18+88.04, 25.47' RT	2.5	2	0.15	3	5	3	5	3	5	3	5
CODI-13	"CO" 10+83.88, 21.16' LT	2.5	2	0.06	3	2	3	0.7	3	2	3	2
CODI-3	"CO" 28+60.63, 24.97' RT	2.5	2	0.50	3	17	3	17	3	17	3	17
CODI-4	"CO" 27+18.62, 25.21' RT	2.5	2	0.48	3	13	3	16	3	19	3	16
CODI-6	"CO" 24+00.86, 30.82' LT	2.5	2	0.36	3	6	3	12	3	12	3	12
CODI-7	"CO" 23+42.16, 41.65' RT	2.5	2	0.15	3	5	3	5	3	5	3	5
CODI-2	"CO" 20+33.79, 25.78' LT	2.5	2	0.10	3	3	3	3	2	5	2	5
LMDI-4	"LM" 8+64.12, 58.97' LT	10	2	1.50	4	19	6	27	3	50	3	10
RD1-1	"R" 24+34.00, 18.07' RT	4	5	0.60	3	20	3	20	3	2	3	2
RD1-2	"R" 24+34.00, 20.24' LT	3	4	0.60	3	20	3	20	3	2	3	2

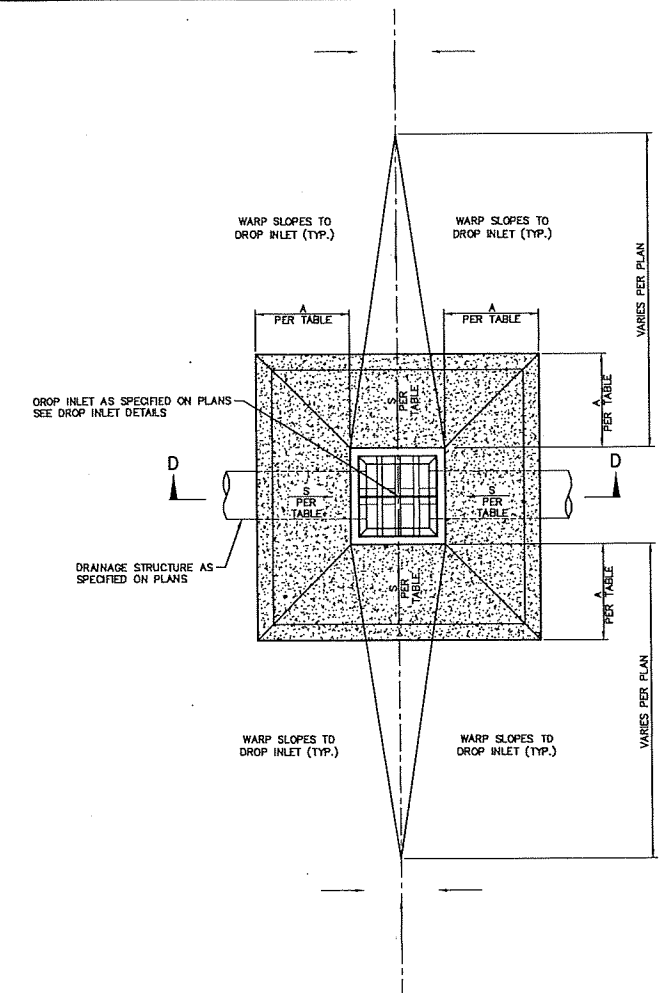
DROP INLET & CONCRETE APRON TABLE

NOTES:

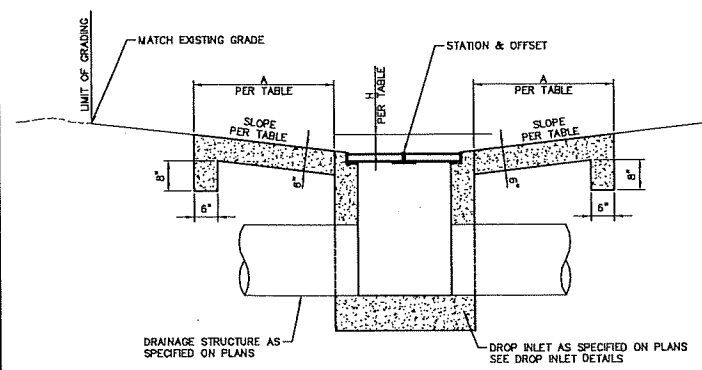
- ALL CONCRETE SHALL BE CLASS A OR AA.
- REINFORCING STEEL SHALL BE NO. 4 BARS WITH MAXIMUM SPACING AT 18" CENTERS, WELDED TIGHTLY AT ALL INTERSECTIONS AND EMBEDDED 2" CLEAR OF ALL CONCRETE SURFACES.
- EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1".
- STRUCTURAL STEEL WEIGHT INCLUDES THE 2" NOMINAL DIAMETER PIPE STANDARD WEIGHT AND 3" x 3" x 3/8" FRAME ANGLES.
- FOR 2" NOMINAL DIAMETER PIPE SEE ASTM A53.
- SLOPE CATCH BASIN FLOORS 10:1 FROM ALL DIRECTIONS TOWARD OUTLET PIPE. IF BASIN IS USED AS A JUNCTION, SHAPE FLOW LINE(S) TO OUTLET PIPE AND PROVIDE A 10:1 SLOPE TO FLOW LINE(S).
- RUN REBAR CONTINUOUS THRU CONSTRUCTION JOINT. JOINT MUST BE A MIN. 3' FROM HORIZONTAL BARS.

DESIGN NOTES:

- ADDITIONAL PIPE PENETRATIONS MAY BE PLACED IN ANY WALL.



PLAN



SECTION D-D

GENERAL NOTE:

- CONCRETE SHALL BE CLASS A OR AA.
- ALL DROP INLETS SHALL INCLUDE STORM WATER MANAGEMENT STAMP AND DETAIL PER USDOCA STD. DWC. NO. 421.

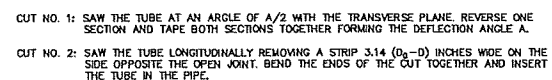
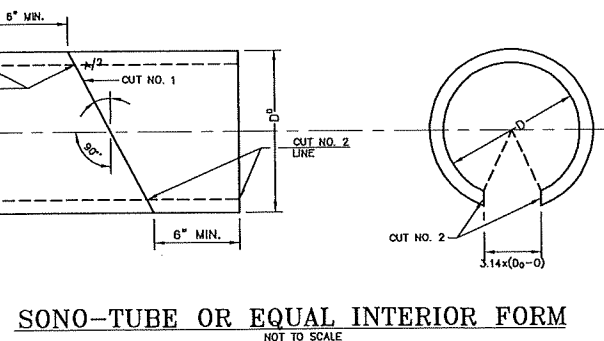
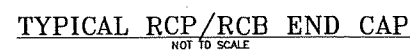
DROP INLET CONCRETE APRON
NOT TO SCALE

REVISIONS		DESIGNED BY: JS	DATE: 9/7/17	APPROVED
		DRAWN BY: RM	CHECKED BY: EH	
		3753 Howard Highway Las Vegas, NV 89146 Phone: 702-892-2400		
DEPARTMENT OF PUBLIC WORKS CAPITAL PROJECT MANAGEMENT				
GOWAN NORTH BUFFALO BRANCH LONE MOUNTAIN TO WASHBURN		DRAINAGE DETAILS		
TITLE:		SHEET:		
D-3		52 of 89		
DRAWING NO. 731-94				

Call before you Dig
811
1-800-227-2800
1-702-455-7511
1-702-455-7544

Avoid cutting overhead
utility lines. It's costly.
Call before you
do Overhead
1-702-593-6111
OVERHEAD SERVICE ALERT

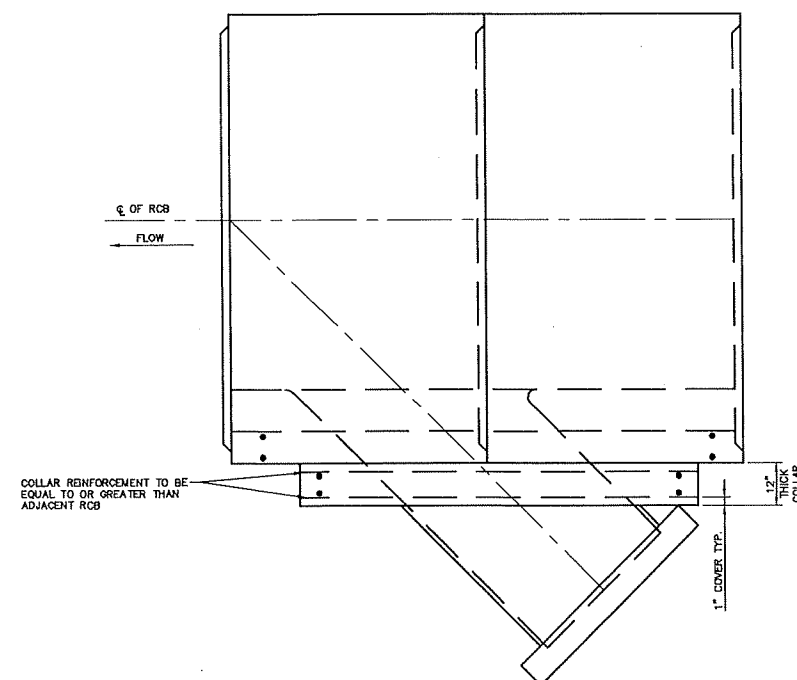
Call before you
Under Ground
1-702-455-7511
1-702-729-6611



NOTES:

1. WHERE PIPE IS 21-INCHES OR LESS IN DIAMETER, AN INTERIOR FORM OF UNSEALED SONO-TUBE, OR EQUAL, SHALL BE USED TO PROVIDE A SMOOTH INTERIOR JOINT. THE PAPER FORM MAY BE LEFT IN PLACE. WHEN THE PIPE IS 24-INCHES OR LARGER A REMOVABLE INTERIOR FORM SHALL BE USED OR THE INTERIOR JOINT SHALL BE COMPLETELY FILLED WITH MORTAR AND NEATLY POINTED.

0	18°	24°	30°	36°	42°	48°	54°	60°	72°
T	5°	6°	7°	8°	9°	10°	11°	12°	14°
L	12°	12°	16°	16°	24°	24°	30°	30°	36°



PRECAST RCP/RCB CONNECTION DETAIL
(APPLIES TO 24", 30", 36", 48" RCP AND 60"x 36" HERCP)
NOT TO SCALE

[illegible]DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECT MANAGEMENT

**GOWAN NORTH BUFFALO BRANCH
LONE MOUNTAIN TO WASHBURN**

TITLE:



D-5
54 of 89
DRAWING NO.
731-94

AS VEGAS PAYING CORP.
RECORD
Jeff Anderson

1:31:17 I:\31698-R\JEFF\015 0 PROJECT DATA\CADD\SHEETS\DETAILD-5.DWG

Call before you Dig
 Avoid digging underground
 utility lines. It's deadly.

**Call
 811**

OR
 1-800-227-2663
 AND
 CLARK COUNTY PUBLIC WORKS
 1-702-455-7544

Avoid cutting overhead utility lines. It's costly.



Call
before you
do Overhead
1-702-593-6111

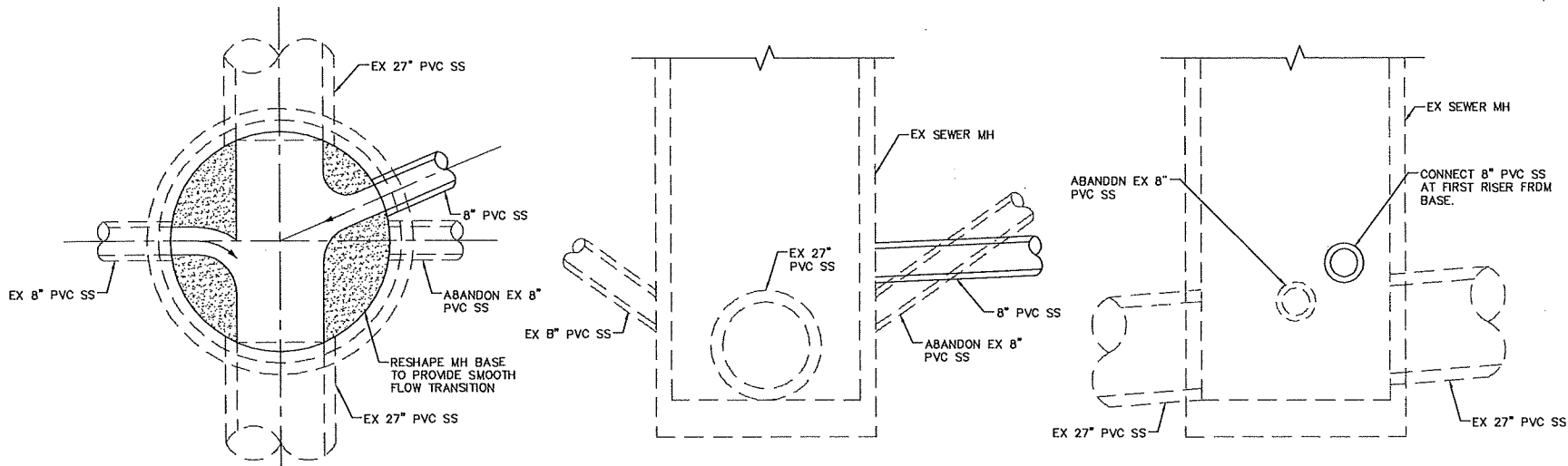

 #100 HITTING UNDERGROUND
 TRAFFIC SIGNALS, ETC.
 NO IMPACT, NO NOISE, NO CONCRETE
 CALL BEFORE
 YOU GO
 (SEE BEHIND)

before you
Under Ground
 1-702-455-7511
 CLARK COUNTY TRAFFIC SIGNALS
 1-702-229-6611

POTHOLE NUMBER	NORTHING	EASTING	TOP ELEVATION	BOTTOM ELEVATION	UTILITY	MATERIAL
PH1	655484.72	241452.411	2337.49		27" SS	PLASTIC
PH2	655488.42	241448.884	2340.72		18" CASHG	METAL
PH3	655498.80	241446.982	2340.28		8" W	PLASTIC
PH4	655498.82	241432.758	2341.40		8" G	PLASTIC
PH5	655501.36	240090.345	2348.33		8" SS	PLASTIC
PH6	655501.44	240087.228	2360.73		8" W	PLASTIC
PH7	655580.45	240115.523	2360.92		16" W	CONCRETE
PH8	655597.68	240104.014	2360.88		8" W	CONCRETE
PH9	655609.29	240102.512	2362.12		2" G	PLASTIC
PH10	655613.07	240089.63	2352.78		8" SS	PLASTIC
PH11	655578.65	239569.258	2353.36		8" SS	PLASTIC
PH12	655591.39	236723.272	2368.18		10" W	PLASTIC
PH13	655615.12	238724.214	2369.42		10" W	PLASTIC
PH14	655613.03	238687.652	2364.32		42" W	CONCRETE
PH15	655617.60	236689.023	2364.20		42" W	CONCRETE
PH16	655617.08	236703.784	2358.57		8" SS	PLASTIC
PH17	655576.85	238629.805	2367.27		16" HP G	METAL
PH18	655509.65	241417.54	2349.63		4" T & 2" T	PLASTIC
PH19	655509.78	241421.60	2350.34	2349.75	(2) 4" T	PLASTIC
PH21	655529.74	240781.89	2343.11		8" SS PER PLAH	PLASTIC
PH22	655559.17	240857.36	2358.73		16" W	CONCRETE
PH23	655641.38	236754.13	2368.41		12" W	PLASTIC
PH24	655468.22	241493.46	2344.00		30" W	CONCRETE
PH28	655589.52	240078.66	2361.24		(2) 4" T	PLASTIC
PH28	655581.07	240080.46	2360.62		16" W	METAL
PH28	655551.63	240103.35	2363.30		2" CATV	PLASTIC
PH30	655551.32	240108.60	2358.13		(2) 4" T	PLASTIC
PH32A	655774.50	238687.43	2361.85		4" FO PER ONE CALL	PLASTIC
PH32	655774.31	238690.02	2365.05		42" W PER PLAN	CONCRETE
PH33	655637.08	238697.71	2362.98		42" W PER PLANS	CONCRETE
PH35	655633.26	238608.65	2357.04		27" SS PER PLAN	CONCRETE
PH36	655589.12	238804.44	2366.16		10" HP C	METAL
PH37	655564.05	238802.78	2369.86		3" T	PLASTIC
PH38	655603.82	238774.73	2369.07		4" FO	PLASTIC
PH38	655564.48	238607.71	2371.53		(3) 3" T & 2" CATV & 1" CATV	PLASTIC/DIRECT BURRY
PH40A	655651.88	238666.09	2366.40	2365.08	(6) 4" T	PLASTIC
PH40	655661.07	238725.29	2369.65		10" W	PLASTIC
PH41A	655645.31	238668.03	2370.69		12" W	PLASTIC
PH42	655647.18	238746.15	2367.45	2365.92	(6) 4" T	PLASTIC
PH44	655639.60	238633.11	2359.31		24" SS	RIBBED PLASTIC
PH45	655648.07	238568.87	2371.04		12" W	PLASTIC
PH47A	655657.53	238518.31	2371.42		3" S	PLASTIC
PH47	655658.81	238518.39	2368.75	2368.8	(6) 4" T	PLASTIC
PH48	655641.54	240084.62	2363.91		2" CATV	PLASTIC
PH50	655642.90	240084.65	2363.85		2" E	DIRECT BURRY
PH51	655621.24	240082.92	2365.24		2" C	PLASTIC
PH52	655621.80	240083.20	2361.58		8" W PER PLAN	PLASTIC
PH53	655618.43	240082.89	2361.74		8" W PER PLAN	PLASTIC
PH54	655631.12	240082.36	2366.30		2" CATV	PLASTIC
PH55	655644.27	240106.60	2366.74		2" E & (2) 2" CATV	DIRECT BURRY/PLASTIC
PH57	655632.82	240099.70	2368.13		2" G	PLASTIC
PH58	655627.74	240095.72	2364.33		8" W	CONCRETE
PH58	655635.82	239008.03	2365.29	2364.02	(6) 4" T	PLASTIC
PH59A	655639.20	239005.69	2368.32		1-1/2" T	DIRECT BURRY
PH59B	655642.36	239005.50	2367.32		1" E	DIRECT BURRY
PH60	655637.75	239005.09	2369.09		(2) 1" CATV	PLASTIC
PH61	655655.87	240153.72	2381.59		2" T	PLASTIC
PH61A	655590.36	240152.92	2359.69	2358.24	(6) 4" T & (2) UHK	PLASTIC
PH62	655598.41	240153.28	2361.88		2" E & 1" E	PLASTIC
PH63	655742.29	240081.55	2368.05		2" G	PLASTIC
PH64	655687.40	240078.63	2367.92		2" G	PLASTIC
PH65	655682.40	240092.61	2367.67		8" W	PLASTIC
PH68	655699.59	240058.45	2368.74		2" G	PLASTIC
PH67	655697.75	240049.91	2368.89		4" E & 4" T	PLASTIC
PH68	655640.48	240080.25	2367.70		10" W	PLASTIC
PH68A	655640.78	240080.22	2369.01		2" CATV	PLASTIC
PH69	655649.10	240080.25	2367.78		2" E & 2" T	PLASTIC
PH70	657630.86	239946.66	2370.96	2370.7	2" T & 1" CATV & 1-1/4" E	PLASTIC
PH70A	657631.47	239945.42	2370.89		2" G	PLASTIC

POTHOLE NUMBER	NORTHING	EASTING	TOP ELEVATION	BOTTOM ELEVATION	UTILITY	MATERIAL
PH71	656940.91	240061.00	2367.78		10" W	PLASTIC
PH72	656944.71	240058.57	2369.49		2" G	PLASTIC
PH73	656949.31	240054.33	2369.46		2" CATV & 2" E & 2" T	PLASTIC
PH75	656954.08	240051.06	2367.80		1" E & 1/2" T	DIRECT BURRY
PH76	657213.83	240077.03	2369.78		8" W	PLASTIC
PH77A	657367.35	240077.08	2368.63		4" E	PLASTIC
PH77	657368.80	240077.08	2369.44		2" T	PLASTIC
PH78	657270.85	240093.48	2368.37		8" W	PLASTIC
PH79	657364.05	240076.66	2369.09		(2) 2" CATV	PLASTIC
PH80	657409.27	240093.23	2368.31		8" W	PLASTIC
PH81	657577.13	240054.29	2370.27		2" G	PLASTIC
PH82	657585.37	240074.32	2370.05		2" G	PLASTIC
PH83	657628.14	239948.70	2369.91		6" W	PLASTIC
PH84	657628.29	240019.16	2369.56		6" W	PLASTIC
PH85	657625.00	240075.03	2368.81		8" W	PLASTIC
PH86	657832.35	240074.85	2368.62	2369.18	1" CATV & 2" T & 1-1/4" E	DIRECT BURRY/DIRECT BURRY/PLASTIC
PH88	657923.11	240076.23	2371.79		2" G	PLASTIC
PH89	655933.84	240152.94	2363.18		2" CATV	PLASTIC
PH90	655579.47	240148.98	2360.49		16" W	CONCRETE
PH91A	657658.23	240073.22	2371.53		4" E	PLASTIC
PH91	657657.14	240073.18	2372.48		2" T & 2" CATV	PLASTIC
PH93	656971.38	240057.63	2369.74		14" W	CONCRETE
PH94	658275.35	240052.91	2372.99		4" G	PLASTIC
PH95	658302.67	240004.50	2372.07		4" & 2" CATV	PLASTIC
PH96	658303.02	239992.94	2369.79		14" W	CONCRETE
PH97	658302.85	239986.80	2370.72		2" G	PLASTIC
PH98	658302.80	239866.74	2372.23		(3) 4" T	PLASTIC
PH99	658327.10	238814.88	2368.64		3" CATV & 3" T	PLASTIC
PH102	658327.61	238724.41	2367.32		6" E	PLASTIC
PH103	655619.98	241461.33	2349.70		(2) 3" CATV	PLASTIC
PH104	655800.78	241444.42	2350.87		4" G	PLASTIC
PH106	658248.97	241461.70	2351.58		30" W	CONCRETE
PH107	656274.68	241488.95	2353.34		1" G	PLASTIC
PH108	656244.95	241439.04	2353.62		2" G	PLASTIC
PH109	656251.21	241433.77	2354.17		1/2" G	PLASTIC
PH110	656273.53	241455.13	2353.84		1" C	PLASTIC
PH111	655551.60	238797.98	2368.89	2367.03	(5) 2" CATV/(2) 6" E/(2) 2" & (2) 4" & 3" U	PLASTIC
PH112	656197.85	240053.51	2364.22	2363.62	(3) 4" CATV	PLASTIC
PH113	656993.82	241432.05	2358.24		2" G	PLASTIC
PH114	656197.87	240004.48	2364.08		(2) 4" T	PLASTIC
PH120	655808.87	239987.00	2362.84		(5) 4" E/6" T/(3) UNK	PLASTIC
PH121	655802.08	239984.08	2360.70		(2) 4" T & (3) UNK	PLASTIC
PH129	656940.44	240060.95	2368.81		2" CATV	PLASTIC
PH130	657811.85	240073.13	2372.58		1" W	PLASTIC
PH135	657825.34	240080.55	2369.04		8" W	PLASTIC
PH140	658271.85	240033.83	2369.92		14" W	CONCRETE
PH141	658275.95	240031.74	2373.02		4" G	PLASTIC
PH143	658086.65	239992.78	2369.97		14" W	CONCRETE
PH148A	655695.88	238688.43	2368.82		4" W	PLASTIC
PH148	655725.70	238689.25	2364.53		42" W	CONCRETE
PH148	655725.70	238688.79	2361.44		4" FO	PLASTIC
PH148	655653.69	238708.43	2368.34		(3) 1" T	PLASTIC
PH150	655824.12	239478.82	2368.22	2362.8	(3) 2" CATV	PLASTIC
PH151/152	655511.89	241400.66	2349.82		(2) 3" & 2" IS	PLASTIC
PH153A	656080.07	240058.47	2361.60		4" E	PLASTIC
PH153	656079.90	240055.14	2361.63	2361.63	4" T & 2" CATV	PLASTIC
PH154	656082.78	240095.76	2363.13		8" W	CONCRETE
PH155	656062.93	240104.14	2364.27		2" G	PLASTIC
PH157	656892.17	240123.58	2368.38		1/4" E & 2" T	DIRECT BURRY
PH159	657267.37	240076.50	2368.46		2" E	PLASTIC
PH161	657633.42	240010.68	2370.60	2370.42	1" CATV/2" T/1-1/4" E	DIRECT BURRY/DIRECT BURRY/PLASTIC
PH162	657587.60	240015.97	2370.96		2" G	PLASTIC
PH163	655622.10	239478.70	2363.17	2361.93	(6) 4" T	PLASTIC
PH163A	655626.39	239476.94	2363.63		2" E	PLASTIC
PH164	656331.75	239448.77	2360.87		4" & (2) 1-1/2" CATV	PLASTIC
PH165	656653.34	241449.01	2358.03		1" G	PLASTIC
PH166	655599.74	240110.02	2362.79		(4) 4" T/(2) 2" CATV	PLASTIC
PH166A	655592.11	240114.22	2359.73	2358.37	(6) 4" T & (2) UNK	PLASTIC
PH167	655578.15	240168.36	2361.69		16" W	CONCRETE
PH168	655467.15	241452.99	2348.45		16" HP G	METAL

POTHOLE DATA TABLE



RESHAPE SEWER MANHOLE BASE
PLAN

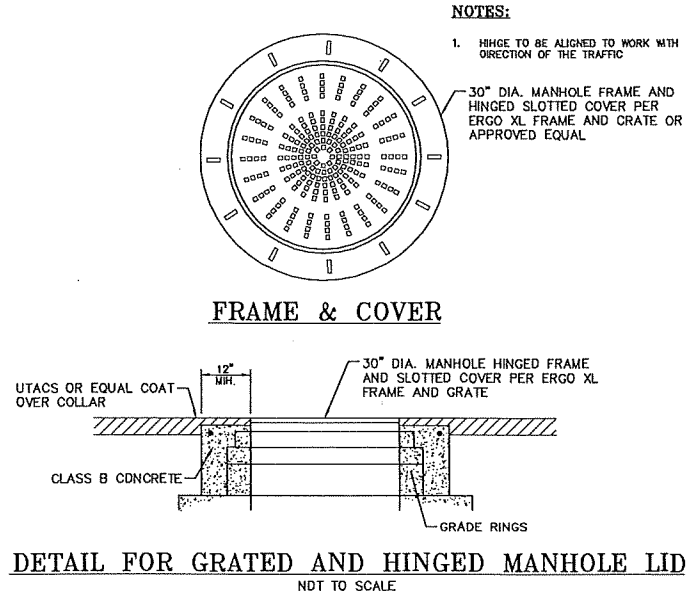
SECTION

PROFILE

DETAIL FOR CONNECTION TO EX SEWER MANHOLE
NOT TO SCALE

NOTES:

