LAS VEGAS VALLEY WATER DISTRICT

PEOPLE LEADING THE WAY

LAS VEGAS VALLEY WATER DISTRICT

CONTRACT NO. C1467

MISCELLANEOUS SMALL BACKFLOW INSTALLATIONS, PHASE XV

SAVING WATER IT'S A GRASS ROOTS EFFORT

SHEET NO	DRAWING NO	DESCRIPTION
1	G1	COVER SHEET
2	G2	LVVWD GENERAL NOTES
3	G3	CITY OF LAS VEGAS GENERAL NOTES I
4	G4	CITY OF LAS VEGAS GENERAL NOTES II
5	G5	ABBREVIATION LIST
6	C1	PROJECT LOCATION MAP AND CLV INSPECTION AREAS
7	C2	PROJECT LOCATIONS LISTING I
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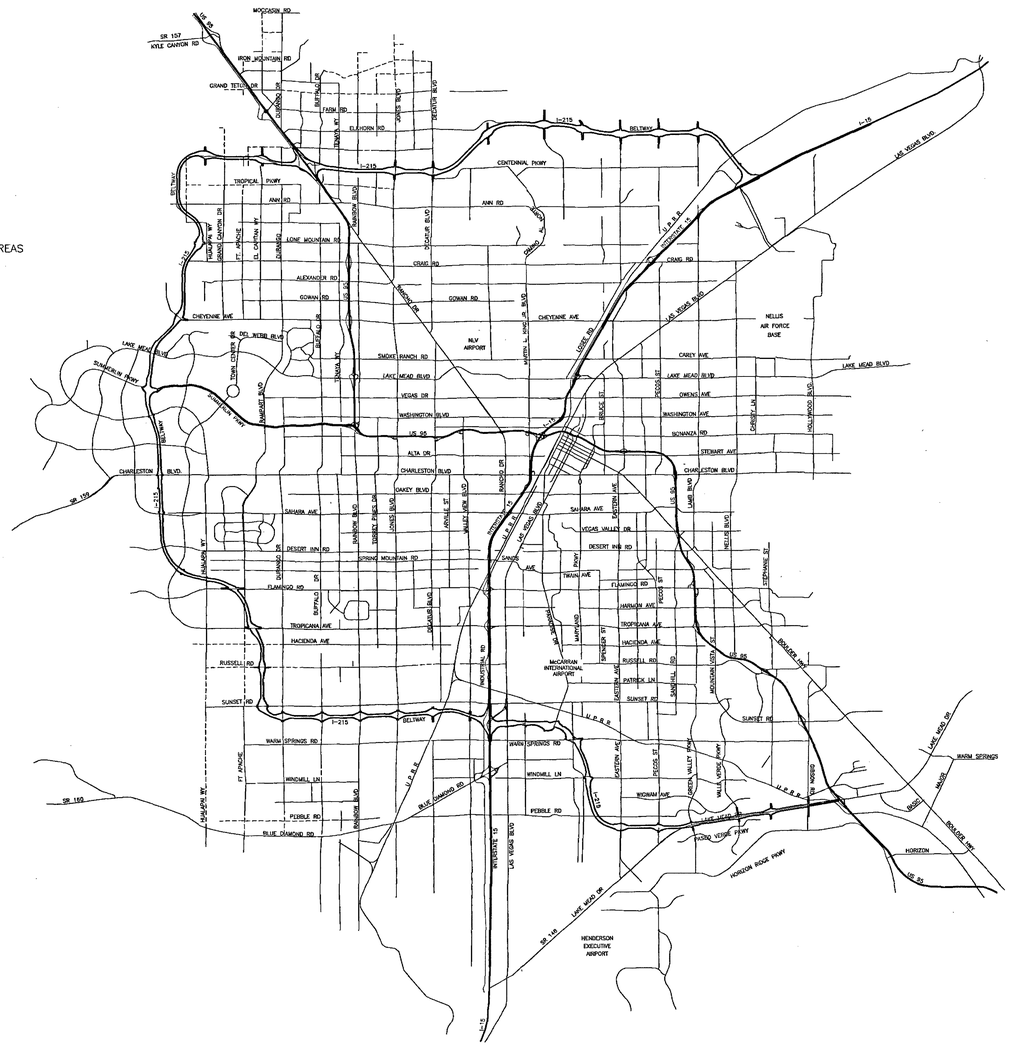
10	C5	PROJECT LOCATIONS LISTING IV
11	C6	PROJECT LOCATIONS LISTING V
12	CD1	STANDARD DETAILS I
13	CD2	STANDARD DETAILS II
14	CD3	STANDARD DETAILS III



LOCATION MAP

NOT TO SCALE

CAUTION TO CONTRACTOR:

THE CONTRACTOR SHALL BE RESPONSIBLE TO INVESTIGATE AND VERIFY THE ACTUAL LOCATION AND DEPTH OF ALL EXISTING UNDERGROUND FACILITIES AT LEAST 48 HOURS IN ADVANCE OF THE PERFORMANCE OF ANY WORK.

PROFESSIONAL ENGINEER - STATE OF NEVADA
ZACHARY D. HILLS
Exp. June 30, 2017
CIVIL
No. 20641
3/29/17

ACCEPTED BY:

PETER J. JAUCH, PE, DIRECTOR OF ENGINEERING DATE

Avoid overhead power line contact. It's deadly. Call before you OVERHEAD 1-702-227-2929

Call before you Dig. Avoid cutting underground utility lines. It's deadly. Call 811

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

VERIFY SCALE
1/2 0 1/2 1
BAR REPRESENTS ONE AND ONE-HALF INCHES ON ORIGINAL

MISCELLANEOUS SMALL BACKFLOW INSTALLATIONS, PHASE XV

COVER SHEET

SCALE NONE

DRAWN BY: STEPHEN D. MILLER	9/19/16
CHECKED BY: ZACHARY D. HILLS	9/19/16
RECOMMENDED BY: CHRISTOPHER M. LIQUETTE	DATE
ACCEPTED BY: RYAN C. PEARSON	DATE

PROFESSIONAL ENGINEER - STATE OF NEVADA
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REVISIONS:

CONTRACT NUMBER
C1467
DRAWING NUMBER G1
SHEET 1 OF 14

3/29/17

#69862

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LAS VEGAS VALLEY WATER DISTRICT NOTES

1. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY HORIZONTAL AND VERTICAL TRANSITIONS BETWEEN NEW CONSTRUCTION AND EXISTING SURFACES FOR PROPER DRAINAGE, AND FOR INGRESS AND EGRESS TO SAID CONSTRUCTION. EXTENT OF TRANSITIONS TO BE DETERMINED IN THE FIELD BY THE LVVWD ENGINEER.

2. ENCASE OR WELD JOINTS (MLCP) OF NEW WATER LINE TEN (10) FEET BEYOND EACH SIDE OF ALL SEWER MAINS AND LATERALS OR STORM DRAINS WHEN REQUIRED CLEARANCES CAN NOT BE MET OR REPLACE ENTIRE SEWER MAIN FROM MANHOLE TO MANHOLE WITH APPROVED PLANS BY CCWRD. CONSTRUCTION SHALL BE PERFORMED IN THE PRESENCE OR APPROVAL OF CCWRD INSPECTOR AND CONFORM TO DESIGN AND CONSTRUCTION STANDARDS.

3. SOME WATER SERVICE LATERALS ARE NOT SHOWN. ALL WATER SERVICE LATERALS SHALL BE PROTECTED IN PLACE OR REPLACED WITH COPPER TUBING AT THE CONTRACTOR'S EXPENSE IN ACCORDANCE WITH THE UDS.

4. DURING ALL PHASES OF CONSTRUCTION THE CONTRACTOR SHALL MAINTAIN A 10 FOOT MINIMUM CLEARANCE IN ALL DIRECTIONS OF ALL OVERHEAD POWER LINES AND EQUIPMENT.

5. REMOVAL OR RELOCATION OF POWER POLES, TELEPHONE POLES, CABLE POLES OR JOINTLY-OWNED POLES AND APPURTENANCES WHICH INTERFERE WITH THE IMPROVEMENTS REQUIRED TO BE CONSTRUCTED UNDER THIS CONTRACT, SHALL BE COORDINATED BY THE CONTRACTOR WITH THE RESPECTIVE UTILITY COMPANY.

6. ALL AGENCY/UTILITY INSPECTORS SHALL BE CALLED WHENEVER WORK IS TO BE PERFORMED NEAR OR ON ANY OF THEIR FACILITIES.

7. SEWER LATERALS ARE NOT SHOWN. THE CONTRACTOR SHALL MAINTAIN CONTINUOUS SEWER SERVICE TO CUSTOMERS. SEWER LATERALS CUT DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE PER DESIGN AND CONSTRUCTION STANDARDS OF AGENCY HAVING JURISDICTION AND IN PRESENCE OF CCWRD INSPECTOR. SEWER LATERALS SHALL BE PROTECTED IN PLACE AND A SEWER SUPPORT PLAN SHALL BE PROVIDED TO CCWRD INSPECTOR. CCWRD SHALL BE CONTACTED IMMEDIATELY UPON EXPOSURE AT 702-622-2867 (CELL) OR 702-668-8204.

