

DEPARTMENT OF PUBLIC WORKS

Mayor:
CAROLYN G. GOODMAN

City Council:
MICHELE FIORE (Mayor Pro-Tem)
STAVROS S. ANTHONY
CEDRIC CREAR
BRIAN KNUDSEN
VICTORIA SEAMAN
OLIVIA DIAZ

City Manager:
SCOTT D. ADAMS

Director of Public Works:
MIKE JANSSEN, P.E., P.T.O.E.

City Engineer:
STEVE FORD, P.E.



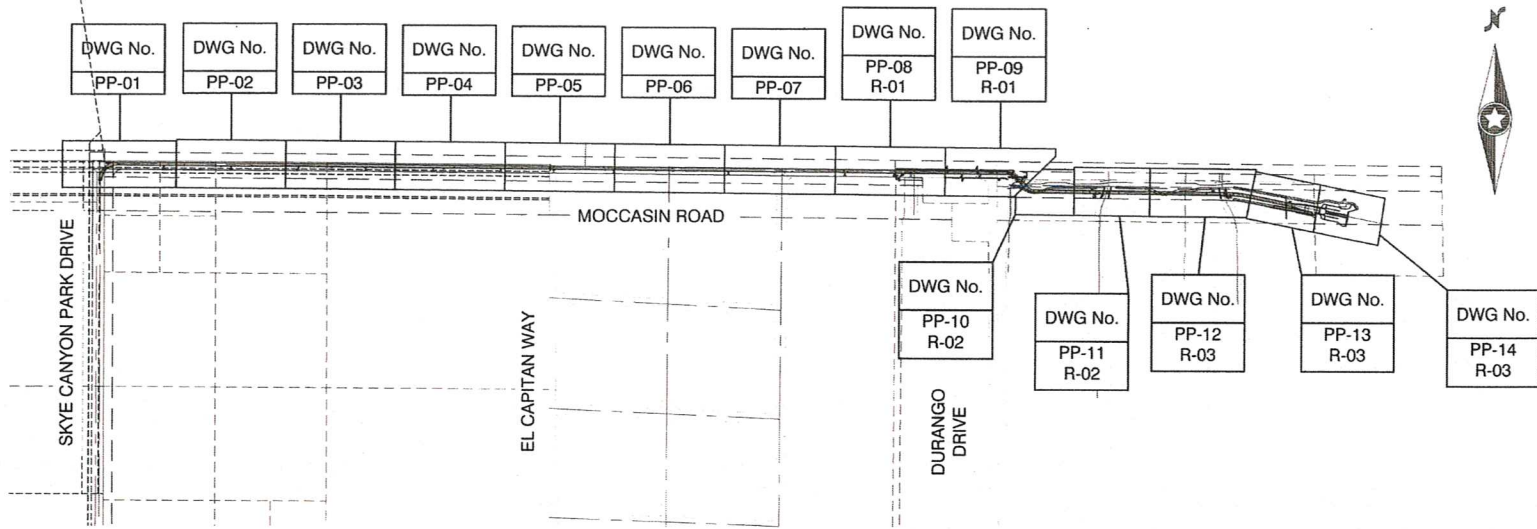
MOCCASIN RD CCRFCFCD FLOOD CONTROL FACILITY MOCCASIN RD TO CCRFCFCD FACILITY LVUP 1076/1077

Funded By:
CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT

Reviewed By:
Steve Ford 3/31/2020
CLV CITY ENGINEER DATE
N. M. 3/31/2020
CLV PROJECT MANAGER DATE
Tom Posley 3/31/2020
CLV CITY TRAFFIC ENGINEER DATE
P. Harris 3/31/2020
CLV CONSTRUCTION MANAGER DATE

Steve C. Paul 03/27/2020
CLARK COUNTY DATE
REGIONAL FLOOD CONTROL DISTRICT
Jacob Sakaguchi 08/26/19
SOUTHWEST GAS CORPORATION DATE
Veronica Figueroa 9-30-19
CENTRAL TELEPHONE COMPANY DATE
d/b/a CENTURYLINK
THE AFFIXED CENTURYLINK 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.
Celia Lopez 10/8/19
COX COMMUNICATIONS LAS VEGAS, INC. DATE
Barbara Garrison 9-30-19
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.
Jim Harris 9/27/19
NV ENERGY - TRANSMISSION DATE

APPROVED FOR CONSTRUCTION
Steve Ford
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT No. 139013 FIRST APPROVED DATE: 3-4-2020
SHEETS: C1, C4, P1, P2, P3, P4, P5, P6, P7, P8, P9, P10, P11, P12, P13, P14, P15, P16, P17, P18, P19, P20, P21, P22, P23, P24, P25, P26, P27, P28, P29, P30, P31, P32, P33, P34, P35, P36, P37, P38, P39, P40, P41, P42, P43, P44, P45, P46, P47, P48, P49, P50, P51, P52, P53, P54, P55, P56, P57, P58, P59, P60, P61, P62, P63, P64, P65, P66, P67, P68, P69, P70, P71, P72, P73, P74, P75, P76, P77, P78, P79, P80, P81, P82, P83, P84, P85, P86, P87, P88, P89, P90, P91, P92, P93, P94, P95, P96, P97, P98, P99, P100, P101, P102, P103, P104, P105, P106, P107, P108, P109, P110, P111, P112, P113, P114, P115, P116, P117, P118, P119, P120, P121, P122, P123, P124, P125, P126, P127, P128, P129, P130, P131, P132, P133, P134, P135, P136, P137, P138, P139, P140, P141, P142, P143, P144, P145, P146, P147, P148, P149, P150, P151, P152, P153, P154, P155, P156, P157, P158, P159, P160, P161, P162, P163, P164, P165, P166, P167, P168, P169, P170, P171, P172, P173, P174, P175, P176, P177, P178, P179, P180, P181, P182, P183, P184, P185, P186, P187, P188, P189, P190, P191, P192, P193, P194, P195, P196, P197, P198, P199, P200, P201, P202, P203, P204, P205, P206, P207, P208, P209, P210, P211, P212, P213, P214, P215, P216, P217, P218, P219, P220, P221, P222, P223, P224, P225, P226, P227, P228, P229, P230, P231, P232, P233, P234, P235, P236, P237, P238, P239, P240, P241, P242, P243, P244, P245, P246, P247, P248, P249, P250, P251, P252, P253, P254, P255, P256, P257, P258, P259, P260, P261, P262, P263, P264, P265, P266, P267, P268, P269, P270, P271, P272, P273, P274, P275, P276, P277, P278, P279, P280, P281, P282, P283, P284, P285, P286, P287, P288, P289, P290, P291, P292, P293, P294, P295, P296, P297, P298, P299, P300, P301, P302, P303, P304, P305, P306, P307, P308, P309, P310, P311, P312, P313, P314, P315, P316, P317, P318, P319, P320, P321, P322, P323, P324, P325, P326, P327, P328, P329, P330, P331, P332, P333, P334, P335, P336, P337, P338, P339, P340, P341, P342, P343, P344, P345, P346, P347, P348, 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P515, P516, P517, P518, P519, P520, P521, P522, P523, P524, P525, P526, P527, P528, P529, P530, P531, P532, P533, P534, P535, P536, P537, P538, P539, P540, P541, P542, P543, P544, P545, P546, P547, P548, P549, P550, P551, P552, P553, P554, P555, P556, P557, P558, P559, P560, P561, P562, P563, P564, P565, P566, P567, P568, P569, P570, P571, P572, P573, P574, P575, P576, P577, P578, P579, P580, P581, P582, P583, P584, P585, P586, P587, P588, P589, P590, P591, P592, P593, P594, P595, P596, P597, P598, P599, P600, P601, P602, P603, P604, P605, P606, P607, P608, P609, P610, P611, P612, P613, P614, P615, P616, P617, P618, P619, P620, P621, P622, P623, P624, P625, P626, P627, P628, P629, P630, P631, P632, P633, P634, P635, P636, P637, P638, P639, P640, P641, P642, P643, P644, P645, P646, P647, P648, P649, P650, P651, P652, P653, P654, P655, P656, P657, P658, P659, P660, P661, P662, P663, P664, P665, P666, P667, P668, P669, P670, P671, P672, P673, P674, P675, P676, P677, P678, P679, P680, 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P1869, P1870, P1871, P1872, P1873, P1874, P1875, P1876, P1877, P1878, P1879, P1880, P1881, P1882, P1883, P1884, P1885, P1886, P1887, P1888, P1889, P1890, P1891, P1892, P1893, P1894, P1895, P1896, P1897, P1898, P1899, P1900, P1901, P1902, P1903, P1904, P1905, P1906, P1907, P1908, P1909, P1910, P1911, P1912, P1913, P1914, P1915, P1916, P1917, P1918, P1919, P1920, P1921, P1922, P1923, P1924, P1925, P1926, P1927, P1928, P1929, P1930, P1931, P1932, P1933, P1934, P1935, P1936, P1937, P1938, P1939, P1940, P1941, P1942, P1943, P1944, P1945, P1946, P1947, P1948, P1949, P1950, P1951, P1952, P1953, P1954, P1955, P1956, P1957, P1958, P1959, P1960, P1961, P1962, P1963, P1964, P1965, P1966, P1967, P1968, P1969, P1970, P1971, P1972, P1973, P1974, P1975, P1976, P1977, P1978, P1979, P1980, P1981, P1982, P1983, P1984, P1985, P1986, P1987, P1988, P1989, P1990, P1991, P1992, P1993, P1994, P1995, P1996, P1997, P1998, P1999, P2000, P2001, P2002, P2003, P2004, P2005, P2006, P2007, P2008, P2009, P2010, P2011, 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KEY MAP
NOT TO SCALE

SHEET INDEX

1	CV	COVER SHEET
2	GN-1	GENERAL NOTES, LEGEND, VICINITY MAP AND ABBREVIATIONS
3	GN-2	KEY MAP AND SHEET INDEX
4	HC-1	HORIZONTAL CONTROL AND RIGHT-OF-WAY
5	HC-2	HORIZONTAL CONTROL AND RIGHT-OF-WAY
6	HC-3	HORIZONTAL CONTROL AND RIGHT-OF-WAY
7	R-01	REMOVAL PLAN I
8	R-02	REMOVAL PLAN II
9	R-03	REMOVAL PLAN III
10	PP-01	PLAN AND PROFILE - 'SD' 80+50.00 TO 'SD' 87+00.00
11	PP-02	PLAN AND PROFILE - 'SD' 74+00.00 TO 'SD' 80+50.00
12	PP-03	PLAN AND PROFILE - 'SD' 67+50.00 TO 'SD' 74+00.00
13	PP-04	PLAN AND PROFILE - 'SD' 61+00.00 TO 'SD' 67+50.00
14	PP-05	PLAN AND PROFILE - 'SD' 54+50.00 TO 'SD' 61+00.00
15	PP-06	PLAN AND PROFILE - 'SD' 48+00.00 TO 'SD' 54+50.00
16	PP-07	PLAN AND PROFILE - 'SD' 41+50.00 TO 'SD' 48+00.00
17	PP-08	PLAN AND PROFILE - 'SD' 35+00.00 TO 'SD' 41+50.00
18	PP-09	PLAN AND PROFILE - 'SD' 30+00.00 TO 'SD' 35+00.00
19	PP-10	PLAN AND PROFILE - 'SD' 27+00.00 TO 'SD' 30+00.00
20	PP-11	PLAN AND PROFILE - 'SD' 22+50.00 TO 'SD' 27+00.00
21	PP-12	PLAN AND PROFILE - 'SD' 16+50.00 TO 'SD' 22+50.00
22	PP-13	PLAN AND PROFILE - 'SD' 12+50.00 TO 'SD' 16+50.00
23	PP-14	PLAN AND PROFILE - 'SD' 08+00.00 TO 'SD' 12+50.00
24	PP-15	STORM DRAIN LATERAL PROFILES
25	PP-16	STORM DRAIN LATERAL PROFILES
26	DT-01	SECTIONS AND DETAILS
27	DT-02	SECTIONS AND DETAILS
28	DT-03	SECTIONS AND DETAILS
29	DT-04	SECTIONS AND DETAILS
30	DT-05	DROP INLET DETAILS
31	UT-01	UTILITY PLAN 1
32	UT-02	UTILITY PLAN 2
33	UT-03	UTILITY PLAN 3
33A	UT-03A	TEST STATION DETAILS
34	ST-01	STRIPING AND STREETLIGHT PLAN
35	S-1	GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS
36	S-2	16'x9' RCB TYPICAL SECTION AND TYPICAL DETAILS
37	S-3	72" RCP CONNECTION TO 16'x9' RCB
38	S-4	RCB JUNCTION STRUCTURE PLAN, SECTION AND DETAILS
39	S-5	RECTANGULAR CHANNEL PLAN AND ELEVATION
40	S-6	RECTANGULAR CHANNEL SECTION AND DETAILS
41	S-7	RECTANGULAR CHANNEL DETAILS
42	S-8	RECTANGULAR CHANNEL SECTION AND DETAILS
43	S-9	72" RCB PENETRATION INTO 16'x9' RCB
44	E-1	FENCE AND GATE GROUNDING
45	L-1	LANDSCAPE PLAN
46	AR-01	ACCESS ROAD - 'SD' 22+50.00 TO 'SD' 30+56.20
47	AR-02	ACCESS ROAD - 'SD' 12+50.00 TO 'SD' 22+50.00
48	AR-03	ACCESS ROAD - 'SD' 8+45.00 TO 'SD' 12+50.00

CLARK COUNTY GENERAL NOTES (CLARK COUNTY JURSDICTION ONLY)

- ALL REFERENCES TO STANDARD DRAWINGS ARE TO STATE OF NEVADA STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION LATEST EDITION. THE UNIFORM STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA NEVADA OR THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA NEVADA AS NOTED.
- THE CONTRACTOR SHALL NOTIFY ALL AFFECTED PUBLIC ENTITIES, THE PROJECT ENGINEER, CLARK COUNTY AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF WORK.
- LOCATIONS OF UNDERGROUND UTILITIES SHOWN ON THE DRAWINGS WERE OBTAINED FROM INFORMATION RECEIVED FROM THE APPLICABLE UTILITY COMPANIES. NEITHER THE OWNER NOR ENGINEER ASSUMES ANY RESPONSIBILITY FOR UTILITIES OR STRUCTURES NOT SHOWN, OR FOR UTILITIES OR STRUCTURES NOT SHOWN AT ACTUAL LOCATIONS ON THE DRAWINGS. EXISTING SERVICE LATERALS ARE NOT SHOWN ON THESE DRAWINGS. CONTRACTOR TO VERIFY THE EXACT LOCATION OF UTILITIES PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR'S RESPONSIBILITY REGARDING UTILITIES SHALL BE AS REQUIRED UNDER SECTION 107.17 OF THE UNIFORM STANDARD SPECIFICATIONS FOR CLARK COUNTY AREA, NEVADA AND AS PROVIDED IN THE SPECIFICATIONS.
- THE CONTRACTOR SHALL NOT REMOVE TREES, SHRUBS, LAWNS, WALLS, FENCES, SIGNS, STRUCTURES, LIGHTS, OR ANY EXISTING IMPROVEMENTS OUTSIDE OF STREET RIGHT-OF-WAY, EXCEPT WHERE REQUIRED TO DO SO BY THE CONTRACT DRAWINGS OR BY THE ENGINEER. REPLACEMENT, RELOCATION OR RECONSTRUCTION OF ALL EXISTING IMPROVEMENTS INCLUDING SPRINKLER SYSTEMS, LAWNS, FENCES, WALLS, SIGNS, STEPS, SIDEWALK, DRIVEWAYS, LAWN LIGHTS, AND ALL OTHER ITEMS APPLICABLE TO THIS CONTRACT SHALL BE AS REQUIRED BY THE ENGINEER.
- THE CONTRACTOR SHALL BACKFILL AND FINE GRADE ALL CUT OR FILL SLOPES TO MATCH EXISTING CONDITIONS TO THE SATISFACTION OF THE ENGINEER. WHERE EXISTING LAWNS ARE DAMAGED BY THE CONTRACTOR'S OPERATIONS, THE CONTRACTOR SHALL SOD THE AFFECTED AREA TO A CONDITION EQUAL TO OR BETTER THAN THAT WHICH EXISTED PRIOR TO CONSTRUCTION.
- ALL BARRICADE AND TEMPORARY TRAFFIC CONTROL DEVICES OR METHODS USED DURING CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE "UNIFORM STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION, CLARK COUNTY AREA, NEVADA" LATEST EDITION.
- REMOVAL OR RELOCATIONS OF POWER POLES, TELEPHONE POLES, JOINTLY-OWNED POLES, AND APPURTENANCES WHICH INTERFERE WITH IMPROVEMENTS REQUIRED TO BE CONSTRUCTED UNDER THIS CONTRACT, SHALL BE THE RESPONSIBILITY OF THE RESPECTIVE UTILITY COMPANY. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH THE UTILITY COMPANIES FAR ENOUGH IN ADVANCE AS TO NOT IMPACT THE SCHEDULE.
- NO ENERGY SHALL BE RESPONSIBLE FOR THE RELOCATION OF UNDERGROUND OR OVERHEAD POWER LINES THAT INTERFERE WITH THE REQUIRED IMPROVEMENTS AS SHOWN ON THE PLANS.
- POWER POLES AND/OR OTHER EXISTING FACILITIES NOT IN PROPER LOCATION BASED ON PROPOSED IMPROVEMENT SHOWN HEREON WILL BE RELOCATED AT NO EXPENSE TO CLARK COUNTY.
- CENTURYLINK SHALL BE RESPONSIBLE FOR THE VERTICAL OR HORIZONTAL ADJUSTMENT OF ALL TELEPHONE FACILITIES WHICH INTERFERE WITH IMPROVEMENTS SHOWN ON THE CONTRACT DRAWINGS.
- COX COMMUNICATIONS SHALL BE RESPONSIBLE FOR THE VERTICAL OR HORIZONTAL ADJUSTMENT OF ALL CATV FACILITIES WHICH INTERFERE WITH IMPROVEMENTS SHOWN ON THE CONTRACT DRAWINGS.
- SOUTHWEST GAS CORPORATION SHALL PERFORM ANY NECESSARY WORK ON THE EXISTING AND PROPOSED GAS FACILITIES SHOWN ON THE DRAWINGS.
- UNLESS OTHERWISE SHOWN ON THE CONTRACT DRAWINGS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OR RELOCATION OF ALL WATER SERVICES AND METERS WHICH INTERFERE WITH IMPROVEMENTS SHOWN ON THE CONTRACT DRAWINGS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE VERTICAL ADJUSTMENT OF ALL EXISTING SANITARY, WATER AND STORM SEWER MANHOLES TO THE FINAL FINISH GRADES IN ACCORDANCE WITH SECTION 800 OF THE "STANDARD SPECIFICATIONS".
- ALL SANITARY SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CLARK COUNTY WATER RECLAMATION DISTRICT DESIGN AND CONSTRUCTION STANDARDS AND THE CITY OF LAS VEGAS AND CITY OF NORTH LAS VEGAS CONSTRUCTION STANDARDS.
- THE PLANS DO NOT SHOW ALL SEWER LATERALS, SEWER FORCE MAINS AND WATER SERVICE LATERALS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REPAIRS OR RELOCATIONS OF LATERALS BROKEN OR IN CONFLICT WITH THE PROPOSED STORM DRAIN OR ROADWAY CONSTRUCTION.
- CONTRACTOR SHALL MAINTAIN CONTINUOUS SEWER SERVICE TO ALL CUSTOMERS. SEWER LATERALS CUT DURING CONSTRUCTION SHALL BE REPAIRED BY CONTRACTOR PER CONDO DESIGN AND CONSTRUCTION STANDARDS. CONTRACTOR SHALL IMMEDIATELY REPORT ANY SANITARY SEWER OR SEWER LATERALS THAT CANNOT BE RECONNECTED TO SEWER MAIN DUE TO STORM DRAIN CONFLICT. CLARK COUNTY SHALL BE RESPONSIBLE FOR PROVIDING REEVALUATED APPROVED MAIN LINE SEWER EXTENSION PLANS TO PROVIDE NEW MAIN TO REDROUTE ANY SEWERS THAT CANNOT BE RECONNECTED.
- EXACT LOCATIONS OF ALL SAWCUT LINES SHALL BE DETERMINED IN THE FIELD BY THE CLARK COUNTY INSPECTOR.
- CURB AND GUTTER OF A GRADE OF LESS THAN 4:10 OF ONE PERCENT SHALL BE CONSTRUCTED BY FORMING. EACH JOINT SHALL BE CHECKED FOR GRADE PRIOR TO CONSTRUCTION AND WATER TEST AS SOON AS POSSIBLE AFTER CONSTRUCTION.
- OFFSET DIMENSIONS TO CURB AND GUTTER ARE MEASURED TO BACK OF CURB. OFFSET DIMENSIONS TO GLUE DOWN MEDIAN ARE MEASURED TO FACE OF CURB/MEDIAN.
- THE CONTRACTOR SHALL VERIFY IN THE FIELD ALL DIMENSIONS, EXISTING CONDITIONS AND POINTS OF CONNECTION WITH ADJOINING PROPERTY (PUBLIC AND PRIVATE). ANY DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE PROJECT ENGINEER PRIOR TO PROCEEDING WITH THE WORK.
- THE CONTRACTOR SHALL PROVIDE ALL NECESSARY HORIZONTAL AND VERTICAL TRANSITIONS BETWEEN NEW CONSTRUCTION AND EXISTING SURFACES TO PROVIDE PROPER DRAINAGE, INGRESS AND EGRESS TO THE PROJECT.
- FINAL PLANT/PAVEMENT SURFACE (P/S) PAVEMENT SHALL BE ONE-HALF INCH ABOVE THE LIP OF GUTTER (INCLUDING OPEN GRADE) EXCEPT AT SIDEWALK RAMP WHERE P/S PAVEMENT SHALL BE FLUSH WITH CONCRETE RAMP. PAVEMENT SURFACES SHALL BE FLUSH WITH EDGES OF CROSS GUTTERS.
- PORTLAND CEMENT CONCRETE PAVING JOINTS SHALL CONFORM TO MDT STD. PLAN R-10.1.2.
- THE CONTRACTOR SHALL MAINTAIN AN ONGOING REMOVAL PROCESS OF ALL SPILLAGE OF EXCAVATION MATERIAL ON ALL PAVED STREETS.
- THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PROTECT EXISTING PERMANENT SURVEY MONUMENTS. ANY MONUMENTS DISTURBED SHALL BE REPLACED AND ADJUSTED PER AVAILABLE RECORDS IN ACCORDANCE WITH N.R.S. STATUTE NO. 625.550.
- ALL EXISTING TRAFFIC SIGNS, STREET LIGHTS & SIGNS TO BE REMOVED SHALL BE SALVAGED BY THE CONTRACTOR AND DELIVERED TO THE CLARK COUNTY TRAFFIC OPERATIONS DIVISION LOCATED AT 3821 E. FLAMINGO ROAD, LAS VEGAS, NEVADA WITHIN 48 HOURS OF THEIR REMOVAL.
- THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING TRAFFIC SIGNS, NOT SPECIFICALLY NOTED ON THE DRAWINGS, WHICH ARE TO BE RELOCATED OR REMOVED.
- ALL PERMANENT TRAFFIC CONTROL DEVICES CALLED FOR HEREON SHALL BE IN PLACE AND IN FINAL POSITION PRIOR TO ALLOWING ANY PUBLIC TRAFFIC ONTO THE PORTIONS OF THE ROAD(S) BEING IMPROVED THEREUNDER, REGARDLESS OF THE STATUS OF COMPLETION OF PAVING OR OTHER OFF-SITE IMPROVEMENTS CALLED FOR.
- IF THE IMPROVEMENTS NECESSITATE THE OBLITERATION, TEMPORARY OBSTRUCTION, TEMPORARY REMOVAL, OR RELOCATION OF ANY EXISTING TRAFFIC PAVEMENT MARKING, SUCH PAVEMENT MARKING SHALL BE RESTORED OR REPLACED WITH LIKE MATERIALS TO THE SATISFACTION OF THE COUNTY TRAFFIC MANAGER.
- F.A.S.T. INTELLIGENT TRANSPORTATION SYSTEM (ITS) POLICY IS IN EFFECT. COMMUNICATIONS FACILITIES, INCLUDING BUT NOT LIMITED TO, COPPER WIRE, FIBER OPTIC, MICROWAVE, AND RADIO SYSTEMS SHALL BE MAINTAINED AT ALL TIMES. ANY DAMAGE TO THE ITS SYSTEM OF COMMUNICATION CABLE IS CONSIDERED TO BE AN EMERGENCY AND LIQUIDATED DAMAGES OF \$2,500 PER DAY FOR COPPER CABLE AND \$1,500 PER DAY FOR FIBER OPTIC CABLE SHALL BE ASSESSED TO THE CONTRACTOR BEGINNING 24 HOURS AFTER THE CONDUIT OR CABLE DAMAGE. DEVELOPER OR CONTRACTOR SHALL PROVIDE TEMPORARY OVERHEAD INTERCONNECT CABLE WHILE PERMANENT CABLE IS BEING RELOCATED OR REPAIRED. THE TEMPORARY AERIAL INSTALLATION MUST BE ACCEPTABLE TO CLARK COUNTY TRAFFIC MANAGEMENT, F.A.S.T., CITY OF LAS VEGAS, CITY OF NORTH LAS VEGAS AND MUST BE REPORTED AND REPAIRED IMMEDIATELY TO F.A.S.T. ACCEPTANCE. IMMEDIATELY CONTACT JESSIE MARMOLEGO (702-432-6500) TO REPORT ANY DAMAGE OF EXISTING FACILITIES.
- ALL NEW OR REPLACEMENT TRAFFIC SIGNAL LOOPS SHALL BE INSTALLED USING CABLE-IN-DUCT WIRING. SHALL HAVE INDEPENDENT LEAD-IN WIRES FOR EACH LOOP FROM THE CONTROLLER TO THE PULL-BOX, AND EACH LEAD-IN SHALL BE INDIVIDUALLY TAGGED.
- 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) DAY 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.
- PRIOR TO BEGINNING OF CONSTRUCTION, OR RELOCATION OF ANY TRAFFIC SIGNAL SYSTEM, WRITTEN NOTICE SHALL BE SUBMITTED TO THE CLARK COUNTY TRAFFIC MANAGEMENT DIVISION INFORMING OF THE DATE WORK WILL BEGIN.
- THREE (3) WORKING DAYS PRIOR TO TURN-ON OR COMPLETION OF MODIFICATION(S) TO A TRAFFIC SIGNAL SYSTEM, WRITTEN NOTICE SHALL BE SUBMITTED TO THE CLARK COUNTY TRAFFIC MANAGEMENT DIVISION THAT WORK IS BEING COMPLETED AND SHALL INCLUDE THE PROPOSED DATE OF COMPLETION.
- BEFORE ANY WORK IS STARTED IN THE RIGHT-OF-WAY, THE CONTRACTOR SHALL INSTALL ALL ADVANCE WARNING SIGNS FOR THE CONSTRUCTION ZONE. THE CONTRACTOR SHALL INSTALL TEMPORARY GROUND MOUNTED STOP SIGNS AT ALL STREET ENCROACHMENTS INTO EXISTING COUNTY STREETS IMMEDIATELY AFTER FIRST GRADING WORK IS ACCOMPLISHED, AND SHALL MAINTAIN SAID SIGNS UNTIL PERMANENT SIGNS ARE INSTALLED. STOP SIGNS SHALL BE INSTALLED IN GROUND. NO TEMPORARY MOUNTINGS WILL BE ALLOWED.

CLARK COUNTY MARKER BALL NOTE

- STORM DRAIN LATERALS AND RCB IN CLARK COUNTY JURSDICTION SHALL INCLUDE PASSIVE 4 INCH 3M GENERAL PURPOSE BALL MARKER MODEL 1408-XR EMS EXTENDED RANGE AT ENDS OF STORM DRAIN PIPE AND/OR RCB AND AT EACH CHANGE IN HORIZONTAL ALIGNMENT WITH 200' MAXIMUM INTERVAL.
- BALL MARKERS SHALL NOT BE INSTALLED LESS THAN 3' OR MORE THAN 5' BELOW FINISH GRADE.

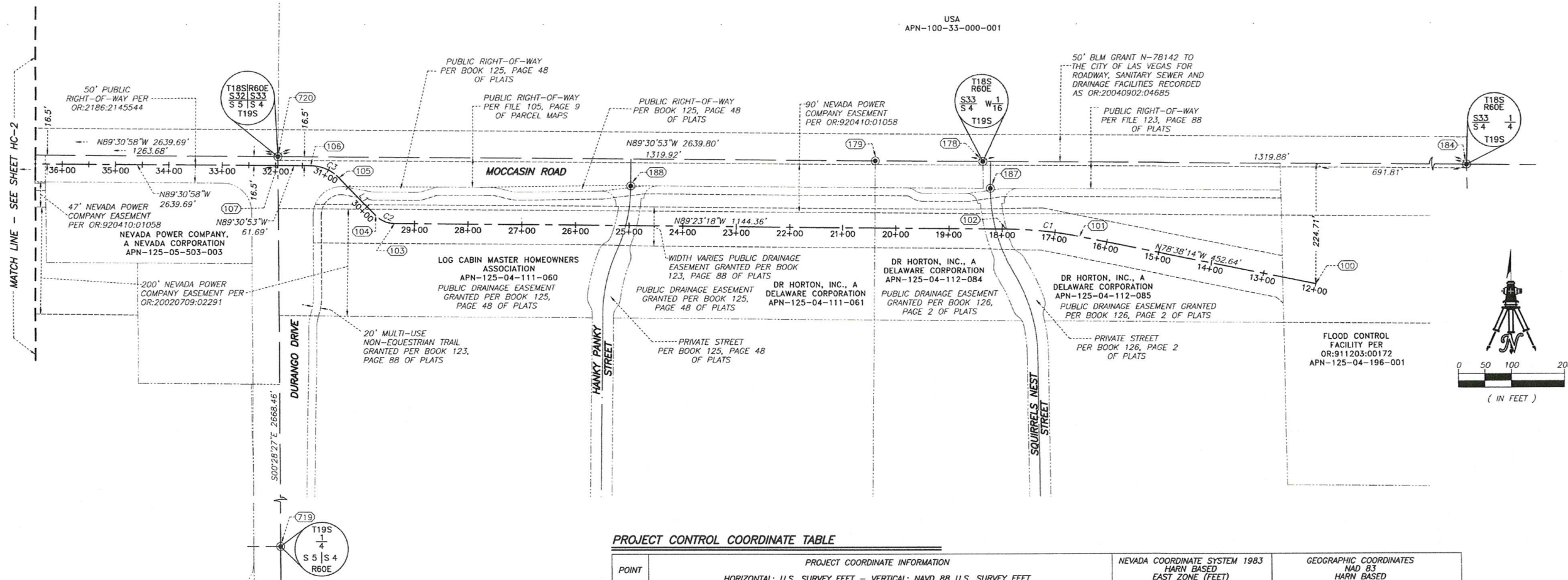
- CITY OF LAS VEGAS FIRE AND RESCUE NOTES
- ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE LAS VEGAS FIRE AND RESCUE ADOPTED FIRE CODE ORDINANCE #6325 FOR HYDRANT SPECIFICATIONS AND HYDRANT INSTALLATION SPECIFICATIONS.
 - ONLY FIRE HYDRANTS THAT ARE ON THE LAS VEGAS VALLEY WATER DISTRICT'S APPROVED PRODUCTS LIST ARE ALLOWED TO BE INSTALLED.
 - A PERMIT IS REQUIRED FROM LAS VEGAS FIRE AND RESCUE FOR THE INSTALLATION OF ON-SITE WATER LINES AND FIRE HYDRANTS. THE PERMIT AND CONTRACTORS MATERIAL TEST CERTIFICATE FOR UNDERGROUND PIPING FORM SHALL BE OBTAINED FROM THE FIRE PROTECTION ENGINEER BEFORE COMMENCEMENT OF WORK. IFC § 106.3.12.
 - 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 HYDRANTS SHALL BE IN GOOD WORKING ORDER AND SHALL BE CAPABLE OF DELIVERING THE REQUIRED FIRE FLOW. IFC § 5310, § 5312.
 - 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 § 507.5.7.3.
 - 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 § 106.3.
 - 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, NPSA 24.
 - 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 § 507.
 - PRIVATE HYDRANTS SHALL BE PAINTED RED. IFC § 507.5.7.1.
 - 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.
 - FIRE HYDRANT SPACING SHALL BE AS FOLLOWS: IFC § C102
 - RESIDENTIAL - 500 FT UNSPRINKLERED; 600 FT SPRINKLERED.
 - COMMERCIAL - 300 FT UNSPRINKLERED; 400 FT SPRINKLERED.
 - 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 § C102.8.
 - NO FIRE HYDRANTS SHALL BE LOCATED WITHIN THE RADIUS OF A CUL-DE-SAC OR WITHIN 20 FT OF THE PERIMETER OF THE RADIUS OF THE CUL-DE-SAC.
 - NO FIRE HYDRANTS SHALL BE LOCATED WITHIN 8 FT OF ANY CURB RETURN, DRIVEWAY, POWER POLE, STREETLIGHT OR ANY OTHER OBSTRUCTION. IFC § C102.12.
 - 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.
 - 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.
 - THE MAXIMUM DISTANCE FROM A HYDRANT TO THE END OF A DEAD-END STREET SHALL NOT EXCEED 200 FT. IFC § C102.6.
 - TWO (2) SOURCES OF SUPPLY ARE REQUIRED WHENEVER THERE IS 4 OR MORE FIRE HYDRANTS/SPRINKLER LEAD-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.
 - 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 § 503.2.3.
 - THE GRADIENT 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 CHANGE. ADJACENT TO THE STRUCTURES GRADIENT SHALL NOT EXCEED 6%. IFC § 503.2.7; 503.2.8.
 - THE TURNING RADIUS OF THE FIRE APPARATUS ACCESS ROADS SHALL BE NO LESS THAN 52 FT OUTSIDE AND 28 FT INSIDE TURNING RADIUS. IFC § 503.2.4.
 - VERTICAL CLEARANCE OF ALL FIRE APPARATUS ACCESS ROADS SHALL NOT BE LESS THAN 13'6" INS. IFC § 503.2.1.
 - FIRE DEPARTMENT ACCESS ROADS SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF NOT LESS THAN 40 FT FLOW LINE TO 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 LANES THROUGH PARKING LOTS SHALL BE NOT LESS THAN 24 FT. IFC § 503.2.1.1.
 - A FIRE APPARATUS ACCESS ROAD SHALL BE REQUIRED WHEN ANY PORTION OF AN EXTERIOR WALL OF THE FIRST STORY IS LOCATED MORE THAN 150 FT FROM A FIRE DEPARTMENT VEHICLE ACCESS. THIS DISTANCE COULD BE INCREASED TO 250 FT IF THE BUILDING IS SPRINKLERED. IFC § 503.1.1.
 - APPROVED SECONDARY FIRE APPARATUS ACCESS SHALL BE PROVIDED FOR 100 OR MORE DWELLING UNITS, ROAD(S) WITH DEAD-ENDS OR WITH A SINGLE POINT OF ACCESS IN EXCESS OF 600 FT. COMMERCIAL AND INDUSTRIAL DEVELOPMENTS WHERE BUILDINGS EXCEED 2 STORIES OR 30 FEET IN HEIGHT, OR EXCEEDING 62,000 SQUARE FEET IN AREA. IFC § 503.1.2.
 - ALL DEAD-END FIRE APPARATUS ROADS AND/OR FIRE LANES, PUBLIC OR PRIVATE, IN EXCESS OF 150 FT IN LENGTH SHALL BE PROVIDED WITH AN APPROVED TURN AROUND HAVING A MINIMUM DIAMETER OF 81 FT. IFC § 503.2.5.
 - ALL FIRE APPARATUS ACCESS ROADS SHALL BE MARKED BY PLACING APPROVED SIGNS AT THE START OF THE DESIGNATED FIRE LANE, ONE SIGN AT THE END OF THE FIRE LANE AND WITH SIGNS AT INTERVALS OF 100 FT ALONG THE DESIGNATED FIRE LANES. SIGNS TO BE PLACED ON BOTH SIDES OF AN ACCESS ROADWAY IF NEEDED TO PREVENT PARKING ON EITHER SIDE. SIGNS TO BE INSTALLED NO HIGHER THAN 10 FT OR LESS THAN 6 FT FROM THE ROADWAY LEVEL. THE CURBS 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 § 503.3.
 - ELECTRICALLY CONTROLLED ACCESS GATES SHALL BE PROVIDED WITH AN APPROVED EMERGENCY VEHICLE DETECTOR/RECEIVER SYSTEM. SAID SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE IFC § 503.6 AND IFC APPENDIX M.

REVISED MARCH 1, 2016

PREPARED BY	SLATER HANIFAN GROUP	DESIGNED BY	CM	DRAWN BY	BCC	CHECKED BY	FR
CITY OF LAS VEGAS	BID# 19-1033	DATE: JAN 2020	SUBMITTAL STAGE:	100% FINAL			
TITLE		MOCCASIN RD		GENERAL NOTES, KEY MAP AND SHEET INDEX			
SHEET		GN-2		3 OF 48			
DRAWING NO.		731-99					

PROFESSIONAL ENGINEER
FREDERICK RETZLAFF
No. 1575
Exp. 12/31/2021
CIVIL

AS BUILT



LEGEND

- 13+00 CENTERLINE PROPOSED FLOOD CONTROL FACILITY AND STATIONING
- SECTION LINE
- QUARTER SECTION LINE
- EASEMENT LINE
- ADJOINING LOT LINE
- MATCH LINE
- FOUND MONUMENTATION AS SHOWN AND DESCRIBED
- POINT NUMBER SEE PROJECT CONTROL COORDINATE TABLE FOR INFORMATION
- OR: OFFICIAL RECORDS
- APN ASSESSOR'S PARCEL NUMBER

BASIS OF BEARINGS

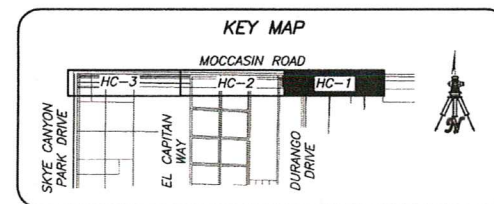
NORTH 00°01'50" WEST, BEING THE BEARING OF THE EAST LINE OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 6, TOWNSHIP 19 SOUTH, RANGE 60 EAST, MOUNT DIABLO MERIDIAN, CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN FILE 151, PAGE 14 OF SURVEYS IN THE CLARK COUNTY RECORDER'S OFFICE, NEVADA.

BENCHMARK

BENCHMARK NUMBER: USDA (1934) 19
 U.S. DEPARTMENT OF AGRICULTURE BRASS DISC AT THE SOUTHWEST CORNER OF U.S. 95 AND KYLE CANYON ROAD.
 ELEVATION = 2817.61 FEET, 858.810 METERS
 NAVD 88 DATUM
 PER THE CITY OF LAS VEGAS BENCHMARK BOOK - 2008
 ADJUSTMENT (UPDATED 05/24/2010).

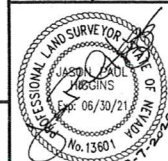
PROJECT CONTROL COORDINATE TABLE

POINT (NO.)	PROJECT COORDINATE INFORMATION				NEVADA COORDINATE SYSTEM 1983 HARN BASED EAST ZONE (FEET)		GEOGRAPHIC COORDINATES NAD 83 HARN BASED	
	NORTHING	EASTING	ELEV	DESCRIPTION	NORTHING	EASTING	LATITUDE	LONGITUDE
178	830027.0491	747393.7354	2532.03'	FOUND 2" BRASS CAP STAMPED "CRAIG MATSUEDA PLS 17022"	26824057.5838	747227.2349	36°20'09.4285"	-115°16'26.9537"
179	830028.7773	747191.9061	2537.22'	FOUND 1 1/2" ALUMINUM CAP STAMPED "GL HOLTEN PLS 13290"	26824059.3116	747025.4500	36°20'09.4520"	-115°16'29.4200"
184	830015.8085	748713.5669	2493.04'	FOUND 4" ALUMINUM MONUMENT STAMPED "BLM 1990CLV BM LLY904N4"	26824046.3463	748546.7763	36°20'09.2754"	-115°16'10.8254"
187	829976.9168	747407.6025	2530.63'	FOUND 1 1/2" ALUMINUM CAP STAMPED "GL HOLTEN PLS 13290"	26824007.4626	747241.0990	36°20'08.9324"	-115°16'26.7862"
188	829982.3185	746733.3179	2541.72'	FOUND 1 1/2" ALUMINUM CAP STAMPED "GL HOLTEN PLS 13290"	26824012.8628	746566.9626	36°20'09.0071"	-115°16'35.0259"
719	827369.7954	746095.9538	2545.14'	FOUND 2" BRASS CAP STAMPED "PLS 13290 2006"	26821400.9136	745929.7399	36°19'43.1965"	-115°16'42.9153"
720	830038.1651	746073.8656	2541.64'	FOUND 2" BRASS CAP IN WELL MONUMENT STAMPED "2006 PLS 13290"	26824068.6968	745907.6552	36°20'09.5799"	-115°16'43.0825"
100	829796.9616	748019.8817	----	STORM DRAIN BEGIN 12+00	26823827.5472	747853.2437	36°20'07.1338"	-115°16'19.3110"
101	829886.1416	747576.1103	----	STORM DRAIN BEGIN OF CURVE 16+52.64	26823916.7074	747409.5698	36°20'08.0296"	-115°16'24.7305"
102	829900.7993	747436.3503	----	STORM DRAIN END OF CURVE 17+93.38	26823931.3618	747269.8406	36°20'08.1789"	-115°16'26.4378"
103	829913.0139	746292.0545	----	STORM DRAIN BEGIN OF CURVE 29+37.74	26823943.5732	746125.7962	36°20'08.3357"	-115°16'40.4209"
104	829928.1909	746256.7056	----	STORM DRAIN END OF CURVE 29+77.23	26823958.7469	746090.4551	36°20'08.4868"	-115°16'40.8523"
105	829998.2593	746188.7118	----	STORM DRAIN BEGIN OF CURVE 30+74.86	26824028.7998	746022.4762	36°20'09.1817"	-115°16'41.6805"
106	830021.1433	746135.4098	----	STORM DRAIN END OF CURVE 31+34.42	26824051.6787	745969.1859	36°20'09.4096"	-115°16'42.3310"
107	830021.6657	746073.7263	----	STORM DRAIN ANGLE POINT 31+96.10	26824052.2010	745907.5160	36°20'09.4167"	-115°16'43.0848"



LINE	BEARING	DISTANCE
L1	N44°08'21"W	97.64'

CURVE	DELTA	RADIUS	LENGTH	TANGENT
C1	10°45'04"	750.00'	140.73'	70.57'
C2	45°14'58"	50.00'	38.49'	20.84'
C3	45°29'56"	75.00'	59.56'	31.45'

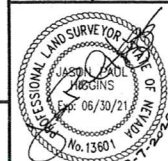


SHEET
HC-1
 4 OF 48
 DRAWING NO
 731-99

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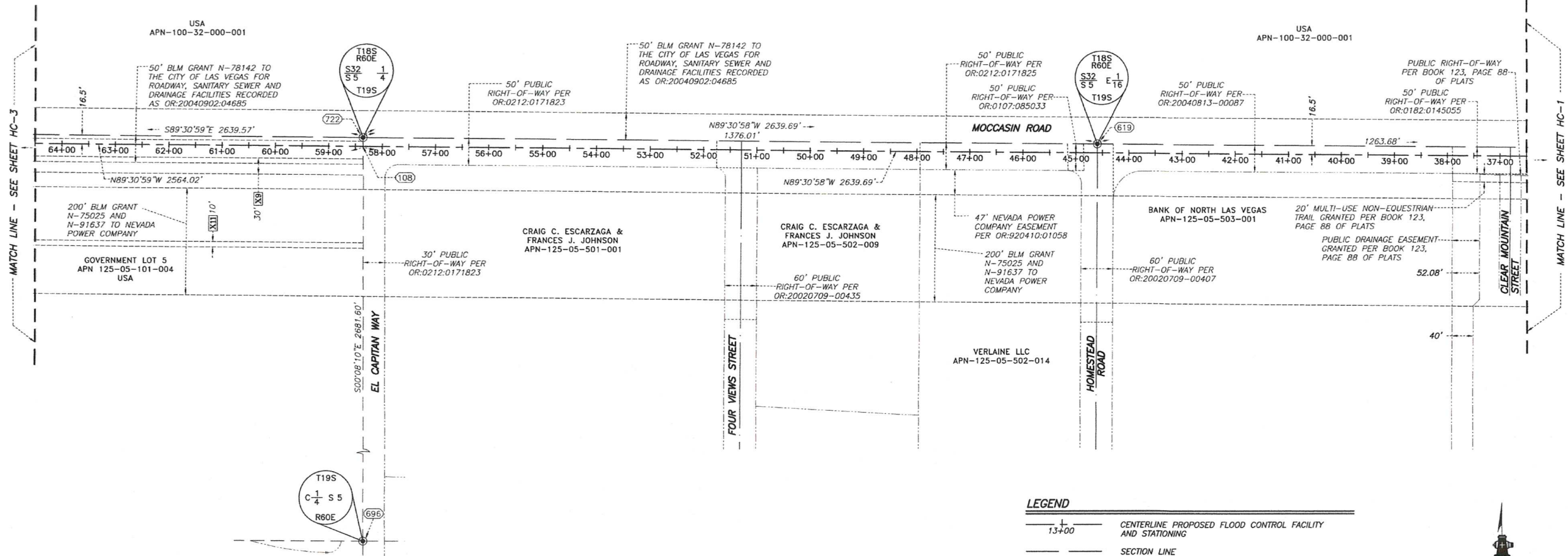
DATE: SEPTEMBER 2019
 SUBMITTAL STAGE: 100% FINAL
 DESIGNED BY: SAT
 DRAWN BY: SAT
 CHECKED BY: JPH

TITLE
**MOCCASIN RD CCRFCD
 FLOOD CONTROL FACILITY
 MOCCASIN RD TO CCRFCD FACILITY LVUP 1076/1077**
 SHEET
**HORIZONTAL CONTROL AND RIGHT-OF-WAY
 LAND SURVEY PLAN SET**



SHEET
HC-1
 4 OF 48
 DRAWING NO
 731-99

AS BUILT



BASIS OF BEARINGS

NORTH 00°01'50" WEST, BEING THE BEARING OF THE EAST LINE OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 6, TOWNSHIP 19 SOUTH, RANGE 60 EAST, MOUNT DIABLO MERIDIAN, CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN FILE 151, PAGE 14 OF SURVEYS IN THE CLARK COUNTY RECORDER'S OFFICE, NEVADA.

BENCHMARK

BENCHMARK NUMBER: USDA (1934) 19

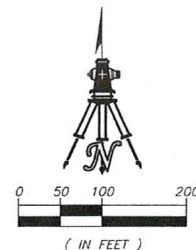
U.S. DEPARTMENT OF AGRICULTURE BRASS DISC AT THE SOUTHWEST CORNER OF U.S. 95 AND KYLE CANYON ROAD.

ELEVATION = 2817.61 FEET, 858.810 METERS
NAVD 88 DATUM

PER THE CITY OF LAS VEGAS BENCHMARK BOOK - 2008
ADJUSTMENT (UPDATED 05/24/2010).

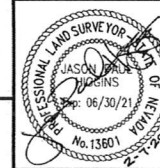
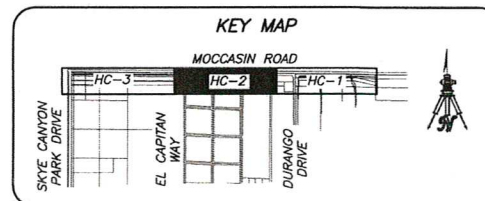
LEGEND

- 13+00 CENTERLINE PROPOSED FLOOD CONTROL FACILITY AND STATIONING
- SECTION LINE
- QUARTER SECTION LINE
- EASEMENT LINE
- ADJOINING LOT LINE
- MATCH LINE
- FOUND MONUMENTATION AS SHOWN AND DESCRIBED
- (100) POINT NUMBER SEE PROJECT CONTROL COORDINATE TABLE FOR INFORMATION
- OR: OFFICIAL RECORDS
- APN ASSESSOR'S PARCEL NUMBER
- [X9] BUREAU OF LAND MANAGEMENT RIGHT-OF-WAY GRANTED TO NEVADA POWER COMPANY UNDER SERIAL NUMBER N-42592G PER OR:20040924-02389
- [X11] BUREAU OF LAND MANAGEMENT RIGHT-OF-WAY GRANTED TO NEVADA POWER COMPANY UNDER SERIAL NUMBER N-76432 PER OR:20050209-00888



PROJECT CONTROL COORDINATE TABLE

POINT (NO.)	PROJECT COORDINATE INFORMATION			DESCRIPTION	NEVADA COORDINATE SYSTEM 1983 HARN BASED EAST ZONE (FEET)		GEOGRAPHIC COORDINATES HARN BASED	
	NORTHING	EASTING	ELEV		NORTHING	EASTING	LATITUDE	LONGITUDE
619	830048.6763	744810.2287	2560.76'	FOUND 5/8" REBAR	26824079.2050	744644.2961	36°20'09.7229"	-115°16'58.5241"
696	827378.8631	743440.6401	2593.88'	FOUND 2" BRASS CAP, STAMPED "PLS 11449"	26821409.9781	743275.0098	36°19'43.3676"	-115°17'15.3607"
722	830060.4542	743434.2728	2592.18'	FOUND 3 1/4" BLM BRASS CAP STAMPED "1956 2015"	26824090.9797	743268.6427	36°20'09.8813"	-115°17'15.3383"
108	830043.9548	743434.1336	---	STORM DRAIN ANGLE POINT 58+35.79	26824074.4839	743268.5035	36°20'09.7181"	-115°17'15.3406"



SHEET
HC-2
5 OF 48
DRAWING NO.
731-99

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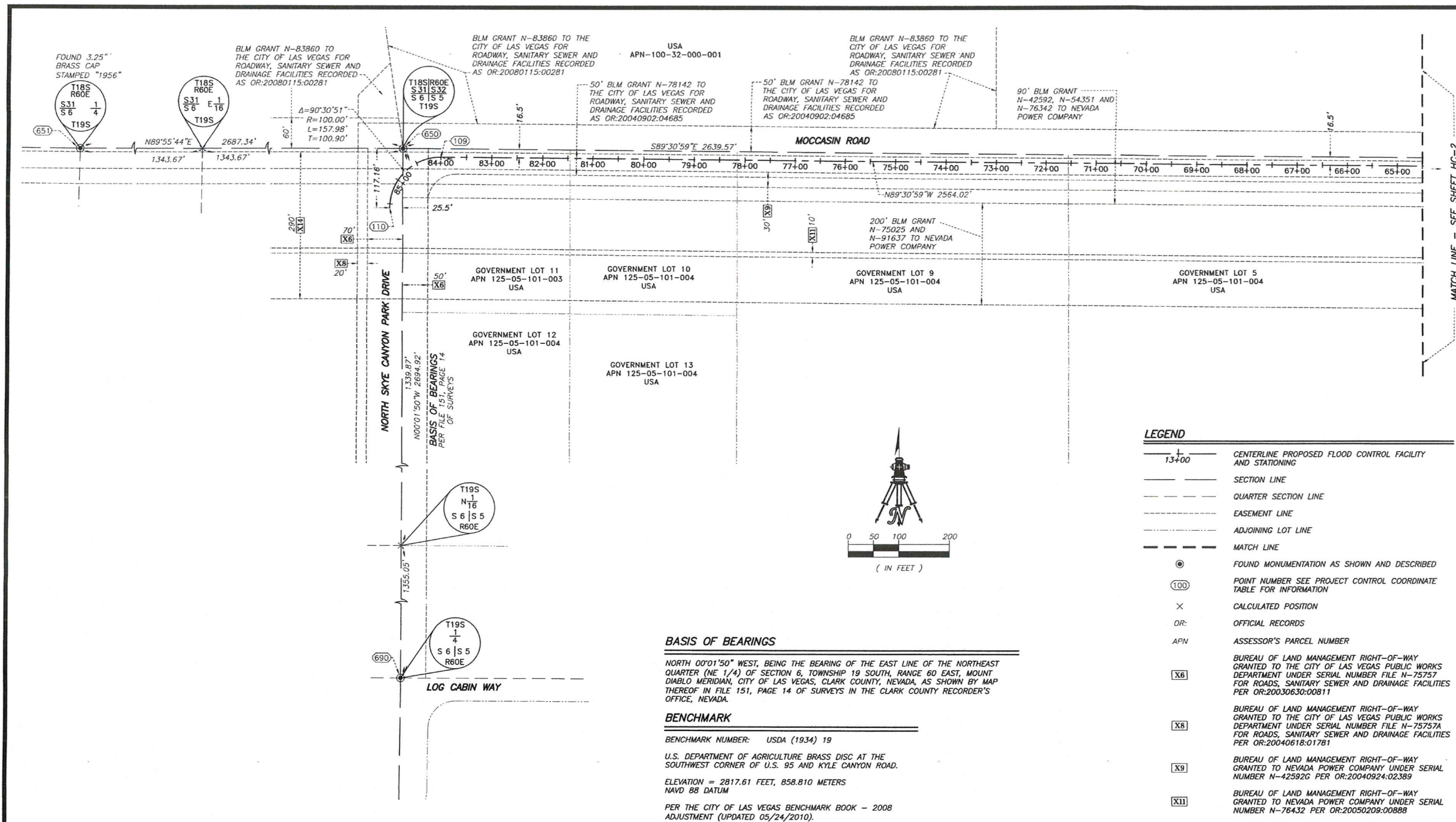
DESIGNED BY: JPH
DRAWN BY: SAT
CHECKED BY: JPH
SUBMITTAL STAGE: 100% FINAL

TITLE
**MOCCASIN RD CCRFCD
FLOOD CONTROL FACILITY
MOCCASIN RD TO CCRFCD FACILITY LVUP 1076/1077
HORIZONTAL CONTROL AND RIGHT-OF-WAY
LAND SURVEY PLAN SET**

DATE: SEPTEMBER 2019
NO. DATE
REVISIONS

PREPARED BY: WALLACE MORRIS KLINE
SURVEYOR
LAND SURVEY
CONSULTING
5740 SOUTH
ARVILLE STREET,
#206
LAS VEGAS,
NEVADA 89118
PH: 702.212.3967 FAX: 702.212.3963

AS BUILT



BASIS OF BEARINGS

NORTH 00°01'50" WEST, BEING THE BEARING OF THE EAST LINE OF THE NORTHEAST QUARTER (NE 1/4) OF SECTION 6, TOWNSHIP 19 SOUTH, RANGE 60 EAST, MOUNT DIABLO MERIDIAN, CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN FILE 151, PAGE 14 OF SURVEYS IN THE CLARK COUNTY RECORDER'S OFFICE, NEVADA.

BENCHMARK

BENCHMARK NUMBER: USDA (1934) 19

U.S. DEPARTMENT OF AGRICULTURE BRASS DISC AT THE SOUTHWEST CORNER OF U.S. 95 AND KYLE CANYON ROAD.

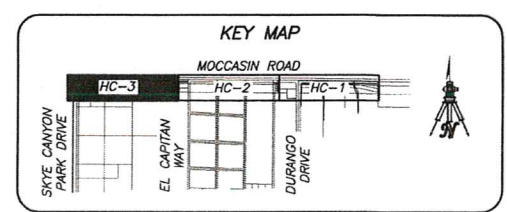
ELEVATION = 2817.61 FEET, 858.810 METERS
NAVD 88 DATUM

PER THE CITY OF LAS VEGAS BENCHMARK BOOK - 2008 ADJUSTMENT (UPDATED 05/24/2010).

- LEGEND**
- 13+00 CENTERLINE PROPOSED FLOOD CONTROL FACILITY AND STATIONING
 - SECTION LINE
 - QUARTER SECTION LINE
 - EASEMENT LINE
 - ADJOINING LOT LINE
 - MATCH LINE
 - FOUND MONUMENTATION AS SHOWN AND DESCRIBED
 - POINT NUMBER SEE PROJECT CONTROL COORDINATE TABLE FOR INFORMATION
 - CALCULATED POSITION
 - OFFICIAL RECORDS
 - ASSESSOR'S PARCEL NUMBER
 - BUREAU OF LAND MANAGEMENT RIGHT-OF-WAY GRANTED TO THE CITY OF LAS VEGAS PUBLIC WORKS DEPARTMENT UNDER SERIAL NUMBER FILE N-75757 FOR ROADS, SANITARY SEWER AND DRAINAGE FACILITIES PER OR-20030630:00811
 - BUREAU OF LAND MANAGEMENT RIGHT-OF-WAY GRANTED TO THE CITY OF LAS VEGAS PUBLIC WORKS DEPARTMENT UNDER SERIAL NUMBER FILE N-75757A FOR ROADS, SANITARY SEWER AND DRAINAGE FACILITIES PER OR-20040618:01781
 - BUREAU OF LAND MANAGEMENT RIGHT-OF-WAY GRANTED TO NEVADA POWER COMPANY UNDER SERIAL NUMBER N-42592G PER OR-20040924:02389
 - BUREAU OF LAND MANAGEMENT RIGHT-OF-WAY GRANTED TO NEVADA POWER COMPANY UNDER SERIAL NUMBER N-76432 PER OR-20050209:00888
 - NEVADA POWER COMPANY EASEMENT GRANTED PER OR-20150608:00946

PROJECT CONTROL COORDINATE TABLE

POINT (NO.)	PROJECT COORDINATE INFORMATION				NEVADA COORDINATE SYSTEM 1983 HARN BASED EAST ZONE (FEET)		GEOGRAPHIC COORDINATES NAD 83 HARN BASED	
	NORTHING	EASTING	ELEV	DESCRIPTION	NORTHING	EASTING	LATITUDE	LONGITUDE
650	830082.8395	740794.8612	2660.08'	FOUND 3 1/4" BLM BRASS CAP STAMPED "1956 2015"	26824113.3588	740629.8113	36°20'10.1812"	-115°17'47.5920"
651	830079.3553	738107.3693	2727.46'	FOUND 3 1/4" BRASS CAP STAMPED "1956"	26824109.8741	737942.9101	36°20'10.2243"	-115°18'20.4342"
690	827387.7595	740796.1883	2663.64'	FOUND 2" BRASS CAP IN WELL MONUMENT STAMPED "VIN PLS 11449 2004"	26821418.8713	740631.1393	36°19'43.5343"	-115°17'47.6734"
109	830065.5930	740870.2065	----	STORM DRAIN BEGIN OF CURVE 83+99.81	26824096.1162	740705.1400	36°20'10.0084"	-115°17'46.6718"
110	829965.5431	740769.3626	----	STORM DRAIN END OF CURVE AND END 85+57.38	26823996.0882	740604.3183	36°20'09.0222"	-115°17'47.9078"



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PREPARED BY
WALLACE MORRIS KLINE SURVEYING, LLC.
LAND SURVEY CONSULTING
ARVILLO STREET, #306
LAS VEGAS, NEVADA 89118
PH: 702.212.3967 FX: 702.212.3963

CITY OF LAS VEGAS

BID# 18.17033
DATE: SEPTEMBER 2019
DESIGNED BY:
DRAWN BY: SAT
CHECKED BY: JPH

100% FINAL

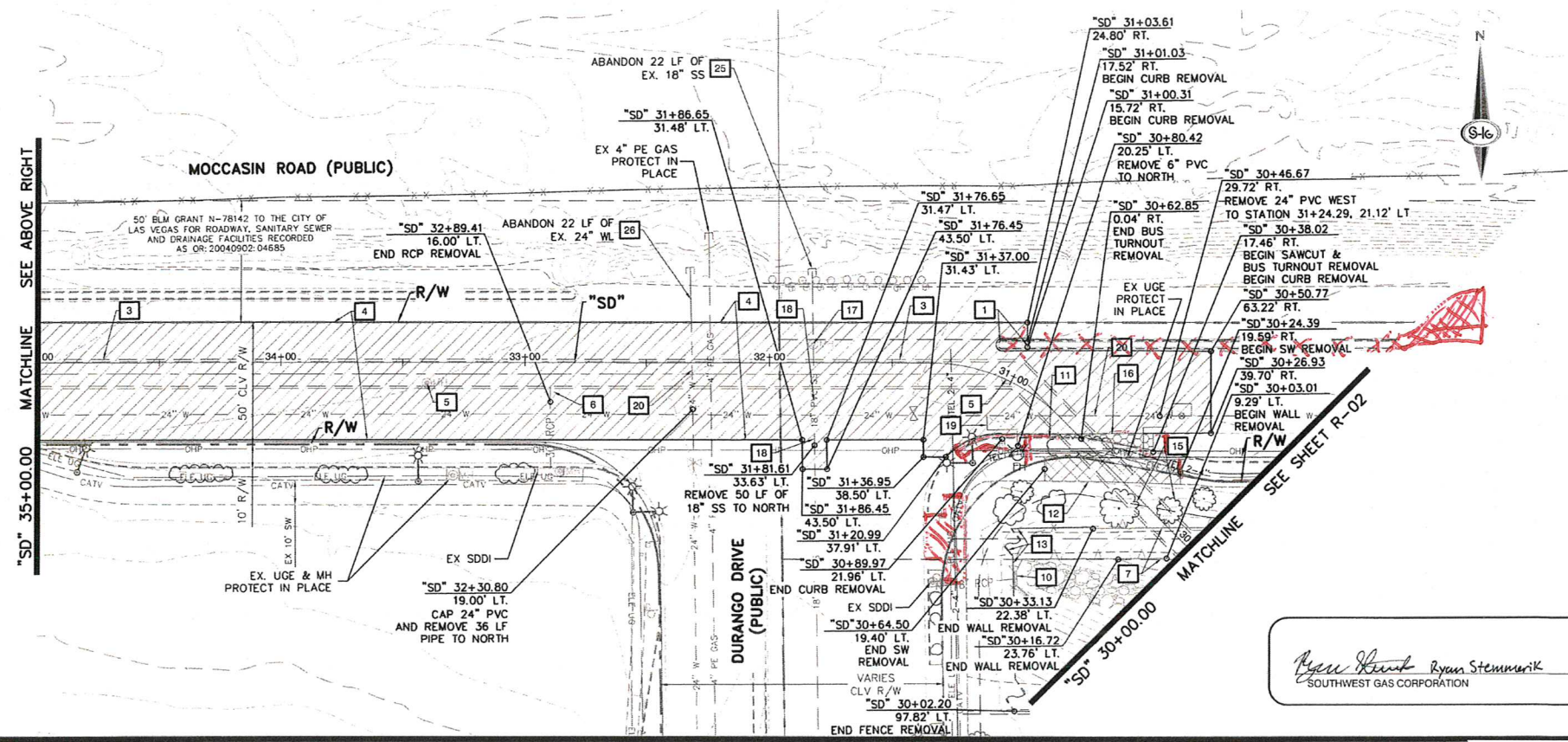
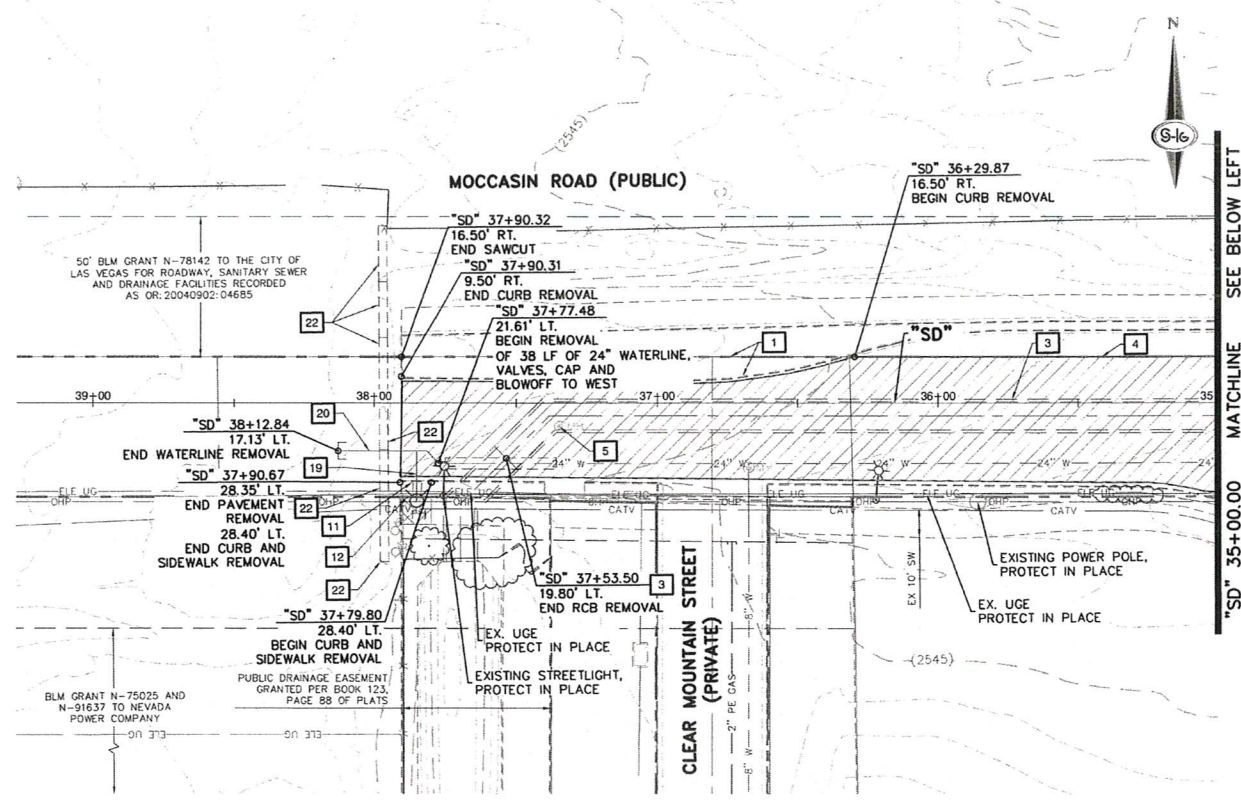
TITLE
MOCCASIN RD CCRFCD
FLOOD CONTROL FACILITY
MOCCASIN RD TO CCRFCD FACILITY LVUP 1076/1077
HORIZONTAL CONTROL AND RIGHT-OF-WAY
LAND SURVEY PLAN SET

SHEET
HC-3
6 OF 48
DRAWING NO.
731-99

REVISIONS

NO.	DATE	REVISIONS
-----	------	-----------

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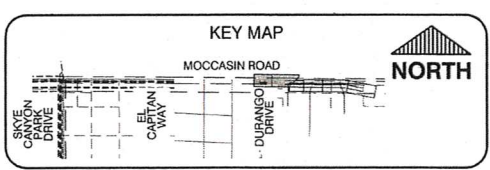
- ### CONSTRUCTION NOTES
- 1 SAWCUT AND REMOVE CONCRETE FILLED MEDIAN AND CURB
 - 2 REMOVE CONCRETE CUTOFF WALL
 - 3 REMOVE 10'W x 5'H RCB
 - 4 SAWCUT AND MATCH EXISTING PAVEMENT
 - 5 REMOVE STORM DRAIN MANHOLE
 - 6 REMOVE 30\"/>

- ### LEGEND
- [Pattern] BITUMINOUS PAVEMENT REMOVAL
 - [Pattern] CONCRETE SIDEWALK REMOVAL
 - [Pattern] CONCRETE SIDEWALK BUS TURNOUT REMOVAL

- ### CONSTRUCTION NOTES
1. FINAL SAWCUT AND RESTORATION LIMITS TO BE APPROVED BY THE FIELD ENGINEER.
 2. PROTECT-IN-PLACE ALL IMPROVEMENTS NOT DESIGNATED FOR REMOVAL

DISCLAIMER NOTES

1. NV ENERGY, CENTURYLINK, AND SOUTHWEST GAS SHOWN FOR INFORMATION ONLY. REFERENCE NV ENERGY, CENTURYLINK, AND SOUTHWEST GAS DRAWINGS FOR CONSTRUCTION DETAILS. CONTRACTOR TO COORDINATE WITH UTILITIES FOR REMOVAL AND INSTALLATION OF FACILITIES.
2. ALL EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION. THE DEPTH BELOW GRADE OF THE VARIOUS UTILITIES DEPICTED ON THE PLANS VARIES THROUGHOUT THE PROJECT AREA. THE CONTRACTOR SHALL EXERCISE EXTREME CARE WHERE EXCAVATING AND GRADING THE SUBBASE IN THE VICINITY OF UTILITIES TO AVOID DAMAGE TO THE LATTER.
3. ALL EXISTING UTILITIES SHALL BE PROTECTED IN PLACE UNLESS OTHERWISE NOTED.