- FOR DETAIL NOT SHOWN SEE DCSWCS SD-9
- ABANDON EX SEWER USING DCSWCS METHOD C



DETAIL FOR GRATED AND HINGED MANHOLE LID
NDT TO SCALE



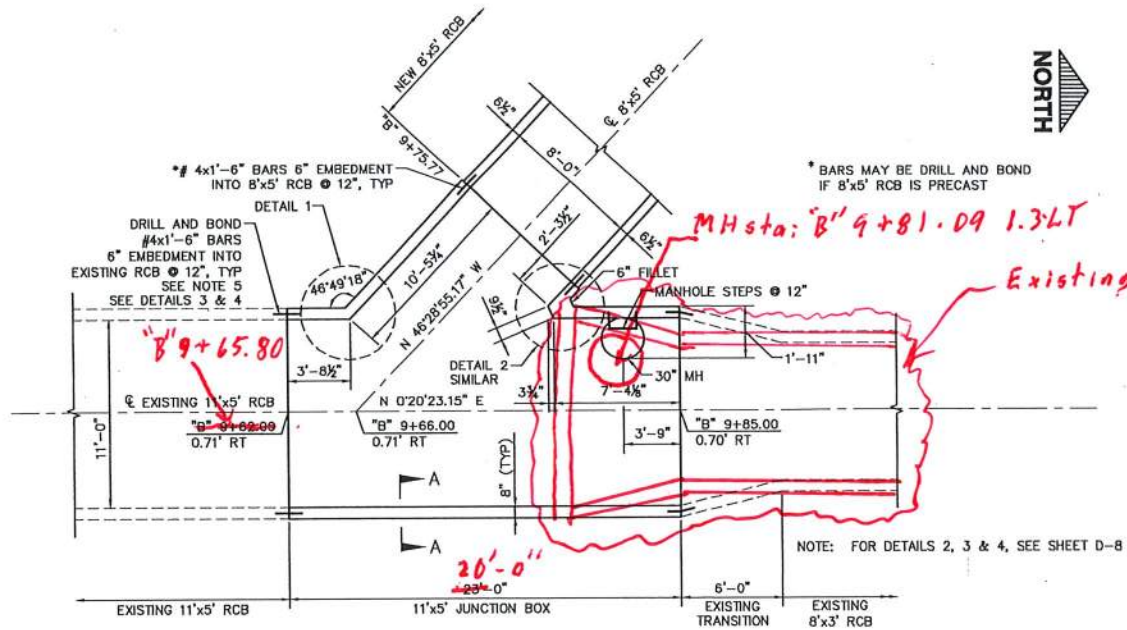
REVISIONS	NO.	DATE	DESCRIPTION	APPROD

DESIGNED BY: JS	DRAWN BY: RM	CHECKED BY: EH	DATE: 8/7/17
DEPARTMENT OF PUBLIC WORKS CAPITAL PROJECT MANAGEMENT			

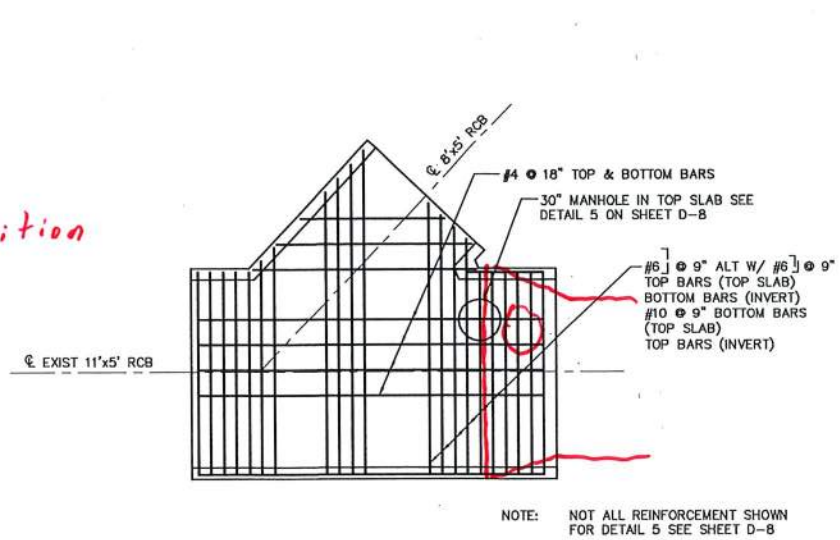
GOWAN NORTH BUFFALO BRANCH LONE MOUNTAIN TO WASHBURN	DRAINAGE DETAILS
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PROFESSIONAL ENGINEER SHOU-CHING HSU Exp. 04/10/18 CIVIL License No. 14701	9/7/17
D-6 55 of 89 DRAWING NO. 731-94	

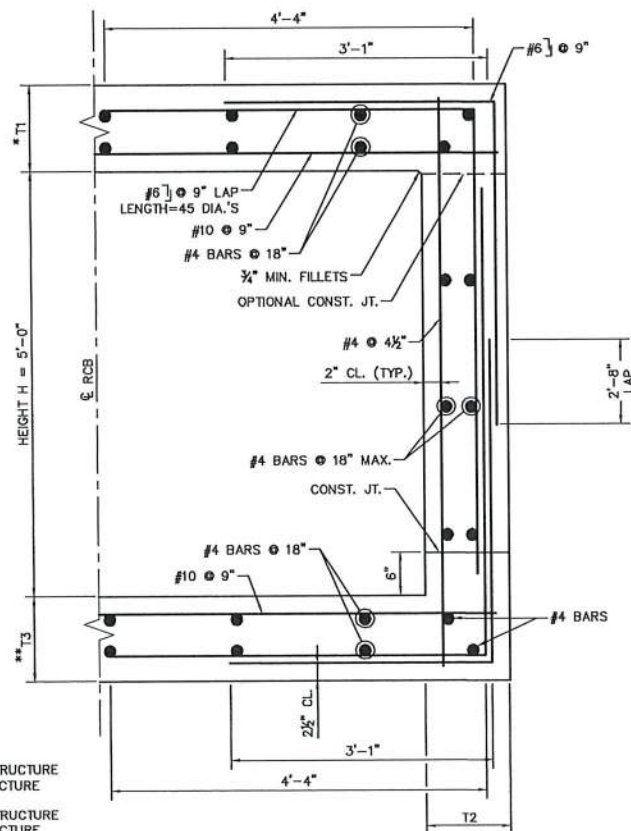




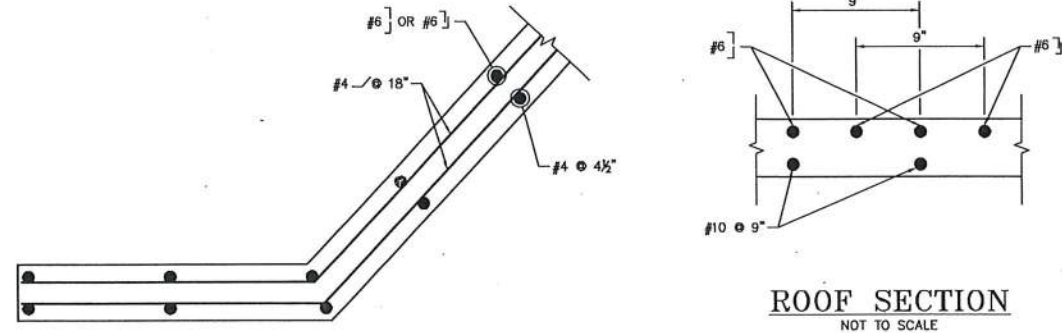
**8'x5' TO 11'x5' RCB JUNCTION STRUCTURE
AT LONE MOUNTAIN AND BUFFALO**
NOT TO SCALE



TOP SLAB AND INVERT REINFORCEMENT LAYOUT
NOT TO SCALE

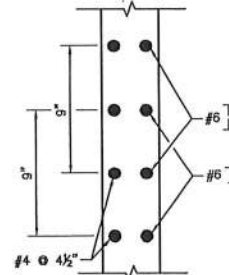


SECTION A-A
NOT TO SCALE



ROOF SECTION
NOT TO SCALE

DETAIL 1
NOT TO SCALE



WALL SECTION
NOT TO SCALE

GENERAL NOTES

1. FOR GENERAL NOTES AND ADDITIONAL DETAILS, SEE NDOT STD DWG B-20.1.1, B-20.1.2 AND B.20.1.2.1. ASSUME SPAN = 12'-0", HEIGHT = 5'-0" AND 10'-0" MAX SOIL COVER UNLESS NOTED OTHERWISE FOR 8'x5' TO 11'x5' RCB JUNCTION STRUCTURE. ASSUME SPAN = 8'-0", HEIGHT = 5'-0" AND 10'-0" MAX SOIL COVER UNLESS NOTED OTHERWISE FOR 5'x5' TO 8'x5' JUNCTION STRUCTURE.
2. 8'x5' TO 11'x5' RCB JUNCTION STRUCTURE SHALL BE CAST-IN-PLACE.
3. 5'x5' TO 8'x5' RCB JUNCTION STRUCTURE, 48" RCP CONNECTION TO 5'x5' RCB AND 36" RCP CONNECTION TO 8'x5' RCB ARE SHOWN AS CAST-IN-PLACE. THE CONTRACTOR MAY SUBMIT A PRECAST OPTION FOR ENGINEER REVIEW AND APPROVAL.
4. DRAINAGE STRUCTURES REQUIRE 4500 PSI CONCRETE.
5. EXTEND BEGINNING OR END OF JUNCTION BOX TO EXISTING CONSTRUCTION JOINT IF DISTANCE BETWEEN PROPOSED SAW CUT LINE AND EXISTING JOINT IS LESS THAN 2'-0", SEE DETAIL 4.

- *T1 = 1'-0" FOR 11'x5' JUNCTION STRUCTURE
10" FOR 8'x5' JUNCTION STRUCTURE
- *T3 = 1'-0" FOR 11'x5' JUNCTION STRUCTURE
10" FOR 8'x5' JUNCTION STRUCTURE

REVISIONS	NO.	DATE	DESCRIPTION	APPRO

DESIGNED BY: CR
DRAWN BY: RM
CHECKED BY: VL

DATE: 9/7/17



TITLE: GOWAN NORTH BUFFALO BRANCH
LONE MOUNTAIN TO WASHBURN

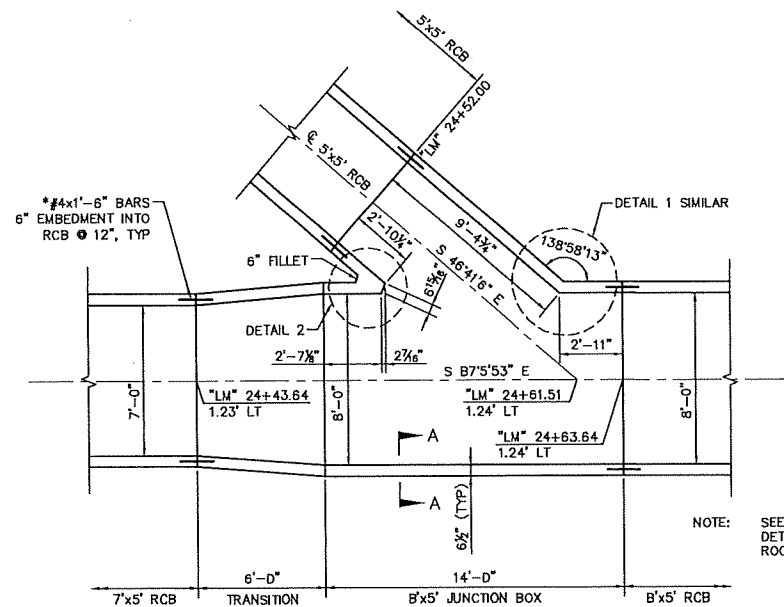
SHEET: DRAINAGE DETAILS

9/7/17



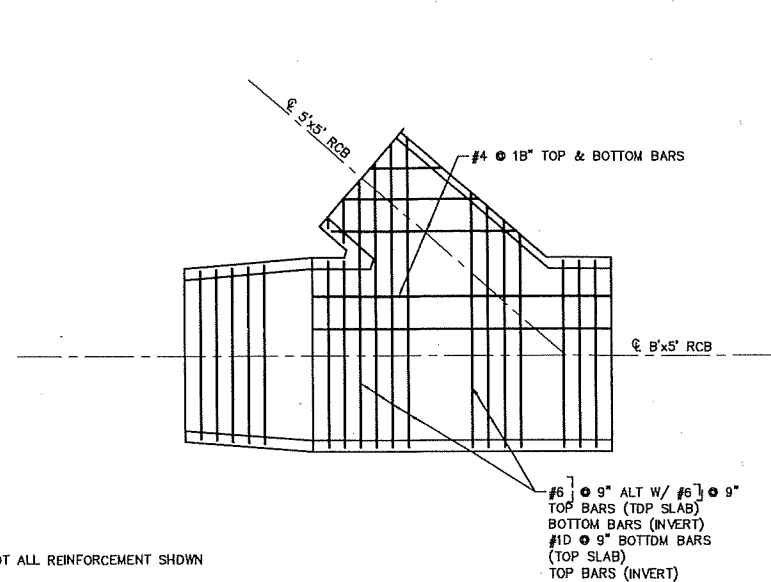
D-7
56 of 89
DRAWING NO.
731-94



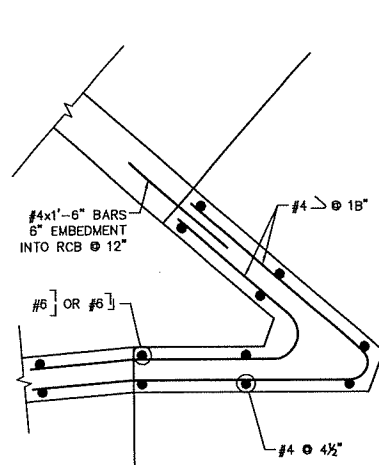


*BARS MAY BE DRILL AND BOND IF 7'x5' RCB,
5'x5' RCB OR 5'x5' RCB ARE PRECAST

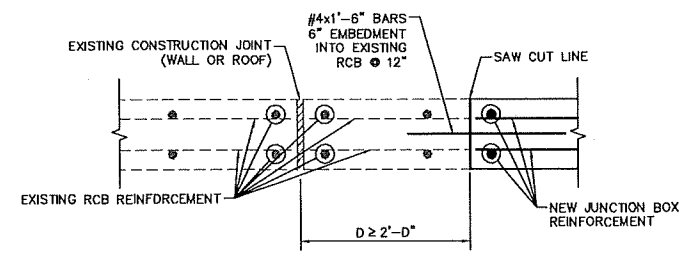
RCB JUNCTION STRUCTURE STATION "LM" 24+52.00
NOT TO SCALE



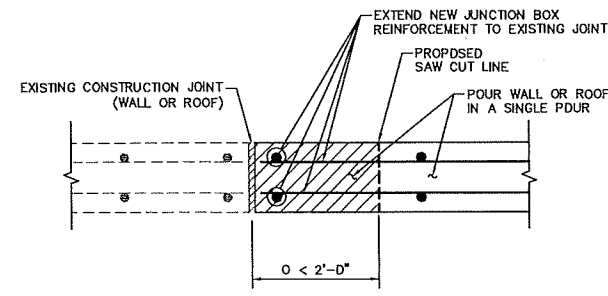
TOP SLAB AND INVERT REINFORCEMENT LAYOUT
NOT TO SCALE



DETAIL 2
NOT TO SCALE

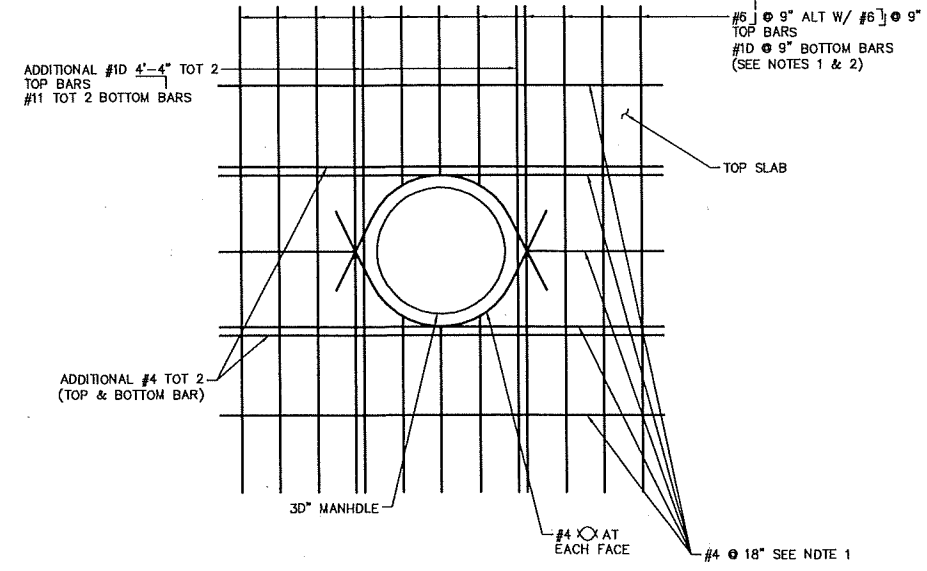


DETAIL 3 - CLOSURE POUR D ≥ 2'-0"
NOT TO SCALE



DETAIL 4 - CLOSURE POUR D < 2'-0"
NOT TO SCALE

ADDITIONAL WALL OR ROOF REMOVAL



- NOTES:
- CUT REINFORCEMENT IN CONFLICT WITH MANHOLE 2" CLEAR FROM FACE OF MANHOLE.
 - FOR ROOF REINFORCEMENT LAYOUT, SEE "TOP SLAB AND INVERT REINFORCEMENT LAYOUT" ON SHEET D-7.

DETAIL 5
NOT TO SCALE

REVISIONS	NO.	DATE	DESCRIPTION	APPD

DESIGNED BY: CR
DRAWN BY: RM
CHECKED BY: VL
DATE: 8/7/17

DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECT MANAGEMENT

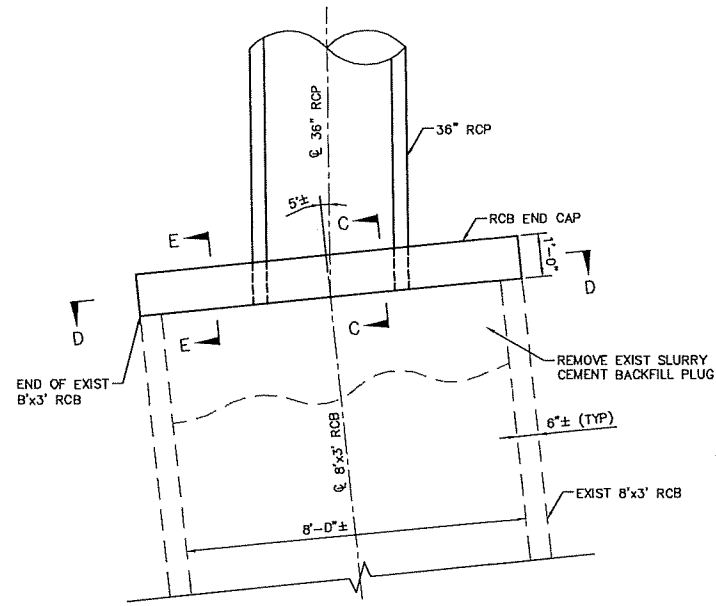
WSP
3153 Howard Hughes Parkway, Suite 135
Las Vegas, NV 89169
Phone: 702-497-4100

TITLE: GOWAN NORTH BUFFALO BRANCH
LONE MOUNTAIN TO WASHBURN
SHEET: DRAINAGE DETAILS

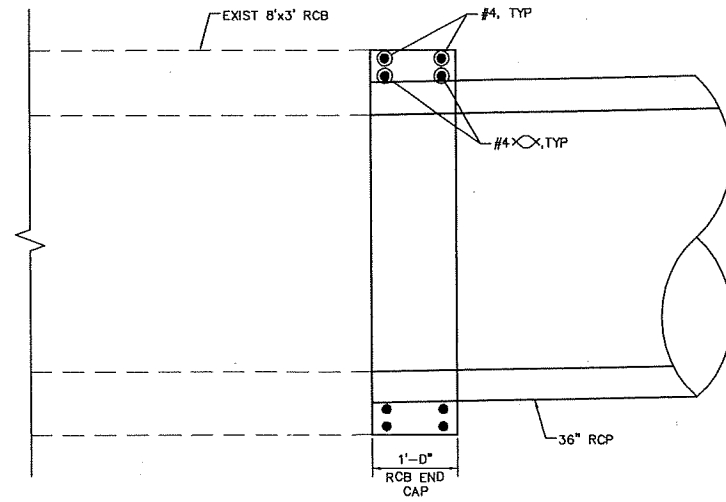
ENGINEER
BENJAMIN CONSOLACION
Exp. 12/25/16
CML
No. 20168
9/7/17

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57 of 89
DRAWING NO.
731-94

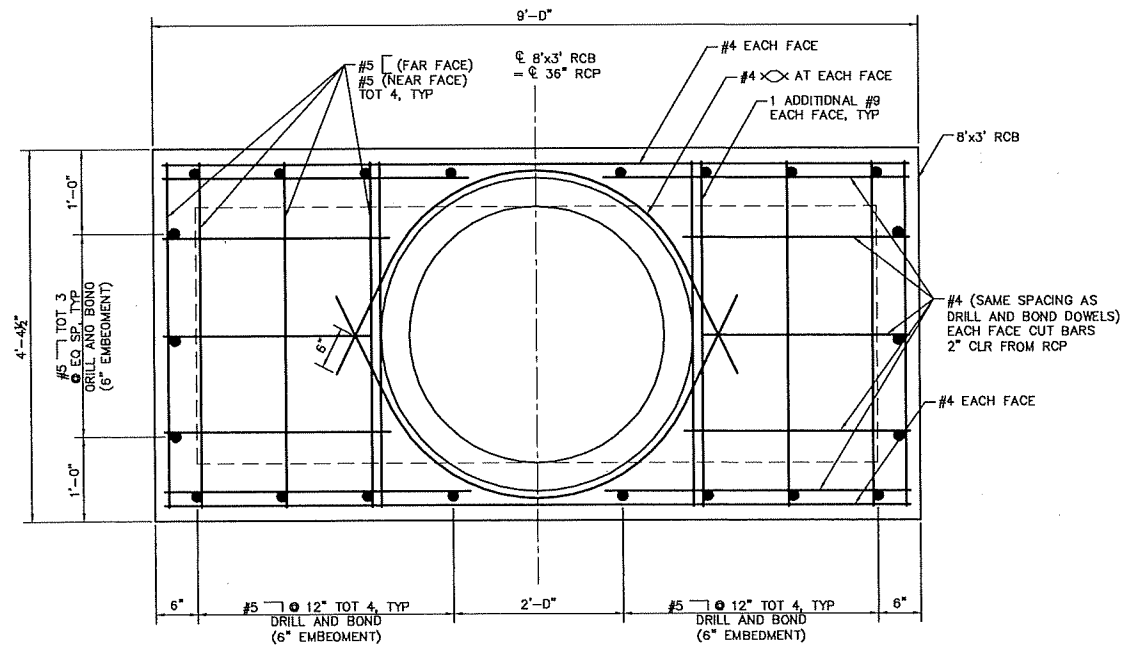
RECORD
LAS VEGAS PAVING CORP.
Jeff Anderson
As-Built



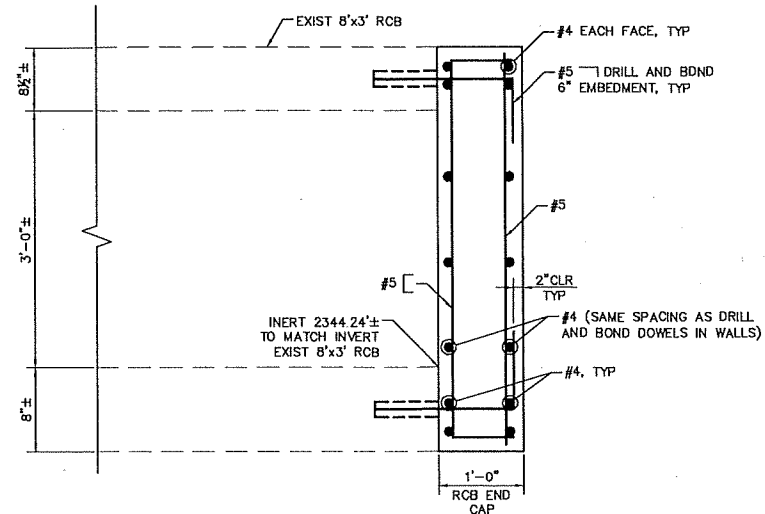
CONNECTION DETAIL FOR 36" RCP TO EXIST 8'x3' RCB
NOT TO SCALE



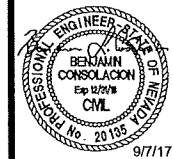
SECTION C-C
NOT TO SCALE



SECTION D-D
NOT TO SCALE



SECTION E-E
NOT TO SCALE



D-9
58 of 89
DRAWING NO.
731-94

DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECT MANAGEMENT

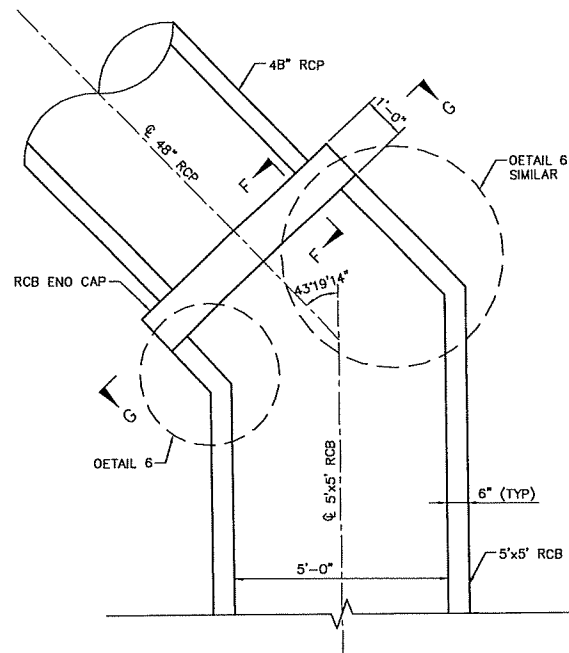
DESIGNED BY: CR
DRAWN BY: RM
CHECKED BY: VL
DATE: 9/7/17

GOWAN NORTH BUFFALO BRANCH
LONE MOUNTAIN TO WASHBURN

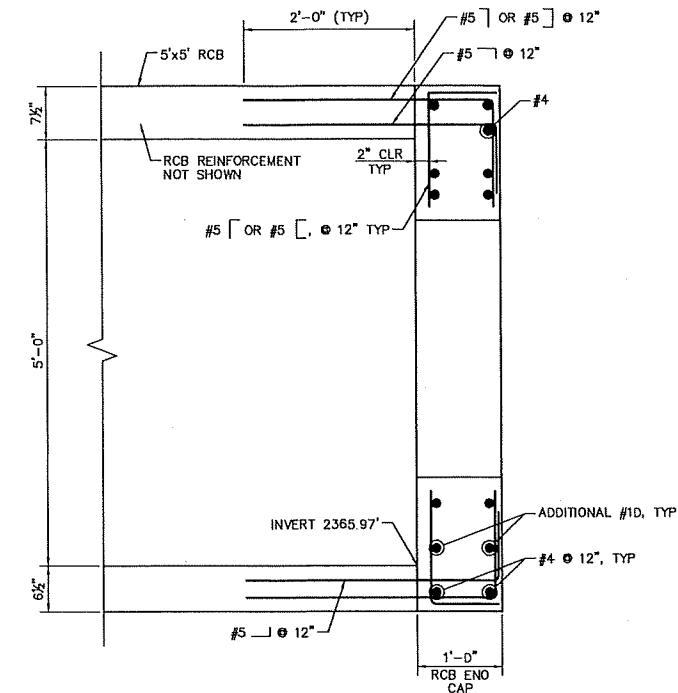
DRAINAGE DETAILS

REVISIONS	NO.	DATE	DESCRIPTION	APPD.