8. SANITARY SEWER MANHOLES SHALL BE PROTECTED FROM DAMAGE WHEN EXCAVATING IN THEIR VICINITY.

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VERIFY SCALE
1/2 0 1/2 1
BAR: REPRESENTS ONE AND ONE-HALF INCHES ON ORIGINAL

MISCELLANEOUS SMALL BACKFLOW INSTALLATIONS, PHASE XV

LVVWD GENERAL NOTES

SCALE NONE

DRAWN BY: STEPHEN D. MILLER	9/19/16
CHECKED BY: ZACHARY D. HILLS	9/19/16
RECOMMENDED BY: CHRISTOPHER M. LUQUETTE	DATE
ACCEPTED BY: RYAN C. PEARSON	DATE

PROFESSIONAL ENGINEER - STATE OF NEVADA
ZACHARY D. HILLS
Exp. June 30, 2017
CIVIL
No. 20641
3/2/17

REVISIONS:

CONTRACT NUMBER
C1467
DRAWING NUMBER G2
SHEET 2 OF 14

CITY OF LAS VEGAS FIRE DEPARTMENT NOTES

1. 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.
2. ONLY FIRE HYDRANTS THAT ARE ON THE LAS VEGAS VALLEY WATER DISTRICT'S APPROVED PRODUCTS LIST ARE ALLOWED TO BE INSTALLED.
3. A PERMIT IS REQUIRED FROM LAS VEGAS FIRE AND RESCUE FOR THE INSTALLATION OF 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 § 105.7.12]
4. ON ANY RESIDENTIAL OR COMMERCIAL INSTALLATIONS, FIRE HYDRANTS SHALL BE INSTALLED AND FIRE APPARATUS ACCESS ROADS SHALL BE MAINTAINED BEFORE COMMENCEMENT OF ANY COMBUSTIBLE CONSTRUCTION. ALL FIRE HYDRANTS SHALL BE IN GOOD WORKING ORDER AND SHALL BE CAPABLE OF DELIVERING THE REQUIRED FIRE FLOW. [IFC § 3310, § 3312]
5. TO IDENTIFY THE FIRE HYDRANT LOCATIONS, THE CONTRACTOR SHALL PLACE A BLUE REFLECTIVE MARKER AT THE CENTER LINE OF THE STREET ADJACENT TO THE FIRE HYDRANTS. [IFC § 507.5.7.3]
6. ALL UNDERGROUND INSPECTIONS PRESSURE AND FLUSH VERIFICATIONS OF ALL FIRE HYDRANTS AND FIRE LINES, SHALL BE CONDUCTED BEFORE COVERING THE LINES. CENTER LOADING IS ACCEPTABLE FOR THE HYDRO TESTS WITH PRIOR FIRE PREVENTION APPROVAL. [IFC § 106.3]
7. ALL ON-SITE UNDERGROUND WATER MAINS AND MATERIALS SHALL BE U.L. LISTED, A.W.W.A APPROVED AND SHALL BE RATED FOR THE APPROPRIATE WORKING PRESSURE. [IFC § 507.2.1, NFPA 24]
8. PAINTING OF CURBS, FIRE HYDRANTS, PADS, PROTECTION OF FIRE HYDRANTS FROM PHYSICAL DAMAGE, AND ALL OTHER WORK NECESSARY PER PLANS SHALL BE COMPLETED BEFORE APPROVAL BY LAS VEGAS FIRE AND RESCUE, FIRE PREVENTION DIVISION. [IFC § 507]
9. PRIVATE HYDRANTS SHALL BE PAINTED RED. [IFC § 507.5.7.1]
10. PRIOR TO THE FINAL OCCUPANCY, A FIRE FLOW TEST SHALL BE WITNESSED BY LAS VEGAS FIRE AND RESCUE, FIRE PREVENTION DIVISION TO VERIFY AVAILABILITY OF THE REQUIRED FIRE FLOW. [IFC § 507]
11. FIRE HYDRANT SPACING SHALL BE AS FOLLOWS: [IFC § C102]
    * RESIDENTIAL - 500 FT UNSPRINKLERED; 600 FT SPRINKLERED.
    * COMMERCIAL - 300 FT UNSPRINKLERED; 400 FT SPRINKLERED
12. WHERE THE WATER MAINS ARE EXTENDED ALONG STREETS OR NEW STREETS ARE INSTALLED WHERE FIRE HYDRANTS ARE NOT NEEDED FOR PROTECTION OF THE STRUCTURES, FIRE HYDRANTS SHALL BE INSTALLED AT A MAXIMUM OF 1000 FT SPACING, TO PROVIDE FOR TRANSPORTATION HAZARDS. WHERE STREETS ARE PROVIDED WITH MEDIAN DIVIDERS OR HAVE FOUR (4) OR MORE TRAFFIC LANES AND HAVE A TRAFFIC COUNT OF MORE THAN 30,000 PER DAY, HYDRANTS ARE REQUIRED ON EACH SIDE OF THE STREET SPACED AT 500 FT ON AN ALTERNATING BASIS. [IFC § C102.8]
13. 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.
14. NO FIRE HYDRANTS SHALL BE LOCATED WITHIN 6 FT OF ANY CURB RETURN, DRIVEWAY, POWER POLE, STREETLIGHT OR ANY OTHER OBSTRUCTION. [IFC § C102.12]
15. A MAXIMUM DISTANCE FROM A FIRE HYDRANT TO A ONE-TWO FAMILY DWELLING SHALL NOT EXCEED 300 FT, AS MEASURED BY AN APPROVED ROUTE. [IFC § C102.4]
16. THE MAXIMUM DISTANCE FROM A FIRE HYDRANT TO A FIRE DEPARTMENT CONNECTION (FDC) SHALL NOT EXCEED 100 FT, AS MEASURED BY AN APPROVED ROUTE. [IFC § C102.7]
17. THE MAXIMUM DISTANCE FROM A HYDRANT TO THE END OF A DEAD-END STREET SHALL NOT EXCEED 200 FT. [IFC § C102.6]
18. TWO (2) SOURCES OF SUPPLY ARE REQUIRED WHENEVER THERE IS 4 OR MORE FIRE HYDRANTS/SPRINKLER 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]
19. ALL FIRE APPARATUS ACCESS ROADS SHALL BE PAVED TO PROVIDE ALL-WEATHER DRIVING CAPABILITIES, AND SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF THE FIRE APPARATUS. [IFC § 503.2.3]
20. 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]
21. THE TURNING RADIUS OF THE FIRE APPARATUS ACCESS ROADS SHALL BE NO LESS THAN 52 FT OUTSIDE AND 28 FT INSIDE TURNING RADIUS. IFC § 503.2.4]
22. VERTICAL CLEARANCE OF ALL FIRE APPARATUS ACCESS ROADS SHALL NOT BE LESS THAN 13FT 6 INS. [IFC § 503.2.1]
23. 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]
24. 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
25. 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]
26. 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]
27. 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 CURB ALONG OR ON THE PAVEMENT OR CEMENT (IF NO CURB IS PROVIDED) SHALL BE PAINTED WITH A RED WEATHER RESISTANT PAINT IN ADDITION TO THE SIGNS. [IFC § 503.3]
28. ELECTRICALLY CONTROLLED ACCESS GATES SHALL BE PROVIDED WITH AN APPROVED EMERGENCY VEHICLE DETECTOR/RECEIVER SYSTEM. SAD SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE IFC § 503.6 AND IFC APPENDIX M.

DEVIATIONS FROM STANDARDS

NONE

CITY OF LAS VEGAS GENERAL NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE "UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA NEVADA," LATEST ISSUE; THE "UNIFORM STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION, CLARK COUNTY AREA NEVADA," LATEST REVISED EDITION; THE "SUMMERLIN IMPROVEMENTS STANDARDS" FOR WORK IN THE SUMMERLIN AREA; AND OTHER APPLICABLE APPROVED STANDARDS ISSUED BY THE CONTROLLING AGENCY; THE UNIFORM BUILDING CODE; AND ALL LOCAL CITY CODES AND ORDINANCES APPLICABLE, EXCEPT AS NOTED ON THIS SHEET AS "DEVIATIONS FROM STANDARDS."
2. THE EXISTENCE AND LOCATION OF ANY OVERHEAD OR UNDERGROUND UTILITY LINES, PIPES, OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A RESEARCH OF THE AVAILABLE RECORDS. EXISTING UTILITIES AS SHOWN FROM CLV PLANS LIBRARY ARE APPROXIMATE AND FOR RECORD PURPOSES. EXISTING UTILITIES ARE LOCATED ON PLANS ONLY FOR THE CONVENIENCE OF THE CONTRACTOR. EXISTING UTILITY SERVICE LATERALS MAY NOT BE SHOWN ON THE PLANS. THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, LOCATE ALL UNDERGROUND AND OVERHEAD INTERFERENCE'S WHICH MAY AFFECT HIS OPERATION DURING CONSTRUCTION AND SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO SAME. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING NEAR OVERHEAD UTILITIES SO AS TO SAFELY PROTECT ALL PERSONNEL AND EQUIPMENT, AND SHALL BE RESPONSIBLE FOR ALL COST AND LIABILITY IN CONNECTION THEREWITH.
3. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING UTILITY LINES, STRUCTURES AND STREET IMPROVEMENTS WHICH ARE TO REMAIN IN PLACE, FROM DAMAGE, AND ALL SUCH IMPROVEMENTS OR STRUCTURES DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED SATISFACTORY TO THE CITY ENGINEER AND OWNING UTILITY COMPANY AT THE EXPENSE OF THE CONTRACTOR.
4. ALL CONSTRUCTION SHALL BE AS SHOWN ON THESE PLANS, ANY REVISIONS SHALL HAVE THE PRIOR WRITTEN APPROVAL OF THE CITY ENGINEER.
5. TYPE V CEMENT SHALL BE USED IN ALL OFF-SITE CONCRETE WORK. CONCRETE TO BE 3000 P.S.I. MINIMUM @ 28 DAYS. MIX DESIGNS TO BE APPROVED BY THE CITY, PRIOR TO THE USE ON THE PROJECT.
6. PERMITS ARE REQUIRED FOR ANY WORK IN THE PUBLIC RIGHT-OF-WAY. THE CONTRACTOR SHALL SECURE ALL PERMITS AND INSPECTIONS REQUIRED FOR THIS CONSTRUCTION.
7. EXPANSION JOINTS REQUIRED, MAXIMUM EVERY 300' IN EXTRUDED-TYPE CURB.
8. AC PAVEMENT TO BE ONE-HALF INCH (1/2") ABOVE LIP OF ALL GUTTERS AFTER COMPACTION, EXCEPT AT SIDEWALK RAMPS AND CROSS GUTTERS.
9. CURB AND GUTTER FOUND TO BE UNACCEPTABLE TO THE CITY OF LAS VEGAS SHALL BE REMOVED AND REPLACED PER STANDARD DRAWING 216.
10. SIDEWALK RAMPS SHALL BE CONSTRUCTED IN EACH QUADRANT OF AN INTERSECTION PER STANDARD DRAWING 235. EXACT LOCATION OF RAMPS MAY BE ADJUSTED IN THE FIELD BY A CITY INSPECTOR.
11. CONTRACTOR SHALL PROVIDE ALL NECESSARY HORIZONTAL AND VERTICAL TRANSITIONS BETWEEN NEW CONSTRUCTION AND EXISTING SURFACES TO PROVIDE FOR PROPER DRAINAGE AND FOR INGRESS AND EGRESS TO NEW CONSTRUCTION. THE EXTENT OF TRANSITIONS TO BE AS SHOWN ON PLANS.

    ALL GRADING WORK SHALL CONFORM TO THE SOILS REPORT AS PREPARED BY THE SOILS ENGINEER APPROVED BY THE CITY ENGINEER, AND AS SHOWN ON THESE PLANS.