GRAPHIC SCALE

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PREPARED BY

SLATER HANIFAN GROUP

CONSULTING ENGINEERS & PLANNERS

5748 S. ARVILLE STREET #210, LAS VEGAS, NV 89118

PHONE (702) 264-5300 FAX (702) 264-5309

CITY OF LAS VEGAS

BID# 19-71033

DESIGNED BY: BCC

DRAWN BY: BCC

CHECKED BY: PKR

DATE: JAN 2020

SUBMITTAL STAGE: 100% FINAL

TITLE

MOCCASIN RD

CCRFCD FLOOD CONTROL FACILITY

MOCCASIN RD TO CCRFCD FACILITY LVUP 1076/1077

SHEET

REMOVAL PLAN I

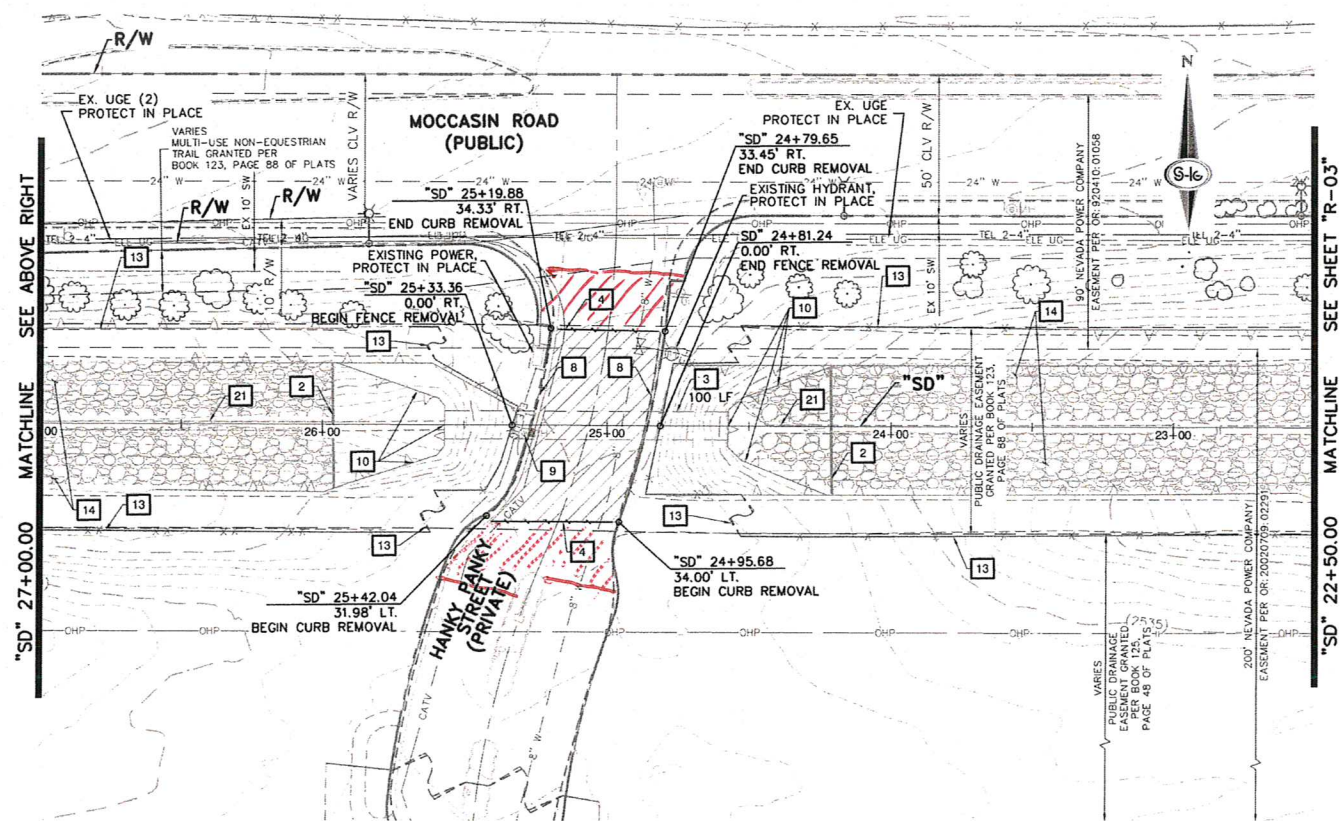
SHEET

R-01

7 OF 48

DRAWING NO. 731-99

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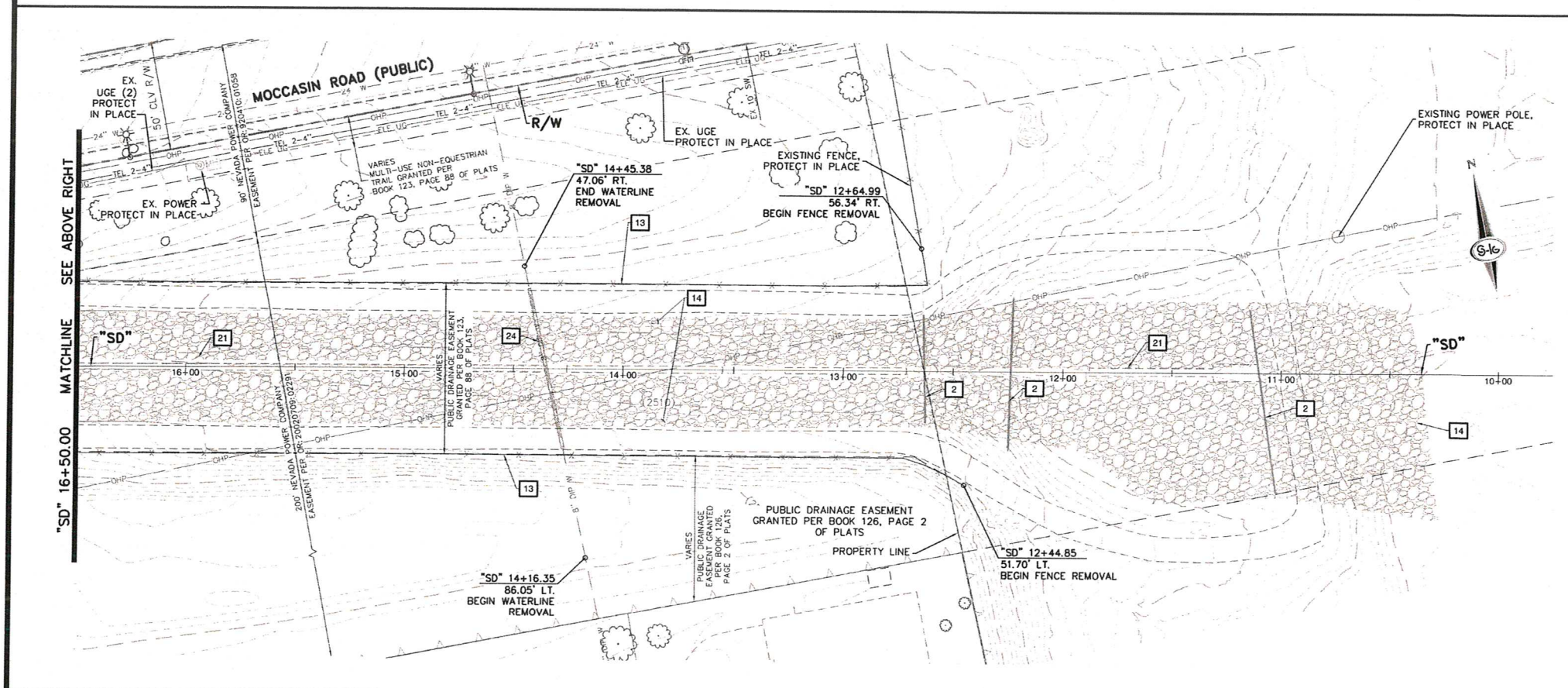
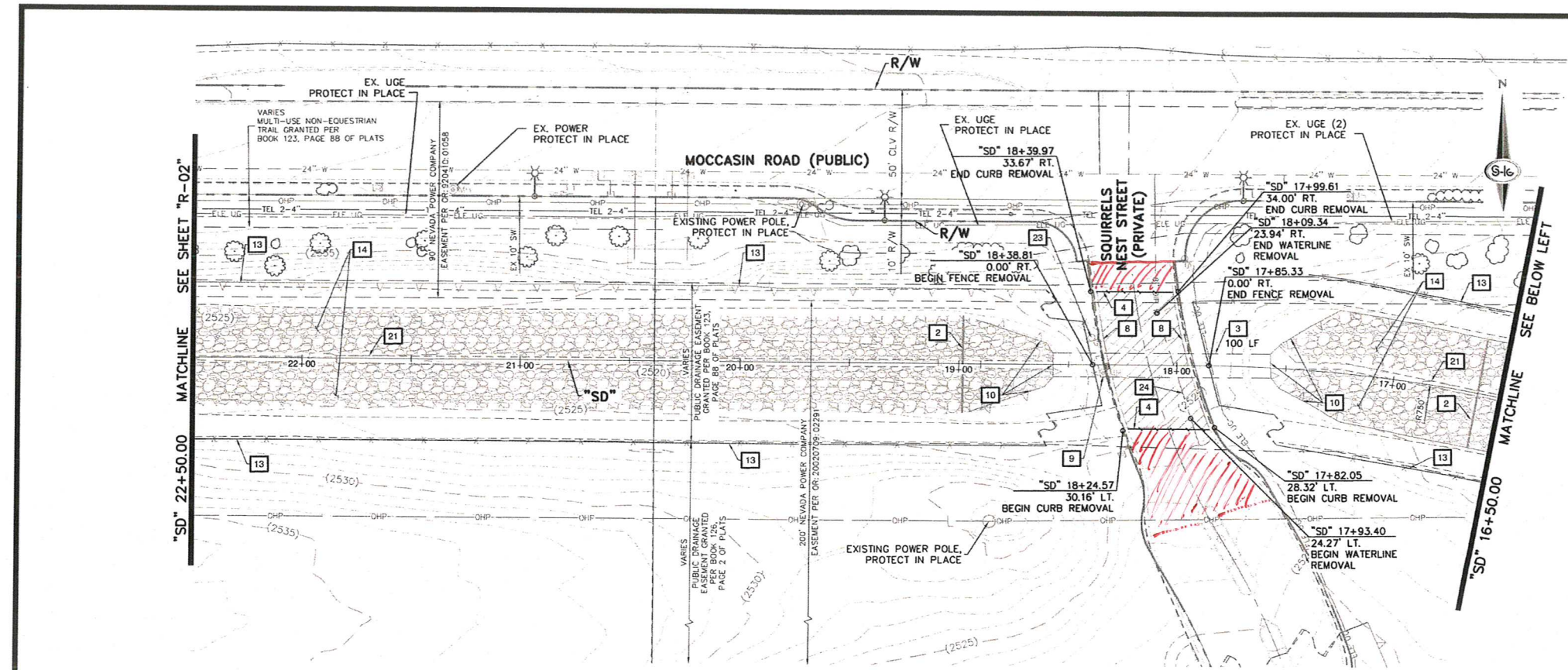


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(IN FEET)

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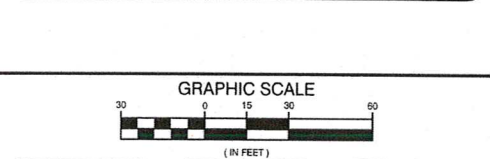
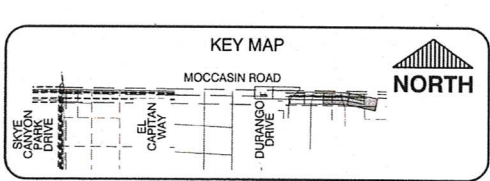
- ### CONSTRUCTION NOTES
1. SAWCUT AND REMOVE CONCRETE FILLED MEDIAN AND CURB
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 4. SAWCUT AND MATCH EXISTING PAVEMENT
 5. REMOVE STORM DRAIN MANHOLE
 6. REMOVE 30" RCP STORM DRAIN (6 LF)
 7. REMOVE RETAINING WALL
 8. REMOVE "ROLL" TYPE CURB
 9. REMOVE STORM DRAIN DROP INLET
 10. REMOVE HEADWALL
 11. REMOVE "L" TYPE CURB
 12. REMOVE CONCRETE SIDEWALK
 13. REMOVE FENCE AND GATES
 14. REMOVE RIPRAP
 15. REMOVE TREE
 16. REMOVE CONCRETE BUS TURNOUT
 17. REMOVE SANITARY SEWER MANHOLE
 18. REMOVE 18" SANITARY SEWER PIPE
 19. REMOVE 6" PVC WATERLINE
 20. REMOVE 24" PVC WATERLINE
 21. REMOVE CONCRETE FLUME
 22. REMOVE BARRIER RAIL
 23. REMOVE AND RESET SIGN
 24. REMOVE 8" DIP WATERLINE
 25. ABANDON EXISTING SEWER PER DCSWCS SECTION 3.18.1, METHOD C
 26. ABANDON EXISTING WATER LINE PER UDACS SECTION 2.12

- ### LEGEND
- BITUMINOUS PAVEMENT REMOVAL
 - CONCRETE SIDEWALK REMOVAL
 - CONCRETE SIDEWALK BUS TURNOUT REMOVAL

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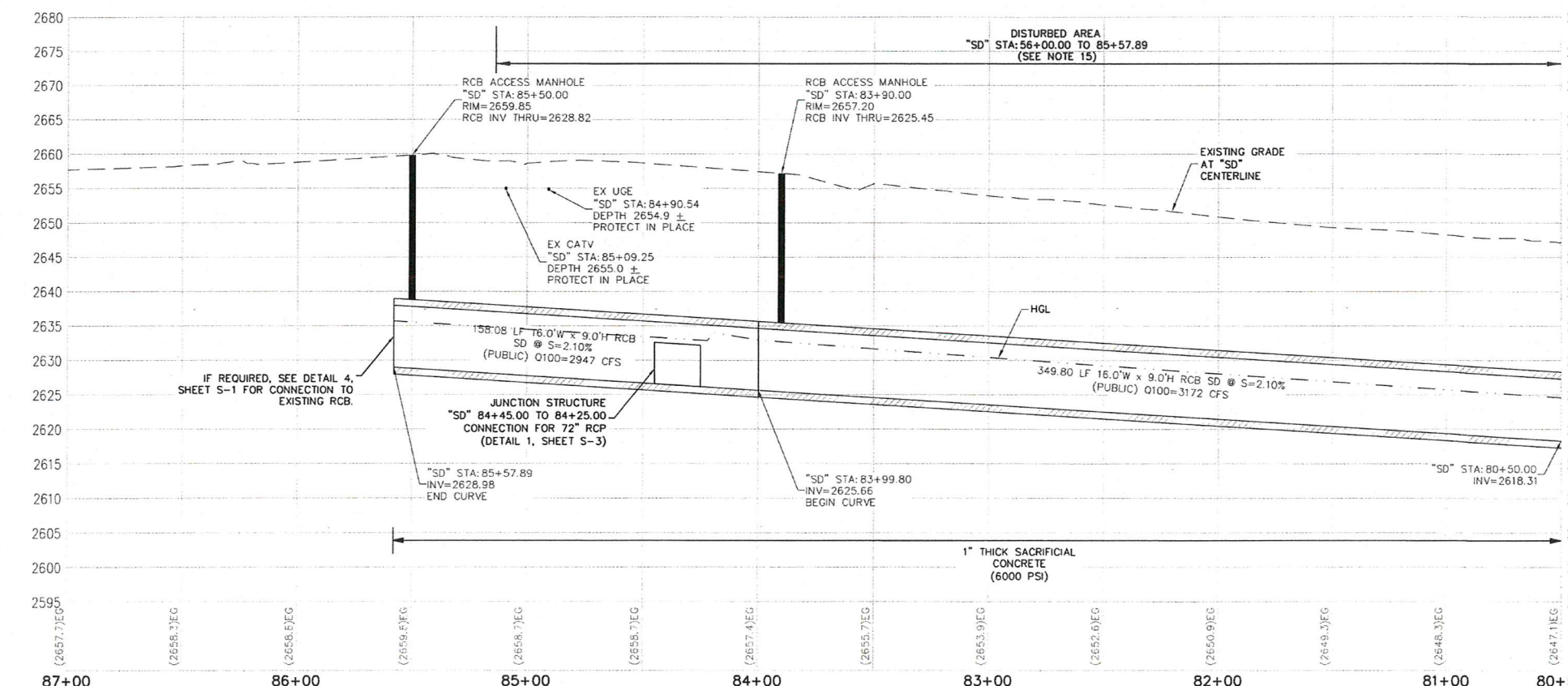
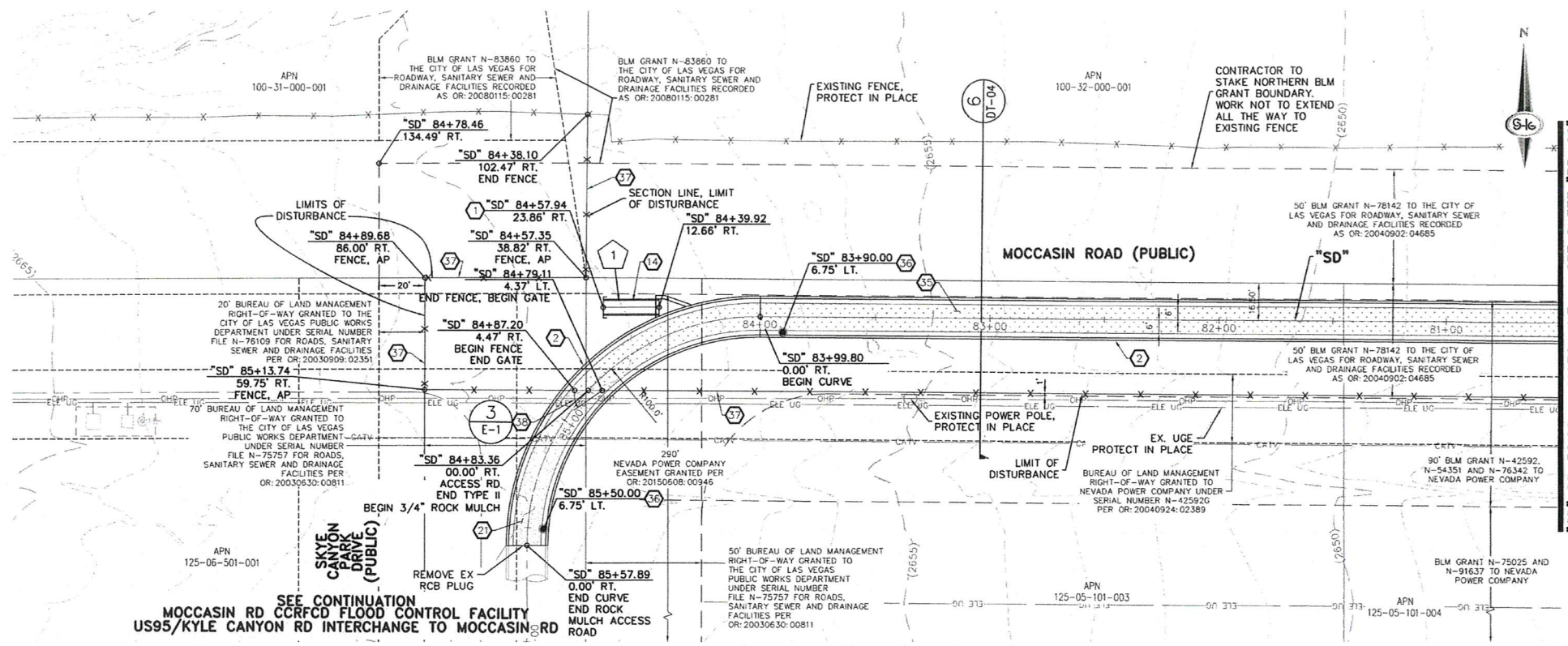
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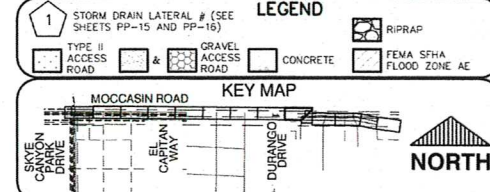
SLATER HANIFAN GROUP CONSULTING ENGINEERS & PLANNERS 1500 S. LAS VEGAS BLVD., SUITE 4210, LAS VEGAS, NV 89102 PHONE (702) 244-5300	
PREPARED BY: CITY OF LAS VEGAS H# 71033 DATE: JAN 2020 SUBMITTAL STAGE: 100% FINAL	DESIGNED BY: BCC DRAWN BY: BCC CHECKED BY: FIR
TITLE: MOCCASIN RD CCRFCD FLOOD CONTROL FACILITY MOCCASIN RD TO CCRFCD FACILITY LVUP 1076/1077 SHEET: REMOVAL PLAN III	
SHEET: R-03 9 OF 48 DRAWING NO. 731-99	

AS BUILT



- ### CONSTRUCTION NOTES
1. CONSTRUCT STORM DRAIN PIPE PLUG (DETAIL 2, SHEET S-2)
 2. INSTALL 16\"/>
 3. CONSTRUCT CONCRETE FILLED MEDIAN WITH \"L\" TYPE ISLAND CURB (USDOCA STD. DWG. NO. 218 AND 219)
 4. CONSTRUCT 48\"/>
 5. CONSTRUCT HEADWALL (DETAIL 1, SHEET S-7)
 6. CONSTRUCT CONCRETE TRANSITION (DETAIL 1, SHEET S-5)
 7. CONSTRUCT ACCESS RAMP (DETAIL 1, SHEET S-5)
 8. MATCH EXISTING GRADE
 9. CONSTRUCT 10\"/>
 10. CONNECT TO EXISTING 30\"/>
 11. INSTALL 5.5\"/>
 12. CONSTRUCT CONCRETE RECTANGULAR CHANNEL (DETAIL A, SHEET S-6)
 13. INSTALL 30\"/>
 14. INSTALL 72\"/>
 15. INSTALL 24\"/>
 16. INSTALL MODIFIED TYPE \"DM2\" STORM DRAIN DROP INLET, L=7.5' (USDOCA STD. DWG. 412.1 AND 421)
 17. CONSTRUCT \"L\" TYPE CURB AND GUTTER (USDOCA STD. DWG. 215)
 18. INSTALL 10\"/>
 19. INSTALL NDOT TYPE 2B STORM DRAIN DROP INLET WITH CONCRETE APRON (SDOT DETAIL 8-4.2.2, R-4.2.7 AND USDOCA STD. DWG. 412.1 AND 421) (SEE SHEET DT-05)
 20. INSTALL 18\"/>
 21. CONSTRUCT 12\"/>
 22. INSTALL PARTIALLY GROUTED RIPRAP (D50=12\", T=24\") (SEE DETAIL 5, SHEET DT-02)
 23. CONSTRUCT CONCRETE FLUME (DETAIL 1, SHEET S-5)
 24. CONSTRUCT 5 LF \"ROLL\" TYPE CURB TO \"L\" TYPE CURB TRANSITION (DETAIL 3, SHEET DT-03)
 25. INSTALL 72\"/>
 26. INSTALL 12\"/>
 27. INSTALL 3\"/>
 28. INSTALL BUS TURNOUT (SEE DETAIL 4 ON SHEET DT-01)
 29. CONNECT TO EXISTING 18\"/>
 30. INSTALL POST AND CABLE FENCE WITH GROUNDING (LOCATION PER DETAIL ON SHEET PP-14) (SEE SHEET E-1) (DETAIL 1, SHEET E-1) (KEYNOTE 6)
 31. INSTALL 6\"/>
 32. INSTALL 42\"/>
 33. INSTALL 10\"/>
 34. CONSTRUCT \"ROLL\" TYPE CURB AND GUTTER (USDOCA STD. DWG. NO. 217.2)
 35. CONSTRUCT 60\"/>
 36. INSTALL 42\"/>
 37. INSTALL 12\"/>
 38. CONSTRUCT CUT-OFF WALL (SECTION C, SHEET S-5)
 39. CONSTRUCT WING WALL (DETAIL A, SHEET S-7)
 40. INSTALL 2\"/>
 41. SEE AR-SHEETS FOR GRADING AND LAYOUT
 42. INSTALL TYPE \"CM\" STORM DRAIN DROP INLET, L=5' (USDOCA STD. DWG. NO. 422). DO NOT USE SOLID LID ON 1ST PANEL, USE DUAL VANE TYPE GRATES.
 43. INSTALL 30\"/>

- ### NOTES
1. NV ENERGY, CENTURION TELEPHONE, AND SOUTHWEST GAS SHOWN FOR INFORMATION ONLY. REFER TO NV ENERGY, CENTURION TELEPHONE, AND SOUTHWEST GAS DRAWINGS FOR CONSTRUCTION. CONTRACTOR TO COORDINATE WITH UTILITIES FOR REMOVAL AND INSTALLATION OF FACILITIES.
 2. THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UTILITIES AND TO COORDINATE WITH UTILITIES FOR REMOVAL AND INSTALLATION OF FACILITIES IS NOT DELEGATED TO THE ENGINEER. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE LOCATION OF UTILITIES SHOWN ON THESE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF UTILITIES SHOWN ON THESE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF UTILITIES SHOWN ON THESE PLANS.
 3. THE CONTRACTOR SHALL RESTORE AFFECTED LANDSCAPING AND IRRIGATION TO PRE-CONSTRUCTION CONDITIONS.
 4. ALL RCP SHALL BE CLASS II UNLESS OTHERWISE SHOWN.
 5. ALL PIPE LINES ARE MEASURED ALONG PIPE CENTERLINE TO CENTER OF MANHOLE OR INSIDE EDGE OF 18\"/>
 6. SEE STRUCTURAL PLANS FOR ADDITIONAL STRUCTURAL DETAILS AND CONNECTIONS.
 7. SPECIAL INSPECTION REQUIRED FOR PIPE SEGMENTS WITH SACRIFICIAL CONCRETE.
 8. SEE SHEET S-1 FOR LANDSCAPE PLAN.
 9. SEE DETAIL 3 ON SHEET DT-01 FOR STANDARD RCP/RCP TRENCH SECTIONS.
 10. EXISTING ADEQUATE SURFACE TREATMENT - CONTRACTOR SHALL STRIP THE TOP SIX INCHES OF SOIL MATERIAL WITH ASSOCIATED PLANT MATERIAL OVER ALL SURFACE TO BE DISTURBED BY CONSTRUCTION. EXISTING ADEQUATE SURFACE TREATMENT SHALL BE REPLACED WITH PLANT MATERIAL ON THE SURFACE OF THE DISTURBED AREA IN A UNIFORM FASHION.



GRAPHIC SCALE - HORIZONTAL (IN FEET)

GRAPHIC SCALE - VERTICAL (IN FEET)

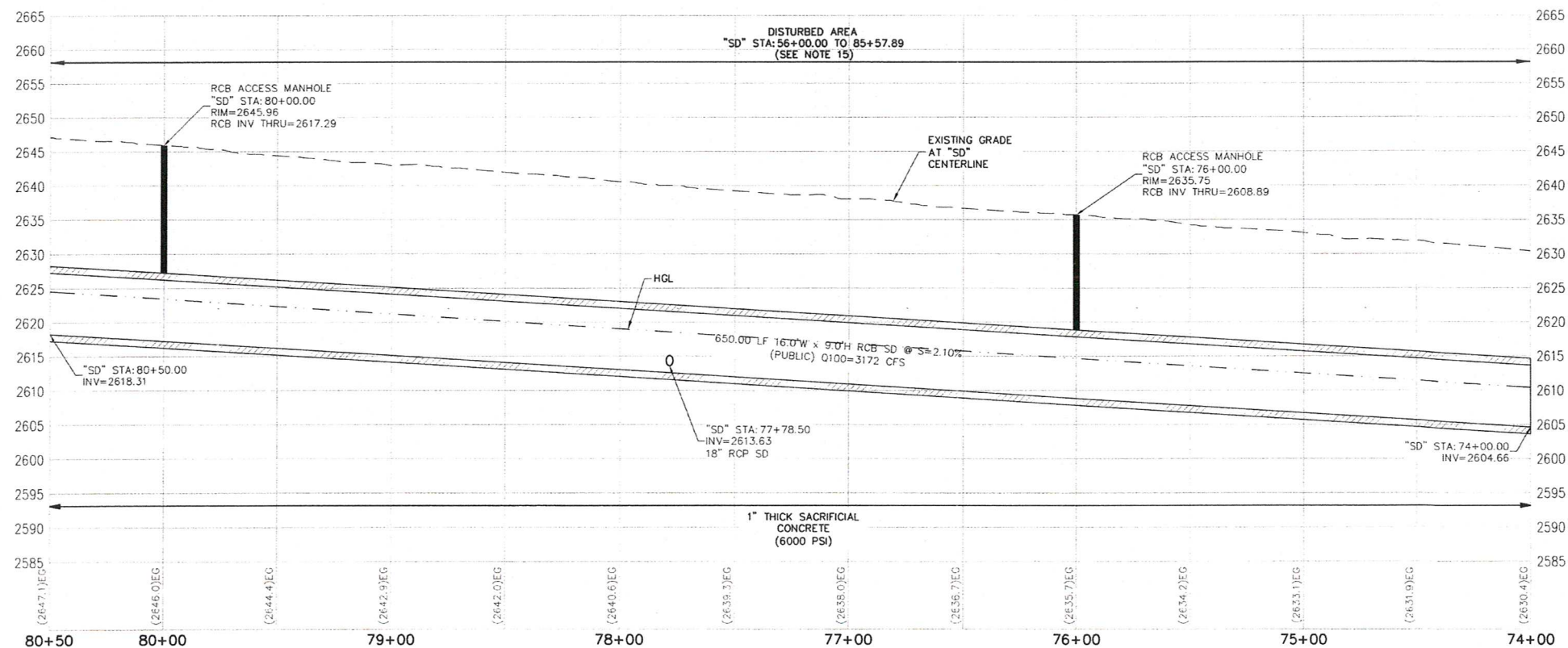
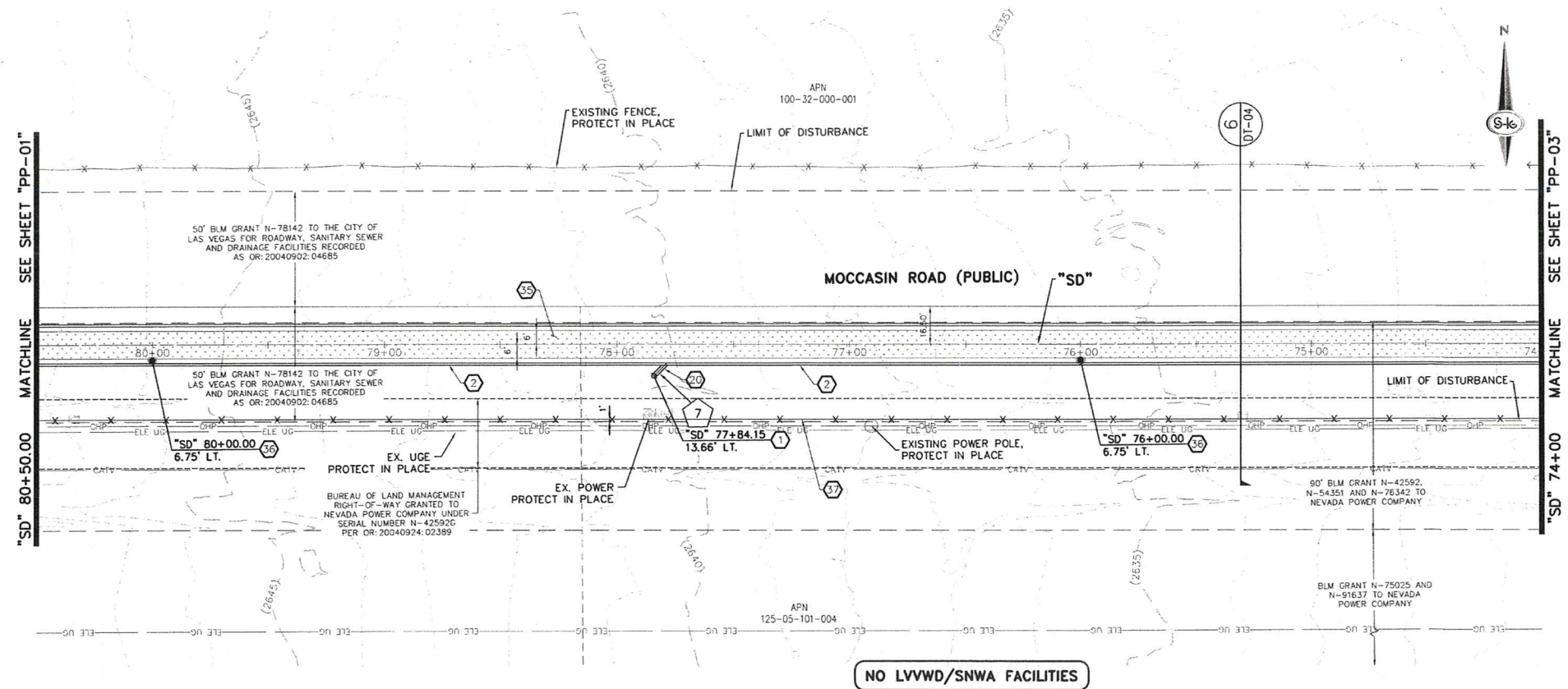
Call before you Dig 811

CALL BEFORE YOU DIG OVERHEAD

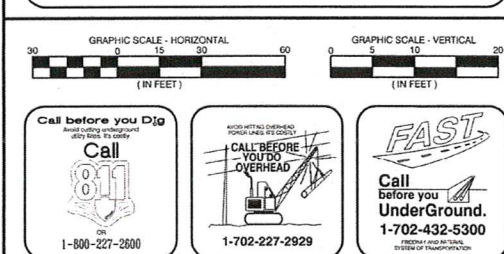
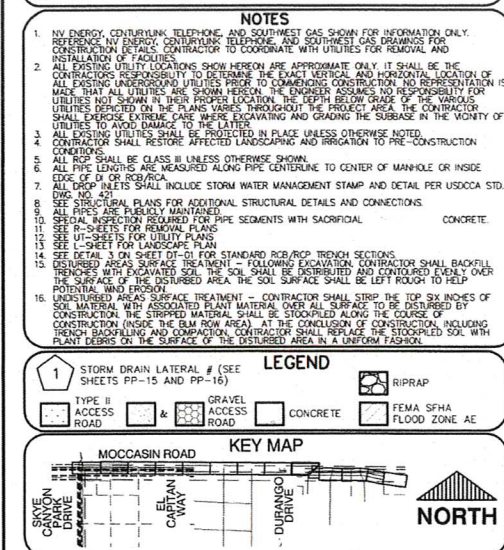
FAST Call before you UnderGround. 1-702-432-5300

SLATER HANIFAN GROUP CONSULTING ENGINEERS & PLANNERS 5740 S. ARVILLE STREET #116, LAS VEGAS, NV 89118 PHONE (702) 284-5300 FAX (702) 284-5300	
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DATE: JAN 2021	CHECKED BY: FR
SUBMITTAL STAGE: 100% FINAL	
MOCASIN RD CCRCFD FLOOD CONTROL FACILITY 1076/1077	
PLAN AND PROFILE	
\"SD\" 80+50.00 TO \"SD\" 87+00.00	
SHEET PP-01	
10 OF 48	
DRAWING NO. 731-99	

AS BUILT

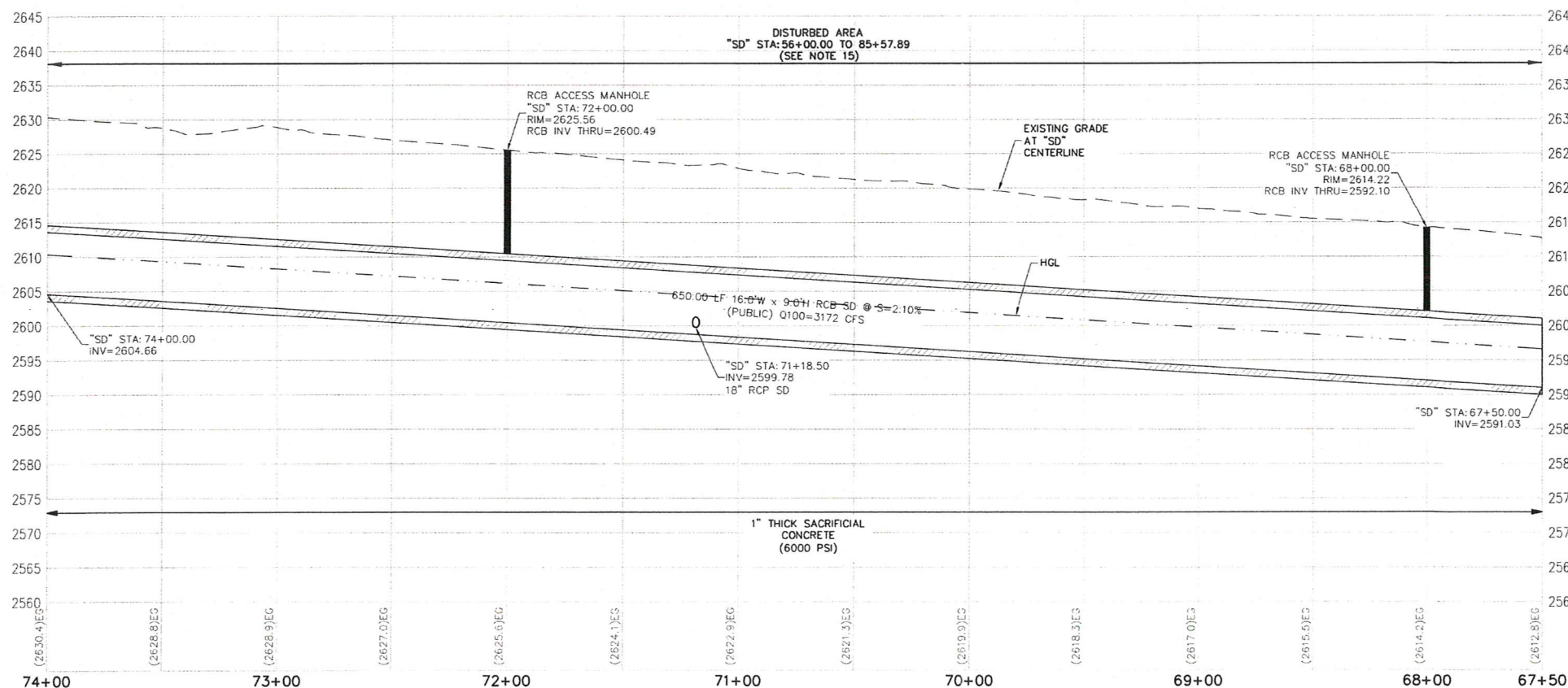
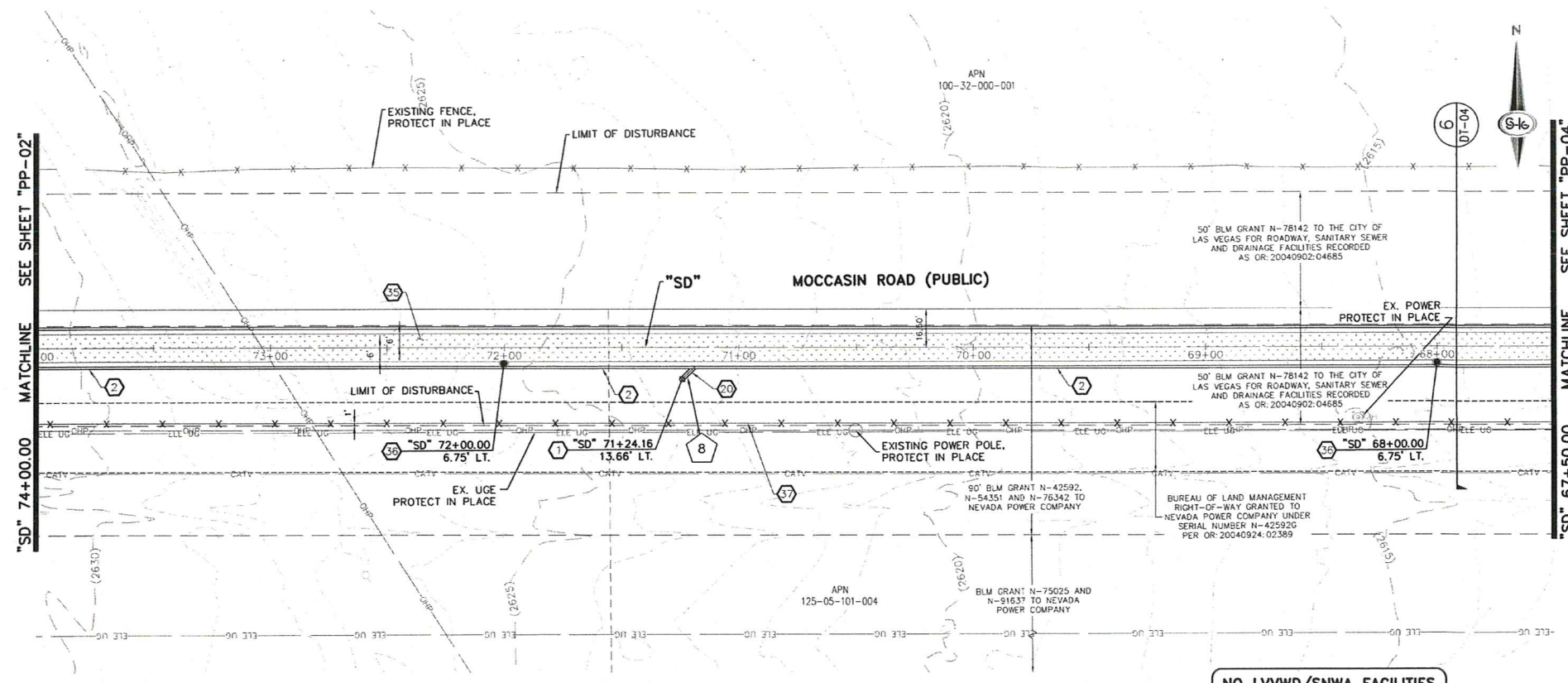


- ### CONSTRUCTION NOTES
1. CONSTRUCT STORM DRAIN PIPE PLUG (DETAIL 2, SHEET S-2)
 2. INSTALL 16\"/>
- ### NOTES
1. NV ENERGY, CENTURYLINK, TELEPHONE, AND SOUTHWEST GAS SHOWN FOR INFORMATION ONLY. REFERENCE NV ENERGY, CENTURYLINK, TELEPHONE, AND SOUTHWEST GAS DRAWINGS FOR CONSTRUCTION UTILITIES. CONTRACTOR TO COORDINATE WITH UTILITIES FOR REMOVAL AND INSTALLATION OF FACILITIES.
 2. ALL EXISTING UTILITIES LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THESE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF UTILITIES SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF UTILITIES NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF UTILITIES NOT SHOWN ON THE PLANS.



SLATER HANIFAN GROUP CONSULTING ENGINEERS & PLANNERS 9740 S. ARVILLE STREET #210, LAS VEGAS, NV 89118 PHONE (702) 264-5300 FAX (702) 264-5399	
PREPARED BY CITY OF LAS VEGAS	DESIGNED BY CAM
DRAWN BY BCC	CHECKED BY FR
SUBMITTAL STAGE 100% FINAL	DATE JAN 2021
TITLE MOCCASIN RD CCRFCD FLOOD CONTROL FACILITY MOCCASIN RD TO CCRFCD FACILITY LVUP 1076/1077	
SHEET PP-02 11 OF 48 DRAWING NO. 731-99	

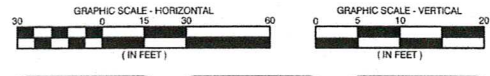
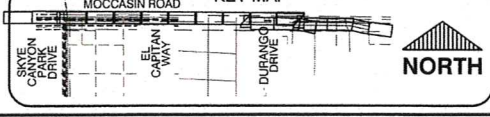
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- ### CONSTRUCTION NOTES
1. CONSTRUCT STORM DRAIN PIPE PLUG (DETAIL 2, SHEET S-2)
 2. INSTALL 16"W x 9"H RCB (DETAIL 1, SHEET S-2)
 3. CONSTRUCT CONCRETE FILLED MEDIAN WITH "L" TYPE ISLAND CURB (USDOCA STD. DWG. NO. 218 AND 219)
 4. CONSTRUCT 48" RCB ACCESS MANHOLE (DETAIL 3, SHEET S-1)
 5. CONSTRUCT HEADWALL (DETAIL 1, SHEET S-7)
 6. CONSTRUCT CONCRETE TRANSITION (DETAIL 1, SHEET S-5)
 7. CONSTRUCT ACCESS RAMP (DETAIL 1, SHEET S-5)
 8. MATCH EXISTING GRADE
 9. CONSTRUCT 10"W x 5"H RCB CONNECTION (DETAIL 1, SHEET S-4)
 10. CONNECT TO EXISTING 30" RCP WITH CONCRETE COLLAR (DETAIL 1, SHEET DT-02)
 11. INSTALL 5.5" ASPHALT OVER 6" TYPE II AGGREGATE BASE
 12. CONSTRUCT CONCRETE RECTANGULAR CHANNEL (DETAIL A, SHEET S-6)
 13. INSTALL 30" RCP STORM DRAIN (CLASS PER LATERAL PROFILE)
 14. INSTALL 72" RCP STORM DRAIN (CLASS PER LATERAL PROFILE)
 15. INSTALL 24" RCP STORM DRAIN (CLASS PER LATERAL PROFILE)
 16. INSTALL MODIFIED TYPE "DM2" STORM DRAIN DROP INLET, L=7.5' (USDOCA STD. DWG. 412.1 AND 421)
 17. CONSTRUCT "L" TYPE CURB AND GUTTER (USDOCA STD. DWG. 216)
 18. INSTALL 10' WIDE CONCRETE SIDEWALK (USDOCA STD. DWG. 234)
 19. INSTALL NDOT TYPE 2B STORM DRAIN DROP INLET WITH CONCRETE APRON (NDOT DETAIL R-4.2.2.2, R-4.2.7 AND USDOCA STD. DWG. 412.1 AND 421) (SEE SHEET DT-05)
 20. INSTALL 18" RCP STORM DRAIN (CLASS PER LATERAL PROFILE)
 21. CONSTRUCT 12" WIDE, 2" THICK 3/4" ROCK MULCH ACCESS ROAD OVER 90% COMPACTED NATIVE MATERIAL. SEE AR-SHEETS FOR GRADING AND INFORMATION
 22. INSTALL PARTIALLY GROUTED RIPRAP (D50=12", T=24") (SEE DETAIL 5, SHEET DT-02)
 23. CONSTRUCT CONCRETE FLUME (DETAIL 1, SHEET S-5)
 24. CONSTRUCT 5 LF "ROLL" TYPE CURB TO "L" TYPE CURB TRANSITION (DETAIL 3, SHEET DT-03)
 25. INSTALL 72" HIGH CHAIN LINK FENCE WITH GROUNDING (SEE SHEET E-1)
 26. INSTALL 12-FEET WIDE CHAIN LINK GATE WITH GROUNDING (SEE SHEET E-1)
 27. INSTALL 3" ASPHALT OVER 4" TYPE II AGGREGATE BASE
 28. INSTALL BUS TURNOUT (SEE DETAIL 4 ON SHEET DT-01)
 29. CONNECT TO EXISTING 18" RCP WITH CONCRETE COLLAR (DETAIL 1, SHEET DT-02)
 30. INSTALL POST AND CABLE FENCE WITH GROUNDING (LOCATION PER DETAIL ON SHEET PP-14) (SEE SHEET E-1) (DETAIL 1, SHEET DT-01 OR APPROVED EQUAL)
 31. INSTALL 6" THICK CONCRETE OVER 6" TYPE II AGGREGATE BASE (DETAIL 5, SHEET DT-04)
 32. INSTALL 42" C900 PVC PIPE (OR APPROVED EQUAL) WITH CAPS ON EACH END FOR FUTURE SEWER (LATERAL PROFILE 1, SHEET DT-01)
 33. INSTALL 10"W x 5"H RCB (DETAIL 1, SHEET S-4)
 34. CONSTRUCT "ROLL" TYPE CURB AND GUTTER (USDOCA STD. DWG. NO. 217.2)
 35. INSTALL 12" WIDE 6" THICK TYPE II AGGREGATE ACCESS ROAD OVER 95% COMPACTED NATIVE MATERIAL
 36. CONSTRUCT 60" RCB ACCESS MANHOLE (DETAIL 3, SHEET S-1)
 37. INSTALL 42" HOG-WIRE FENCE (DETAIL 4, SHEET DT-04) INSTALL HOG-WIRE FENCE GROUNDING PER REQUIREMENTS OUTLINED ON SHEET E-1, KEYNOTE 8
 38. INSTALL 12" WIDE LOCKING GATE (USDOCA STD. DWG. NO. 253) INSTALL GATE GROUNDING SYSTEM PER REQUIREMENTS OUTLINED ON SHEET E-1, KEYNOTE 9
 39. CONSTRUCT CUT-OFF WALL (SECTION C, SHEET S-5)
 40. CONSTRUCT WING WALL (DETAIL A, SHEET S-7)
 41. INSTALL 5" THICK 3/4" ROCK MULCH ON EXISTING ACCESS ROAD
 42. SEE AR-SHEETS FOR GRADING AND LAYOUT
 43. INSTALL TYPE "CM" STORM DRAIN DROP INLET, L=5' (USDOCA STD. DWG. NO. 422). DO NOT USE SOLID LID ON 1ST PANEL, USE DUAL VANE TYPE GRATES.
 44. INSTALL 30" C900 STORM DRAIN

- ### NOTES
1. INV ENERGY, CENTURYLINK, TELEPHONE, AND SOUTHWEST GAS SHOWN FOR INFORMATION ONLY. REFERENCE INV ENERGY, CENTURYLINK, TELEPHONE, AND SOUTHWEST GAS DRAWINGS FOR CONSTRUCTION. CONTRACTOR TO COORDINATE WITH UTILITIES FOR REMOVAL AND INSTALLATION OF FACILITIES.
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 3. EXISTING UTILITIES SHALL BE PROTECTED IN PLACE UNLESS OTHERWISE NOTED.
 4. CONTRACTOR SHALL RESTORE AFFECTED LANDSCAPING AND IRRIGATION TO PRE-CONSTRUCTION CONDITIONS.
 5. ALL RCP SHALL BE CLASS II UNLESS OTHERWISE SHOWN.
 6. ALL PIPE LINES ARE MEASURED ALONG PIPE CENTERLINE TO CENTER OF MANHOLE OR INSIDE EDGE OF D.I. OR BOX CULVERT.
 7. ALL DROP PIPES SHALL INCLUDE STORM WATER MANAGEMENT STAMP AND DETAIL PER USDOCA STD. DWG. NO. 421.
 8. SEE STRUCTURAL PLANS FOR ADDITIONAL STRUCTURAL DETAILS AND CONNECTIONS.
 9. ALL PIPES ARE PUBLICLY MAINTAINED.
 10. SEE DETAIL 1 FOR RCP JOINTS AND PIPE SEGMENTS WITH SACRIFICIAL CONCRETE.
 11. SEE R-SHEETS FOR REMOVAL PLANS.
 12. SEE L-SHEETS FOR LANDSCAPE PLANS.
 13. DETAIL 1, SHEET S-2 FOR STANDARD RCB/RCP TRENCH SECTIONS.
 14. DISTURBED AREAS SHALL BE TREATED - FOLLOWING EXCAVATION, CONTRACTOR SHALL BACKFILL EXCAVATED AREAS WITH EXCAVATED SOIL. SOIL SHALL BE OBTAINED AND STOCKPILED CLOSE BY OVER THE SURFACE OF THE DISTURBED AREA. THE SOIL SURFACE SHALL BE LEFT ROUGH TO HELP POTENTIAL REVEGETATION.
 15. CONSTRUCTED AREAS SURFACE TREATMENT - CONTRACTOR SHALL STRIP THE TOP SIX INCHES OF SOIL MATERIAL WITH ASSOCIATED PLANT MATERIAL OVER ALL SURFACES TO BE DISTURBED BY CONSTRUCTION. THE STRIPPED MATERIAL SHALL BE STOCKPILED ALONG THE COURSE OF CONSTRUCTION (INSIDE THE BLM ROW AREA). AT THE CONCLUSION OF CONSTRUCTION, INCLUDING TRENCH BACKFILLING AND CONCRETE, CONTRACTOR SHALL REVEGETATE THE STOCKPILED SOIL WITH PLANT DEBRIS ON THE SURFACE OF THE DISTURBED AREA IN A UNIFORM FASHION.