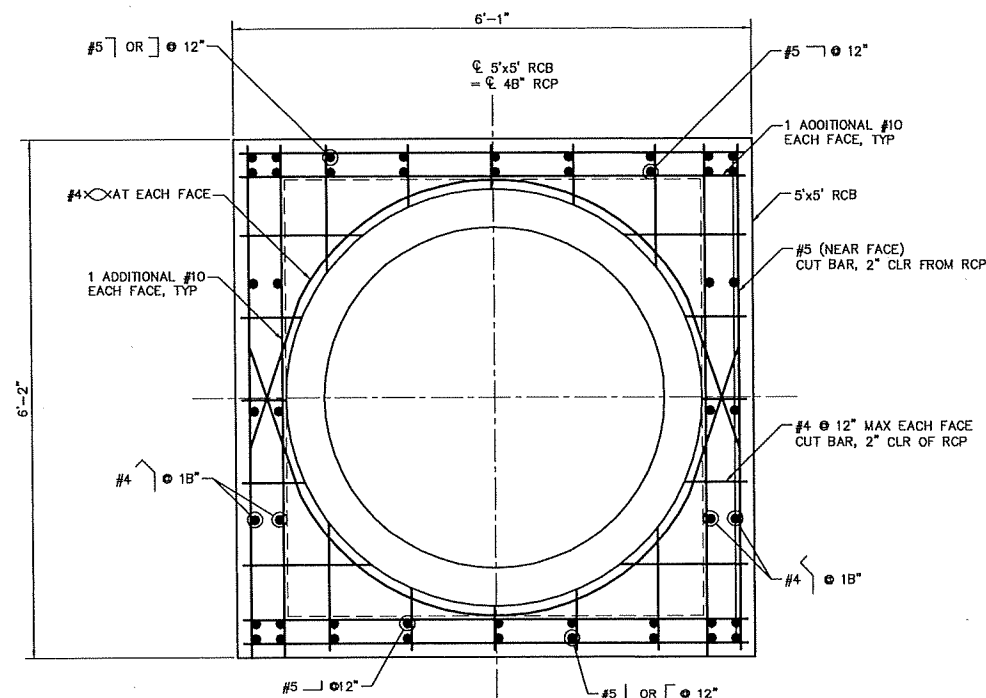




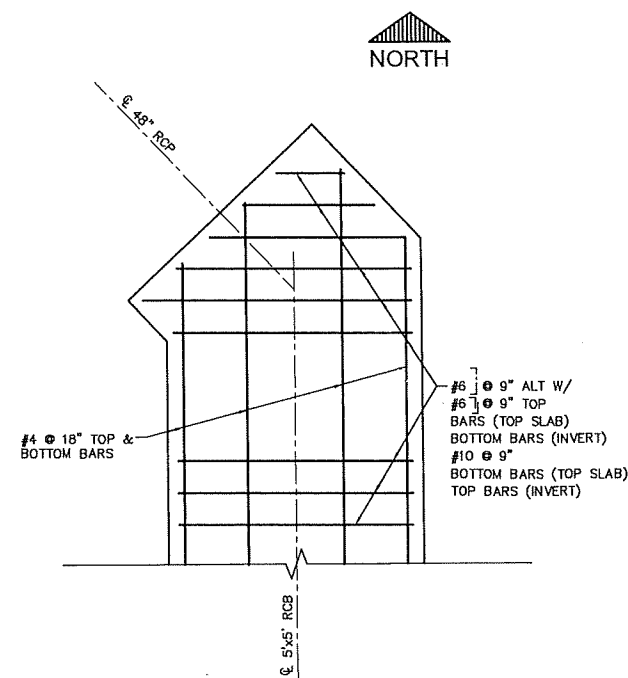
CONNECTION DETAIL FOR 48" RCP TO 5'x5' RCB
NOT TO SCALE



SECTION F-F
NOT TO SCALE

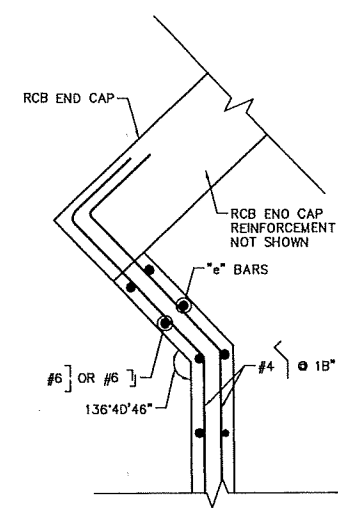


SECTION G-G
NOT TO SCALE



- NOTES:
1. NOT ALL REINFORCEMENT SHOWN
 2. SEE "ROOF SECTION AND WALL SECTION" DETAIL ON SHEET 0-7

TOP SLAB AND INVERT
REINFORCEMENT LAYOUT
NOT TO SCALE



DETAIL 6
NOT TO SCALE

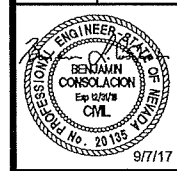
REVISIONS	NO.	DATE	DESCRIPTION	APPD

DESIGNED BY: CR
DRAWN BY: RM
CHECKED BY: VL
DATE: 9/7/17

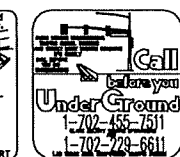
DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECT MANAGEMENT

GOWAN NORTH BUFFALO BRANCH
LONE MOUNTAIN TO WASHBURN

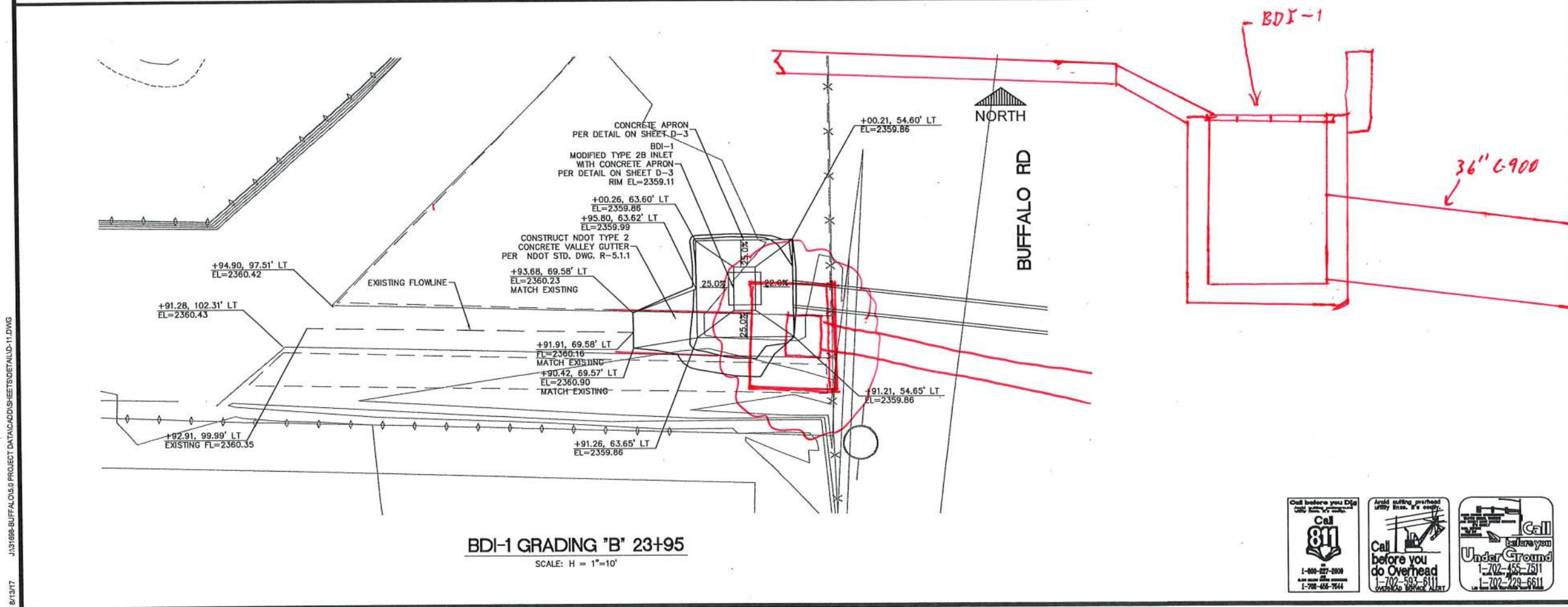
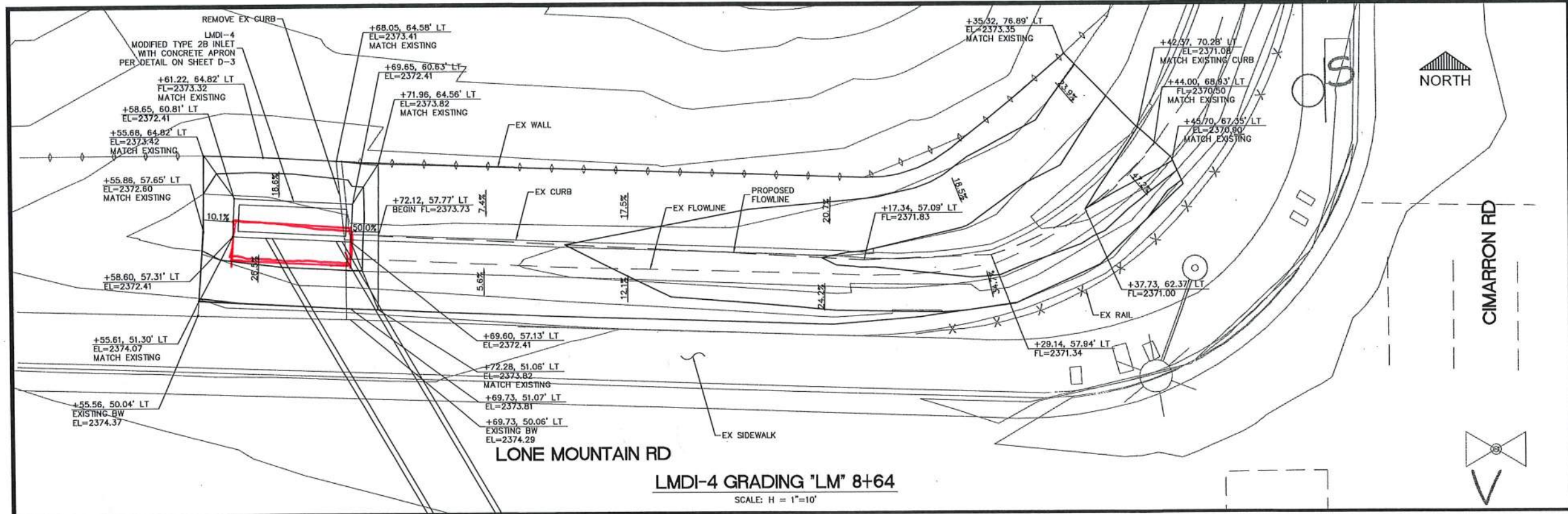
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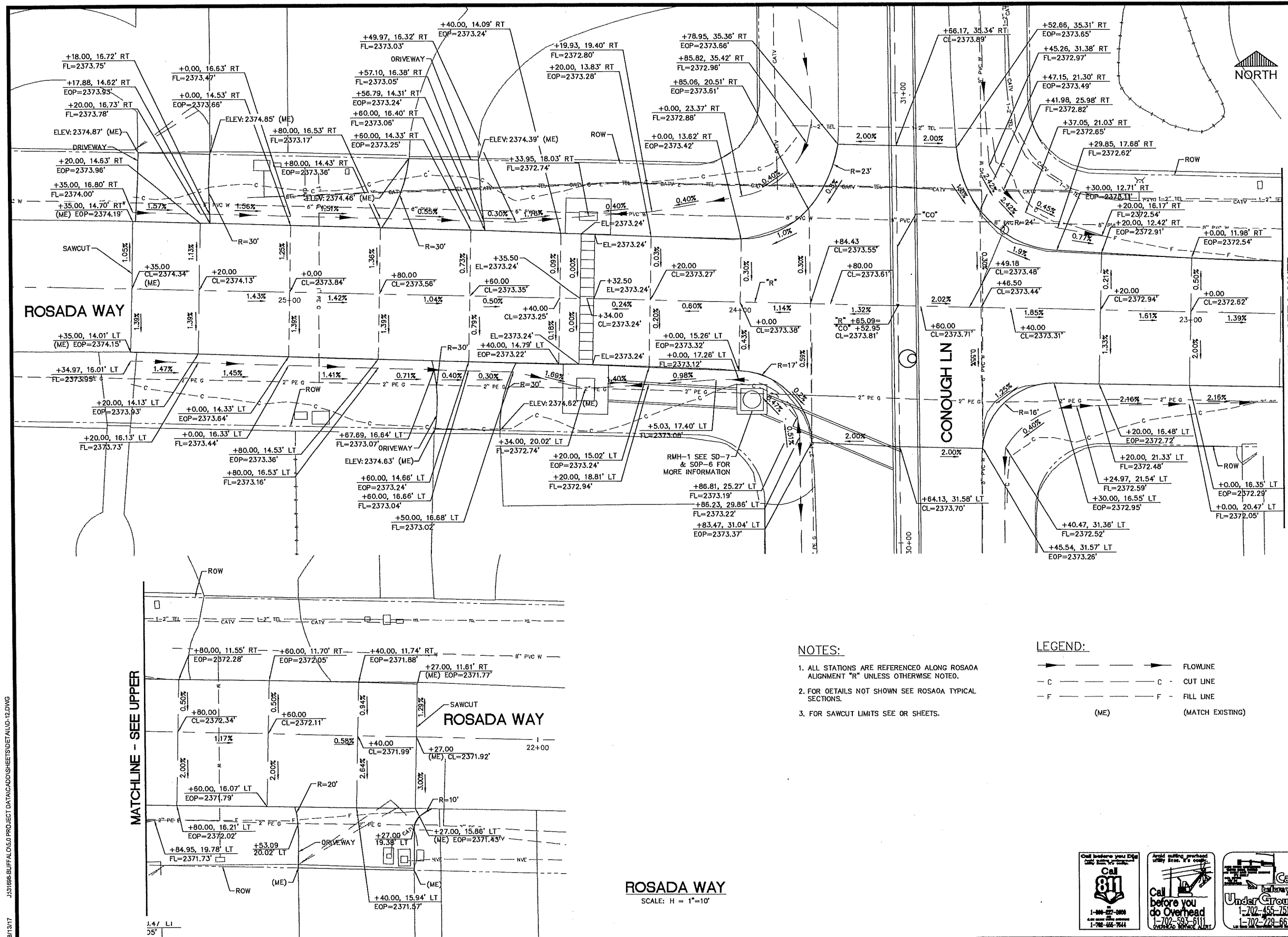
D-10
59 of 89
DRAWING NO.
731-94



8/13/17 J:\31608-BUFFALO\05 PROJECT DATA\ADD SHEETS\DETAILD-11.DWG



REVISED																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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[illegible]DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECT MANAGEMENT

GOWAN NORTH BUFFALO BRANCH
LONE MOUNTAIN TO WASHBURN

DRAINAGE DETAILS
ROSADA & CONOUGH GRADING

TITLE: _____

SHEET: _____

PROFESSIONAL ENGINEER-STATE OF NEVADA
SHOU-CHING HSU
Exp 06/30/19
CIVIL
No. 1A707
9/7/17

D-12
61 of 89
DRAWING NO.
731-94

LAS VEGAS PAVING CORP.
WE'RE #1

RECORD
Jeff Anderson
AS-BUILT

NOTES:

1. ALL STATIONS ARE REFERENCED ALONG ROSAOA ALIGNMENT "R" UNLESS OTHERWISE NOTED.
2. FOR DETAILS NOT SHOWN SEE ROSAOA TYPICAL SECTIONS.
3. FOR SAWCUT LIMITS SEE OR SHEETS.

LEGEND:

ROSADA WAY
SCALE: H = 1"=10'

Call before you Dig
Toll-free, 24 hours a day, 7 days a week.
Call
811
or
1-800-227-2000
A-ONE SERVICE SYSTEMS CORPORATION
1-702-455-7544

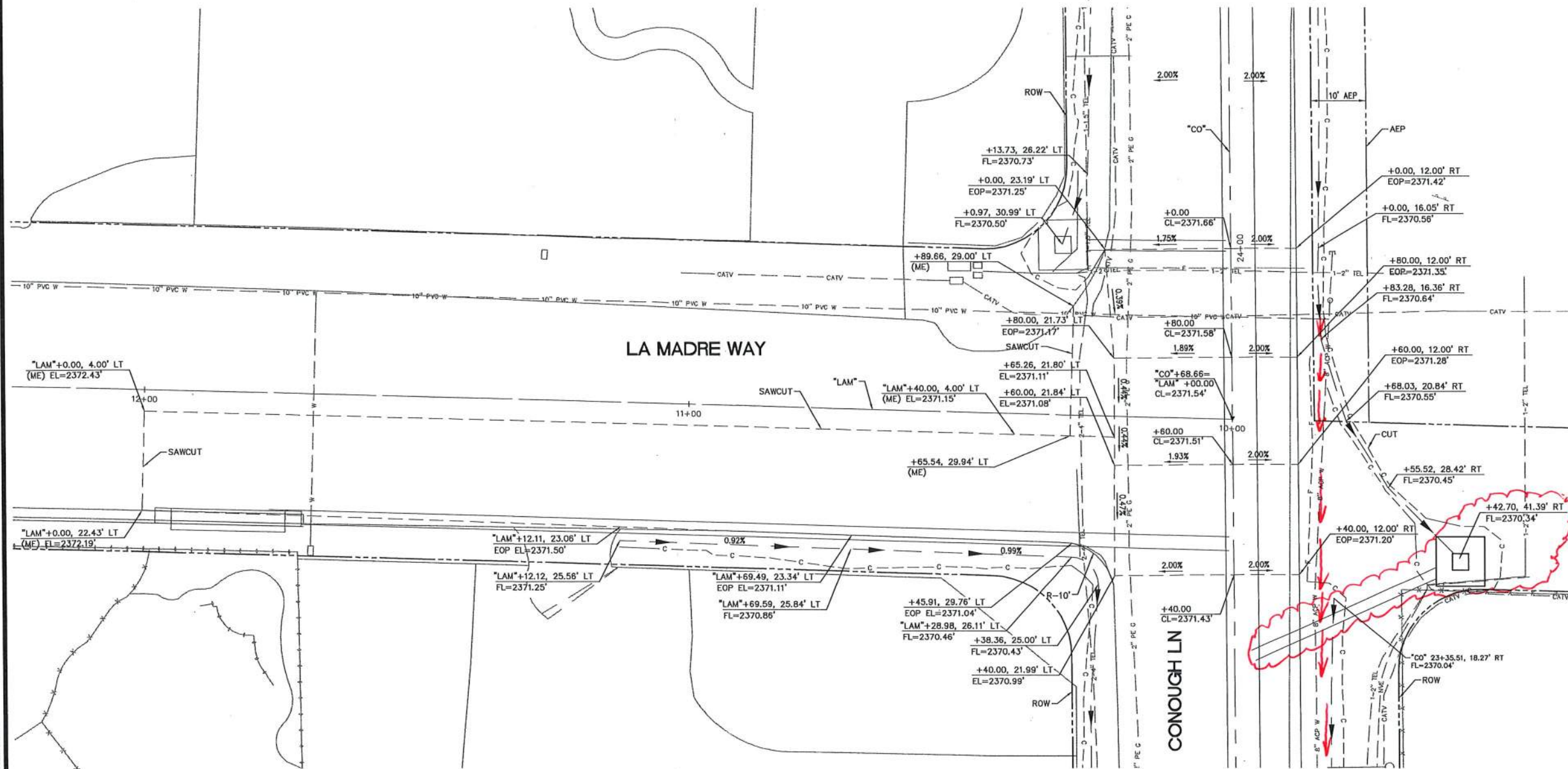
Avoid cutting overhead utility lines. It's costly.

Call before you do Overhead

1-702-593-6111

Call before you dig
Under Ground
1-702-455-7511
1-702-229-6611

9/10/17 J:\31698-BUFFALO & O PROJECT\DATA\CAD\SHEETS\DETAILS\13.DWG



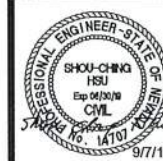
NOTES:

1. ALL STATIONS ARE REFERENCED ALONG CONOUGH ALIGNMENT "C" UNLESS OTHERWISE NOTED.
2. FOR DETAILS NOT SHOWN SEE LA MADRE TYPICAL SECTIONS.
3. FOR SAWCUT LIMITS SEE DR SHEETS.

LEGEND:

- > FLOWLINE
— C — CUT LINE
— F — FILL LINE
(ME) (MATCH EXISTING)

LA MADRE WAY
SCALE: H = 1"=10'



D-13
62 of 89
731-94

DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECT MANAGEMENT



GOWAN NORTH BUFFALO BRANCH
LONE MOUNTAIN TO WASHBURN

TITLE:
SHEET:

DRAINAGE DETAILS LA MADRE
& CONOUGH GRADING

DESIGNED BY: MG
DRAWN BY: MG
CHECKED BY: EH

DATE: 9/7/17

NO.	DATE	DESCRIPTION	APPD

PI was Deleted



8/11/17 J:\31698-BUFFALO-50 PROJECT DATA\CD\SHS\UT-4.DWG

MATCHLINE - "LM" 31+00 (SEE SHEET UT-3)

MATCHLINE - "LM" 31+00 (SEE SHEET UT-3)

GAS LINE NOTES:

1. CAUTION: HIGH PRESSURE GAS LINE
2. CALL SOUTHWEST GAS AT 702-651-2111 FOR STANDBY WHEN EXCAVATING OVER OR NEAR HIGH PRESSURE GAS LINES.

APPROVED FOR CONSTRUCTION
[Signature]
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT # 123778 FIRST APPROVED DATE: 9/18/17

GENERAL NOTES:

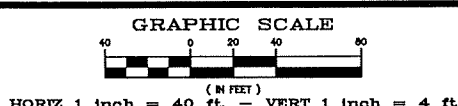
1. FOR LEGEND AND ABBREVIATIONS SEE SHEET GN-1.
2. FOR STORM DRAIN SEE SD SHEETS.
3. FOR POTHOLE DATA SEE SHEET D-8.
4. FOR LIMITS OF PAVEMENT REPLACEMENT SEE DR SHEETS.
5. RESIDENTIAL SERVICE LATERALS ARE GENERALLY PERPENDICULAR TO THE WATER MAIN AND IN LINE WITH THE WATER METER CONTRACTOR TO REPLACE WATER SERVICE LATERAL FROM MAIN TO ANGLE METER STOP PER UDACS IF DAMAGED DURING CONSTRUCTION.

PLAN

BASIS OF BEARINGS
GRID NORTH AS DEFINED BY THE CENTRAL MEDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS AND LAS VEGAS HIGH ELEVATION ZONES, NORTH AMERICAN DATUM OF 1983, SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN, THE REFERENCE FRAME BEING NAD 83 (2011) EPOCH 2010

CAUTION:
EXISTING UTILITIES ARE LOCATED ON THE PLANS FROM A SEARCH OF AVAILABLE RECORDS. CONTRACTOR TO VERIFY LOCATIONS AND DEPTHS PRIOR TO CONSTRUCTION.

(SEE SHEET UT-12)



Call before you Dig
811
1-800-222-2600
1-702-655-7511

Avoid cutting overhead utility lines. It's costly.
Call before you do Overhead
1-702-655-7511
OVERHEAD SERVICE ALERT

Call before you dig
Under Ground
1-702-455-7511
1-702-729-6611

UTILITY NOTES

1. GAS VALVES, AND PULLBOXES: ADJUST TO FINISH GRADE BY OTHERS UNLESS OTHERWISE NOTED.
2. RE-ESTABLISH SURVEY MONUMENT.
3. PROTECT IN PLACE.
4. REMOVE PER DR SHEETS.
5. RELOCATE.
6. TO BE RELOCATED BY NEVADA ENERGY.
7. TO BE RELOCATED BY SOUTHWEST GAS.
8. TO BE RELOCATED CONCURRENTLY BY COX COMMUNICATIONS.
9. TO BE RELOCATED CONCURRENTLY BY CENTURYLINK.

SEWER LINE CONSTRUCTION ITEMS

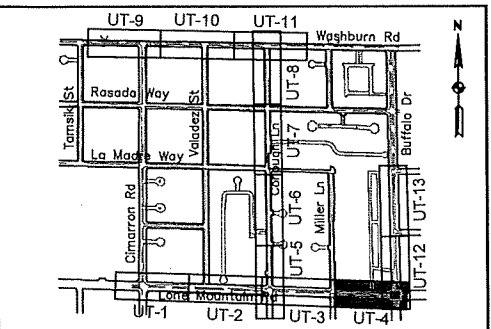
1. CONSTRUCT 48" SANITARY SEWER MANHOLE PER DCSWCS.
2. CONSTRUCT 8" PVC O-3D34 SS SDR 35.
3. ADJUST SEWER MANHOLE TO FINISH GRADE.
4. ABANDON SEWER LINE PER DCSWCS METHOD C.
5. REMOVE SEWER LINE PER DCSWCS METHOD B.
6. REMOVE SEWER MANHOLE.
7. APPLY CORROSION PROTECTION PER SP 691.

WATER LINE NOTES

1. RELOCATE WATERLINE. FOR CONSTRUCTION ITEMS SEE UTP SHEETS.
2. REPLACE WATERLINE.
3. ADJUST WATER VALVE BOX TO FINISH GRADE PER UDACS PLATE NO. 39 VALVE SHOULD ACCESSIBLE AT ALL TIMES.
4. ABANDON WATERLINE PER UDACS.
5. REMOVE WATERLINE PER UDACS.
6. REMOVE WATER VALVE.
7. CONSTRUCT CLSM BACKFILL TO SPRINGLINE OF WATERLINE.

WATER LINE NOTES FOR TRENCHES SIX (6) FEET WIDE AND GREATER

1. IF THE PIPE MATERIAL IS ACP, THE EXPOSED PIPE MUST BE REPLACED WITH DUCTILE IRON PIPE.
2. CONTRACTOR MUST SUBMIT PIPE SUPPORT DETAIL PREPARED BY NEVADA LICENSED ENGINEER, TO LVWD ENGINEERING SERVICES BEFORE CONSTRUCTION TO SHOW HOW WATERLINE(S) WILL BE SUPPORTED DURING EXCAVATION AND BACKFILL.
3. SUPPORTED PIPE MAY BE EXPOSED FOR NO LONGER THAN 90 DAYS MAXIMUM. IF THE PIPE WILL BE EXPOSED FOR MORE THAN 90 DAYS, PLANS MUST BE SUBMITTED AND APPROVED BY THE LVWD TO RELOCATE PIPE.



KEY MAP

REVISIONS		NO.		DATE	DESCRIPTION	APPD

DESIGNED BY: JS	DATE: 8/11/17
DRAWN BY: LS	
CHECKED BY: EH	

DEPARTMENT OF PUBLIC WORKS	
CAPITAL PROJECT MANAGEMENT	

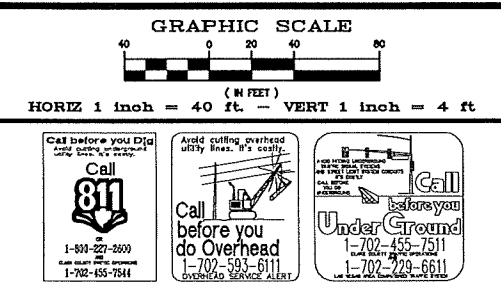
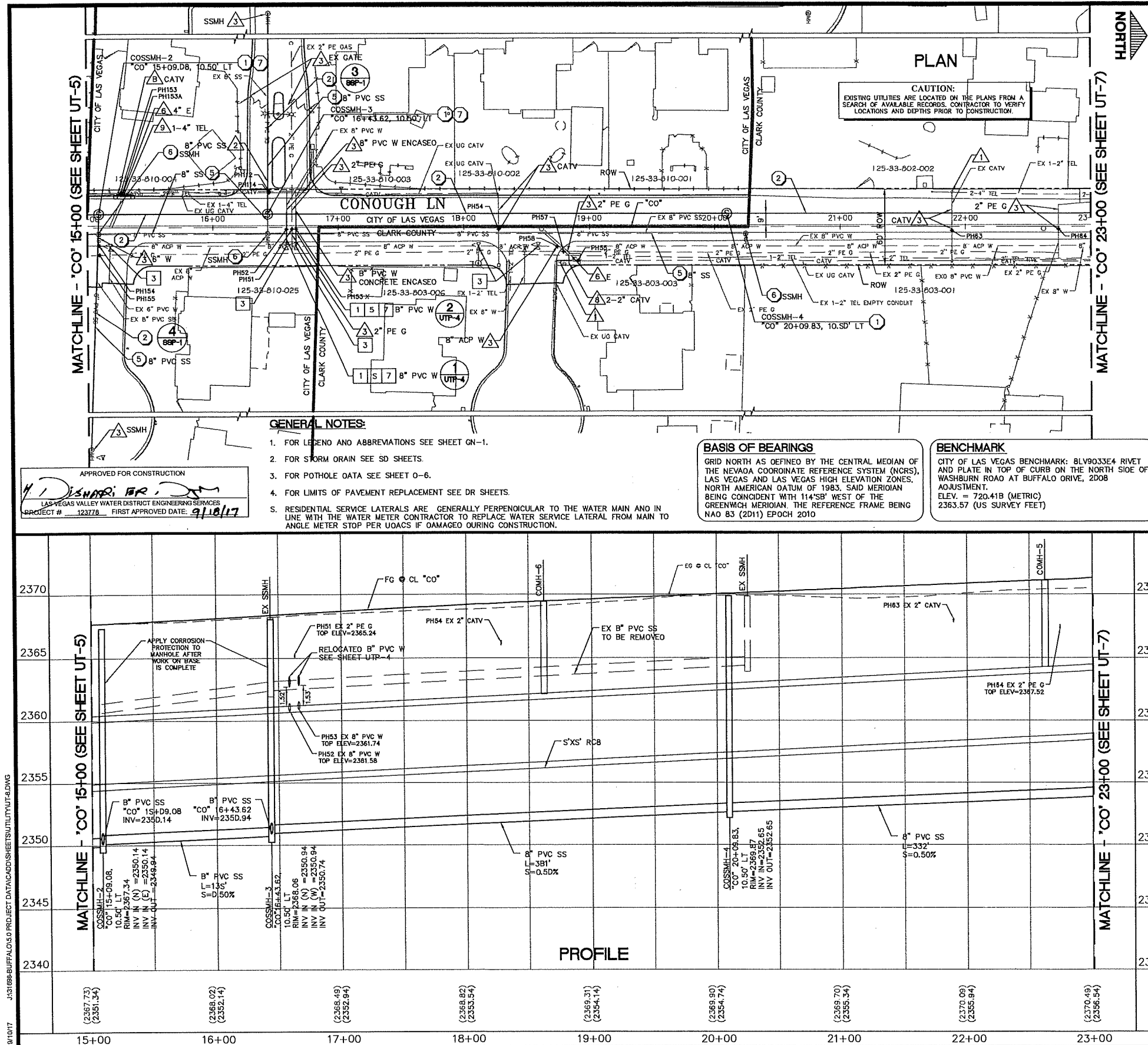
GOWAN NORTH BUFFALO BRANCH	
LONE MOUNTAIN TO WASHBURN	

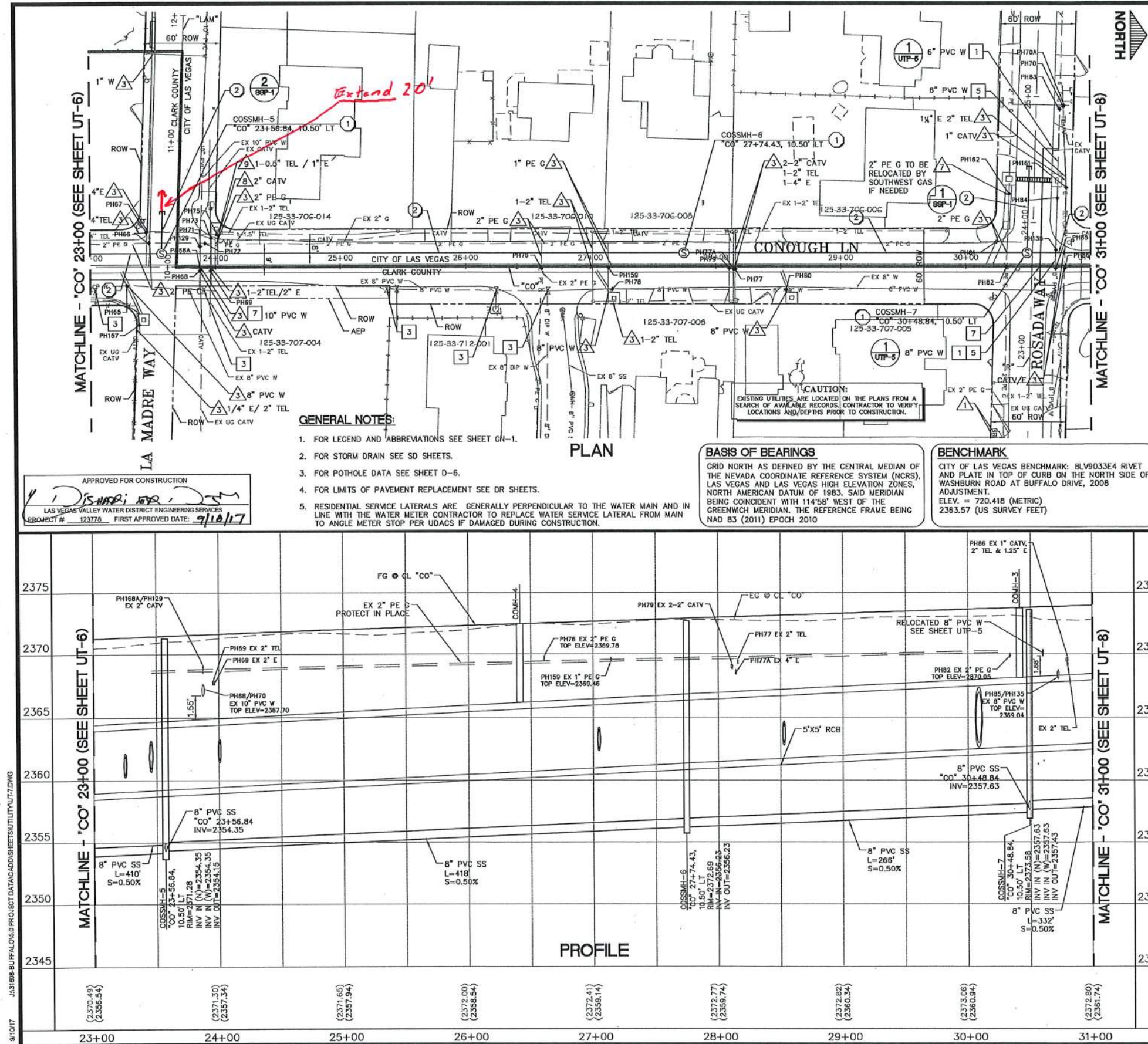
UTILITY / SANITARY SEWER PLAN AND PROFILE	
"LM" 31+00 TO 39+00	

UT-4	
66 of 89	
DRAWING NO 731-94	

PROJECT: 123778 AGR-119533 08-125-33-SESW XC-11343



[illegible]



GRAPHIC SCALE

HORIZ 1 inch = 40 ft. - VERT 1 inch = 4 ft

UTILITY NOTES

- GAS VALVES, AND PULLBOXES: ADJUST TO FINISH GRADE BY OTHERS UNLESS OTHERWISE NOTED.
- RE-ESTABLISH SURVEY MONUMENT.
- PROTECT IN PLACE.
- REMOVE PER DR SHEETS.
- RELOCATE.
- TO BE RELOCATED BY NEVADA ENERGY.
- TO BE RELOCATED BY SOUTHWEST GAS.
- TO BE RELOCATED CONCURRENTLY BY COX COMMUNICATIONS.
- TO BE RELOCATED CONCURRENTLY BY CENTURYLINK.