    EXACT LOCATION OF ALL SAWCUT LINES MAY BE ADJUSTED OR DETERMINED IN THE FIELD BY A CITY OF LAS VEGAS ENGINEER IF LOCATION ON PLANS IS NOT CLEARLY SHOWN, OR EXISTING PAVEMENT CONDITION REQUIRES RELOCATION.

    THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PROTECT EXISTING PERMANENT SURVEY MONUMENTS. ANY MONUMENTS DISTURBED SHALL BE REPLACED AND ADJUSTED PER AVAILABLE RECORDS IN ACCORDANCE WITH N.R.S. NO. 625.550 AND CITY OF LAS VEGAS TITLE 18, APPENDIX D.

    UTILITY COMPANY METER BOXES, MANHOLE LIDS, VALVE COVERS, ETC., SHALL BE LOCATED OUT OF DRIVEWAYS, DRIVEWAY APRONS, FLOWLINES, AND CROSS GUTTERS UNLESS WRITTEN APPROVAL IS GRANTED BY THE UTILITY COMPANY AND THE CITY ENGINEER.

    WALL NOTES:

    ALL WALLS, NEW OR EXISTING, ARE ONLY SHOWN ON CIVIL PLANS FOR THE PURPOSE OF REVIEWING GRADING RELATIONSHIPS; FLOOD CONTROL AND SIGHT DISTANCE AT INTERSECTIONS. NEW WALLS REQUIRE A SEPARATE PERMIT AND INSPECTION BY THE BUILDING DEPARTMENT.

    ASPHALT MIX DESIGN MUST BE SUBMITTED AND APPROVED BY THE CITY ENGINEER PRIOR TO THE PLACEMENT OF ASPHALT WITHIN CITY RIGHT OF WAY.

    CONTRACTOR SHALL ADJUST ALL NEW AND EXISTING INLETS, VALVE BOXES, MANHOLE RIMS, AND SEWER CLEAN OUTS, ETC. TO FINISH GRADE AS APPLICABLE WHETHER OR NOT THEY ARE SHOWN ON THE PLANS.

    MATERIALS, HANDLING AND PLACEMENT OF PORTLAND CEMENT CONCRETE SHALL BE IN ACCORDANCE WITH APPLICABLE SECTIONS OF NDOT OR THE CLARK COUNTY AREA SPECIFICATIONS (AS APPLICABLE) AND THE PLANS AND DETAILS SHOWN HEREON.

    WHEN INSTALLING UNDERGROUND FACILITIES THAT REQUIRE UNDERGROUND LOCATING DEVICES SUCH AS MARKER BALLS, LOCATING RIBBON, ETC. THE CONTRACTOR SHALL PROVIDE WRITTEN DOCUMENTATION TO OFFSITE INSPECTION AND TESTING CERTIFYING THAT ALL DEVICES HAVE BEEN PLACED AND VERIFIED TO BE IN GOOD WORKING CONDITION PRIOR TO THE CONSTRUCTION OF ANY ROAD BASE.

    SANITARY SEWER AND STORM DRAIN FINAL LOCATION MAP(S) SHALL BE PROVIDED TO THE CITY AND APPROVED PRIOR TO ACCEPTANCE OF FACILITY VIDEO INSPECTION. THE MAP(S) SHALL INCLUDE THE HORIZONTAL AND VERTICAL (INVERT) LOCATION OF PUBLIC SEWER MANHOLES, STORM DRAIN MANHOLES AND TRANSITION STRUCTURES, STORM DRAIN LATERALS AT THE CONNECTION TO THE STORM DRAIN MAIN AND AT THE CONNECTION TO A DROP INLET, THE CONNECTION OF SEWER SERVICE LATERALS TO THE SEWER MAIN AND WHERE THE SEWER SERVICE LATERALS EXITS THE PUBLIC RIGHT-OF-WAY, AND STORM DRAIN MAIN ALIGNMENT, INCLUDING DEFLECTION POINTS. THE LOCATION SHALL BE DESCRIBED COORDINATES WHICH SHALL BE BASED ON THE OFFICIAL HORIZONTAL AND VERTICAL CONTROL NETWORKS FOR THE CITY OF LAS VEGAS. FINAL LOCATION MAPS MUST BE SEALED AND CERTIFIED BY A NEVADA PROFESSIONAL LAND SURVEYOR TO HAVE POSITIONAL CERTAINTIES OF +/- 0.09 METER (+/- 0.3 FEET) HORIZONTALLY AND VERTICALLY. A SEPARATE ELECTRONIC COMMA DELIMITED FILE FOR THE SANITARY SEWER AND STORM DRAIN COORDINATES SHALL ALSO ACCOMPANY THE SANITARY SEWER AND STORM DRAIN FINAL LOCATION MAP(S).

    CCTV VIDEO INSPECTION IS REQUIRED FOR ALL SEWER AND STORM DRAINS. THE CCTV VIDEO INSPECTIONS NEED TO BE PERFORMED PER THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS LATEST ADDITION.

    A SEPARATE BORING PERMIT IS REQUIRED FOR ALL BORING ACTIVITIES.

CITY OF LAS VEGAS SEWER NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS AND THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS' CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA, AS AMENDED. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BE AWARE OF THE CONTENTS OF THE ABOVE SPECIFICATIONS.
2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PERFORM CONSTRUCTION AS PER PLANS. ANY ADDITIONS, DELETIONS, OR CHANGES SHALL FIRST MEET WITH THE APPROVAL OF THE CITY ENGINEER.
3. CHISEL "S" OR "G" IN CURBS WHERE SEWER OR GAS LATERALS PASS UNDER THE CURB.
4. POLYVINYL (PVC) SEWER PIPE SHALL MEET ASTM D-3034 SDR 35 SPECIFICATIONS, INSTALLED WITH SAND BEDDING AND BACKFILL OF TYPE II AGGREGATE BASE.
5. ALL MANHOLES PAVED IN STREETS EIGHTY (80') FOOT R/W AND LARGER SHALL HAVE CONCRETE COLLARS. STREETS LESS THAN EIGHTY (80') FOOT R/W WILL REQUIRE RETROFIT IF PAVING DOES NOT CONFORM TO CITY STANDARDS AT THE MANHOLE.
6. TEE SADDLES SHALL BE USED TO CONNECT SEWER LATERALS TO EXISTING MAIN LINES UP TO TWELVE INCH (12") DIAMETER. CONNECTIONS TO FIFTEEN INCH (15") OR LARGER MAINS SHALL REQUIRE SPECIAL PROCEDURES. IN LINE "Y'S" SHALL BE USED ON LINES TWELVE INCHES (12") OR ABOVE.
7. WATER MAINS SHALL BE PROTECTED IN ACCORDANCE WITH LVVWD STANDARDS WHENEVER A SEWER MAIN CROSSES OVER A WATER MAIN OR THE SEWER IS LESS THAN EIGHTEEN INCHES (18") UNDER A WATER MAIN.
8. ALL CONTRACTORS INSTALLING SEWER MAINS THAT WILL BE UNDER THE JURISDICTION OF THE CITY OF LAS VEGAS MUST BE STATE OF NEVADA CLASS "A" CONTRACTORS.
9. THE CITY OF LAS VEGAS WILL NOT ACCEPT ANY SEWER MAINS WHICH HAVE A VERTICAL DEFLECTION OF MORE THAN ONE TENTH (0.1) OF A FOOT FROM THE APPROVED CONSTRUCTION PLANS AT ANY LOCATION. SEWER MAINS FOUND TO EXCEED THIS TOLERANCE WILL HAVE TO BE REPAIRED OR REMOVED OR REPLACED TO THE SATISFACTION OF THE CITY ENGINEER PRIOR TO ACCEPTANCE BY THE CITY OF LAS VEGAS.
10. INSTALLATION OF CURVED SEWER REQUIRES THE USE OF C-900 PVC PIPE WHICH ALLOWS FOR PIPE DEFLECTION AT THE JOINTS.

CITY OF LAS VEGAS GRADING NOTES

1. IN THE EVENT THAT ANY UNFORESEEN CONDITIONS NOT COVERED BY THESE NOTES ARE ENCOUNTERED DJRING GRADING OPERATIONS, THE OWNER/ENGINEER SHALL BE IMMEDIATELY NOTIFIED FOR DIRECTION.
2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM ALL NECESSARY CUTS AND FILLS WITHIN THE LIMITS OF THIS PROJECT AND THE RELATED OFF-SITE WORK, SO AS TO GENERATE THE DESIRED SUBGRADE, FINISH GRADES AND SLOPES SHOWN.
3. CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR ALL EXCAVATION. ADEQUATE SHORING SHALL BE DESIGNED AND PROVIDED BY THE CONTRACTOR TO PREVENT UNDERMINING OF ANY ADJACENT FEATURES OR FACILITIES AND/OR CAVING OF THE EXCAVATION.
4. THE CONTRACTOR IS WARNED THAT AN EARTHWORK BALANCE IS NOT NECESSARILY THE INTENT OF THIS PROJECT. ANY ADDITIONAL MATERIAL REQUIRED OR LEFTOVER MATERIAL FOLLOWING EARTHWORK OPERATIONS BECOMES THE RESPONSIBILITY OF THE CONTRACTOR.
5. THE GRADING CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH THE OWNER TO PROVIDE FOR THE REQUIREMENTS OF THE PROJECT STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND ASSOCIATED PERMIT.
6. CONTRACTOR SHALL GRADE TO THE LINES AND ELEVATIONS SHOWN ON THE PLANS WITHIN THE FOLLOWING HORIZONTAL AND VERTICAL TOLERANCES AND DEGREES OF COMPACTION, IN THE AREAS INDICATED:

	HORIZONTAL	VERTICAL	COMPACTION
A. PAVEMENT AREA SUBGRADE	0.1'+	+0.0' TO -0.1'	SEE SOILS REPORT
B. ENGINEERED FILL	0.5'+	+0.1' TO -0.1'	SEE SOILS REPORT

   COMPACTION TESTING WILL BE PERFORMED BY THE OWNER OR HIS REPRESENTATIVE.