- ### LEGEND
- | | |
|---|----------------------------|
| 1. STORM DRAIN LATERAL # (SEE SHEETS PP-15 AND PP-16) | 2. RIPRAP |
| 3. TYPE II ACCESS ROAD | 4. GRAVEL ACCESS ROAD |
| 5. CONCRETE | 6. FEMA SFHA FLOOD ZONE AC |



Call before you Dig

811

1-800-227-2600

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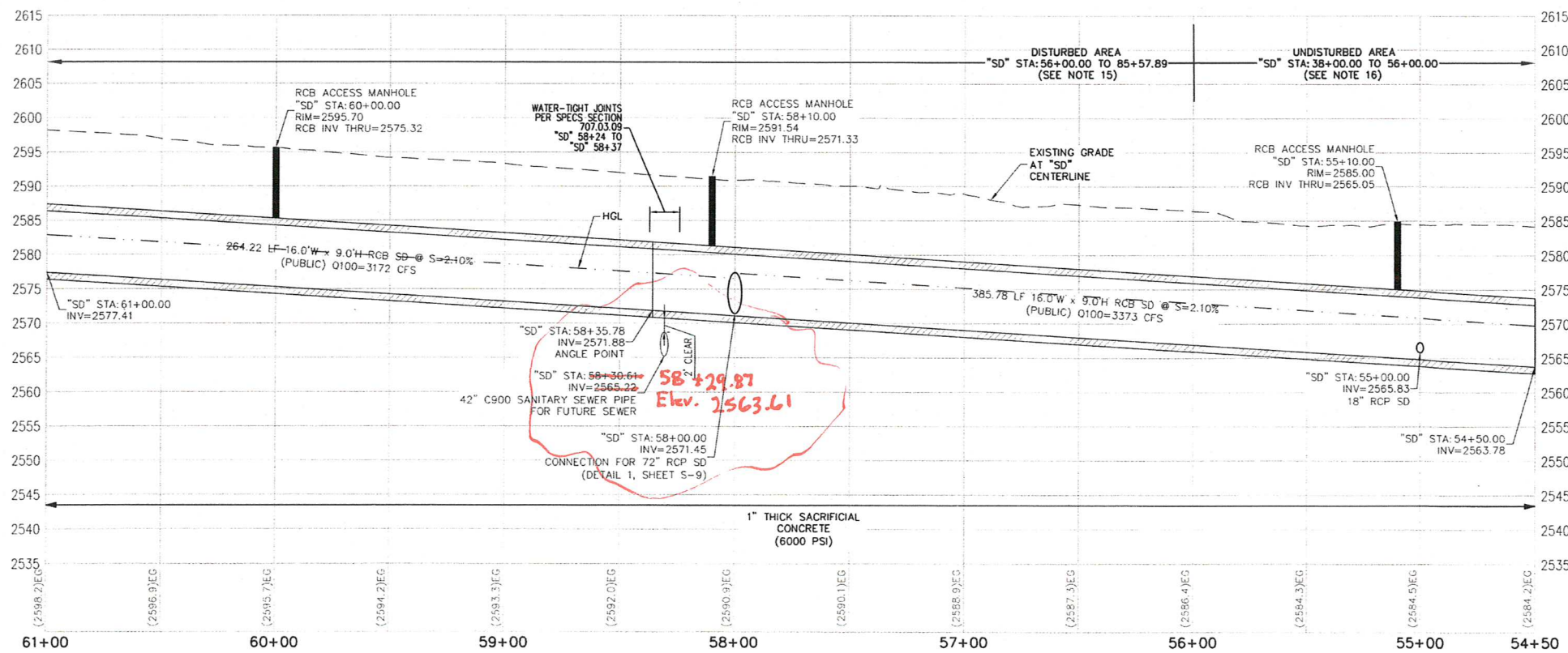
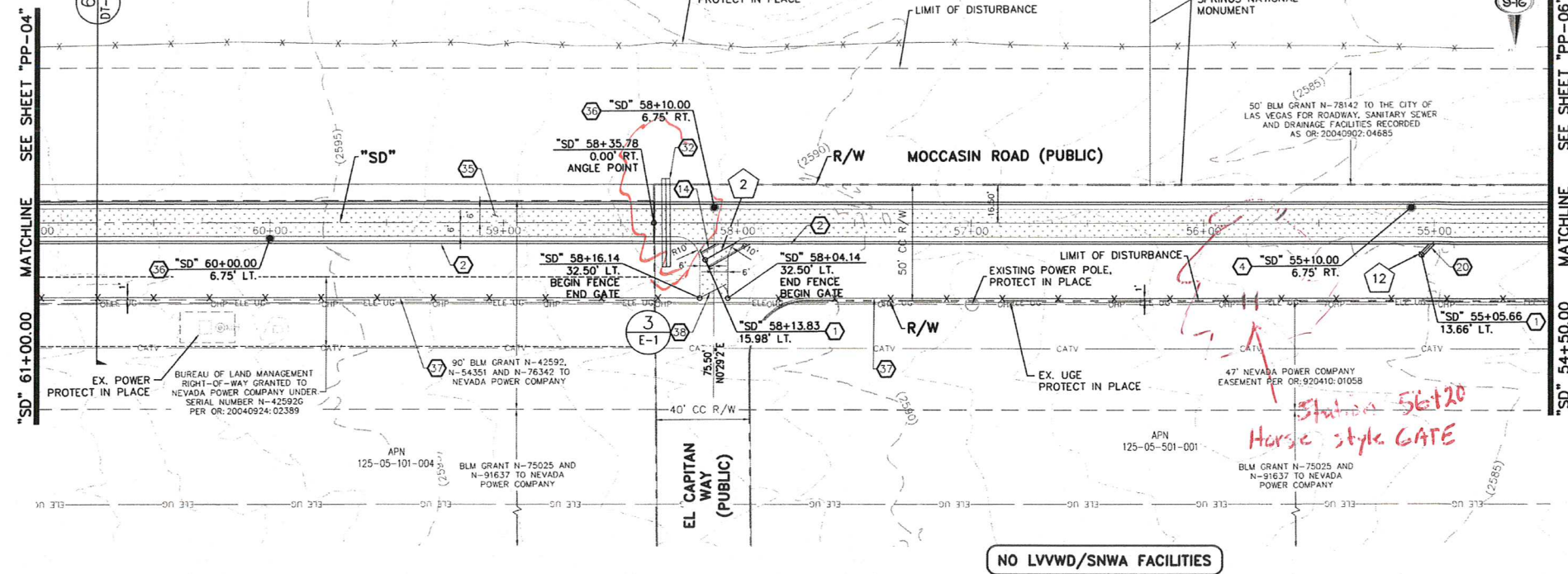
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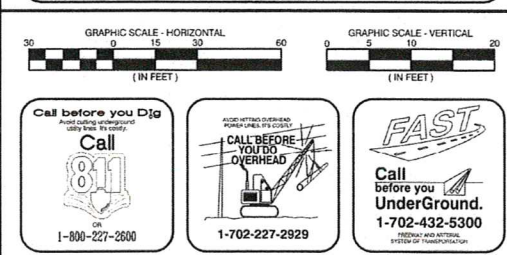
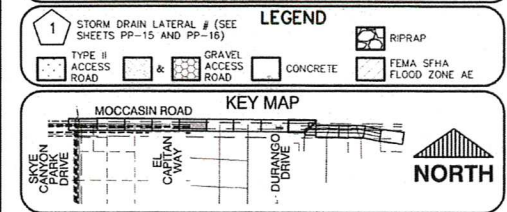
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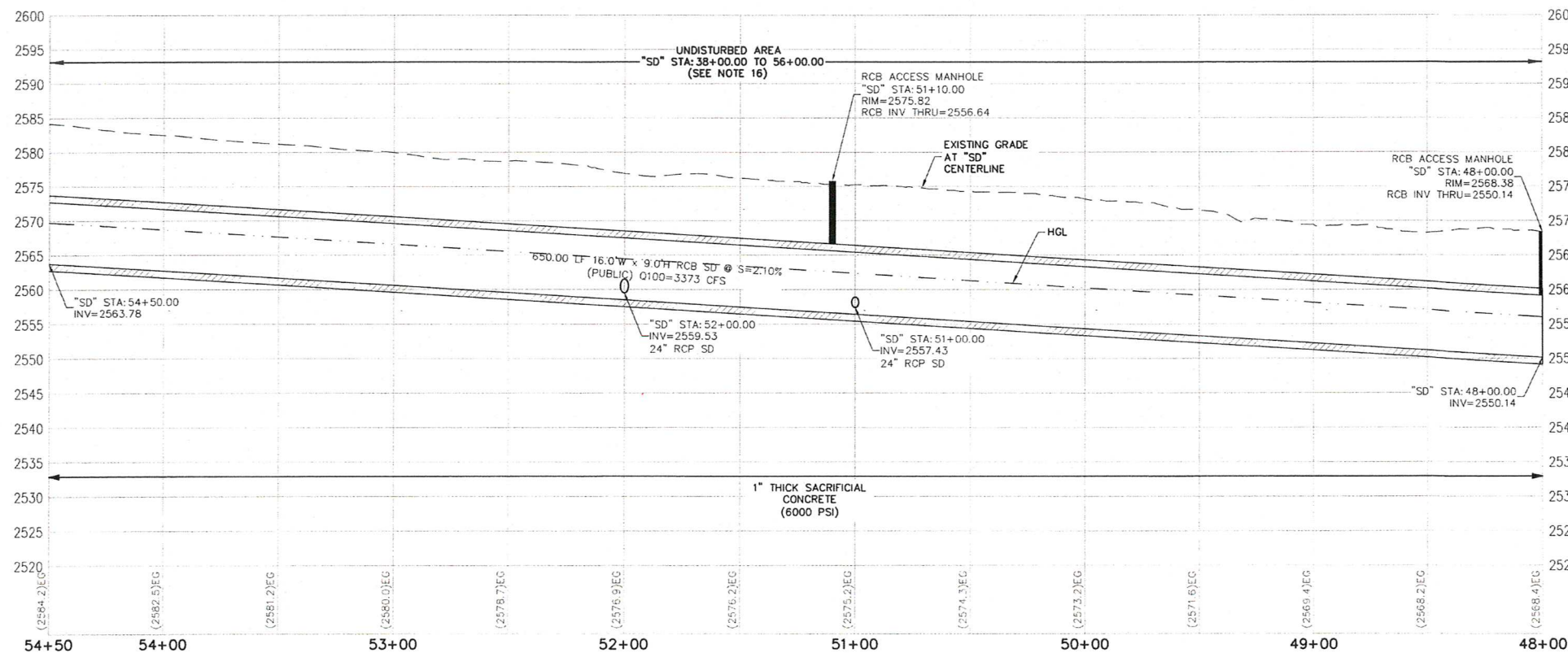
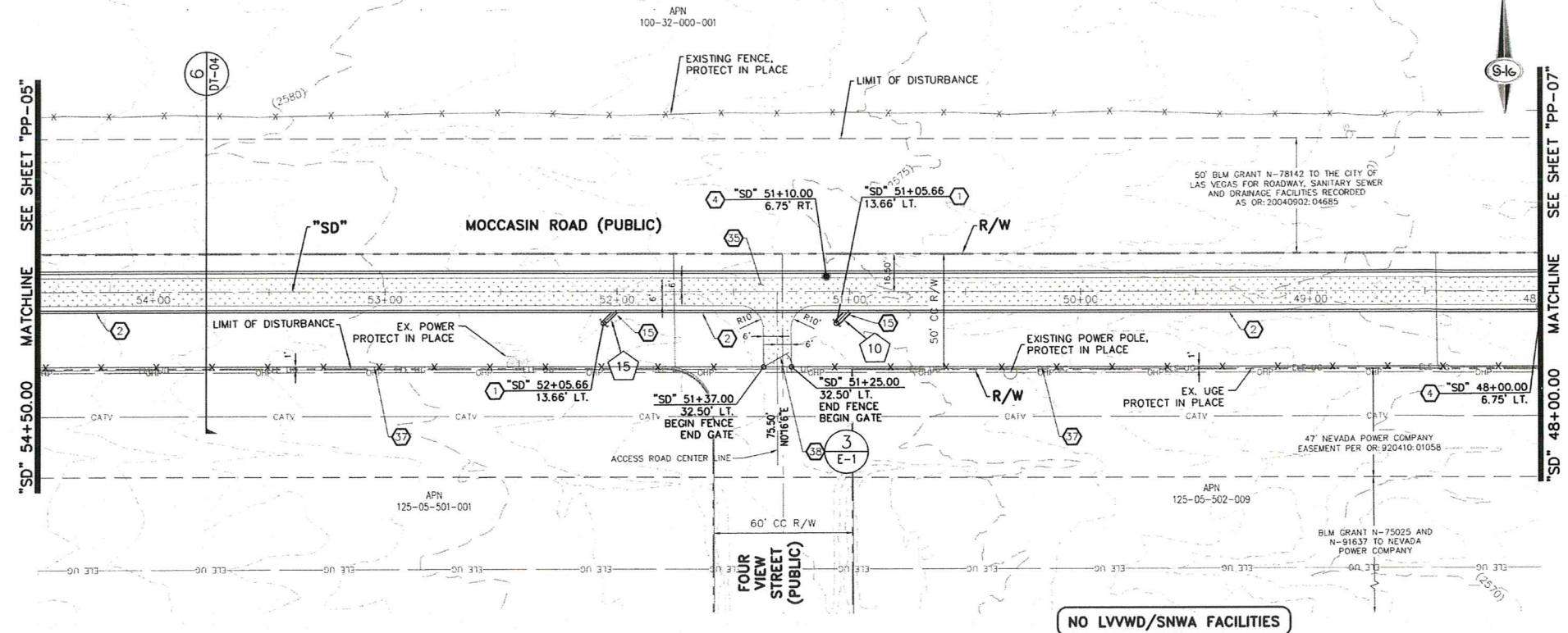
- ### CONSTRUCTION NOTES
- CONSTRUCT STORM DRAIN PIPE PLUG (DETAIL 2, SHEET S-2)
 - INSTALL 16"W x 9"H RCB (DETAIL 1, SHEET S-2)
 - CONSTRUCT CONCRETE FILLED MEDIAN WITH "L" TYPE ISLAND CURB (USDOCA STD. DWG. NO. 218 AND 219)
 - CONSTRUCT 48" RCB ACCESS MANHOLE (DETAIL 3, SHEET S-1)
 - CONSTRUCT HEADWALL (DETAIL 1, SHEET S-7)
 - CONSTRUCT CONCRETE TRANSITION (DETAIL 1, SHEET S-5)
 - CONSTRUCT ACCESS RAMP (DETAIL 1, SHEET S-5)
 - MATCH EXISTING GRADE
 - CONSTRUCT 10"W x 5"H RCB CONNECTION (DETAIL 1, SHEET S-4)
 - CONNECT TO EXISTING 30" RCP WITH CONCRETE COLLAR (DETAIL 1, SHEET DT-02)
 - INSTALL 5.5" ASPHALT OVER 6" TYPE II AGGREGATE BASE
 - CONSTRUCT CONCRETE RECTANGULAR CHANNEL (DETAIL A, SHEET S-6)
 - INSTALL 30" RCP STORM DRAIN (CLASS PER LATERAL PROFILE)
 - INSTALL 72" RCP STORM DRAIN (CLASS PER LATERAL PROFILE)
 - INSTALL 24" RCP STORM DRAIN (CLASS PER LATERAL PROFILE)
 - INSTALL MODIFIED TYPE "DM2" STORM DRAIN DROP INLET, L=7.5' (USDOCA STD. DWG. 412.1 AND 421)
 - CONSTRUCT "L" TYPE CURB AND GUTTER (USDOCA STD. DWG. 216)
 - INSTALL 10' WIDE CONCRETE SIDEWALK (USDOCA STD. DWG. 234)
 - INSTALL NDOT TYPE 2B STORM DRAIN DROP INLET WITH CONCRETE APRON (NDOT DETAIL R-4.2.2, R-4.2.7 AND USDOCA STD. DWG. 412.1 AND 421) (SEE SHEET DT-05)
 - INSTALL 18" RCP STORM DRAIN (CLASS PER LATERAL PROFILE)
 - CONSTRUCT 12' WIDE, 2" THICK 3/4" ROCK MULCH ACCESS ROAD OVER 90% COMPACTED NATIVE MATERIAL. SEE AR-SHEETS FOR GRADING AND INFORMATION
 - INSTALL PARTIALLY GROUTED RIPRAP (D50=12", T=24") (SEE DETAIL 5, SHEET DT-02)
 - CONSTRUCT CONCRETE FLUME (DETAIL 1, SHEET S-5)
 - CONSTRUCT 5 LF "ROLL" TYPE CURB TO "L" TYPE CURB TRANSITION (DETAIL 3, SHEET DT-03)
 - INSTALL 12'-FT WIDE CHAIN LINK FENCE WITH GROUNDING (SEE SHEET E-1)
 - INSTALL 3" ASPHALT OVER 4" TYPE II AGGREGATE BASE
 - INSTALL BUS TURNOUT (SEE DETAIL 4 ON SHEET DT-01)
 - CONNECT TO EXISTING 18" RCP WITH CONCRETE COLLAR (DETAIL 1, SHEET DT-02)
 - INSTALL POST AND CABLE FENCE WITH GROUNDING (LOCATION PER DETAIL ON SHEET PP-14) (SEE SHEET E-1) (DETAIL 1, SHEET DT-01 OR APPROVED EQUAL)
 - INSTALL 6" THICK CONCRETE OVER 6" TYPE II AGGREGATE BASE (DETAIL 5, SHEET DT-04)
 - INSTALL 42" C900 PVC PIPE (OR APPROVED EQUAL) WITH CAPS ON EACH END FOR FUTURE SEWER (LATERAL PROFILE 1, SHEET UT-01)
 - INSTALL 10"W x 5"H RCB (DETAIL 1, SHEET S-4)
 - CONSTRUCT "ROLL" TYPE CURB AND GUTTER (USDOCA STD. DWG. NO. 217.2)
 - COMPACTED NATIVE MATERIAL
 - CONSTRUCT 60" RCB ACCESS MANHOLE (DETAIL 3, SHEET S-1)
 - INSTALL 42" HOG-WIRE FENCE (DETAIL 4, SHEET DT-04). INSTALL HOG-WIRE FENCE GROUNDING SYSTEM PER REQUIREMENTS OUTLINED ON SHEET E-1, KEYNOTE 8.
 - INSTALL 12" WIDE LOCKING GATE (USDOCA STD. DWG. NO. 253). INSTALL GATE GROUNDING SYSTEM PER REQUIREMENTS OUTLINED ON SHEET E-1, KEYNOTE 9.
 - CONSTRUCT OUT-OFF WALL (SECTION C, SHEET S-5)
 - CONSTRUCT WING WALL (DETAIL A, SHEET S-7)
 - INSTALL 2" THICK 3/4" ROCK MULCH ON EXISTING ACCESS ROAD
 - SEE AR-SHEETS FOR GRADING AND LAYOUT
 - INSTALL TYPE "CM" STORM DRAIN DROP INLET, L=5' (USDOCA STD. DWG. NO. 422). DO NOT USE SOLID LID ON 1ST PANEL. USE DUAL VANE TYPE GRATES
 - INSTALL 30" C900 STORM DRAIN

- ### NOTES
- NV ENERGY, CENTURYLINK TELEPHONE, AND SOUTHWEST GAS SHOWN FOR INFORMATION ONLY. REFERENCE NV ENERGY, CENTURYLINK TELEPHONE, AND SOUTHWEST GAS DRAWINGS FOR CONSTRUCTION DETAILS. CONTRACTOR TO COORDINATE WITH UTILITIES FOR REMOVAL AND INSTALLATION OF FACILITIES.
 - ALL EXISTING UTILITIES LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN A REPRESENTATION MADE THAT ALL UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF UTILITIES DEPICTED ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF UTILITIES DEPICTED ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF UTILITIES DEPICTED ON THE PLANS.
 - ALL EXISTING UTILITIES SHALL BE PROTECTED IN PLACE UNLESS OTHERWISE NOTED.
 - CONTRACTOR SHALL RESTORE AFFECTED LANDSCAPING AND IRRIGATION TO PRE-CONSTRUCTION CONDITION.
 - ALL RCP SHALL BE CLASS II UNLESS OTHERWISE SHOWN.
 - PIPE LENGTHS ARE MEASURED ALONG PIPE CENTERLINE TO CENTER OF MANHOLE OR INSIDE EDGE OF IN OR OUT RAMP.
 - ALL DROP INLETS SHALL INCLUDE STORM WATER MANAGEMENT STAMP AND DETAIL PER USDOCA STD. DWG. NO. 42.
 - SEE STRUCTURAL PLANS FOR ADDITIONAL STRUCTURAL DETAILS AND CONNECTIONS.
 - ALL PIPES ARE PUBLICLY MAINTAINED.
 - SOIL INSPECTION SHALL BE REQUIRED FOR PIPE SEGMENTS WITH SACRIFICIAL CONCRETE.
 - SEE L-SHEET FOR LANDSCAPE PLAN
 - SEE DETAIL A ON SHEET DT-01 FOR STANDARD RCB/RCP TRENCH SECTIONS.
 - DISTURBED AREAS SURFACE TREATMENT - FOLLOWING EXCAVATION, CONTRACTOR SHALL BACKFILL WITH EXCAVATED MATERIAL OVER ALL SURFACE TO BE DISTURBED BY CONSTRUCTION. THE EXCAVATED MATERIAL SHALL BE STOCKPILED ALONG THE COURSE OF CONSTRUCTION (INSIDE THE BLM ROW AREA). AT THE CONCLUSION OF CONSTRUCTION, INCLUDING BACKFILLING AND COMPLETION, CONTRACTOR SHALL, AS A MINIMUM, STOCKPILE SOIL WITH PLANT DEBRIS ON THE SURFACE OF THE DISTURBED AREA IN A UNIFORM FASHION.



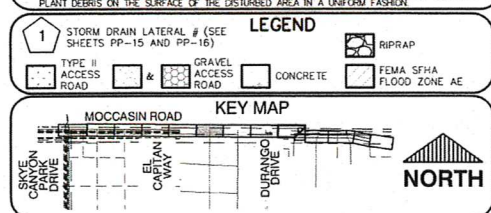
SLATER HANIFAN GROUP CONSULTING ENGINEERS & PLANNERS 5740 S. ANKLE STREET #116, LAS VEGAS, NV 89118 PHONE (702) 284-3390 FAX (702) 284-3399	
PREPARED BY CITY OF LAS VEGAS	DESIGNED BY CAM
DRAWN BY BCC	CHECKED BY FR
SUBMITTAL STAGE 100% FINAL	DATE JAN 2021
TITLE MOCCASIN RD FLOOD CONTROL FACILITY MOCCASIN RD TO CCRFCD FACILITY LVUP 1076/1077	
SHEET PP-05 14 OF 48	
DRAWING NO. 731-99	

AS BUILT



- ### CONSTRUCTION NOTES
- CONSTRUCT STORM DRAIN PIPE PLUG (DETAIL 2, SHEET S-2)
 - INSTALL 16"W x 9"H RCB (DETAIL 1, SHEET S-2)
 - CONSTRUCT CONCRETE FILLED MEDIAN WITH "L" TYPE ISLAND CURB (USDOCA STD. DWG. NO. 218 AND 219)
 - CONSTRUCT 48" RCB ACCESS MANHOLE (DETAIL 3, SHEET S-1)
 - CONSTRUCT HEADWALL (DETAIL 1, SHEET S-7)
 - CONSTRUCT CONCRETE TRANSITION (DETAIL 1, SHEET S-5)
 - CONSTRUCT ACCESS RAMP (DETAIL 1, SHEET S-5)
 - MATCH EXISTING GRADE
 - CONSTRUCT 10"W x 5"H RCB CONNECTION (DETAIL 1, SHEET S-4)
 - CONNECT TO EXISTING 30" RCP WITH CONCRETE COLLAR (DETAIL 1, SHEET DT-02)
 - INSTALL 5.5" ASPHALT OVER 6" TYPE II AGGREGATE BASE
 - CONSTRUCT CONCRETE RECTANGULAR CHANNEL (DETAIL A, SHEET S-6)
 - INSTALL 30" RCP STORM DRAIN (CLASS PER LATERAL PROFILE)
 - INSTALL 72" RCP STORM DRAIN (CLASS PER LATERAL PROFILE)
 - INSTALL 24" RCP STORM DRAIN (CLASS PER LATERAL PROFILE)
 - INSTALL MODIFIED TYPE "DM2" STORM DRAIN DROP INLET, L=7.5' (USDOCA STD. DWG. 412.1 AND 421)
 - CONSTRUCT "L" TYPE CURB AND GUTTER (USDOCA STD. DWG. 216)
 - INSTALL 10" WIDE CONCRETE SIDEWALK (USDOCA STD. DWG. 234)
 - INSTALL NGDT TYPE 2B STORM DRAIN DROP INLET WITH CONCRETE APRON (NOT DETAIL R-4.2.2, R-4.2.7 AND USDOCA STD. DWG. 412.1 AND 421) (SEE SHEET DT-05)
 - INSTALL 18" RCP STORM DRAIN (CLASS PER LATERAL PROFILE)
 - CONSTRUCT 12" WIDE, 2" THICK 3/4" ROCK MULCH ACCESS ROAD OVER 50% COMPACTED NATIVE MATERIAL. SEE AIR-SHEETS FOR GRADING AND INFORMATION
 - INSTALL PARTIALLY GROUTED RIPRAP (D50=12", T=24") (SEE DETAIL 5, SHEET DT-02)
 - CONSTRUCT CONCRETE FLUME (DETAIL 1, SHEET S-5)
 - CONSTRUCT 5 LF "ROLL" TYPE CURB TO "L" TYPE CURB TRANSITION (DETAIL 3, SHEET DT-03)
 - INSTALL 72" HIGH CHAIN LINK FENCE WITH GROUNDING (SEE SHEET E-1)
 - INSTALL 12-FT WIDE CHAIN LINK GATE WITH GROUNDING (SEE SHEET E-1)
 - INSTALL 3" ASPHALT OVER 4" TYPE II AGGREGATE BASE
 - INSTALL BUS TURNOUT (SEE DETAIL 4 ON SHEET DT-01)
 - CONNECT TO EXISTING 18" RCP WITH CONCRETE COLLAR (DETAIL 1, SHEET DT-02)
 - INSTALL POST AND CABLE FENCE WITH GROUNDING (LOCATION PER DETAIL ON SHEET PP-14) (SEE SHEET E-1) (DETAIL 1, SHEET DT-01 OR APPROVED EQUAL)
 - INSTALL 6" THICK CONCRETE OVER 6" TYPE II AGGREGATE BASE (DETAIL 5, SHEET DT-04)
 - INSTALL 4" C900 PVC PIPE (OR APPROVED EQUAL) WITH CAPS ON EACH END FOR FUTURE SEWER (LATERAL PROFILE 1, SHEET DT-01)
 - INSTALL 10"W x 5"H RCB (DETAIL 1, SHEET S-4)
 - CONSTRUCT "ROLL" TYPE CURB AND GUTTER (USDOCA STD. DWG. NO. 217.2)
 - INSTALL 12" WIDE 6" THICK TYPE II AGGREGATE ACCESS ROAD OVER 95% COMPACTED NATIVE MATERIAL
 - CONSTRUCT 60" RCB ACCESS MANHOLE (DETAIL 3, SHEET S-1)
 - INSTALL 48" HDG-WIRE FENCE (DETAIL 4, SHEET DT-04) INSTALL HDG-WIRE FENCE GROUNDING SYSTEM PER REQUIREMENTS OUTLINED ON SHEET E-1, KEYNOTE 8
 - INSTALL 12" WIDE LOCKING GATE (USDOCA STD. DWG. NO. 223) INSTALL GATE GROUNDING SYSTEM PER REQUIREMENTS OUTLINED ON SHEET E-1, KEYNOTE 9
 - CONSTRUCT CUT-OFF WALL (SECTION C, SHEET S-5)
 - CONSTRUCT WING WALL (DETAIL A, SHEET S-7)
 - INSTALL 2" THICK 3/4" ROCK MULCH ON EXISTING ACCESS ROAD
 - SEE AIR-SHEETS FOR GRADING AND LAYOUT
 - INSTALL TYPE "CM" STORM DRAIN DROP INLET, L=5' (USDOCA STD. DWG. NO. 422) DO NOT USE SOLID LID ON 1ST PANEL, USE DUAL VANE TYPE GRATES
 - INSTALL 30" C900 STORM DRAIN

- ### NOTES
1. NV ENERGY, CENTURYLINK, TELEPHONE, AND SOUTHWEST GAS SHOWN FOR INFORMATION ONLY. REFERENCE NV ENERGY, CENTURYLINK, TELEPHONE, AND SOUTHWEST GAS DRAWINGS FOR CONSTRUCTION. CONTRACTOR TO COORDINATE WITH UTILITIES FOR REMOVAL AND INSTALLATION OF FACILITIES.
 2. ALL EXISTING UTILITIES LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THE PROPER LOCATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR UTILITIES NOT SHOWN IN THE PROPER LOCATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR UTILITIES NOT SHOWN IN THE PROPER LOCATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR UTILITIES NOT SHOWN IN THE PROPER LOCATION.
 3. CONTRACTOR SHALL RESTORE AFFECTED LANDSCAPING AND IRRIGATION TO PRE-CONSTRUCTION CONDITIONS.
 4. ALL RCP SHALL BE CLASS II UNLESS OTHERWISE NOTED.
 5. SPECIAL INSPECTION REQUIRED FOR PIPE SEGMENTS WITH SAGROFIAL CONCRETE.
 6. ALL PIPES ARE PUBLICLY MAINTAINED.
 7. SEE R-SHEETS FOR REMOVAL PLANS.
 8. SEE L-SHEETS FOR UTILITY PLANS.
 9. SEE L-SHEET FOR LANDSCAPE PLAN.
 10. SEE DETAIL 3 ON SHEET DT-01 FOR STANDARD RCB/RCP TRENCH SECTIONS.
 11. DISTURBED AREAS SURFACE TREATMENT - FOLLOWING EXCAVATION, CONTRACTOR SHALL BACKFILL TRENCHES WITH EXCAVATED MATERIAL. ALL SURFACES TO BE DESIGNED BY CONTRACTOR. THE STRIPPED MATERIAL SHALL BE STOCKPILED ALONG THE COURSE OF CONSTRUCTION (NEAR THE RCB ROW AREA) AT THE CONCLUSION OF CONSTRUCTION, INCLUDING TRENCH BACKFILLING AND COMPACTION, CONTRACTOR SHALL REPLACE THE STOCKPILED SOIL WITH PLANT DEBRIS ON THE SURFACE OF THE DISTURBED AREA IN A UNIFORM FASHION.
 12. UNDISTURBED AREAS SURFACE TREATMENT - CONTRACTOR SHALL STRIP THE TOP SIX INCHES OF SOIL MATERIAL WITH ASSOCIATED PLANT MATERIAL. ALL SURFACES TO BE DESIGNED BY CONTRACTOR. THE STRIPPED MATERIAL SHALL BE STOCKPILED ALONG THE COURSE OF CONSTRUCTION (NEAR THE RCB ROW AREA) AT THE CONCLUSION OF CONSTRUCTION, INCLUDING TRENCH BACKFILLING AND COMPACTION, CONTRACTOR SHALL REPLACE THE STOCKPILED SOIL WITH PLANT DEBRIS ON THE SURFACE OF THE DISTURBED AREA IN A UNIFORM FASHION.



GRAPHIC SCALE - HORIZONTAL (IN FEET)

GRAPHIC SCALE - VERTICAL (IN FEET)

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FAST

Call before you UnderGround

SLATER HANIFAN GROUP

CONSULTING ENGINEERS & PLANNERS

9748 S. ARVILLE STREET #214, LAS VEGAS, NV 89118

PHONE (702) 264-5300 FAX (702) 264-5399

PREPARED BY: CITY OF LAS VEGAS

DESIGNED BY: CAM

DRAWN BY: BCC

CHECKED BY: FR

DATE: JAN 2021

SUBMITTAL STAGE: 100% FINAL

MOCCASIN RD

CCRFCD FLOOD CONTROL FACILITY

MOCCASIN RD TO CCRFCD FACILITY LVUP 1076/1077

PLAN AND PROFILE

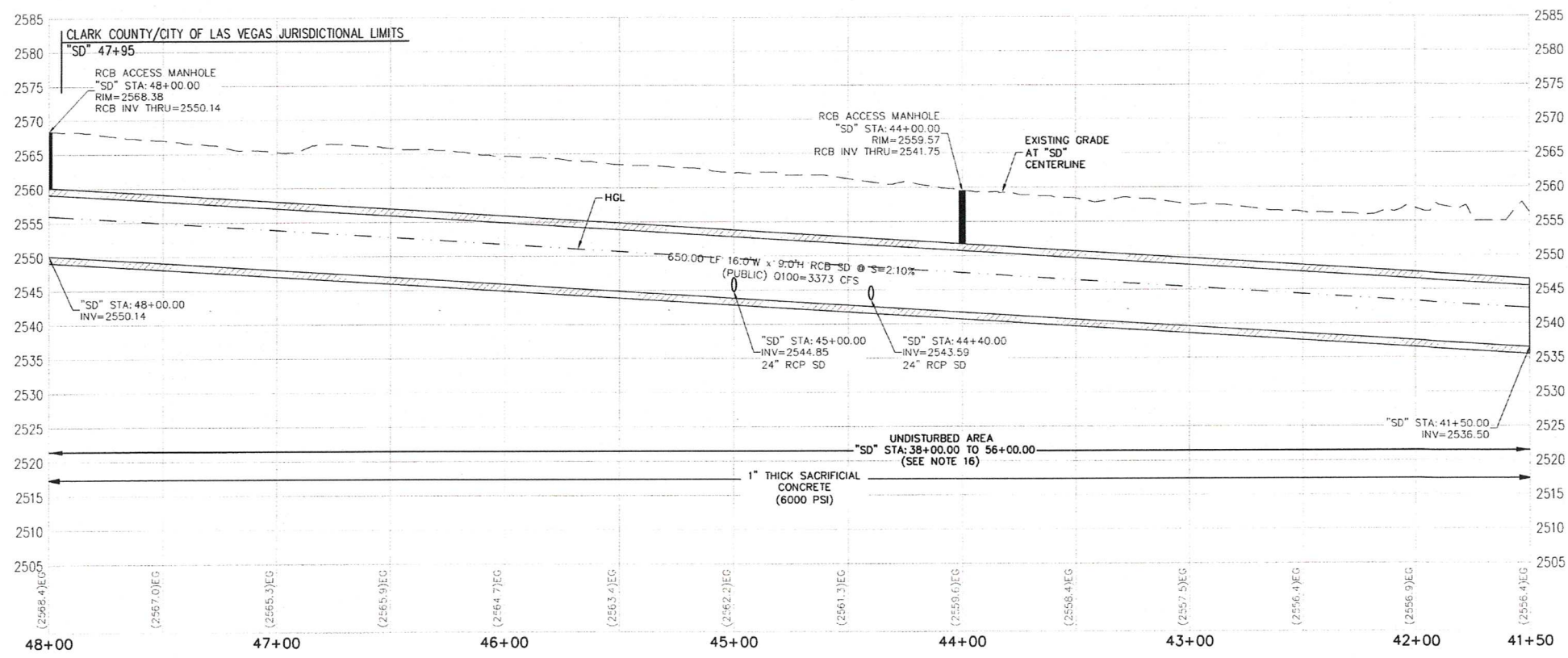
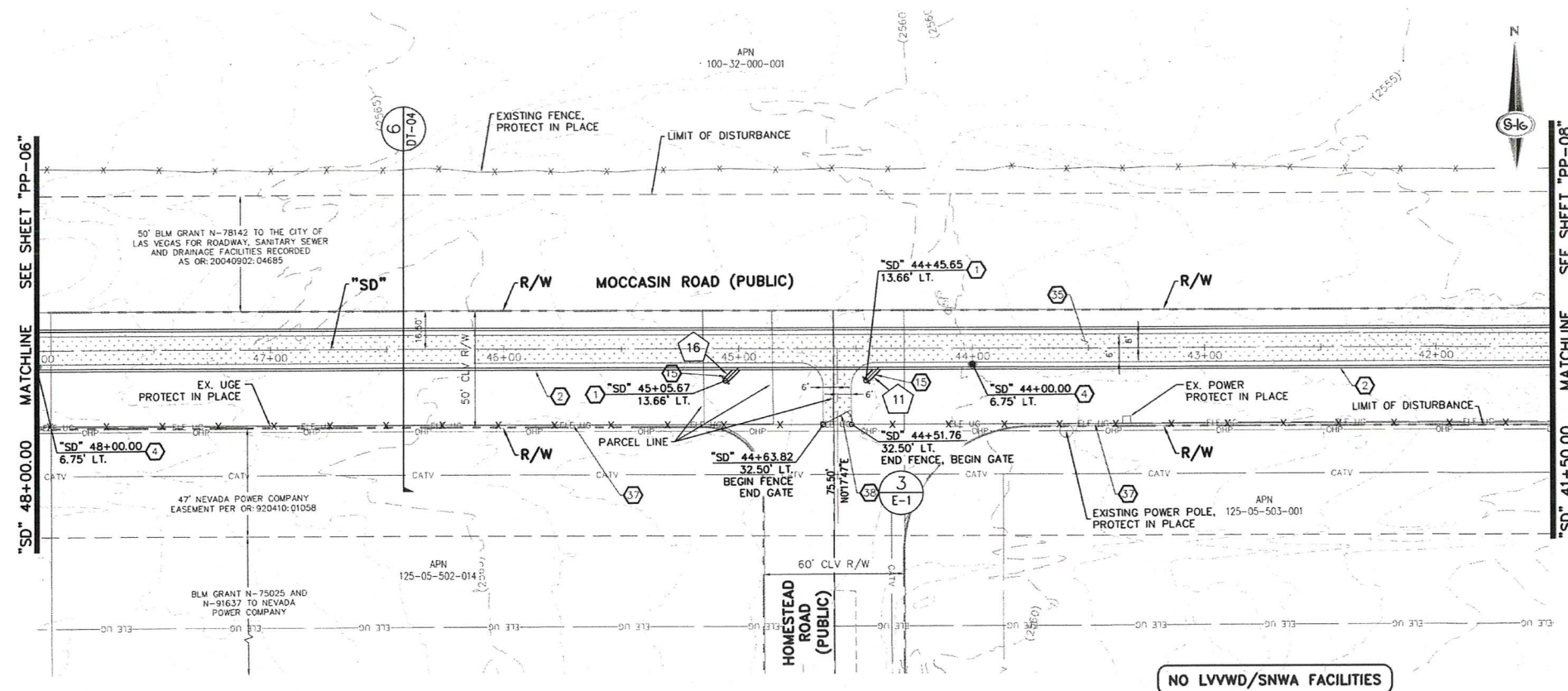
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PP-06

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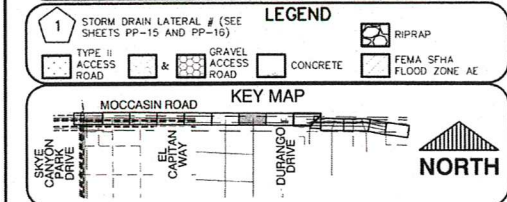
DRAWING NO. 731-99

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- ### CONSTRUCTION NOTES
1. CONSTRUCT STORM DRAIN PIPE PLUG (DETAIL 2, SHEET S-2)
 2. INSTALL 16\"/>
 3. CONSTRUCT CONCRETE FILLED MEDIAN WITH \"L\" TYPE ISLAND CURB (USDOCA STD. DWG. NO. 218 AND 219)
 4. CONSTRUCT 48\"/>
 5. CONSTRUCT HEADWALL (DETAIL 1, SHEET S-7)
 6. CONSTRUCT CONCRETE TRANSITION (DETAIL 1, SHEET S-5)
 7. CONSTRUCT ACCESS RAMP (DETAIL 1, SHEET S-5)
 8. MATCH EXISTING GRADE
 9. CONSTRUCT 10\"/>
 10. CONNECT TO EXISTING 30\"/>
 11. INSTALL 5.5\"/>
 12. CONSTRUCT CONCRETE RECTANGULAR CHANNEL (DETAIL A, SHEET S-6)
 13. INSTALL 30\"/>
 14. INSTALL 72\"/>
 15. INSTALL 24\"/>
 16. INSTALL MODIFIED TYPE \"DM2\" STORM DRAIN DROP INLET, L=7.5' (USDOCA STD. DWG. 412.1 AND 421)
 17. CONSTRUCT \"L\" TYPE CURB AND GUTTER (USDOCA STD. DWG. 216)
 18. INSTALL 10\"/>
 19. INSTALL MDOT TYPE 28 STORM DRAIN DROP INLET WITH CONCRETE APRON (MDOT DETAIL R-4.2.2, R-4.2.7 AND USDOCA STD. DWG. 412.1 AND 421) (SEE SHEET DT-05)
 20. INSTALL 18\"/>
 21. CONSTRUCT 12\"/>
 22. INSTALL PARTIALLY GROUTED RIPRAP (D50=12\", T=24\") (SEE DETAIL 5, SHEET DT-02)
 23. CONSTRUCT CONCRETE FLUME (DETAIL 1, SHEET S-5)
 24. CONSTRUCT 5 LF \"ROLL\" TYPE CURB TO \"L\" TYPE CURB TRANSITION (DETAIL 3, SHEET DT-03)
 25. INSTALL 72\"/>
 26. INSTALL 12-FT WIDE CHAIN LINK GATE WITH GROUNDING (SEE SHEET E-1)
 27. INSTALL 3\"/>
 28. INSTALL BUS TURNOUT (SEE DETAIL 4 ON SHEET DT-01)
 29. CONNECT TO EXISTING 18\"/>
 30. INSTALL POST AND CABLE FENCE WITH GROUNDING (LOCATION PER DETAIL ON SHEET PP-14) (SEE SHEET E-1) (DETAIL 1, SHEET DT-01 OR APPROVED EQUAL)
 31. INSTALL 6\"/>
 32. INSTALL 42\"/>
 33. INSTALL 10\"/>
 34. CONSTRUCT \"ROLL\" TYPE CURB AND GUTTER (USDOCA STD. DWG. NO. 217.2)
 35. CONSTRUCT 12\"/>
 36. CONSTRUCT 60\"/>
 37. INSTALL 42\"/>
 38. INSTALL 12\"/>
 39. CONSTRUCT CUT-OFF WALL (SECTION C, SHEET S-5)
 40. CONSTRUCT WING WALL (DETAIL A, SHEET S-7)
 41. INSTALL 3\"/>
 42. INSTALL TYPE \"CM\" STORM DRAIN DROP INLET, L=5' (USDOCA STD. DWG. NO. 422). DO NOT USE \"SOLID LID ON 1ST PANEL, USE DUAL VANE TYPE GRATES.
 43. INSTALL 30\"/>

- ### NOTES
1. INV ENERGY, CENTURYLINK TELEPHONE, AND SOUTHWEST GAS SHOWN FOR INFORMATION ONLY. REFERENCE INV ENERGY, CENTURYLINK TELEPHONE, AND SOUTHWEST GAS DRAWINGS FOR CONSTRUCTION. CONTRACTOR TO COORDINATE WITH UTILITIES FOR REMOVAL AND INSTALLATION OF FACILITIES.
 2. ALL EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION. THE DEPTH BELOW GRADE OF THE VARIOUS UTILITIES SHOWN ON THE PLANS VARIES THROUGHOUT THE PROJECT AREA. THE CONTRACTOR SHALL EXERCISE EXTREME CARE WHEN EXCAVATING AND GRADING THE SURFACE IN THE VICINITY OF UTILITIES TO AVOID DAMAGE TO THE LATTER.
 3. ALL EXISTING UTILITIES SHALL BE PROTECTED IN PLACE UNLESS OTHERWISE NOTED. CONTRACTOR SHALL RESTORE AFFECTED LANDSCAPING AND IRRIGATION TO PRE-CONSTRUCTION CONDITIONS.
 4. ALL RCP SHALL BE CLASS II UNLESS OTHERWISE SHOWN.
 5. ALL PIPE LENGTHS ARE MEASURED ALONG PIPE CENTERLINE TO CENTER OF MANHOLE OR INSIDE EDGE OF DI OR BOX/CURB.
 6. ALL DROP PIPES SHALL INCLUDE STORM WATER MANAGEMENT STAMP AND DETAIL PER USDOCA STD. DWG. NO. 421.
 7. SEE STRUCTURAL PLANS FOR ADDITIONAL STRUCTURAL DETAILS AND CONNECTIONS.
 8. ALL PIPES ARE PUBLICLY MAINTAINED.
 9. SPECIAL INSPECTION REQUIRED FOR PIPE SEGMENTS WITH SACRIFICIAL CONCRETE. (SEE L-1 SHEET FOR UTILITY PLAN)
 10. SEE L-1 SHEET FOR LANDSCAPE PLAN.
 11. SEE DETAIL 3 OR SHEET DT-01 FOR STANDARD RCP/RCP TRENCH SECTIONS.
 12. DISTURBED AREAS SURFACE TREATMENT - FOLLOWING EXCAVATION, CONTRACTOR SHALL BACKFILL AND COMPACT EXCAVATION TO THE SOIL SURFACE AND COVERED EXACTLY OVER THE SURFACE OF THE DISTURBED AREA. THE SOIL SURFACE SHALL BE LEFT ROUGH TO HELP PREVENT EROSION.
 13. UNDISTURBED AREAS SURFACE TREATMENT - CONTRACTOR SHALL STOP THE TOP SIX INCHES OF SOIL MATERIAL WITH ASSOCIATED PLANT MATERIAL OVER ALL SURFACES TO BE DISTURBED BY CONSTRUCTION. THE STOPPED MATERIAL SHALL BE STOCKPILED ALONG THE COURSE OF CONSTRUCTION (INSIDE THE ELM ROW AREA). AT THE CONCLUSION OF CONSTRUCTION, INCLUDING TRENCH BACKFILLING AND COMPACTING, CONTRACTOR SHALL STOCKPILE THE STOPPED SOIL WITH PLANT DEBRIS ON THE SURFACE OF THE DISTURBED AREA IN A UNIFORM FASHION.



GRAPHIC SCALE - HORIZONTAL

0 15 30 60 (IN FEET)

GRAPHIC SCALE - VERTICAL

0 5 10 20 (IN FEET)

Call before you Dig

811

1-800-227-2600

CALL BEFORE YOU OVERHEAD

1-702-227-2929

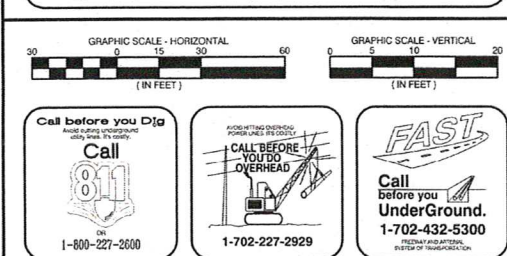
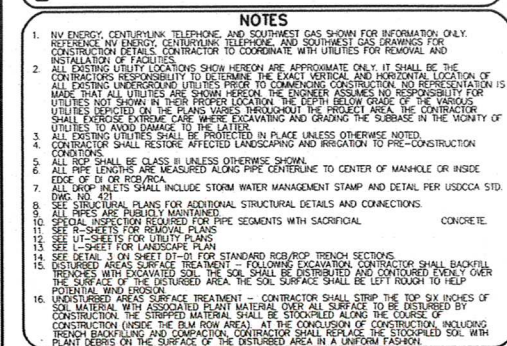
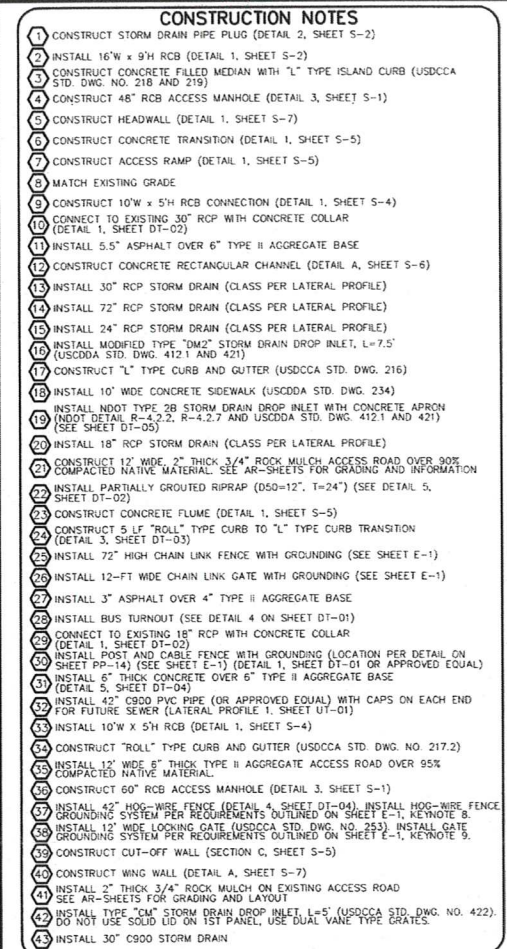
FAST

Call before you UnderGround.

1-702-432-5300

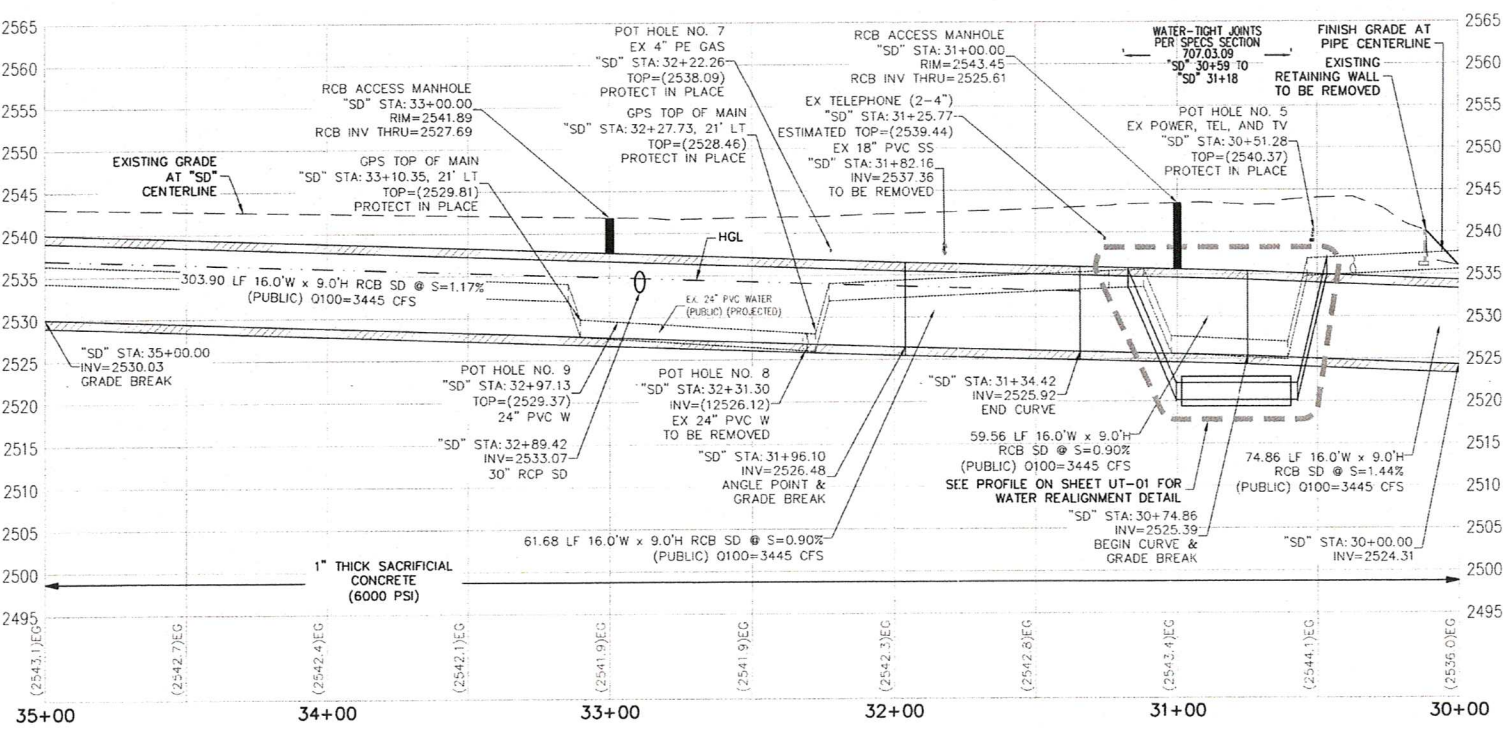
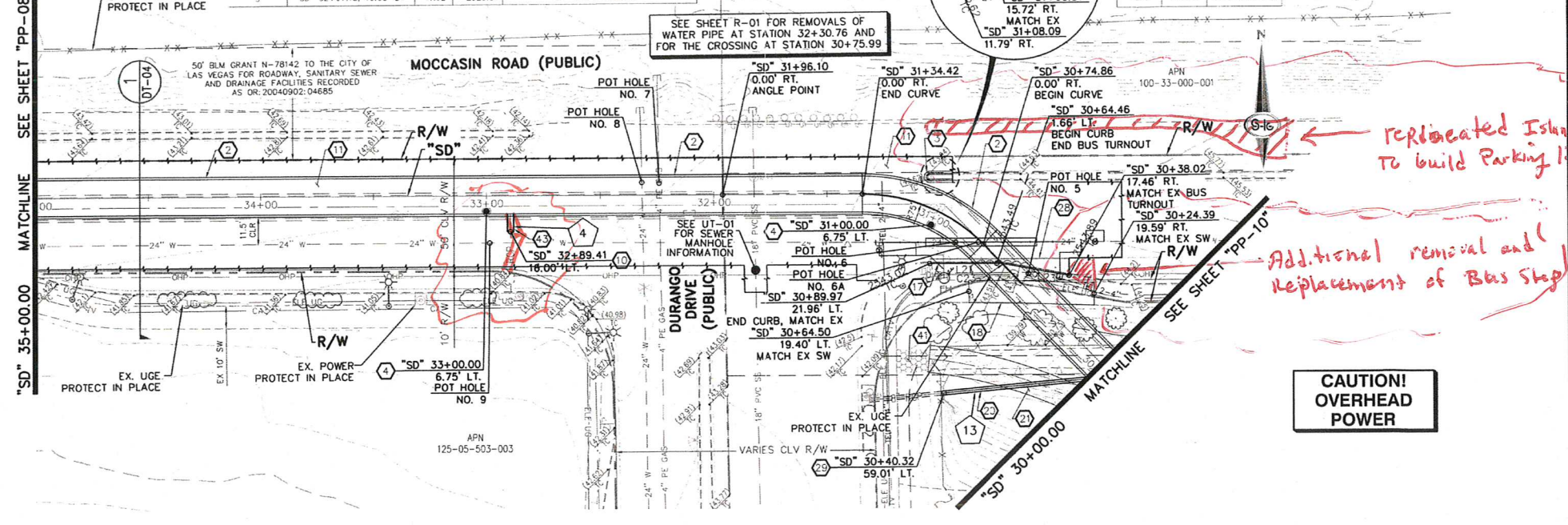
SLATER HANIFAN GROUP		CONSULTING ENGINEERS & PLANNERS	
5746 S. ARVILLE STREET #216 LAS VEGAS, NV 89118		PHONE (702) 264-5300 FAX (702) 264-5399	
PREPARED BY	CITY OF LAS VEGAS	DESIGNED BY	CAM
DRAWN BY	BCC	CHECKED BY	FR
DATE	JAN 2021	SUBMITTAL STAGE	100% FINAL
TITLE		SHEET	
Moccasin Rd		PP-07	
CORFCD FLOOD CONTROL FACILITY		16 OF 48	
Moccasin Rd to CCRFCD FACILITY LVUP 1076/1077		DRAWING NO. 731-99	
PLAN AND PROFILE		731-99	
"SD" 41+50.00 TO "SD" 48+00.00			

AS BUILT

[illegible]

AS BUILT

POT HOLE	STATION/OFFSET	DEPTH	TOP	UTILITY
5	"SD" 30+51.44, 7.43' RT	3.36	2540.37	2-6", 4-4", 2-5" ELEC/TEL/TV
6	"SD" 30+85.69, 4.48' LT	14.85	2527.99	36" STEEL SLEEVE / 24" WATERLINE
6A	"SD" 30+78.24, 2.37' LT	7.37	2535.73	10"x5" RCB
7	"SD" 32+22.65, 7.00' RT	3.65	2538.09	4" PEG
8	"SD" 32+30.21, 7.35' RT	12.91	2528.74	36" STEEL SLEEVE / 24" WATERLINE
9	"SD" 32+97.13, 19.35' LT	11.62	2529.37	24" PVC WATERLINE

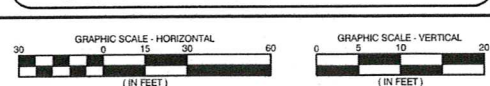
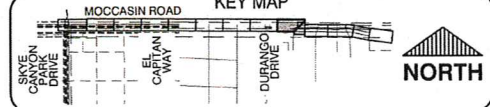


Line Table			Curve Table			
Line #	Length	Direction	Curve #	Length	Radius	Delta
L3	10.03	N89°30'53"W	C2	3.14	1.00	180.00
L4	10.00	N89°30'53"W	C3	64.73	206.00	18.0032
L21	30.00	N89°30'53"W	C23	4.45	25.00	10.1986
L22	28.19	N79°18'58"W				

- ### CONSTRUCTION NOTES
- CONSTRUCT STORM DRAIN PIPE PLUG (DETAIL 2, SHEET S-2)
 - INSTALL 16"W x 9"H RCB (DETAIL 1, SHEET S-2)
 - CONSTRUCT CONCRETE FILL MEDIAN WITH "L" TYPE ISLAND CURB (USDOCA STD. DWG. NO. 218 AND 219)
 - CONSTRUCT 48" RCB ACCESS MANHOLE (DETAIL 3, SHEET S-1)
 - CONSTRUCT HEADWALL (DETAIL 1, SHEET S-7)
 - CONSTRUCT CONCRETE TRANSITION (DETAIL 1, SHEET S-5)
 - CONSTRUCT ACCESS RAMP (DETAIL 1, SHEET S-5)
 - MATCH EXISTING GRADE
 - CONSTRUCT 10"W x 5"H RCB CONNECTION (DETAIL 1, SHEET S-4)
 - CONNECT TO EXISTING 30" RCP WITH CONCRETE COLLAR (DETAIL 1, SHEET DT-02)
 - INSTALL 5.5" ASPHALT OVER 6" TYPE II AGGREGATE BASE
 - CONSTRUCT CONCRETE RECTANGULAR CHANNEL (DETAIL A, SHEET S-6)
 - INSTALL 30" RCP STORM DRAIN (CLASS PER LATERAL PROFILE)
 - INSTALL 72" RCP STORM DRAIN (CLASS PER LATERAL PROFILE)
 - INSTALL 24" RCP STORM DRAIN (CLASS PER LATERAL PROFILE)
 - INSTALL MODIFIED TYPE "DM2" STORM DRAIN DROP INLET, L=7.5' (USDOCA STD. DWG. 412.1 AND 421)
 - CONSTRUCT "L" TYPE CURB AND GUTTER (USDOCA STD. DWG. 216)
 - INSTALL 10" WIDE CONCRETE SIDEWALK (USDOCA STD. DWG. 234)
 - INSTALL 18" RCP STORM DRAIN DROP INLET WITH CONCRETE APRON (USDOCA STD. DWG. 422.2, R=4.27 AND USDOCA STD. DWG. 412.1 AND 421) (SEE SHEET DT-05)
 - INSTALL 18" RCP STORM DRAIN (CLASS PER LATERAL PROFILE)
 - CONSTRUCT 12" WIDE, 2" THICK 3/4" ROCK MULCH ACCESS ROAD OVER 90% COMPACTED NATIVE MATERIAL. SEE AIR-SHEETS FOR GRADING AND INFORMATION (USDOCA STD. DWG. 412.1 AND 421)
 - INSTALL PARTIALLY GROUTED RIPRAP (D50=12", T=24") (SEE DETAIL 5)
 - CONSTRUCT CONCRETE FLUME (DETAIL 1, SHEET S-5)
 - CONSTRUCT 5 LF "ROLL" TYPE CURB TO "L" TYPE CURB TRANSITION (DETAIL 3, SHEET DT-03)
 - INSTALL 72" HIGH CHAIN LINK FENCE WITH GROUNDING (SEE SHEET E-1)
 - INSTALL 12" WIDE CHAIN LINK FENCE WITH GROUNDING (SEE SHEET E-1)
 - INSTALL 3" ASPHALT OVER 4" TYPE II AGGREGATE BASE
 - INSTALL BUS TURNOUT (SEE DETAIL 4 ON SHEET DT-01)
 - CONNECT TO EXISTING 18" RCP WITH CONCRETE COLLAR (DETAIL 1, SHEET DT-02)
 - INSTALL POST AND CABLE FENCE WITH GROUNDING (LOCATION PER DETAIL ON SHEET PP-14) (SEE SHEET E-1) (DETAIL 1, SHEET DT-01 OR APPROVED EQUAL)
 - INSTALL 6" THICK CONCRETE OVER 6" TYPE II AGGREGATE BASE (DETAIL 5, SHEET DT-04)
 - INSTALL 42" C900 PVC PIPE (OR APPROVED EQUAL) WITH CAPS ON EACH END FOR FUTURE SEWER (LATERAL PROFILE 1, SHEET UT-01)
 - INSTALL 10"W x 5"H RCB (DETAIL 1, SHEET S-4)
 - CONSTRUCT "ROLL" TYPE CURB AND GUTTER (USDOCA STD. DWG. NO. 217.2)
 - CONSTRUCT 60" RCB ACCESS MANHOLE (DETAIL 3, SHEET S-1)
 - INSTALL 42" HOG-WIRE FENCE (DETAIL 4, SHEET DT-04). INSTALL HOG-WIRE FENCE GROUNDING SYSTEM PER REQUIREMENTS OUTLINED ON SHEET E-1, KEYNOTE 8
 - INSTALL 12" WIDE LOCKING GATE (USDOCA STD. DWG. NO. 263). INSTALL GATE GROUNDING SYSTEM PER REQUIREMENTS OUTLINED ON SHEET E-1, KEYNOTE 9
 - CONSTRUCT CUT-OFF WALL (SECTION C, SHEET S-5)
 - CONSTRUCT WING WALL (DETAIL A, SHEET S-7)
 - INSTALL 2" THICK 3/4" ROCK MULCH ON EXISTING ACCESS ROAD
 - SEE AIR-SHEETS FOR GRADING AND LAYOUT
 - INSTALL TYPE "CM" STORM DRAIN DROP INLET, L=5' (USDOCA STD. DWG. NO. 422). DO NOT USE "SOLID LID ON 1ST PANEL. USE DUAL VANE TYPE GRATES.
 - INSTALL 30" C900 STORM DRAIN

- ### NOTES
- NO ENERGY, CENTURYLINK TELEPHONE, AND SOUTHWEST GAS SHOWN FOR INFORMATION ONLY. REFERENCE NO. ENERGY, CENTURYLINK TELEPHONE, AND SOUTHWEST GAS DRAWINGS FOR CONSTRUCTION. CONTRACTOR TO COORDINATE WITH UTILITIES FOR REMOVAL AND INSTALLATION OF FACILITIES.
 - ALL EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION. THE DEPTH BELOW GRADE OF THE UTILITIES SHOWN ON THE PLANS VARIES THROUGHOUT THE PROJECT AREA. THE CONTRACTOR SHALL VERIFY THE EXACT DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL RESTORE AFFECTED LANDSCAPING AND IRRIGATION TO PRE-CONSTRUCTION CONDITIONS.
 - ALL RCP SHALL BE CLASS II UNLESS OTHERWISE SHOWN.
 - ALL PIPE LENGTHS ARE MEASURED ALONG PIPE CENTERLINE TO CENTER OF MANHOLE OR INSIDE EDGE OF D OR RCB/RA.
 - ALL DRAIN PIPES SHALL INCLUDE STORM WATER MANAGEMENT STAMP AND DETAIL PER USDOCA STD. DWG. NO. 412.
 - SEE STRUCTURAL PLANS FOR ADDITIONAL STRUCTURAL DETAILS AND CONNECTIONS.
 - ALL PIPES ARE PUBLICLY MAINTAINED.
 - SPECIAL INSPECTION REQUIRED FOR PIPE SEGMENTS WITH SACRIFICIAL CONCRETE.
 - SEE UT-SHEETS FOR REMOVAL PLANS.
 - SEE UT-SHEETS FOR LANDSCAPE PLANS.
 - SEE DETAIL 3 ON SHEET DT-03 FOR STANDARD RCB/RCP TRENCH SECTIONS.
 - UNDISTURBED AREAS SURFACE TREATMENT - FOLLOWING EXCAVATION, CONTRACTOR SHALL BACKFILL BENCHES WITH EXCAVATED MATERIAL. EXCAVATED AND COMPACTED EROSION OVER THE SURFACE OF THE DISTURBED AREA. THE SOIL SURFACE SHALL BE LEFT ROUGH TO HELP POTENTIAL WIND PROOF.
 - UNDISTURBED AREAS SURFACE TREATMENT - CONTRACTOR SHALL STRIP THE TOP SIX INCHES OF SOIL MATERIAL WITH ASSOCIATED SUBSTRATE TO BE DISTURBED BY CONSTRUCTION. THE STRIPPED MATERIAL SHALL BE STOCKPILED ALONG THE COURSE OF CONSTRUCTION (INSIDE THE BAR ROW AREA). AT THE COMPLETION OF CONSTRUCTION, INCLUDING BENCHING AND BACKFILLING, CONTRACTOR SHALL REPLACE THE STOCKPILED SOIL WITH PLANT DEBRIS ON THE SURFACE OF THE DISTURBED AREA IN A UNIFORM FASHION.