SEWER LINE CONSTRUCTION ITEMS

- CONSTRUCT 48" SANITARY SEWER MANHOLE PER DCSWCS.
- CONSTRUCT 8" PVC D-3034 SS SDR 35.
- ADJUST SEWER MANHOLE TO FINISH GRADE.
- ABANDON SEWER LINE PER DCSWCS METHOD C.
- REMOVE SEWER LINE PER DCSWCS METHOD B.
- REMOVE SEWER MANHOLE.
- APPLY CORROSION PROTECTION PER SP 691.

WATER LINE NOTES

- RELOCATE WATERLINE. FOR CONSTRUCTION ITEMS SEE UTP SHEETS.
- REPLACE WATERLINE.
- ADJUST WATER VALVE BOX TO FINISH GRADE PER UDACS PLATE NO. 39 VALVE SHOULD ACCESSIBLE AT ALL TIMES.
- ABANDON WATERLINE PER UDACS.
- REMOVE WATERLINE PER UDACS.
- REMOVE WATER VALVE.
- CONSTRUCT CLSM BACKFILL TO SPRINGLINE OF WATERLINE.

WATER LINE NOTES FOR TRENCHES SIX (6) FEET WIDE AND GREATER

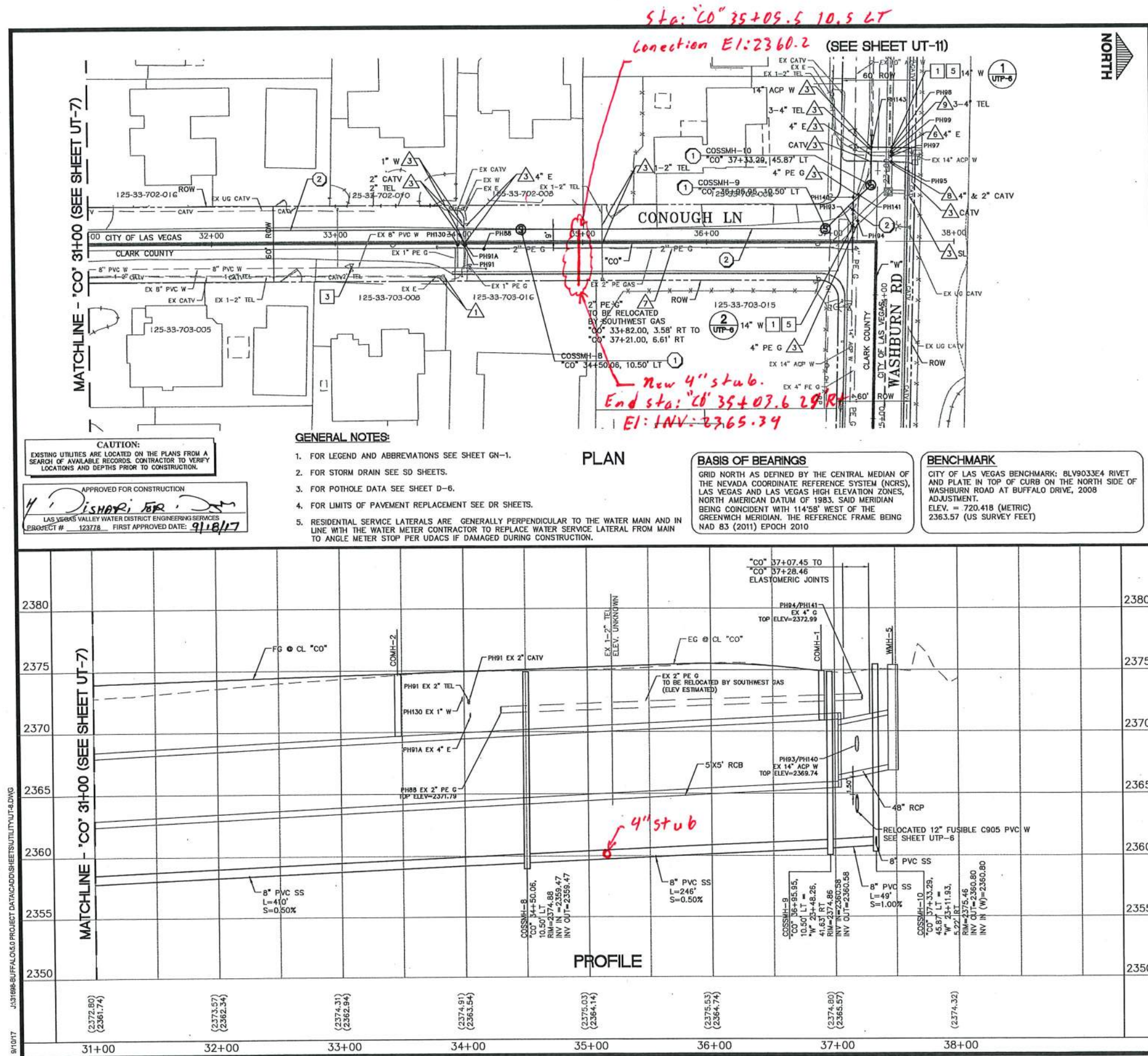
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- CONTRACTOR MUST SUBMIT PIPE SUPPORT DETAIL PREPARED BY NEVADA LICENSED ENGINEER, TO LVWD ENGINEERING SERVICES BEFORE CONSTRUCTION TO SHOW HOW WATERLINE(S) WILL BE SUPPORTED DURING EXCAVATION AND BACKFILL.
- SUPPORTED PIPE MAY BE EXPOSED FOR NO LONGER THAN 90 DAYS MAXIMUM. IF THE PIPE WILL BE EXPOSED FOR MORE THAN 90 DAYS, PLANS MUST BE SUBMITTED AND APPROVED BY THE LVWD TO RELOCATE PIPE.

KEY MAP

UT-7

69 of 89

731-94



REVISIONS					
NQ.	DATE:		DESCRIPTION	APPD	

DESIGNED BY: JS DRAWN BY: LS CHECKED BY: EH	DATE: 9/7/17
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 DEPARTMENT OF
CAPITAL PROJECTS
 3733 Howard Hughes Parkway, Suite 135
 Las Vegas, NV 89009

GOWAN NORTH BUFFALO BRANCH
LONE MOUNTAIN TO WASHBURN

TITLE:	SHEET:	UTILITY
		
UT-8 70 of 89 DRAWING NO. 731-94		

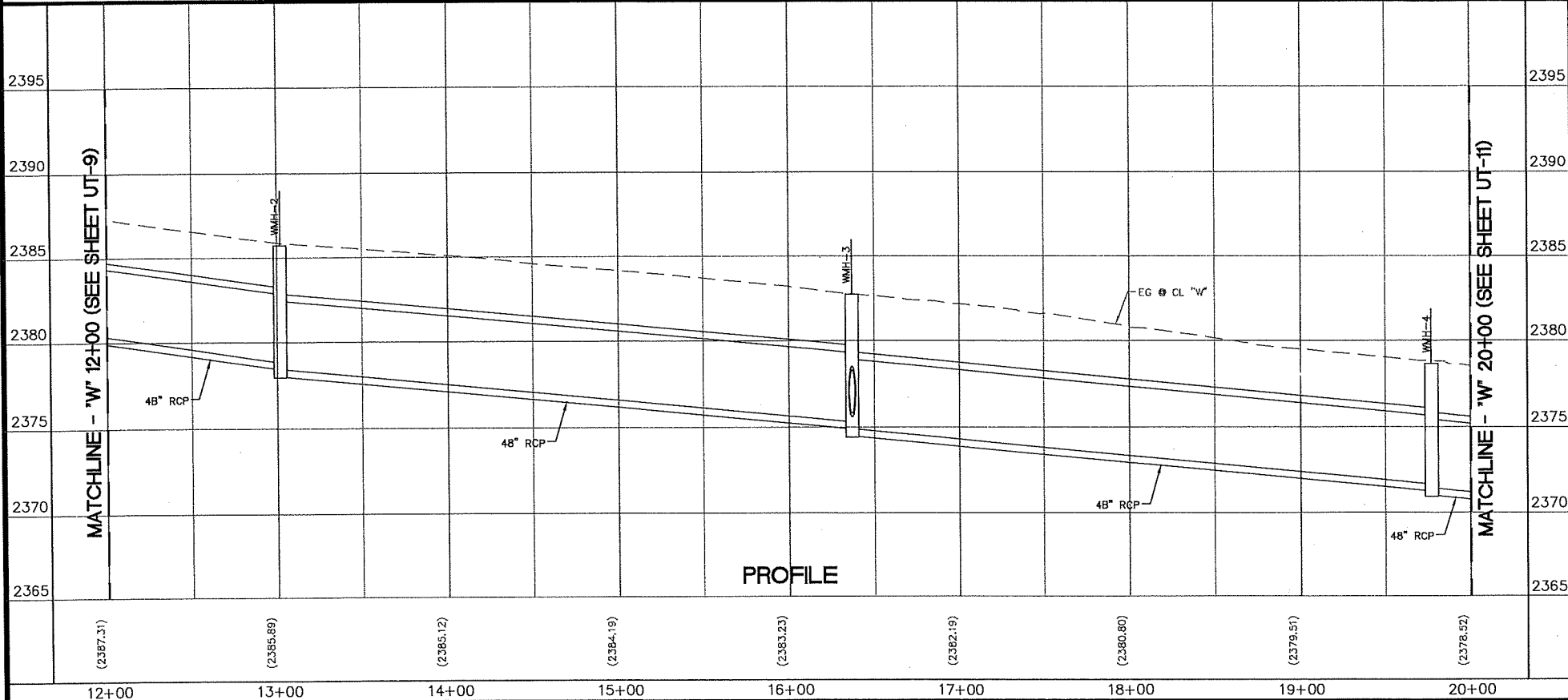
PROJ.#:123778 AGR:115933 QS:125-33-SE/SW XC 11343

LAS VEGAS PAVING CORP.
WE'RE #1

LAS VEGAS PAVING CORP.
WE'VE GOT IT

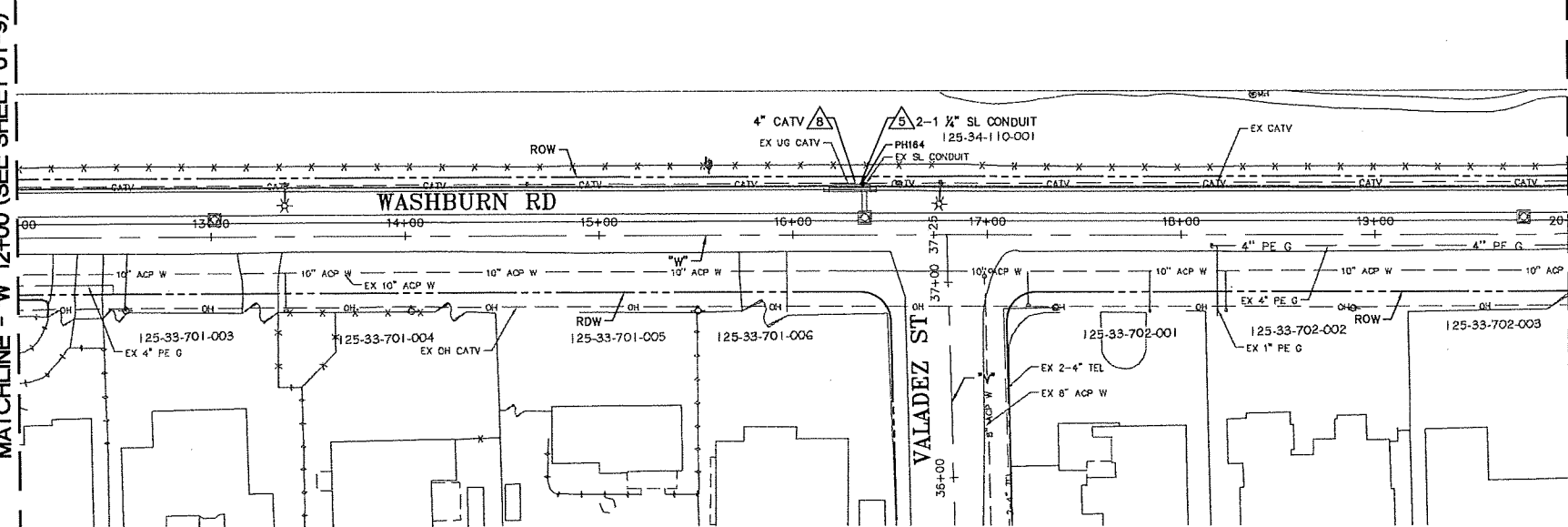
9/10/17 J:\31598-BUFFALO-05-0-PROJECT-DATA\05-SHEETS\UTILITY\UT-10.DWG

MATCHLINE - "W" 12+00 (SEE SHEET UT-9)



PROFILE

MATCHLINE - "W" 12+00 (SEE SHEET UT-9)



PLAN

CAUTION:
EXISTING UTILITIES ARE LOCATED ON THE PLANS FROM A SEARCH OF AVAILABLE RECORDS. CONTRACTOR TO VERIFY LOCATIONS AND DEPTHS PRIOR TO CONSTRUCTION.

APPROVED FOR CONSTRUCTION
Shou-Ching HSU
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT # 123778 FIRST APPROVED DATE: 9/18/17

GENERAL NOTES:

1. FOR LEGEND AND ABBREVIATIONS SEE SHEET CN-1.
2. FOR STORM DRAIN SEE SD SHEETS.
3. FOR POTHOLE DATA SEE SHEET D-6.
4. FOR LIMITS OF PAVEMENT REPLACEMENT SEE DR SHEETS.
5. RESIDENTIAL SERVICE LATERALS ARE GENERALLY PERPENDICULAR TO THE WATER MAIN AND IN LINE WITH THE WATER METER CONTRACTOR TO REPLACE WATER SERVICE LATERAL FROM MAIN TO ANGLE METER STOP PER UDACS IF DAMAGED DURING CONSTRUCTION.

BASIS OF BEARINGS

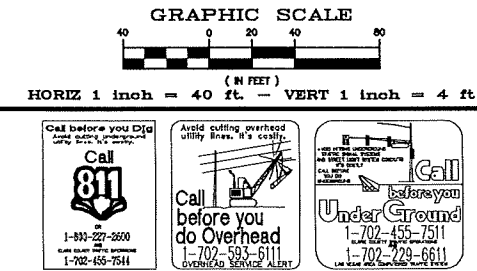
GRID NORTH AS DEFINED BY THE CENTRAL MEDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS AND LAS VEGAS HIGH ELEVATION ZONES, NORTH AMERICAN DATUM OF 1983, SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN, THE REFERENCE FRAME BEING NAD 83 (2011) EPDCH 2D1D

BENCHMARK

CITY OF LAS VEGAS BENCHMARK: BLV9D33E4 RIVET AND PLATE IN TOP OF CURB ON THE NORTH SIDE OF WASHBURN ROAD AT BUFFALO DRIVE, 200B ADJUSTMENT.
ELEV. = 720.41B (METRIC)
2363.57 (US SURVEY FEET)



MATCHLINE - "W" 20+00 (SEE SHEET UT-11)



UTILITY NOTES

1. GAS VALVES, AND PULLBOXES: ADJUST TO FINISH GRADE BY OTHERS UNLESS OTHERWISE NOTED.
2. RE-ESTABLISH SURVEY MONUMENT.
3. PROTECT IN PLACE.
4. REMOVE PER DR SHEETS.
5. RELOCATE.
6. TO BE RELOCATED BY NEVADA ENERGY.
7. TO BE RELOCATED BY SOUTHWEST GAS.
8. TO BE RELOCATED CONCURRENTLY BY CDX COMMUNICATIONS.
9. TO BE RELOCATED CONCURRENTLY BY CENTURYLINK.

SEWER LINE CONSTRUCTION ITEMS

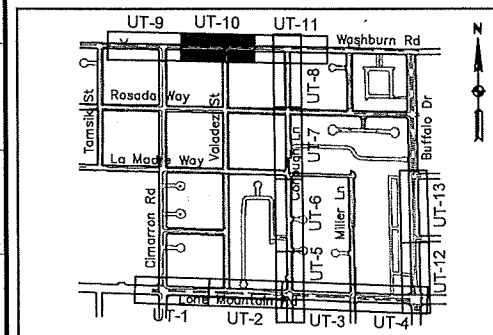
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2. CONSTRUCT 8" PVC D-3034 SS SDR 35.
3. ADJUST SEWER MANHOLE TO FINISH GRADE.
4. ABANDON SEWER LINE PER DCSWCS METHOD C.
5. REMOVE SEWER LINE PER DCSWCS METHOD B.
6. REMOVE SEWER MANHOLE.
7. APPLY CORROSION PROTECTION PER SP 691.

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7. CONSTRUCT CLSM BACKFILL TO SPRINGLINE OF WATERLINE.

WATER LINE NOTES FOR TRENCHES SIX (6) FEET WIDE AND GREATER

1. IF THE PIPE MATERIAL IS ACP, THE EXPOSED PIPE MUST BE REPLACED WITH DUCTILE IRON PIPE.
2. CONTRACTOR MUST SUBMIT PIPE SUPPORT DETAIL PREPARED BY NEVADA LICENSED ENGINEER, TO LVWD ENGINEERING SERVICES BEFORE CONSTRUCTION TO SHOW HOW WATERLINE(S) WILL BE SUPPORTED DURING EXCAVATION AND BACKFILL.
3. SUPPORTED PIPE MAY BE EXPOSED FOR NO LONGER THAN 90 DAYS MAXIMUM. IF THE PIPE WILL BE EXPOSED FOR MORE THAN 90 DAYS, PLANS MUST BE SUBMITTED AND APPROVED BY THE LVWD TO RELOCATE PIPE.



KEY MAP

DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECT MANAGEMENT



GOWAN NORTH BUFFALO BRANCH
LONE MOUNTAIN TO WASHBURN

TITLE



UT-10
72 of 89
DRAWING NO.
731-94

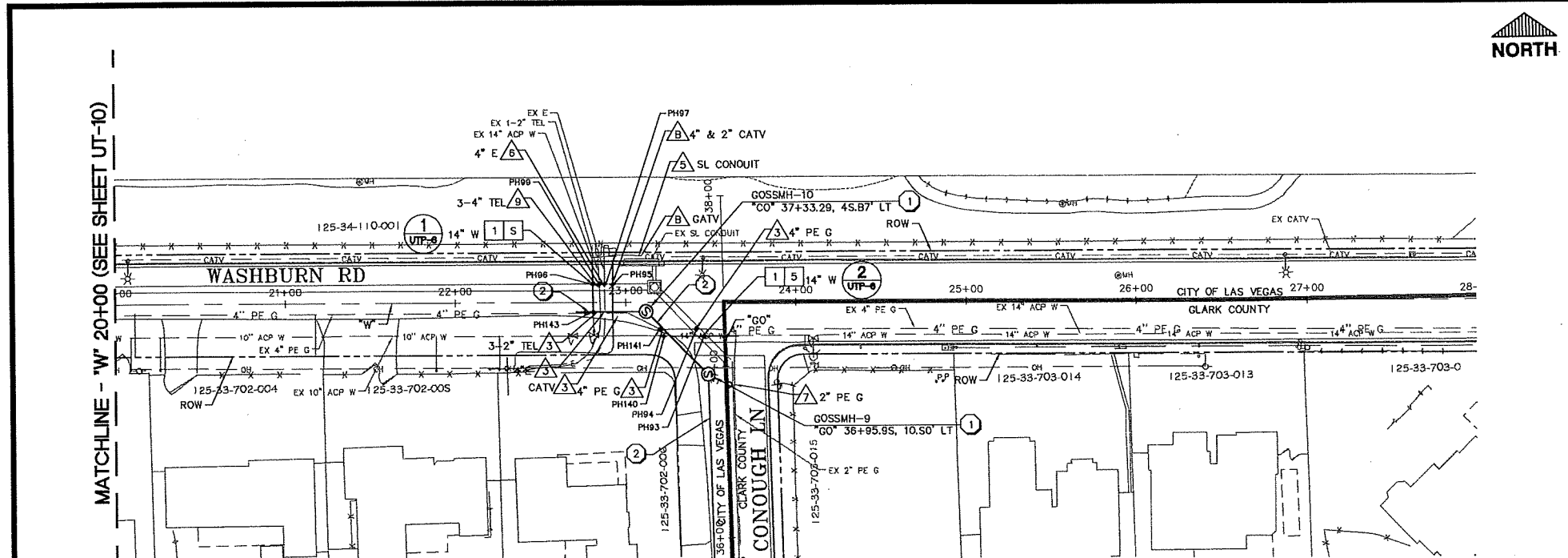
DESIGNED BY: JS
DRAWN BY: LS
CHECKED BY: BH
DATE: 9/7/17

3753 Howard Hughes Parkway, Suite 135
Las Vegas, NV 89169
Phone: 702.487.4000
Fax: 702.487.4000

UTILITY / SANITARY SEWER PLAN AND PROFILE
"W" 12+00 TO 20+00

PROJ# 123778 AGR:119933 QS-12-35-SE/SW XC 11343





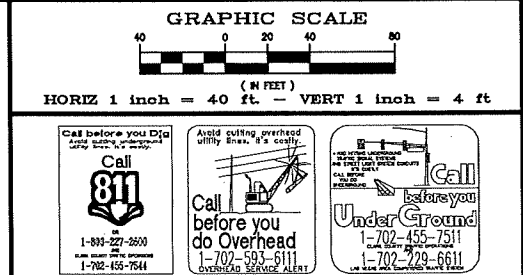
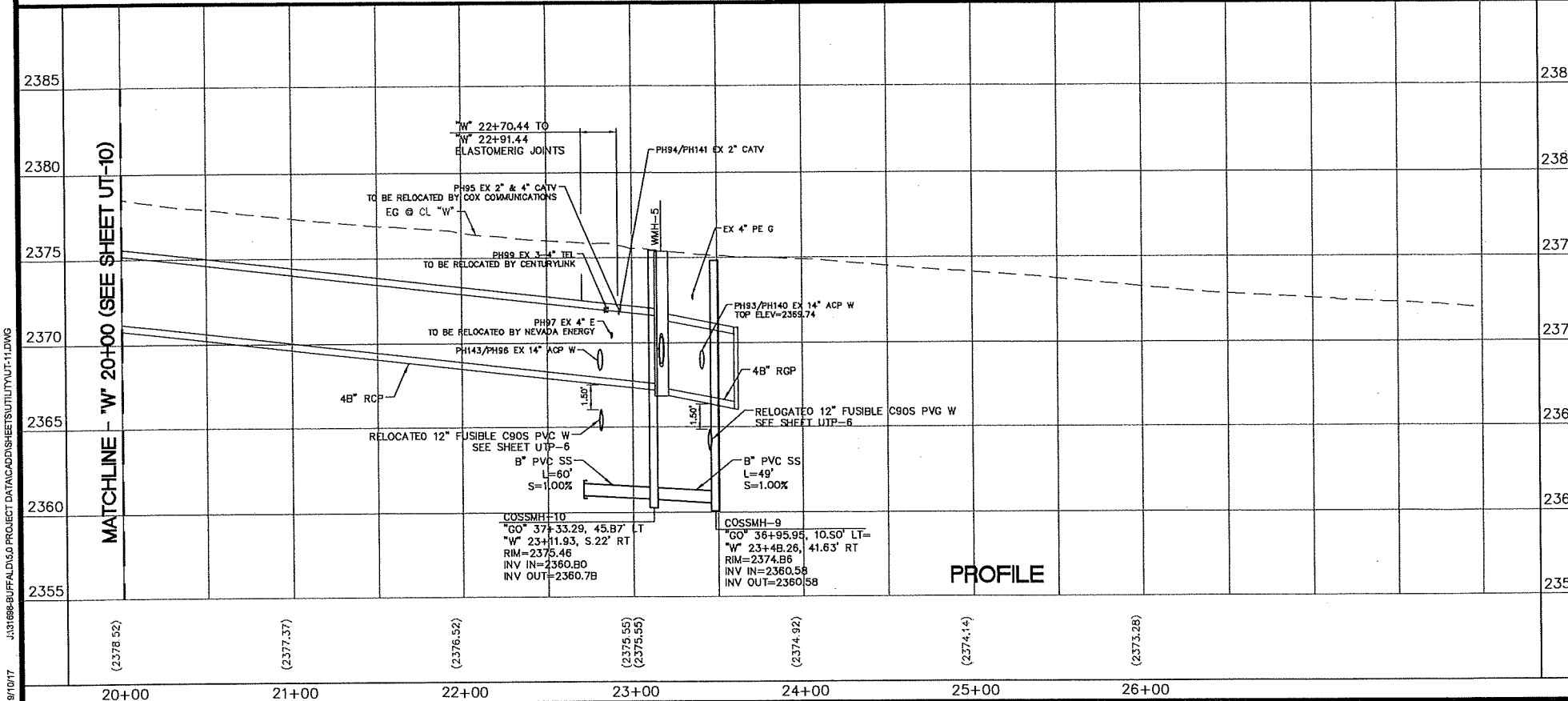
CAUTION:
EXISTING UTILITIES ARE LOCATED ON THE PLANS FROM A SEARCH OF AVAILABLE RECORDS. CONTRACTOR TO VERIFY LOCATIONS AND DEPTHS PRIOR TO CONSTRUCTION.