7. ALL CUT AND FILL SLOPES SHALL BE PROTECTED UNTIL EFFECTIVE EROSION CONTROL HAS BEEN ESTABLISHED.
8. THE USE OF POTABLE WATER WITHOUT A SPECIAL PERMIT FOR BUILDING OR CONSTRUCTION PURPOSES INCLUDING CONSOLIDATION OF BACKFILL OR DUST CONTROL IS PROHIBITED. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR CONSTRUCTION WATER.
9. THE CONTRACTOR SHALL MAINTAIN THE STREETS, SIDEWALKS AND ALL OTHER PUBLIC RIGHT-OF-WAY IN A CLEAN, SAFE AND USABLE CONDITION. ALL SPILLS OF SOIL, ROCK OR CONSTRUCTION DEBRIS SHALL BE PROMPTLY REMOVED FROM THE PUBLICLY OWNED PROPERTY DURING CONSTRUCTION AND UPON COMPLETION OF THE PROJECT. ALL ADJACENT PROPERTY, PRIVATE OR PUBLIC SHALL BE MAINTAINED IN A CLEAN, SAFE AND USABLE CONDITION.
10. IN THE EVENT THAT ANY TEMPORARY CONSTRUCTION ITEM IS REQUIRED THAT IS NOT SHOWN ON THESE DRAWINGS, THE OWNER AGREES TO PROVIDE AND INSTALL SUCH ITEM AT HIS OWN EXPENSE AND AT THE DIRECTION OF THE CITY ENGINEER. TEMPORARY CONSTRUCTION INCLUDES DITCHES, BERMS, ROAD SIGNS AND BARRICADES, ETC.

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Call before you OVERHEAD
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Avoid cutting underground utility lines. It's costly.
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LAS VEGAS VALLEY WATER DISTRICT
1001 S. VALLEY VIEW BOULEVARD
LAS VEGAS, NEVADA 89153
(702) 870-2011

VERIFY SCALE
1/2 0 1/2 1
BAR REPRESENTS ONE AND ONE-HALF INCHES ON ORIGINAL

MISCELLANEOUS SMALL BACKFLOW INSTALLATIONS, PHASE XV

CITY OF LAS VEGAS GENERAL NOTES I

SCALE NONE

DRAWN BY: J. D. MILLER 9/19/16
CHECKED BY: ZACHARY D. HILLS 9/19/16
RECOMMENDED BY: CHRISTOPHER M. LUQUETTE DATE
ACCEPTED BY: RYAN C. PEARSON DATE

PROFESSIONAL ENGINEER STATE OF NEVADA
ZACHARY D. HILLS
Exp: June 30, 2017
CIVIL
No. 20641
3/31/17

CONTRACT NUMBER
C1467
DRAWING NUMBER G3
SHEET 3 OF 14

REVISIONS:

DEVIATIONS FROM STANDARDS

NONE

CITY OF LAS VEGAS TRAFFIC SIGNAL NOTES

1. ALL WORK PERFORMED ON ANY TRAFFIC SIGNAL COMPONENT MUST BE UNDER THE DIRECT ON-SITE SUPERVISION OF AN IMSA CERTIFIED TECHNICIAN. EFFECTIVE MARCH 30, 2000 THE LEVEL OF CERTIFICATION REQUIRED IS LEVEL I, AND THE LEVEL OF CERTIFICATION REQUIRED SHALL BE INCREASED TO LEVEL II *EFFECTIVE MARCH 30, 2001.*

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO ALL EXISTING UTILITIES. THE LOCATIONS OF UNDERGROUND UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES TO VERIFY IN THE FIELD THE LOCATIONS OF THEIR INSTALLATIONS 72 HOURS PRIOR TO CONSTRUCTION.
   CALL-BEFORE-YOU-OVERHEAD 1-702-227-2929
   CALL-BEFORE-YOU-DIG 1-800-227-2600

3. ALL *TRAFFIC SIGNAL INSTALLATIONS SHALL CONFORM TO THE UNIFORM STANDARD DRAWINGS SPECIFICATIONS* AND SPECIAL PROVISIONS FOR PUBLIC WORKS' CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA, VOLUMES I AND II, ADOPTED BY THE REGIONAL TRANSPORTATION COMMISSION APRIL 8, 1992 WITH ALL SUBSEQUENT REVISIONS. (REVISIONS THRU MAY 11, 2000)

4. SERVICE SHALL HAVE 1-60 AMP SINGLE POLE BREAKER FOR SIGNAL, AND ONE 40 AMP SINGLE POLE BREAKERS FOR STREET LIGHTS. SERVICE SHALL BE 200 AMP PADMOUNT.

5. LINE SIDE OF METER TO BE WIRED WITH THREE #3/0 AWG THW. LOAD SIDE SHALL BE WIRED WITH FOUR #4 AWG THW (2 BLACK, 2 WHITE) AND ONE #8 AWG THW (GREEN).

6. LUMINAIRES ON ALL SIGNAL POLES SHALL BE 400 WATT HIGH PRESSURE SODIUM CUTOFF (G.E. M400A) WITH MC-111 DISTRIBUTION. EACH LUMINAIRE SHALL HAVE AN INDIVIDUAL 1000 WATT P.E. CONTROL. FOR LUMINAIRES THERE SHALL BE 2(TWO)-#4 AWG THW CONDUCTOR FROM THE SERVICE TO THE CABINET. IN THE CABINET, THE #4 AWG THW CONDUCTORS SHALL BRANCH OFF INTO #10 AWG THW CONDUCTORS INDIVIDUALLY FUSED WITH 10 AMP FUSES. THERE SHALL BE NO SPLICES BETWEEN THE CABINET AND LUMINAIRE FIXTURES.

7. THE INTERNALLY ILLUMINATED STREET NAME SIGNS SHALL BE WIRED TO THE LUMINAIRES PHOTO CELL FOR CONTROL WITH #10 AWG THW COPPER STRANDED WIRE (TYPICAL). IN THE EVENT THERE IS NO LUMINAIRE ON THE TRAFFIC SIGNAL POLE, THE 1000 WATT P.E. CONTROL SHALL BE MOUNTED ON THE POLE CAP.

8. CHECK CONDUIT AND CABLE SCHEDULE FOR CONDUIT, CABLE, AND WIRE SIZE. VERIFY ALL EXISTING CONDUIT RUNS.

9. ALL PULLBOXES SHALL BE IN ACCORDANCE WITH UNIFORM STANDARD DRAWINGS NO. 404.110, NO. 404.120, AND NO. 404.130.

10. *TRAFFIC SIGNAL CABLE SHALL BE 15 OR 25 CONDUCTOR #14 AWG SOLID (TYPICAL) CABLE AND SHALL* CONFORM TO IMSA SPEC. NO. 20-1.

11. PEDESTRIAN PUSH BUTTONS SHALL BE AUDIBLE TACTILE TYPE IN ACCORDANCE WITH CITY OF LAS VEGAS SPECIAL PROVISIONS TO SECTION 623 OF THE CCA USS. PUSH BUTTON SIGNS SHALL BE 9" X 12" WITH FULL MOUNTING BRACKETS. ALL PUSH BUTTONS TO BE MOUNTED 36" ABOVE SIDEWALK. THE MAXIMUM HORIZONTAL REACH DISTANCE IS TO BE 24". SIDEWALK RAMPS WILL BE ACCORDING TO U.S.D. No. 235 (1-4) DATED 12-14-00.

12. THE ROUTING AND TERMINATION OF CONDUITS AND THE PLACING OF POLES AND CABINETS SHALL BE AS INDICATED ON THE PLANS. ALL CHANGES SHALL BE APPROVED BY THE ENGINEER.

13. MAST ARM R10-12 SIGNS TO BE ADJACENT (NO GAP) TO THE M-5 SIGNAL HEAD.

14. INSTALL TYPE VIII CABINET. THIS IS COMMONLY REFERRED TO AS AN "R" CABINET. THE CABINET SHALL CONFORM TO THE UNIFORM STANDARD DRAWINGS SPECIFICATIONS AND SPECIAL PROVISIONS, CLARK COUNTY AREA, NEVADA. INSTALL CABINET NEAR THE R.O.W. LINE OR AS SHOWN ON THE DRAWINGS.

15. THE CONTRACTOR SHALL SUPPLY A 2070N CONTROLLER TO THE CITY OF LAS VEGAS TRAFFIC SIGNAL REPAIR SHOP, FOURTEEN DAYS PRIOR TO SIGNAL TURN-ON, FOR TESTING PURPOSES. THE CONTRACTOR SHALL DELIVER THE CONTROLLER TO, AND PICKUP THE CONTROLLER AT 2801 E. CHARLESTON BOULEVARD. CONTRACTOR SHALL NOTIFY THE TRAFFIC SIGNAL REPAIR SHOP (229-6075) SEVEN DAYS PRIOR TO PICK UP. ALL 2070N CONTROLLERS MUST BE COMPATIBLE WITH AND FUNCTION PROPERLY WITH OS9 1996 OPERATION SYSTEM; THE LATEST REVISION OF THE "NEXT PHASE INTERSECTION MANAGEMENT SOFTWARE" (GARDNER TRANSPORTATION SYSTEM) AND THE ICONS (GARDNER TRANSPORTATION SYSTEM) GENERAL SOFTWARE.

16. CONTRACTOR SHALL POTHOLE SIGNAL POLE LOCATIONS PRIOR TO ORDERING OF POLES.

17. ALL MAST ARMS TO BE HOT-DIP GALVANIZED BY THE MANUFACTURER THE MAST ARM IS TO BE FABRICATED WITH END TENON ONLY. THE END TENON SHALL BE FACTORY INSTALLED AND THE REMAINING TETONS SHALL BE FABRICATED IN THE FIELD AT THE LOCATION SHOWN ON THE PLANS OR AS DIRECTED BY THE TRAFFIC ENGINEER AND/OR HIS AUTHORIZED REPRESENTATIVE. FOR TENON FABRICATION DETAILS SEE CLARK COUNTY AREA U.S.D. NO. 404.406 SHEET 2. ALL WELDING SHALL CONFORM TO AWS D 2.0, "SPECIFICATION FOR WELDED HIGHWAYS AND RAILWAY BRIDGES," AND TO ANY ADDITIONAL REQUIREMENTS OF SECTION 623 T.02.09 OF THE SPECIFICATIONS. ALL EXPOSED WELDS, SHALL BE PAINTED AS PROVIDED FOR REPAIRING DAMAGED GALVANIZED SURFACES.

18. ALL VEHICLE AND PEDESTRIAN SIGNAL INDICATIONS SHALL HAVE LIGHT EMMITING DIODE (LED) TYPE INDICATIONS, IN CONFORMANCE TO CITY OF LAS VEGAS SPECIAL PROVISIONS TO SECTION 623 OF THE CCA USS.

19. ALL VEHICLE DETECTION WILL BE BY VIDEO IMAGE DETECTION. EITHER ITERIS VANTAGE PLUS OR AUTO SCOPE 2004 VIDEO DETECTION SYSTEM MUST BE INSTALLED. EACH VIDEO CAMERA WILL HAVE POWER (3/16 COND. PVC JACKETED) AND 8281 COAXIAL CABLE DIRECTLY FROM THE CABINET. CAMERAS WILL BE MOUNTED PER THE MANUFACTURER'S RECOMMENDATIONS AND PER CLV TRAFFIC ENGINEER APPROVAL. "BNC" CONNECTORS ARE THE ONLY ACCEPTABLE TERMINATION OF CABLES.