- ### LEGEND
- STORM DRAIN LATERAL # (SEE SHEETS PP-15 AND PP-16)
 - TYPE II ACCESS ROAD
 - GRASS
 - GRAVEL ACCESS ROAD
 - CONCRETE
 - FEMA SFHA FLOOD ZONE AE
 - RIPRAP



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APPROVED FOR CONSTRUCTION

[Signature]

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES

PROJECT NO. 135013 FIRST APPROVED DATE: 3-14-20

[Signature]

2/13/2020

SOUTHWEST GAS CORPORATION

DATE

SLATER HANIFAN GROUP

CONSULTING ENGINEERS & PLANNERS

5745 S. ARVILLE STREET, SUITE 200, LAS VEGAS, NV 89119

PHONE (702) 244-5300 FAX (702) 244-5399

PREPARED FOR

CITY OF LAS VEGAS

DESIGNED BY: CAM

DRAWN BY: BCC

CHECKED BY: FR

DATE: JAN 2021

SUBMITTAL STAGE: 100% FINAL

TITLE

MOCCASIN RD

CCRFCD FLOOD CONTROL FACILITY

MOCCASIN RD TO CCRFCD FACILITY LVUP 1076/1077

SHEET

PP-09

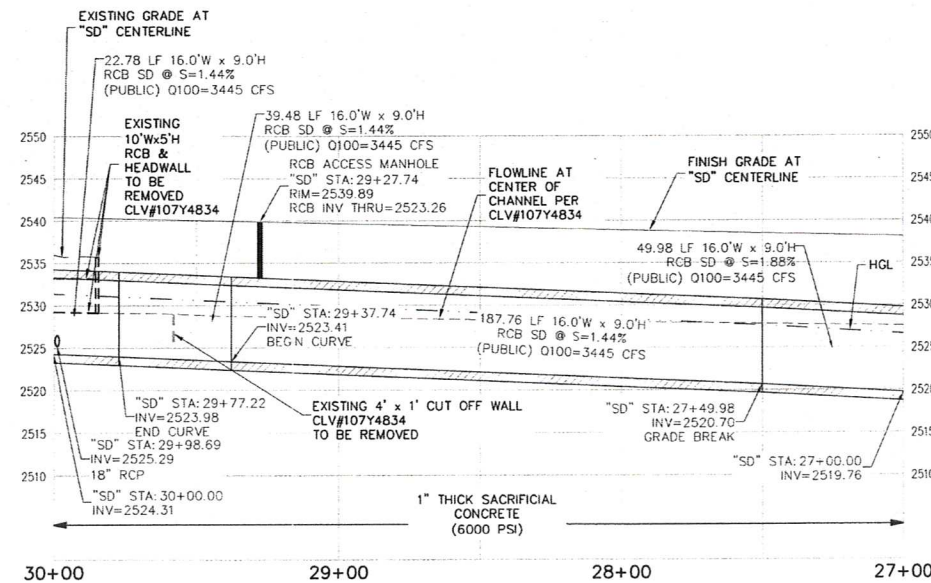
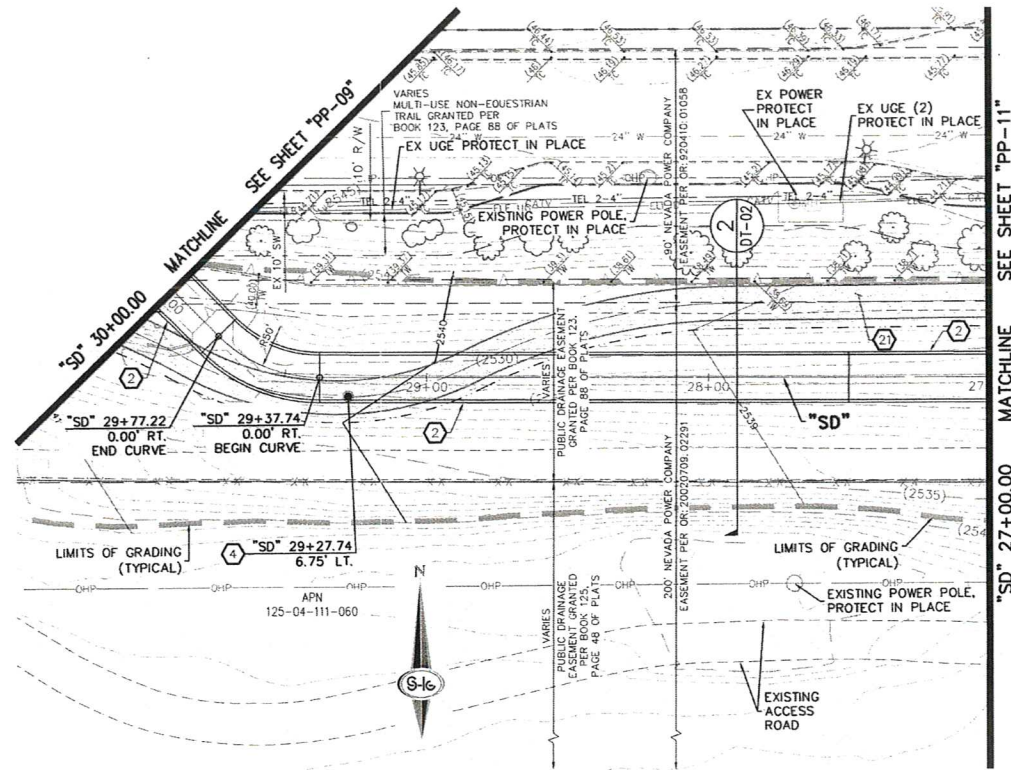
18 OF 48

DRAWING NO. 731-99

REVISIONS

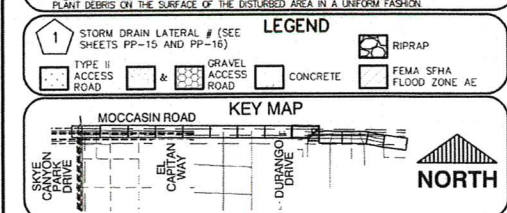
NO.	DATE	DESCRIPTION

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- ### CONSTRUCTION NOTES
- CONSTRUCT STORM DRAIN PIPE PLUG (DETAIL 2, SHEET S-2)
 - INSTALL 16" W x 9" H RCB (DETAIL 1, SHEET S-2)
 - CONSTRUCT CONCRETE FILLED MEDIAN WITH "L" TYPE ISLAND CURB (USDOCA STD. DWG. NO. 218 AND 219)
 - CONSTRUCT 48" RCB ACCESS MANHOLE (DETAIL 3, SHEET S-1)
 - CONSTRUCT HEADWALL (DETAIL 1, SHEET S-7)
 - CONSTRUCT CONCRETE TRANSITION (DETAIL 1, SHEET S-5)
 - CONSTRUCT ACCESS RAMP (DETAIL 1, SHEET S-5)
 - WATCH EXISTING GRADE
 - CONSTRUCT 10" W x 5" H RCB CONNECTION (DETAIL 1, SHEET S-4)
 - CONNECT TO EXISTING 30" RCP WITH CONCRETE COLLAR (DETAIL 1, SHEET DT-02)
 - INSTALL 5.5" ASPHALT OVER 6" TYPE II AGGREGATE BASE
 - CONSTRUCT CONCRETE RECTANGULAR CHANNEL (DETAIL A, SHEET S-6)
 - INSTALL 30" RCP STORM DRAIN (CLASS PER LATERAL PROFILE)
 - INSTALL 72" RCP STORM DRAIN (CLASS PER LATERAL PROFILE)
 - INSTALL 24" RCP STORM DRAIN (CLASS PER LATERAL PROFILE)
 - INSTALL MODIFIED TYPE "DM2" STORM DRAIN DROP INLET, L=7.5' (USDOCA STD. DWG. 412.1 AND 421)
 - CONSTRUCT "L" TYPE CURB AND GUTTER (USDOCA STD. DWG. 216)
 - INSTALL 10" WIDE CONCRETE SIDEWALK (USDOCA STD. DWG. 234)
 - INSTALL 18" RCP STORM DRAIN DROP INLET WITH CONCRETE APRON (DETAIL 1, SHEET S-4.2.2, R=4.2.7 AND USDOCA STD. DWG. 412.1 AND 421) (SEE SHEET DT-05)
 - INSTALL 18" RCP STORM DRAIN (CLASS PER LATERAL PROFILE)
 - CONSTRUCT 5 LF "ROLL" TYPE CURB TO "L" TYPE CURB TRANSITION (DETAIL 3, SHEET DT-03)
 - INSTALL 72" HIGH CHAIN LINK FENCE WITH GROUNDING (SEE SHEET E-1)
 - INSTALL 12-FT WIDE CHAIN LINK GATE WITH GROUNDING (SEE SHEET E-1)
 - INSTALL 3" ASPHALT OVER 4" TYPE II AGGREGATE BASE
 - INSTALL BUS TURNOUT (SEE DETAIL 4 ON SHEET DT-01)
 - CONNECT TO EXISTING 18" RCP WITH CONCRETE COLLAR (DETAIL 1, SHEET DT-02)
 - INSTALL POST AND CABLE FENCE WITH GROUNDING (LOCATION PER DETAIL ON SHEET PP-14) (SEE SHEET E-1) (DETAIL 1, SHEET DT-01 OR APPROVED EQUAL)
 - INSTALL 6" THICK CONCRETE OVER 6" TYPE II AGGREGATE BASE (DETAIL 5, SHEET DT-04)
 - INSTALL 42" C900 PIPE (OR APPROVED EQUAL) WITH CAPS ON EACH END FOR FUTURE SEWER (LATERAL PROFILE 1, SHEET UT-01)
 - INSTALL 10" W x 5" H RCB (DETAIL 1, SHEET S-4)
 - CONSTRUCT "ROLL" TYPE CURB AND GUTTER (USDOCA STD. DWG. NO. 217.2)
 - INSTALL 12" WIDE 6" THICK TYPE II AGGREGATE ACCESS ROAD OVER 95% COMPACTED NATIVE MATERIAL
 - CONSTRUCT 60" RCB ACCESS MANHOLE (DETAIL 3, SHEET S-1)
 - INSTALL 42" HOG-WIRE FENCE (DETAIL 4, SHEET DT-04), INSTALL HOG-WIRE FENCE GROUNDING SYSTEM PER REQUIREMENTS OUTLINED ON SHEET E-1, KEYNOTE 8
 - INSTALL 12" WIDE LOCKING GATE (USDOCA STD. DWG. NO. 253), INSTALL GATE GROUNDING SYSTEM PER REQUIREMENTS OUTLINED ON SHEET E-1, KEYNOTE 9
 - CONSTRUCT CUT-OFF WALL (SECTION C, SHEET S-5)
 - CONSTRUCT WING WALL (DETAIL A, SHEET S-7)
 - INSTALL 2" THICK 3/4" ROCK MULCH ON EXISTING ACCESS ROAD SEE AS-SHEETS FOR GRADING AND LAYOUT
 - INSTALL TYPE "CM" STORM DRAIN DROP INLET, L=5' (USDOCA STD. DWG. NO. 422), DO NOT USE SOLID LID ON 1ST PANEL, USE DUAL VANE TYPE GRATES
 - INSTALL 30" C900 STORM DRAIN

- ### NOTES
- NO ENERGY, CENTURYLINK TELEPHONE, AND SOUTHWEST GAS FOR INFORMATION ONLY. REFERENCE TO ENERGY, CENTURYLINK TELEPHONE, AND SOUTHWEST GAS DRAWINGS FOR CONSTRUCTION TO COORDINATE WITH UTILITIES FOR REMOVAL AND INSTALLATION OF FACILITIES
 - ALL EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN AT THEIR PROPER LOCATION. THE DEPTH BELOW GRADE OF THE VARIOUS UTILITIES SHOWN ON THE PLANS VARIES THROUGHOUT THE PROJECT AREA. THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES WHERE EXCAVATING AND GRADING THE SUBGRADE IN THE VICINITY OF UTILITIES TO AVOID DAMAGE TO THE LATTER.
 - ALL EXISTING UTILITIES SHALL BE PROTECTED IN PLACE UNLESS OTHERWISE NOTED. CONTRACTOR SHALL RESTORE AFFECTED LANDSCAPING AND IRRIGATION TO PRE-CONSTRUCTION CONDITIONS
 - ALL RCP SHALL BE CLASS II UNLESS OTHERWISE SHOWN
 - ALL PIPE LENGTHS BE MEASURED ALONG PIPE CENTERLINE TO CENTER OF MANHOLE OR INSIDE EDGE OF DI OR RCB/RC
 - ALL DROP PIPES SHALL INCLUDE STORM WATER MANAGEMENT STAMP AND DETAIL PER USDOCA STD. DWG. NO. 42
 - SEE DETAIL A FOR ADDITIONAL PLANS FOR ADDITIONAL STRUCTURAL DETAILS AND CONNECTIONS
 - ALL PIPES ARE PUBLICLY MAINTAINED
 - SPECIAL INSPECTION REQUIRED FOR PIPE SEGMENTS WITH SAGROFIAL
 - SEE R-SHEETS FOR REMOVAL PLANS
 - UT-SHEETS FOR UTILITY PLANS
 - SEE L-SHEET FOR LANDSCAPE PLAN
 - SEE DETAIL 2 ON SHEET DT-01 FOR STANDARD RCB/RCP TRENCH SECTIONS
 - UNDISTURBED AREAS SURFACE TREATMENT - FOLLOWING EXCAVATION, CONTRACTOR SHALL BACKFILL WITH 3/4" EXCAVATION SOIL. THE SOIL SHALL BE COMPACTED EXISTING OVER THE SURFACE OF THE DISTURBED AREA. THE SOIL SURFACE SHALL BE LEFT ROUGH TO HELP POTENTIAL ANTI-EROSION
 - CONTRACTOR SHALL STRIP THE TOP SIX INCHES OF EXISTING MATERIAL WITH ASSURANCE PLANT MATERIAL OVER ALL SURFACES TO BE DISTURBED BY CONSTRUCTION. THE STRIPPED MATERIAL SHALL BE STOCKPILED ALONG THE COURSE OF CONSTRUCTION (INSIDE THE BLM ROW AREA). AT THE CONCLUSION OF CONSTRUCTION, INCLUDING FRENCH BACKFILLING AND SOIL REMOVAL, CONTRACTOR SHALL REINSTALL SOIL WITH PLANT DEBRIS ON THE SURFACE OF THE DISTURBED AREA IN A UNIFORM FASHION



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GRAPHIC SCALE - VERTICAL (IN FEET)

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SLATER HANIFAN GROUP CONSULTING ENGINEERS & PLANNERS

5746 S. ARVILLE STREET #216, LAS VEGAS, NV 89118

PHONE (702) 284-5300 FAX (702) 284-5399

PREPARED BY: CITY OF LAS VEGAS

DESIGNED BY: CAM

DRAWN BY: BOC

CHECKED BY: FR

DATE: JAN 2021

SUBMITTAL STAGE: 100% FINAL

MOCCASIN RD

CORFCD FLOOD CONTROL FACILITY

MOCCASIN RD TO CORFCD FACILITY LVUP 1076/1077

PLAN AND PROFILE

"SD" 27+00.00 TO "SD" 30+00.00

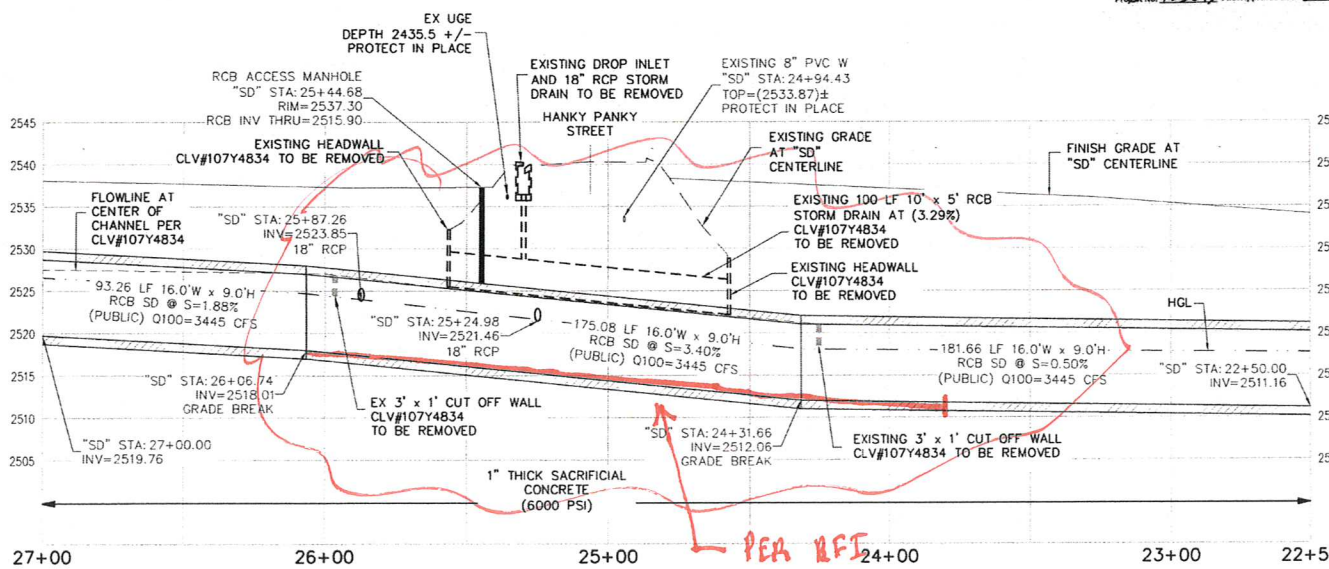
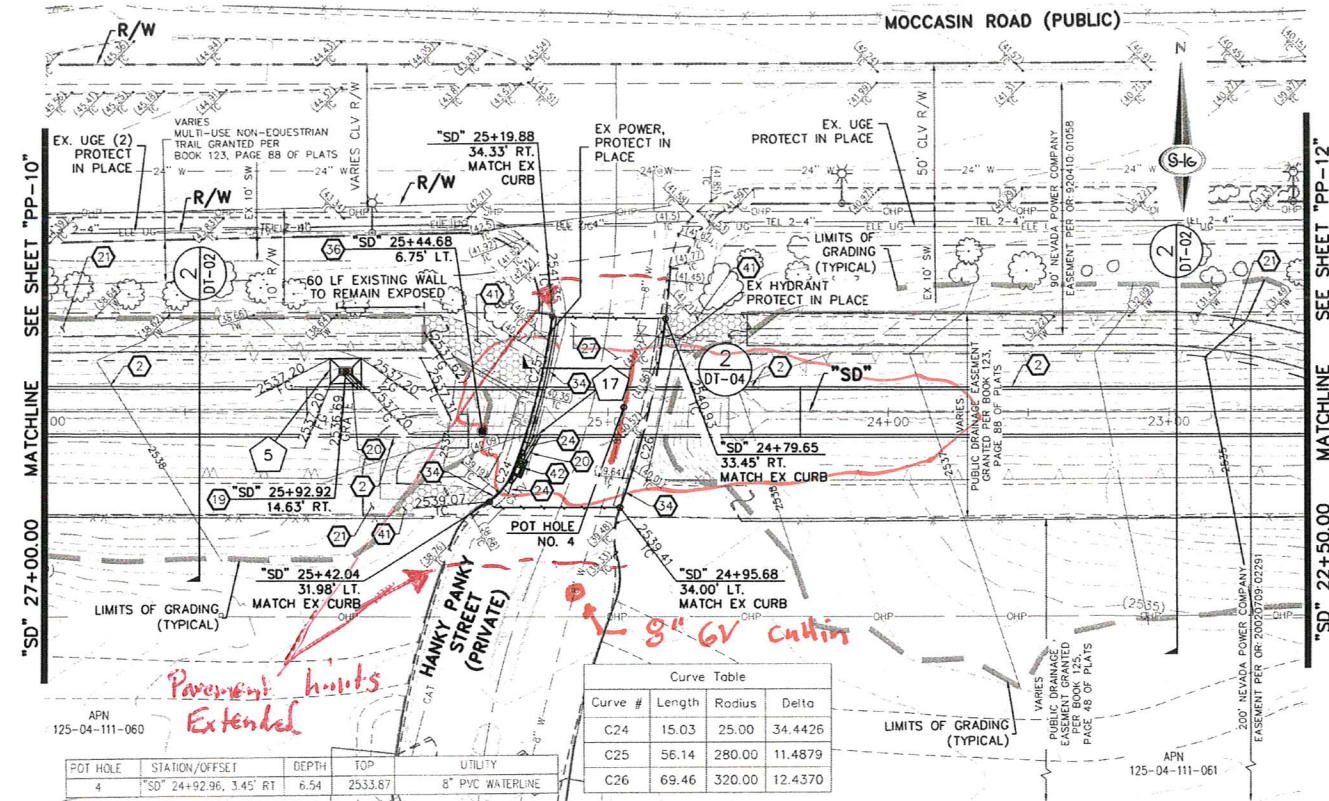
SHEET PP-10

19 OF 48

DRAWING NO. 731-99

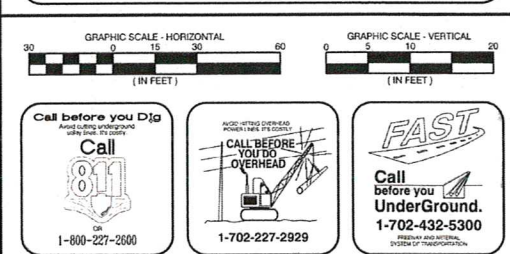
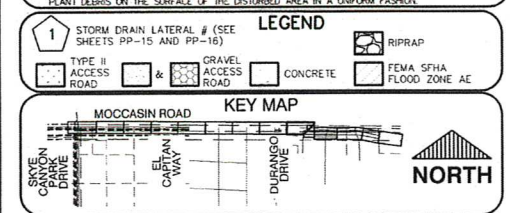
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FOR TRENCHES SIX (6) FEET WIDE AND GREATER- DISTRIBUTION:
CONTRACTOR MUST SUBMIT PIPE SUPPORT DETAILS PREPARED BY A NEVADA LICENSED ENGINEER, TO LVVWD ENGINEERING SERVICES BEFORE CONSTRUCTION TO SHOW HOW WATERLINE(S) WILL BE SUPPORTED DURING EXCAVATION AND BACKFILL. IF THE PIPE MATERIAL IS ACP, THE EXPOSED PIPE MUST BE REPLACED WITH DUCTILE IRON PIPE. SUPPORTED PIPE MAY BE EXPOSED FOR NO LONGER THAN 14 DAYS MAXIMUM.



- ### CONSTRUCTION NOTES
1. CONSTRUCT STORM DRAIN PIPE PLUG (DETAIL 2, SHEET S-2)
 2. INSTALL 16"W x 9"H RCB (DETAIL 1, SHEET S-2)
 3. CONSTRUCT CONCRETE FILLED MEDIAN WITH "L" TYPE ISLAND CURB (USDOCA STD. DWG. NO. 218 AND 219)
 4. CONSTRUCT 48" RCB ACCESS MANHOLE (DETAIL 3, SHEET S-1)
 5. CONSTRUCT HEADWALL (DETAIL 1, SHEET S-7)
 6. CONSTRUCT CONCRETE TRANSITION (DETAIL 1, SHEET S-5)
 7. CONSTRUCT ACCESS RAMP (DETAIL 1, SHEET S-5)
 8. MATCH EXISTING GRADE
 9. CONSTRUCT 10"W x 5"H RCB CONNECTION (DETAIL 1, SHEET S-4)
 10. CONNECT TO EXISTING 30" RCP WITH CONCRETE COLLAR (DETAIL 1, SHEET DT-02)
 11. INSTALL 5.5" ASPHALT OVER 6" TYPE II AGGREGATE BASE
 12. CONSTRUCT CONCRETE RECTANGULAR CHANNEL (DETAIL A, SHEET S-6)
 13. INSTALL 30" RCP STORM DRAIN (CLASS PER LATERAL PROFILE)
 14. INSTALL 72" RCP STORM DRAIN (CLASS PER LATERAL PROFILE)
 15. INSTALL 24" RCP STORM DRAIN (CLASS PER LATERAL PROFILE)
 16. INSTALL MODIFIED TYPE "DM2" STORM DRAIN DROP INLET, L=7.5' (USDOCA STD. DWG. 412.1 AND 421)
 17. CONSTRUCT "L" TYPE CURB AND GUTTER (USDOCA STD. DWG. 216)
 18. INSTALL 10" WIDE CONCRETE SIDEWALK (USDOCA STD. DWG. 234)
 19. INSTALL 18" RCP STORM DRAIN DROP INLET WITH CONCRETE APRON (DETAIL 1, SHEET DT-02, R=4.2.7 AND USDOCA STD. DWG. 412.1 AND 421) (SEE SHEET DT-05)
 20. INSTALL 18" RCP STORM DRAIN (CLASS PER LATERAL PROFILE)
 21. CONSTRUCT 12" WIDE, 2" THICK 3/4" ROCK MULCH ACCESS ROAD OVER 90% COMPACTED NATIVE MATERIAL. SEE AR-SHEETS FOR GRADING AND INFORMATION.
 22. INSTALL PARTIALLY GROUTED RIPRAP (D50=12", T=24") (SEE DETAIL 5, SHEET DT-01-02)
 23. CONSTRUCT CONCRETE FLUME (DETAIL 1, SHEET S-5)
 24. CONSTRUCT 5 LF "ROLL" TYPE CURB TO "L" TYPE CURB TRANSITION (DETAIL 3, SHEET DT-03)
 25. INSTALL 72" HIGH CHAIN LINK FENCE WITH GROUNDING (SEE SHEET E-1)
 26. INSTALL 12'-FT WIDE CHAIN LINK GATE WITH GROUNDING (SEE SHEET E-1)
 27. INSTALL 3" ASPHALT OVER 4" TYPE II AGGREGATE BASE
 28. INSTALL BUS TURNOUT (SEE DETAIL 4 ON SHEET DT-01)
 29. CONNECT TO EXISTING 18" RCP WITH CONCRETE COLLAR (DETAIL 1, SHEET DT-02)
 30. INSTALL POST AND CABLE FENCE WITH GROUNDING (LOCATION PER DETAIL ON SHEET PP-11) (SEE SHEET E-1) (DETAIL 1, SHEET DT-01 OR APPROVED EQUAL)
 31. INSTALL 6" THICK CONCRETE OVER 6" TYPE II AGGREGATE BASE (DETAIL 5, SHEET DT-04)
 32. INSTALL 42" CSO PVC PIPE (OR APPROVED EQUAL) WITH CAPS ON EACH END FOR FUTURE SEWER (LATERAL PROFILE 1, SHEET UT-01)
 33. INSTALL 10"W x 5"H RCB (DETAIL 1, SHEET S-4)
 34. CONSTRUCT "ROLL" TYPE CURB AND GUTTER (USDOCA STD. DWG. NO. 217.2)
 35. INSTALL 12" WIDE 6" THICK TYPE II AGGREGATE ACCESS ROAD OVER 95% COMPACTED NATIVE MATERIAL
 36. CONSTRUCT 60" RCB ACCESS MANHOLE (DETAIL 3, SHEET S-1)
 37. INSTALL 42" HDG-WIRE FENCE (DETAIL 4, SHEET DT-04) INSTALL HDG-WIRE FENCE GROUNDING SYSTEM PER REQUIREMENTS OUTLINED ON SHEET E-1, KEYNOTE B
 38. INSTALL 12" WIDE LOOKING GATE (USDOCA STD. DWG. NO. 253) INSTALL GATE GROUNDING SYSTEM PER REQUIREMENTS OUTLINED ON SHEET E-1, KEYNOTE 3.
 39. CONSTRUCT CUT-OFF WALL (SECTION C, SHEET S-5)
 40. CONSTRUCT WING WALL (DETAIL A, SHEET S-7)
 41. INSTALL 2" THICK 3/4" ROCK MULCH ON EXISTING ACCESS ROAD SEE AR-SHEETS FOR GRADING AND LAYOUT
 42. INSTALL TYPE "CM" STORM DRAIN DROP INLET, L=5' (USDOCA STD. DWG. NO. 422). DO NOT USE SOLID LID ON 1ST PANEL, USE DUAL VANE TYPE GRATES.
 43. INSTALL 30" CSO STORM DRAIN

- ### NOTES
1. NV ENERGY, CENTURYLINK, TELEPHONE, AND SOUTHWEST GAS SHOWN FOR INFORMATION ONLY. REFERENCE NV ENERGY, CENTURYLINK, TELEPHONE, AND SOUTHWEST GAS DRAWINGS FOR CONSTRUCTION DETAILS. CONTRACTOR TO COORDINATE WITH UTILITIES FOR REMOVAL AND INSTALLATION OF FACILITIES.
 2. ALL EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION. THE DEPTH BELOW GRADE OF UTILITIES IDENTIFIED ON THE PLANS VARIES THROUGHOUT THE PROJECT AREA. IF CONTRACTOR SHALL EXCAVATE EXISTING CHASE WHERE EXCAVATING AND GRADING THE SUBBASE IN THE VICINITY OF UTILITIES TO AVOID DAMAGE TO THE LATTER.
 3. ALL EXISTING UTILITIES SHALL BE PROTECTED IN PLACE UNLESS OTHERWISE NOTED.
 4. CONTRACTOR SHALL RESTORE AFFECTED LANDSCAPING AND IRRIGATION TO PRE-CONSTRUCTION CONDITIONS.
 5. ALL RCP SHALL BE CLASS III UNLESS OTHERWISE SHOWN.
 6. ALL PIPE LENGTHS ARE MEASURED ALONG PIPE CENTERLINE TO CENTER OF MANHOLE OR INSIDE EDGE OF CI OR RCB/RCA.
 7. ALL DROP INLETS SHALL INCLUDE STORM WATER MANAGEMENT STAMP AND DETAIL PER USDOCA STD. DWG. NO. 421.
 8. SEE STRUCTURAL PLANS FOR ADDITIONAL STRUCTURAL DETAILS AND CONNECTIONS.
 9. ALL PIPES ARE PUBLICLY MAINTAINED.
 10. SPECIAL INSPECTION REQUIRED FOR PIPE SEGMENTS WITH SACKFILL CONCRETE.
 11. SEE R-SHEETS FOR REMOVAL PLANS.
 12. SEE UT-SHEETS FOR UTILITY PLANS.
 13. SEE L-SHEET FOR LANDSCAPE PLAN.
 14. SEE DETAIL 1 ON SHEET DT-01 FOR STANDARD RCB/RCP TRENCH SECTIONS.
 15. EXISTING AREAS SURFACE TREATMENT - FOLLOWING EXCAVATION, CONTRACTOR SHALL BACKFILL TRENCHES WITH SAND OR EQUIVALENT MATERIAL. THE SURFACE SHALL BE LEFT ROUGH TO HELP POTENTIAL WIND EROSION.
 16. UNDISTURBED AREAS SURFACE TREATMENT - CONTRACTOR SHALL STRIP THE TOP SIX INCHES OF SOIL MATERIAL WITH ASSOCIATED PARENT MATERIAL OVERLAP SURFACE TO BE DESTROYED BY CONSTRUCTION. THE STRIPPED MATERIAL SHALL BE STOCKPILED ALONG THE COURSE OF CONSTRUCTION (IN THE CLAM RAIL AREA) UNTIL THE CONCLUSION OF CONSTRUCTION INCLUDING TRENCH BACKFILLING AND COMPACTION. CONTRACTOR SHALL REPLACE THE STOCKPILED SOIL WITH PLANT DEBRIS ON THE SURFACE OF THE DISTURBED AREA IN A UNIFORM FASHION.



PREPARED BY: SLATER HANIFAN GROUP CONSULTING ENGINEERS & PLANNERS 940 S. ANVILLE STREET #216 LAS VEGAS, NV 89108 PHONE (702) 244-5500 FAX (702) 244-5500

CITY OF LAS VEGAS

MOCCASIN RD

CCRCD FLOOD CONTROL FACILITY

MOCCASIN RD TO CCRCD FACILITY LVUP 1076/1077

PLAN AND PROFILE

"SD" 22+50.00 TO "SD" 27+00.00

PP-11

20 OF 48

731-99

AS BUILT

Request for Information

Subject: * Box Invent

Priority:

**Question/Clarifications *
Required:**

On sheet PP-11, The boxes at station 23+00 are checking on grade per VTN. And at station 24+00 we are .67 above invert. If we calculate this error out to the grade break we will be at elevation of 2512.93

Proposed Solution:

We propose we change the slope from station 24+31.66 to 26+06.74 to correct this error. 175.08' @5.08 elevation change
Slope =2.9015 %

Response/Clarification:

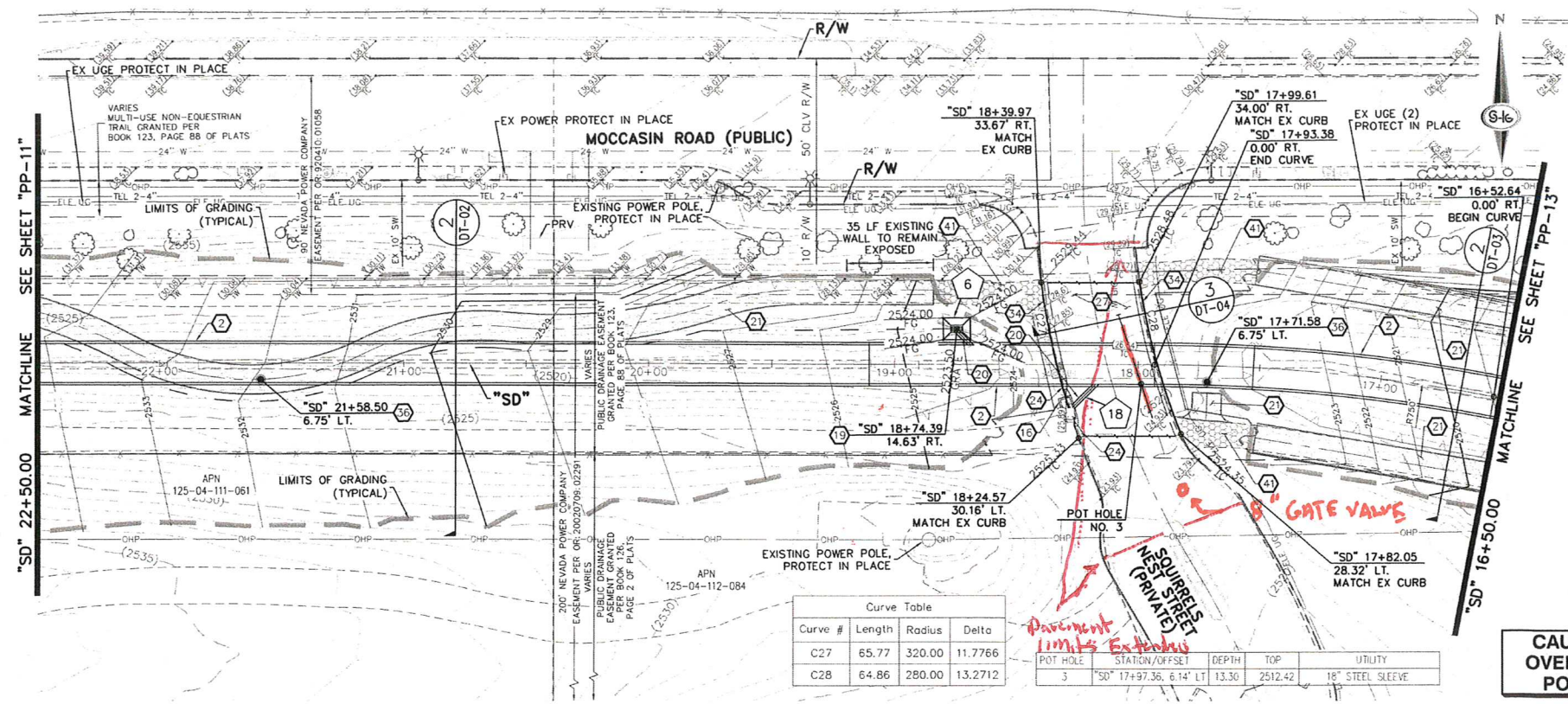
The proposed solution is acceptable to the city. Please make sure these changes are reflected in the asbuilts.

Response Date: 12/22/2020

Impact to Scope: Medium

Impact to Cost: Low

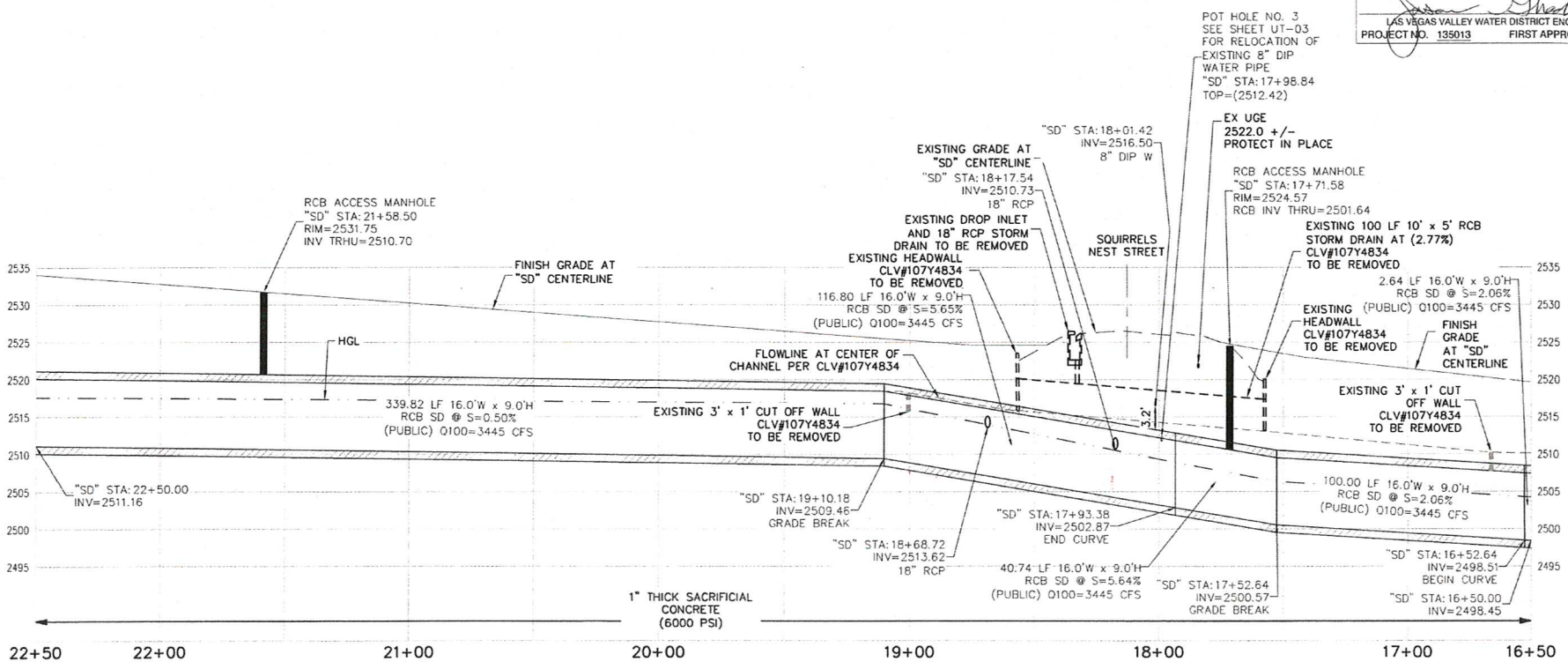
Impact to Schedule: Low



Curve Table			
Curve #	Length	Radius	Delta
C27	65.77	320.00	11.7766
C28	64.86	280.00	13.2712

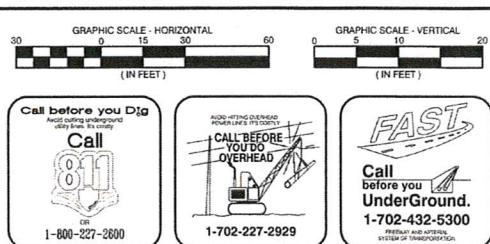
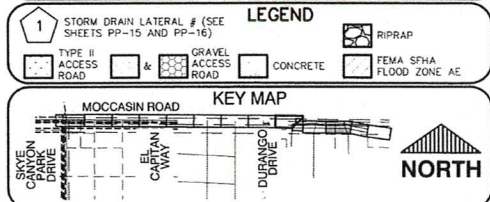
POT HOLE	STATION/OFFSET	DEPTH	TOP	UTILITY
3	"SD" 17+97.36, 6.14' LT	13.30	2512.42	18" STEEL SLEEVE

APPROVED FOR CONSTRUCTION
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT NO. 135013 FIRST APPROVED DATE: 5-4-2020



- ### CONSTRUCTION NOTES
1. CONSTRUCT STORM DRAIN PIPE PLUG (DETAIL 2, SHEET S-2)
 2. INSTALL 16" x 9" RCB (DETAIL 1, SHEET S-2)
 3. CONSTRUCT CONCRETE FILL MEDIAN WITH "L" TYPE ISLAND CURB (USDOCA STD. DWG. NO. 218 AND 219)
 4. CONSTRUCT 48" RCB ACCESS MANHOLE (DETAIL 3, SHEET S-1)
 5. CONSTRUCT HEADWALL (DETAIL 1, SHEET S-7)
 6. CONSTRUCT CONCRETE TRANSITION (DETAIL 1, SHEET S-5)
 7. CONSTRUCT ACCESS RAMP (DETAIL 1, SHEET S-5)
 8. MATCH EXISTING GRADE
 9. CONSTRUCT 10'W x 5'H RCB CONNECTION (DETAIL 1, SHEET S-4)
 10. CONNECT TO EXISTING 30" RCP WITH CONCRETE COLLAR (DETAIL 1, SHEET DT-02)
 11. INSTALL 5.5' ASPHALT OVER 6" TYPE II AGGREGATE BASE
 12. CONSTRUCT CONCRETE RECTANGULAR CHANNEL (DETAIL A, SHEET S-6)
 13. INSTALL 30" RCP STORM DRAIN (CLASS PER LATERAL PROFILE)
 14. INSTALL 72" RCP STORM DRAIN (CLASS PER LATERAL PROFILE)
 15. INSTALL 24" RCP STORM DRAIN (CLASS PER LATERAL PROFILE)
 16. INSTALL MODIFIED TYPE "DM2" STORM DRAIN DROP INLET, L=7.5' (USDOCA STD. DWG. 412.1 AND 421)
 17. CONSTRUCT "L" TYPE CURB AND GUTTER (USDOCA STD. DWG. 216)
 18. INSTALL 10' WIDE CONCRETE SIDEWALK (USDOCA STD. DWG. 234)
 19. INSTALL 12" WIDE 2" THICK 3/4" ROCK MULCH ACCESS ROAD OVER 90% COMPACTED NATIVE MATERIAL. SEE AIR-SHEETS FOR GRADING AND INFORMATION
 20. INSTALL PARTIALLY GROUTED RIPRAP (D50=12", T=24") (SEE DETAIL 5, SHEET DT-03)
 21. CONSTRUCT CONCRETE FLUME (DETAIL 1, SHEET S-5)
 22. CONSTRUCT 5' LF "ROLL" TYPE CURB TO "L" TYPE CURB TRANSITION (DETAIL 3, SHEET DT-03)
 23. INSTALL 72" HIGH CHAIN LINK FENCE WITH GROUNDING (SEE SHEET E-1)
 24. INSTALL 12-FT WIDE CHAIN LINK GATE WITH GROUNDING (SEE SHEET E-1)
 25. INSTALL 3" ASPHALT OVER 4" TYPE II AGGREGATE BASE
 26. INSTALL BUS TURNOUT (SEE DETAIL 4 ON SHEET DT-01)
 27. CONNECT TO EXISTING 18" RCP WITH CONCRETE COLLAR (DETAIL 1, SHEET DT-02)
 28. INSTALL POST AND CABLE FENCE WITH GROUNDING (LOCATION PER DETAIL ON SHEET PP-14) (SEE SHEET E-1) (DETAIL 1, SHEET DT-01 OR APPROVED EQUAL)
 29. INSTALL 6" THICK CONCRETE OVER 6" TYPE II AGGREGATE BASE (DETAIL 5, SHEET DT-04)
 30. INSTALL 42" C900 RCP PIPE (OR APPROVED EQUAL) WITH CAPS ON EACH END FOR FUTURE SEWER (LATERAL PROFILE 1, SHEET UT-01)
 31. INSTALL 10'W x 5'H RCB (DETAIL 1, SHEET S-4)
 32. CONSTRUCT "ROLL" TYPE CURB AND GUTTER (USDOCA STD. DWG. NO. 217.2)
 33. INSTALL 12" WIDE 6" THICK TYPE II AGGREGATE ACCESS ROAD OVER 95% COMPACTED NATIVE MATERIAL
 34. CONSTRUCT 60" RCB ACCESS MANHOLE (DETAIL 3, SHEET S-1)
 35. INSTALL 42" HOG-WIRE FENCE (DETAIL 4, SHEET DT-04). INSTALL HOG-WIRE FENCE GROUNDING SYSTEM PER REQUIREMENTS OUTLINED ON SHEET E-1, KEYNOTE 8
 36. INSTALL 12" WIDE LOCKING GATE (USDOCA STD. DWG. NO. 253). INSTALL GATE GROUNDING SYSTEM PER REQUIREMENTS OUTLINED ON SHEET E-1, KEYNOTE 9
 37. CONSTRUCT CUT-OFF WALL (SECTION C, SHEET S-5)
 38. CONSTRUCT WING WALL (DETAIL A, SHEET S-7)
 39. INSTALL 3" THICK 3/4" ROCK MULCH ON EXISTING ACCESS ROAD (SEE AIR-SHEETS FOR GRADING AND LAYOUT)
 40. INSTALL TYPE "CM" STORM DRAIN DROP INLET, L=5' (USDOCA STD. DWG. NO. 422). DO NOT USE SOLID LID ON 1ST PANEL, USE DUAL VANE TYPE GRATES.
 41. INSTALL 30" C900 STORM DRAIN

- ### NOTES
1. NV ENERGY, CENTURYLINK, TELEPHONE, AND SOUTHWEST GAS SHOWN FOR INFORMATION ONLY. REFERENCE NV ENERGY, CENTURYLINK, TELEPHONE, AND SOUTHWEST GAS DRAWINGS FOR CONSTRUCTION DETAILS. CONTRACTOR TO COORDINATE WITH UTILITIES FOR REMOVAL AND INSTALLATION OF FACILITIES.
 2. ALL EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR EXISTING LOCATION. THE DEPTH BELOW GRADE OF THE VARIOUS UTILITIES SHOWN ON THE PLANS VARIES THROUGHOUT THE PROJECT AREA. THE CONTRACTOR SHALL EXERCISE EXTREME CARE WHEN EXCAVATING AND GRADING THE SURFACE IN THE VICINITY OF UTILITIES TO AVOID DAMAGE TO THE LATTER.
 3. ALL EXISTING UTILITIES SHALL BE PROTECTED IN PLACE UNLESS OTHERWISE NOTED. CONTRACTOR SHALL RESTORE AFFECTED LANDSCAPING AND IRRIGATION TO PRE-CONSTRUCTION CONDITIONS.
 4. ALL RCP SHALL BE CLASS II UNLESS OTHERWISE SHOWN.
 5. ALL PIPE LENGTHS ARE MEASURED ALONG PIPE CENTERLINE TO CENTER OF MANHOLE OR INSIDE EDGE OF "L" OR "C" CURB.
 6. ALL DROP PILES SHALL INCLUDE STORM WATER MANAGEMENT STAMP AND DETAIL PER USDOCA STD. DWG. NO. 421.
 7. SPECIAL INSPECTION REQUIRED FOR PIPE SEGMENTS WITH SACRIFICIAL CONCRETE.
 8. SEE UT-SHEETS FOR REMOVAL PLANS.
 9. SEE UT-SHEETS FOR LANDSCAPE PLAN.
 10. SEE DETAIL 3 OR DETAIL 4 FOR STANDARD RCB/RCP TRENCH SECTIONS.
 11. DISTURBED AREAS SURFACE TREATMENT - FOLLOWING EXCAVATION, CONTRACTOR SHALL BACKFILL WITH MATERIAL WITH ASSIGNED RULP MATERIAL OVER ALL SURFACES TO BE DISTURBED BY CONSTRUCTION. THE STIPPED MATERIAL SHALL BE STOCKPILED ALONG THE COURSE OF CONSTRUCTION (INSIDE THE ELM ROW AREA). AT THE CONCLUSION OF CONSTRUCTION, INCLUDING TRENCH BACKFILL AND CONSTRUCTION, CONTRACTOR SHALL REFACE THE STOCKPILED SOIL WITH PLANT DEBRIS ON THE SURFACE OF THE DISTURBED AREA IN A UNIFORM FASHION.



SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
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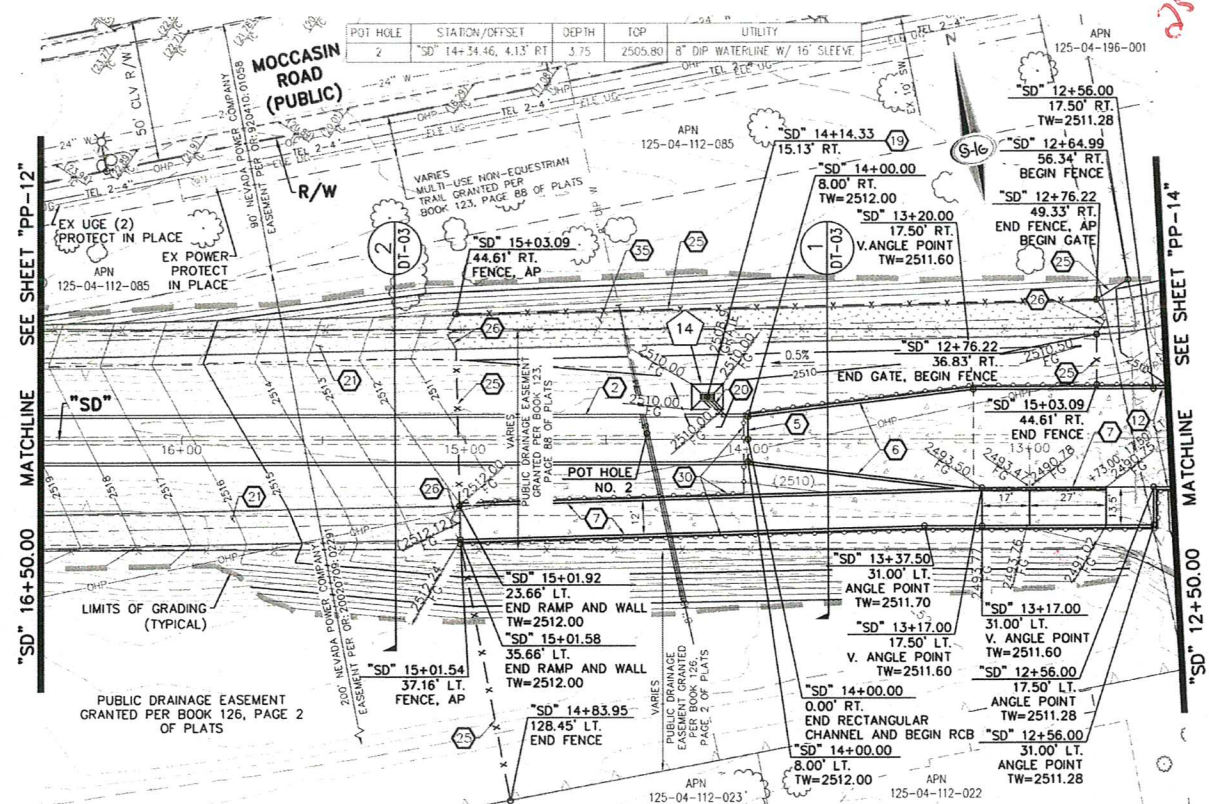
PREPARED BY: SLATER HANIFAN GROUP
CITY OF LAS VEGAS
BID# 1971033
DESIGNED BY: CAM
DRAWN BY: BCC
CHECKED BY: FR
DATE: JAN 2021
SUBMITTAL STAGE: 100% FINAL

MOCCASIN RD
CORFCD FLOOD CONTROL FACILITY
MOCCASIN RD TO CORFCD FACILITY LVUP 1076/1077
SHEET
PLAN AND PROFILE
"SD" 16+50.00 TO "SD" 22+50.00

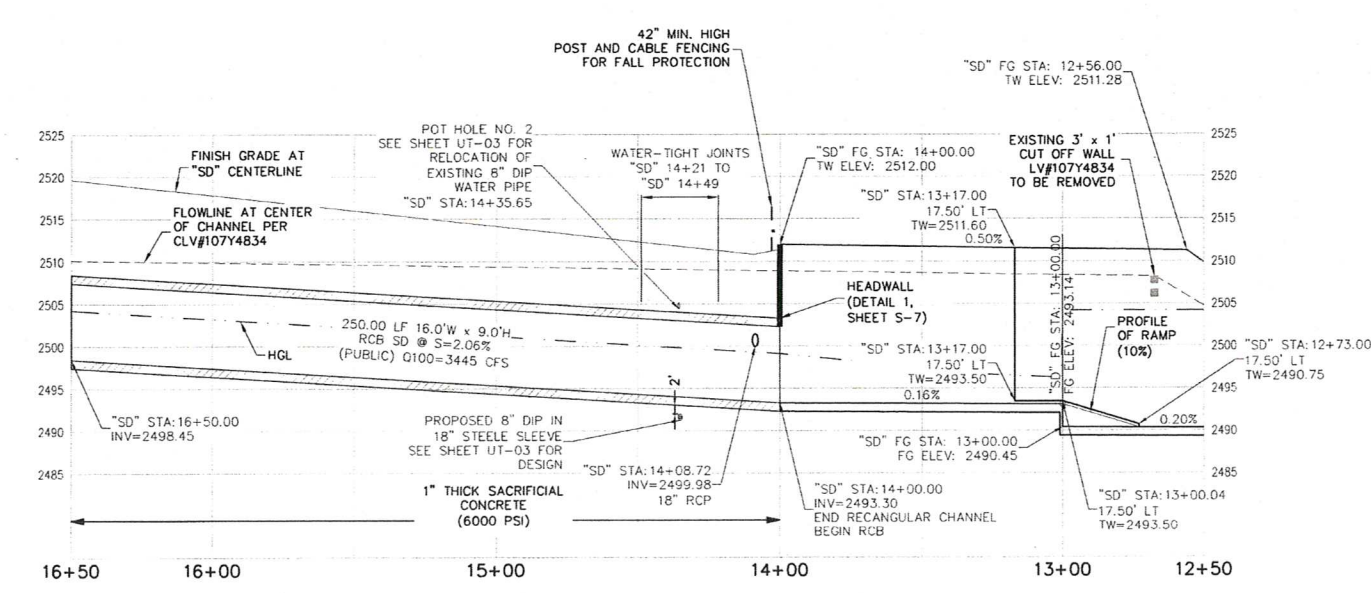
731-99

AS BUILT

Added Riprap
25' grade

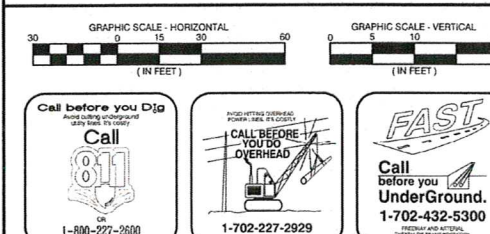
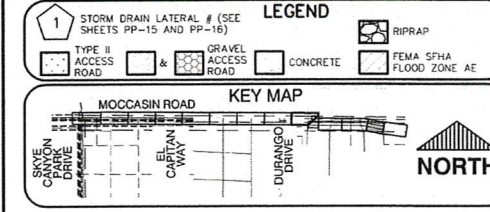


APPROVED FOR CONSTRUCTION
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT NO. 135013 FIRST APPROVED DATE: 3-4-20



- ### CONSTRUCTION NOTES
1. CONSTRUCT STORM DRAIN PIPE PLUG (DETAIL 2, SHEET S-2)
 2. INSTALL 16"W x 9"H RCB (DETAIL 1, SHEET S-2)
 3. CONSTRUCT CONCRETE FILLED MEDIAN WITH "L" TYPE ISLAND CURB (USDCOA STD. DWG. NO. 218 AND 219)
 4. CONSTRUCT 48" RCB ACCESS MANHOLE (DETAIL 3, SHEET S-1)
 5. CONSTRUCT HEADWALL (DETAIL 1, SHEET S-7)
 6. CONSTRUCT CONCRETE TRANSITION (DETAIL 1, SHEET S-5)
 7. CONSTRUCT ACCESS RAMP (DETAIL 1, SHEET S-5)
 8. MATCH EXISTING GRADE
 9. CONSTRUCT 10"W x 5"H RCB CONNECTION (DETAIL 1, SHEET S-4)
 10. CONNECT TO EXISTING 30" RCP WITH CONCRETE COLLAR (DETAIL 1, SHEET DT-02)
 11. INSTALL 5.5" ASPHALT OVER 6" TYPE II AGGREGATE BASE
 12. CONSTRUCT CONCRETE RECTANGULAR CHANNEL (DETAIL A, SHEET S-6)
 13. INSTALL 30" RCP STORM DRAIN (CLASS PER LATERAL PROFILE)
 14. INSTALL 72" RCP STORM DRAIN (CLASS PER LATERAL PROFILE)
 15. INSTALL 24" RCP STORM DRAIN (CLASS PER LATERAL PROFILE)
 16. INSTALL MODIFIED TYPE "DM2" STORM DRAIN DROP INLET, L=7.5' (USDCOA STD. DWG. 412.1 AND 421)
 17. CONSTRUCT "L" TYPE CURB AND GUTTER (USDCOA STD. DWG. 216)
 18. INSTALL 10" WIDE CONCRETE SIDEWALK (USDCOA STD. DWG. 234)
 19. INSTALL 18" RCP STORM DRAIN (CLASS PER LATERAL PROFILE)
 20. CONSTRUCT 12" WIDE, 2" THICK 3/4" ROCK MULCH ACCESS ROAD OVER 50% COMPACTED NATIVE MATERIAL. SEE AR-SHEETS FOR GRADING AND INFORMATION (SHEET DT-02)
 21. INSTALL PARTIALLY GROUTED RIPRAP (D50=12", T=24") (SEE DETAIL 5, SHEET DT-02)
 22. CONSTRUCT CONCRETE FLUME (DETAIL 1, SHEET S-5)
 23. CONSTRUCT 5 LF "ROLL" TYPE CURB TO "L" TYPE CURB TRANSITION (DETAIL 3, SHEET DT-03)
 24. INSTALL 72" HIGH CHAIN LINK FENCE WITH GROUNDING (SEE SHEET E-1)
 25. INSTALL 12-FT WIDE CHAIN LINK GATE WITH GROUNDING (SEE SHEET E-1)
 26. INSTALL 3" ASPHALT OVER 4" TYPE II AGGREGATE BASE
 27. INSTALL BUS TURNOUT (SEE DETAIL 4 ON SHEET DT-01)
 28. CONNECT TO EXISTING 18" RCP WITH CONCRETE COLLAR (DETAIL 1, SHEET DT-02)
 29. CONSTRUCT 12" WIDE, 2" THICK 3/4" ROCK MULCH ACCESS ROAD OVER 50% COMPACTED NATIVE MATERIAL. SEE AR-SHEETS FOR GRADING AND INFORMATION (SHEET DT-02)
 30. CONSTRUCT 5 LF "ROLL" TYPE CURB TO "L" TYPE CURB TRANSITION (DETAIL 3, SHEET DT-03)
 31. INSTALL 72" HIGH CHAIN LINK FENCE WITH GROUNDING (SEE SHEET E-1)
 32. INSTALL 12-FT WIDE CHAIN LINK GATE WITH GROUNDING (SEE SHEET E-1)
 33. INSTALL 3" ASPHALT OVER 4" TYPE II AGGREGATE BASE
 34. CONSTRUCT 12" WIDE, 2" THICK 3/4" ROCK MULCH ACCESS ROAD OVER 50% COMPACTED NATIVE MATERIAL
 35. CONSTRUCT 60" RCB ACCESS MANHOLE (DETAIL 3, SHEET S-1)
 36. CONSTRUCT 12" WIDE, 2" THICK 3/4" ROCK MULCH ACCESS ROAD OVER 50% COMPACTED NATIVE MATERIAL. SEE AR-SHEETS FOR GRADING AND INFORMATION (SHEET DT-02)
 37. CONSTRUCT 5 LF "ROLL" TYPE CURB TO "L" TYPE CURB TRANSITION (DETAIL 3, SHEET DT-03)
 38. INSTALL 12" WIDE LOCKING GATE (USDCOA STD. DWG. NO. 243). INSTALL GATE GROUNDING SYSTEM PER REQUIREMENTS OUTLINED ON SHEET E-1, KEYNOTE 9.
 39. CONSTRUCT CUT-OFF WALL (SECTION C, SHEET S-5)
 40. CONSTRUCT WING WALL (DETAIL A, SHEET S-7)
 41. INSTALL 3" THICK 3/4" ROCK MULCH ON EXISTING ACCESS ROAD
 42. CONSTRUCT 12" WIDE, 2" THICK 3/4" ROCK MULCH ACCESS ROAD OVER 50% COMPACTED NATIVE MATERIAL. SEE AR-SHEETS FOR GRADING AND LAYOUT
 43. CONSTRUCT 12" WIDE, 2" THICK 3/4" ROCK MULCH ACCESS ROAD OVER 50% COMPACTED NATIVE MATERIAL. SEE AR-SHEETS FOR GRADING AND LAYOUT
 44. CONSTRUCT 12" WIDE, 2" THICK 3/4" ROCK MULCH ACCESS ROAD OVER 50% COMPACTED NATIVE MATERIAL. SEE AR-SHEETS FOR GRADING AND LAYOUT
 45. CONSTRUCT 12" WIDE, 2" THICK 3/4" ROCK MULCH ACCESS ROAD OVER 50% COMPACTED NATIVE MATERIAL. SEE AR-SHEETS FOR GRADING AND LAYOUT
 46. CONSTRUCT 12" WIDE, 2" THICK 3/4" ROCK MULCH ACCESS ROAD OVER 50% COMPACTED NATIVE MATERIAL. SEE AR-SHEETS FOR GRADING AND LAYOUT
 47. CONSTRUCT 12" WIDE, 2" THICK 3/4" ROCK MULCH ACCESS ROAD OVER 50% COMPACTED NATIVE MATERIAL. SEE AR-SHEETS FOR GRADING AND LAYOUT
 48. CONSTRUCT 12" WIDE, 2" THICK 3/4" ROCK MULCH ACCESS ROAD OVER 50% COMPACTED NATIVE MATERIAL. SEE AR-SHEETS FOR GRADING AND LAYOUT
 49. CONSTRUCT 12" WIDE, 2" THICK 3/4" ROCK MULCH ACCESS ROAD OVER 50% COMPACTED NATIVE MATERIAL. SEE AR-SHEETS FOR GRADING AND LAYOUT
 50. CONSTRUCT 12" WIDE, 2" THICK 3/4" ROCK MULCH ACCESS ROAD OVER 50% COMPACTED NATIVE MATERIAL. SEE AR-SHEETS FOR GRADING AND LAYOUT

- ### NOTES
1. NV ENERGY, CENTURYLINK, TELEPHONE, AND SOUTHWEST GAS SHOWN FOR INFORMATION ONLY. REFERENCE ANY ENERGY CENTER/TELEPHONE AND SOUTHWEST GAS DRAWINGS FOR CONSTRUCTION DETAILS. CONTRACTOR TO COORDINATE WITH UTILITIES FOR REMOVAL AND INSTALLATION OF FACILITY.
 2. ALL EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN AT THEIR PROPER LOCATION. THE DEPTH BELOW GRADE OF UTILITIES SHOWN ON THE PLANS VARIES THROUGHOUT THE PROJECT AREA. THE CONTRACTOR SHALL EXCAVATE EXISTING UTILITIES WORKING AND GRADING THE SUBGRADE IN THE VICINITY OF UTILITIES TO AVOID DAMAGE TO THE LATER.
 3. ALL EXISTING UTILITIES ARE PROTECTED IN PLACE UNLESS OTHERWISE NOTED. CONTRACTOR SHALL RESTORE AFFECTED LANDSCAPING AND IRRIGATION TO PRE-CONSTRUCTION CONDITIONS.
 4. ALL RCP SHALL BE CLASS II UNLESS OTHERWISE NOTED.
 5. ALL PIPE LENGTHS ARE MEASURED ALONG PRE-CENTRELINE TO CENTER OF MANHOLE OR INSIDE EDGE OF DI OR RCB/RCB.
 6. ALL DROP PIPES SHALL INCLUDE STORM WATER MANAGEMENT STAMP AND DETAIL PER USDCOA STD. DWG. NO. 49.
 7. SEE STRUCTURAL PLANS FOR ADDITIONAL STRUCTURAL DETAILS AND CONNECTIONS.
 8. ALL PIPES ARE PUBLICLY MAINTAINED.
 9. SPECIAL INSPECTION REQUIRED FOR PIPE SEQUENTS WITH SACRIFICIAL CONCRETE.
 10. SEE R-SHEETS FOR REMOVAL PLANS.
 11. SEE L-SHEETS FOR UTILITY PLANS.
 12. SEE DETAIL 4 ON SHEET DT-01 FOR STANDARD RCB/RCP TRENCH SECTIONS.
 13. UNDISTURBED AREAS SURFACE TREATMENT - CONTRACTOR SHALL STRIP THE TOP SIX INCHES OF SOIL MATERIAL WITH ASSOCIATED SUBGRADE, OVER EXPOSED TO BE DISTURBED BY CONSTRUCTION. THE STRIPPED MATERIAL SHALL BE STOCKPILED ALONG THE COURSE OF CONSTRUCTION (INSIDE THE RCB) AT THE CONCLUSION OF CONSTRUCTION, INCLUDING TRENCH BACKFILLING AND COMPACTION. CONTRACTOR SHALL REPLACE THE STOCKPILED SOIL WITH PLANT DEBRIS ON THE SURFACE OF THE DISTURBED AREA IN A UNIFORM 1-FOOT LAYER.