GENERAL NOTES:

- FOR LEGEND AND ABBREVIATIONS SEE SHEET GN-1.
- FOR STORM DRAIN SEE SO SHEETS.
- FOR POTHOLE DATA SEE SHEET O-8.
- FOR LIMITS OF PAVEMENT REPLACEMENT SEE OR SHEETS.
- RESIDENTIAL SERVICE LATERALS ARE GENERALLY PERPENDICULAR TO THE WATER MAIN AND IN LINE WITH THE WATER METER CONTRACTOR TO REPLACE WATER SERVICE LATERAL FROM MAIN TO ANGLE METER STOP PER UOAGS IF DAMAGED DURING CONSTRUCTION.

BASIS OF BEARINGS
GRID NORTH AS DEFINED BY THE CENTRAL MEDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NGRS), LAS VEGAS AND LAS VEGAS HIGH ELEVATION ZONES, NORTH AMERICAN DATUM OF 1983, SAID MERIDIAN BEING CONJUGENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN, THE REFERENCE FRAME BEING NAD 83 (2011) EPOCH 2010

BENCHMARK
CITY OF LAS VEGAS BENCHMARK: BLV9033E4 RIVET AND PLATE IN TOP OF CURB ON THE NORTH SIDE OF WASHBURN ROAD AT BUFFALO DRIVE, 2008 ADJUSTMENT.
ELEV. = 720.41B (METRIC)
2363.57 (US SURVEY FEET)

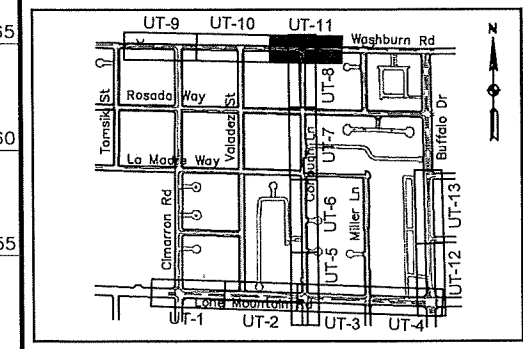


- UTILITY NOTES**
- GAS VALVES, AND PULLBOXES: ADJUST TO FINISH GRADE BY OTHERS UNLESS OTHERWISE NOTED.
 - RE-ESTABLISH SURVEY MONUMENT.
 - PROTECT IN PLACE.
 - REMOVE PER OR SHEETS.
 - RELOCATE.
 - TO BE RELOCATED BY NEVADA ENERGY.
 - TO BE RELOCATED BY SOUTHWEST GAS.
 - TO BE RELOCATED CONCURRENTLY BY COX COMMUNICATIONS.
 - TO BE RELOCATED CONCURRENTLY BY CENTURYLINK.

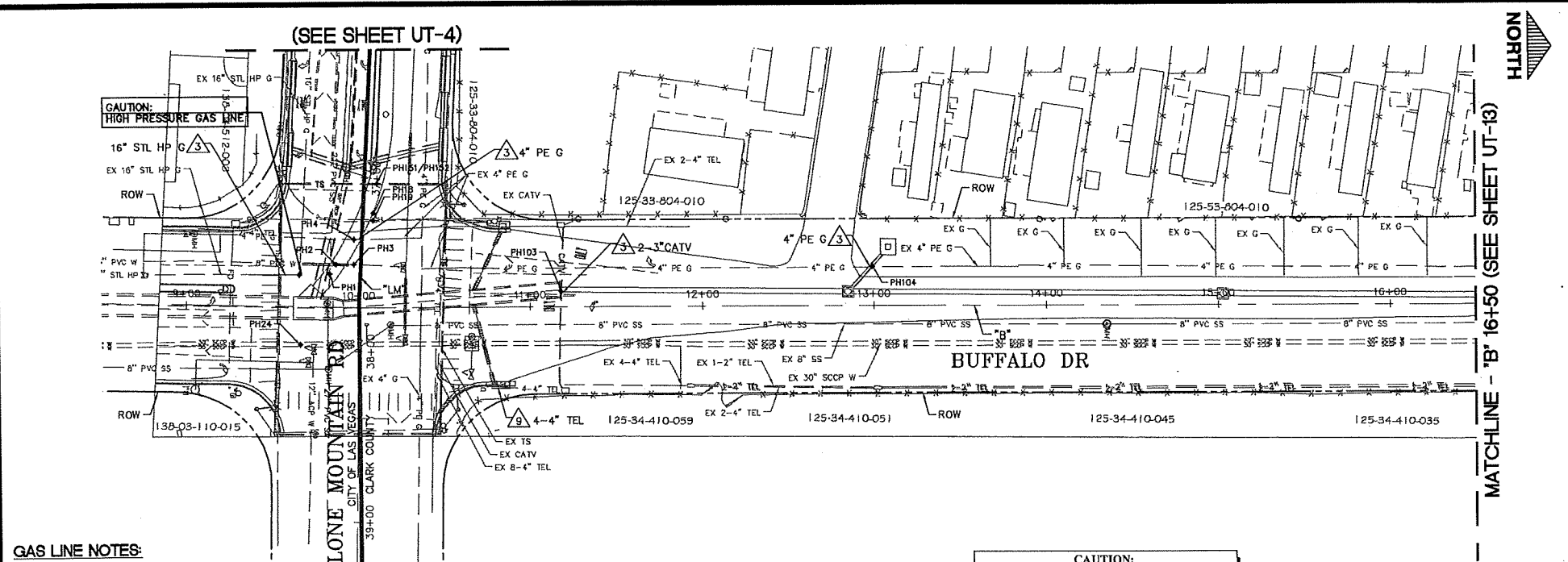
- SEWER LINE CONSTRUCTION ITEMS**
- CONSTRUCT 48\"/>
 - CONSTRUCT 8\"/>
 - ADJUST SEWER MANHOLE TO FINISH GRADE.
 - ABANDON SEWER LINE PER OGSCWS METHOD G.
 - REMOVE SEWER LINE PER OGSCWS METHOD B.
 - REMOVE SEWER MANHOLE.
 - APPLY CORROSION PROTECTION PER SP 691.

- WATER LINE NOTES**
- RELOCATE WATERLINE. FOR CONSTRUCTION ITEMS SEE UTP SHEETS.
 - REPLACE WATERLINE.
 - ADJUST WATER VALVE BOX TO FINISH GRADE PER UOAGS PLATE NO. 39 VALVE SHOULD BE ACCESSIBLE AT ALL TIMES.
 - ABANDON WATERLINE PER UOAGS.
 - REMOVE WATERLINE PER UOAGS.
 - REMOVE WATER VALVE.
 - CONSTRUCT GLSM BACKFILL TO SPRINGLINE OF WATERLINE.

- WATER LINE NOTES FOR TRENCHES SIX (6) FEET WIDE AND GREATER**
- IF THE PIPE MATERIAL IS ACP, THE EXPOSED PIPE MUST BE REPLACED WITH DUCTILE IRON PIPE.
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 - SUPPORTED PIPE MAY BE EXPOSED FOR NO LONGER THAN 90 DAYS MAXIMUM. IF THE PIPE WILL BE EXPOSED FOR MORE THAN 90 DAYS, PLANS MUST BE SUBMITTED AND APPROVED BY THE LVWD TO RELOCATE PIPE.



REVISIONS		DATE	DESCRIPTION	APPD
DESIGNED BY: JS DRAWN BY: LS CHECKED BY: EH				
DATE: 9/7/17				
DEPARTMENT OF PUBLIC WORKS CAPITAL PROJECT MANAGEMENT				
TITLE: GOWAN NORTH BUFFALO BRANCH LONE MOUNTAIN TO WASHBURN				
SHEET: UTILITY / SANITARY SEWER PLAN AND PROFILE "W" 20+00 TO 28+00				
UT-11 73 of 89 DRAWING NO. 731-94				



GAS LINE NOTES:

- CAUTION: HIGH PRESSURE GAS LINE
- CALL SOUTHWEST GAS AT 702-651-2111 FOR STANDBY WHEN EXCAVATING OVER OR NEAR HIGH PRESSURE GAS LINES.

APPROVED FOR CONSTRUCTION
Y. Disandro, P.E.
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT # 123778 FIRST APPROVED DATE: 9/18/17

GENERAL NOTES:

- FOR LEGEND AND ABBREVIATIONS SEE SHEET GN-1.
- FOR STORM DRAIN SEE SD SHEETS.
- FOR POTHOLE DATA SEE SHEET D-6.
- FOR LIMITS OF PAVEMENT REPLACEMENT SEE DR SHEETS.
- RESIDENTIAL SERVICE LATERALS ARE GENERALLY PERPENDICULAR TO THE WATER MAIN AND IN LINE WITH THE WATER METER CONTRACTOR TO REPLACE WATER SERVICE LATERAL FROM MAIN TO ANGLE METER STOP PER UDACS IF DAMAGED DURING CONSTRUCTION.

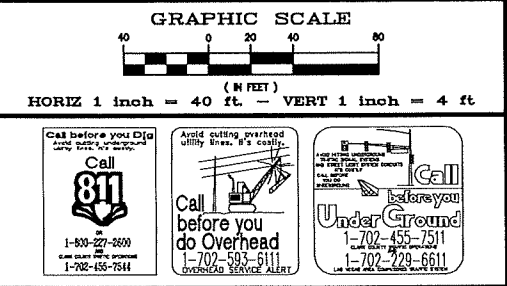
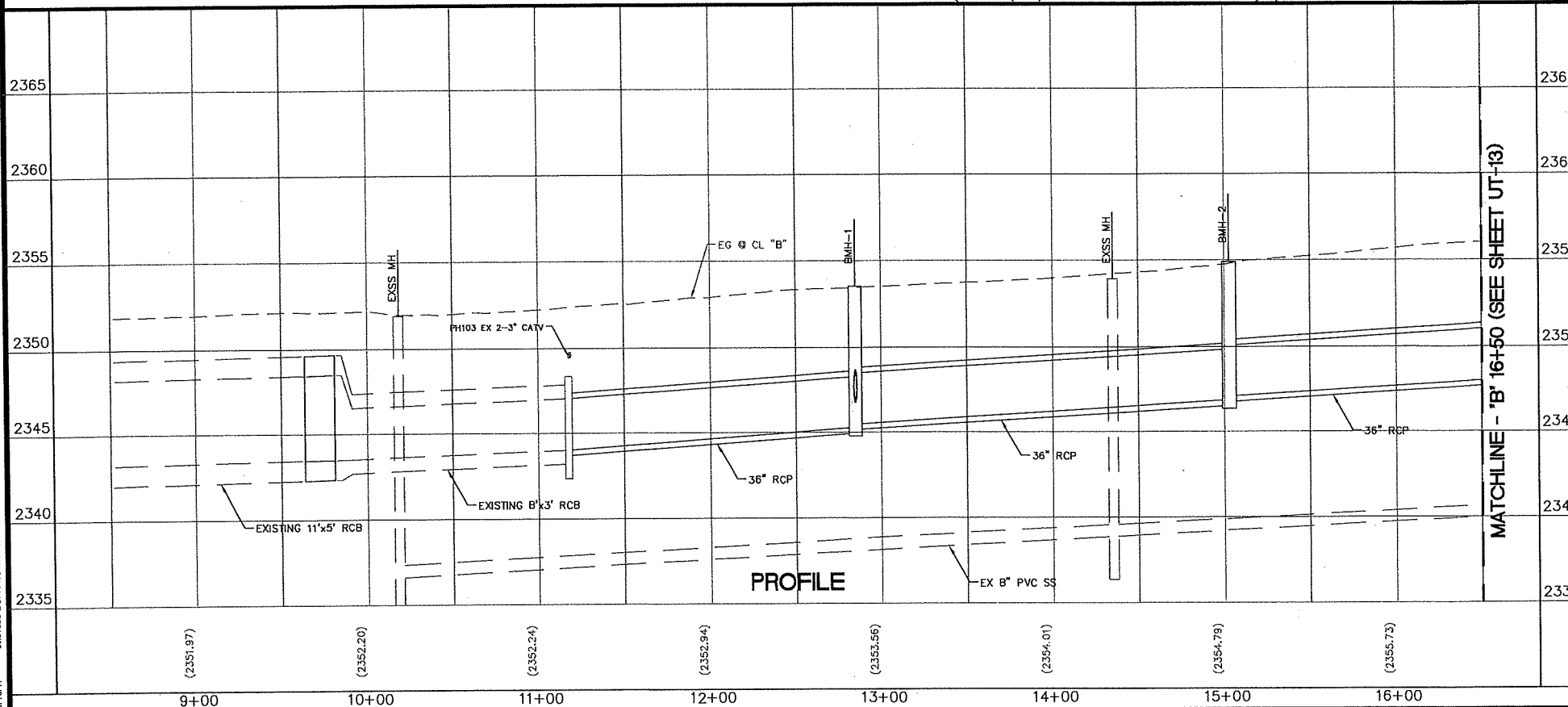
CAUTION:
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GRID NORTH AS DEFINED BY THE CENTRAL MEDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS AND LAS VEGAS HIGH ELEVATION ZONES, NORTH AMERICAN DATUM OF 1983, SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN. THE REFERENCE FRAME BEING NAD 83 (2011) EPOCH 2010.

BENCHMARK

CITY OF LAS VEGAS BENCHMARK: BLVD33E4 RIVET AND PLATE IN TOP OF CURB ON THE NORTH SIDE OF WASHBURN ROAD AT BUFFALO DRIVE, 200B ADJUSTMENT.
ELEV. = 720.41B (METRIC)
2363.57 (US SURVEY FEET)



UTILITY NOTES

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- PROTECT IN PLACE.
- REMOVE PER DR SHEETS.
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- TO BE RELOCATED BY NEVADA ENERGY.
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- TO BE RELOCATED CONCURRENTLY BY COX COMMUNICATIONS.
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SEWER LINE CONSTRUCTION ITEMS

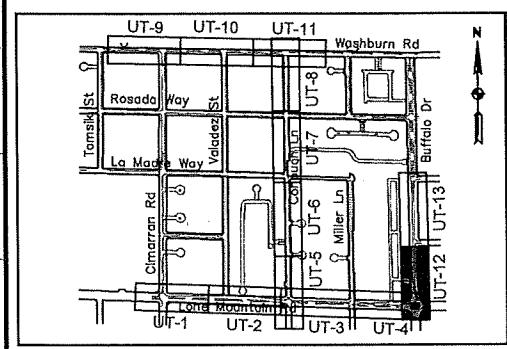
- CONSTRUCT 48\"/>
- CONSTRUCT 8\"/>
- ADJUST SEWER MANHOLE TO FINISH GRADE.
- ABANDON SEWER LINE PER DCSWCS METHOD D.
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REVISIONS			
NO.	DATE	DESCRIPTION	APP'D

DESIGNED BY: JS	DATE: 9/7/17
DRAWN BY: LS	
CHECKED BY: EH	

DEPARTMENT OF PUBLIC WORKS	3725 Howard Hughes Parkway, Suite 135 Las Vegas, NV 89169 Phone: 702-228-2100
CAPITAL PROJECT MANAGEMENT	

TITLE	GOWAN NORTH BUFFALO BRANCH
SHEET	UTILITY / SANITARY SEWER PLAN AND PROFILE
	"B" 9+00 TO 16+50

UT-12
74 of 89
DRAWING NO. 731-94

9/10/17 1331088-BUFFALO-0 PROJECT DATA/CD SHEETS/UTILITY-13.DWG

MATCHLINE - 'B' 16+50 (SEE SHEET UT-12)

MATCHLINE - 'B' 16+50 (SEE SHEET UT-12)

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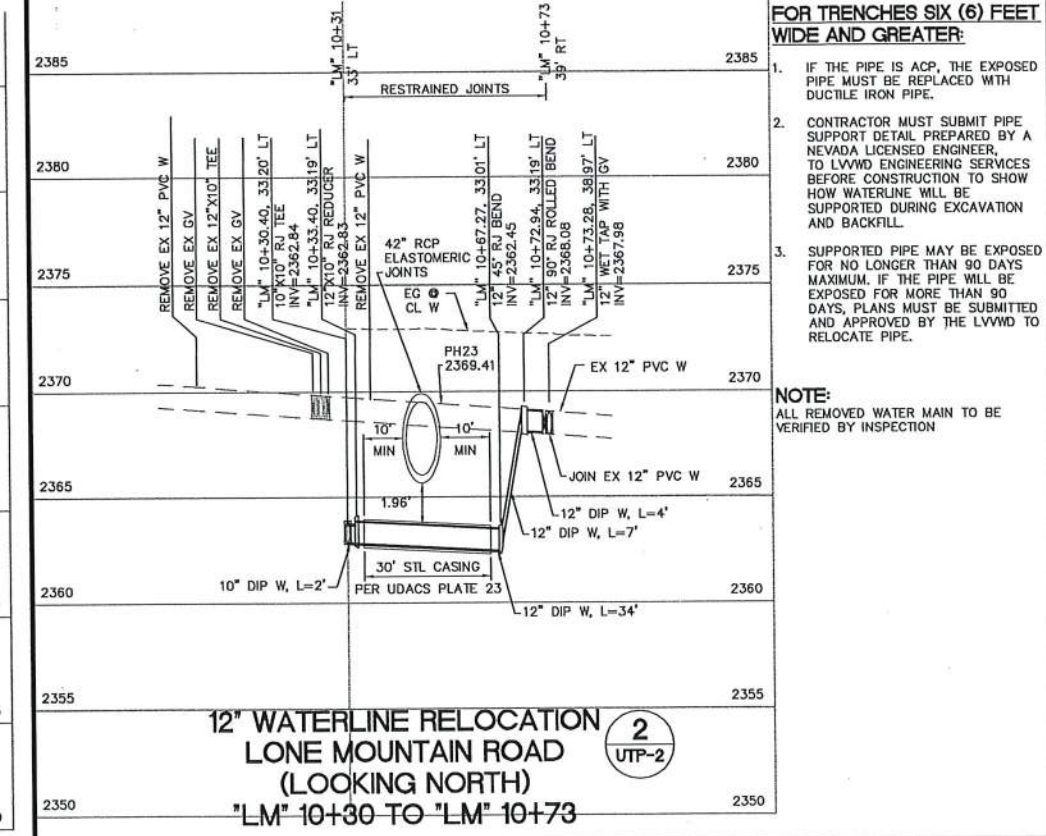
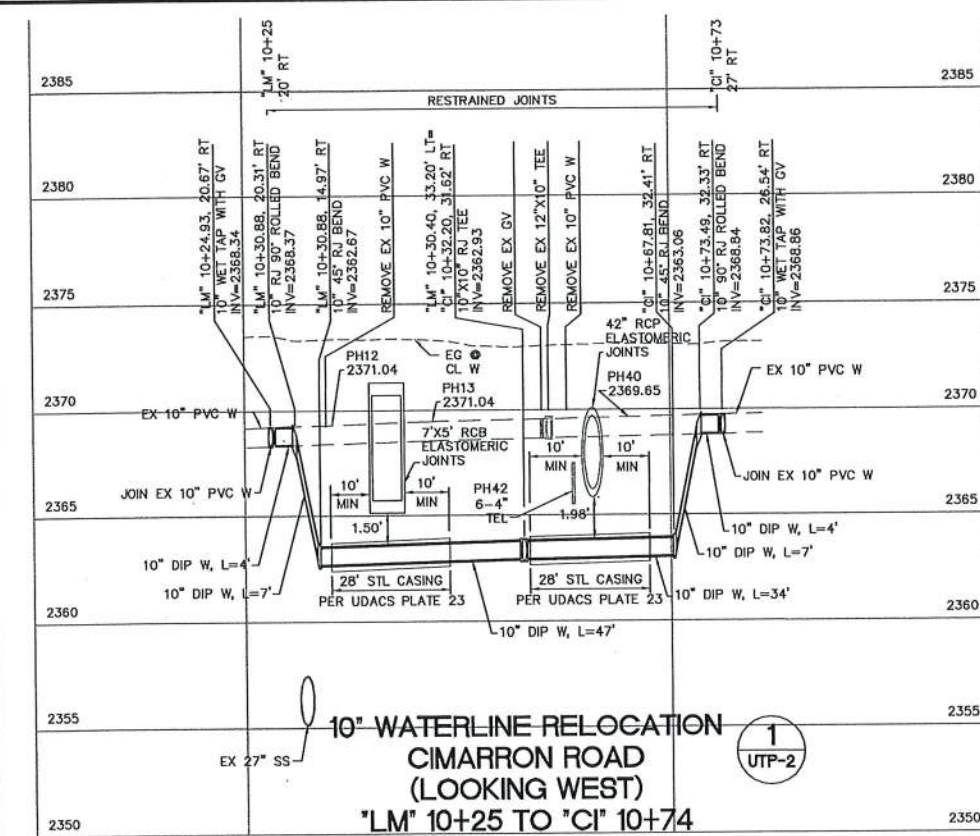
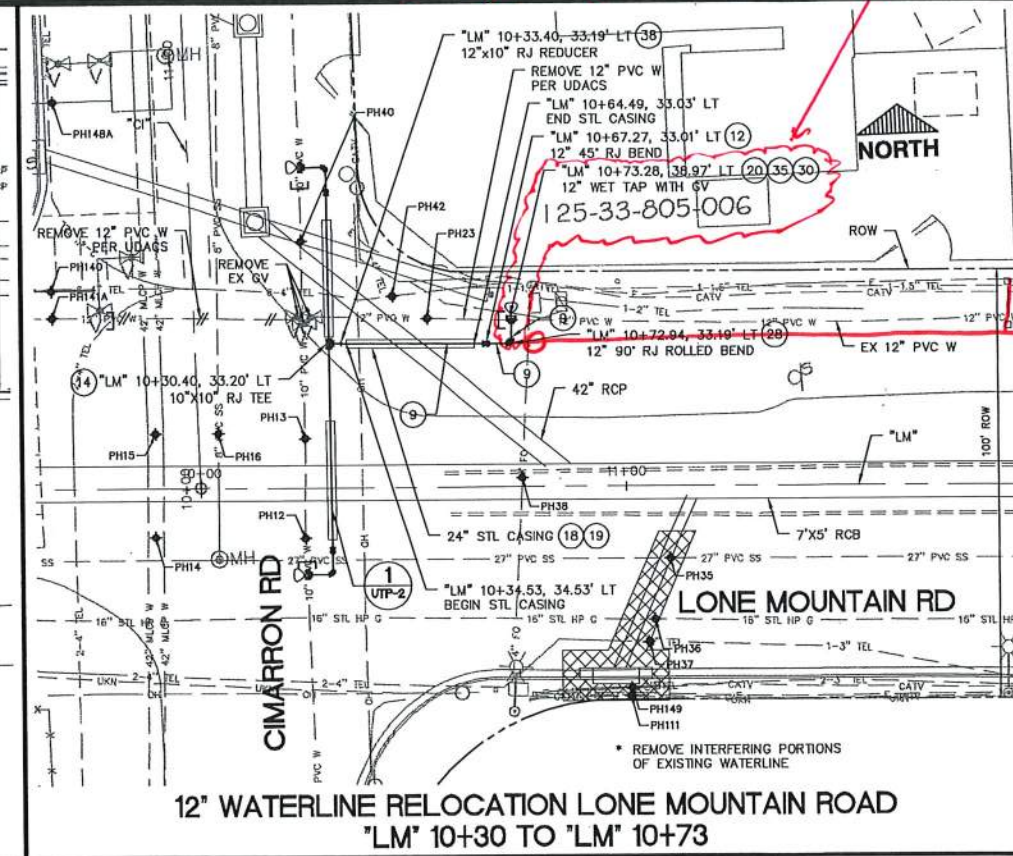
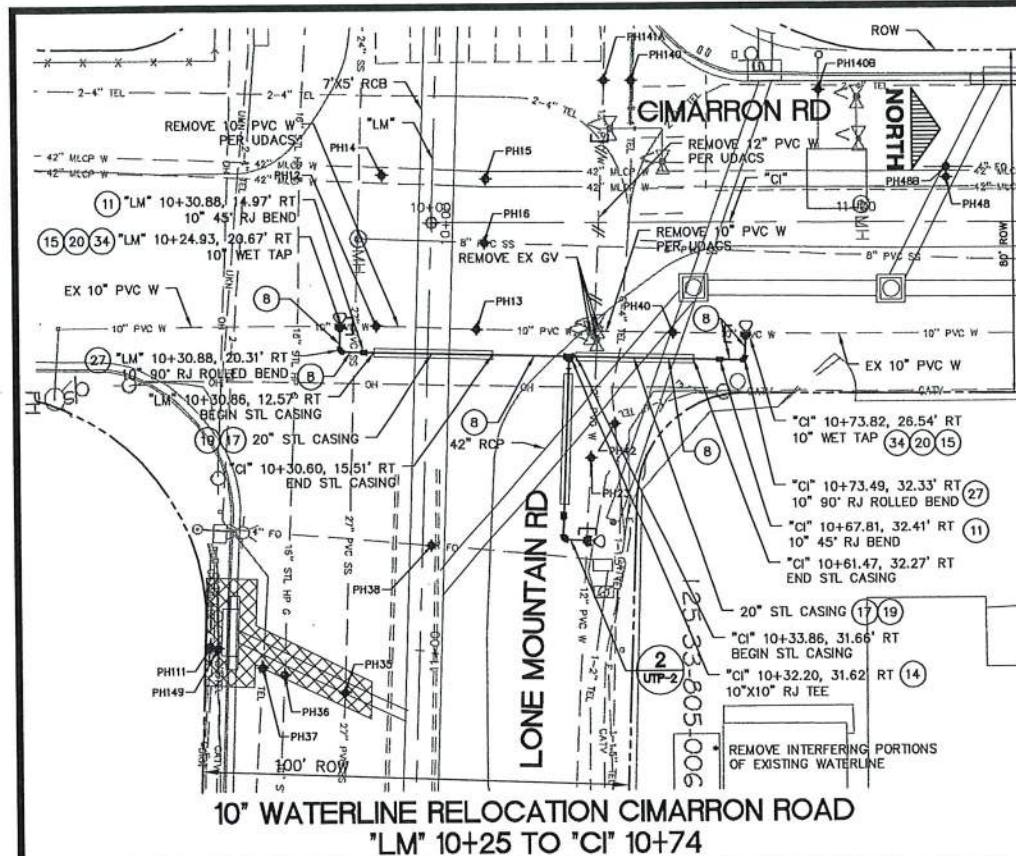
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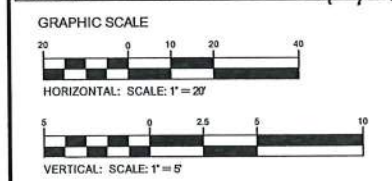


- ### WATER LINE CONSTRUCTION ITEMS

- (1) CONSTRUCT 8" DIP W
- (2) CONSTRUCT 8" PVC W
- (3) CONSTRUCT 6" PVC W
- (4) CONSTRUCT 12" PVC W
- (5) CONSTRUCT 12" FUSIBLE C905 PVC W
- (6) CONSTRUCT 14" DIP W
- (7) CONSTRUCT 8" CLASS 53 DIP W
- (8) CONSTRUCT 10" DIP W
- (9) CONSTRUCT 12" DIP W
- (10) CONSTRUCT 8" 45° BEND
- (11) CONSTRUCT 10" 45° BEND
- (12) CONSTRUCT 12" 45° BEND
- (13) CONSTRUCT 6" GATE VALVE
- (14) CONSTRUCT 10" X 10" TEE
- (15) CONSTRUCT 10" GATE VALVE
- (16) CONSTRUCT 12" COUPLING
- (17) CONSTRUCT 20" STEEL CASING
- (18) CONSTRUCT 24" STEEL CASING
- (19) CONSTRUCT CLSM 1 BACKFILL TO SPRINGLINE OF WATERLINE
- (20) CONSTRUCT THRUST BLOCK PER UDACS PLATE NO. 31 UNLESS OTHERWISE NOTED
- (21) CONSTRUCT 8" COUPLING
- (22) CONSTRUCT 16" COUPLING
- (23) CONSTRUCT 18" STEEL CASING
- (24) CONSTRUCT 8"x6" REDUCER
- (25) CONSTRUCT 14" X 12" REDUCER
- (26) CONSTRUCT 8" 90° BEND
- (27) CONSTRUCT 10" 90° BEND
- (28) CONSTRUCT 12" 90° BEND
- (29) CONSTRUCT 8" GATE VALVE
- (30) CONSTRUCT 12" GATE VALVE
- (31) CONSTRUCT 14" CUT IN VALVE
- (32) CONSTRUCT 6" WET TAP PER UDACS PLATE 34
- (33) CONSTRUCT 8" WET TAP PER UDACS PLATE 34
- (34) CONSTRUCT 10" WET TAP PER UDACS PLATE 34
- (35) CONSTRUCT 12" WET TAP PER UDACS PLATE 34
- (36) CONSTRUCT 16" DIP
- (37) CONSTRUCT 14" ACP TO DIP COUPLING
- (38) CONSTRUCT 12" X 10" REDUCER