20. IF THE IMPROVEMENTS NECESSITATE THE OBLITERATION, TEMPORARY CONSTRUCTION, TEMPORARY REMOVAL, OR RELOCATION OF ANY EXISTING TRAFFIC PAVEMENT MARKING, SUCH PAVEMENT MARKING SHALL BE RESTORED OR REPLACED AT THE CONTRACTORS EXPENSE TO THE SATISFACTION OF THE CITY.

21. INTERCONNECT CABLE SHALL BE 25 PAIR OF #22 AWG SHIELD SPECIFICATION REA PE 39.

22. THE CONTRACTOR SHALL INSTALL CROSSWALKS, STOP BARS AND SIGNS AS IDENTIFIED ON THE PLANS.

REGIONAL TRANSPORTATION COMMITTEE CITIZENS AREA TRANSIT ACCESS NOTES

1. UNLESS OTHERWISE SPECIFIED IN THE SPECIAL PROVISIONS, NO PUBLIC BUS OR TRANSIT STOP SHALL BE TEMPORARILY CLOSED WITHOUT THE WRITTEN CONSENT OF THE REGIONAL TRANSPORTATION COMMISSION (RTC) DIRECTOR OR HIS DESIGNEE. THE RTC SHALL BE NOTIFIED AT LEAST TEN (10) WORKING DAYS PRIOR TO THE PROPOSED TEMPORARY CLOSURE OF ANY BUS OR TRANSIT STOP, INCLUDING THOSE LISTED IN THE SPECIAL PROVISIONS.

2. NO BUS STOPS AT TRANSFER POINTS SHALL BE CLOSED DURING CONSTRUCTION. BUS STOPS AT TRANSFER POINTS CAN, HOWEVER, BE TEMPORARILY RELOCATED WITH THE APPROVAL OF THE RTC DIRECTOR OR HIS DESIGNEE.

3. IF BUS OR TRANSIT STOP IS TEMPORARILY RELOCATED, THE EXISTING BUS OR TRANSIT STOP SIGN PANELS SHALL BE RELOCATED TO TEMPORARY BUS OR TRANSIT STOPS AND SHALL REMAIN UNTIL TEMPORARY STOP IS REMOVED. TEMPORARY RELOCATION OF SIGN PANELS SHALL CONFORM TO SUBSECTION 627.03.05, "RELOCATION."

4. THE CONTRACTOR SHALL MAINTAIN ACCESS WHICH IS IN CONFORMANCE TO THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT TO AND FROM BUS OR TRANSIT STOPS WHICH REMAIN OPEN AT ALL TIMES DURING CONSTRUCTION.

CITY OF LAS VEGAS TRAFFIC NOTES

1. ALL CONSTRUCTION SIGNING, BARRICADING, AND TRAFFIC DELINEATION SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST EDITION.

2. THE STREET SIGN CONTRACTOR SHALL OBTAIN STREET NAMES AND BLOCK NUMBERING FROM THE PLANNING DEPARTMENT PRIOR TO CONSTRUCTION.

3. 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 STOP SIGNS AT ALL NEW STREET ENCROACHMENTS INTO EXISTING CITY STREETS WHERE WARRANTED IMMEDIATELY AFTER FIRST GRADING WORK IS ACCOMPLISHED, AND SHALL MAINTAIN SAID SIGNS UNTIL PERMANENT SIGNS ARE INSTALLED.

4. WHEN A DESIGNATED "SAFE ROUTE TO SCHOOL" IS ENCROACHED UPON BY A CONSTRUCTION WORK ZONE AND PUBLIC WORKS STAFF IDENTIFIES A NEED FOR STUDENTS TO BE ASSISTED IN THE SAFE CROSSING THROUGH THAT WORK ZONE, THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE A QUALIFIED "CROSSING GUARD". THE GUARD SHALL BE PRESENT FOR THE FULL DURATION OF TIME THAT CHILDREN ARE LIKELY TO BE PRESENT.

5. 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 CITY TRAFFIC ENGINEER.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL PERMANENT SIGNS SHOWN ON THE PLANS. ALL NEW TRAFFIC SIGNS SHALL BE FABRICATED WITH DIAMOND GRADE VIP CLASS 6 REFLECTIVE SHEETING OR APPROVED EQUAL. ALL NEW TRAFFIC SIGNS, EXCEPT STREET NAME AND SCHOOL SPEED LIMIT SIGNS, SHALL HAVE 3M SERIES 1160 ANTI-GRAFFITI PROTECTIVE OVERLAY FILM; SCHOOL ZONE SIGNS SHALL HAVE 3M SERIES 1150 ANTI-GRAFFITI PROTECTIVE OVERLAY FILM. STREET NAME SIGNS SHALL CONFORM IN THEIR ENTIRETY TO CURRENT CITY STANDARDS. ALL OTHER SIGNS SHALL BE STANDARD SIZE UNLESS OTHERWISE SPECIFIED ON THE PLANS. ALL SIGN POSTS SHALL BE INSTALLED IN ACCORDANCE WITH THE CURRENT CITY STANDARDS.

7. WHEN A PROPOSED STREET LIGHT STANDARD IS LOCATED WITHIN FIVE (5') FEET OF ANY PROPOSED SIGN SHOWN ON THE PLANS TO BE MOUNTED ON A SIGNPOST, THE SIGN SHALL BE MOUNTED ON THE STREET LIGHT STANDARD AND THE SIGNPOST SHALL BE ELIMINATED.

8. 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 HERE UNDER, REGARDLESS OF THE STATUS OF COMPLETION OF PAVING OR OTHER OFF-SITE IMPROVEMENTS CALLED FOR BY THESE PLANS.

9. STREET SIGNS AND STOPS SIGNS SHALL BE INSTALLED PER CITY STANDARD SPECIFICATIONS FOR PLACEMENT OF STREET NAME SIGNS.

10. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY TRAFFIC CONTROL DEVICES AND FLAGGERS TO INSURE THE SAFETY OF THE PUBLIC IN OR AROUND THE WORK AREA. THE CONTRACTOR SHALL HAVE A CERTIFIED ATSSA TRAFFIC CONTROL TECHNICIAN OR IMSA WORK ZONE SAFETY SPECIALIST SET UP, MAINTAIN AND/OR REMOVE ALL TRAFFIC CONTROL DEVICES IN THE CITY OF LAS VEGAS RIGHT OF WAY.

11. WORK IN PUBLIC STREETS, ONCE BEGUN, SHALL BE EXPEDITED TO COMPLETION SO AS TO PROVIDE MINIMUM INCONVENIENCE TO ADJACENT PROPERTY OWNERS AND TO THE TRAVELING PUBLIC.

12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING CITIZENS AREA TRANSIT (C.A.T.) IF THE CONSTRUCTION INTERRUPTS OR RELOCATES A BUS STOP OR HAS AN ADVERSE EFFECT ON BUS SERVICE ON THAT STREET TO ARRANGE FOR TEMPORARY RELOCATION OF STOP.

13. GUARDS SHALL BE OBTAINED BY CONTACTING THE METROPOLITAN POLICE DEPARTMENT SPECIAL EVENTS UNIT (PHONE # 229-3442) WHO WILL PROVIDE OFFICERS PROPERLY TRAINED IN TRAFFIC CONTROL. FEES FOR THE USE OF THESE OFFICERS SHALL BE SET BY METRO AND WILL BE PAID BY THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR ALL ARRANGEMENTS WITH METRO.

14. ANY WORK WITHIN 300' OF A SIGNALIZED INTERSECTION WILL BE NIGHT WORK, UNLESS DIRECTED BY THE CITY OF LAS VEGAS TRAFFIC ENGINEER.

15. CONTRACTOR SHALL CONTACT THE TRAFFIC ENGINEERING DIVISION (TRANSPORTATION SECTION) THROUGH THE PROJECT'S OFFSITE INSPECTOR PRIOR TO INITIATING PAVING TO RECEIVE DIRECTION FOR ANY PERMANENT OR TEMPORARY MODIFICATIONS TO THE APPROVED DRAWINGS REGARDING FINAL PAVEMENT TRANSITIONS, MARKINGS AND SIGNING THAT ARE REQUIRED TO MATCH ADJACENT ROADWAY SEGMENTS. THE CONTRACTOR SHALL PROVIDE A DRAWING FOR APPROVAL BY THE TRAFFIC ENGINEERING DIVISION DEPICTING ANY ADJUSTMENTS TO THE FINAL PAVEMENT MARKINGS AND SIGNAGE, WHICH MAY INCLUDE OMITTING, ADDING OR MODIFYING PAVEMENT MARKINGS AND TRAFFIC CONTROL SIGNS SUCH THAT ADEQUATE TRANSITIONS AND LANE TERMINATIONS BETWEEN ADJACENT ROADWAY SEGMENTS ARE CONSTRUCTED.

CITY OF LAS VEGAS STREET LIGHT NOTES

1. ALL STREET LIGHTING INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE STREET LIGHTING PLANS, THE "UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA," LATEST REVISION, AND THE *"UNIFORM STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS,* CLARK COUNTY AREA, NEVADA," LATEST REVISION, AND ANY ADOPTED SPECIAL AREA STANDARDS.

2. NO DEVIATION OF STREET LIGHT, PULL BOX, CONDUITS (ETC.) LOCATIONS SHALL BE PERMITTED WITHOUT WRITTEN APPROVAL OF TRAFFIC ENGINEERING AND THE CITY ENGINEER.

3. ALL EXISTING STREET LIGHTING SHALL REMAIN OPERATIONAL DURING CONSTRUCTION.

4. ALL STREET LIGHTING CONDUITS STUB SHALL HAVE AT LEAST ONE GREEN #8 THW WIRE INSTALLED, AS TRACER WIRE. WHEN "EMPTY" CONDUIT IS COMPLETELY INSTALLED FROM PB TO PB, IT SHALL HAVE MINIMUM OF 2 #4 AND 1 #8 THW WIRE WITH THE ENDS TAPED OR "SAFE OFF" PRIOR TO FINAL INSPECTION.

5. ANY STRUCTURE SUCH AS BLOCK WALLS, CHAIN LINK FENCES, RETAINING WALLS, ETC., SHALL LEAVE A MINIMUM CLEARANCE IN ACCORDANCE WITH THE USD NO. 320A.