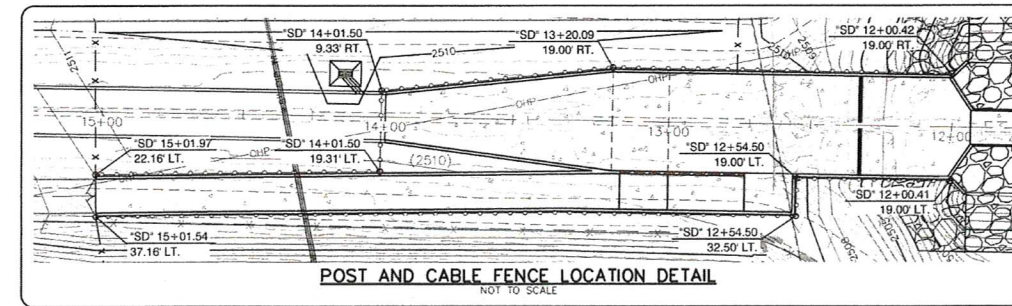
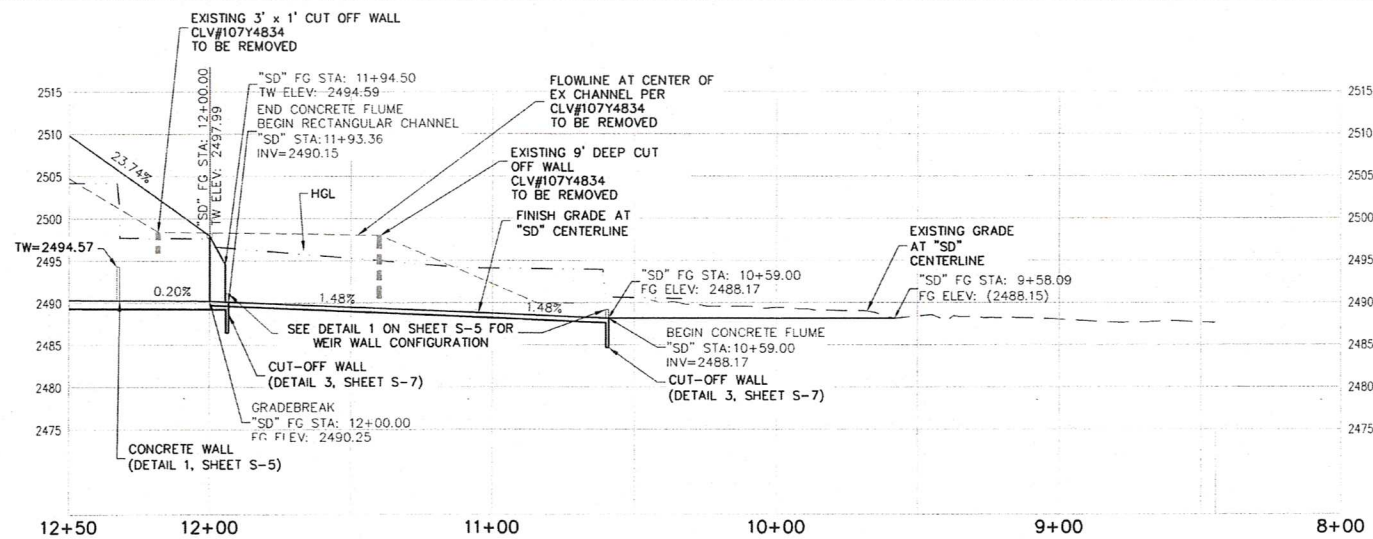
SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
9748 S. ARVILLE STREET #211, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5309

PREPARED FOR: CITY OF LAS VEGAS
DESIGNED BY: CAM
DRAWN BY: BCC
CHECKED BY: FR

DATE: JAN 2021
SUBMITTAL STAGE: 100% FINAL

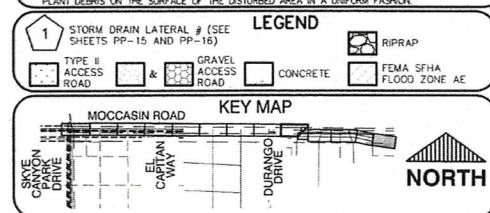
TITLE: MOCCASIN RD FLOOD CONTROL FACILITY
CCRFCD FACILITY LVUP 1076/1077
SHEET: PP-13
22 OF 48
DRAWING NO: 731-99

AS BUILT



- ### CONSTRUCTION NOTES
1. CONSTRUCT STORM DRAIN PIPE PLUG (DETAIL 2, SHEET S-2)
 2. INSTALL 16"W x 9"H RCB (DETAIL 1, SHEET S-2)
 3. CONSTRUCT CONCRETE FILLED MEDIAN WITH "L" TYPE ISLAND CURB (USCDOA STD. DWG. NO. 218 AND 219)
 4. CONSTRUCT 48" RCB ACCESS MANHOLE (DETAIL 3, SHEET S-1)
 5. CONSTRUCT HEADWALL (DETAIL 1, SHEET S-7)
 6. CONSTRUCT CONCRETE TRANSITION (DETAIL 1, SHEET S-5)
 7. CONSTRUCT ACCESS RAMP (DETAIL 1, SHEET S-5)
 8. MATCH EXISTING GRADE
 9. CONSTRUCT 10"W x 5"H RCB CONNECTION (DETAIL 1, SHEET S-4)
 10. CONNECT TO EXISTING 30" RCP WITH CONCRETE COLLAR (DETAIL 1, SHEET DT-02)
 11. INSTALL 5.5" ASPHALT OVER 6" TYPE II AGGREGATE BASE
 12. CONSTRUCT CONCRETE RECTANGULAR CHANNEL (DETAIL A, SHEET S-6)
 13. INSTALL 30" RCP STORM DRAIN (CLASS PER LATERAL PROFILE)
 14. INSTALL 72" RCP STORM DRAIN (CLASS PER LATERAL PROFILE)
 15. INSTALL 24" RCP STORM DRAIN (CLASS PER LATERAL PROFILE)
 16. INSTALL MODIFIED TYPE "DM2" STORM DRAIN DROP INLET, L=7'5" (USCDOA STD. DWG. 412.1 AND 421)
 17. CONSTRUCT "L" TYPE CURB AND GUTTER (USCDOA STD. DWG. 216)
 18. INSTALL 10' WIDE CONCRETE SIDEWALK (USCDOA STD. DWG. 234)
 19. INSTALL NDOT TYPE 2B STORM DRAIN DROP INLET WITH CONCRETE APRON (NDOT DETAIL 4-2.2, R=4.2.7 AND USCDOA STD. DWG. 412.1 AND 421) (SEE SHEET DT-05)
 20. INSTALL 18" RCP STORM DRAIN (CLASS PER LATERAL PROFILE)
 21. CONSTRUCT 12" WIDE, 2" THICK 3/4" ROCK MULCH ACCESS ROAD OVER 90% COMPACTED NATIVE MATERIAL. SEE AR-SHEETS FOR GRADING AND INFORMATION
 22. INSTALL PARTIALLY GROUTED RIPRAP (D50=12", T=24") (SEE DETAIL 5, SHEET DT-02)
 23. CONSTRUCT CONCRETE FLUME (DETAIL 1, SHEET S-5)
 24. CONSTRUCT 5 LF "ROLL" TYPE CURB TO "L" TYPE CURB TRANSITION (DETAIL 3, SHEET DT-03)
 25. INSTALL 72" HIGH CHAIN LINK FENCE WITH GROUNDING (SEE SHEET E-1)
 26. INSTALL 12-FIT WIDE CHAIN LINK GATE WITH GROUNDING (SEE SHEET E-1)
 27. INSTALL 3" ASPHALT OVER 4" TYPE II AGGREGATE BASE
 28. INSTALL BUS TURNOUT (SEE DETAIL 4 ON SHEET DT-01)
 29. CONNECT TO EXISTING 18" RCP WITH CONCRETE COLLAR (DETAIL 1, SHEET DT-02)
 30. INSTALL POST AND CABLE FENCE WITH GROUNDING (LOCATION PER DETAIL ON SHEET PP-14) (SEE SHEET E-1) (DETAIL 1, SHEET DT-01 OR APPROVED EQUAL)
 31. INSTALL 6" THICK CONCRETE OVER 6" TYPE II AGGREGATE BASE (DETAIL 5, SHEET DT-04)
 32. INSTALL 42" C900 PVC PIPE (OR APPROVED EQUAL) WITH CAPS ON EACH END FOR FUTURE SEWER (LATERAL PROFILE 1, SHEET UT-01)
 33. INSTALL 10"W x 5"H RCB (DETAIL 1, SHEET S-4)
 34. CONSTRUCT "ROLL" TYPE CURB AND GUTTER (USCDOA STD. DWG. NO. 217.2)
 35. INSTALL 12" WIDE 6" THICK TYPE II AGGREGATE ACCESS ROAD OVER 95% COMPACTED NATIVE MATERIAL
 36. CONSTRUCT 60" RCB ACCESS MANHOLE (DETAIL 3, SHEET S-1)
 37. INSTALL 42" HOOD-WIRE FENCE (DETAIL 4, SHEET DT-04) INSTALL HOOD-WIRE FENCE GROUNDING SYSTEM PER REQUIREMENTS OUTLINED ON SHEET E-1, KEYNOTE 8
 38. INSTALL 12" WIDE LOCKING GATE (USCDOA STD. DWG. NO. 253) INSTALL GATE GROUNDING SYSTEM PER REQUIREMENTS OUTLINED ON SHEET E-1, KEYNOTE 9
 39. CONSTRUCT CUT-OFF WALL (SECTION C, SHEET S-5)
 40. CONSTRUCT WING WALL (DETAIL A, SHEET S-7)
 41. INSTALL 3" THICK 3/4" ROCK MULCH ON EXISTING ACCESS ROAD
 42. CONSTRUCT TYPE "CM" STORM DRAIN DROP INLET, L=5" (USCDOA STD. DWG. NO. 422) DO NOT USE SOLID ID ON 1ST PANEL, USE DUAL VANE TYPE GRATES
 43. INSTALL 30" C900 STORM DRAIN

- ### NOTES
1. NV ENERGY, CENTURYLINK TELEPHONE, AND SOUTHWEST GAS SHOWN FOR INFORMATION ONLY. REFER TO NV ENERGY, CENTURYLINK TELEPHONE, AND SOUTHWEST GAS DRAWINGS FOR COORDINATION OF DEEP CONSTRUCTION TO COORDINATE WITH UTILITIES FOR REMOVAL AND INSTALLATION OF FACILITIES.
 2. ALL EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL UTILITIES.
 3. ALL EXISTING UTILITIES SHALL BE PROTECTED IN PLACE UNLESS OTHERWISE NOTED. CONTRACTOR SHALL RESTORE AFFECTED LANDSCAPING AND IRRIGATION TO PRE-CONSTRUCTION CONDITIONS.
 4. ALL RCP SHALL BE CLASS III UNLESS OTHERWISE SHOWN.
 5. PIPE JOINTS ARE MEASURED ALONG PIPE CENTERLINE TO CENTER OF MANHOLE OR INSIDE EDGE OF 3' OR RCB/CA.
 6. ALL RCP SHALL BE CLASS III UNLESS OTHERWISE SHOWN.
 7. ALL RCP SHALL BE CLASS III UNLESS OTHERWISE SHOWN.
 8. ALL RCP SHALL BE CLASS III UNLESS OTHERWISE SHOWN.
 9. ALL RCP SHALL BE CLASS III UNLESS OTHERWISE SHOWN.
 10. SPECIAL INSPECTION REQUIRED FOR PIPE SEGMENTS WITH SACRIFICIAL CONCRETE.
 11. SEE R-SHEETS FOR REMOVAL PLANS.
 12. SEE R-SHEETS FOR UTILITY PLANS.
 13. SEE L-SHEET FOR LANDSCAPE PLAN.
 14. SEE DETAIL 3 ON SHEET DT-01 FOR STANDARD RCB/RCP TRENCH SECTIONS.
 15. DISTURBED AREAS SURFACE TREATMENT - FOLLOWING EXCAVATION, CONTRACTOR SHALL BACKFILL BENCHES WITH ASSOCIATED PLANT MATERIAL. ALL SURFACE TO BE DISTURBED BY CONSTRUCTION SHALL BE STOCKPILED ALONG THE COURSE OF CONSTRUCTION (INSIDE THE REMOVAL AREA). AT THE CONCLUSION OF CONSTRUCTION, TRENCH BACKFILLING AND COMPACTION, CONTRACTOR SHALL REPLACE THE STOCKPILED SOIL WITH PLANT DEBRIS ON THE SURFACE OF THE DISTURBED AREA IN A UNIFORM PATTERN.



GRAPHIC SCALE - HORIZONTAL (IN FEET)

GRAPHIC SCALE - VERTICAL (IN FEET)

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FAST

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SLATER HANIFAN GROUP CONSULTING ENGINEERS & PLANNERS

PREPARED BY

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MOCCASIN RD

CCRFCD FLOOD CONTROL FACILITY

MOCCASIN RD TO CCRFCD FACILITY LVUP 1076/1077

PLAN AND PROFILE

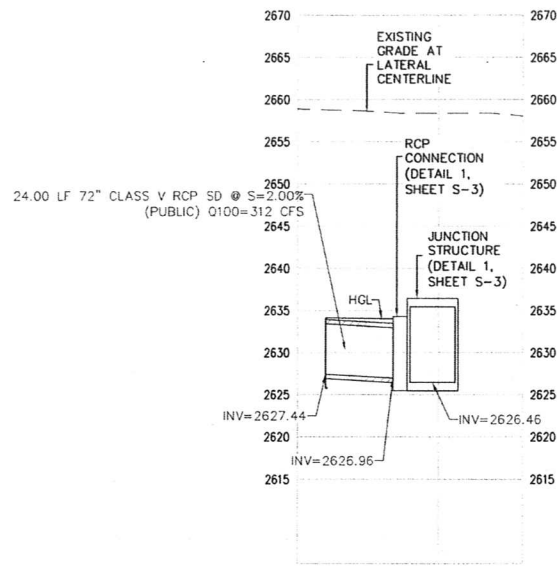
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PP-14

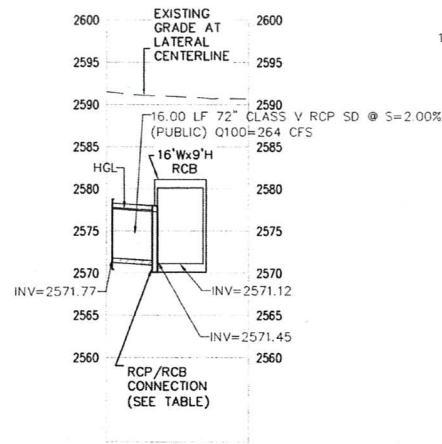
23 OF 48

731-99

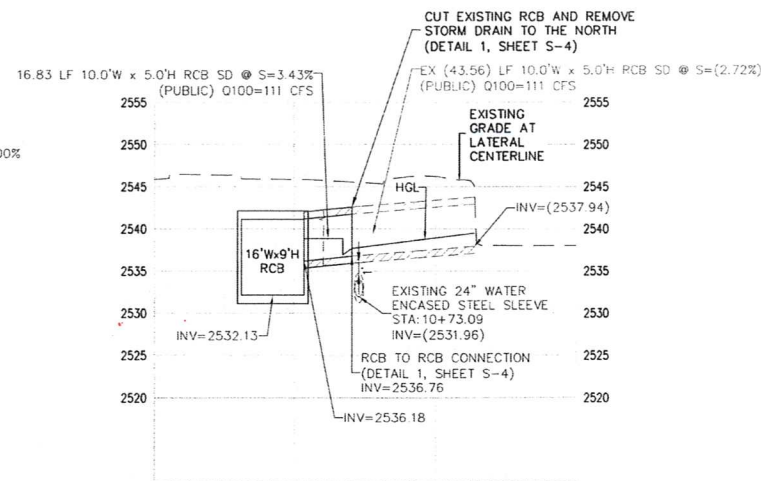
AS BUILT



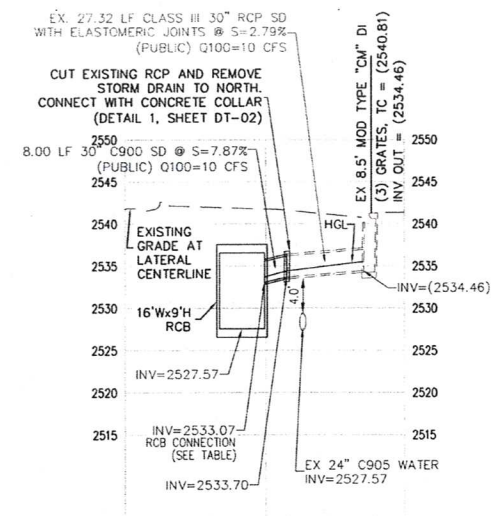
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LATERAL PROFILE**
SCALE HORIZ: 1" = 30'
SCALE VERT: 1" = 5'



**"SD" 58+00.00, 8.00' LT.
LATERAL PROFILE**
SCALE HORIZ: 1" = 30'
SCALE VERT: 1" = 5'



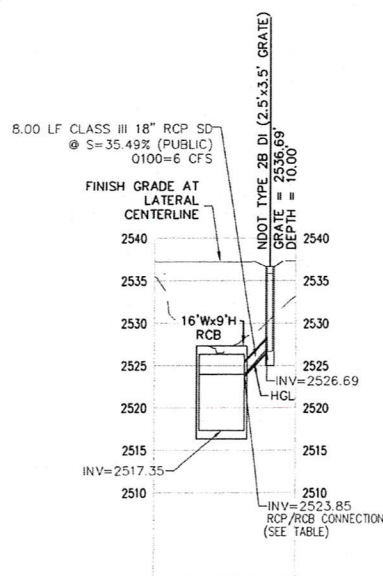
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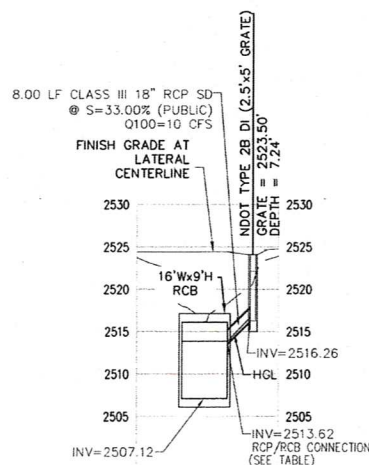
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**REFERENCE TABLE
RCP/RCB CONNECTION DETAILS**

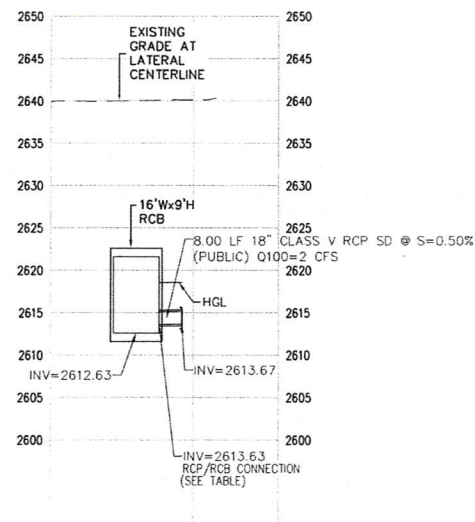
RCP 24" Ø OR LESS (CAST-IN-PLACE RCB)	DETAIL 1 / SHEET S-1
RCP 30" Ø OR LESS (PRECAST RCB)	DETAIL 3 / SHEET S-9
RCP 30" Ø (CAST-IN-PLACE RCB)	DETAIL 6 / SHEET S-1
RCP 72" Ø "SD" 58+00.00	DETAIL 1 / SHEET S-9
RCP 72" Ø "SD" 84+45.00	DETAIL 1 / SHEET S-3



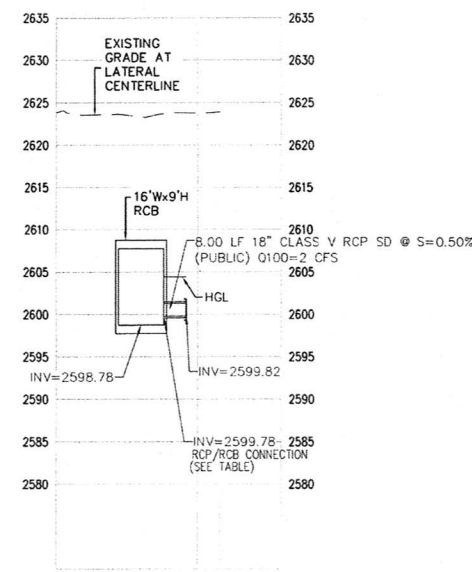
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LATERAL PROFILE**
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SCALE VERT: 1" = 5'



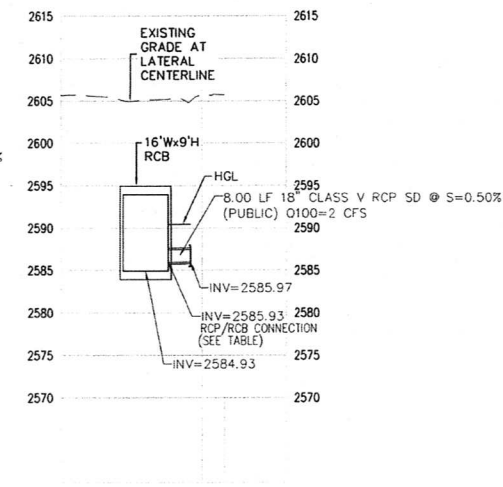
**"SD" 18+68.72, 8.00' FT.
LATERAL PROFILE**
SCALE HORIZ: 1" = 30'
SCALE VERT: 1" = 5'



**"SD" 77+78.50, 8.00' LT.
LATERAL PROFILE**
SCALE HORIZ: 1" = 30'
SCALE VERT: 1" = 5'



**"SD" 71+18.50, 8.00' LT.
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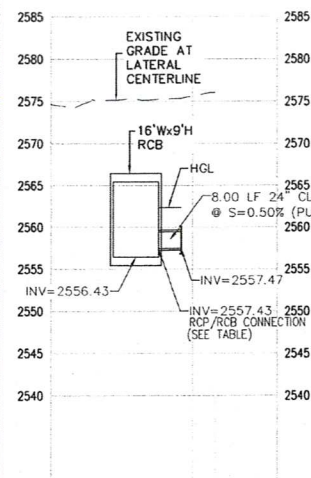


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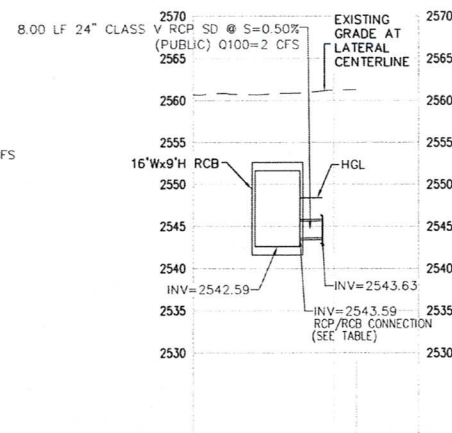
APPROVED FOR CONSTRUCTION
[Signature]
Lay Valley Water District Engineering Services
Project No. 13013 First Approved Date: 3-4-2020

PREPARED BY SLATER HANIFAN GROUP CONSULTING ENGINEERS & PLANNERS 5740 S. APRIL STREET, SUITE 1411 LAS VEGAS, NV 89119 PHONE (702) 244-4300 FAX (702) 244-4399		NO. DATE REVISIONS
CITY OF LAS VEGAS MOCCASIN RD CORFCD FLOOD CONTROL FACILITY MOCCASIN RD TO CCRFCD FACILITY LVUP 1076/1077	BID# 13-71033 H# 71033 DATE: JAN 2020 SUBMITTAL STAGE: 100% FINAL	DESIGNED BY: CAM DRAWN BY: BCC CHECKED BY: FR
STORM DRAIN LATERAL PROFILES		
SHEET PP-15 24 OF 48 DRAWING NO 731-99		

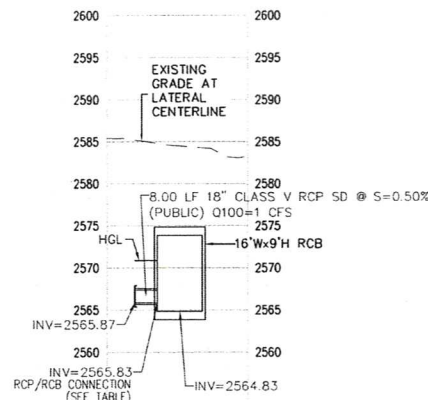
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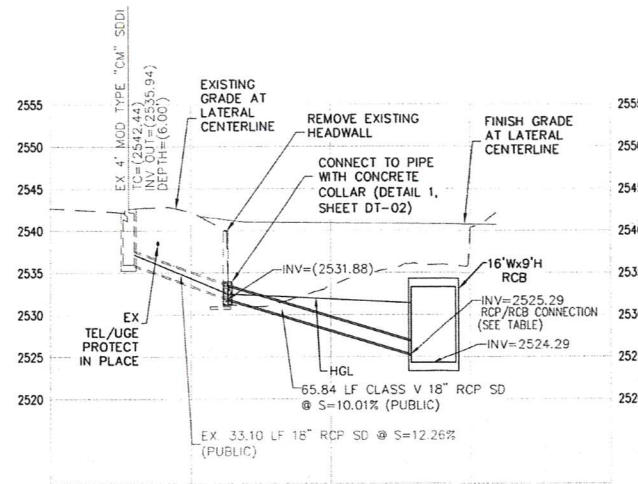
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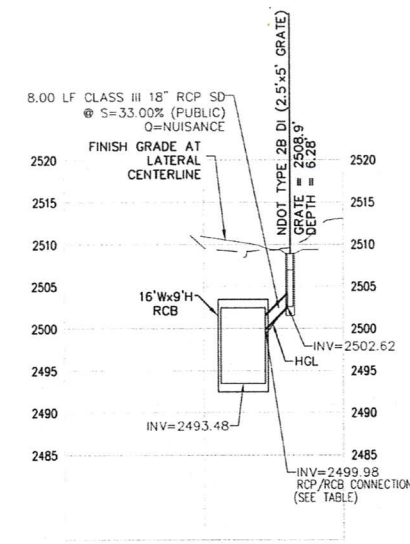
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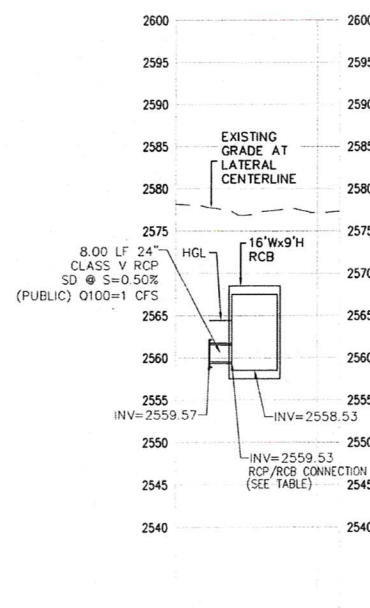
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SCALE VERT: 1" = 5'



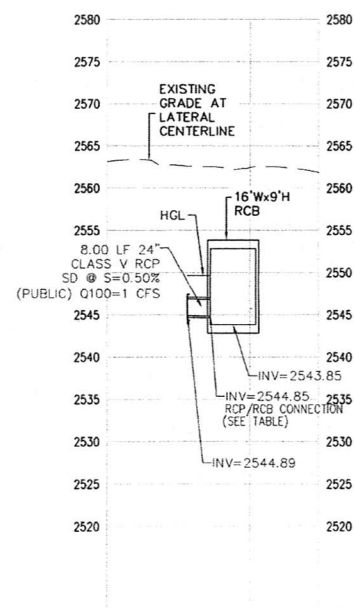
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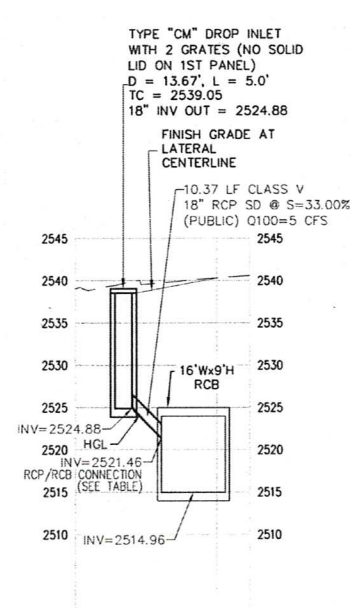
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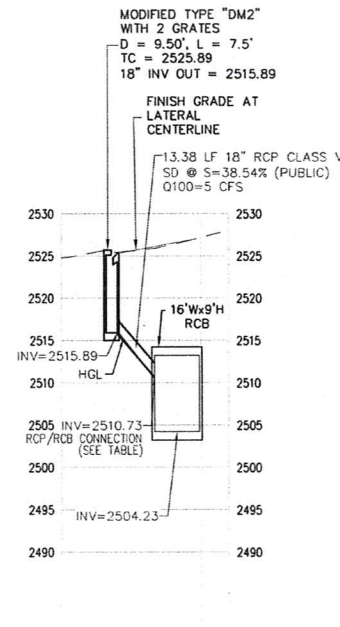
"SD" 52+00.00, 8.00' LT.
LATERAL PROFILE
SCALE HORIZ: 1" = 30'
SCALE VERT: 1" = 5'



"SD" 45+00.00, 8.00' LT.
LATERAL PROFILE
SCALE HORIZ: 1" = 30'
SCALE VERT: 1" = 5'



"SD" 25+24.98, 8.00' LT.
LATERAL PROFILE
SCALE HORIZ: 1" = 30'
SCALE VERT: 1" = 5'



"SD" 18+17.54, 8.00' LT.
LATERAL PROFILE
SCALE HORIZ: 1" = 30'
SCALE VERT: 1" = 5'

REFERENCE TABLE
RCP/RCB CONNECTION DETAILS

RCP 24" Ø OR LESS (CAST-IN-PLACE RCB)	DETAIL 1 / SHEET S-1
RCP 30" Ø OR LESS (PRECAST RCB)	DETAIL 3 / SHEET S-9
RCP 30" Ø (CAST-IN-PLACE RCB)	DETAIL 6 / SHEET S-1
RCP 72" Ø "SD" 58+00.00	DETAIL 1 / SHEET S-9
RCP 72" Ø "SD" 84+45.00	DETAIL 1 / SHEET S-3

SLATER HANIFAN GROUP

CONSULTING ENGINEERS & PLANNERS

9740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118

PHONE (702) 264-5000 FAX (702) 264-5099

NO. DATE

REVISIONS

PREPARED FOR

CITY OF LAS VEGAS

PROJECT NO. 71033

DATE: JAN 2020

SUBMITTAL STAGE:

100% FINAL

DESIGNED BY: BCC

DRAWN BY: FMT

CHECKED BY: BCC

TITLE

MOCCASIN RD

CCRFCD FLOOD CONTROL FACILITY

MOCCASIN RD TO CCRFCD FACILITY LVUP 1076/1077

SHEET

STORM DRAIN LATERAL PROFILES

REGISTERED PROFESSIONAL ENGINEER

FRANK RETZLAFF

Exp. 12/31/2021

CIVIL

No. 15751-KVW

SHEET

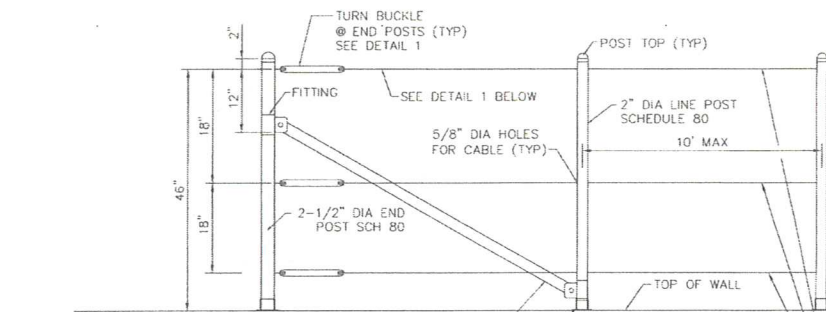
PP-16

25 OF 48

DRAWING NO.

731-99

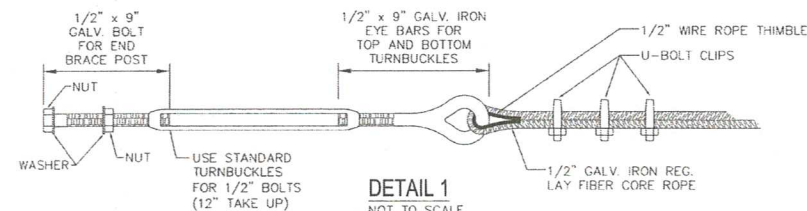
AS BUILT



- NOTES:
1. ALL POSTS SHALL BE SET PLUMB.
 2. RAILING POSTS AND FITTINGS SHALL BE HOT DIPPED GALVANIZED MALLEABLE CAST IRON, OR PRESSED STEEL.
 3. GALVANIZE COMPONENTS AFTER FABRICATION.
 4. BRACE BANDS SIZED FOR 1500 LBS. (WORKING LOAD).
 5. DO NOT INSTALL BRACES ACROSS WALL EXPANSION JOINTS. DO NOT DRILL HOLES IN BRACE FOR CABLE.

ELEVATION VIEW

NOT TO SCALE

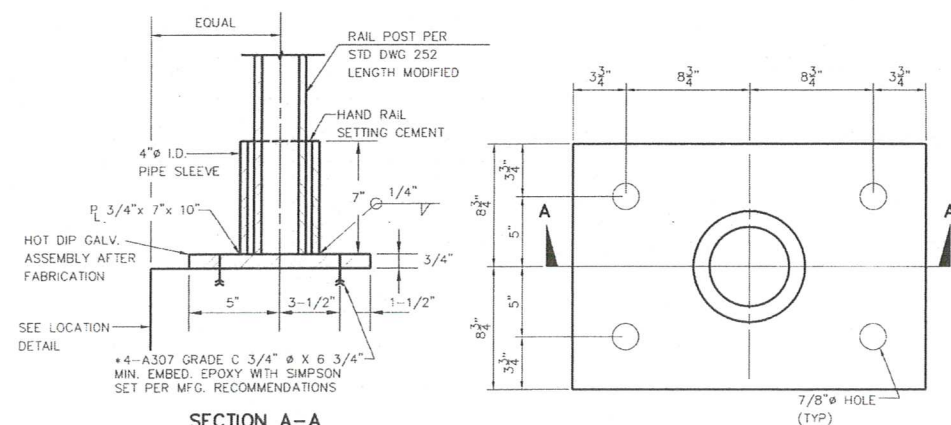


DETAIL 1
NOT TO SCALE

3-WIRE POST AND CABLE RAILING

NOT TO SCALE

1
DT-01



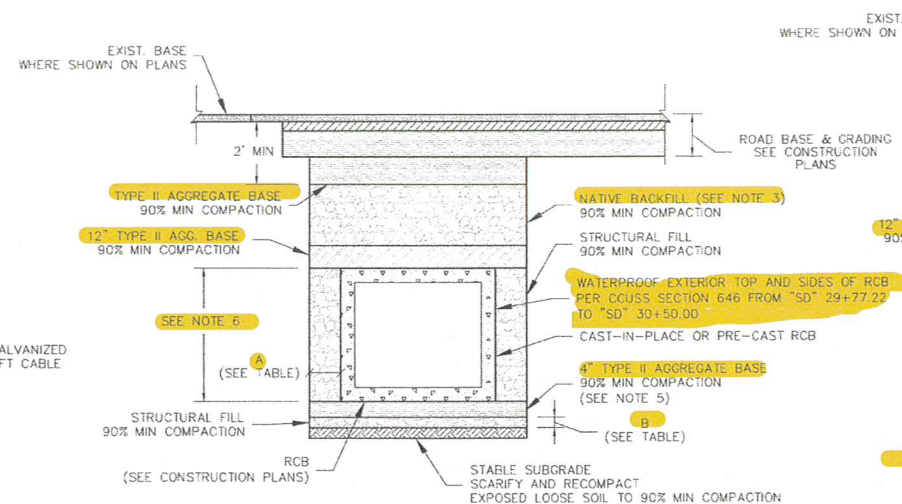
SECTION A-A

- NOTE:
FOR 8" WALLS - ROTATE PLATE AND USE (4) BOLTS. POLE MOUNTS SHALL NOT BE LOCATED WITHIN 1-FOOT OF CONTRACTION OR EXPANSION JOINTS

POST, CABLE MOUNT POLE

NOT TO SCALE

2
DT-01



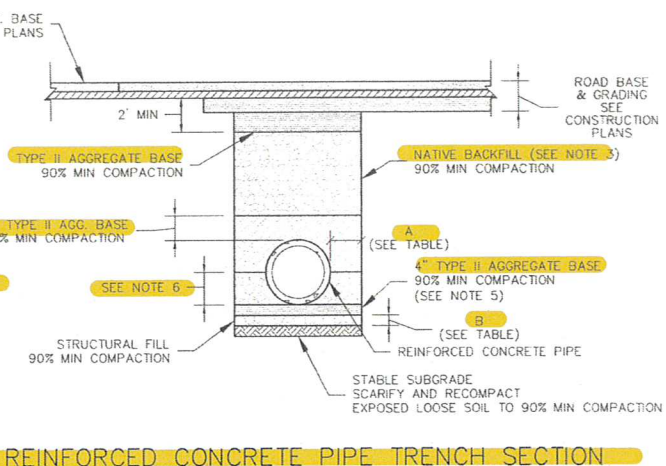
REINFORCED CONCRETE BOX TRENCH SECTION

STATION	A	B
"SD" 14+00.00 TO 31+96.10	24" MIN	24" MIN OR UNTIL CEMENTED SOIL ENCOUNTERED
"SD" 31+96.10 TO 85+57.89	12" STRUCTURAL FILL OR MIN 6" WITH CLSM	0" CEMENTED SOILS OR 12" MIN FOR SAND & GRAVEL

STANDARD TRENCH SECTIONS

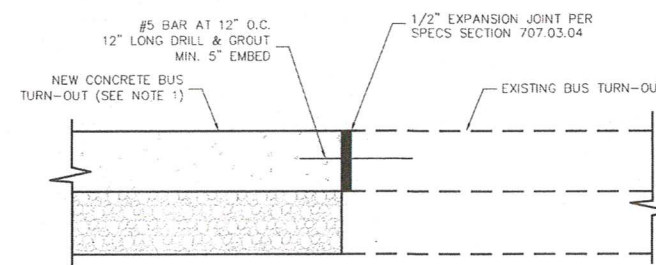
NOT TO SCALE

3
DT-01



REINFORCED CONCRETE PIPE TRENCH SECTION

- NOTES:
- 1) TRENCH WALLS SHOULD BE APPROPRIATELY SHORED OR LAID BACK PER OSHA REQUIREMENTS.
 - 2) COORDINATE EXCAVATION SOIL W/ OSHA 29 CFR 1926 SUBPART P TO DETERMINE SOIL TYPE A, B, OR C
 - 3) CONTRACTOR SHALL CONSULT GEOTECHNICAL REPORT PRIOR TO EXCAVATION. NOTE THAT NATIVE MATERIAL EXCAVATED EAST OF DURANGO DRIVE (STATION "SD" 31+96.10) IS NOT SUITABLE FOR USE AS STRUCTURAL FILL NOR TRENCH BACKFILL.
 - 4) INSTALL WATERPROOF MEMBRANE ON TOP OF RCB FROM "SD" 14+00 TO "SD" 31+00
 - 5) FOR PRE-CAST RCB AND CONCRETE PIPE, OPTIONAL 2" CRUSHED ROCK LEVELING COURSE (-3/8") UNDER RCB/PIPE WITH 4" OF TYPE II AGGREGATE BASE @ 90% MINIMUM COMPACTION UNDER LEVELING COURSE.
 - 6) OPTIONAL CLSM FROM BOTTOM TO SPRINGLINE OF RCB AND BOTTOM TO TOP OF RCB

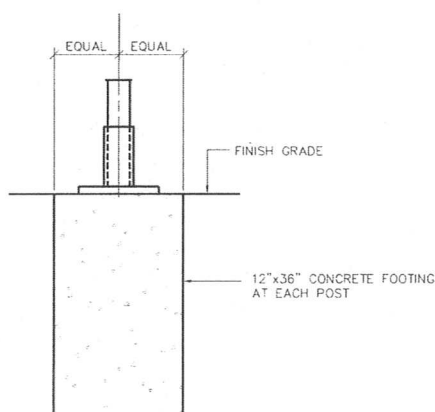


- NOTES:
1) SEE USDCCA STD. DWG. 234.1 FOR ADDITIONAL REINFORCING AND DIMENSIONS NOT SHOWN

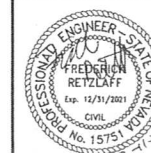
BUS TURN-OUT CONCRETE CONNECTION DETAIL

NOT TO SCALE

4
DT-01



FOUNDATION



SHEET
DT-01
26 OF 48
DRAWING NO.
731-99

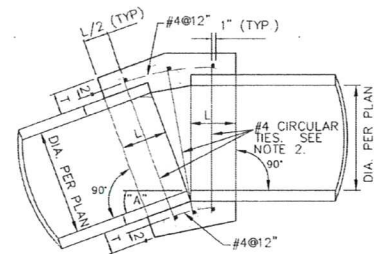
PREPARED FOR
CITY OF LAS VEGAS
DESIGNED BY: CB
DRAWN BY: BOC
CHECKED BY: FR
100% FINAL

TITLE
**MOCCASIN RD
CCRCD FLOOD CONTROL FACILITY
MOCCASIN RD TO CCRCD FACILITY LVUP 1076/1077**
SHEET
SECTIONS AND DETAILS

PREPARED BY
SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
940 S. AVENUE STREET #216 LAS VEGAS, NV 89101
PHONE (702) 241-5500 FAX (702) 241-0370

NO.	DATE	REVISIONS

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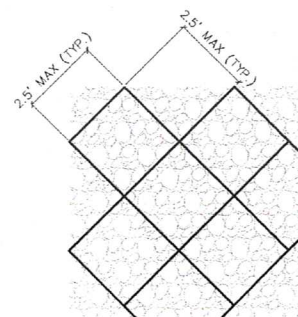


- NOTES:**
- PLAN**
- WHERE THE SLOPE OF THE UPSTREAM PIPE IS GREATER THAN THE SLOPE OF THE DOWNSTREAM PIPE, JOIN SOFFITS. WHERE THE SLOPE OF THE UPSTREAM PIPE IS LESS THAN THE SLOPE OF THE DOWNSTREAM PIPE, JOIN INVERTS.
 - WHERE THE SPACE BETWEEN THE PIPE EXTREMITIES EXCEEDS 2 1/2 INCHES, THE NUMBER OF CIRCULAR TIES SHALL BE INCREASED TO MAINTAIN A MAXIMUM SPACING OF 6 INCHES CENTER TO CENTER. CIRCULAR TIES SHALL HAVE A DIAMETER 5 INCHES GREATER THAN THE OUTSIDE DIAMETER OF THE LARGER PIPE.

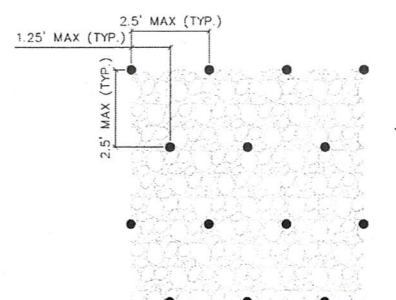
CIRCULAR TIES

PIPE DIAMETER	SPACE BETWEEN PIPE EXTREMITIES	NO. OF CIRCULAR TIES	L	T
18"	2 1/2"	3	12"	6"
24"	2 1/2"	3	12"	6"
30"	2 1/2"	3	12"	7"
36"	2 1/2" or less	4	18"	9"
60"	2 1/2" or less	5	21"	11"

CONCRETE COLLAR
NOT TO SCALE

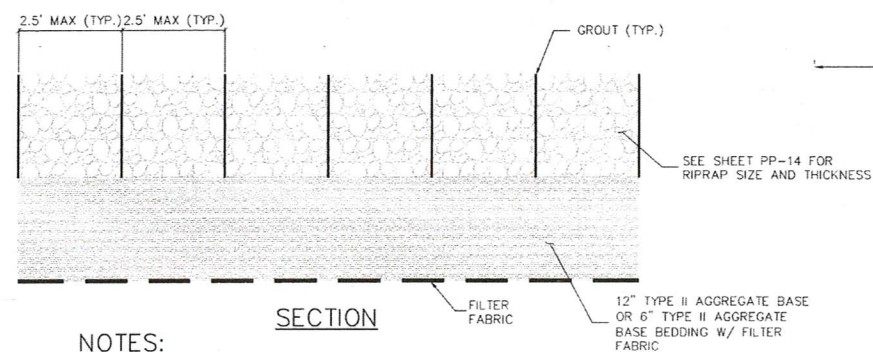


LINE BY LINE METHOD



SPOT BY SPOT METHOD

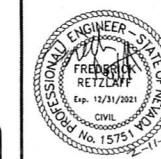
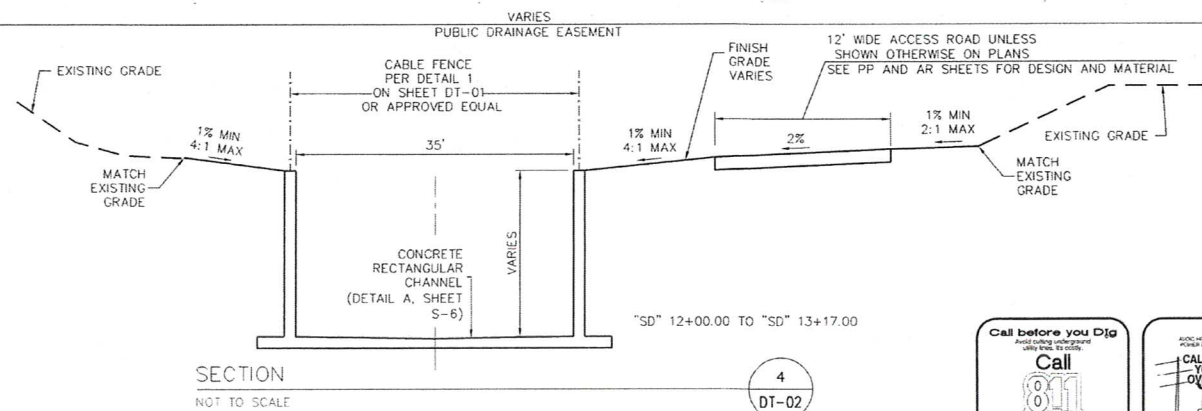
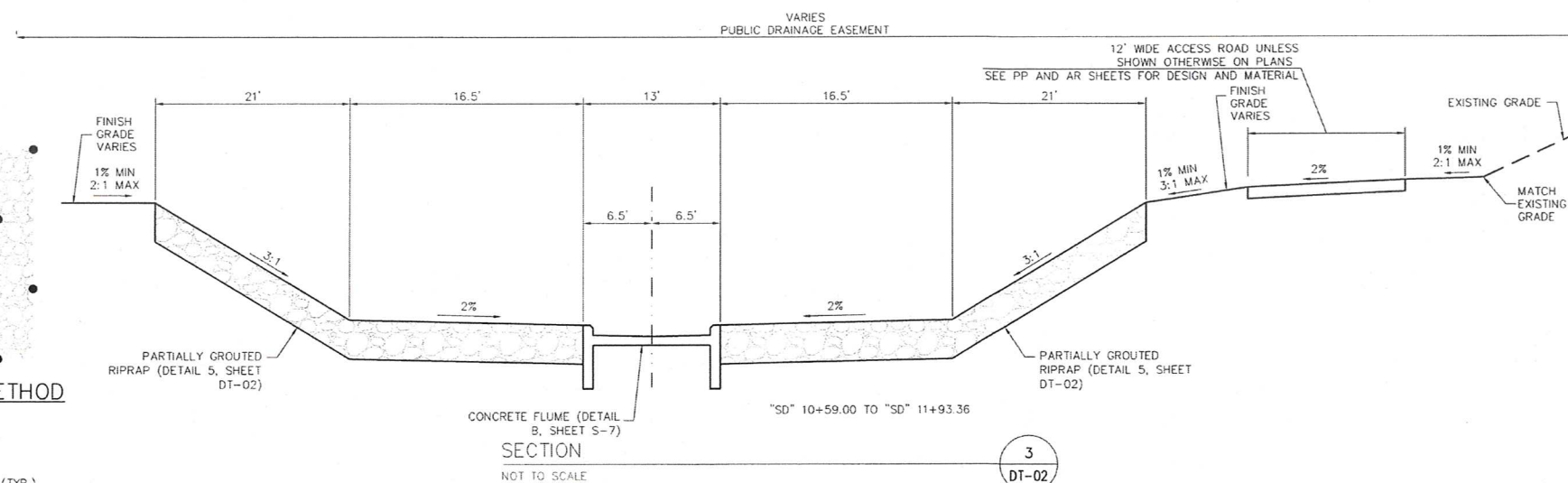
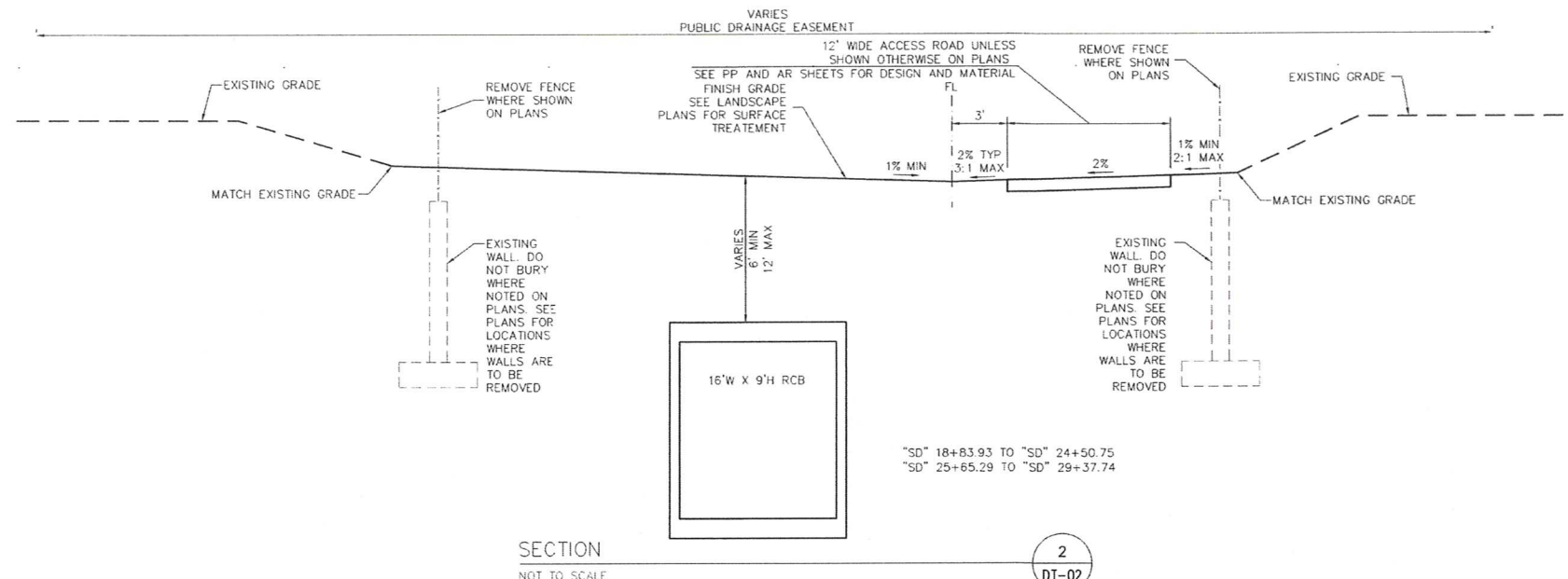
PLAN



NOTES:

- PARTIALLY GROUTED RIPRAP TO BE INSTALLED IN ACCORDANCE WITH SPECIAL PROVISION 610.03.70

PARTIALLY GROUTED RIPRAP
NOT TO SCALE



DT-02
27 OF 48
DRAWING NO. 731-99

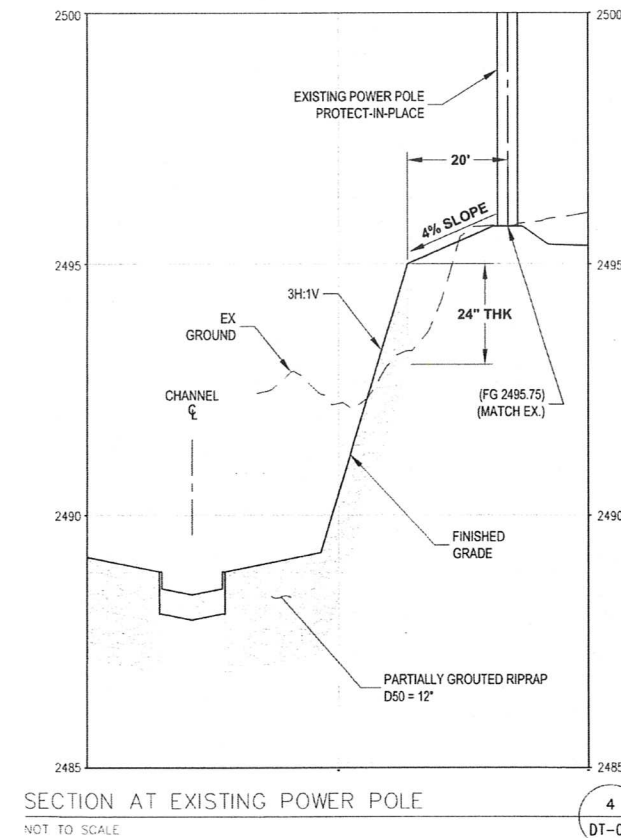
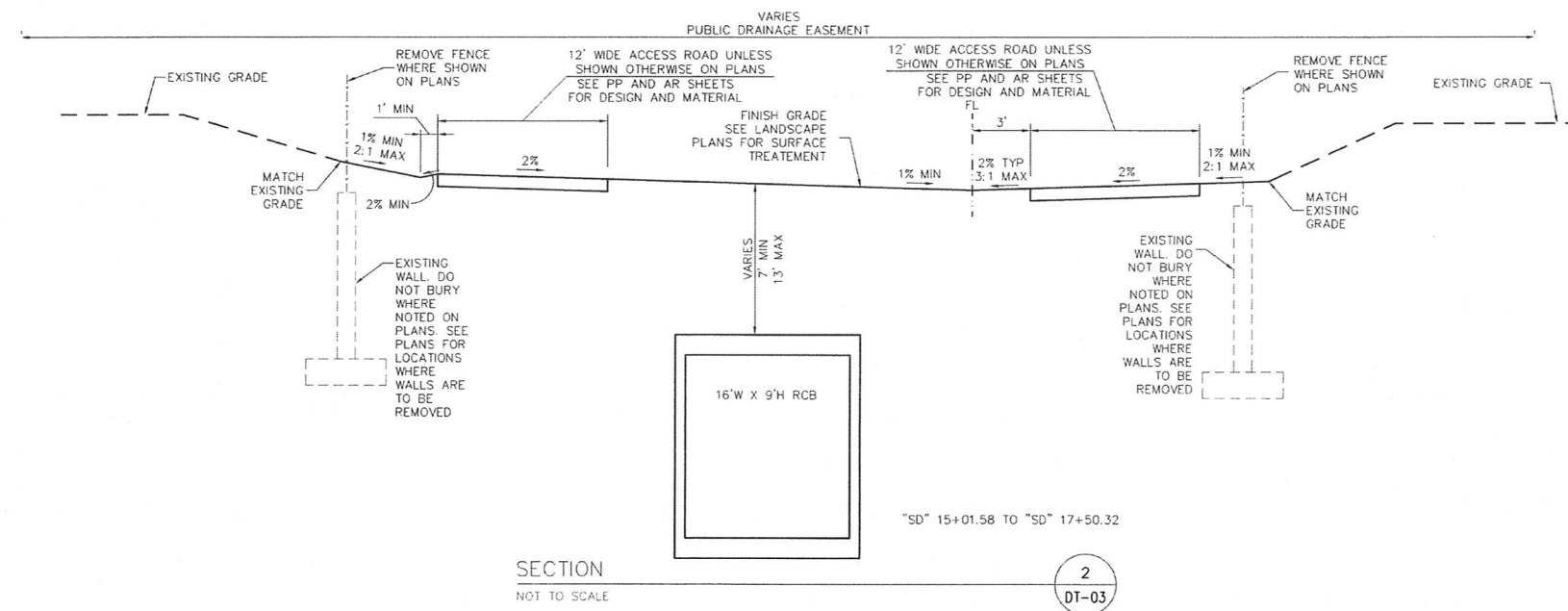
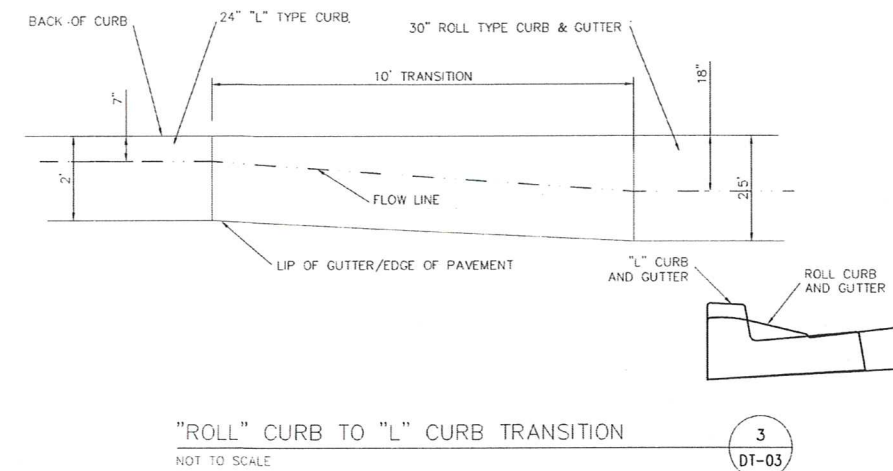
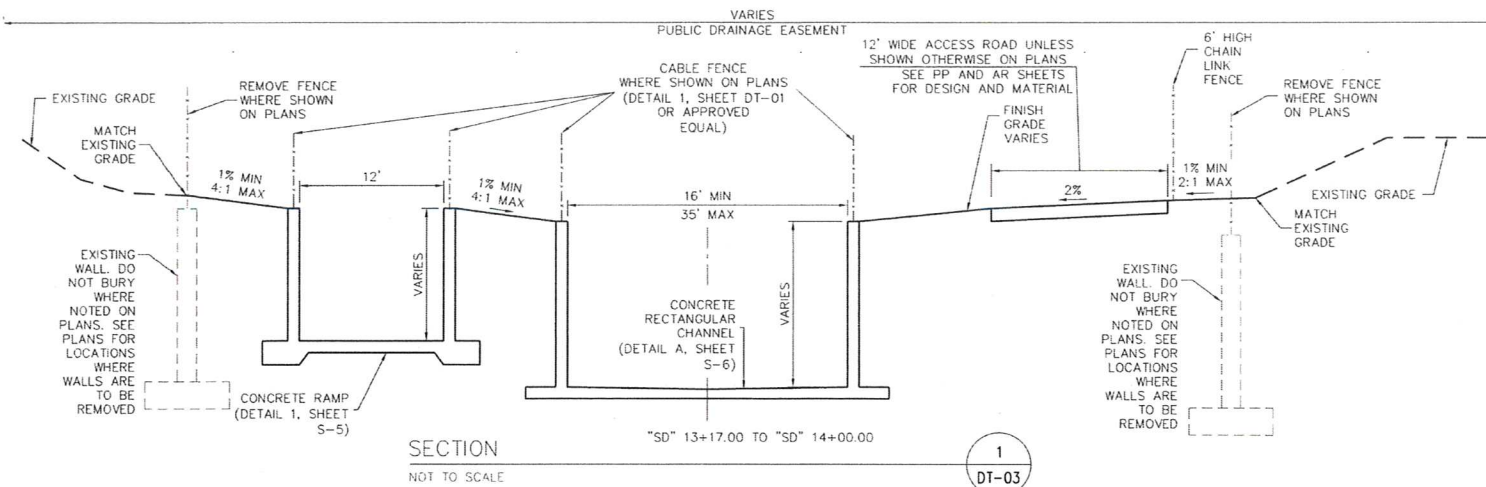
CITY OF LAS VEGAS
PREPARED FOR
BID# 19-71033
DATE: JAN 2020
SUBMITTAL STAGE: 100% FINAL

MOCCASIN RD
CCRFCD FLOOD CONTROL FACILITY
MOCCASIN RD TO CCRFCD FACILITY LVUP 1076/1077
SECTIONS AND DETAILS

SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 264-5300 FAX (702) 264-5399

NO.	DATE	REVISIONS

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SLATER HANIFAN GROUP CONSULTING ENGINEERS & PLANNERS 5740 S. ARVILLE STREET #214, LAS VEGAS, NV 89118 PHONE (702) 264-5300 FAX (702) 264-5399		NO. DATE REVISIONS
PREPARED BY CITY OF LAS VEGAS	DESIGNED BY: CB DRAWN BY: BC CHECKED BY: FR	SECTIONS AND DETAILS
TITLE MOCCASIN RD CCRFCD FLOOD CONTROL FACILITY MOCCASIN RD TO CCRFCD FACILITY LVUP 1076/1077	SUBMITTAL STAGE: 100% FINAL	
SHEET DT-03 28 OF 48 DRAWING NO. 731-99		PROFESSIONAL ENGINEER RETZLAFF Exp. 12/31/2021 No. 15751

Call before you Dig

Call 811

1-800-227-2600

CALL BEFORE YOU DO OVERHEAD

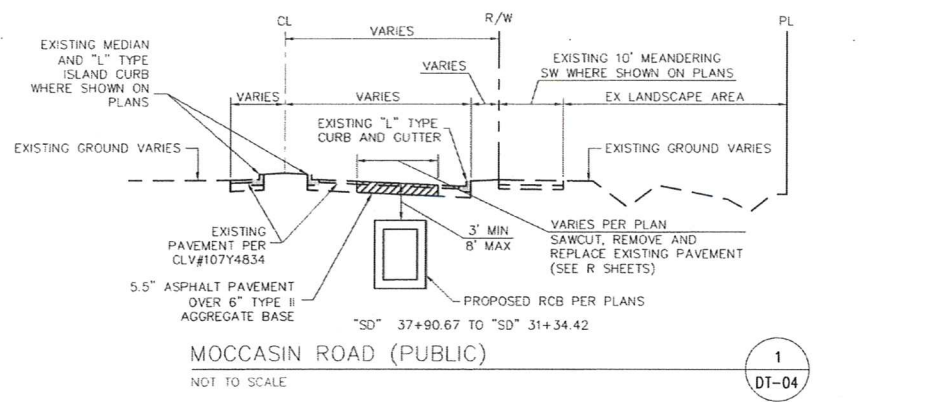
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FAST

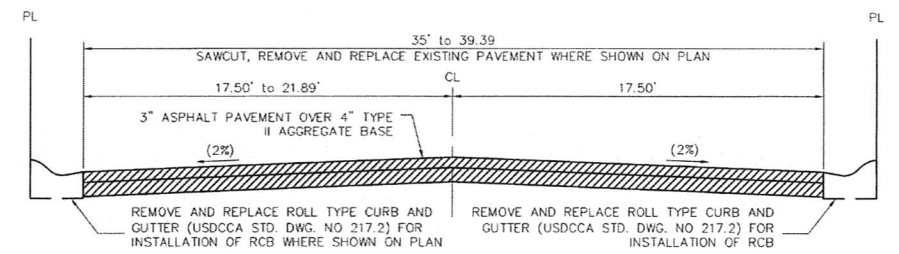
Call before you UnderGround.