 STORM DRAIN AND DROP INLET
INFORMATION ARE FOR REFERENCE
ONLY. FOR DETAILS, REFER TO
"LONE MOUNTAIN IMPROVEMENT
PROJECT LONE MOUNTAIN RD:
CC215 TO TENAYA" L-2128

APPROVED FOR CONSTRUCTION
 4 DISHAR: FOR: DSM
 LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
 PROJECT # 123778 FIRST APPROVED DATE: 9/18/17



SCALE: H = 1"=20'
V = 1"=5'

TITLE: GOWAN NORTH BUFFALO BRANCH LONE MOUNTAIN TO WASHBURN		DEPARTMENT OF PUBLIC WORKS CAPITAL PROJECT MANAGEMENT		DESIGNED BY: JS DRAWN BY: GAMM CHECKED BY: EH DATE: 9/7/17	
SHEET: UTILITY PROFILES (SHEET 2 OF 6)		  3753 Howard Hughes Parkway, Suite 135 Las Vegas, NV 89169 Phone: 702-397-4300		NO. DATE: DESCRIPTION: APPD	

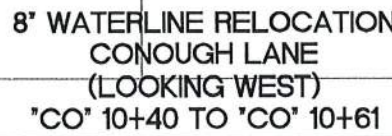
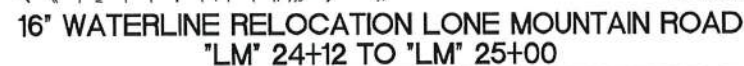
PROJ#:123778 AGR:115933 QS:125-33-SE/SW XC 11343

11/30/17

RECORD *John*
Jeff Anderson
As-Built

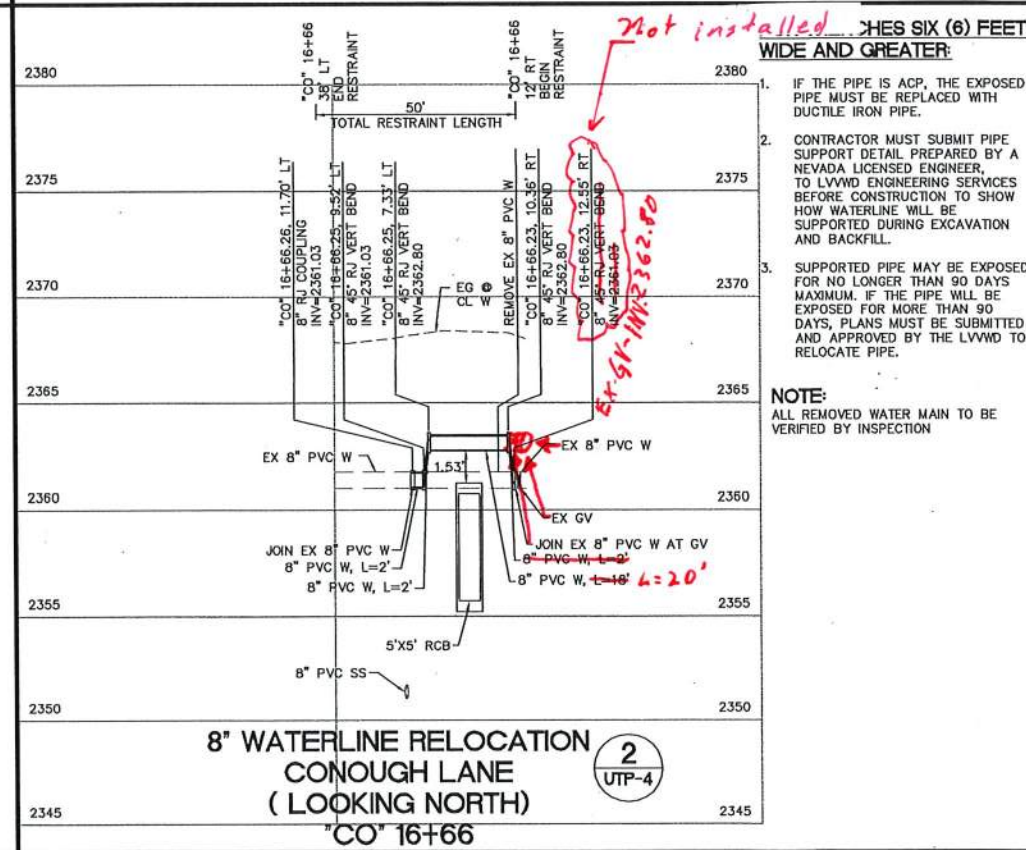
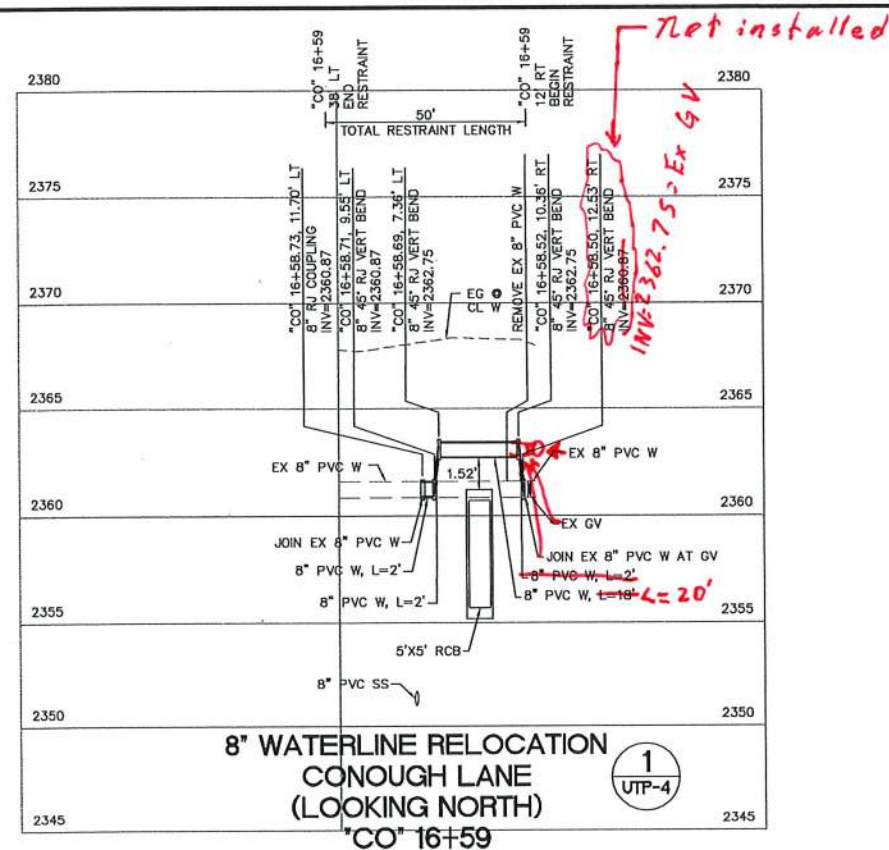
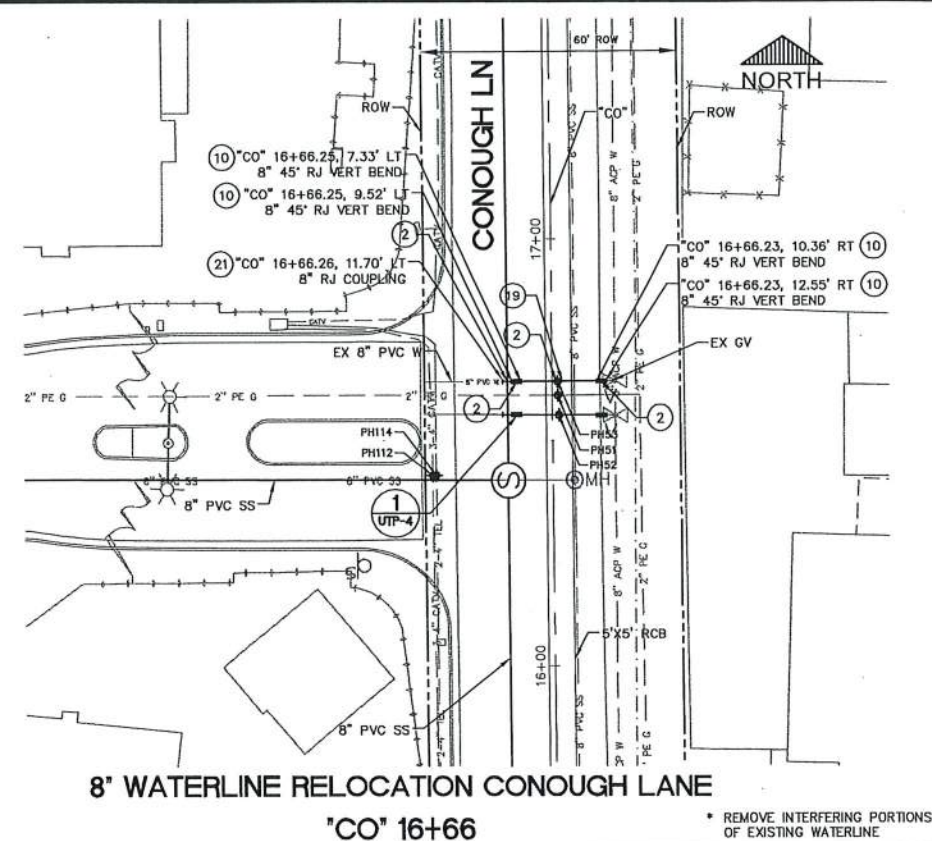
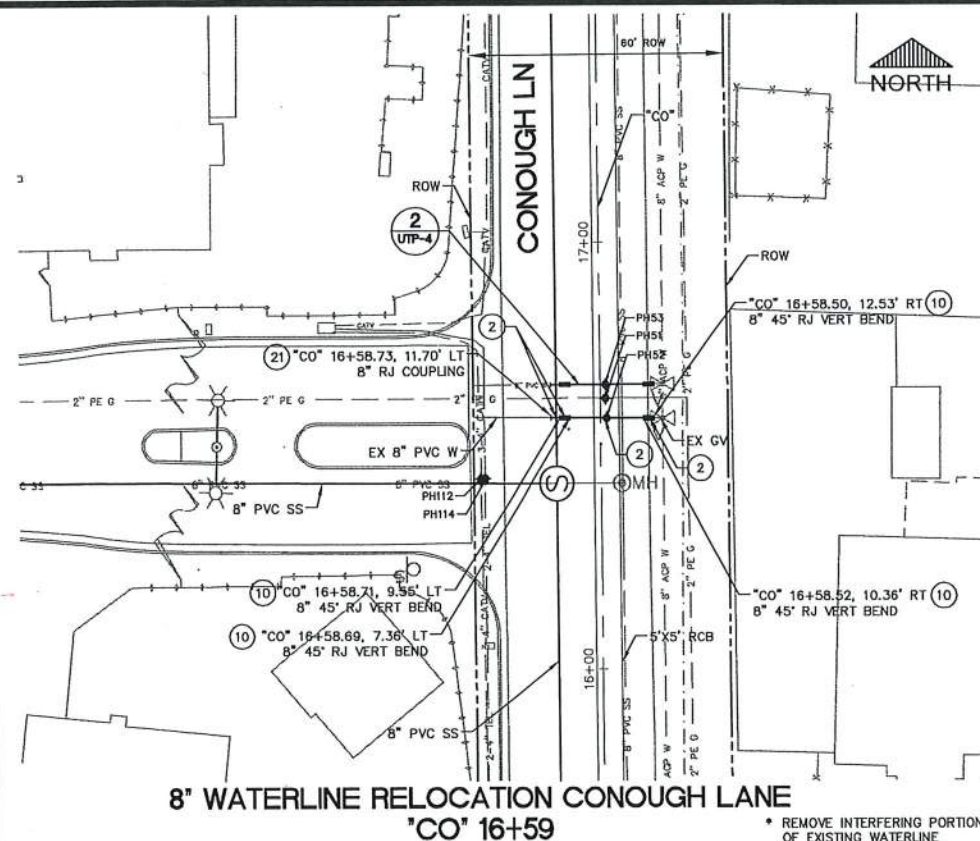
LAS VEGAS PAVING CORP.

WE'RE #1



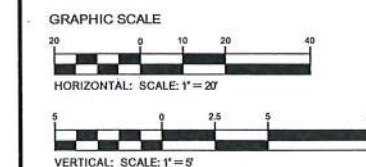
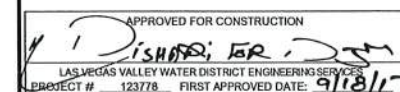
- SCALE: H = 1"=20'
V = 1"=5'

UTP-3
78 of 89
DRAWING NO.
731-94



- ### WATER LINE CONSTRUCTION ITEMS

- ① CONSTRUCT 8" DIP W
- ② CONSTRUCT 8" PVC W
- ③ CONSTRUCT 6" PVC W
- ④ CONSTRUCT 12" PVC W
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- ⑨ CONSTRUCT 12" DIP W
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- ⑪ CONSTRUCT 10" 45° BEND
- ⑫ CONSTRUCT 12" 45° BEND
- ⑬ CONSTRUCT 6" GATE VALVE
- ⑭ CONSTRUCT 10" X 10" TEE
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- ⑯ CONSTRUCT 12" COUPLING
- ⑰ CONSTRUCT 20" STEEL CASING
- ⑱ CONSTRUCT 24" STEEL CASING
- ⑲ CONSTRUCT CLSM 1 BACKFILL TO SPRINGLINE OF WATERLINE
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- ㉘ CONSTRUCT 12" 90° BEND
- ㉙ CONSTRUCT 8" GATE VALVE
- ㉚ CONSTRUCT 12" GATE VALVE
- ㉛ CONSTRUCT 14" CUT IN VALVE
- ㉜ CONSTRUCT 6" WET TAP PER UDACS PLATE 34
- ㉝ CONSTRUCT 8" WET TAP PER UDACS PLATE 34
- ㉞ CONSTRUCT 10" WET TAP PER UDACS PLATE 34
- ㉟ CONSTRUCT 12" WET TAP PER UDACS PLATE 34
- ㊱ CONSTRUCT 16" DIP
- ㊲ CONSTRUCT 14" ACP TO DIP COUPLING
- ㊳ CONSTRUCT 12" X 10" REDUCER



REVISIONS					
	NO.	DATE:	DESCRIPTION	APP'D	

DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECT MANAGEMENT

DE
CA

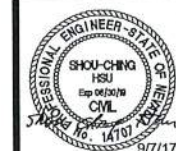
3743 Howard Hughes Parkway, Suite 135
Las Vegas, NV 89169
Phone: 702-897-4100

GOWAN NORTH BUFFALO BRANCH
LONE MOUNTAIN TO WASHBURN

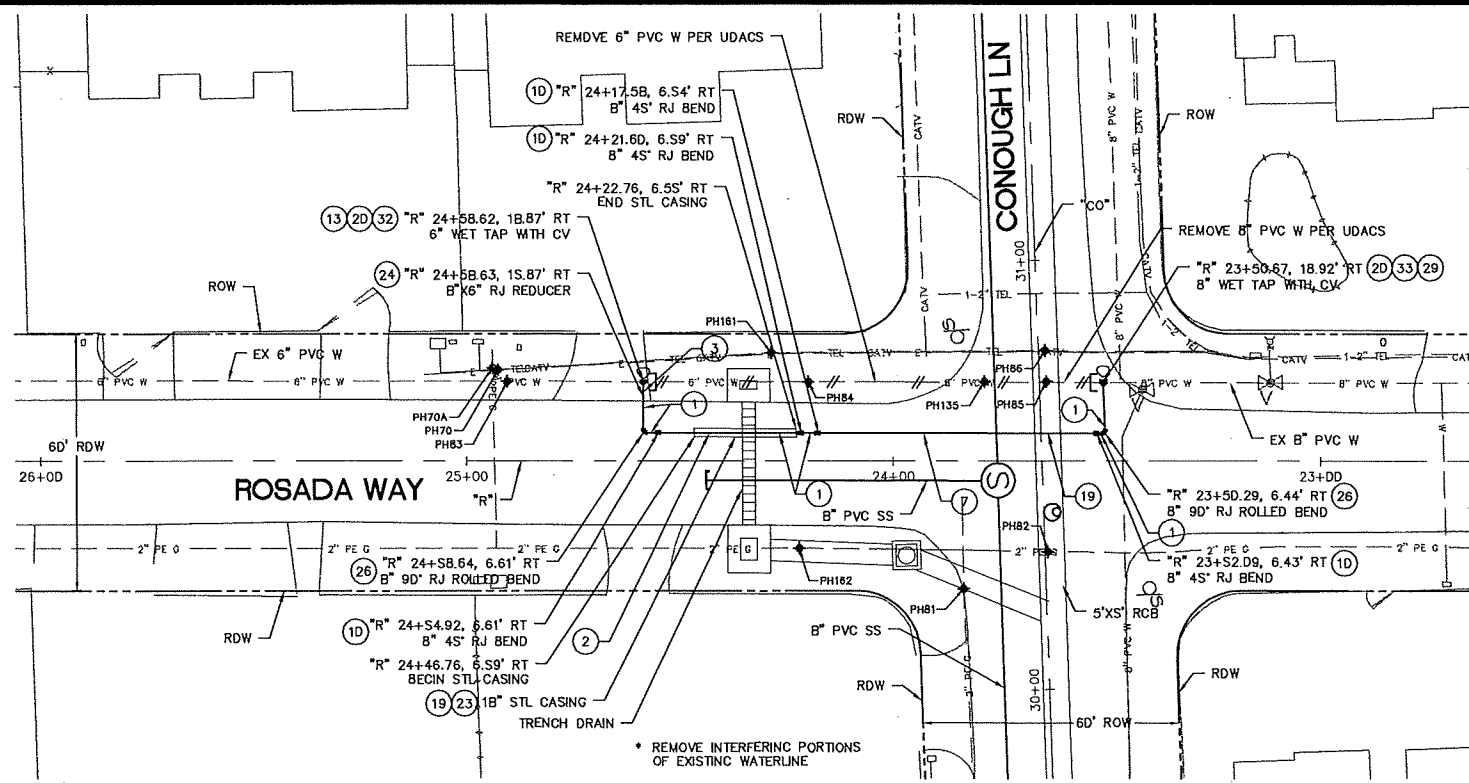
UTILITY PROFILES
(SHEET 4 OF 6)

TITLE: _____

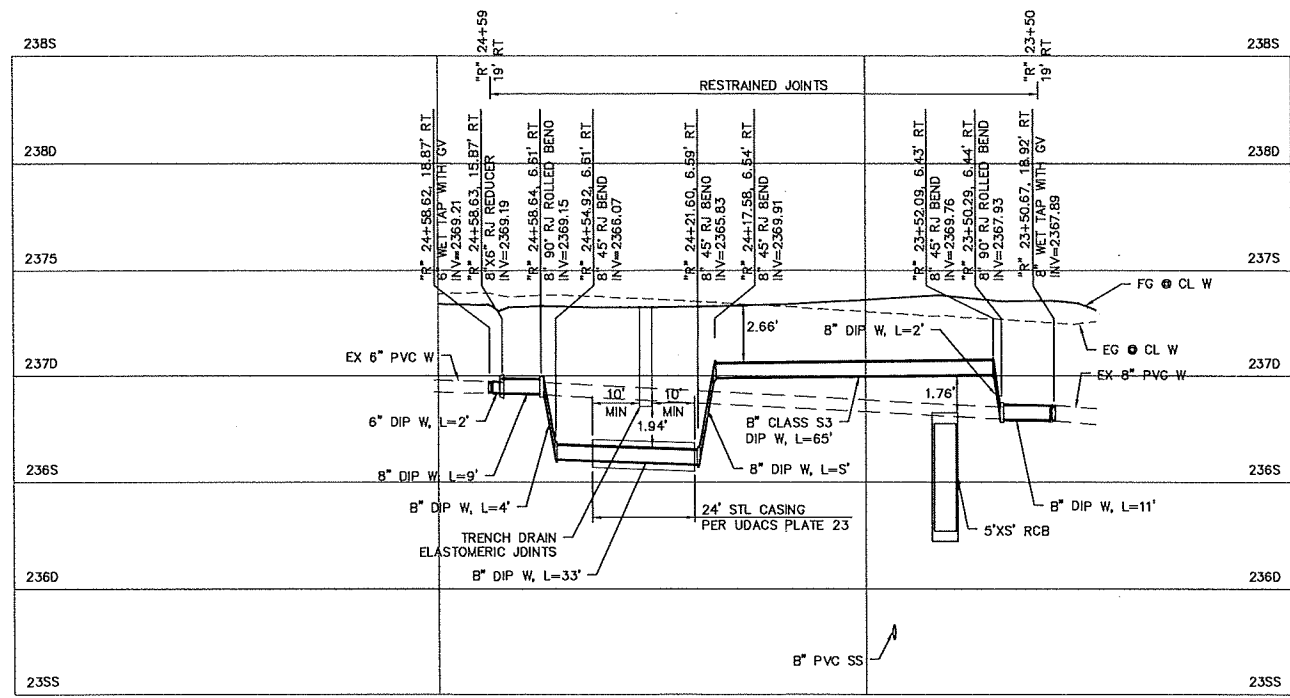
SHEET: _____



UTP-4
79 of 89
DRAWING NO.
731-94



8\"/>



8\"/>

1
UTP-5

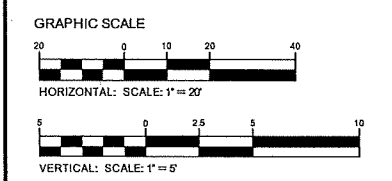
- FOR TRENCHES SIX (6) FEET WIDE AND GREATER:**
- IF THE PIPE IS ACP, THE EXPOSED PIPE MUST BE REPLACED WITH DUCTILE IRON PIPE.
 - CONTRACTOR MUST SUBMIT PIPE SUPPORT DETAIL PREPARED BY A NEVADA LICENSED ENGINEER, TO LVWD ENGINEERING SERVICES BEFORE CONSTRUCTION TO SHOW HOW WATERLINE WILL BE SUPPORTED DURING EXCAVATION AND BACKFILL.
 - SUPPORTED PIPE MAY BE EXPOSED FOR NO LONGER THAN 90 DAYS MAXIMUM. IF THE PIPE WILL BE EXPOSED FOR MORE THAN 90 DAYS, PLANS MUST BE SUBMITTED AND APPROVED BY THE LVWD TO RELOCATE PIPE.

NOTE:
ALL REMOVED WATER MAIN TO BE VERIFIED BY INSPECTION

WATER LINE CONSTRUCTION ITEMS

- CONSTRUCT 8" DIP W
- CONSTRUCT 8" PVC W
- CONSTRUCT 6" PVC W
- CONSTRUCT 12" PVC W
- CONSTRUCT 12" FUSIBLE C9D5 PVC W
- CONSTRUCT 14" DIP W
- CONSTRUCT 8" CLASS 53 DIP W
- CONSTRUCT 10" DIP W
- CONSTRUCT 12" DIP W
- CONSTRUCT 8" 45° BEND
- CONSTRUCT 10" 45° BEND
- CONSTRUCT 12" 45° BEND
- CONSTRUCT 6" GATE VALVE
- CONSTRUCT 10" X 10" TEE
- CONSTRUCT 10" GATE VALVE
- CONSTRUCT 12" COUPLING
- CONSTRUCT 20" STEEL CASING
- CONSTRUCT 24" STEEL CASING
- CONSTRUCT CLSM I BACKFILL TO SPRINGLINE OF WATERLINE
- CONSTRUCT THRUST BLOCK PER UDACS PLATE NO. 31 UNLESS OTHERWISE NOTED
- CONSTRUCT 8" COUPLING
- CONSTRUCT 16" COUPLING
- CONSTRUCT 18" STEEL CASING
- CONSTRUCT 8"x6" REDUCER
- CONSTRUCT 14" X 12" REDUCER
- CONSTRUCT 8" 90° BEND
- CONSTRUCT 10" 90° BEND
- CONSTRUCT 12" 90° BEND
- CONSTRUCT 8" GATE VALVE
- CONSTRUCT 12" GATE VALVE
- CONSTRUCT 14" CUT IN VALVE
- CONSTRUCT 6" WET TAP PER UDACS PLATE 34
- CONSTRUCT 8" WET TAP PER UDACS PLATE 34
- CONSTRUCT 10" WET TAP PER UDACS PLATE 34
- CONSTRUCT 12" WET TAP PER UDACS PLATE 34
- CONSTRUCT 16" DIP
- CONSTRUCT 14" ACP TO DIP COUPLING
- CONSTRUCT 12" X 10" REDUCER

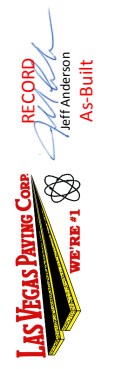
APPROVED FOR CONSTRUCTION
[Signature]
 LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
 PROJECT # 123778 FIRST APPROVED DATE: 9/18/17



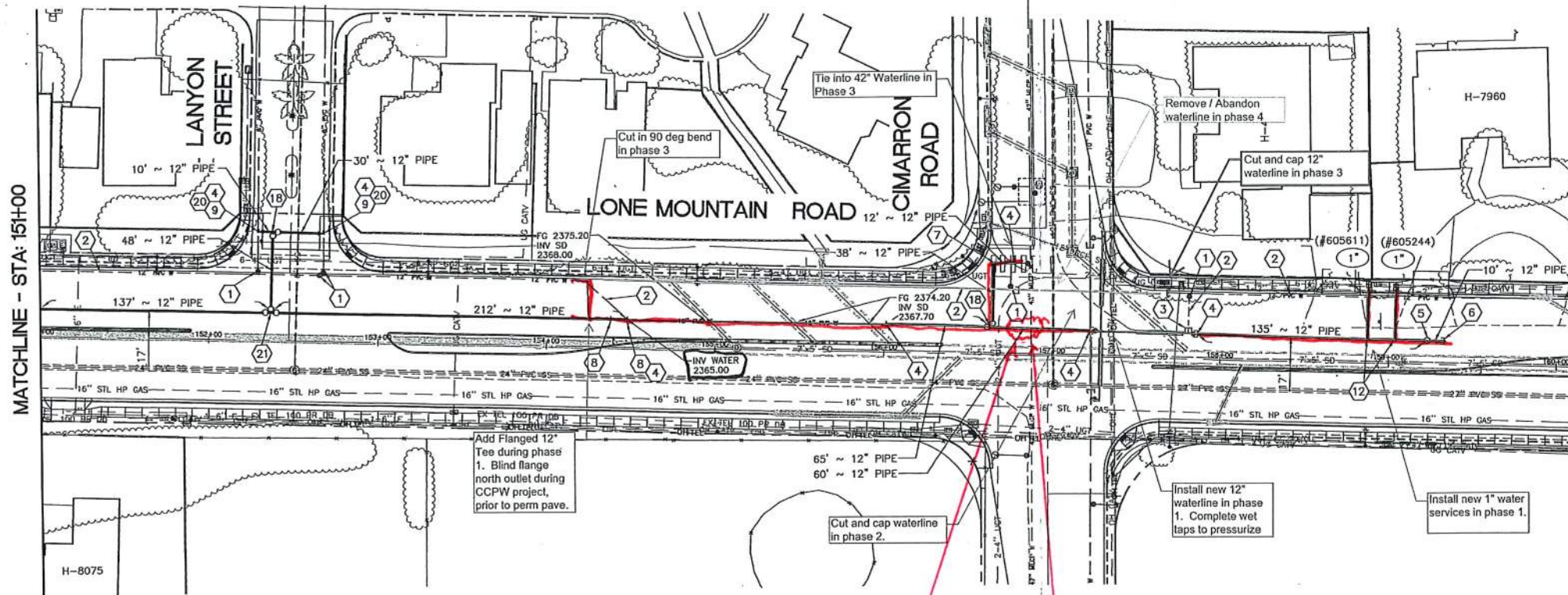
SCALE: H = 1"=20'
V = 1"=5'

REVISIONS		DESIGNED BY: JS	DATE: 9/7/17
		DRAWN BY: GMM	CHECKED BY: EH
			NO. DATE: APPD
DEPARTMENT OF PUBLIC WORKS CAPITAL PROJECT MANAGEMENT			
GOWAN NORTH BUFFALO BRANCH LONE MOUNTAIN TO WASHBURN		UTILITY PROFILES (SHEET 5 OF 6)	
TITLE:		SHEET:	
		UTP-5 80 of 89 DRAWING NO 731-94	

PROJ#123778 AGR#15933 08:125-33-SESW XC 11343



MATCHLINE - STA: 15+00



CONSTRUCTION NOTES

- 1 ABANDON EXISTING VALVE IN CLOSED POSITION.
- 2 EXISTING PIPE TO BE ABANDONED IN PLACE.
- 3 CUT AND REMOVE EXISTING 12", 8", OR 6" PIPE AND INSTALL CAP WITH CONCRETE THRUST BLOCK.
- 4 CUT AND REMOVE EXISTING PIPE AND CONNECT WITH NEW PIPE AND ENGINEER APPROVED COUPLINGS AND FITTINGS. FINAL CONNECTION AFTER SUCCESSFUL COMPLETION OF PRESSURE TEST AND WATER SAMPLE AS REQUIRED.
- 5 INSTALL 12" PO GATE VALVE WITH CONCRETE ANCHOR BLOCK.
- 6 INSTALL 12" CAP WITH CONCRETE THRUST BLOCK AND 2" MANUAL BLOW-OFF ASSEMBLY.
- 7 INSTALL 12" 90° BEND WITH CONCRETE THRUST BLOCK AND LOCATOR BALL.
- 8 INSTALL 12" 45° BEND WITH CONCRETE THRUST BLOCK AND LOCATOR BALL. SEE NOTE 13.
- 9 INSTALL 8" 90° BEND WITH CONCRETE THRUST BLOCK AND LOCATOR BALL.
- 10 INSTALL 8" 45° BEND WITH CONCRETE THRUST BLOCK AND LOCATOR BALL. SEE NOTE 13.