6. AS-BUILT DRAWINGS SHALL BE SUPPLIED TO THE CITY OF LAS VEGAS TRAFFIC ENGINEERING DEPARTMENT (TEFO) PRIOR TO ANY PRE-FINAL INSPECTION. THE AS-BUILT DRAWING NEEDS TO BE STAMPED AS-BUILT AND SIGNED BY THE PREPARER.

7. SERVICE POINT SHALL BE COORDINATED WITH NEVADA POWER COMPANY, AND WHEREVER POSSIBLE, BE LOCATED NEAR THE CENTER OF THE CIRCUIT. SERVICE POINTS SHALL BE SHOWN ON THE PLANS.

8. IT SHALL BE ASSUMED THAT IN THE ABSENCE OF AN EXISTING, WORKABLE CIRCUIT TO ATTACH TO, ALL INSTALLATIONS SHALL REQUIRE A NEW SERVICE FOR OPERATION OF THE CIRCUIT.

9. WHEREVER THERE IS AN OVERHEAD UTILITY THAT MAY CONFLICT WITH THE INSTALLATION OF STREET LIGHTING CIRCUITS AND/OR POLES, *THESE CONFLICTS MUST BE RESOLVED BETWEEN THE DEVELOPER AND THE UTILITIES INVOLVED BEFORE* STREET LIGHT BASES ARE INSTALLED AT NO EXPENSE TO THE CITY OF LAS VEGAS.

10. THE CONTRACTOR SHALL FURNISH COMPLETE SERVICE TO TRANSFORMERS AND CONTROL SYSTEMS IF REQUIRED ON PLANS.

11. THE DEVELOPER/OWNER WILL BE REQUIRED TO SUPPLY POWER TO ALL NEW PUBLIC STREET LIGHTS INSTALLED UNDER THIS DESIGN PRIOR TO BOND RELEASE OR PROJECT COMPLETION. THE DEVELOPER/OWNER WILL BE RESPONSIBLE FOR ALL ITEMS ASSOCIATED WITH THE INSTALLATION, CONSTRUCTION, ENERGIZING, MAINTENANCE AND OPERATIONAL COST OF SAID STREET LIGHTS PRIOR TO PROJECT COMPLETION. REFER TO THE PLAN FOR ANY NEW SERVICE REQUIREMENTS. THE TRANSFER OF OWNERSHIP FROM DEVELOPER/OWNER TO THE CITY OF LAS VEGAS FOR ALL NEW PUBLIC STREET LIGHT/S AND/OR SERVICE/S INSTALLED UNDER THIS PLAN DESIGN WILL BE IN CONJUNCTION WITH THIS PROJECT COMPLETION. COORDINATE ALL MAINTENANCE AND OPERATIONAL TRANSFER WITH THE CITY OF LAS VEGAS TRAFFIC ENGINEERING DEPARTMENT (TEFO) AT (702) 229-6327.

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VERIFY SCALE
1/2 0 1/2 1
BAR REPRESENTS ONE AND ONE-HALF INCHES ON ORIGINAL

MISCELLANEOUS SMALL BACKFLOW INSTALLATIONS, PHASE XV

CITY OF LAS VEGAS GENERAL NOTES II

SCALE NONE

DRAWN BY: STEPHEN D. MILLER 9/19/16
CHECKED BY: ZACHARY D. HILLS 9/19/16
RECOMMENDED BY: CHRISTOPHER M. LUQUETTE DATE
ACCEPTED BY: RYAN C. PEARSON DATE

PROFESSIONAL ENGINEER - STATE OF NEVADA
ZACHARY D. HILLS
Exp: June 30, 2018
CIVIL
No. 20641
3/3/17

CONTRACT NUMBER
C1467

DRAWING NUMBER G4
SHEET 4 OF 14

REVISIONS:

– A –

A/C	AIR CONDITIONING
AB	ANCHOR BOLT
ABAN	ABANDON
ABC	AGGREGATE BASE COURSE
ABS	ABSOLUTE
ABUT	ABUTMENT
ABV	ABOVE
AC	ASPHALTIC CONCRETE
ACKV	AUTOMATIC CHECK VALVE
ACP	ASBESTOS CEMENT PIPE
ACS	ACCESS
ADA	AMERICAN DISABILITY ACT
AD	AREA DRAIN
ADDL	ADDITIONAL
ADDM	ADDENDUM
ADJ	ADJUSTABLE
AGGR	AGGREGATE
AHD	AHEAD
AL	ALUMINUM
ALT	ALTERNATE
AMS	ANGLE METER STOP
AMT	AMOUNT
&	AND
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
ANT	ANTENNA
AP	ACCESS PANEL
APN	ASSESSOR PARCEL NUMBER
APPROX	APPROXIMATE
APPVD	APPROVED
ASPH	ASPHALT
ASSN	ASSOCIATION
ASSY	ASSEMBLY
ASTM	AMERICAN SOCIETY OF TESTING MATERIALS
AUX	AUXILIARY
AV	AIR VENT/AIR VALVE
AVAR	AIR VACUUM AIR RELEASE VALVE
AVE	AVENUE
AWG	AMERICAN WIRE GAUGE
AWWA	AMERICAN WATER WORKS ASSOCIATION

– B –

B/H	BUMPED HEAD
B&S	BELL & SPIGOT
BAL	BALANCE
BC	BOLT CIRCLE/BACK OF CURB
BCV	BUTTERFLY CHECK VALVE
BE	BELL END
BETW	BETWEEN
BFP	BACKFLOW PREVENTER
BFV	BUTTERFLY VALVE
BK	BOOK/BACK
BL–FLG	BLIND FLANGE
BLDG	BUILDING
BLK	BLOCK
BLM	BUREAU OF LAND MANAGEMENT
BLVD	BOULEVARD
BM	BENCHMARK
BO	BLOW OFF ASSEMBLY
BOC	BACK OF CURB
BOT	BOTTOM
BOW	BACK OF WALK
BPV	BACK PRESSURE VALVE
BRG	BEARING
BS	BACK SIGHT
BUR	BURIED
BV	BALL VALVE
BW	BOTH WAYS/BACK OF SIDEWALK

– C –

C/C	CENTER TO CENTER
C	CONDUIT
C&G	CURB & GUTTER
CAL	CALIBRATE
CAP	CAPACITY
CAV	COMBINATION AIR VALVE
CB	CATCH BASIN
CCO	CLARK COUNTY
CEM	CEMENT
CI	CAST IRON
CIP	CAST IRON PIPE/CAST IN PLACE
CIR	CIRCLE
CIRCUM	CIRCUMFERENCE
CJP	COMPLETE JOINT PENETRATION
CL OR ℄	CENTERLINE
CL2	CHLORINE
CLG	CEILING
CLO	CLEANOUT
CLP	CLAMP
CLR	CLEAR
CLSM	CONTROLLED LOW STRENGTH MATERIAL
CLV	CITY OF LAS VEGAS
CM	CENTIMETER
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNIT
CNLV	CITY OF NORTH LAS VEGAS
CO	COUNTY/COMPANY/CONTRACT
COH	CITY OF HENDERSON
COL	COLUMN
COMB	COMBINATION
COMM	COMMUNICATION
COMPL	COMPLETE

– C – (CONT.)

CON	CONCENTRIC
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUE OR CONTINUOUS
CONTR	CONTRACTOR
COORD	COORDINATE
COR	CORNER
CORP STOP	CORPORATION STOP
COV PL	COVER PLATE
CPLG	COUPLING
CPVC	CHLORINATED POLYVINYL CHLORIDE PIPE
CT	COURT
CTR	CENTER
CTV	CABLE TELEVISION
CU	CUBIC/COPPER
CUST	CUSTOMER
CV	CONTROL VALVE
CW	CLOCKWISE
CY	CUBIC YARD
CYL	CYLINDER

– D –

D OR Δ	DELTA ANGLE
D/W	DRIVEWAY
DCSWCS	DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS
DEC	DECIMETER
DEMO	DEMOLITION
DEPT	DEPARTMENT
DET	DETAIL
DEV	DEVELOPMENT
DI	DROP INLET OR DUCTILE IRON
DIA OR Ø	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DIP	DUCTILE IRON PIPE
DIR	DIRECTION
DISCH	DISCHARGE
DIST	DISTANCE
DISTR	DISTRIBUTION
DIV	DIVISION
DL	DEAD LOAD
DMH	DROP MANHOLE
DN	DOWN
DR	DRIVE
DRW	DRY WELL
DUPL	DUPLICATE
DWG	DRAWING

– E –

E	EAST OR EDGE
EA	EACH
EC	EPOXY COATED/END OF CURB
ECC	ECCENTRIC
EF	EACH FACE
EL	EPOXY LINED
ELEC	ELECTRICAL
ELEV	ELEVATION
ELL	ELBOW
ENG	ENGINE/ENGINEERING
ENGR	ENGINEER
EOP	EDGE OF PAVEMENT
EOS	EDGE OF SHOULDER
EQ	EQUAL OR EQUATION
EQ SP	EQUALLY SPACED
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
ESMT	EASEMENT
EST	ESTIMATE
ETC	ETCETERA
EW	EACH WAY
EXC	EXCAVATE
EXIST	EXISTING
EXP JT	EXPANSION JOINT
EXT	EXTENSION

– F –

F/F	FACE TO FACE
FABR	FABRICATION/FABRICATED
FC	FACE OF CURB
FD	FLOOR DRAIN
FDN	FOUNDATION
FEXT	FIRE EXTINGUISHER
FF	FINISHED FLOOR
FG	FINISHED GRADE
FH	FIRE HYDRANT
FIG	FIGURE
FL OR ℄	FLOW LINE
FLG	FLANGE
FLR	FLOOR
FMCT	FLOW METER COMPOUND TORRENT
FMH	FLEXIBLE METAL HOSE
FN	FENCE
FND	FOUND
FO	FIBER OPTIC
FOC	FACE OF CURB
FOW	FACE OF WALL
FPC	FLEXIBLE PIPE COUPLING
FPM	FEET PER MINUTE

– F – (CONT.)