1-702-432-5300

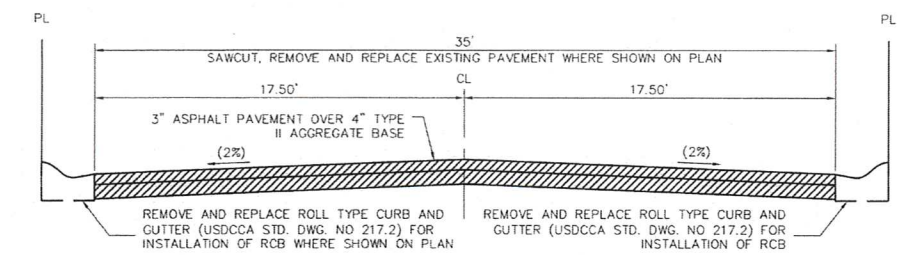
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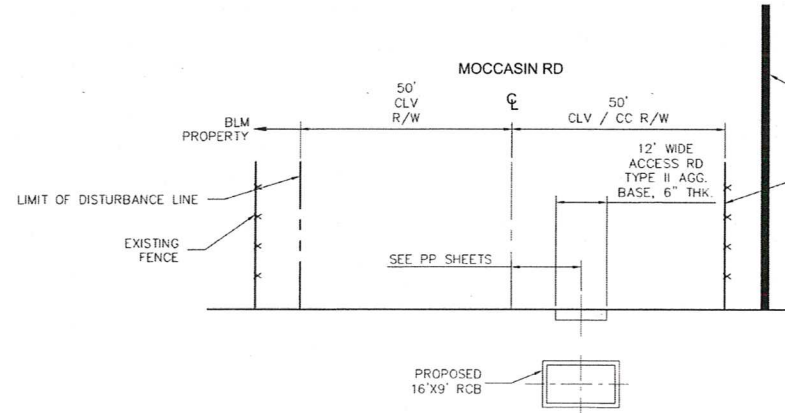
MOCCASIN ROAD (PUBLIC)
NOT TO SCALE



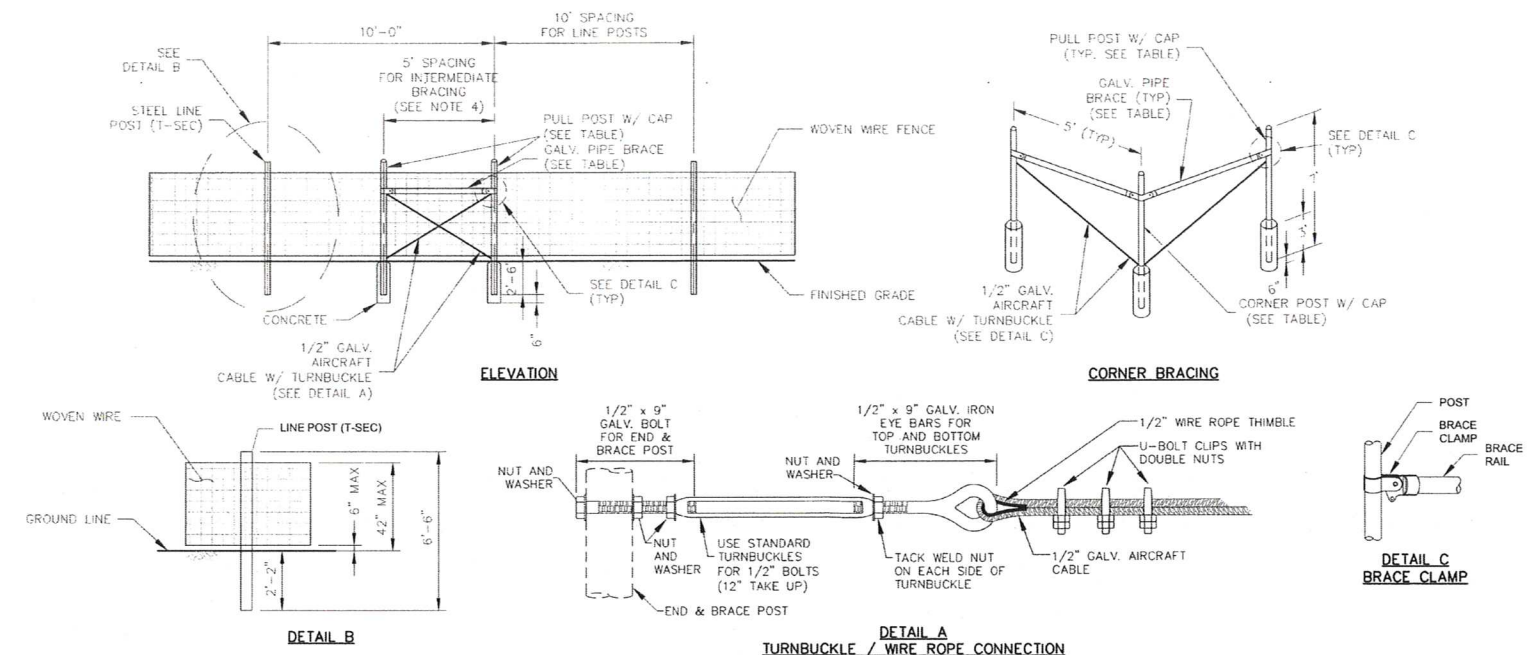
HANKY PANKY STREET (PRIVATE)
NOT TO SCALE



SQUIRRELS NEST STREET (PRIVATE)
NOT TO SCALE

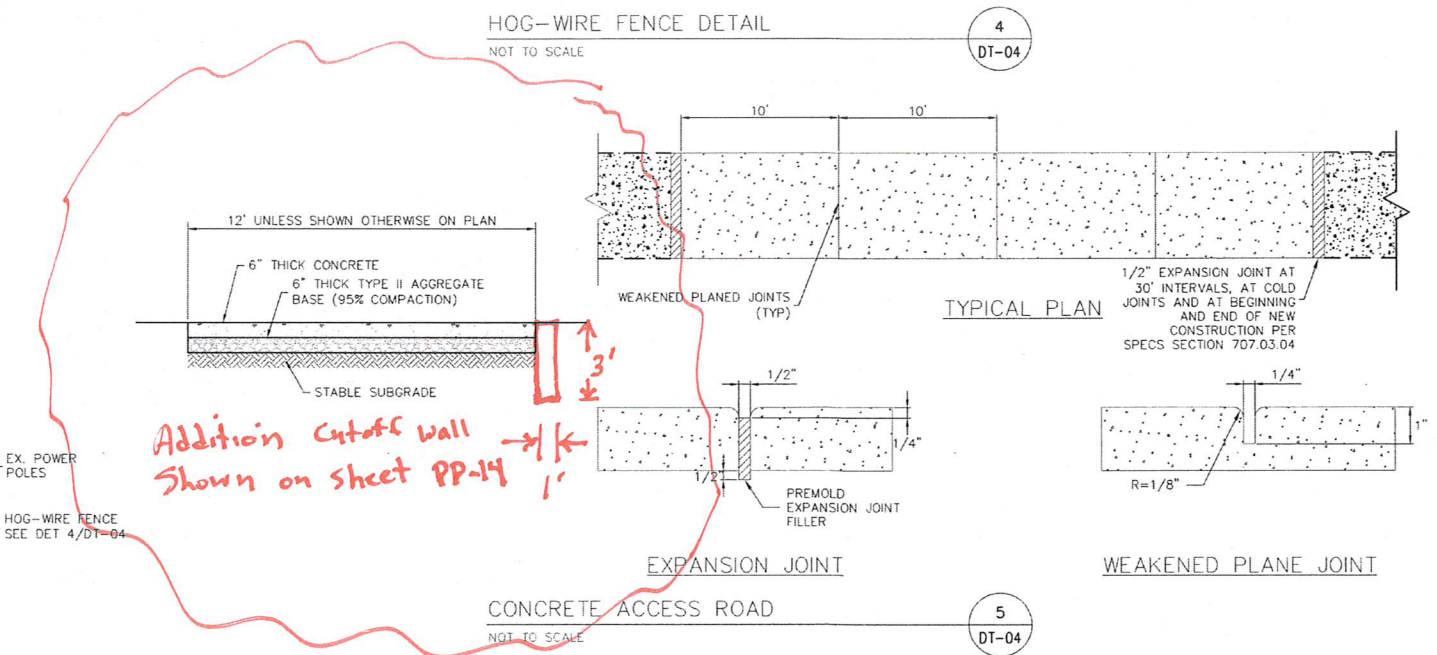


MOCCASIN ROAD - TYPICAL SECTION
NOT TO SCALE



- NOTES:
1. CONCRETE SHALL BE CLASS A OR AA.
 2. MANUFACTURE STEEL LINE POSTS (T-SEC) TO TOLERANCES AND WORKMANSHIP AS PROVIDED IN AASHTO M281.
 3. ATTACH WOVEN WIRE FABRIC TO POSTS PER MANUFACTURER'S RECOMMENDATIONS.
 4. BRACE POSTS AT MAXIMUM OF 500' SPACING. USE BRACE POSTS AT THESE LOCATIONS ONLY.

CORNER, END, AND PULL POSTS		LINE POSTS		BRACE POSTS	
ROUND	MIN. WT.	MIN. WT.	ROUND	MIN. WT.	ROUND
PIPE O.D. (LBS/L.F.)	T-SECTION (LBS/L.F.)	PIPE O.D. (LBS/L.F.)	PIPE O.D. (LBS/L.F.)	PIPE O.D. (LBS/L.F.)	PIPE O.D. (LBS/L.F.)
2.375"	3.65	1.30	1.660"	1.45	



*Addition cutoff wall
Shown on sheet PP-14*

Call before you Dig
Call 811
1-800-227-2600

CALL BEFORE YOU DIG
UNDERGROUND
1-702-227-2829

FAST
Call before you UnderGround.
1-702-432-5300

SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5309

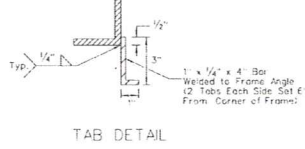
PREPARED BY: CITY OF LAS VEGAS
DESIGNED BY: CB
DRAWN BY: BC
CHECKED BY: FR
SUBMITTAL STAGE: 100% FINAL

TITLE: MOCCASIN RD
CCRFCD FLOOD CONTROL FACILITY
MOCCASIN RD TO CCRFCD FACILITY LVUP 1076/1077
SHEET: DT-04
29 OF 48
DRAWING NO: 731-99

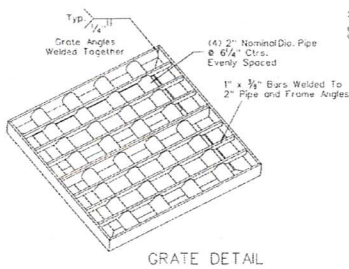
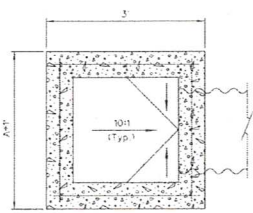
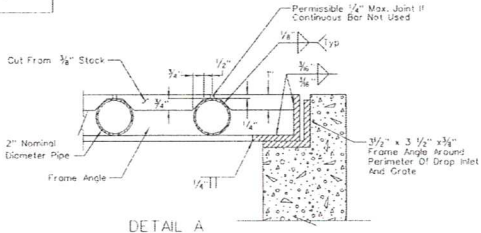
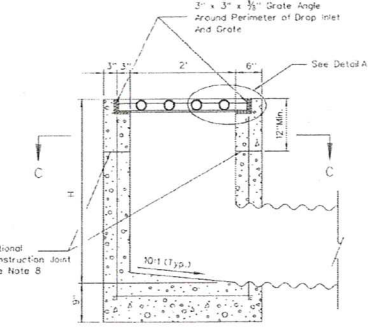
AS BUILT

Pipe Size (Inch)	A	H Min. (ft)	Concrete (CU. YD.)	Reinforcing (LB)	Structural Steel (LB)
15"	2'	2.50	0.71	36	10
18"	2'	3.00	0.89	40	10
24"	3'	3.50	1.08	58	12
30"	3'	4.00	1.28	63	12
36"	4'	4.50	1.50	67	13
42"	4'	5.00	1.71	90	15
48"	5'	5.50	1.94	95	15

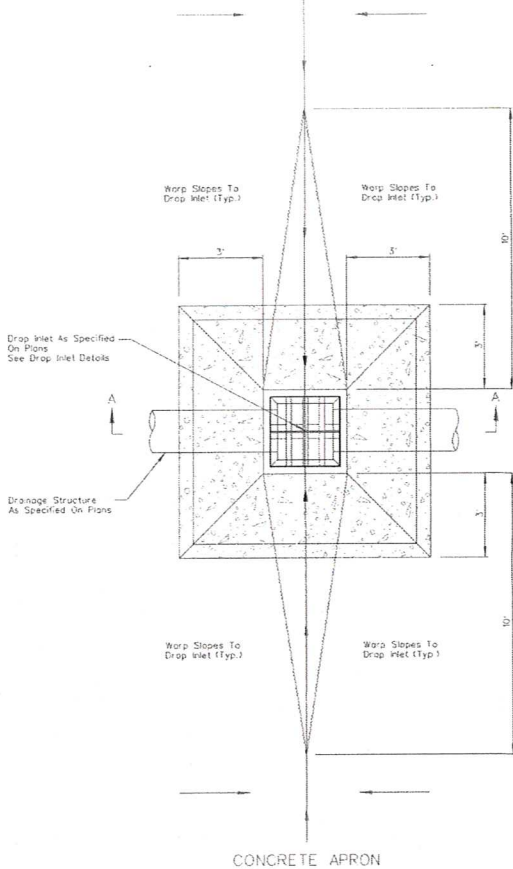
The Concrete And Reinforcing Quantities Are Based On The H Min. Shown Increase The Concrete And Reinforcing Base Quantity By The Corresponding Add Rate (Per Foot Of Increased H) If The H Specified Is Larger Than H Min.



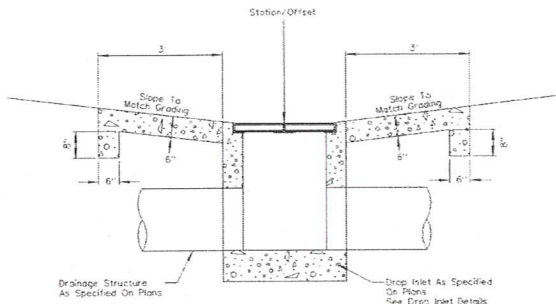
- NOTES:
1. All concrete shall be class A or A2.
 2. Reinforcing steel shall be No. 4 bars with maximum spacing at 18 inch centers, wired tightly at all intersections and embedded 2 inches clear of all concrete surfaces.
 3. Exposed edges of concrete shall be chamfered 1 inch.
 4. Structural steel weight includes the 2 inch nominal diameter pipe standard weight and frame angles (3" x 3" x 3/8" and 3" x 1/2" x 3/8").
 5. For 2 inch nominal diameter pipe see ASTM A53.
 6. See sheet R-2.9.1 for details for connecting HDPE pipe.
 7. Slope catch basin floors 10:1 from all directions toward outlet pipe. If basin is used as a junction, slope flow inlet to outlet pipe and provide a 10:1 slope to flow sheet.
 8. Run rebar continuous thru construction joint. Joint must be a minimum 3 inches from horizontal bars.
 9. Additional pipe penetrations may be placed in any wall.



STATE OF NEVADA DEPARTMENT OF TRANSPORTATION
DROP INLET TYPE 2B
R-4.2.2 (6/03) Signed Original On File
ADOPTED 10/05 REVISED 10/15 CHIEF HYDRAULICS ENGR.



- NOTES:
1. Concrete shall be class A or A2.



STATE OF NEVADA DEPARTMENT OF TRANSPORTATION
DROP INLET CONCRETE APRON
R-4.2.7 (6/03) Signed Original On File
ADOPTED 10/05 REVISED 10/15 CHIEF HYDRAULICS ENGR.

SLATER
HANIFAN
GROUP
CONSULTING ENGINEERS & PLANNERS
5745 S. ARVILLE STREET #214, LAS VEGAS, NV 89118
PHONE (702) 264-5399
FAX (702) 264-5300

PREPARED FOR CITY OF LAS VEGAS
BID# 19.71033
DESIGNED BY: ECC
DRAWN BY: ECC
CHECKED BY: PKB
DATE: JAN 2020
SUBMITTAL STAGE: 100% FINAL

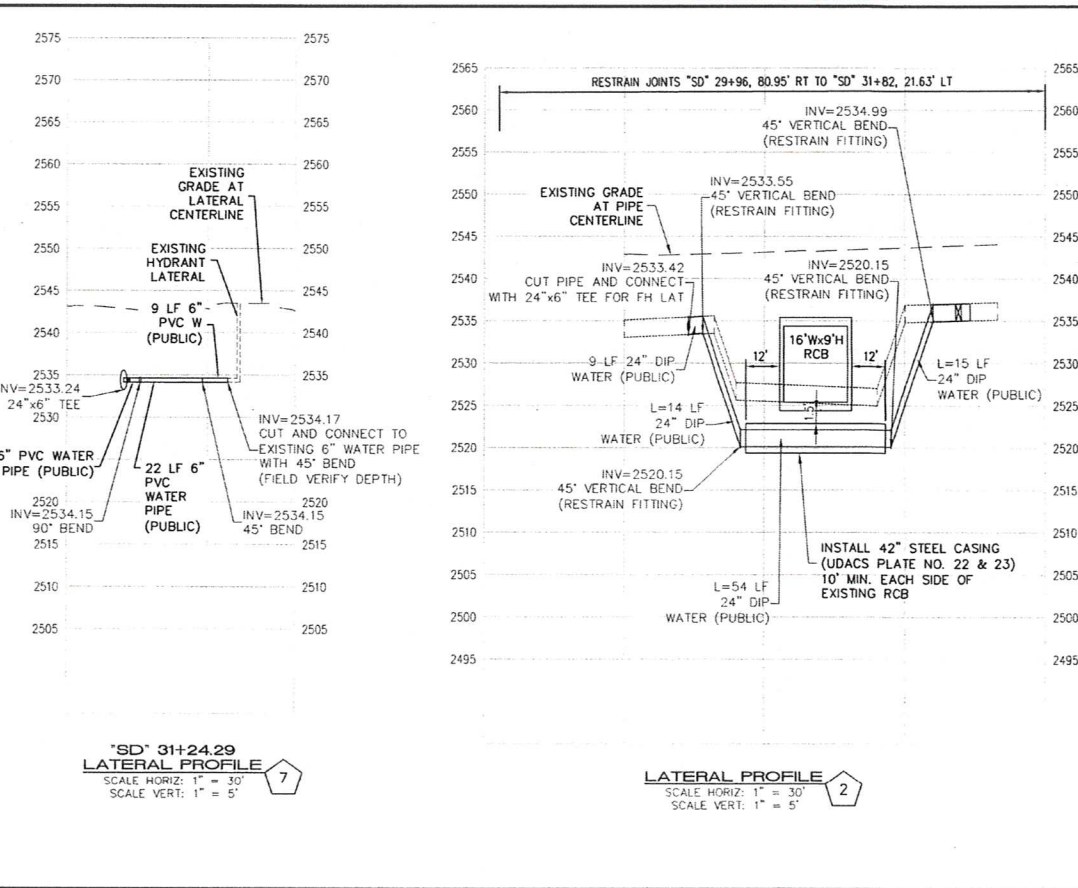
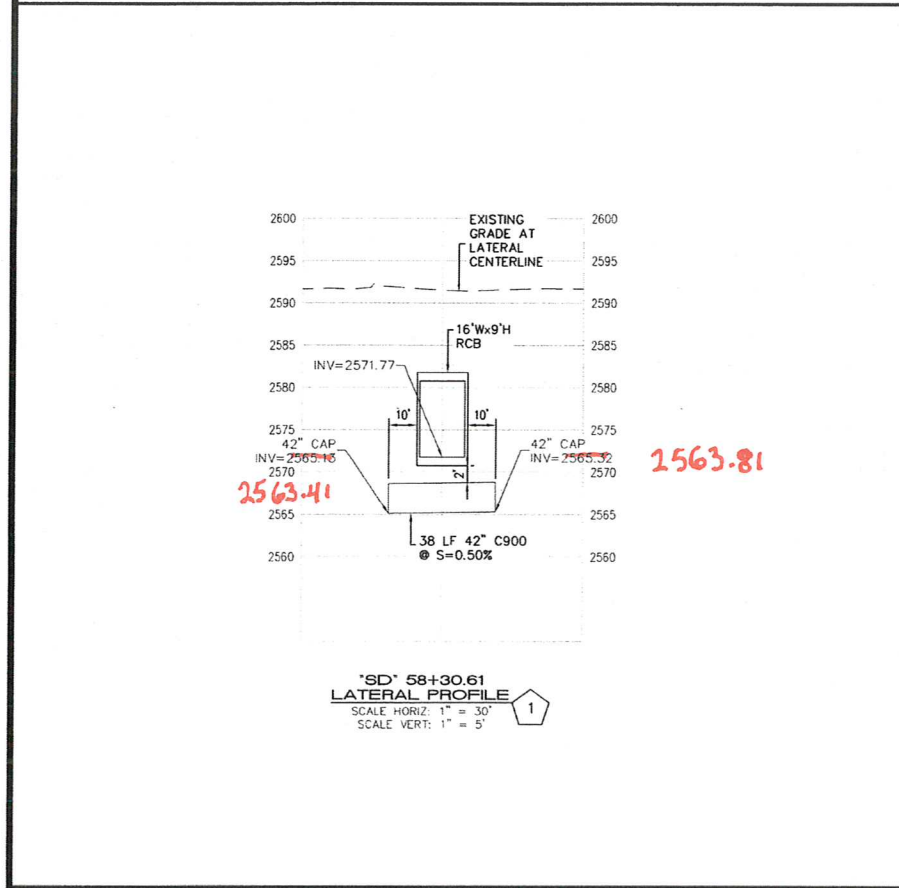
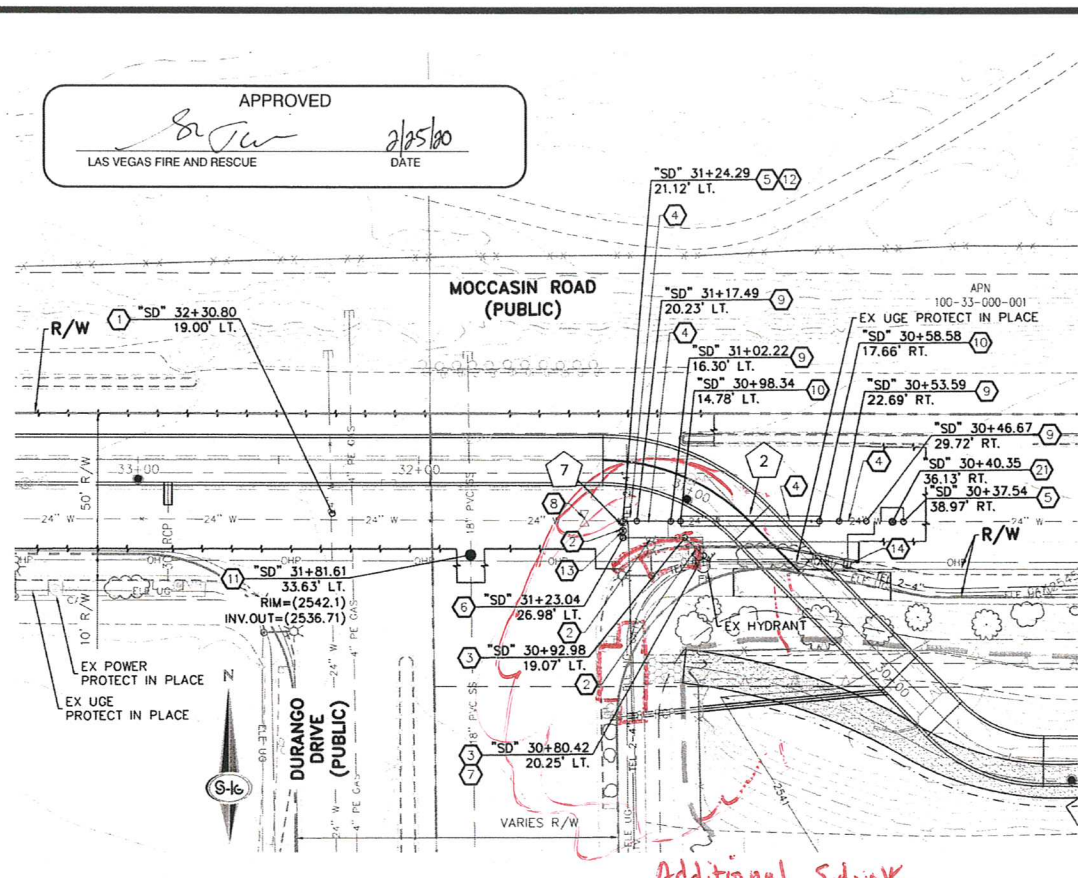
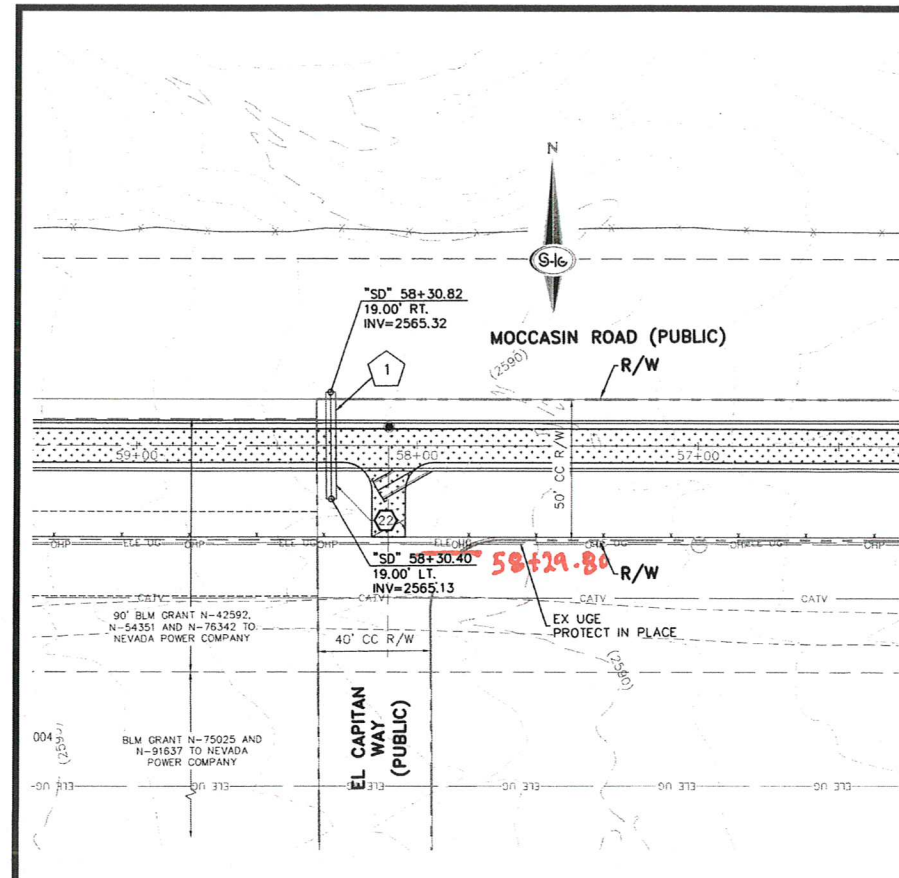
TITLE
MOCCASIN RD
CCRFCD FLOOD CONTROL FACILITY
MOCCASIN RD TO CCRFCD FACILITY LVUP 1076/1077
SHEET
DROP INLET DETAILS



SHEET
DT-05
30 OF 48
DRAWING NO
731-99



AS BUILT



- ### UTILITY NOTES
1. INSTALL CAP WITH 2" BLOW-OFF ASSEMBLY (UDACS PLATE NO. 36)
 2. INSTALL 6" PVC PRESSURE CLASS C900 WATERLINE (PUBLIC) (UDACS PLATE NO. 15 AND 17)
 3. INSTALL 6" 45° HORIZONTAL BEND (UDACS PLATE NO. 31)
 4. INSTALL 24" DIP CLASS 53 WATERLINE (PUBLIC) (UDACS PLATE NO. 15 AND 17)
 5. CUT AND CONNECT TO EXISTING 24" DIP WATER PIPE
 6. INSTALL 6" 90° HORIZONTAL BEND (UDACS PLATE NO. 31)
 7. CONNECT TO EXISTING 6" PVC PRESSURE CLASS C900 WATERLINE (PUBLIC)
 8. ADJUST EXISTING GATE VALVE TO FINISH GRADE (UDACS PLATE NO. 39)
 9. INSTALL 24" 45° VERTICAL BEND (MECHANICALLY RESTRAINED)
 10. INSTALL STEEL CASING (UDACS PLATE NO. 22 & 23)
 11. CONSTRUCT 48" SANITARY SEWER MANHOLE, DUAL LID (DCSWCS NO. SD-1, SD-2, SD-3, AND SD-4)
 12. INSTALL 24"x6" TEE (UDACS PLATE NO. 31)
 13. INSTALL 6" GATE VALVE (UDACS PLATE NO. 30 & 39)
 14. INSTALL TYPE "C" TEST STATION PER DETAILS ON SHEET UT-D3A
 15. INSTALL HYDRANT ASSEMBLY AND LATERAL (UDACS PLATE NO. 41)
 16. CONNECT TO EXISTING 8" WATERLINE (PUBLIC)
 17. INSTALL 8" 45° VERTICAL BEND (UDACS PLATE NO. 31)
 18. INSTALL 8" PVC PRESSURE CLASS C900 WATERLINE (PUBLIC) (UDACS PLATE NO. 15 AND 17)
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 20. INSTALL 8" 45° VERTICAL BEND (MECHANICALLY RESTRAINED)
 21. INSTALL 24" GATE VALVE WITH BY-PASS PER DETAIL ON SHEET UT-D2
 22. INSTALL 42" C900 PIPE, CAP BOTH ENDS FOR FUTURE CONNECTION

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CONTRACTOR TO INSTALL TEMPORARY SERVICE TO ENSURE PROPER SHUTDOWN IN THE EVENT NO OTHER APPURTENANCES ARE AVAILABLE.

- ### LEGEND
- # UTILITY LATERAL # (SEE SHEET UT-01 THRU UT-03)

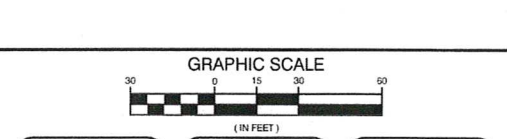
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 2. INSTALL PIPELINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING PER UDACS PLATE NO. 15.
 3. PROVIDE A MIN. 12" OF VERTICAL CLEARANCE BETWEEN WATER MAINS AND DRY UTILITIES PER UDACS SECTION 2.04.06.
 4. PROVIDE A MIN. 3" OF HORIZONTAL CLEARANCE BETWEEN WATER MAINS AND DRY UTILITIES PER UDACS SECTION 2.04.02.
 5. SAWCUT, TRENCH AND PAVEMENT RESTORATION FOR INSTALLATION OF RESTRAINT JOINTS FOR PROPOSED WATER MAIN PER CCAUSD #503 AND 50.

- ### DISCLAIMER NOTES
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APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT NO. 135013 FIRST APPROVED 3-4-2020

Ryan Starnes Ryan Starnes 2/13/2020
SOUTHWEST GAS CORPORATION DATE



Call before you Dig
811
1-800-227-2600

CALL BEFORE YOU DIG
1-702-227-2929

FAST
Call before you UnderGround.
1-702-432-5300

PREPARED BY
SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5140 S. ARVILLE STREET #116, LAS VEGAS, NV 89119
PHONE (702) 284-5300 FAX (702) 284-5309

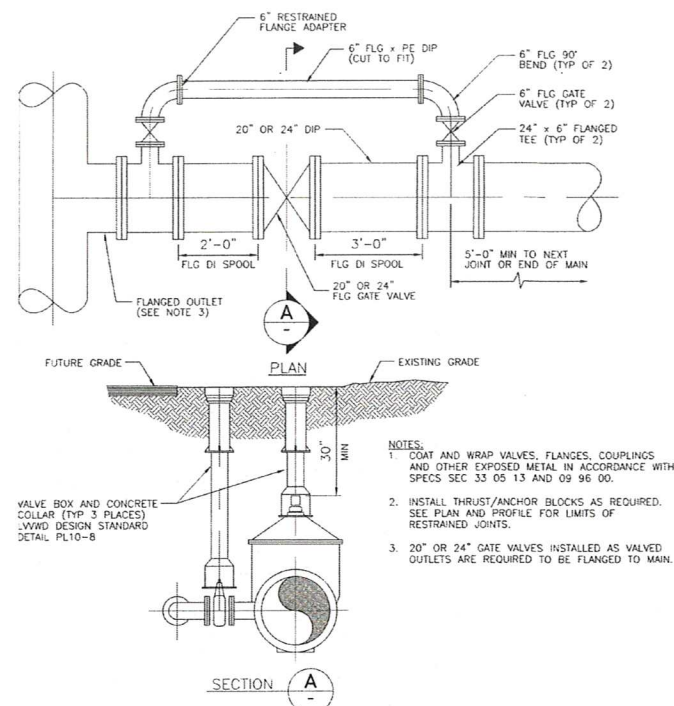
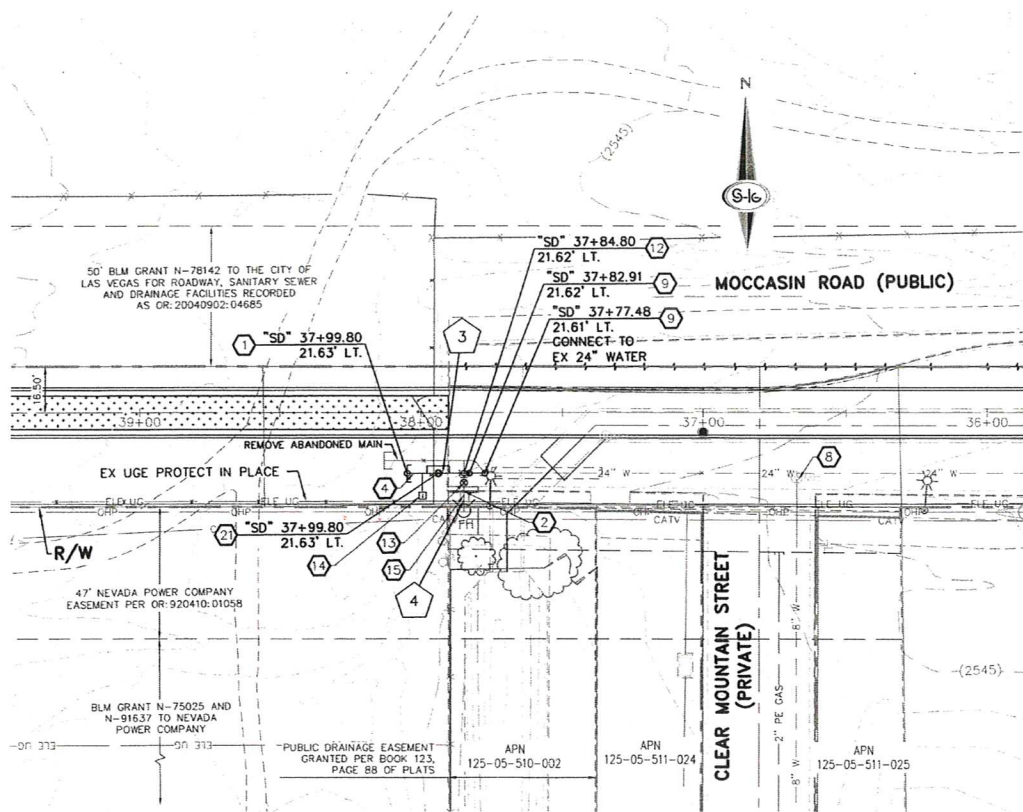
CITY OF LAS VEGAS
BID# 19.17033
DESIGNED BY: BCC
DRAWN BY: BCC
CHECKED BY: FR

MOCCASIN RD
CCRFCD FLOOD CONTROL FACILITY
MOCCASIN RD TO CCRFCD FACILITY LVUP 1076/1077
SHEET
UTILITY PLAN 1

DATE: JAN 2020
SUBMITTAL STAGE: 100% FINAL

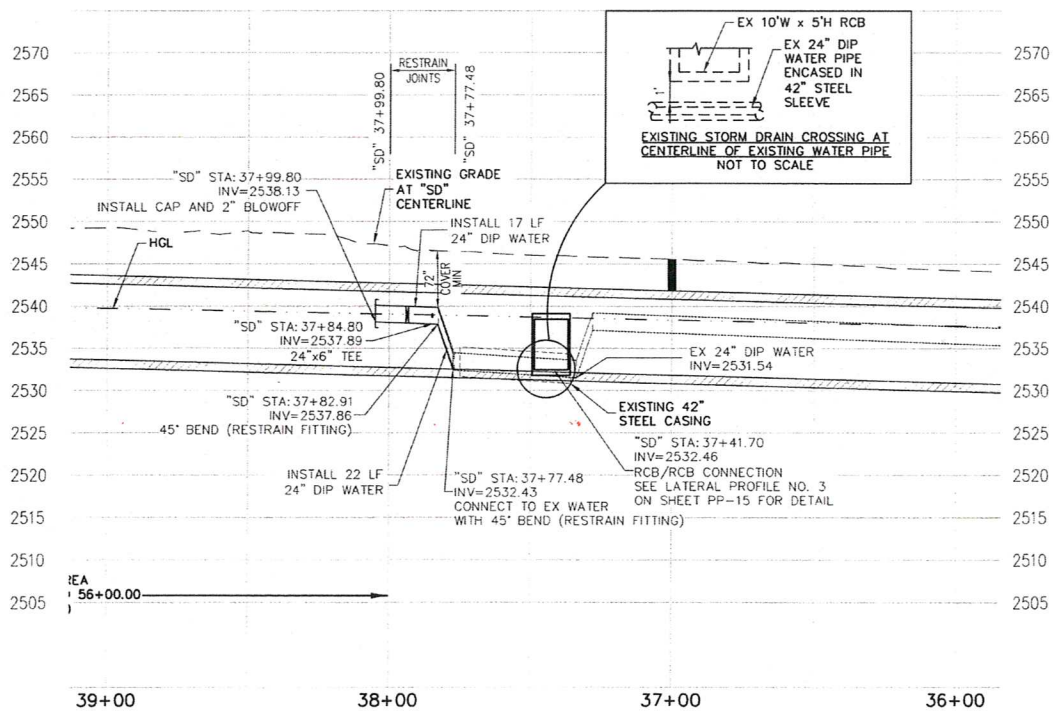
ENGINEER
UT-01
31 OF 48
DRAWING NO. 731-99

AS BUILT

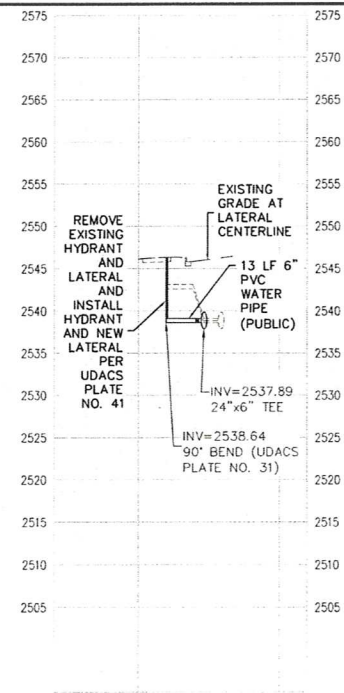


20" AND 24" DIRECT BURIED GATE VALVE WITH BY-PASS INSTALLATION (DIP)

NOT TO SCALE PL10-10 072715



WATER PROFILE
SCALE HORIZ: 1" = 30'
SCALE VERT: 1" = 5'



"SD" 37+84.80
LATERAL PROFILE
SCALE HORIZ: 1" = 30'
SCALE VERT: 1" = 5'

- ### UTILITY NOTES
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THE DISTRICT CANNOT GUARANTEE A WATERTIGHT SHUTDOWN WHERE CONNECTIONS OR REPAIRS TO EXISTING FACILITIES ARE REQUIRED. THE CONTRACTOR SHALL ENSURE ALL LABOR AND EQUIPMENT IS AVAILABLE TO REMOVE FUGITIVE WATER THAT MAY IMPED CONSTRUCTION AT ALL TIMES. COORDINATION WITH INSPECTION DIVISION MUST TAKE PLACE PRIOR TO ANY TRIAL SHUTDOWN.

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- ### LEGEND
- # UTILITY LATERAL # (SEE SHEET UT-01 THRU UT-03)

- ### NOTES
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- ### DISCLAIMER NOTES
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APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT NO. 135013 FIRST APPROVED 3-4-2020

APPROVED

LAS VEGAS FIRE AND RESCUE 2/25/20 DATE

APPROVED

SOUTHWEST GAS CORPORATION 2/13/2020 DATE

GRAPHIC SCALE

0 15 30 60 (IN FEET)

Call before you Dig

Call 800-891-8911

1-800-227-2800

CALL BEFORE YOU DIG

1-702-227-2929

FAST

Call before you UnderGround.

1-702-432-5300

PREPARED BY: SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5746 S. ARVILLE STREET #216, LAS VEGAS, NV 89115
PHONE (702) 244-5300 FAX (702) 244-5399

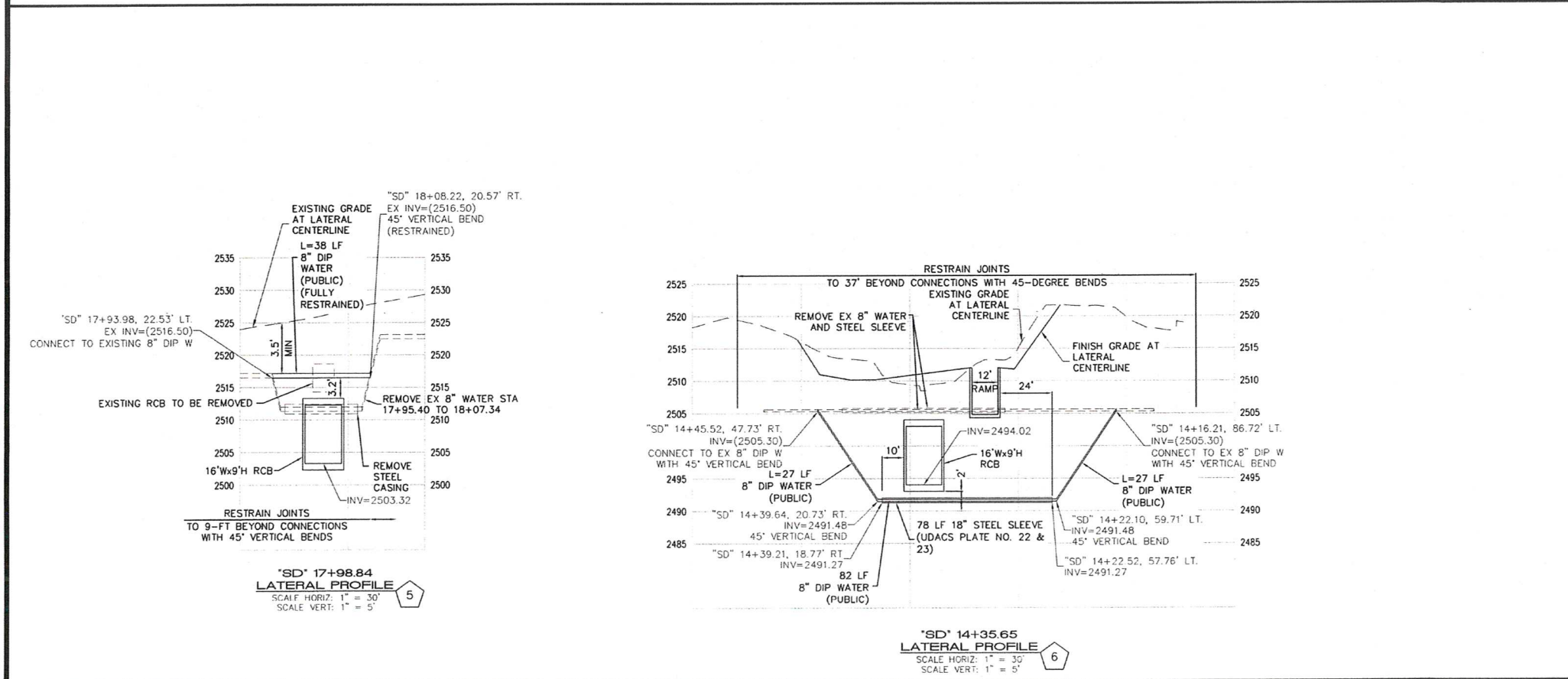
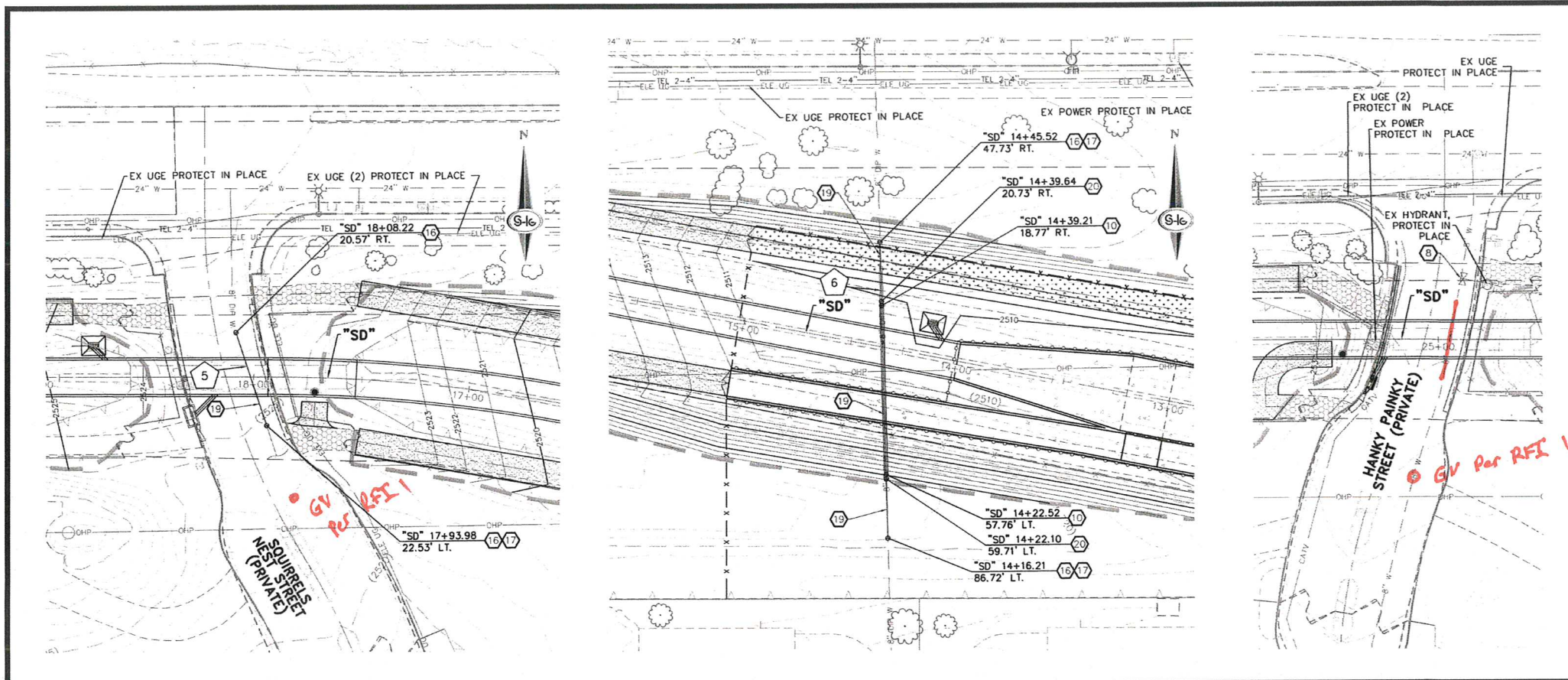
CITY OF LAS VEGAS
BID# 1971033
DESIGNED BY: CB
DRAWN BY: BC
CHECKED BY: FR

DATE: JAN 2020
SUBMITTAL STAGE: 100% FINAL

TITLE: MOCCASIN RD CCRFCD FLOOD CONTROL FACILITY
MOCCASIN RD TO CCRFCD FACILITY LVUP 1076/1077
SHEET: UT-02
32 OF 48
DRAWING NO. 731-99

REVISIONS

AS BUILT



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LEGEND

UTILITY LATERAL # (SEE SHEET UT-01 THRU UT-03)

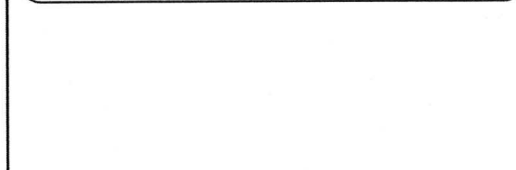
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 2. INSTALL PIPELINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING PER UDACS PLATE NO. 15.
 3. PROVIDE A MIN. 12" OF VERTICAL CLEARANCE BETWEEN WATER MAINS AND DRY UTILITIES PER UDACS SECTION 2.04.06.
 4. PROVIDE A MIN. 3' OF HORIZONTAL CLEARANCE BETWEEN WATER MAINS AND DRY UTILITIES PER UDACS SECTION 2.04.02.
 5. SAWCUT, TRENCH AND PAVEMENT RESTORATION FOR INSTALLATION OF RESTRAINT JOINTS FOR PROPOSED WATER MAIN PER CCAUSD #503 AND 50.

DISCLAIMER NOTES

1. NV ENERGY, CENTURYLINK, AND SOUTHWEST GAS SHOWN FOR INFORMATION ONLY. REFERENCE NV ENERGY, CENTURYLINK, AND SOUTHWEST GAS DRAWINGS FOR CONSTRUCTION DETAILS. CONTRACTOR TO COORDINATE WITH UTILITIES FOR REMOVAL AND INSTALLATION OF FACILITIES.
2. ALL EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION. THE DEPTH BELOW GRADE OF THE VARIOUS UTILITIES DEPICTED ON THE PLANS VARIES THROUGHOUT THE PROJECT AREA. THE CONTRACTOR SHALL EXERCISE EXTREME CARE WHERE EXCAVATING AND GRADING THE SUBBASE IN THE VICINITY OF UTILITIES TO AVOID DAMAGE TO THE LATTER.
3. ALL EXISTING UTILITIES SHALL BE PROTECTED IN PLACE UNLESS OTHERWISE NOTED.

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT NO. 135013
FIRST APPROVED 3-4-2020



Call before you Dig

811

1-800-227-2800

CALL BEFORE YOU DIG OVERHEAD

1-702-227-2929

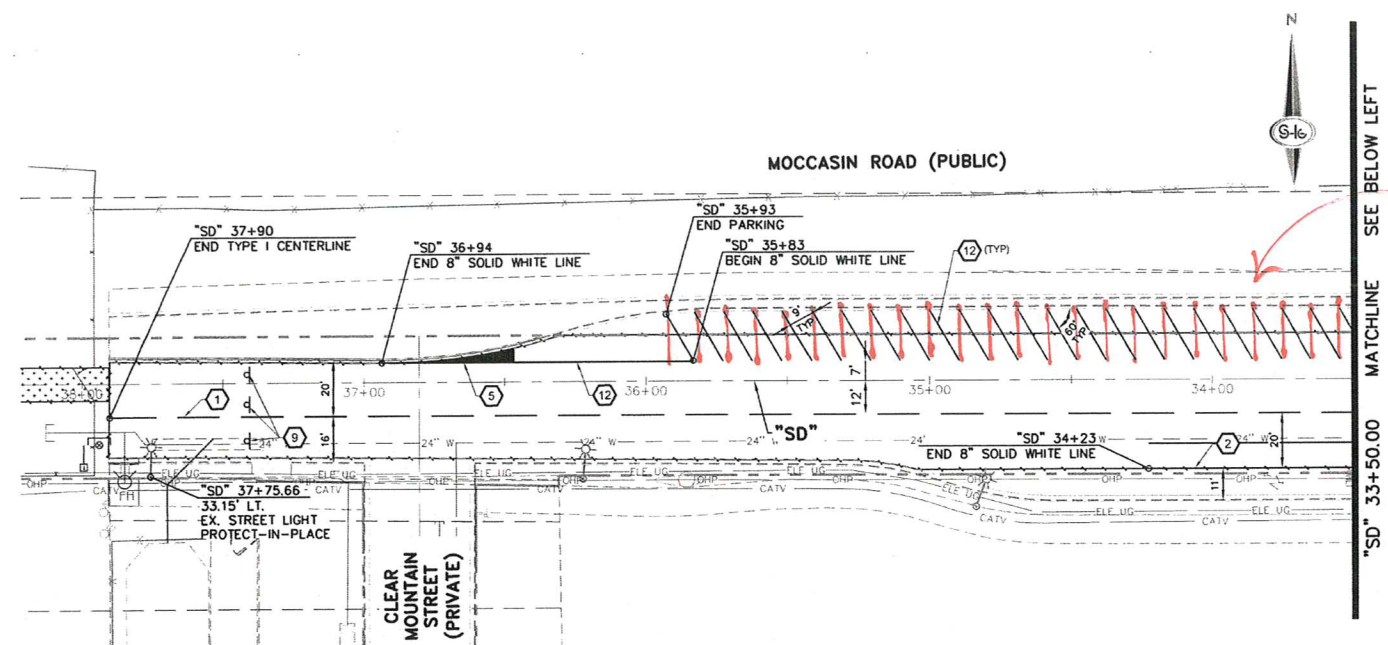
FAST

Call before you UnderGround.

1-702-432-5300

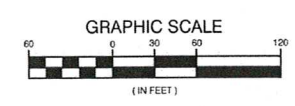
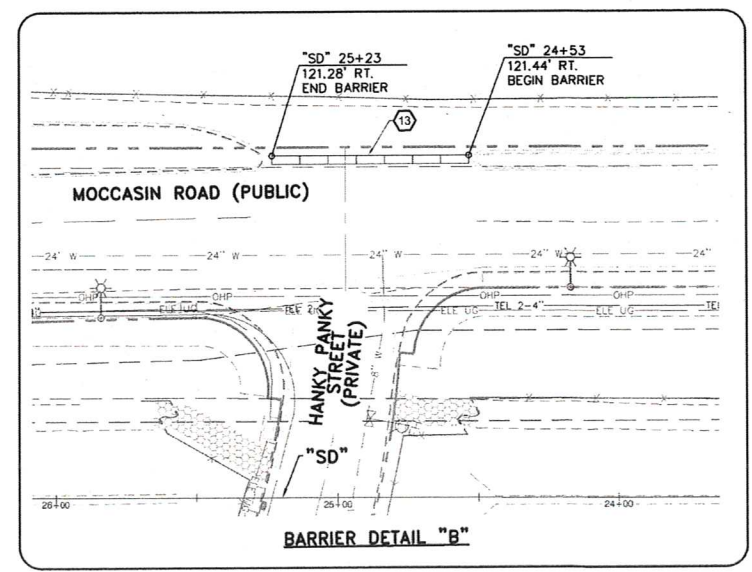
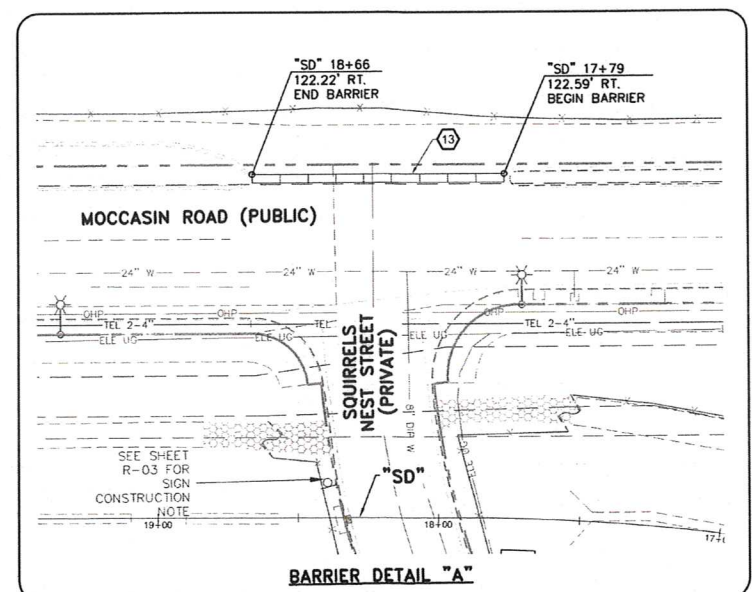
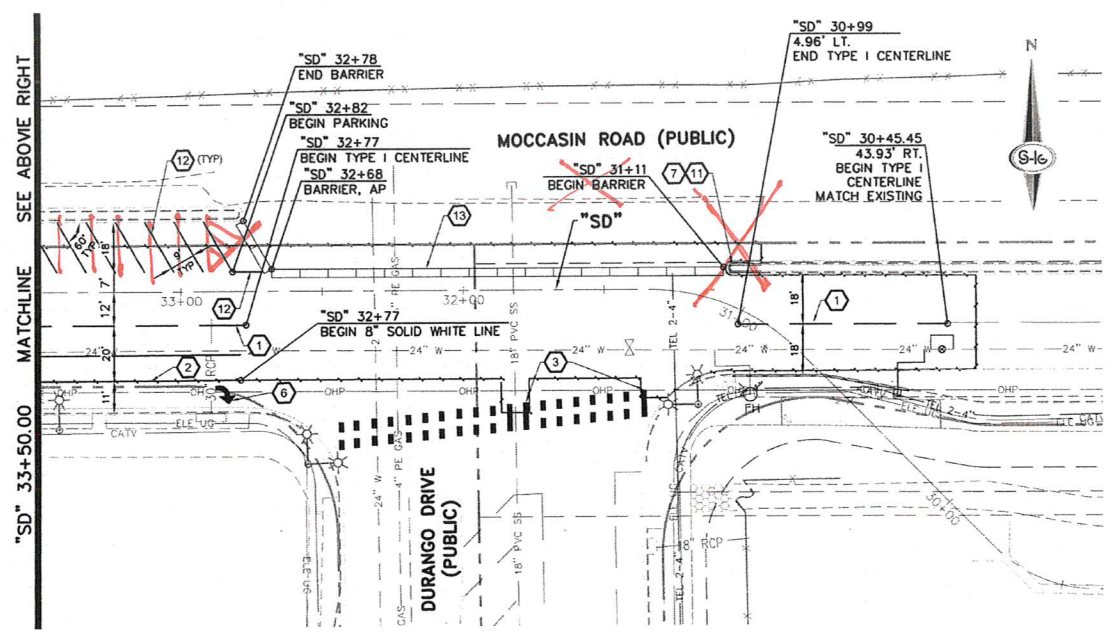
SLATER HANIFAN GROUP CONSULTING ENGINEERS & PLANNERS 2543 ARVILLE STREET, SUITE 200, LAS VEGAS, NV 89103 PHONE (702) 244-5300 FAX (702) 244-5399		PREPARED BY: [Signature] DESIGNED BY: CB DRAWN BY: BC CHECKED BY: FR SUBMITTAL STAGE: 100% FINAL
CITY OF LAS VEGAS PREPARED FOR:	MOCCASIN RD CCRFCD FLOOD CONTROL FACILITY MOCCASIN RD TO CCRFCD FACILITY LVUP 1076/1077	SHEET UT-03 33 OF 48 DRAWING NO. 731-99
TITLE: MOCCASIN RD TO CCRFCD FACILITY LVUP 1076/1077 SHEET: UT-03 UTILITY PLAN 3		

AS BUILT



Changed to straight parking stall

- STRIPING NOTES**
1. INSTALL TYPE 1 CENTERLINE (RPM) (USDCCA STD. DWG. NO. 244)
 2. INSTALL 8-INCH SOLID WHITE LINE (PMF-TYPE 2) (USDCCA STD. DWG. NO. 246)
 3. INSTALL 24-INCH WHITE CROSSWALK LINES (TYPICAL) (PMF-TYPE 2) (USDCCA STD. DWG. NO. 254)
 4. NOT USED
 5. INSTALL SOLID YELLOW TO 5-FOOT WIDTH (PMF-TYPE 2)
 6. INSTALL ARROW (PMF-TYPE 2) (USDCCA STD. DWG. NO. 246)
 7. INSTALL MEDIAN NOSE MARKING (YELLOW) (USDCCA STD. DWG. NO. 248)
 8. NOT USED
 9. REMOVE AND RESET TYPE IIIA BARRICADES
 10. INSTALL 8-INCH SOLID YELLOW LINE (PMF-TYPE 2)
 11. INSTALL K-71 SELF RE-ERECTING MARKER POST (YELLOW)
 12. INSTALL 4" SOLID WHITE LINE (PAINT)
 13. INSTALL PRECAST CONCRETE BARRIER RAIL (JENSEN PRECAST OR APPROVED EQUAL)
- NOTES**
1. LIMITS OF STRIPING INSTALLATION TO MATCH LIMITS OF PAVEMENT RESTORATION FOR CONSTRUCTION OF IMPROVEMENTS SHOWN IN THIS PLAN SET.