- 11 CUT EXISTING COPPER SERVICE LATERAL (LENGTH AS REQUIRED) AND RECONNECT TO PROPOSED PIPELINE WITH SERVICE SADDLE AND CORPORATION STOP. RELOCATE EXISTING WATER METER (IF NECESSARY) INTO PROPOSED SIDEWALK AREA AS REQUIRED.
- 12 INSTALL NEW WATER SERVICE ASSEMBLY AND RELOCATE EXISTING WATER METER (IF NECESSARY) TO PROPOSED SIDEWALK AREA AS REQUIRED.
- 13 INSTALL 10" x 10" MJ TAPPING SLEEVE WITH CONCRETE THRUST BLOCK, 10" FLG GATE VALVE AND 12" x 10" FLG x PO REDUCER.
- 14 INSTALL 12" x 6" FLG TEE WITH CONCRETE THRUST BLOCK, 12" FLG x PO GATE VALVE, 12" ADAPTER FLANGE, 6" FLG x PO GATE VALVE, AND 6" LATERAL TO FIRE HYDRANT OR METER ASSEMBLY.
- 15 INSTALL 12" x 6" PO x FLG TEE WITH CONCRETE THRUST BLOCK AND 6" FLG x PO GATE VALVE.
- 16 INSTALL 12" x 8" PO x FLG TEE WITH CONCRETE THRUST BLOCK AND 8" FLG x PO GATE VALVE.
- 17 INSTALL 12" x 8" FLG TEE WITH CONCRETE THRUST BLOCK, 12" FLG x PO GATE VALVE, 8" FLG x PO GATE VALVE AND 12" ADAPTER FLANGE.

- 18 INSTALL 12" x 12" FLG TEE WITH CONCRETE THRUST BLOCK, (2) 12" FLG x PO GATE VALVES AND (1) 12" ADAPTER FLANGE.
- 19 INSTALL 12" x 12" PO x FLG TEE WITH CONCRETE THRUST BLOCK AND 12" FLG x PO GATE VALVE.
- 20 INSTALL 12" x 8" OR 12" x 10" REDUCER WITH CONCRETE ANCHOR BLOCK.
- 21 INSTALL 12" x 12" FLG TEE WITH CONCRETE THRUST BLOCK AND (3) 12" FLG x PO GATE VALVES.

GENERAL NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE TO INVESTIGATE AND VERIFY THE ACTUAL LOCATION AND DEPTH OF ALL EXISTING UNDERGROUND FACILITIES AT LEAST 48 HOURS IN ADVANCE OF THE PERFORMANCE OF ANY WORK.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ALL DAMAGED OR DISTURBED EXISTING LANDSCAPING AND IRRIGATION FACILITIES DURING CONSTRUCTION OPERATIONS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ALL DAMAGED OR DISTURBED CURBS, GUTTERS, SIDEWALKS AND AC PAVEMENT DURING CONSTRUCTION OPERATIONS.
4. NEW WATER LINE TO PASS PRESSURE TEST AND WATER SAMPLE TESTING PRIOR TO FINAL CONNECTIONS AND ABANDONMENT OF EXISTING WATER LINES.
5. EXISTING PIPELINE, SERVICE LATERAL, VALVE, FIRE HYDRANT ABANDONMENTS AND CUT AND CAPS ARE TO BE COMPLETED PER REQUIREMENTS WITHIN SECTION 2 AND 3 OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS (UDACS).
6. INSTALLATION STANDARD DETAILS AND REQUIREMENTS ARE LOCATED WITHIN SECTION 5 OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS (UDACS).
7. REFER TO THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS (UDACS) FOR ADDITIONAL INFORMATION REQUIRED FOR ALL WORK.
8. COORDINATE SHUTDOWNS TO MINIMIZE SERVICE IMPACTS. MAINTAIN FIRE HYDRANT COVERAGE DURING CONSTRUCTION PER JURISDICTIONAL CODE. REFER TO THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS (UDACS), SECTION 3, FOR CONNECTIONS TO EXISTING FACILITIES.
9. PIPELINES CROSSING SEWER AND STORM DRAIN MAINS AND WHERE ALIGNMENT IS CLOSER THAN 10' OF SEPARATION TO BE WITHIN STEEL CASING PER UDACS OR FUSIBLE PVC PIPE INSTALLED.
10. POLYETHYLENE WRAP/COVER EXPOSED EXISTING OR PROPOSED WATER MAINS AT PROPOSED STORM DRAIN AND EXISTING UTILITY CROSSINGS DURING CONSTRUCTION.
11. ABANDONED WATER MAIN CAP INSTALLATIONS MAY NOT BE REQUIRED WHEN CONCRETE THRUST BLOCKS FOR PROPOSED PIPELINE CLOSE/PLUG OPEN ENDS OF THE ABANDONED WATER LINE (TYP).
12. NO CONCRETE THRUST BLOCKS SHALL BE WITHIN 5' OF ANY EXISTING SEWER MAIN (TYP).
13. ADDITIONAL 6", 8" AND 12" BENDS WILL BE REQUIRED TO AVOID EXISTING/FUTURE UTILITY CROSSING AND FOR CONNECTIONS TO EXISTING WATER PIPELINES (TYP).

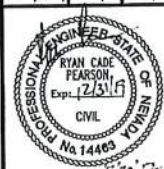
AGENCY APPROVALS:

LAS VEGAS VALLEY WATER DISTRICT

DATE



Call before you dig
1-702-227-2929



CONTRACT NUMBER
C1493
DRAWING NUMBER C2
SHEET OF



VICINITY MAP
NOT TO SCALE

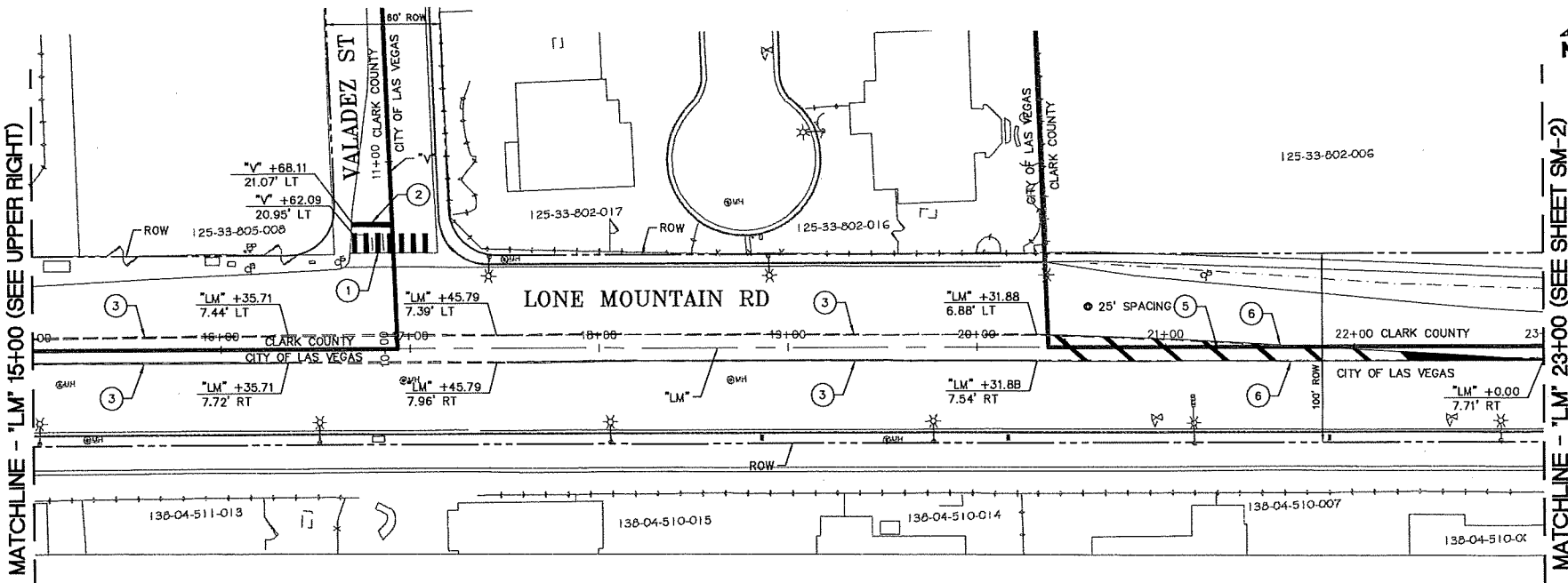
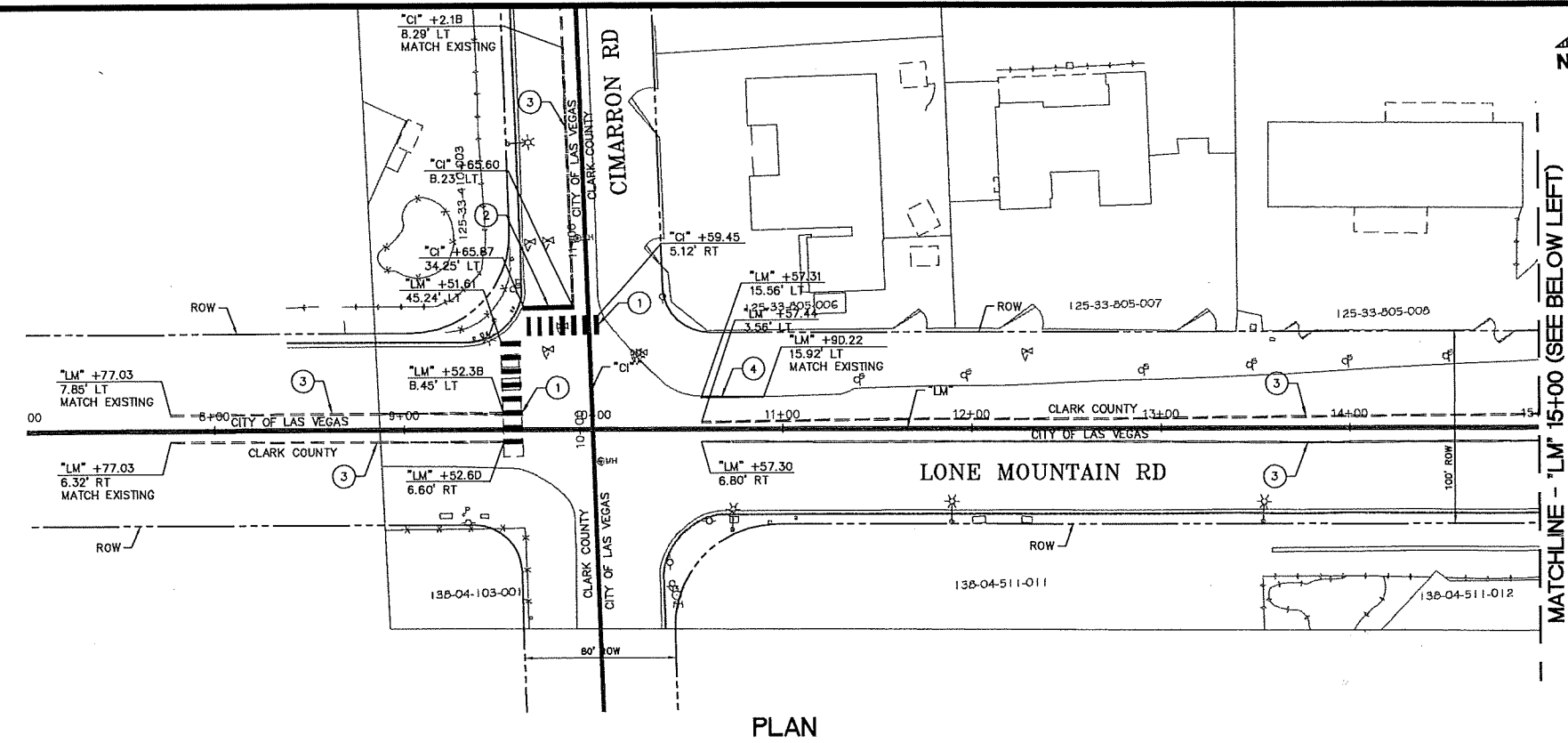
CAUTION TO CONTRACTOR
WHEN HIGH PRESSURE GAS MAINS ARE SHOWN, A SWG QUALIFIED REPRESENTATIVE MUST BE PRESENT DURING CONSTRUCTION IN OR AROUND THESE GAS MAINS. CALL SOUTHWEST GAS 48 HOURS PRIOR TO CONSTRUCTION.
EXISTING GAS VALVES ARE NOT TO BE PAVED OVER DURING CONSTRUCTION. NOTIFY SOUTHWEST GAS IF VALVES NEED TO BE RAISED.
CALL SOUTHWEST GAS AT (702) 365-2296 FOR STANDBY WHEN EXCAVATING OVER OR NEAR HIGH PRESSURE GAS LINES.

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



LAS VEGAS PAVING CORP.
Jeff Anderson
As-Built
WE'RE #1

RECORD
Work performed from County Project.



BASIS OF BEARINGS
GRIO NORTH AS DEFINED BY THE CENTRAL MERIDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS AND LAS VEGAS HIGH ELEVATION ZONES, NORTH AMERICAN DATUM OF 1983. SAIO MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN. THE REFERENCE FRAME BEING NAD 83 (2011) EPOCH 2010

BENCHMARK
CITY OF LAS VEGAS BENCHMARK: 8LV9D33E4 RIVET AND PLATE IN TOP OF CURB ON THE NORTH SIDE OF WASHBURN ROAD AT BUFFALO DRIVE, 2008 ADJUSTMENT.
ELEV. = 720.418 (METRIC)
2363.57 (US SURVEY FEET)

GRAPHIC SCALE
1 inch = 40 ft.

Call before you Dig
Call 811
1-800-227-2600
1-702-455-7511
1-702-455-7511

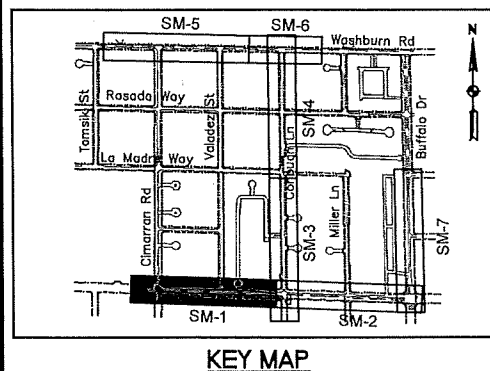
Call before you do Overhead
Call 811
1-800-227-2600
1-702-455-7511
1-702-455-7511

Call before you Under Ground
Call 811
1-800-227-2600
1-702-455-7511
1-702-455-7511

- LANE DELINEATION NOTES**
1. INSTALL CROSSWALK MARKINGS - TYPE 1 PER USDOCA DWG. NO. 254 (TYPE II PMF)
 2. INSTALL 24" SOLID WHITE STOP LINE PER USDOCA DWG. NO. 254 (TYPE II PMF)
 3. INSTALL TYPE 2 CENTERLINE PER USDOCA DWG. NO. 244 (RPM)
 4. INSTALL 6" SOLID WHITE LINE
 5. INSTALL 24" SOLID YELLOW PAINTING TRAFFIC STRIPING PER USDOCA DWG. NO. 245
 6. INSTALL PAVEMENT MARKERS PER USDOCA DWG. NO. 245, DETAIL B (RPM)
 7. INSTALL STORAGE LANE LINE PER USDOCA DWG. NO. 246 (RPM)
 8. INSTALL WHITE PAVEMENT MARKING - ARROW SYMBOL (TYPE II PMF)
 9. INSTALL WHITE PAVEMENT MARKING - "ONLY" SYMBOL (TYPE II PMF)
 10. INSTALL DROP LINE PER USDOCA DWG. NO. 246.6 (RPM)
 11. INSTALL TYPE 4 LANE LINE PER USDOCA DWG. NO. 244.1 (RPM)
 12. INSTALL REFLECTIVE MEDIAN NOSE MARKING AND PAINT PER USDOCA DWG. NO. 248
 13. INSTALL DOUBLE YELLOW LINE TAPE
 14. INSTALL 24" WHITE CHEVRON TAPE PER USDOCA DWG. NO. 245
 15. INSTALL TYPE 1 CENTERLINE PER USDOCA DWG. NO. 244 (RPM)
 16. INSTALL PAVEMENT MARKERS PER USDOCA DWG. NO. 245, PAVEMENT MARKER DETAIL (RPM)

- SIGNING NOTES**
- A. REMOVE AND REPLACE SIGN
 - B. REMOVE AND RESET SIGN
 - C. INSTALL GROUND MOUNTED SIGN

- GENERAL NOTES**
1. RPM - RAISED PAVEMENT MARKER
 2. PMF - PAVEMENT MARKING FILM
 3. EXISTING STRIPING IN CONFLICT WITH PROPOSED STRIPING SHALL BE REMOVED BY APPROVED METHODS.

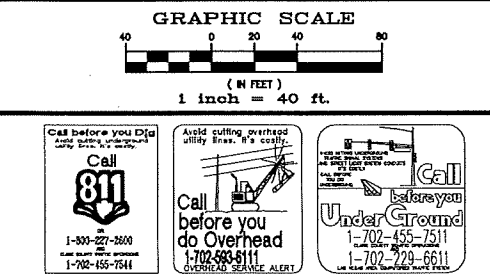
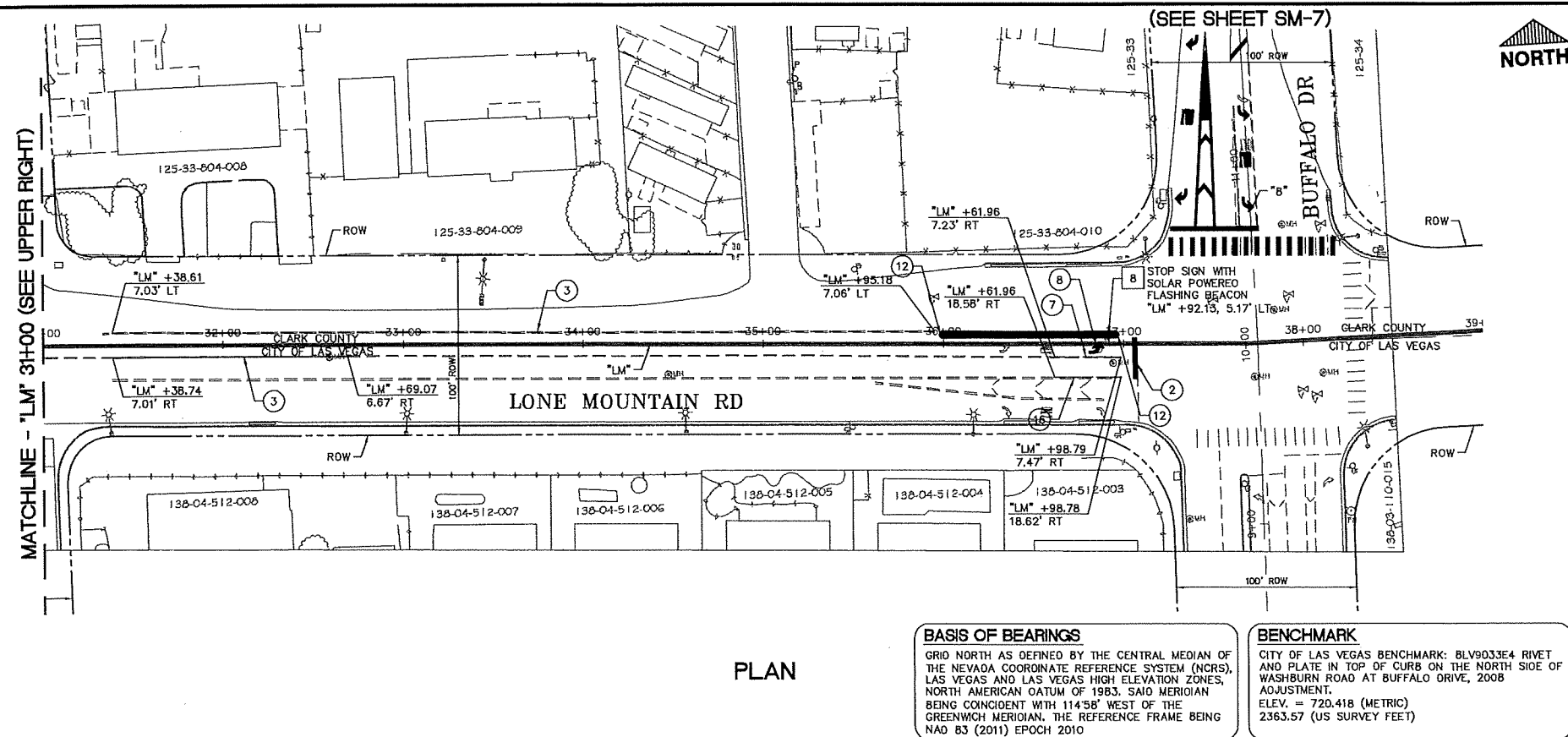
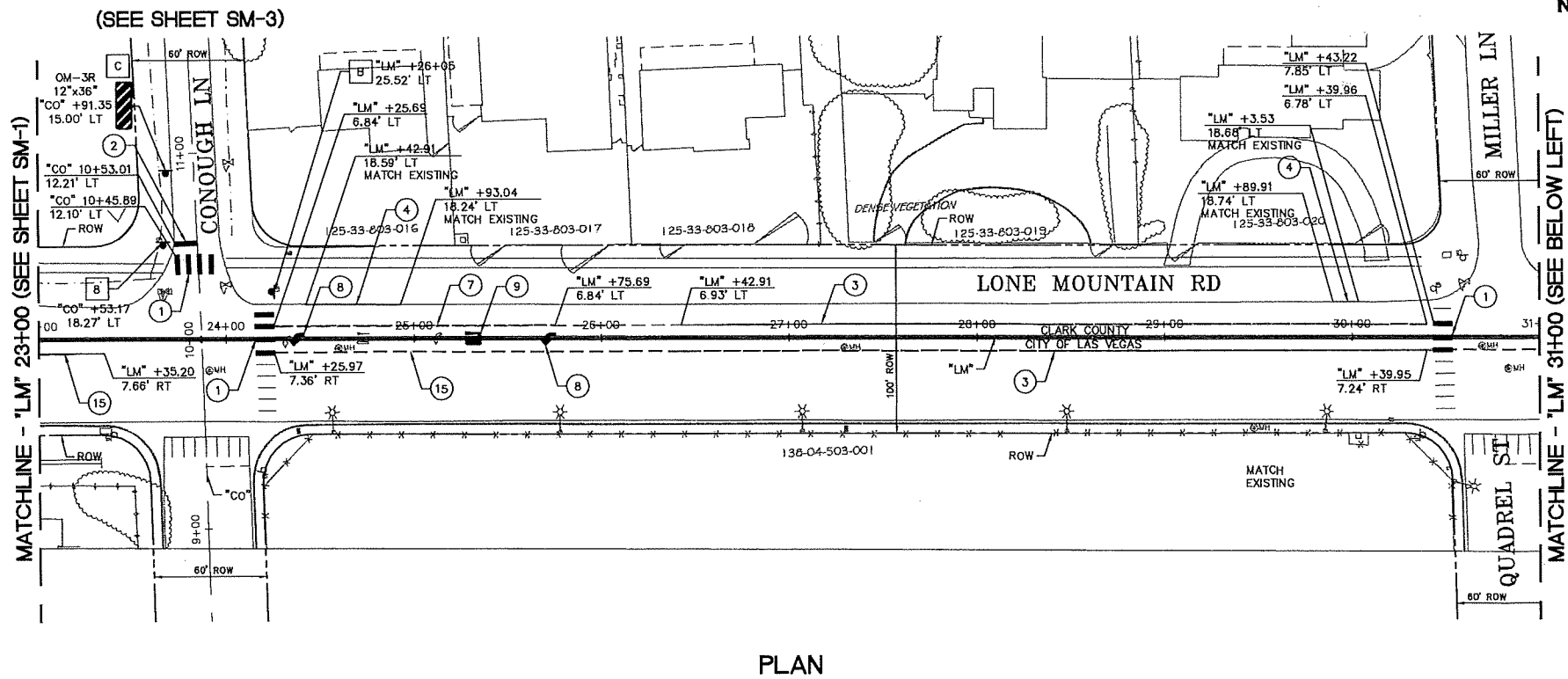


REVISIONS	NO.	DATE	DESCRIPTION	APPD

DESIGNED BY: KL	DATE: 9/7/17
DRAWN BY: RM	
CHECKED BY: JAM	

	SM-1 83 of 89 DRAWING NO. 731-94
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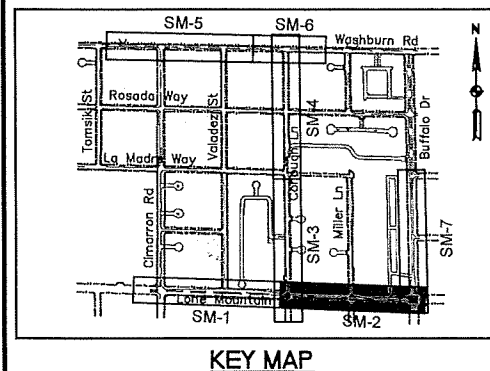
1331898-BUFFALO-04-00-PROJECT DATA-CADD-SHEET SIGNING & MARKING-SM-2.DWG
9/7/17



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REVISIONS	DATE	DESCRIPTION	APPROVED

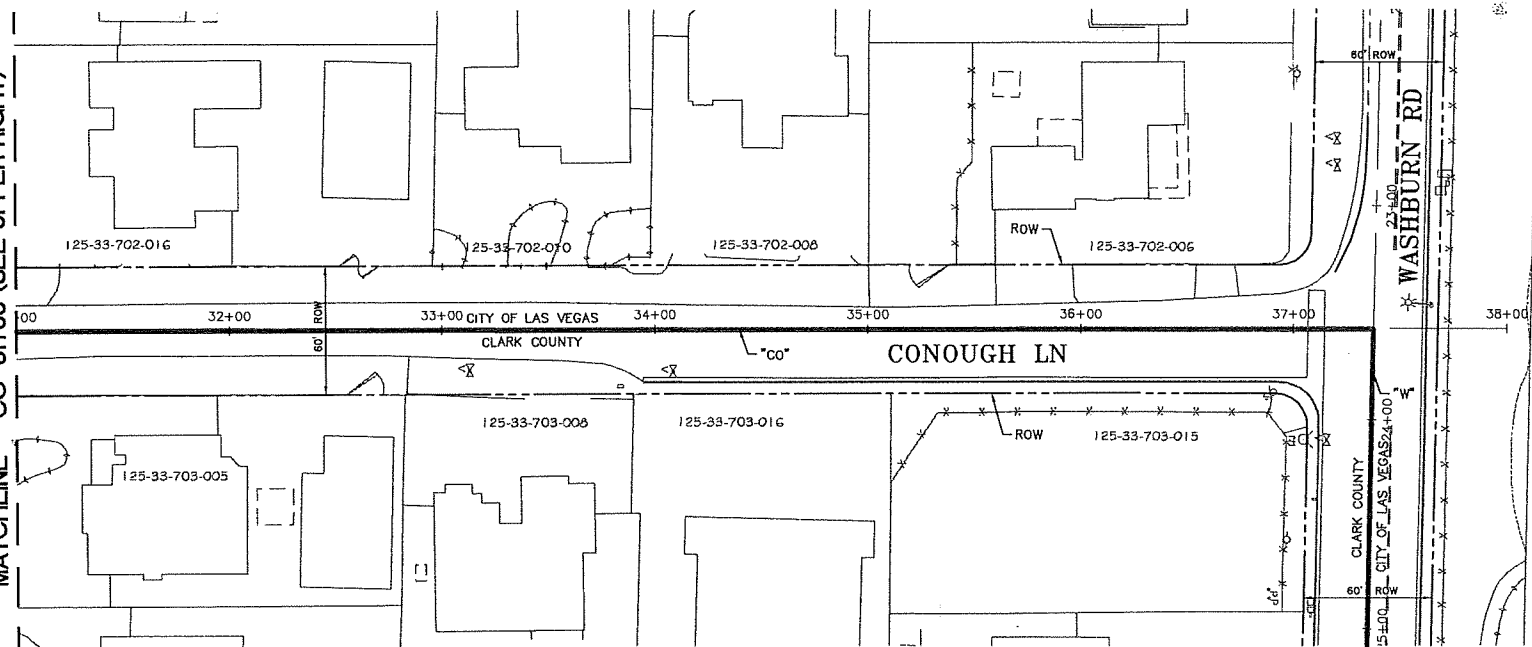
DESIGNED BY: KL	DATE: 9/7/17
DRAWN BY: RM	
CHECKED BY: JAM	

TITLE: GOWAN NORTH BUFFALO BRANCH LONE MOUNTAIN TO WASHBURN	SHEET: SM-2
STRIPING AND MARKING PLAN "LM" 23+00 TO 39+00	

ENGINEER'S SEAL JAMES ROBINSON Exp. 9/20/17 CML	SM-2 84 of 89 DRAWING NO. 731-94
--	---



MATCHLINE - "CO" 31+00 (SEE UPPER RIGHT)