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Call

1-800-227-2800

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1-702-227-2929

FAST

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1-702-432-5300

SLATER HANIFAN GROUP CONSULTING ENGINEERS & PLANNERS 5750 S. ARVILLE STREET #216, LAS VEGAS, NV 89118 PHONE (702) 284-5300 FAX (702) 284-5399	
PREPARED FOR CITY OF LAS VEGAS	PROJECT NO. 1076/1077
DRAWN BY: BCC	CHECKED BY: FJR
DESIGNED BY: BCC	SUBMITTAL STAGE: 100% FINAL
TITLE MOCCASIN RD CCRFCD FLOOD CONTROL FACILITY MOCCASIN RD TO CCRFCD FACILITY LVUP 1076/1077	
SHEET STRIPING AND SIGNING PLAN	
SHEET ST-01 34 OF 48 DRAWING NO. 731-99	

AS BUILT



WILLIAM CHARLES CONSTRUCTION

RFI #1

William Charles Construction
833 Featherstone Rd.
Rockford, Illinois 61107
Phone: (815) 654-4700

Project: 4120502 - ACC - Moccasin Road
Moccasin Road
Las Vegas, Nevada 89166

Waterline Relocation- STA: 17+98.84 and STA 25+00

TO:	Brennen Stott (ACC - American Civil Constructors)	FROM:	Brennen Stott (ACC - American Civil Constructors)
DATE INITIATED:	11/05/2020		4615 N. Lamb Blvd, Suite A Las Vegas, Nevada 89115
LOCATION:	17+98.84	STATUS:	Open
PROJECT STAGE:	Course of Construction	DUE DATE:	11/20/2020
COST IMPACT:		COST CODE:	
DRAWING NUMBER:	UT-03	SCHEDULE IMPACT:	
LINKED DRAWINGS:		SPEC SECTION:	
		REFERENCE:	

RECEIVED FROM: Harold Hoover (William Charles Construction)

COPIES TO:

Question from Brennen Stott (ACC - American Civil Constructors) at 12:39 PM on 11/05/2020

1.) Upon review of the LVVWD valve maps it has been discovered that the isolation valves for this work will affect Water District customers. This work will require a minimum of 3 day of outage. As discussed in the field LVVWD representative Jim Corsi, he recommends we cut in a valve at approximately 17+80 at 40ft. left. Please advise.

2.) Upon review of the LVVWD valve maps it has been discovered that the isolation valves for this work will affect Water District customers. This work will require a minimum of 3 day of outage. As discussed in the field LVVWD representative Jim Corsi, he recommends we cut in a valve at approximately 25+10 at 35ft. left. Please advise.

Awaiting an Official Response

All Replies:

BY

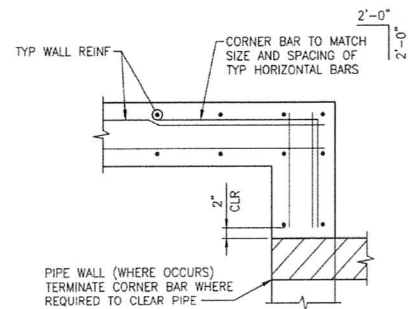
DATE

COPIES TO

2/7/2020 3:10 PM F:\PROJECTS\100767-142\DWG\PRODUCTION\10767-142_S01.DWG DAVID TURNER

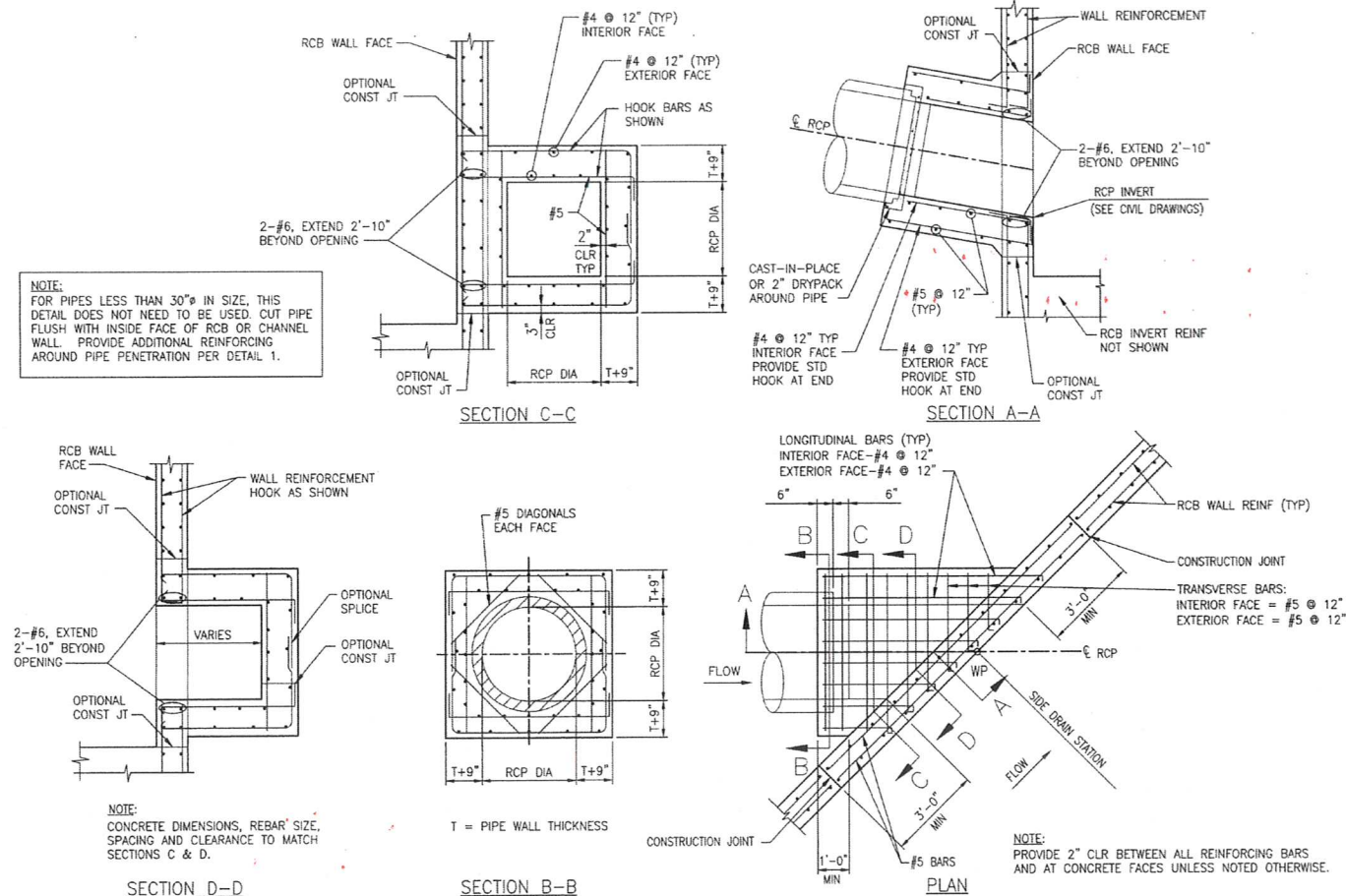
5 WALL CORNER REINF. DETAIL

SCALE: NTS



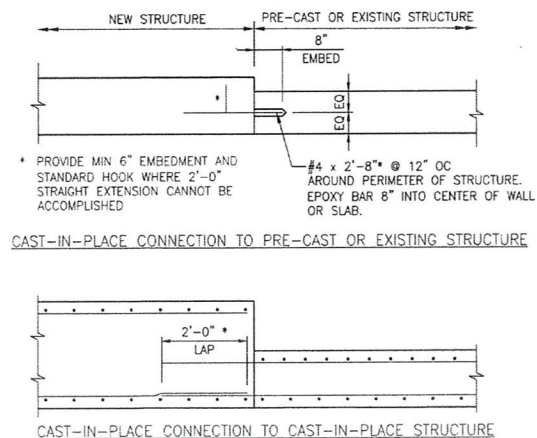
6 TYPICAL PIPE PENETRATION DETAIL INTO CAST-IN-PLACE CONCRETE WALL

SCALE: NTS



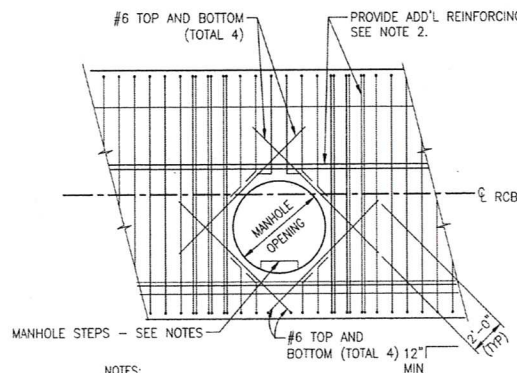
4 JOINT CONNECTION DETAIL

SCALE: NTS



2 RCB ACCESS MANHOLE OPENING

SCALE: NTS

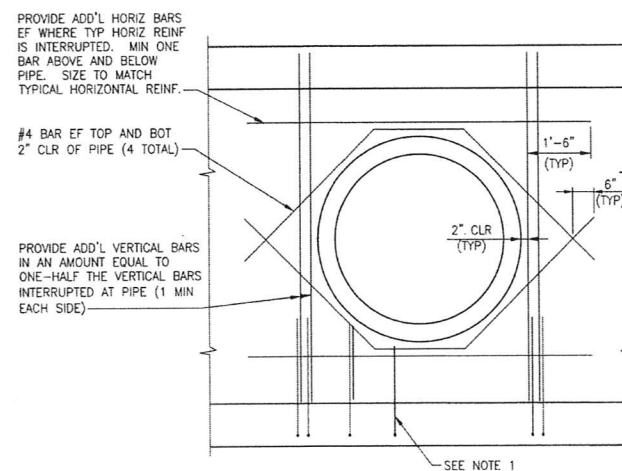


NOTES:

1. FIELD BEND OR CUT ALL REINFORCING 2" CLR OF OPENINGS.
2. EVERY REBAR DISCONTINUED AT OPENING SHALL BE REPLACED BY AN EXTRA REBAR PLACED AT THE SIDE OF THE OPENING AS SHOWN. THE LENGTH OF THE EXTRA REBARS SHALL EQUAL THE LENGTH OF THE SCHEDULE REBARS THAT ARE NOT DISCONTINUED AT THE OPENING.
3. PROVIDE MINIMUM 2" CLR BETWEEN ALL REINFORCING BARS.
4. MANHOLE STEPS SHALL BE PER CLARK COUNTY STANDARD DRAWING NO. 410 WITH A MAXIMUM SPACING BETWEEN STEPS OF 12" AND A MAXIMUM OF 16" BETWEEN THE LAST STEP AND BOTTOM OF STRUCTURE.

1 CAST-IN-PLACE PIPE PENETRATION DETAIL

SCALE: NTS



NOTES:

1. FIELD CUT TYPICAL WALL REINFORCING 2" CLR OF PIPE.
2. WHEN WALL IS LESS THAN 9" THICK REINFORCING DOES NOT NEED TO BE PLACED IN EACH FACE AS STATED ABOVE.
3. IF BARS CANNOT EXTEND BEYOND PIPE AS SHOWN, EXTEND AS FAR AS POSSIBLE AND PROVIDE STANDARD HOOK.

GENERAL STRUCTURAL NOTES

1. **DESIGN SPECIFICATIONS:** AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SEVENTH EDITION, 2014.
2. **CONSTRUCTION SPECIFICATIONS:** UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA AND CONTRACT SPECIAL PROVISIONS.
3. **EXISTING UTILITIES:** THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES WITHIN THE WORK AREA, AND PROVIDING PROTECTION FOR THE VARIOUS UTILITIES AFFECTED PRIOR TO PROCEEDING WITH THE WORK.
4. **CONCRETE:** CONCRETE SHALL BE CLASS D MODIFIED AND SHALL HAVE A MAXIMUM WATER TO CEMENT RATIO, BY WEIGHT, OF 0.45. USE TYPE V CEMENT PER ASTM C-150. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 3/4", UNLESS NOTED OTHERWISE. MINIMUM CONCRETE COMPRESSIVE STRENGTH, f'_c , AT 28 DAYS SHALL BE 6,000 PSI.
5. **REINFORCING STEEL:** ALL REINFORCING STEEL SHALL BE ASTM A615 GRADE 60. DIMENSIONS ARE FROM OUT TO OUT OF BARS. MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE 2" UNLESS NOTED OTHERWISE. HOOKS MAY BE ROTATED OR TILTED AS NECESSARY TO PROVIDE THE PROPER CLEARANCES.
6. IN CURVED SECTIONS, TRANSVERSE REINFORCING SHALL BE PLACED NORMAL TO THE CENTERLINE. THE MAXIMUM SPACING OF BARS SHALL NOT EXCEED THAT FOR TYPICAL SECTIONS. REINFORCING SHALL BE PLACED RADIALLY FROM THE MAXIMUM SPACING.
7. **BEDDING MATERIAL:** BEDDING MATERIAL SHALL BE 8-INCHES OF CLARK COUNTY TYPE II AGGREGATE BASE COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY AS ESTABLISHED BY ASTM TEST METHOD D-1557, UNLESS NOTED OTHERWISE. EXPOSED NATIVE SOILS IN BOTTOMS OF EXCAVATIONS SHALL BE SCARIFIED TO A DEPTH OF 8-INCHES. MOISTURE-CONDITIONED TO WITHIN 2% OF OPTIMUM MOISTURE CONTENT AND COMPACTED TO 95% PER ASTM D-1557.
8. **EPOXY:** EPOXY SHALL BE SIMPSON STRONG-TIE "SET-XP EPOXY-TIE ADHESIVE" PER ICC REPORT ESR-2508 OR APPROVED EQUAL. INSTALL IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS.
9. **STRUCTURAL STEEL:** ALL MISCELLANEOUS STEEL SHALL CONFORM TO ASTM A36 UNLESS NOTED OTHERWISE. ALL HSS TUBE SHAPE SHALL BE ASTM A500, GRADE B.
10. **GALVANIZING:** ALL EXPOSED METAL PARTS SHALL BE GALVANIZED. GALVANIZING DAMAGED BY FABRICATION SHALL RECEIVE TWO COATS OF ZINC RICH PAINT (GALVANOX OR EQUAL).
11. INVERTS, SLOPES, BEARINGS, ALIGNMENTS, AND ELEVATIONS SHOWN ARE FOR "REFERENCE ONLY". INFORMATION ON CIVIL DRAWINGS SHALL GOVERN.
12. CONTRACTOR SHALL PROVIDE SLOPE STABILIZATION, SHEETING, BRACING, AND/OR SHORING AS REQUIRED TO PROTECT EXISTING EMBANKMENTS, STRUCTURES, AND UNDERGROUND ITEMS.
13. THE STRUCTURAL DETAILS PROVIDED HEREIN ARE FOR CAST-IN-PLACE CONCRETE STRUCTURES. IF PRECAST CONCRETE STRUCTURES ARE USED, THE PRECAST SUPPLIER SHALL BE RESPONSIBLE FOR PROVIDING ALL REQUIRED DETAILS. THIS INCLUDES HOW PIPE PENETRATIONS ARE GROUDED INTO OPENINGS IN THE SIDE OF PRECAST RCB.

PREPARED FOR
CITY OF LAS VEGAS

TITLE
**MOCCASIN RD CCRFCD
FLOOD CONTROL FACILITY
MOCCASIN RD TO CCRFCD FACILITY LVUP 1076/1077**

SHEET
S-1
35 OF 48
DRAWING NO.
731-99

DATE: SEPT 2019

DESIGNED BY: BRR

DRAWN BY: BRR

CHECKED BY: EGG

100% FINAL

100% FINAL

100% FINAL

100% FINAL

100% FINAL

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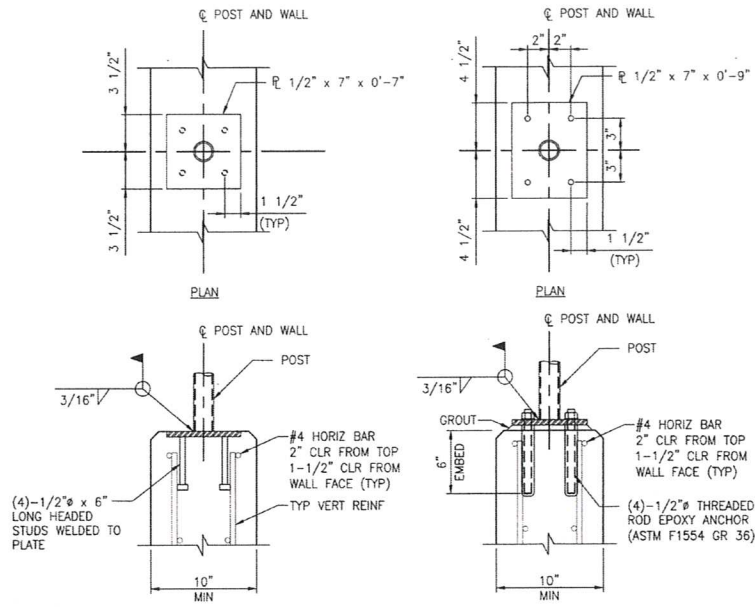
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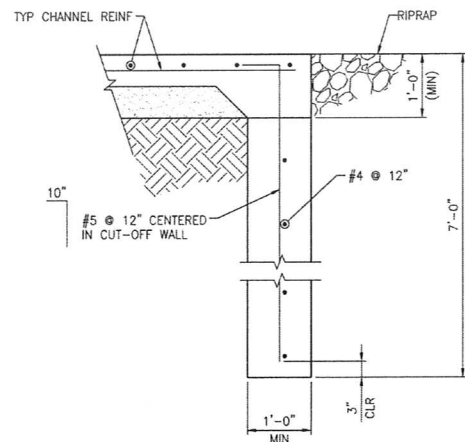
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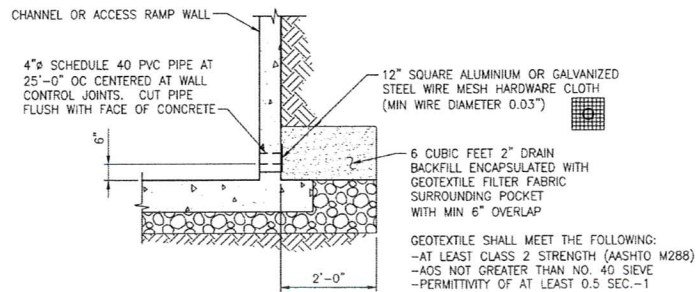
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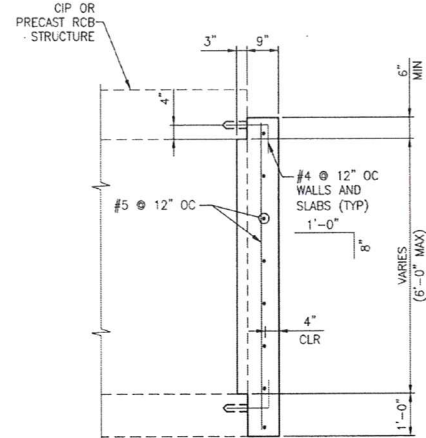
6 POST CONNECTION DETAIL
SCALE: NTS



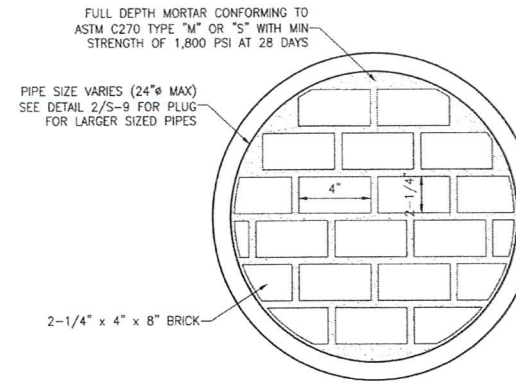
5 CUTOFF WALL SECTION
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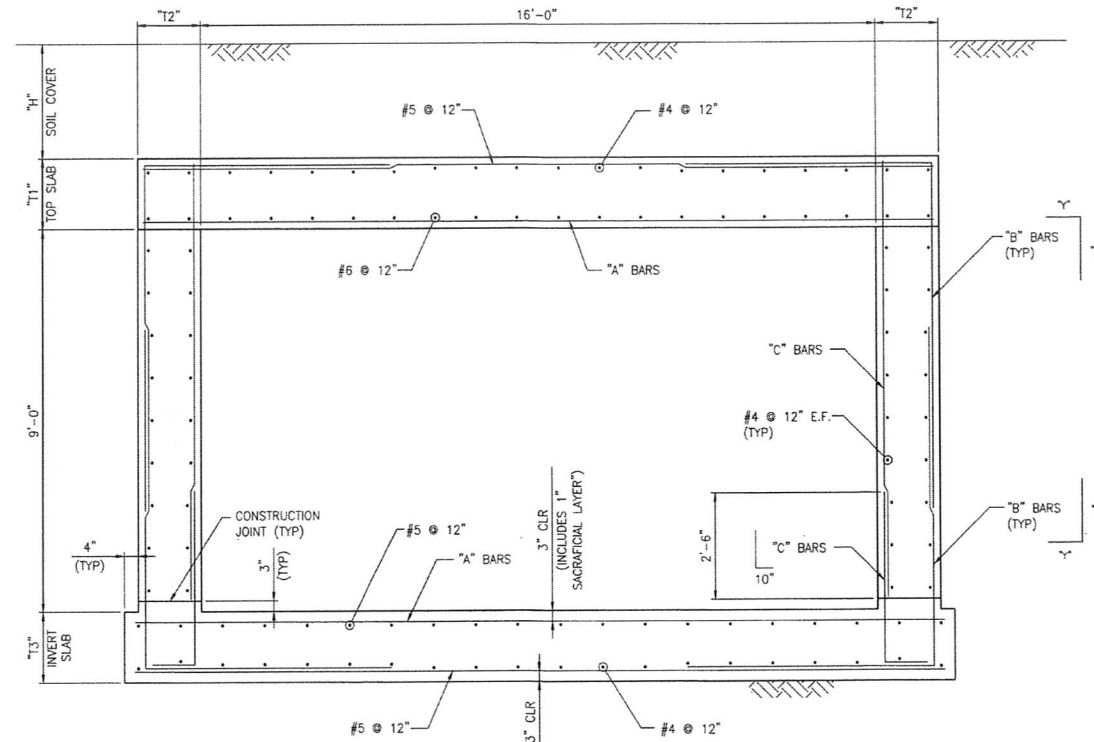
4 CHANNEL WEEPHOLE DETAIL
SCALE: NTS



3 CONCRETE RCB PLUG DETAIL
SCALE: NTS



2 STORM DRAIN PIPE PLUG
SCALE: NTS



1 CAST-IN-PLACE 16'x9' RCB SECTION
SCALE: 1/2" = 1'-0"

16'x9' RCB								
SOIL COVER, "H"	"T1"	"T2"	"T3"	"A" BARS	"B" BARS	"C" BARS	"D" BARS	"E" BARS
H ≤ 10'-0"	1'-4"	1'-0"	1'-5"	#8 @ 6"	#6 @ 6"	5'-3"	7'-5"	#5 @ 6"
10'-0" < H ≤ 20'-0"	1'-6"	1'-4"	1'-7"	#9 @ 6"	#7 @ 6"	5'-10"	7'-9"	#5 @ 6"
20'-0" < H ≤ 35'-0"	1'-8"	1'-6"	1'-9"	#9 @ 4"	#7 @ 4"	6'-0"	8'-0"	#5 @ 4"

AS BUILT

PREPARED BY
GCW
ENGINEERS & SURVEYORS
1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
P: 702.804.2200
F: 702.804.2201
gcwengineering.com

DESIGNED BY: BRR
DRAWN BY: BRR
CHECKED BY: EGG
SUBMITTAL STAGE: 100% FINAL

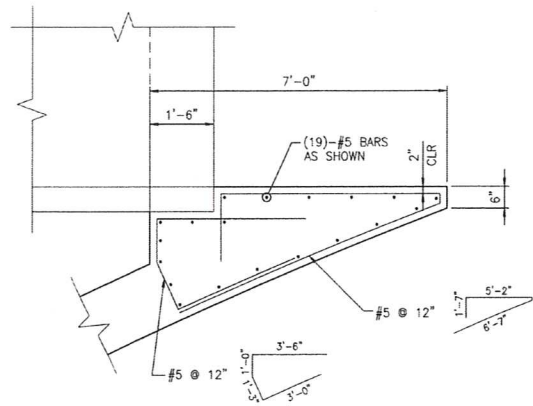
CITY OF LAS VEGAS
HANSSEN NO. 71033
DATE: SEPT 2019
SUBMITTAL STAGE: 100% FINAL

MOCCASIN RD CCRFC
FLOOD CONTROL FACILITY
MOCCASIN RD TO CCRFC FACILITY LVUP 1076/1077
SHEET
16'x9' RCB TYPICAL SECTION AND TYPICAL DETAILS

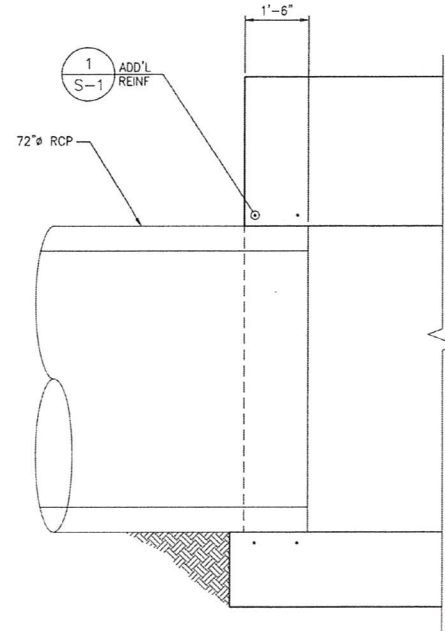
DAVID A. TURNER
Exp. 06/30/2020
CIVIL / STRUCTURAL
Professional Engineer
No. 18979
2/7/20

SHEET
S-2
36 OF 48
DRAWING NO.
731-99

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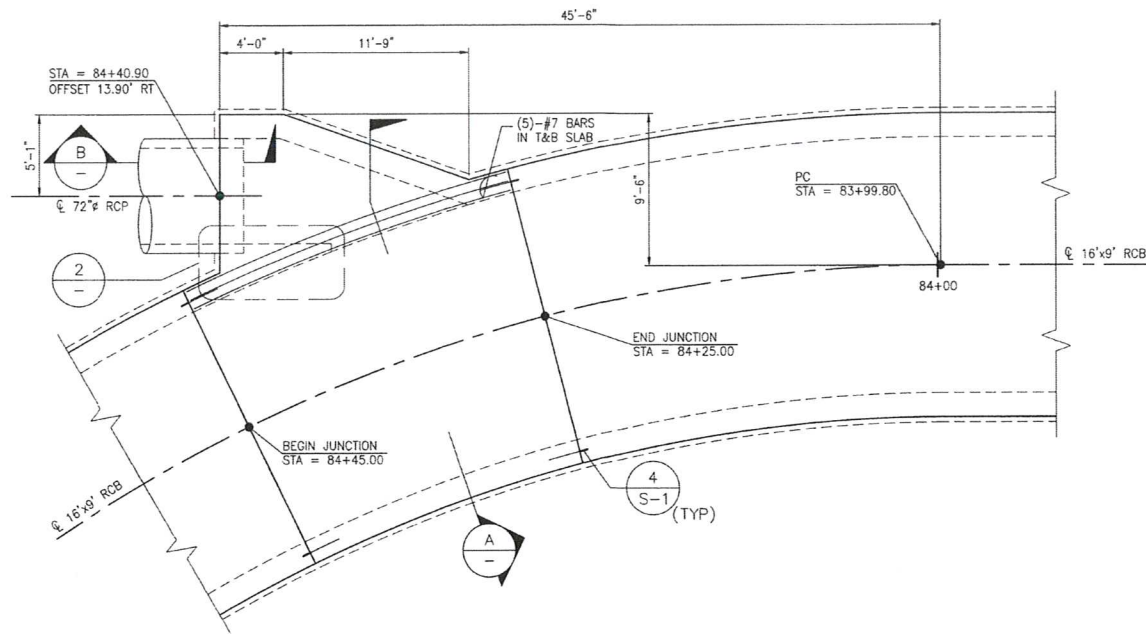


2 DETAIL
SCALE: 1/2" = 1'-0"

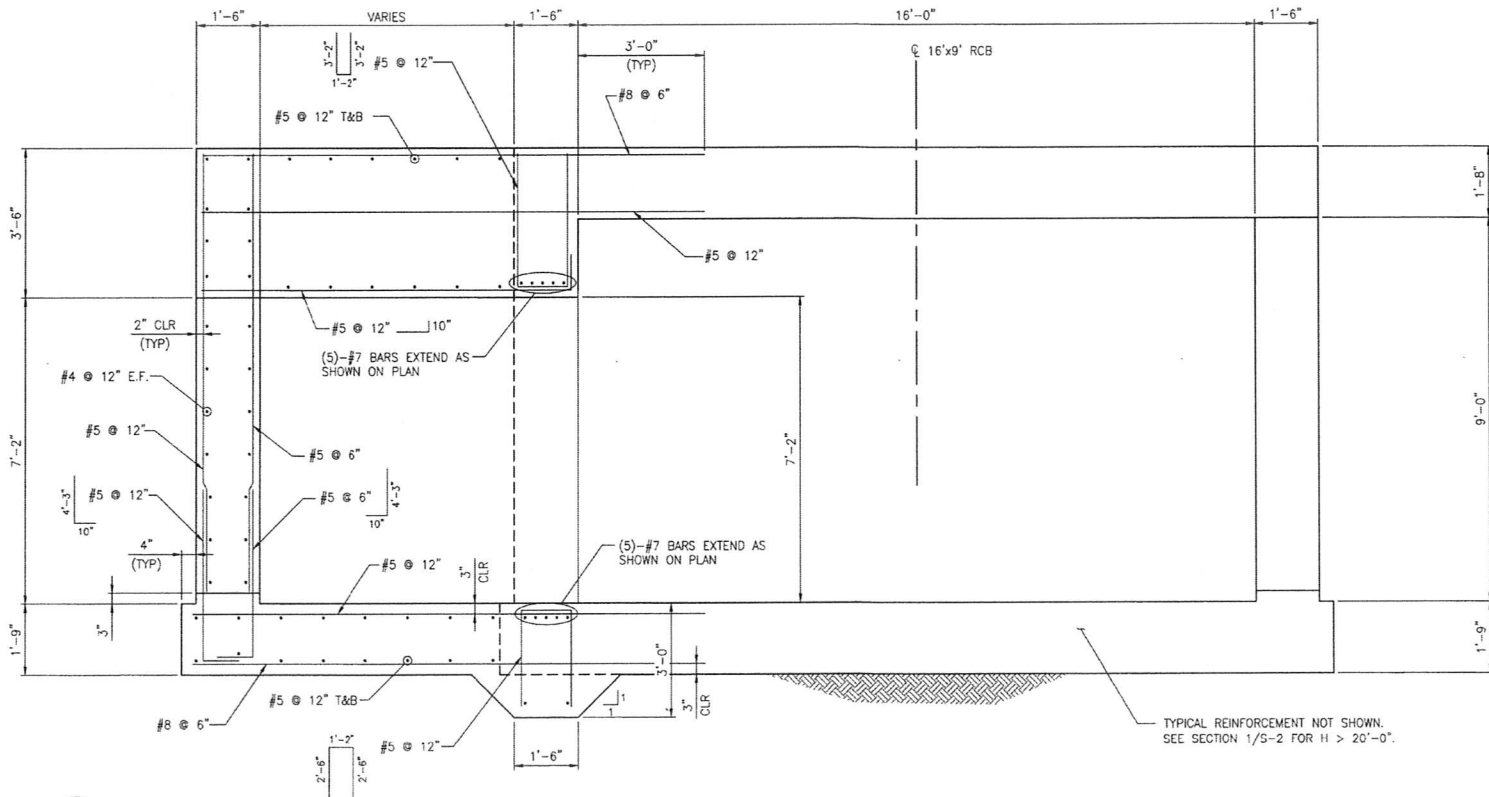


NOTE:
TYPICAL REINFORCING NOT SHOWN.

B SECTION
SCALE: 1/2" = 1'-0"



1 PLAN
SCALE: 3/16" = 1'-0"



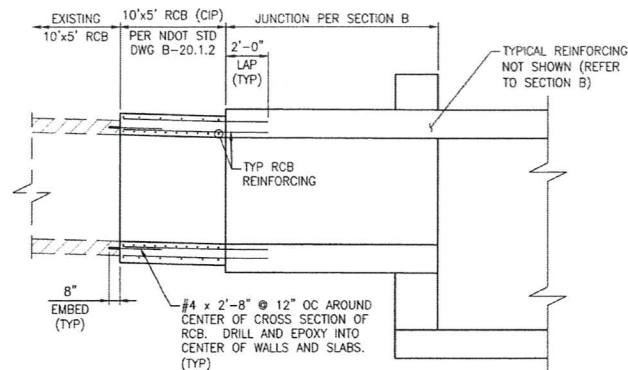
TYPICAL REINFORCING NOT SHOWN.
SEE SECTION 1/5-2 FOR H > 20'-0".

A SECTION
SCALE: 1/2" = 1'-0"

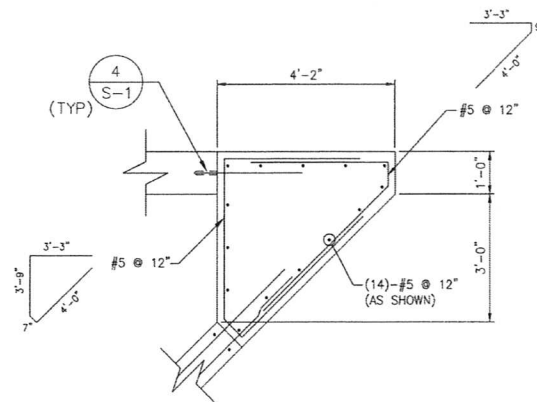
PREPARED BY		CITY OF LAS VEGAS		HANSSEN NO. 71033		DESIGNED BY: BRR		DRAWN BY: BRR		CHECKED BY: EGG		NO.		DATE		REVISIONS	
1555 S. RAINBOW BLVD.		LAS VEGAS, NV 89146		T: 702.804.2000		F: 702.804.2299		gcmengineering.com									
GCM		ENGINEERS & SURVEYORS															
MOCCASIN RD CCRFCD		FLOOD CONTROL FACILITY		MOCCASIN RD TO CCRFCD FACILITY LVUP 1076/1077		DATE: SEPT 2019		SUBMITTAL STAGE:		100% FINAL							
72" RCP CONNECTION TO 16'X9' RCB																	
SHEET		S-3		37 OF 48		DRAWING NO.		731-99									

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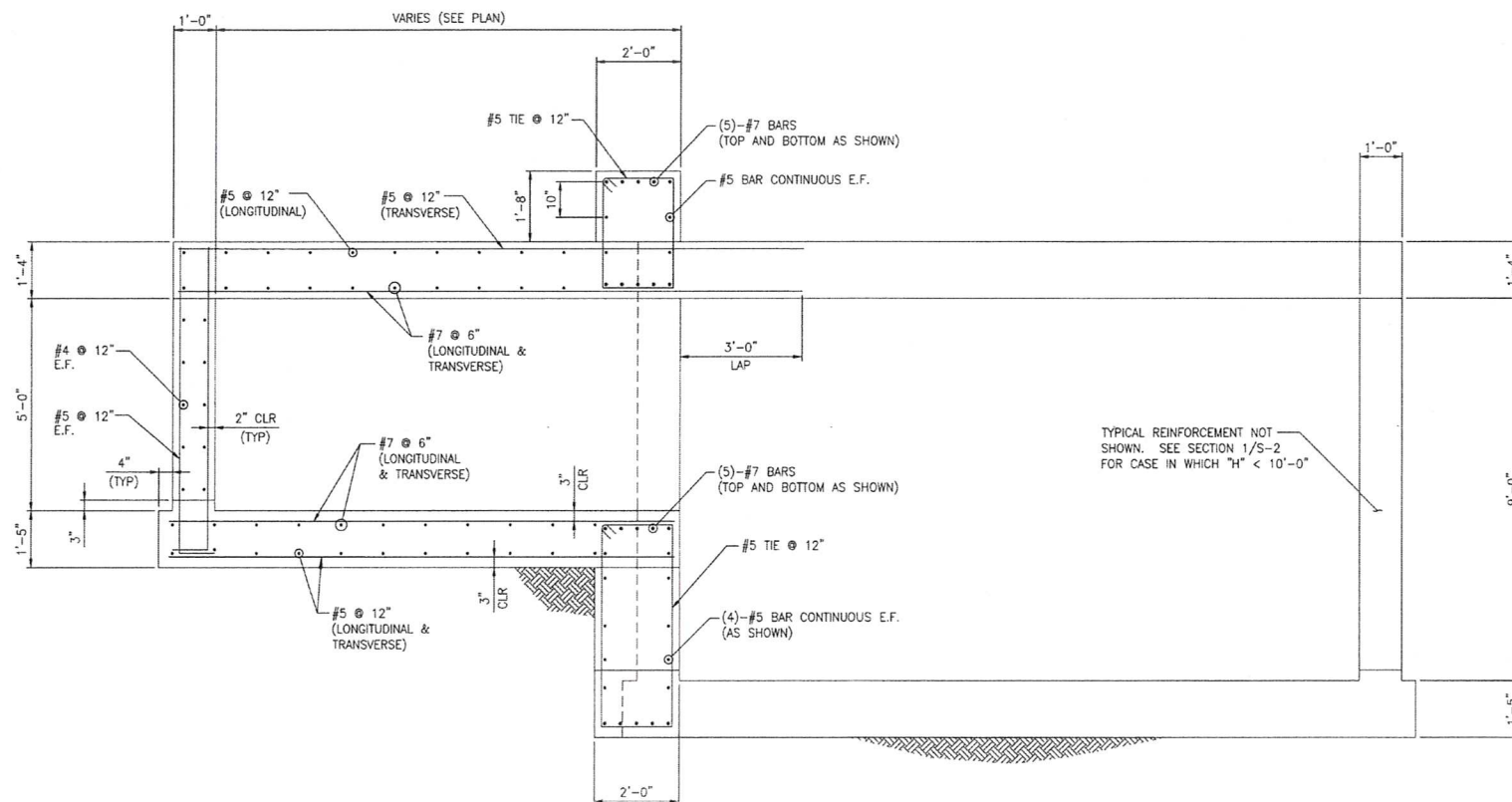
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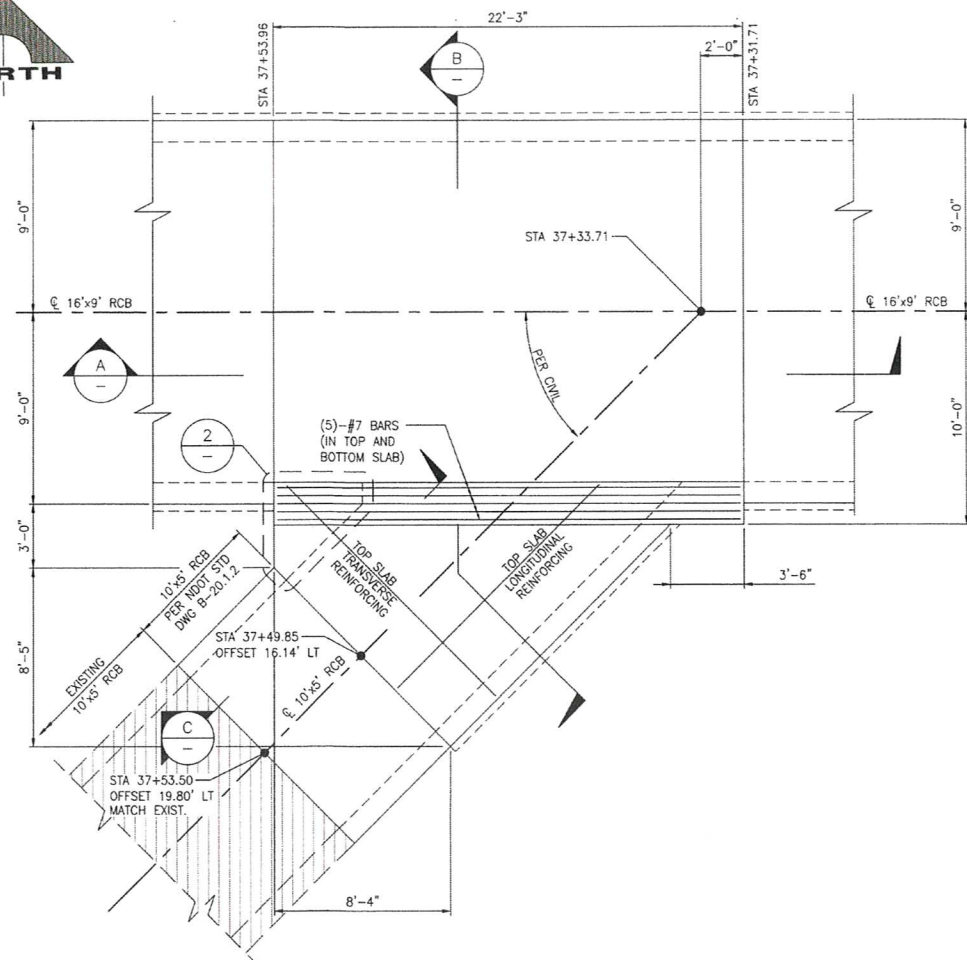
C SECTION
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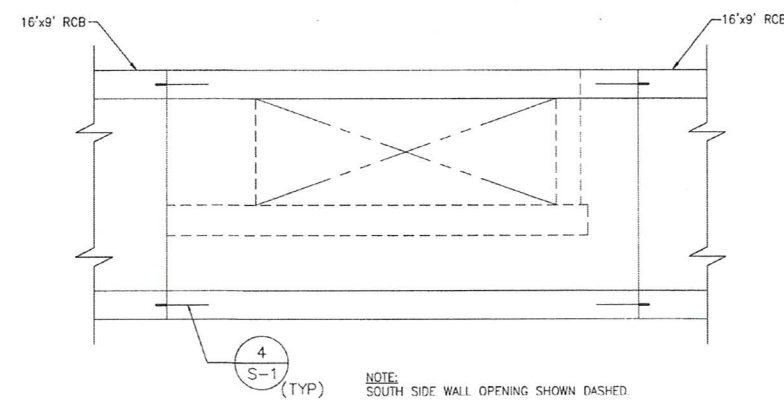
2 DETAIL
SCALE: 1/2" = 1'-0"



B SECTION
SCALE: 3/8" = 1'-0"



1 PLAN
SCALE: 1/4" = 1'-0"

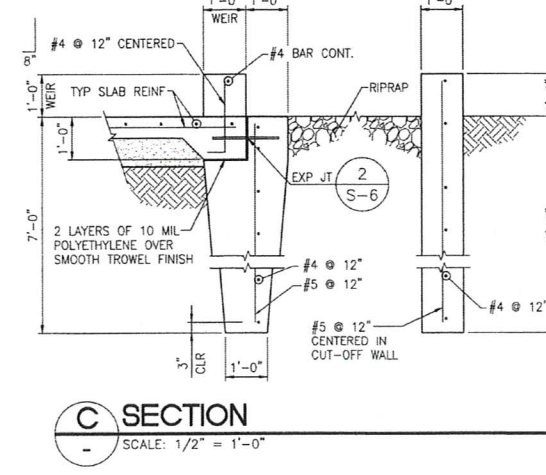
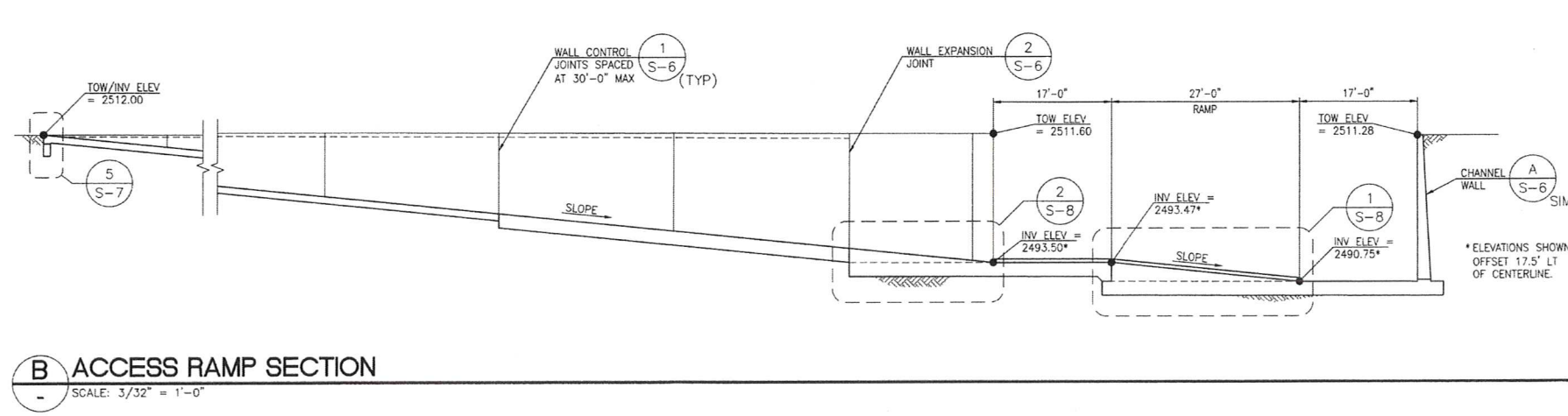
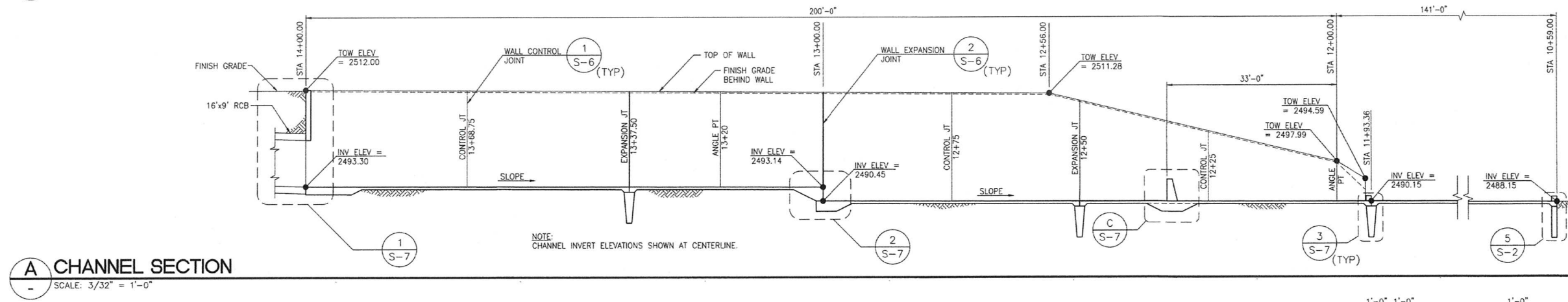
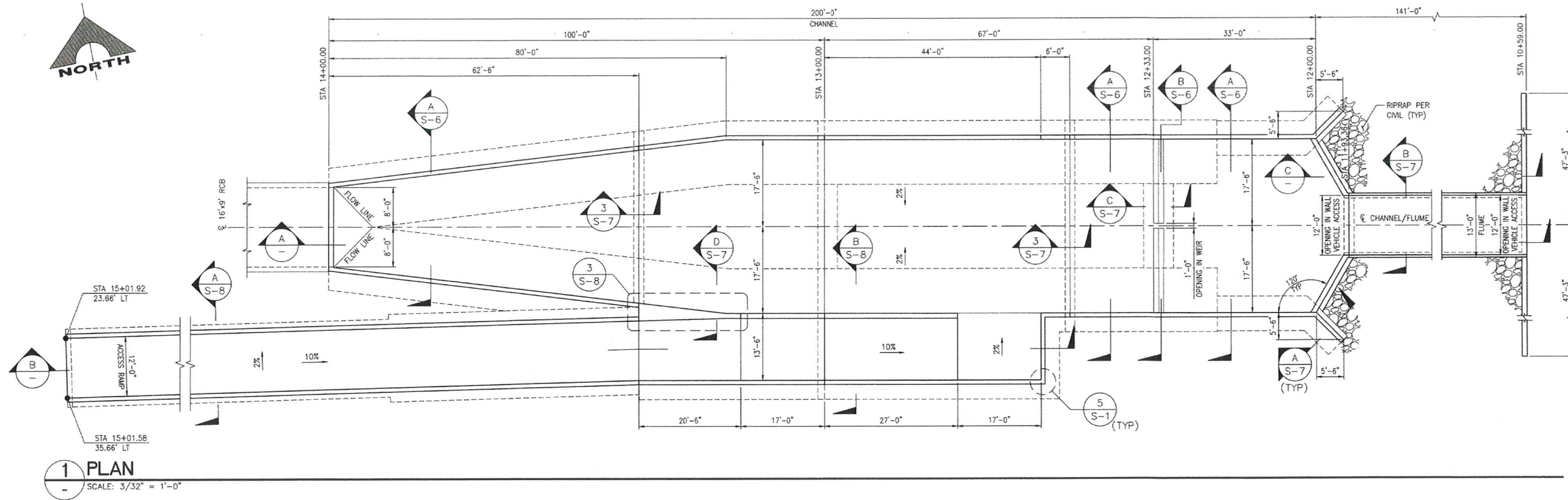


A ELEVATION
SCALE: 1/4" = 1'-0"

PREPARED BY		NO.		DATE	REVISIONS				
GCM									
1555 S. RAINBOW BLVD. LAS VEGAS, NV 89146 T: 702.800.2200 F: 702.800.2299 gcmengineering.com									
PREPARED FOR		DESIGNED BY		CHECKED BY					
CITY OF LAS VEGAS		BRR		EGG					
HANSSEN NO. 71033		DATE: SEPT 2019		SUBMITTAL STAGE					
100% FINAL									
TITLE									
MOCCASIN RD CCRFCD FLOOD CONTROL FACILITY									
MOCCASIN RD TO CCRFCD FACILITY LVUP 1076/1077									
RCB JUNCTION STRUCTURE									
PLAN, SECTION AND DETAILS									
SHEET									
S-4									
38 OF 48									
DRAWING NO. 731-99									

AS BUILT

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PREPARED BY		CITY OF LAS VEGAS		MOCCASIN RD CCRFCD FLOOD CONTROL FACILITY		MOCCASIN RD TO CCRFCD FACILITY LVUP 1076/1077		RECTANGULAR CHANNEL		PLAN AND ELEVATION	
DESIGNED BY		BRR		BRR		BRR		BRR		EGG	
DRAWN BY		BRR		BRR		BRR		BRR		EGG	
CHECKED BY		EGG		EGG		EGG		EGG		EGG	
SUBMITTAL STAGE		100% FINAL		100% FINAL		100% FINAL		100% FINAL		100% FINAL	
DATE		SEPT 2019		SEPT 2019		SEPT 2019		SEPT 2019		SEPT 2019	
NO.		DATE		DATE		DATE		DATE		DATE	
REVISIONS		REVISIONS		REVISIONS		REVISIONS		REVISIONS		REVISIONS	

1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
F: 702.804.2299
GOWINGENGINEERS.COM

GCW
ENGINEERS & SURVEYORS

PREPARED FOR
CITY OF LAS VEGAS

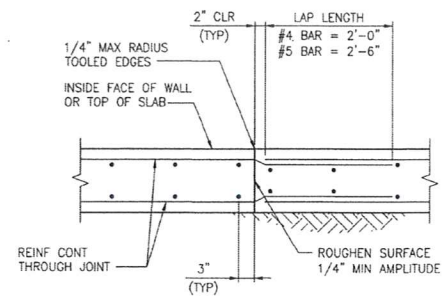
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DATE: SEPT 2019
SUBMITTAL STAGE: 100% FINAL

MOCCASIN RD CCRFCD FLOOD CONTROL FACILITY
MOCCASIN RD TO CCRFCD FACILITY LVUP 1076/1077
RECTANGULAR CHANNEL
PLAN AND ELEVATION

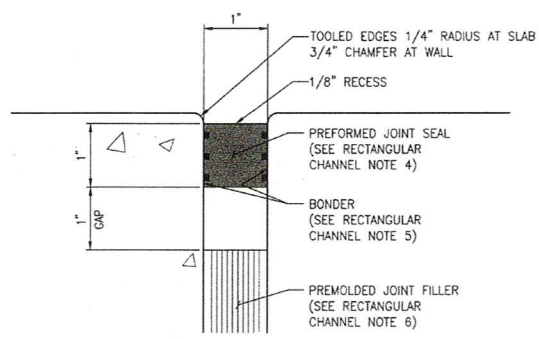
SHEET
S-5
39 OF 48
DRAWING NO.
731-99

AS BUILT

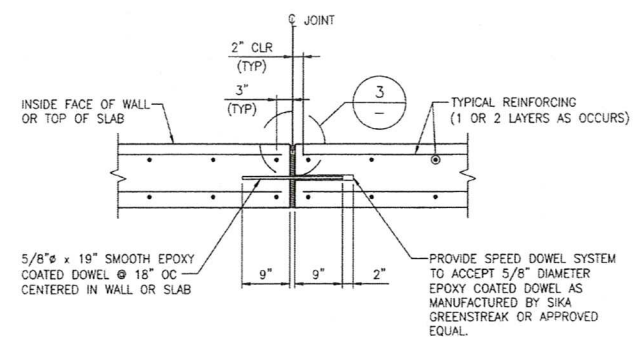
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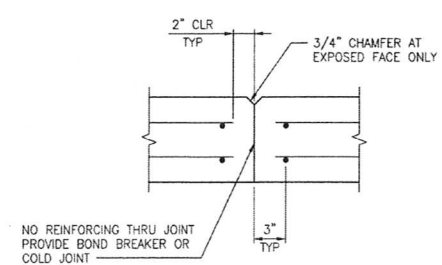
4 CONSTRUCTION JOINT DETAIL
SCALE: NTS



3 EXPANSION JOINT SEALANT
SCALE: NTS

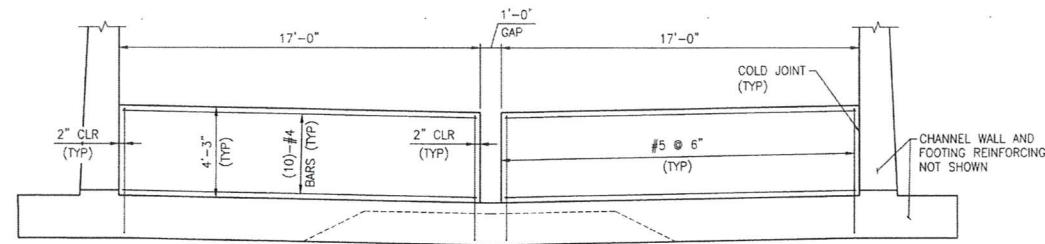


2 EXPANSION JOINT
SCALE: NTS

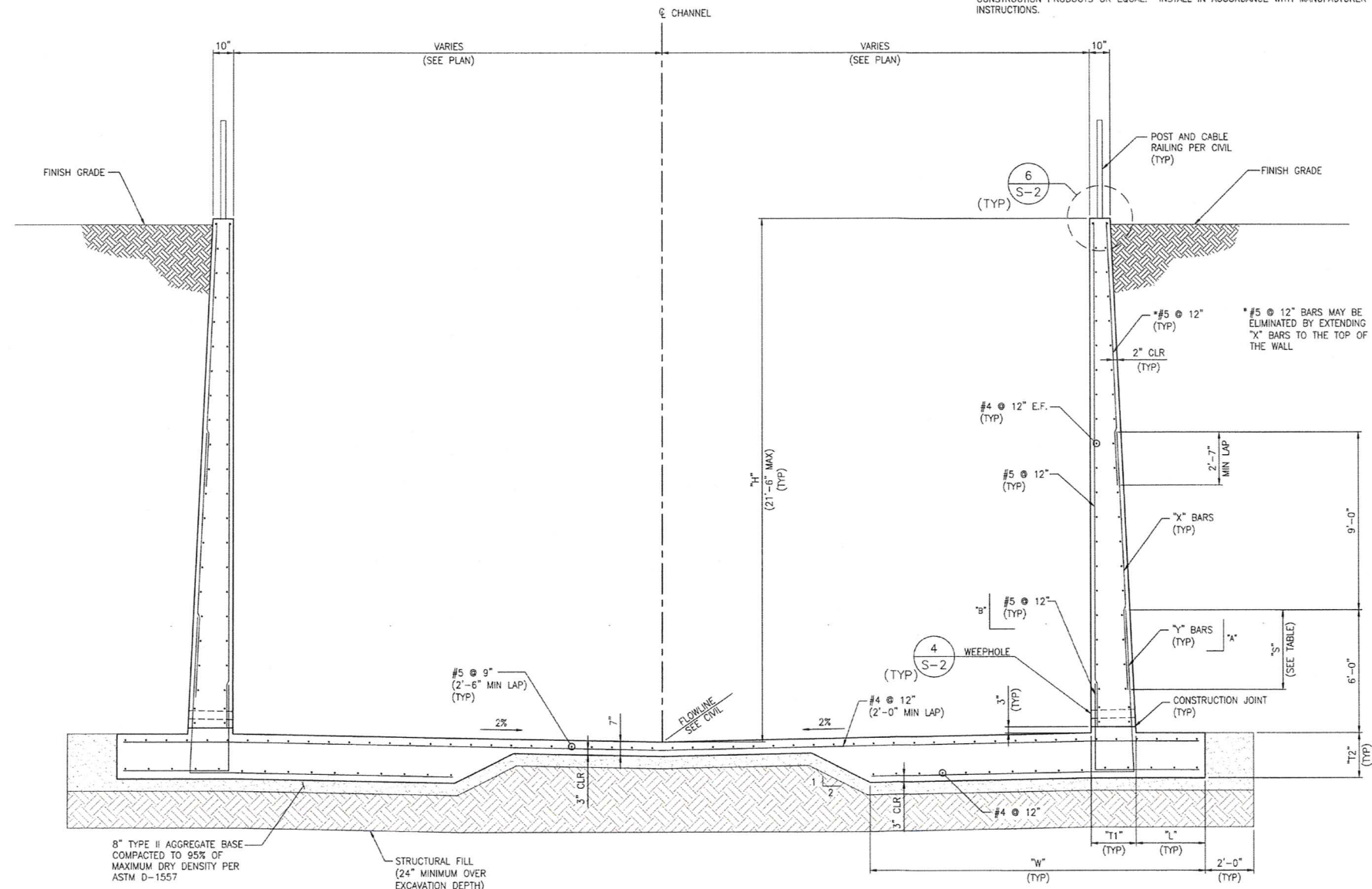


NOTE: CONTROL JOINTS SHALL BE SPACED @ 25'-0" MAX AS SHOWN ON WALL ELEVATIONS ON SHEET S-5.

1 WALL CONTROL JOINT
SCALE: NTS



B WEIR WALL SECTION
SCALE: 1/4" = 1'-0"



A RECTANGULAR CHANNEL SECTION
SCALE: 3/8" = 1'-0"

"H" MAX	"W"	"L"	"X" BARS	"Y" BARS	"A"	"B"	"T1"	"T2"	"S"
H ≤ 12'-0"	7'-3"	2'-0"	#5 @ 12"	#7 @ 6"	6'-9"	3'-6"	0'-10"	1'-0"	2'-7"
12'-0" < H < 21'-6"	15'-8"	1'-10"	#7 @ 6"	#9 @ 6"	7'-11"	4'-8"	2'-2"	2'-2"	4'-6"

RECTANGULAR CHANNEL NOTES

- TRANSVERSE JOINTS IN INVERT SLAB AND WALLS WILL BE REQUIRED AT THE END OF EACH CONTINUOUS POURING OPERATION. SEE TYPICAL CONSTRUCTION JOINT DETAIL.
- ALL TRANSVERSE JOINTS IN WALLS AND SLABS (CONSTRUCTION, WEAKENED, CONTRACTION AND EXPANSION) SHALL BE IN THE SAME PLANE. NO STAGGERING OF JOINTS WILL BE PERMITTED UNLESS SHOWN OTHERWISE. TRANSVERSE CONSTRUCTION JOINTS SHALL BE NORMAL OR RADIAL TO CENTERLINE OF CONSTRUCTION.
- AT THE BEGINNING AND ENDING OF ALL POURS, A COMPLETE CURTAIN OF MAIN REINFORCEMENT SHALL BE PLACED 3-INCHES FROM THE TRANSVERSE CONSTRUCTION, CONTRACTION AND EXPANSION JOINTS.
- PREFORMED EXPANSION JOINT SEAL: PHYZITE 380 WITH H.A.L.S. MANUFACTURED BY CHASE CONSTRUCTION PRODUCTS OR APPROVED EQUAL. SIZE AND INSTALL SEAL IN ACCORDANCE WITH MANUFACTURER INSTRUCTIONS. THE WIDTH OF THE SEAL SHALL BE 25% GREATER THAN THE WIDTH OF THE JOINT AT THE TIME OF INSTALLATION. MEASURE WIDTH OF JOINT AFTER INITIAL SHRINKAGE AND THERMAL MOVEMENT HAS OCCURRED. ALL JOINTS IN THE COMPRESSION SEAL SHALL BE HEAT WELDED. THE JOINT MATERIAL SHALL HAVE E.S.P. (ENGINEERED SURFACE PREPARATION) GROOVES PER MANUFACTURER RECOMMENDATIONS.
- BONDER: EVA-POX BONDER NO. 1 MANUFACTURED BY CHASE CONSTRUCTION PRODUCTS OR APPROVED EQUAL. APPLY TO BOTH SIDES OF SEAL AND CONCRETE. BONDER SHALL FILL THE GROOVES OF THE SEAL.
- PREMOLDED JOINT FILLER: EVA-SEAL 30 WITH 2" TERRA-STRIP MANUFACTURED BY CHASE CONSTRUCTION PRODUCTS OR APPROVED EQUAL. INSTALL IN ACCORDANCE WITH MANUFACTURER INSTRUCTIONS.