PLAN

BASIS OF BEARINGS

GRID NORTH AS DEFINED BY THE CENTRAL MEDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS AND LAS VEGAS HIGH ELEVATION ZONES, NORTH AMERICAN DATUM OF 1983. SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN. THE REFERENCE FRAME BEING NAD 83 (2011) EPOCH 2010

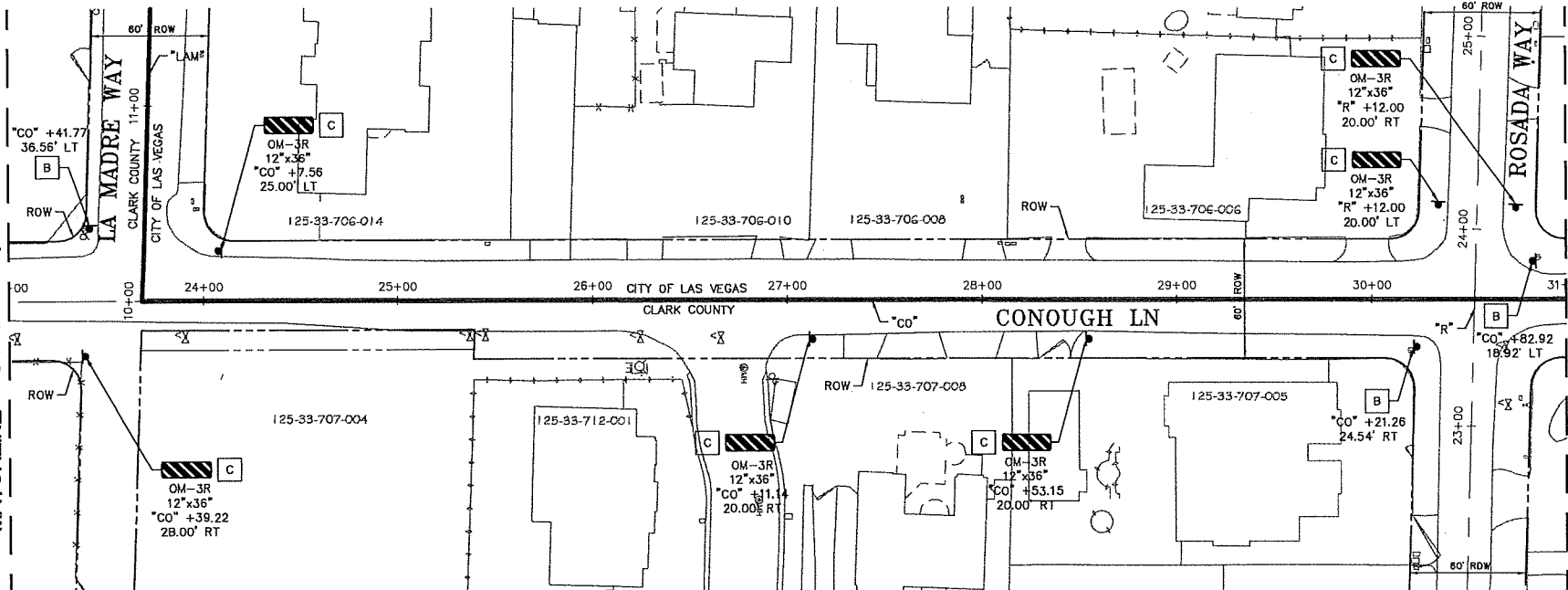
BENCHMARK

CITY OF LAS VEGAS BENCHMARK: 8LV9033E4 RIVET AND PLATE IN TOP OF CURB ON THE NORTH SIDE OF WASHBURN ROAD AT BUFFALO DRIVE, 2008 ADJUSTMENT.
ELEV. = 720.418 (METRIC)
2363.57 (US SURVEY FEET)

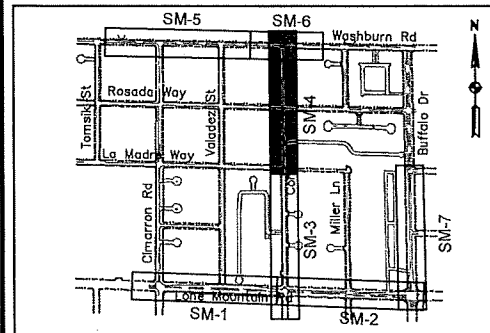
(SEE SHEET SM-6)



MATCHLINE - "CO" 23+00 (SEE SHEET SM-3)



PLAN



KEY MAP

SIGNING NOTES

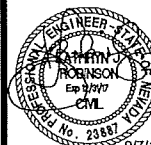
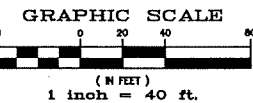
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- B REMOVE AND RESET SIGN
- C INSTALL GROUND MOUNTED SIGN

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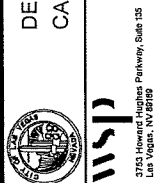
SM-4
86 of 89
DRAWING NO.
731-94

GOWAN NORTH BUFFALO BRANCH
LONE MOUNTAIN TO WASHBURN

STRIPING AND MARKING PLAN
"CO" 23+00 TO 38+00

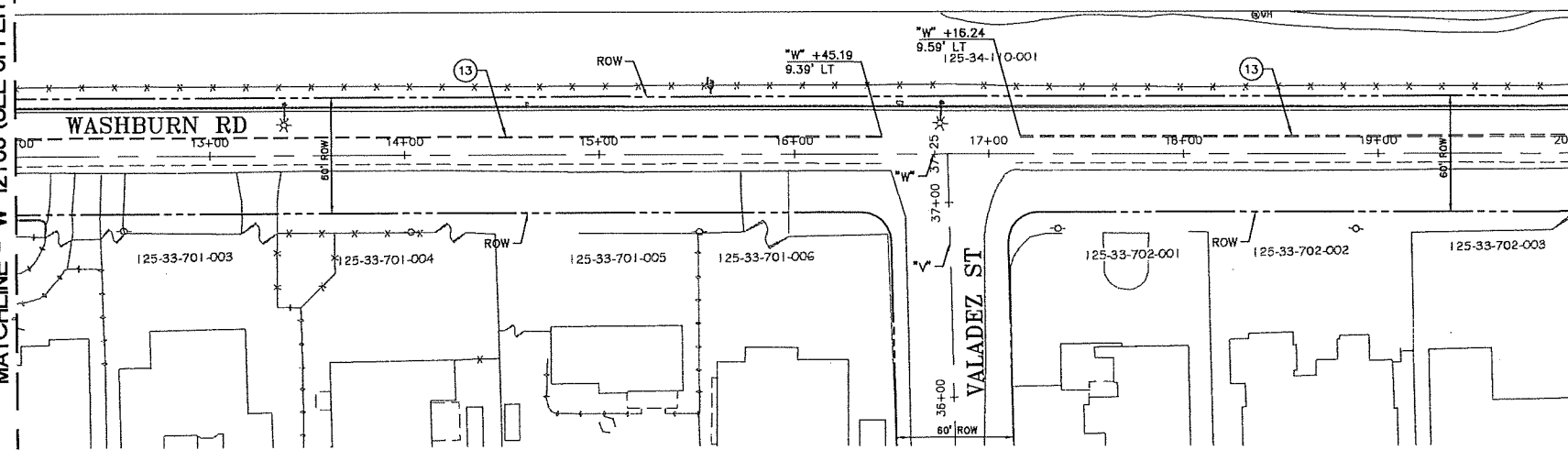
DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECT MANAGEMENT

DESIGNED BY: KL
DRAWN BY: RM
CHECKED BY: JAM
DATE: 8/7/17



9/10/17 J:\31898-BUFFALO\0 PROJECT DATA\ADD SHEET\SIGNING & MARKING\SM-5.DWG

MATCHLINE - "W" 12+00 (SEE UPPER RIGHT)



PLAN

BASIS OF BEARINGS

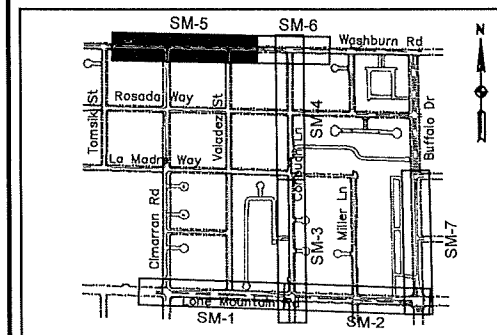
GRIQ NORTH AS DEFINED BY THE CENTRAL MEDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS AND LAS VEGAS HIGH ELEVATION ZONES, NORTH AMERICAN DATUM OF 1983. SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN. THE REFERENCE FRAME BEING NAD 83 (2011) EPOCH 2010

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CITY OF LAS VEGAS BENCHMARK: BLV9033E4 RIVET AND PLATE IN TOP OF CURB ON THE NORTH SIDE OF WASHBURN ROAD AT BUFFALO DRIVE, 200B ADJUSTMENT. ELEV. = 720.418 (METRIC) 2363.57 (US SURVEY FEET)



MATCHLINE - "W" 20+00 (SEE SHEET SM-6)



KEY MAP

SIGNING NOTES

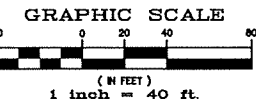
- A REMOVE AND REPLACE SIGN
- B REMOVE AND RESET SIGN
- C INSTALL GROUND MOUNTED SIGN

GENERAL NOTES

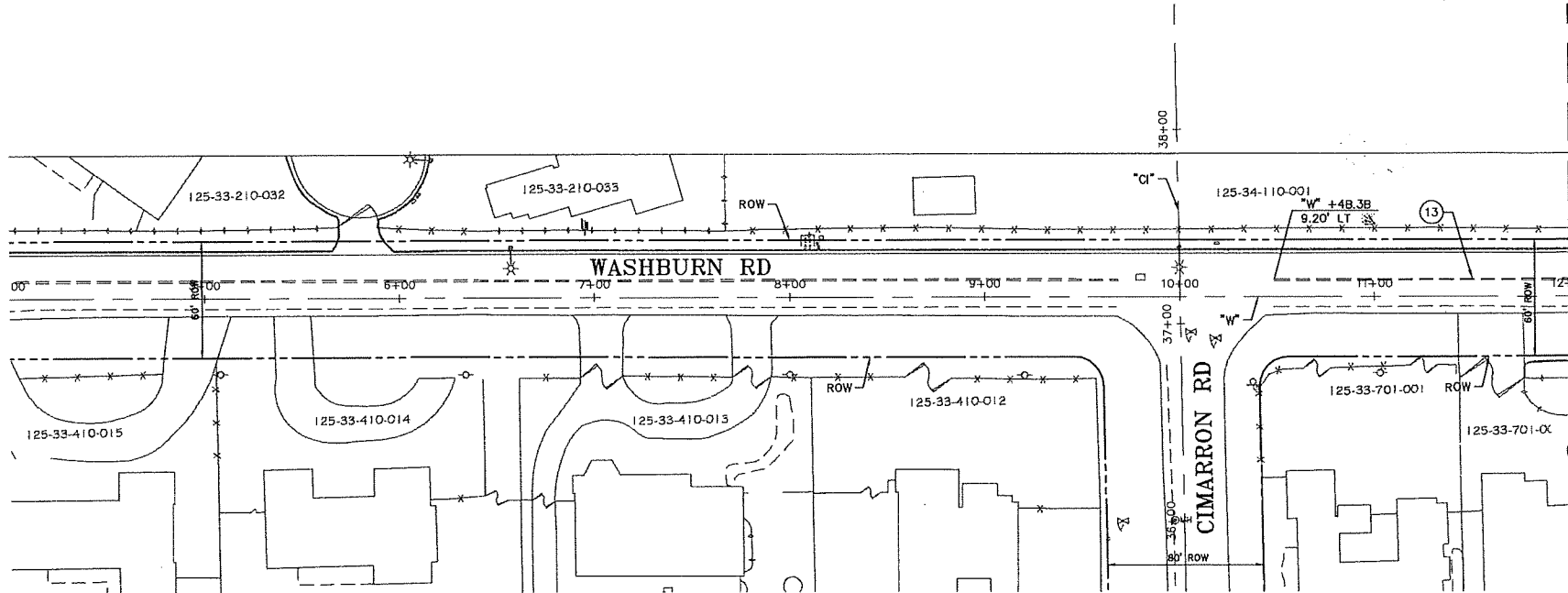
- 1. RPM - RAISED PAVEMENT MARKER
- 2. PMF - PAVEMENT MARKING FILM
- 3. EXISTING STRIPING IN CONFLICT WITH PROPOSED STRIPING SHALL BE REMOVED BY APPROVED METHODS.

LANE DELINEATION NOTES

- 1. INSTALL CROSSWALK MARKINGS - TYPE 1 PER USDOCA DWG. NO. 254 (TYPE II PMF)
- 2. INSTALL 24" SOLID WHITE STOP LINE PER USDOCA DWG. NO. 254 (TYPE II PMF)
- 3. INSTALL TYPE 2 CENTERLINE PER USDOCA DWG. NO. 244 (RPM)
- 4. INSTALL 6" SOLID WHITE LINE
- 5. INSTALL 24" SOLID YELLOW PAINTING TRAFFIC STRIPING PER USDOCA DWG. NO. 245
- 6. INSTALL PAVEMENT MARKERS PER USDOCA DWG. NO. 245, DETAIL B (RPM)
- 7. INSTALL STORAGE LANE LINE PER USDOCA DWG. NO. 246 (RPM)
- 8. INSTALL WHITE PAVEMENT MARKING - ARROW SYMBOL (TYPE II PMF)
- 9. INSTALL WHITE PAVEMENT MARKING - "ONLY" SYMBOL (TYPE II PMF)
- 10. INSTALL DROP LINE PER USDOCA DWG. NO. 246.6 (RPM)
- 11. INSTALL TYPE 4 LANE LINE PER USDOCA DWG. NO. 244.1 (RPM)
- 12. INSTALL REFLECTIVE MEDIAN NOSE MARKING AND PAINT PER USDOCA DWG. NO. 248
- 13. INSTALL DOUBLE YELLOW LINE TAPE
- 14. INSTALL 24" WHITE CHEVRON TAPE PER USDOCA DWG. NO. 245
- 15. INSTALL TYPE 1 CENTERLINE PER USDOCA DWG. NO. 244 (RPM)
- 16. INSTALL PAVEMENT MARKERS PER USDOCA DWG. NO. 245, PAVEMENT MARKER DETAIL (RPM)



MATCHLINE - "W" 12+00 (SEE SHEET SD-10)



PLAN

NO.	DATE	DESCRIPTION	APPD

DESIGNED BY: KL
DRAWN BY: RM
CHECKED BY: JAM

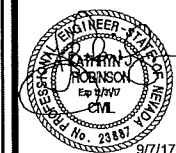
DATE: 9/7/17



WSP
3733 Howard Hughes Parkway, Suite 105
Las Vegas, NV 89169
Phone: 702.897.4900

TITLE: GOWAN NORTH BUFFALO BRANCH
LONE MOUNTAIN TO WASHBURN

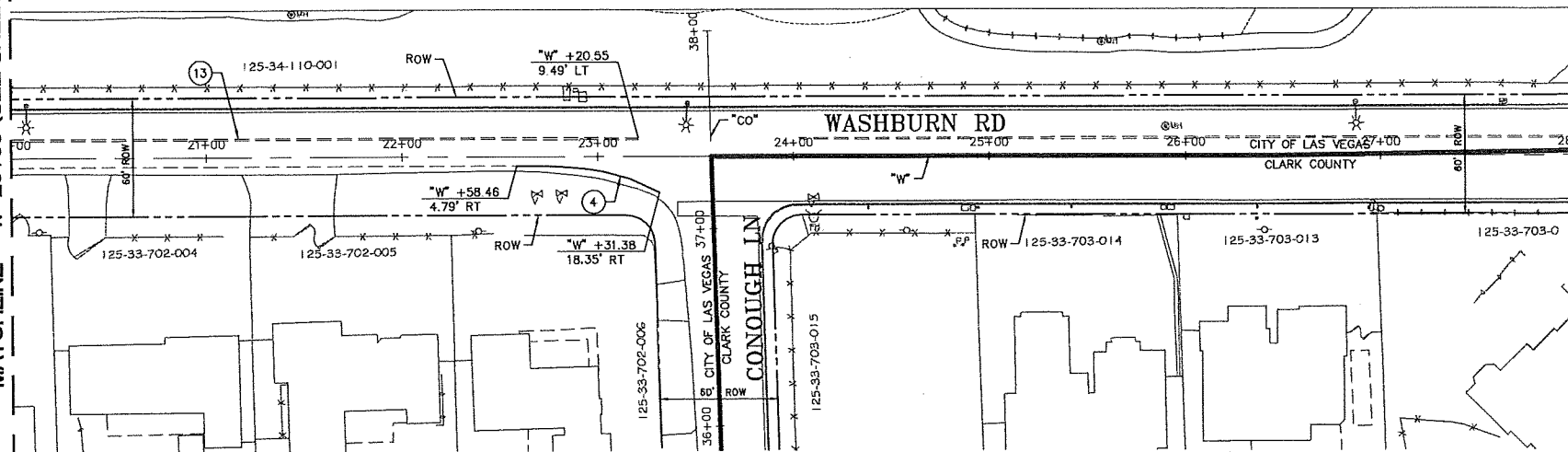
SHEET: STRIPING AND MARKING PLAN
"W" 7+00 TO 20+00



SM-5
87 of 89
DRAWING NO.
731-94



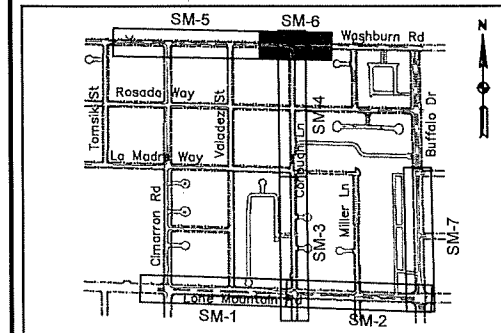
MATCHLINE - "W" 20+00 (SEE SHEET SM-5)



(SEE SHEET SM-4)
PLAN

BASIS OF BEARINGS
GRID NORTH AS DEFINED BY THE CENTRAL MEDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS AND LAS VEGAS HIGH ELEVATION ZONES, NORTH AMERICAN DATUM OF 1983, SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN. THE REFERENCE FRAME BEING NAD 83 (2011) EPOCH 2010

BENCHMARK
CITY OF LAS VEGAS BENCHMARK: 8LV9033E4 RIVET AND PLATE IN TOP OF CURB ON THE NORTH SIDE OF WASHBURN ROAD AT BUFFALO DRIVE, 2008 ADJUSTMENT.
ELEV. = 720.418 (METRIC)
2363.57 (US SURVEY FEET)



KEY MAP

GRAPHIC SCALE
1 inch = 40 ft.

Call before you Dig
1-800-227-8609
1-702-455-7544

Call before you do Overhead
1-702-583-8111
OVERHEAD SERVICE ALERT

Call before you Under Ground
1-702-455-7511
1-702-729-6611
UNDERGROUND SERVICE ALERT

LANE DELINEATION NOTES

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SIGNING NOTES

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- B. REMOVE AND RESET SIGN
- C. INSTALL GROUND MOUNTED SIGN

GENERAL NOTES

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REVISIONS	NO.	DATE	DESCRIPTION	APPD

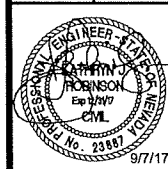
DESIGNED BY: KL
DRAWN BY: RMI
CHECKED BY: JAM

DATE: 9/17/17



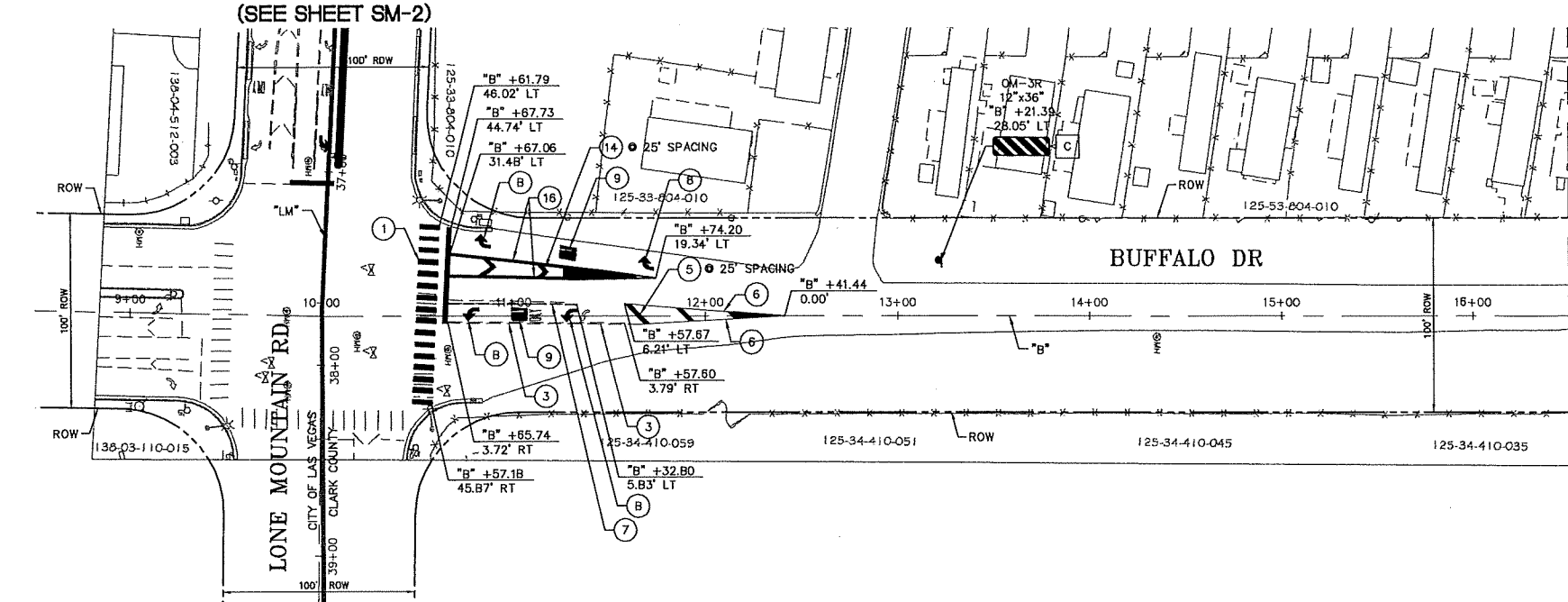
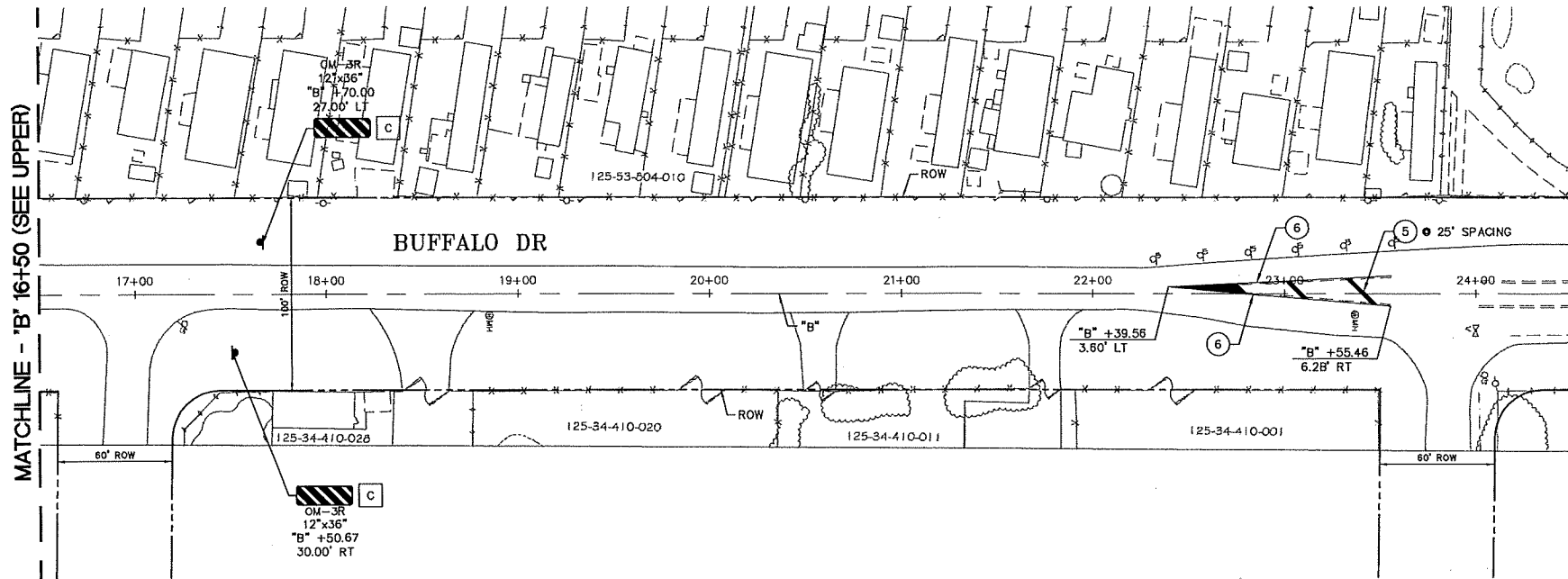
STRIPING AND MARKING PLAN
"W" 20+00 TO 28+00

TITLE: GOWAN NORTH BUFFALO BRANCH
LONE MOUNTAIN TO WASHBURN



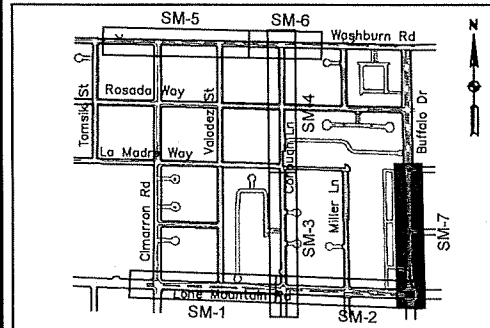
SM-6
88 of 89
DRAWING NO
731-94





BASIS OF BEARINGS
GRID NORTH AS DEFINED BY THE CENTRAL MEDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS AND LAS VEGAS HIGH ELEVATION ZONES, NORTH AMERICAN DATUM OF 1983. SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN, THE REFERENCE FRAME BEING NAD 83 (2011) EPOCH 2010

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ELEV. = 720.418 (METRIC)
2363.57 (US SURVEY FEET)

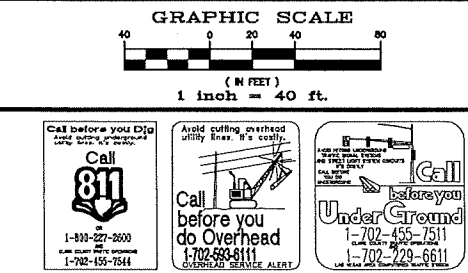


KEY MAP

- SIGNING NOTES**
- A REMOVE AND REPLACE SIGN
 - B REMOVE AND RESET SIGN
 - C INSTALL GROUND MOUNTED SIGN

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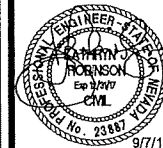


TITLE
GOWAN NORTH BUFFALO BRANCH
LONE MOUNTAIN TO WASHBURN

DESIGNED BY: KL
DRAWN BY: RM
CHECKED BY: JAM



SHEET:
STRIPING AND MARKING PLAN
"B" 9+00 TO 24+50



SM-7
89 of 89
DRAWING NO
731-94

NO.	DATE	DESCRIPTION	APPD