PREPARED BY
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gcnwengineering.com

CITY OF LAS VEGAS

HANSEN NO. 71033
DESIGNED BY: BRR
DRAWN BY: BRR
CHECKED BY: EGG

BID# 18.17033
DATE: SEPT 2019
SUBMITTAL STAGE: 100% FINAL

MOCCASIN RD CORFCD
FLOOD CONTROL FACILITY

MOCCASIN RD TO CORFCD FACILITY LVUP 1076/1077

SHEET

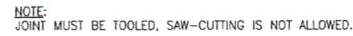
RECTANGULAR CHANNEL SECTION AND DETAILS

DAVID A. TURNER
Exp. 06/30/2020
CIVIL / STRUCTURAL
Professional Engineer No. 18579

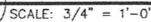
SHEET

S-6
40 OF 48
DRAWING NO.
731-99

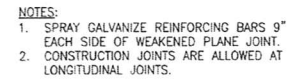
AS BUILT



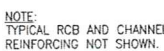
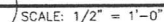
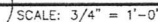
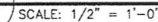
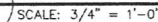
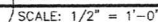
SCALE: NTS



SCALE: $3/8" = 1'-0"$



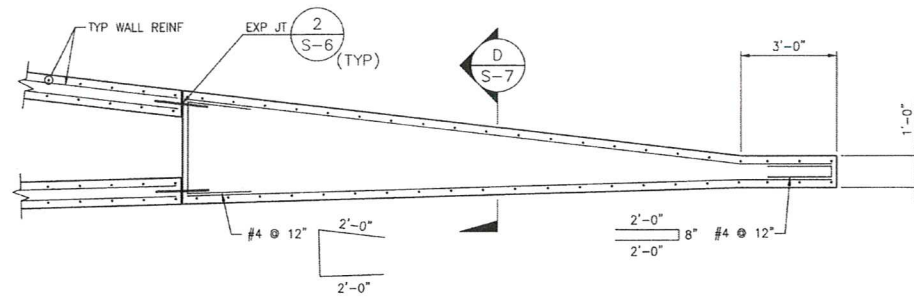
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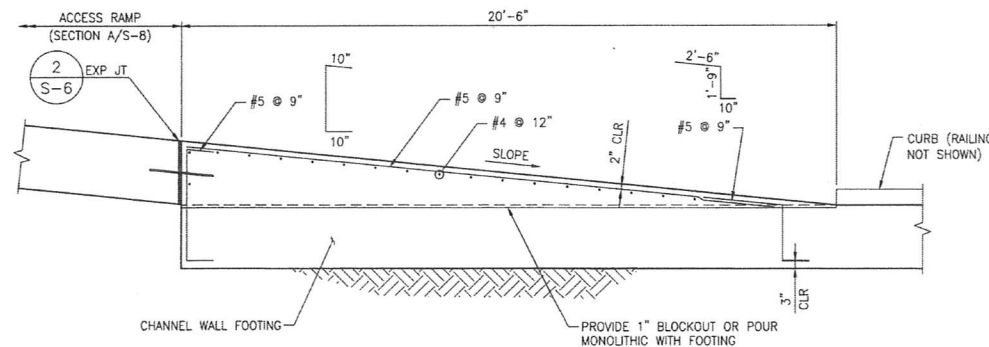
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AS BUILT

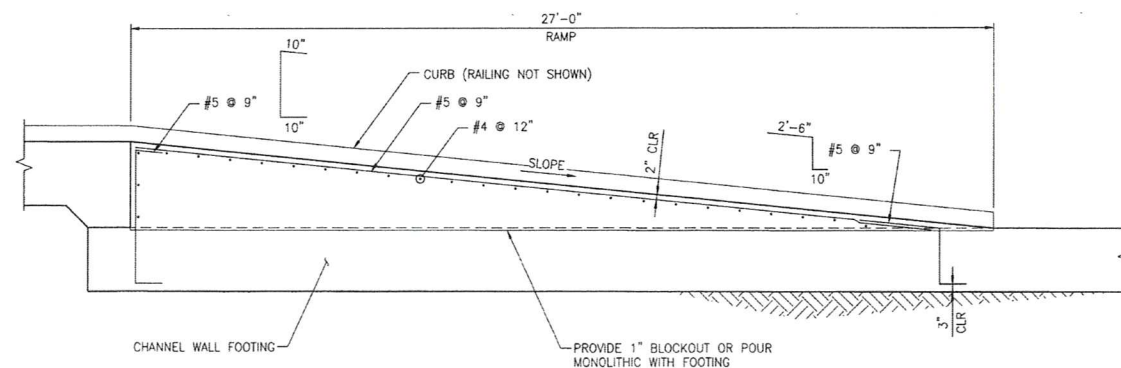
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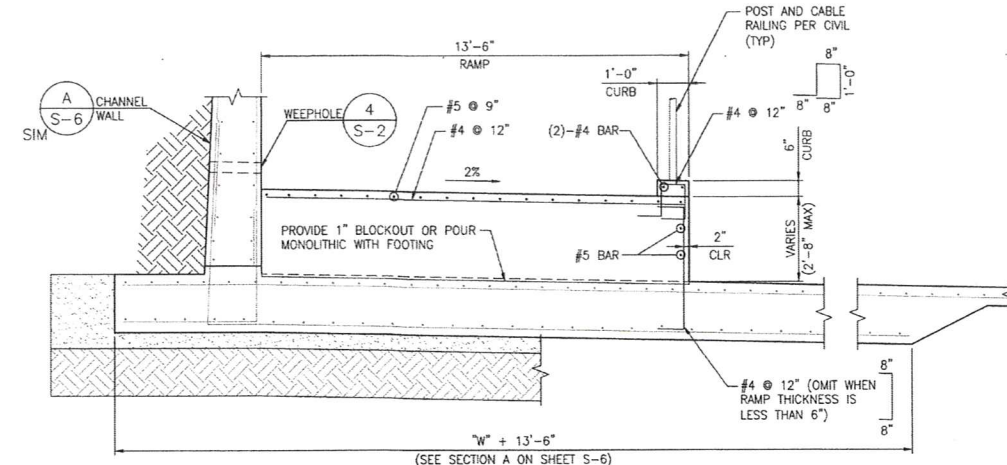
3 WALL PLAN
SCALE: 3/8" = 1'-0"



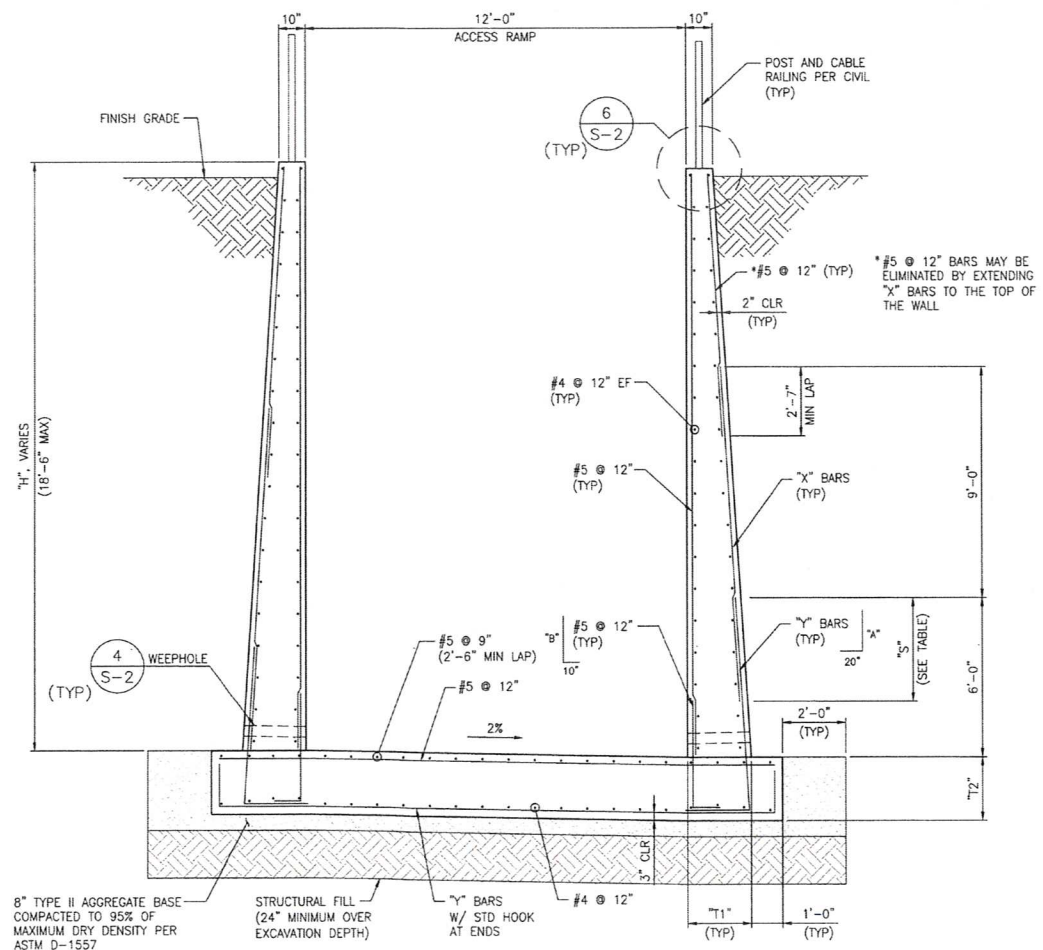
2 RAMP DETAIL
SCALE: 3/8" = 1'-0"



1 RAMP DETAIL
SCALE: 3/8" = 1'-0"



B RAMP SECTION
SCALE: 3/8" = 1'-0"



"H" MAX	"X" BARS	"Y" BARS	"A"	"B"	"T1"	"T2"	"S"
H ≤ 12'-0"	#5 @ 12"	#7 @ 6"	6'-9"	3'-6"	0'-10"	1'-0"	2'-7"
12'-0" < H < 18'-6"	#7 @ 6"	#9 @ 6"	7'-11"	4'-8"	2'-2"	2'-2"	4'-6"

A CHANNEL ACCESS RAMP SECTION
SCALE: 3/8" = 1'-0"

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REVISIONS
NO. DATE

PREPARED FOR
CITY OF LAS VEGAS

BID# 1817033
DESIGNED BY: BRR
DRAWN BY: BRR
CHECKED BY: EGG

DATE: SEPT 2019
SUBMITTAL STAGE:
100% FINAL

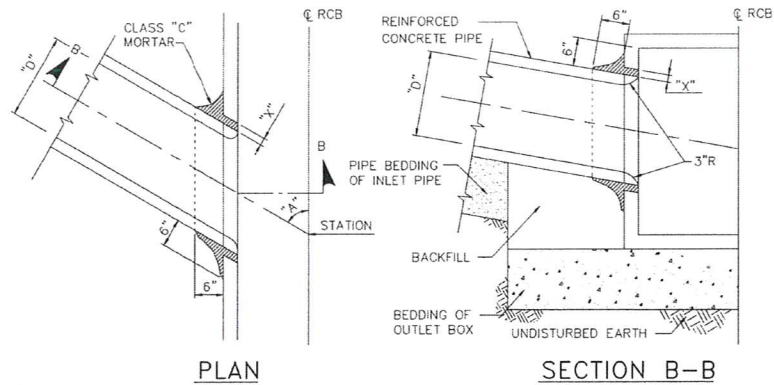
TITLE
**MOCCASIN RD CCRFCD
FLOOD CONTROL FACILITY
MOCCASIN RD TO CCRFCD FACILITY LVUP 1076/1077**

SHEET
RECTANGULAR CHANNEL SECTION AND DETAILS

PROFESSIONAL SEAL
DAVID A. TURNER
Exp. 06/30/2020
CIVIL / STRUCTURAL
No. 18975
4/1/20

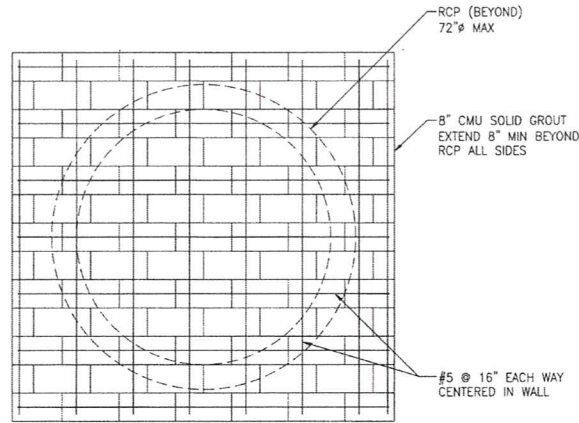
SHEET
S-8
42 OF 48
DRAWING NO.
731-99

AS BUILT



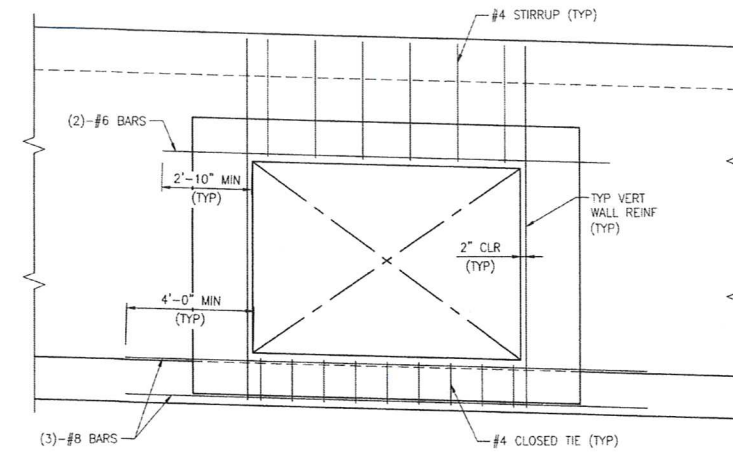
- NOTES:
1. ANGLE "A" SHALL BE BETWEEN 60°.
 2. DIMENSION "D" SHALL BE EQUAL TO OR LESS THAN 1/2 THE INSIDE DIMENSION OF THE MAINLINE BOX.
 3. DIMENSION "X" SHALL BE 1" MIN AND 3" MAX.
 4. BURN OR CHIP END OF INLET PIPE FLUSH WITH INNER SURFACE OF MAINLINE. ROUND EDGES OF MAINLINE AND INLET PIPE.
 5. PRECAST RCB SHALL BE DESIGNED AND DETAILED BY MANUFACTURER TO ACCOMMODATE PENETRATION.

3 PRECAST RCB PENETRATION DETAIL
SCALE: NONE

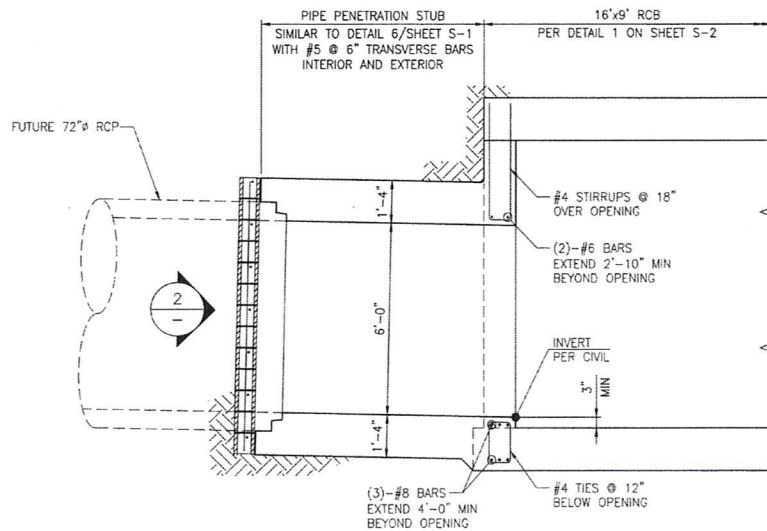


- CMU PLUG NOTES:
1. MASONRY UNITS SHALL CONFORM TO ASTM C-90, MEDIUM WEIGHT HOLLOW CONCRETE UNITS, f'm=2,000 PSI.
 2. MORTAR SHALL CONFORM TO ASTM C270, TYPE "M" OR "S".
 3. GROUT SHALL CONFORM TO ASTM C476. TOTAL CEMENTITIOUS MATERIAL SHALL NOT EXCEED 610 LBS/CY. SLUMP 8" TO 11". WATER-CEMENT RATIO 0.65 TO 0.80. WATER REDUCING ADMIXTURES ARE NOT PERMITTED.
 4. AS AN ALTERNATIVE TO CMU PLUG SHOWN, CONTRACTOR MAY SUBMIT THEIR OWN PLUG DESIGN, INCLUDING PRECAST CONCRETE PLUG, FOR ENGINEER REVIEW AND APPROVAL.

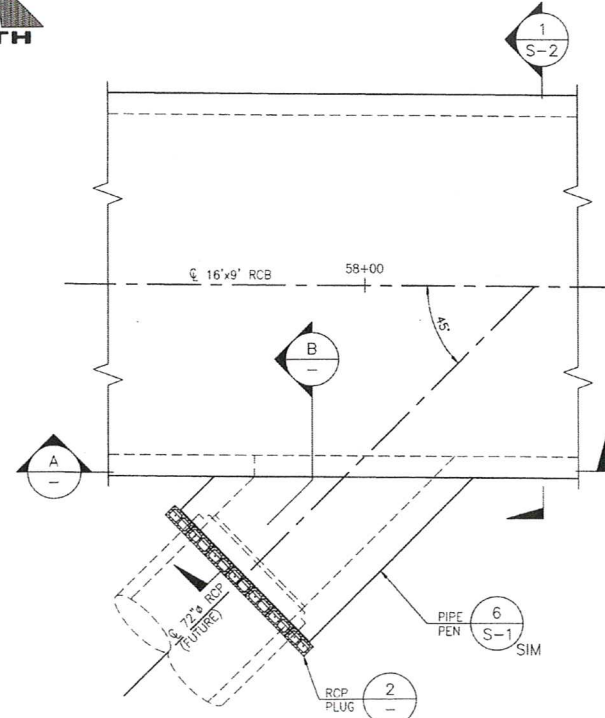
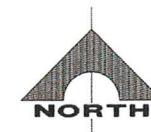
2 RCP PLUG DETAIL
SCALE: 1/2" = 1'-0"



A SECTION
SCALE: 3/8" = 1'-0"



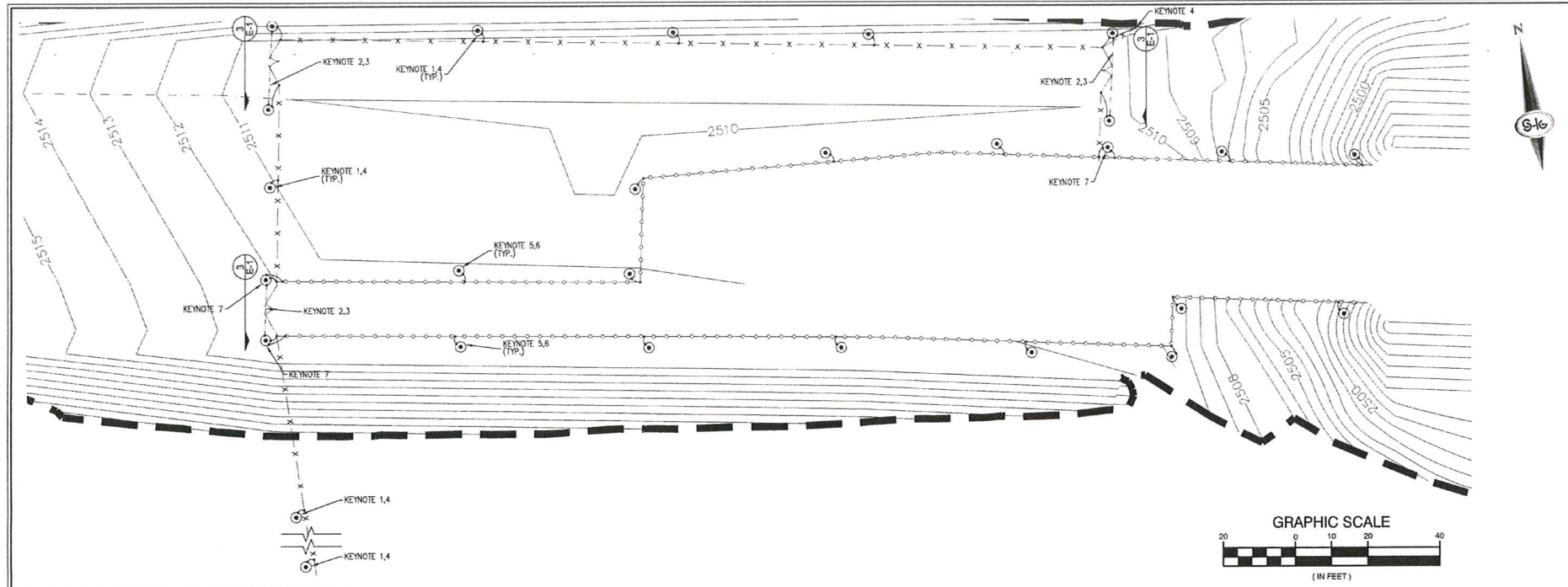
B SECTION
SCALE: 3/8" = 1'-0"



1 PLAN
SCALE: 1/4" = 1'-0"

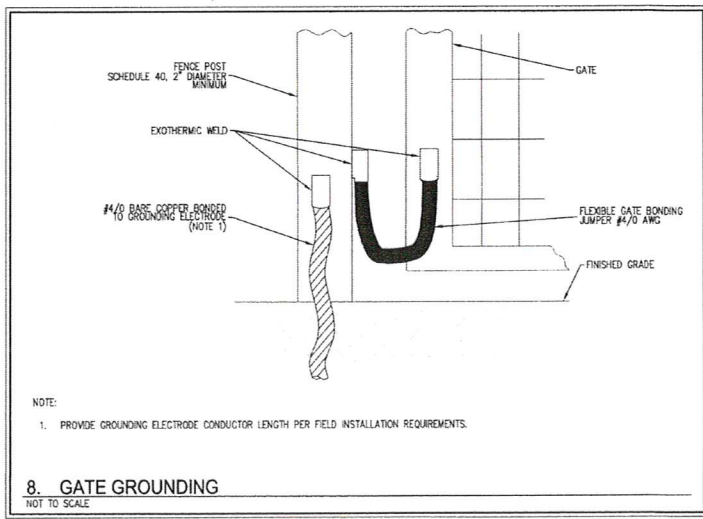
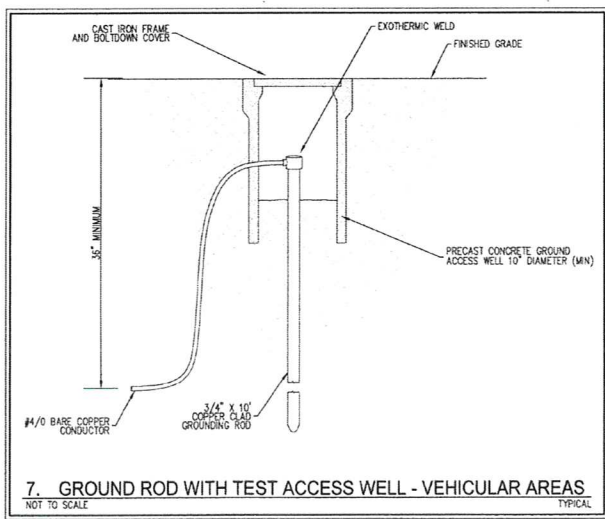
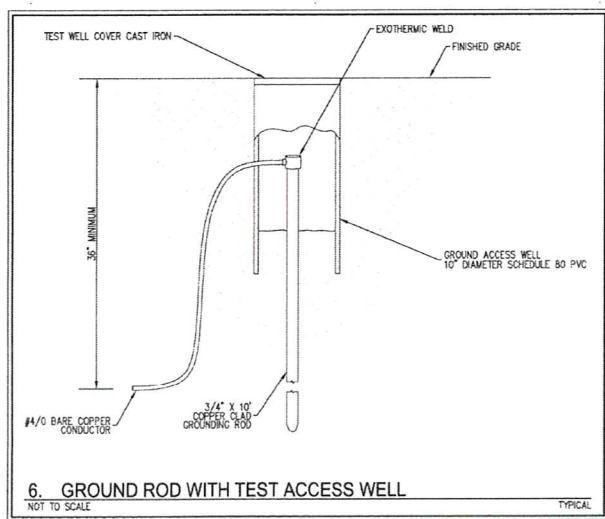
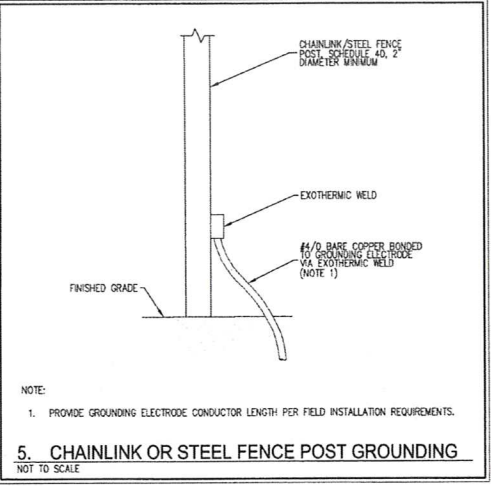
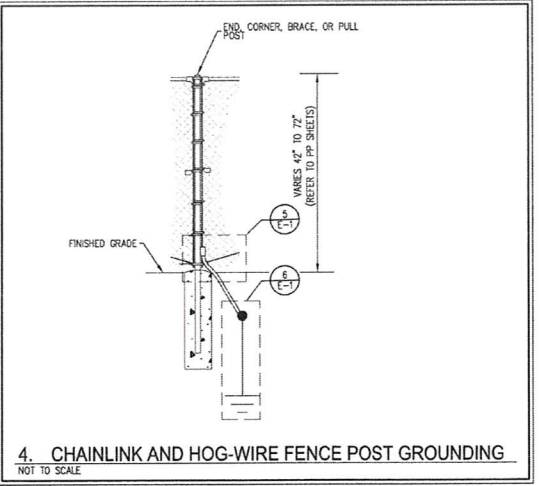
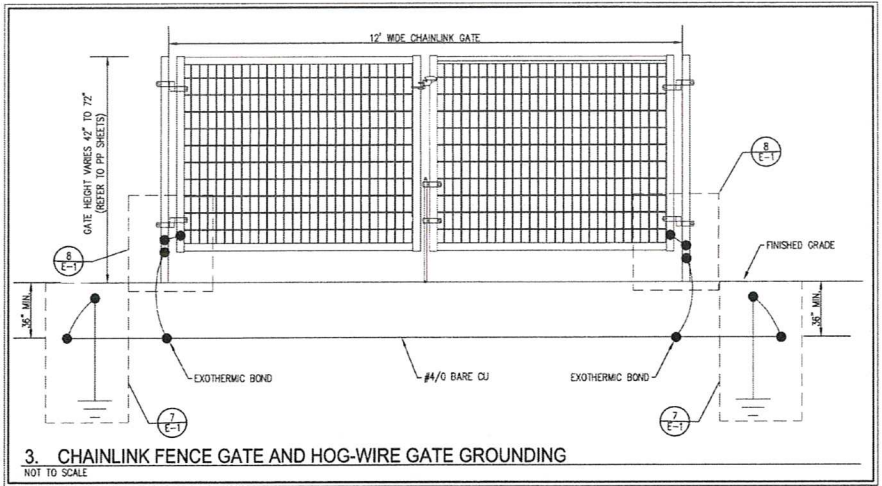
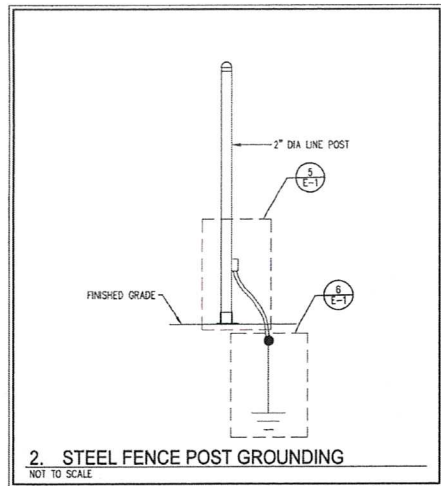
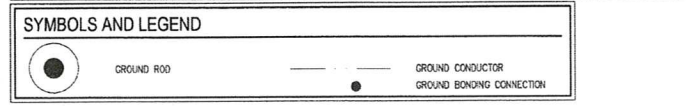
PREPARED BY		NO.		DATE	REVISIONS
CITY OF LAS VEGAS		155 S. RAINBOW BLVD. LAS VEGAS, NV 89146 T: 702.804.2000 F: 702.804.2001 gcw-engineers.com			
HANSER NO. 71083		DESIGNED BY: BRR		DRAWN BY: BRR	
DATE: SEPT 2019		SUBMITTAL STAGE:		CHECKED BY: EGG	
100% FINAL					
TITLE					
MOCCASIN RD CCRFCD FLOOD CONTROL FACILITY					
MOCCASIN RD TO CCRFCD FACILITY LVUP 1076/1077					
SHEET					
72" RCP PENETRATION INTO 16'x9' RCB					
SHEET					
S-9					
43 OF 48					
DRAWING NO.		731-99			

AS BUILT



- ### GENERAL NOTES
- 1) REFER TO CIVIL DRAWINGS FOR CHAIN LINK FENCE AND STEEL FENCE REQUIREMENTS.
 - 2) PROVIDE GROUNDING/BONDING CONNECTIONS WITH CLEAN BARE METAL AT POINTS OF CONTACT. PROVIDE SUITABLE BIMETALLIC CONNECTORS/LUGS SO THAT COPPER CONDUCTORS/CONNECTORS ARE NOT IN DIRECT CONTACT WITH GALVANIZED STEEL.
 - 3) GROUNDED PER NESC 500KV TRANSMISSION LINE.
 - 4) REFER TO FENCING SPECIFICATION SECTION 616 FOR ADDITIONAL FENCE MATERIALS AND FENCE GROUNDING SYSTEM REQUIREMENTS.

- ### KEYNOTES
- 1) GROUND RODS SHALL BE INSTALLED AT INTERVALS NOT TO EXCEED 50 FT ALONG THE CHAIN LINK FENCE LINE. AT FENCE POST LOCATIONS WHERE AN EXOTHERMIC WELD TO GROUNDING ELECTRODE IS REQUIRED, PROVIDE A SCHEDULE 40, 2" (MIN) DIAMETER POST.
 - 2) CHAIN LINK GATE GROUNDING ELECTRODE SYSTEM SHALL CONSIST OF #4/0 BARE COPPER CONDUCTOR INSTALLED 36 INCHES BELOW GRADE, ALONG LENGTH OF GATE, BONDED TO 10 FT GROUND RODS, BONDED TO GATE POST AND GATE FRAME.
 - 3) CHAIN LINK GATE FRAME SHALL BE BONDED TO CHAIN LINK GATE POST AND GROUNDING SYSTEM USING #4/0 BONDING JUMPER. REFER TO DETAIL 3 FOR ADDITIONAL INFORMATION.
 - 4) CHAIN LINK FENCE POSTS SHALL BE BONDED TO GROUNDING ELECTRODE USING #4/0 BONDING JUMPER. REFER TO DETAIL 4 FOR ADDITIONAL INFORMATION.
 - 5) GROUND RODS SHALL BE INSTALLED AT INTERVALS NOT TO EXCEED 50 FT ALONG THE STEEL FENCE LINE.
 - 6) STEEL FENCE POSTS SHALL BE BONDED TO GROUNDING ELECTRODE USING #4/0 BONDING JUMPER. REFER TO DETAIL 2 FOR ADDITIONAL INFORMATION. AT FENCE POST LOCATIONS WHERE AN EXOTHERMIC WELD TO GROUNDING ELECTRODE IS REQUIRED, PROVIDE A SCHEDULE 40, 2" (MIN) DIAMETER POST.
 - 7) AT LOCATIONS SHOWN ON SITE PLAN, BOND GROUND ROD TO BOTH CHAIN LINK FENCE POST AND STEEL FENCE POST.
 - 8) FOR HOG-WIRE FENCE INSTALLATION (KEYNOTE 37) SHOWN ON CIVIL SHEETS PP-01 THROUGH PP-08, THE FOLLOWING GROUNDING REQUIREMENTS ARE APPLICABLE:
 - a)1) INSTALL GROUND RODS, EXOTHERMICALLY BONDED TO FENCE POSTS, AT INTERVALS NOT TO EXCEED 50 FT ALONG THE HOG-WIRE FENCE LINE. AT FENCE POST LOCATIONS WHERE AN EXOTHERMIC WELD TO GROUNDING ELECTRODE IS REQUIRED, PROVIDE A SCHEDULE 40, 2" (MIN) DIAMETER POST.
 - a)2) HOG-WIRE FENCE POSTS SHALL BE BONDED TO GROUND RODS USING #4/0 BONDING JUMPER. REFER TO DETAIL 4 ON THIS SHEET FOR ADDITIONAL INFORMATION.
 - a)3) FOR GATE INSTALLATIONS (KEYNOTE 38) SHOWN ON CIVIL SHEETS PP-01, PP-05, PP-06, PP-07, AND PP-08, THE FOLLOWING GROUNDING REQUIREMENTS ARE APPLICABLE:
 - i)1) GATE GROUNDING ELECTRODE SYSTEM SHALL CONSIST OF #4/0 BARE COPPER CONDUCTOR INSTALLED 36 INCHES BELOW GRADE, ALONG LENGTH OF GATE, BONDED TO 10 FT GROUND RODS, BONDED TO GATE POST AND GATE FRAME. REFER TO DETAIL 3, THIS SHEET FOR ADDITIONAL INFORMATION.
 - i)2) GATE FRAME SHALL BE BONDED TO GATE POST AND GROUNDING SYSTEM USING #4/0 BONDING JUMPER. REFER TO DETAIL 3 AND DETAIL 8 THIS SHEET FOR ADDITIONAL INFORMATION.



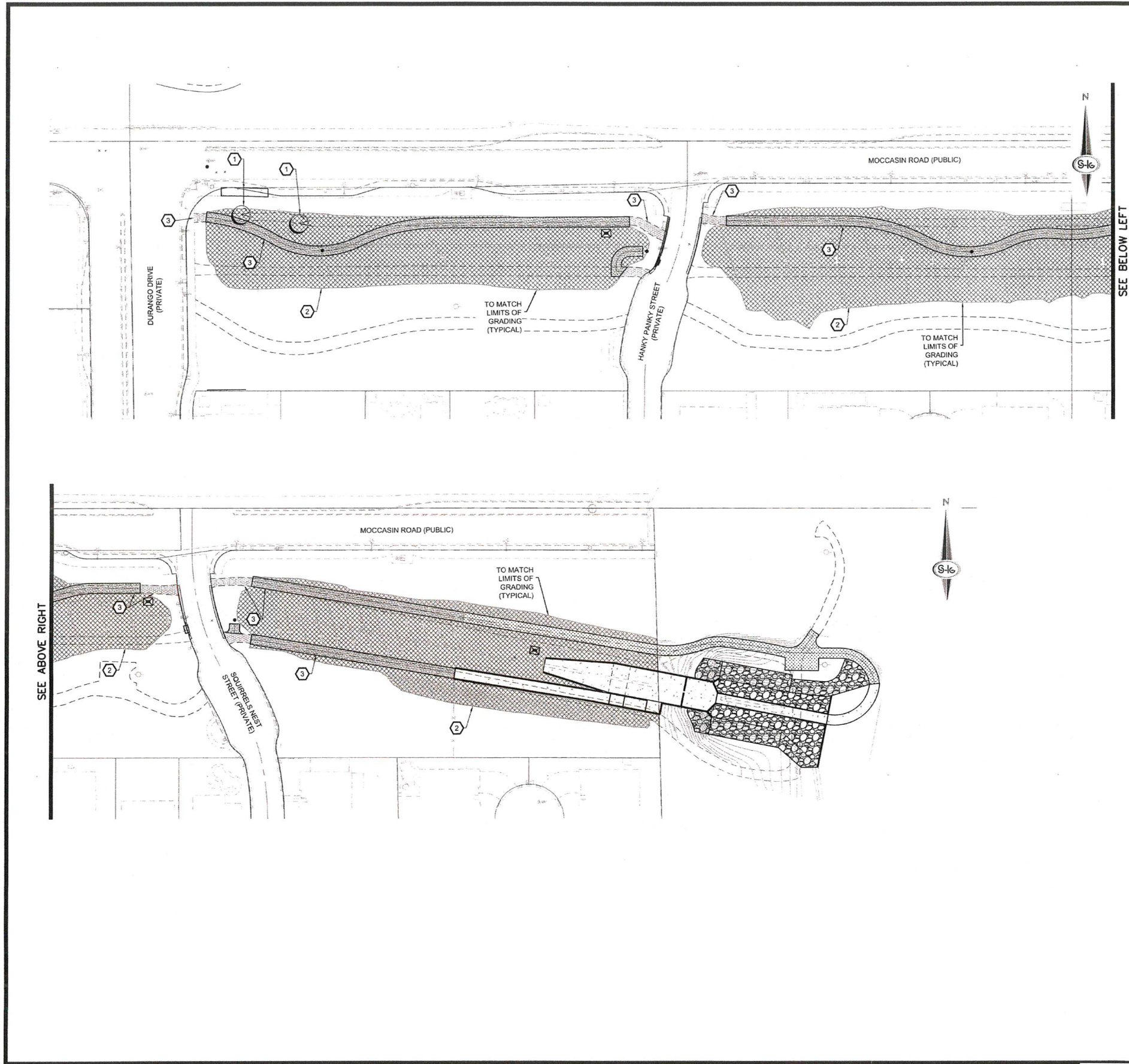
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1-800-227-2800

CALL BEFORE YOU DO OVERHEAD
1-702-227-2929

FAST
Call before you UnderGround.
1-702-432-5300

PREPARED BY SLATER HANIFAN GROUP CONSULTING ENGINEERS & PLANNERS 5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118 PHONE (702) 284-5390 FAX (702) 284-5399	
PREPARED FOR CITY OF LAS VEGAS	TITLE MOCCASIN RD CORFCD FLOOD CONTROL FACILITY MOCCASIN RD TO CORFCD FACILITY LVUP 1076/1077 SHEET FENCE AND GATE GROUNDING
BID# 19-71033 DESIGNED BY: NA DRAWN BY: NA CHECKED BY: HT	DATE: FEB 7, 2020 SUBMITTAL STAGE: 100% FINAL
SHEET E-1 44 OF 48 DRAWING NO. 731-99	

AS BUILT



LANDSCAPE NOTES

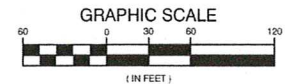
1. INSTALL 36" BOX TREE (SEE NOTE 4)
2. INSTALL 2" THICK ROCK MULCH (TYPICAL)
3. INSTALL 2" THICK 3/4" ROCK MULCH ACCESS ROAD (TYPICAL)

NOTES

1. PROVIDE POSITIVE DRAINAGE AWAY FROM ALL STRUCTURES, WALLS, AND ON ALL SIDEWALKS ACCORDING TO CODE, REGULATIONS AND REQUIREMENTS
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL IRRIGATION LINES AND COMPONENTS IN THE PROJECT AREA AND RESTORE ANY THAT ARE DAMAGED DURING CONSTRUCTION.
3. ROCK MULCH SIZE AND COLOR SHALL MATCH EXISTING AND BE APPROVED BY THE CITY.
4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO RESTORE ANY LANDSCAPING DAMAGED DURING CONSTRUCTION. TREES AND SHRUBS SHALL BE REPLACED IN-KIND. FINAL SELECTION SHALL BE APPROVED BY THE CITY.

LEGEND

- ROCK MULCH (MATCH EXISTING)
- 3/4" ROCK MULCH ACCESS ROAD
- TYPE II ACCESS ROAD
- RIPRAP
- CONCRETE
- TREE (2 EACH) (SEE NOTE 4)



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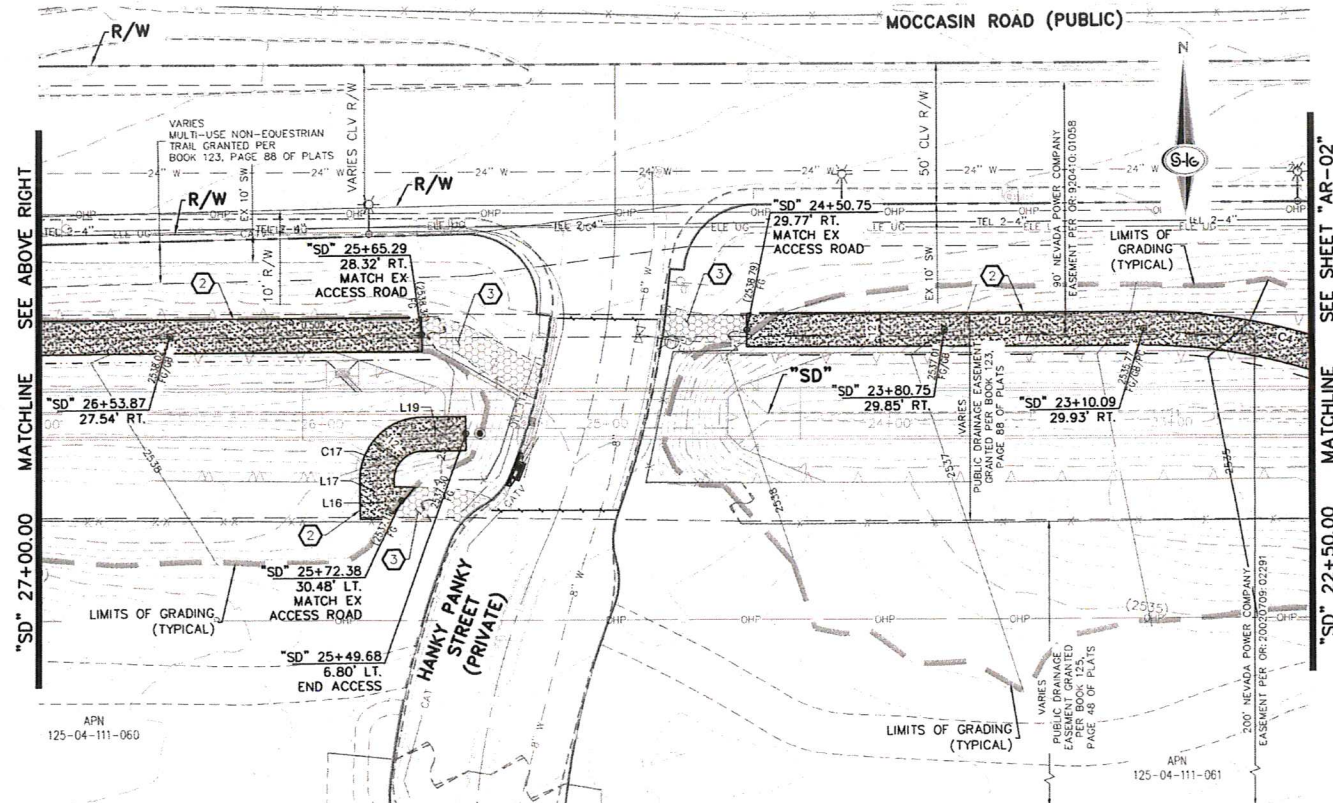
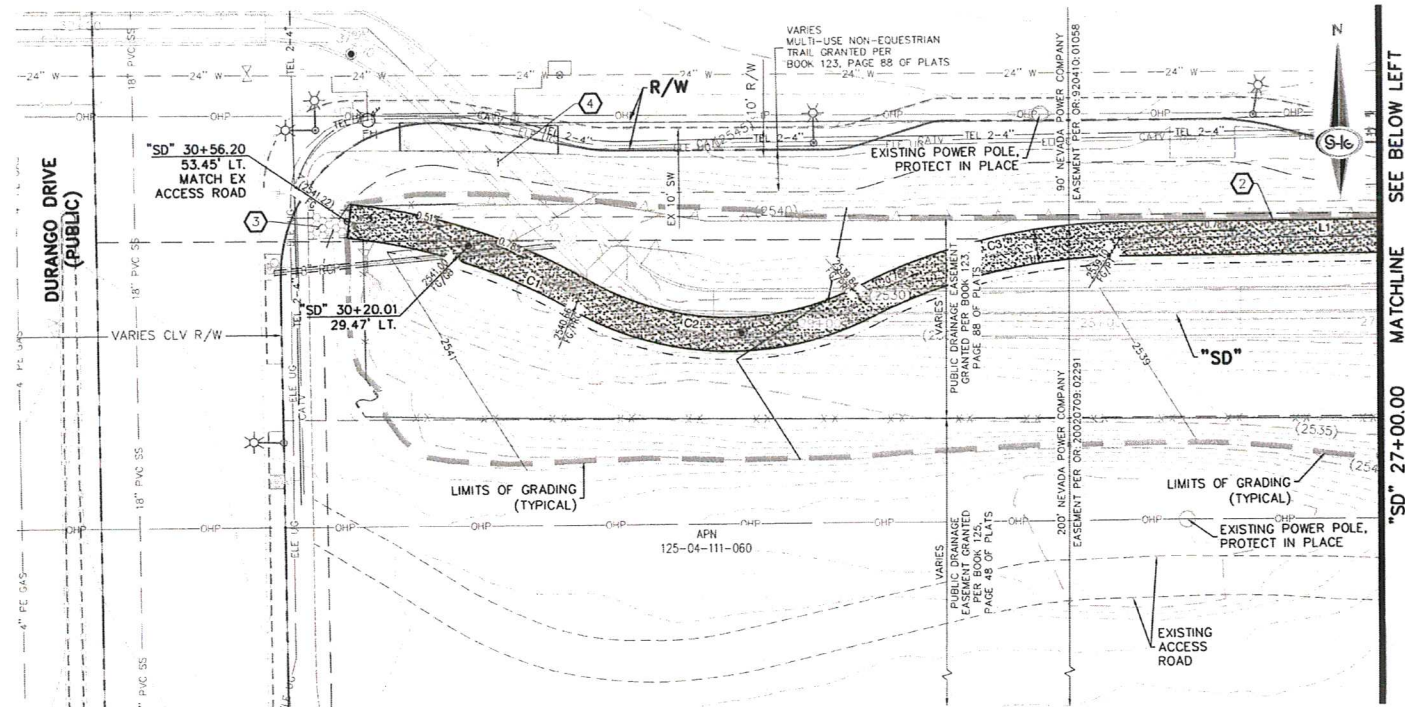
FAST
Call
Before you
UnderGround.
1-702-432-5300

PREPARED BY SLATER HANIFAN GROUP CONSULTING ENGINEERS & PLANNERS 5746 S. ARVILLE STREET #216 LAS VEGAS, NV 89118 PHONE (702) 264-5300 FAX (702) 264-5399		NO. DATE	
PREPARED FOR CITY OF LAS VEGAS		BID# 19-71033 DESIGNED BY: CB DRAWN BY: BC CHECKED BY: FR	
TITLE MOCCASIN RD CCRFCD FLOOD CONTROL FACILITY MOCCASIN RD TO CCRFCD FACILITY LVUP 1076/1077		DATE: JAN 2020 SUBMITTAL STAGE: 100% FINAL	
SHEET ACCESS AND LANDSCAPE PLAN		PROFESSIONAL ENGINEER - STATE OF NEVADA FREDERICK RETLAFF Exp. 12/31/2021 CIVIL No. 15751	
SHEET L-1 45 OF 48 DRAWING NO. 731-99			

AS BUILT

COURSE TABLE		
NO.	BEARING	LENGTH
L1	N89°53'46"W	227.94'
L2	N89°27'16"W	140.66'
L8	N89°27'16"W	54.52'
L9	S79°49'39"E	481.83'
L12	S88°47'12"E	34.94'
L13	S34°38'59"W	30.07'
L14	S79°51'32"E	244.61'
L15	S89°21'18"E	25.76'
L16	N89°01'30"W	8.59'
L17	N0°29'58"W	7.83'
L19	N90°00'00"E	15.44'
L20	S2°47'53"W	11.30'

CURVE TABLE				
CURVE	RADIUS	DELTA	LENGTH	TANGENT
C1	206.00'	23°54'19"	85.95'	43.61'
C2	106.00'	56°43'04"	104.93'	57.22'
C3	206.00'	26°17'45"	94.54'	48.12'
C4	206.00'	28°09'56"	101.27'	51.68'
C5	106.00'	54°38'42"	101.10'	54.76'
C6	106.00'	32°06'23"	59.40'	30.50'
C7	206.00'	24°10'34"	86.92'	44.12'
C8	106.00'	18°32'57"	34.32'	17.31'
C9	106.00'	28°19'32"	52.40'	26.75'
C10	106.00'	28°19'32"	52.40'	26.75'
C11	56.00'	28°24'55"	27.77'	14.18'
C12	294.00'	3°05'13"	15.84'	7.92'
C13	438.40'	6°59'13"	53.46'	26.76'
C14	24.95'	12°56'57"	5.64'	2.83'
C15	46.70'	84°05'20"	88.54'	42.12'
C16	26.53'	102°10'07"	47.31'	32.86'
C17	16.00'	90°29'58"	25.27'	16.14'



ACCESS ROAD NOTES

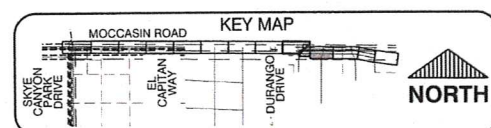
1. CONSTRUCT 12" WIDE, 6" THICK TYPE II AGGREGATE BASE ACCESS ROAD OVER 95% COMPACTED NATIVE MATERIAL
2. CONSTRUCT 12" WIDE, 2" THICK 3/4" ROCK MULCH ACCESS ROAD OVER 90% COMPACTED NATIVE MATERIAL
3. CONSTRUCT 2" THICK 3/4" ROCK MULCH OVER EXISTING ACCESS ROAD
4. RESTORE LANDSCAPING (MATCH EXISTING)

LEGEND

- 6" THICK TYPE II AGGREGATE BASE OVER 90% COMPACTED NATIVE MATERIAL
- 2" THICK 3/4" ROCK MULCH OVER 90% COMPACTED NATIVE MATERIAL
- 2" THICK 3/4" ROCK MULCH OVER EXISTING ACCESS ROAD
- RIPRAP
- CONCRETE

NOTES

1. SEE SHEET AR-01 FOR COURSE (LINE) AND CURVE TABLES



GRAPHIC SCALE

0 10 20 30 40 50 60 (IN FEET)

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SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
9745 S. ARVILLE STREET #214, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

CITY OF LAS VEGAS
PREPARED FOR: CITY OF LAS VEGAS
H# 71033
DATE: JAN 2020
SUBMITTAL STAGE: 100% FINAL

MOCCASIN RD FLOOD CONTROL FACILITY
MOCCASIN RD TO CCRFD FACILITY LVUP 1076/1077
SHEET: AR-01
46 OF 48
DRAWING NO: 731-99

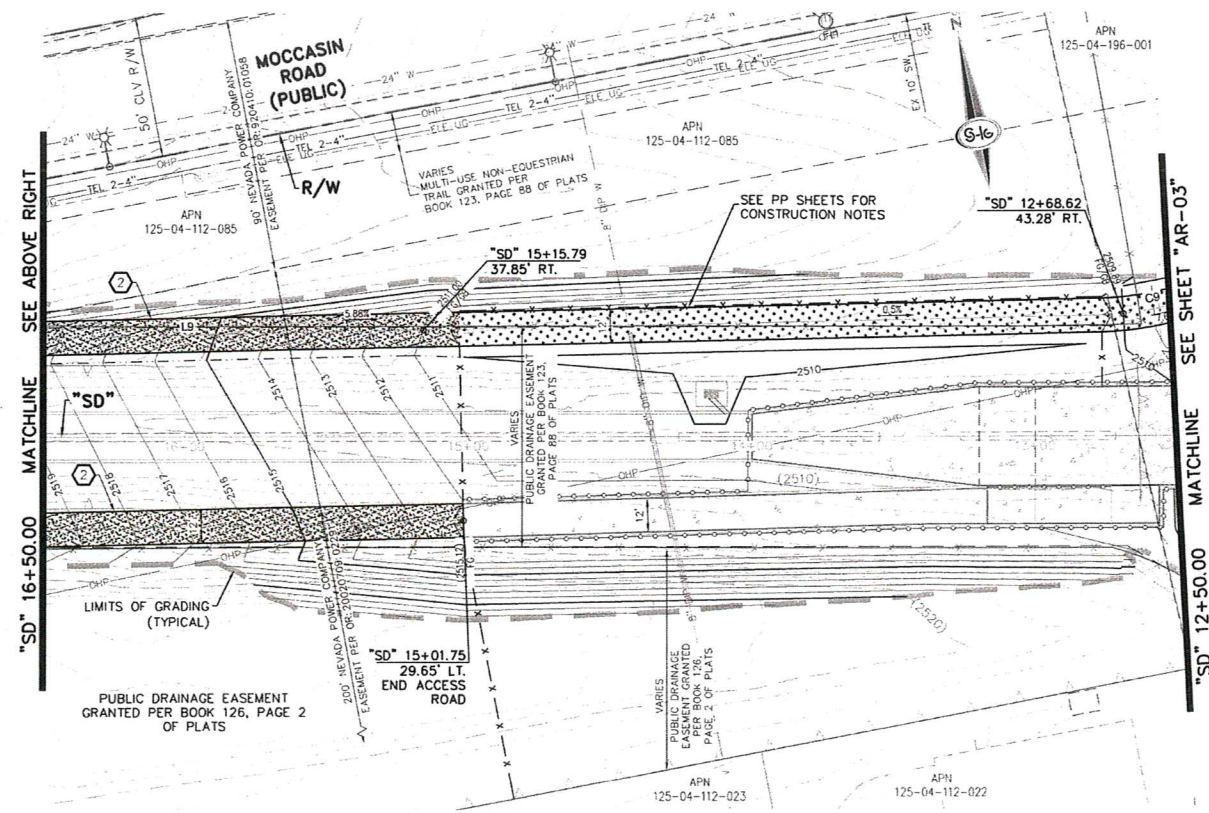
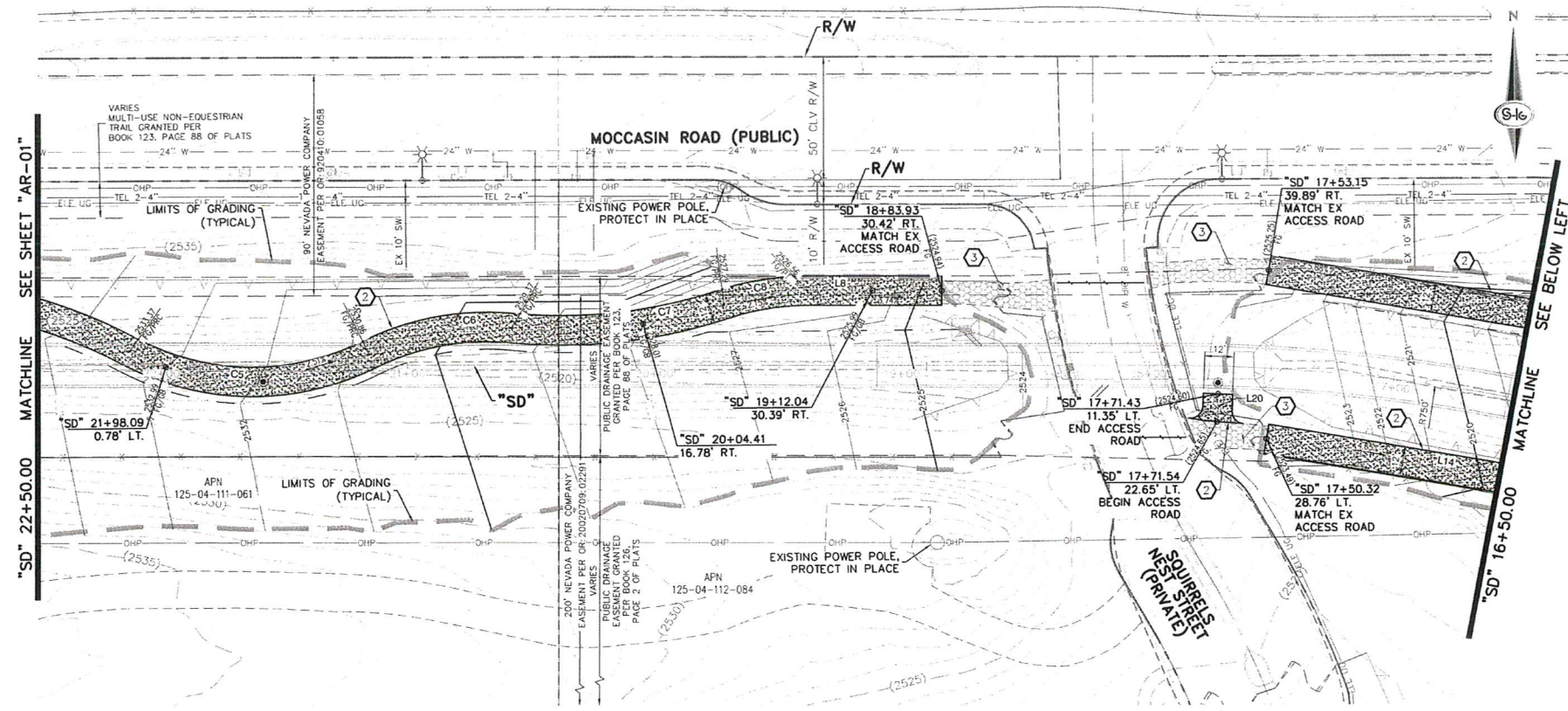
ACCESS ROAD
"SD" 22+50.00 TO "SD" 30+56.20

DESIGNED BY: CAM
DRAWN BY: BCC
CHECKED BY: FR

REVISIONS

PROFESSIONAL ENGINEER STATE OF NEVADA
FREDERICK RETZLAFF
Exp. 12/31/2021
No. 15757

AS BUILT

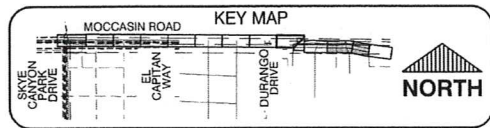


- ### ACCESS ROAD NOTES
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 2. CONSTRUCT 12' WIDE, 2" THICK 3/4" ROCK MULCH ACCESS ROAD OVER 90% COMPACTED NATIVE MATERIAL
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 - RIPRAP
 - CONCRETE

NOTES

1. SEE SHEET AR-01 FOR CURVE (LINE) AND CURVE TABLES



GRAPHIC SCALE
(IN FEET)

30 0 15 30 60

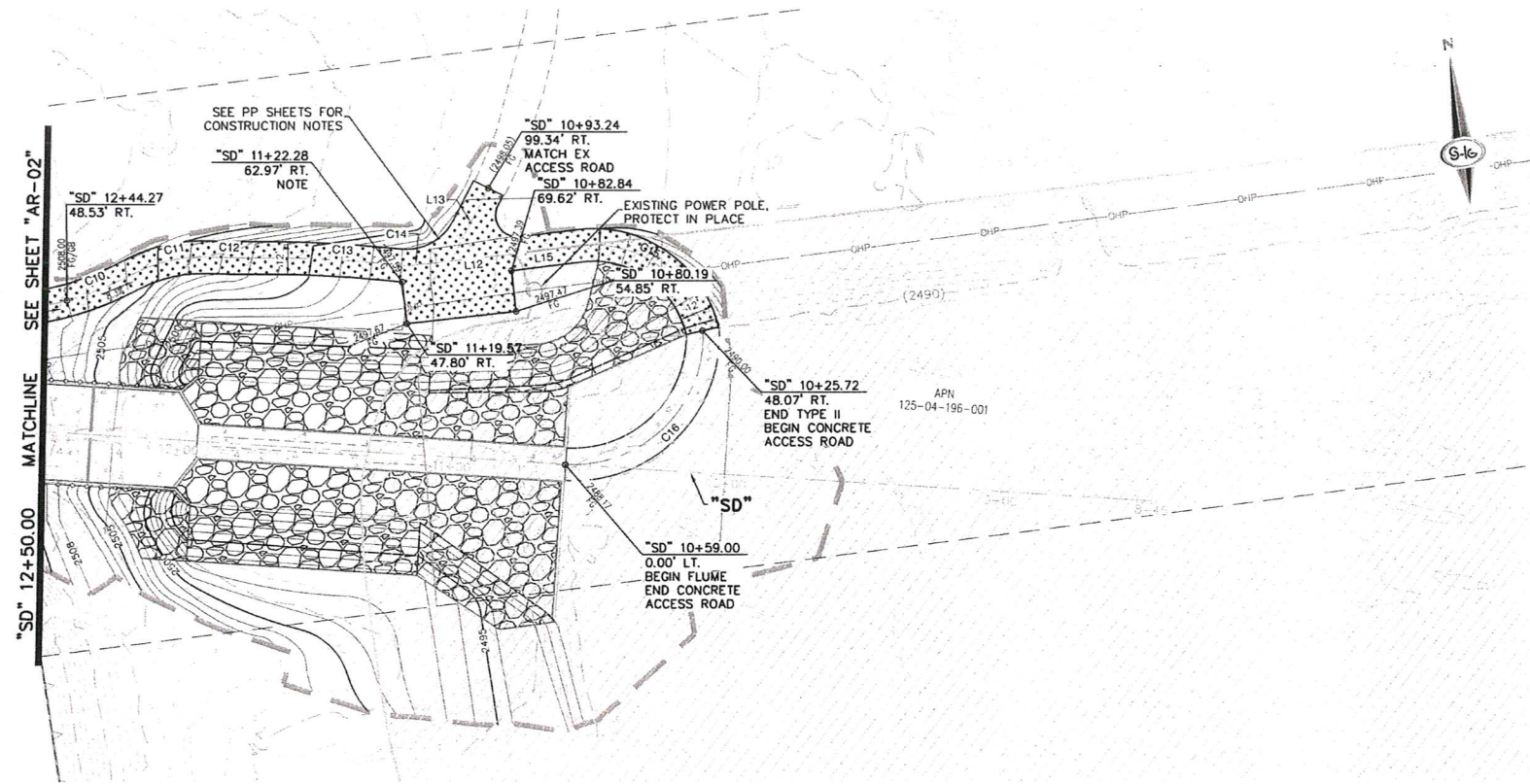
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SLATER HANIFAN GROUP CONSULTING ENGINEERS & PLANNERS 2740 S. ARVILLE STREET #210, LAS VEGAS, NV 89118 PHONE (702) 284-5300 FAX (702) 284-5399	
PREPARED FOR CITY OF LAS VEGAS	BID# 1971033 DESIGNED BY: CAM DRAWN BY: BCC CHECKED BY: FR SUBMITTAL STAGE: 100% FINAL
TITLE MOCCASIN RD CCRFCD FLOOD CONTROL FACILITY MOCCASIN RD TO CCRFCD FACILITY LVUP 1076/1077	
SHEET ACCESS ROAD "SD" 12+50.00 TO "SD" 22+50.00	
SHEET AR-02 47 OF 48 DRAWING NO 731-99	

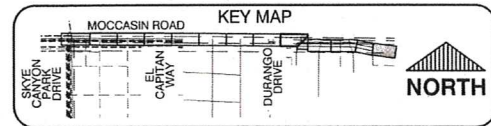
AS BUILT



- ### ACCESS ROAD NOTES
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 - RIPRAP
 - CONCRETE

- ### NOTES
1. SEE SHEET AR-01 FOR COURSE (LINE) AND CURVE TABLES



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PROJECT NO. MOCCASIN RD CCRFGD FLOOD CONTROL FACILITY MOCCASIN RD TO CCRFGD FACILITY LVUP 1076/1077	SUBMITTAL STAGE: 100% FINAL
TITLE ACCESS ROAD "SD" 8+45.00 TO "SD" 12+50.00	
SHEET AR-03 48 OF 48 DRAWING NO. 731-99	

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