FPS	FEET PER SECOND
FPT	FEMALE PIPE THREAD
FREQ	FREQUENCY
FRP	FIRE RETARDANT POLYESTER RESIN/ FIBERGLASS REINFORCED POLYMER
FSTNR	FASTENER
FT	FOOT OR FEET
FTG	FOOTING
FUT	FUTURE

– G –

G/B	GRADE BREAK
G	GAS
GA	GAGE
GAL(S)	GALLON(S)
GALV	GALVANIZED
GENL	GENERAL
GIS	GEOGRAPHIC INFORMATION SYSTEM
GND	GROUND
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GRD	GRADE
GRT	GRATE
GV	GATE VALVE

– H –

H	HOUSE
H&V	HEATING & VENTILATION
HARN	HIGH ACCURACY FREQUENCY NETWORK
HB	HOSE BIBB
HD	HEAD
HDR	HEADER
HEX	HEXAGONAL
HMWPE	HIGH MOLECULAR WEIGHT POLYETHYLENE
HORIZ	HORIZONTAL
HP	HORSEPOWER
HPI	HORIZONTAL POINT OF INTERSECTION
HPG	HIGH PRESSURE GAS
HR	HOUR
HT	HEIGHT
HV	HOSE VALVE
HWY	HIGHWAY

– I –

ID	INSIDE DIAMETER
IN	INCH
INST	INSTALL
INSTR	INSTRUMENT
INSUL	INSULATION
INT	INTERIOR
INV	INVERT
IPS	IRON PIPE SIZE
IRR	IRRIGATION

– J –

JT	JOINT

– K –

kg	KILOGRAM
km	KILOMETER

– L –

LAD	LADDER
LB OR #	POUND
LDR	LEADER
LEN OR L	LENGTH OF CURVATURE
LF	LINEAR FOOT
LG	LONG
LN	LANE
LT	LEFT/LIGHT
LVVWD	LAS VEGAS VALLEY WATER DISTRICT
LWR	LOWER

– M –

M	METER
MATL	MATERIAL
MAX	MAXIMUM
MC	MORTAR COATED
MEAS	MEASUREMENT
MECH	MECHANICAL
MFR	MANUFACTURER
MG	MILLION GALLONS
MGD	MILLION GALLONS PER DAY
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
MKR	MARKER
ML	MORTAR LINED
MLC	MORTAR LINED & COATED

– M – (CONT.)

MLCP	MORTAR LINED & COATED PIPE
MLCTWP	MORTAR LINED & COATED TAPE WRAPPED PIPE
MON	MONUMENT
MOV	MOTOR OPERATED VALVE
MPT	MALE PIPE THREAD
MSD	MAIN SERVICE DISTRIBUTION
MSDS	MATERIAL SAFETY DATA SHEET
MTD	MOUNTED

– N –

N	NORTH
N/A	NOT APPLICABLE
NaOCL	SODIUM HYPOCHLORITE
NAVD	NORTH AMERICAN VERTICAL DATUM
NAP	NOT–A–PART
NBS	NATIONAL BUREAU OF STANDARDS
NC	NATIONAL COARSE
NCS	NEVADA COORDINATE SYSTEM
NDOT	NEVADA DEPARTMENT OF TRANSPORTATION
NE	NORTHEAST
NF	NORTH FACE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NG	NATURAL GROUND
NIC	NOT IN CONTRACT
NIP	NOT IN PROJECT
NO. #	NUMBER
NOM	NOMINAL
NOSHA	NEVADA OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
NPC	NEVADA POWER COMPANY
NPS	NOMINAL PIPE SIZE
NPT	NATIONAL TAPER PIPE THREAD
NRS	NEVADA REVISED STATUTES/ NON–RISING STEM
NTS	NOT TO SCALE
NW	NORTHWEST

– O –

O/O	OUT TO OUT
OC	ON CENTER
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OFC	OFFICE
OH	OVER HEAD
OHP	OVER HEAD POWER
OHTEL	OVER HEAD TELEPHONE
OPER	OPERATOR
OPNG	OPENING
OPP	OPPOSITE
ORF	ORIFICE
ORIG	ORIGINAL
OS&Y	OUTSIDE SCREW & YOKE
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
OVFL	OVERFLOW
oz	OUNCE

– P –

P	POLE/PRESSURE/PIPE/POWER
P/L /℄	PROPERTY LINE
PAT	PATENT
PAVMT	PAVEMENT
PB	PULL BOX
PC	PRESSURE CLASS
PCCP	PRESTRESSED CONCRETE CYLINDER PIPE
PDL	PUMP DISCHARGE LINE
PE	PLAIN END/POLYETHYLENE PIPE
PED	PEDESTAL
PERM	PERMANENT
PERP	PERPENDICULAR
PG	PRESSURE GAGE
PH	PHASE
PI	POINT OF INTERSECTION
PHYD	POST HYDRANT
PKG	PACKAGE
PKWY	PARKWAY
PL	PLACE/PLATE/PARCEL LINE
PLS	PROFESSIONAL LAND SURVEYOR
PLT	PLATE (DRAWING)
PO	PUSH–ON
POLY	POLYETHYLENE
PP	POWER POLE
PPM	PARTS PER MILLION
PR	PAIR
P/R	PATENT RESERVATION
PRC	PRECAST REINFORCED CONCRETE
PRELIM	PRELIMINARY
PRIM	PRIMARY
PROP	PROPOSED
PRV	PRESSURE REGULATING VALVE
PS	PRESSURE SWITCH/PUMP STATION
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POINT/POINT OF TANGENCY
PV	PLUG VALVE
PVC	POLYVINYL CHLORIDE PIPE

– Q –

QCV	QUICK COUPLER VALVE
QDC	QUICK DISCONNECT COUPLING
QS	QUAD SHEET
QTR	QUARTER
QTY	QUANTITY

– R –

R	RADIUS
(R)	RADIAL
R/W	RIGHT–OF–WAY
RCB	REINFORCED CONCRETE BOX
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
REC	RECESSED
RECT	RECTANGULAR
RED	REDUCER
REF	REFERENCE (DIMENSION)
REG	REGULATING (REGULATOR)
REINF	REINFORCED (REBAR)
REQD	REQUIRED
RES	RESIDENTIAL OR RESERVOIR
RET	RETURN
REV	REVISION OR REVERSE
RF	RAISED FACE
RM	ROOM
RME	RESIDENTIAL MAIN EXTENSION
RPM	REVOLUTIONS PER MINUTE
RPS	REVOLUTIONS PER SECOND
RPPA	REDUCED PRESSURE PRINCIPLE ASSEMBLY
RR	RAILROAD
RSGV	RESILIENT SEATED GATE VALVE
RT	RIGHT/RING TITE
RV	RELIEF VALVE

– S –

S	SOUTH/SLOPE
SA	SAMPLE LINE
S/C	SAW CUT
SCCP	STEEL CYLINDER CONCRETE PIPE
SCH	SCHEDULE
SD	STORM DRAIN
SDWK	SIDEWALK
SE	SOUTHEAST
SEC	SECTION/SECOND(ARY)
SEG	SEGMENT
SHLDR	SHOULDER
SHT	SHEET
SID	SPECIAL IMPROVEMENT DISTRICT
SIG	SIGNAL
SIM	SIMILAR
SL	SLOPE
SLV	SLEEVE
SNWA	SOUTHERN NEVADA WATER AUTHORITY
SNWS	SOUTHERN NEVADA WATER SYSTEM
SO	STUBOUT
SPC	STATE PLANE COORDINATES
SPEC(S)	SPECIFICATION(S)
SQ	SQUARE
SQ FT	SQUARE FOOT (FEET)
SQ YD	SQUARE YARD
SR	SAMPLE RETURN
SRM	SINGLE RESIDENTIAL MAIN
SS	SANITARY SEWER
SSTL	STAINLESS STEEL
ST	STREET
STA	STATION
STD	STANDARD
STIR	STIRRUP
STL	STEEL
STLT	STREET LIGHT
SUPPL	SUPPLEMENT
SUR	SURVEY
SV	SOLENOID VALVE
SW	SIDEWALK OR SOUTHWEST
SY	SQUARE YARD
SYM	SYMBOL
SYMM	SYMMETRICAL
SYS	SYSTEM

– T –

t	THICKNESS OF WELD
T	TELEPHONE/TANGENT
T&B	TOP & BOTTOM
T&G	TONGUE AND GROOVE
TAN	TANGENT
TBE	THREAD BOTH ENDS
TBM	TEMPORARY BENCH MARK
TC	TOP OF CURB
TD	TRENCH DRAIN
TDH	TOTAL DYNAMIC HEAD
TEMP	TEMPORARY
THK	THICK(NESS)
THR BLK	THRUST BLOCK
THRD	THREADED
TK	TANK
TMH	TOP OF MANHOLE
TOE	THREAD ONE END
TOF	TOP OF FOOTING
TOG	TOGETHER
TOGR	TOP OF GRATE
TOP	TOP OF PIPE

– T – (CONT.)

TOR	TOP OF RIM
TOS	TOP OF SLAB
TOSTL	TOP OF STEEL
TOSW	TOP OF SIDEWALK
TOT	TOTAL
TOW	TOP OF WALL
TP	TELEPHONE POLE/TOP OF PIPE
TR	TRAIL OR TRACK/TOP OF RIM
TRANS	TRANSITION/TRANSMISSION
(TYP)	TYPICAL

– U –

UDS	UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR WATER DISTRIBUTION SYSTEMS, CLARK COUNTY, NV
UE	UNDERGROUND ELECTRIC
UFC	UNIFORM FIRE CODE
UG	UNDERGROUND
UGC	UNDERGROUND CONDUIT
UGP	UNDERGROUND POWER
UGT	UNDERGROUND TELEPHONE
UL	UNDERWRITERS LABORATORIES
UNC	AMERICAN STANDARD UNIFIED COARSE THREAD
UNF	AMERICAN STANDARD UNIFIED FINE THREAD
UNIV	UNIVERSAL
UNO	UNLESS NOTED OTHERWISE
UPC	UNIFORM PLUMBING CODE
UPRR	UNION PACIFIC RAILROAD
USGS	UNITED STATES GEODETIC SURVEY
UTIL	UTILITIES

– V –

V	VOLT OR VALVE
VAC	VACUUM
VAR	VARIES
VB	VALVE BOX
VCP	VITRIFIED CLAY PIPE
VEL	VELOCITY
VENT	VENTILATOR
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VG	VALLEY GUTTER
VHF	VERY HIGH FREQUENCY
VIB	VIBRATION
VIN	VINYL
VISC	VISCOSITY
VOL	VOLUME
VPI	VERTICAL POINT OF INTERSECTION
VS	VALVE SHEET
VT	VENT

– W –

W/	WITH
W	WEST/WATER
W/O	WITHOUT
WD	WIDTH
WDN	WASTE DRAIN
WF	WIDE FLANGE
WH	WALL HYDRANT
WI	WROUGHT IRON
WL	WASTE LINE
WLD	WELDED
WM	WATER METER
WP	WORK POINT/WEATHER PROOF
WS	WATER SURFACE
WSP	WELDED STEEL PIPE
WSTP	WATER STOP
WT	WEIGHT
WTR	WATER
WV	WATER VALVE
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH

– X –

XARM	CROSS ARM
XFMR	TRANSFORMER
XFR	TRANSFER
XSEC	CROSS SECTION

– Y –

YD	YARD
YH	YARD HYDRANT
YLD	YIELD

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Call 811

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

VERIFY SCALE
1/2 0 1/2 1
BAR REPRESENTS ONE INCH ON ORIGINAL
IF NOT ONE INCH ON THIS SHEET ADJUST SCALE ACCORDINGLY

MISCELLANEOUS SMALL BACKFLOW INSTALLATIONS, PHASE XV

ABBREVIATION LIST

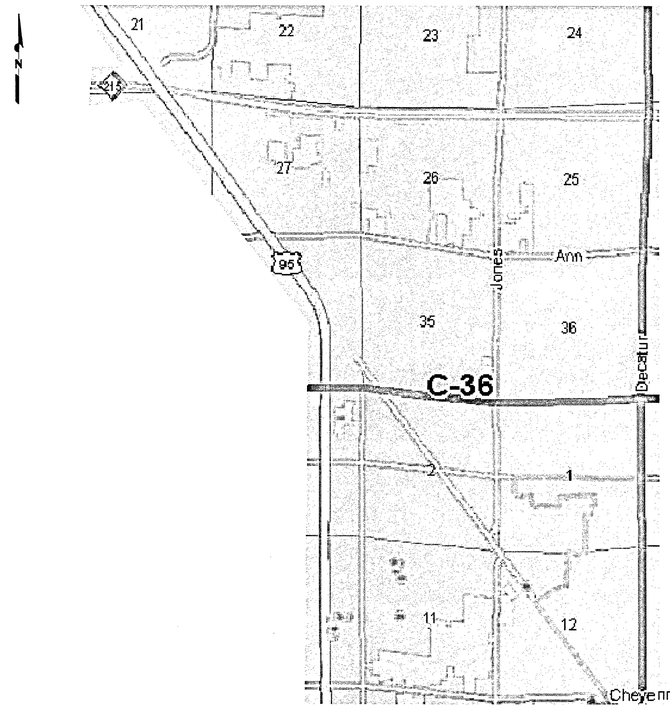
SCALE NONE

DRAWN BY: STEPHEN D. MILLER	9/19/16	
CHECKED BY: ZACHARY D. HILLS	9/19/16	
RECOMMENDED BY: CHRISTOPHER M. LUQUETTE	DATE	
ACCEPTED BY: RYAN C. PEARSON	DATE	

REVISIONS:

PROFESSIONAL ENGINEER STATE OF NEVADA
ZACHARY D. HILLS
Exp. 12-31-2017
CIVIL
No. 20641
12/7/17

CONTRACT NUMBER
C1467
DRAWING NUMBER G5
SHEET 5 OF 14



AREA 36 - VICINITY MAP

NOT TO SCALE

CITY OF LAS VEGAS
CONSTRUCTION INSPECTION AREA

Area 36

TOTAL BACKFLOW INSTALLTIONS
WITHIN CLV AREA

Area 36 (15)

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

VERIFY SCALE
1/2 0 1/2 1
BAR REPRESENTS ONE AND ONE-HALF INCHES ON ORIGINAL

MISCELLANEOUS SMALL BACKFLOW INSTALLATIONS, PHASE XV

PROJECT LOCATION MAP AND CLV INSPECTION AREA 36

SCALE NONE

DRAWN BY: STEPHEN D. MILLER 3/22/17
CHECKED BY: ZACHARY D. HILLS 3/22/17
RECOMMENDED BY: CHRISTOPHER M. LUQUETTE DATE
ACCEPTED BY: RYAN C. PEARSON DATE

PROFESSIONAL ENGINEER STATE OF NEVADA ZACHARY D. HILLS No.20641 Exp: June 30, 2017 CIVIL

CONTRACT NUMBER
C1467
DRAWING NUMBER C1
SHEET 6 OF 14

REVISIONS:

APN	Service Address	Hansen No.	Meter Size	Wateruse Description	Map No.	CLV Off-Site Inspection Area
13811199002	3800 BLK SHERMCREST WAY	133999	1 1/2	Irrigation Residential	In RW - Book 30 Page 30	36
13811199001	3800 BLK SHERMCREST WAY	135257	1 1/2	Irrigation Residential	In RW - Book 30 Page 70	36
13811199002	3700 BLK SHERMCREST WAY	135366	1 1/2	Irrigation Residential	In RW - Book 30 Page 30	36
13929201004	1038 N RANCHO DR	150021	5/8	Non Residential Domestic	MS - 26	36
13818697001	2800 BLK BILLY CASPER DR	549730	1 1/2	Irrigation Residential	Book 49, Page 32	36
13810713000	6800 BLK ELM CREEK DR	550005	2	Multi Service Residential	Book 51, Page 44: permanent easement over private streets, common areas and all areas not occupied by building structures	36
13810712000	6800 BLK ELM CREEK DR	550006	2	Multi Service Residential	Book 49, Page 17: permanent easement over private streets, common areas and all areas not occupied by building structures	36
13820522001	2211 N RAMPART BLVD	558916	2	Non Residential Domestic	E 1780	36
13818297002	9900 BLK BUNDELLA DR	559581	1 1/2	Irrigation Residential	E3772: Book 52 Page 44	36
13810718002	3508-3512 WINTERHAVEN AVE	560155	2	Multi Service Residential	Book 59, Page 15: Permanent Easement shown as private streets, common areas and all areas not occupied by Buildings	36
13818197004	9800 BLK VILLA RIDGE DR	561690	1 1/2	Irrigation Residential	Book 31, Page 18	36
13820110004	9000 HILLPOINTE RD	565987	2	Non Residential Domestic	Book 45, Page 10	36
13820797011	1800 BLK MADERA CANYON PL	572318	3/4	Irrigation Residential	Book 59, Page 2	36
13810721016	3500 BLK WINTERHAVEN AVE	575658	2	Multi Service Residential	Book 60, Page 88: A permanent easement over all private streets and common areas not occupied by buildings	36
13810722001	3432-3436 WINTERHAVEN AVE	575660	2	Multi Service Residential	Book 60, Page 92: A permanent easement over all private streets and common areas not occupied by buildings	36

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(702) 870-2011

VERIFY SCALE
1/2 0 1/2 1
BAR REPRESENTS ONE AND ONE-HALF INCHES ON ORIGINAL

MISCELLANEOUS SMALL BACKFLOW INSTALLATIONS, PHASE XV

PROJECT LOCATIONS LISTING I

SCALE NONE

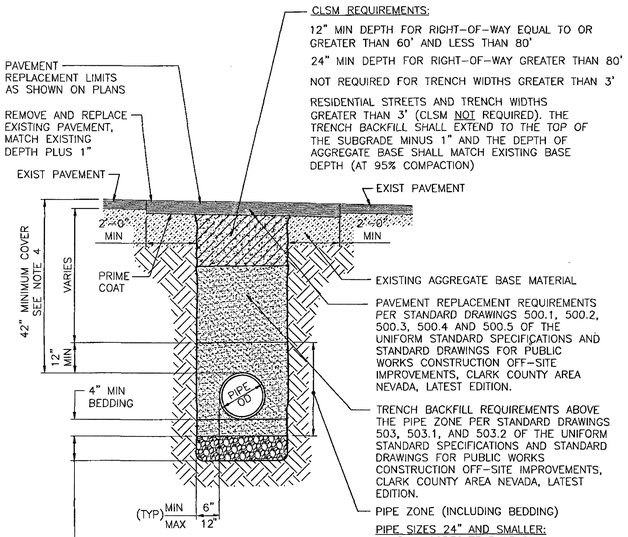
DRAWN BY: STEPHEN D. MILLER 3/22/17
CHECKED BY: ZACHARY D. HILLS 3/22/17
RECOMMENDED BY: CHRISTOPHER M. LUQUETTE DATE
ACCEPTED BY: RYAN C. PEARSON DATE

PROFESSIONAL ENGINEER STATE OF NEVADA
ZACHARY D. HILLS
No. 20641
CIVIL
Exp: June 30, 2018
April 5, 2017

CONTRACT NUMBER
C1467

DRAWING NUMBER C2
SHEET 7 OF 14

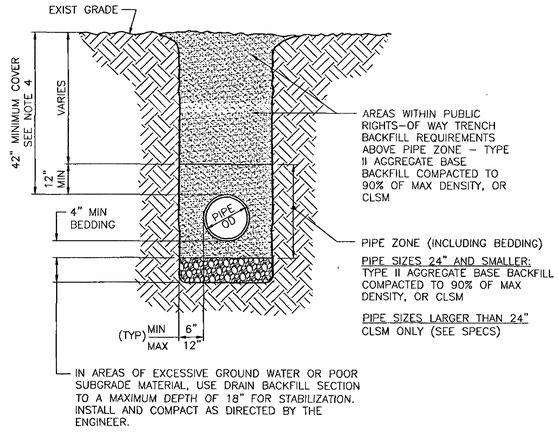
REVISIONS:



TRENCH BACKFILL - PAVED AREAS

NOT TO SCALE UDAC PLATE NO. 17 MODIFIED

1 CD1



TRENCH BACKFILL - UNPAVED AREAS

NOT TO SCALE UDAC PLATE NO. 16 MODIFIED

2 CD1

NOTES FOR PAVED AND UNPAVED AREAS

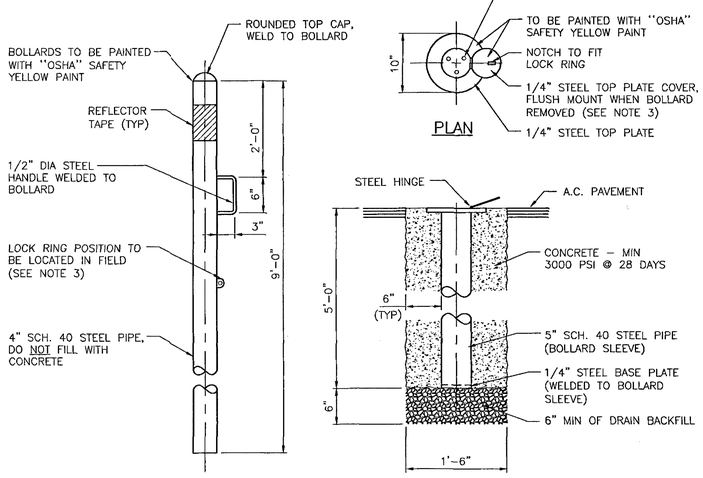
UDAC PLATE NO. 19 MODIFIED

1. REFERENCES:

   UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS CLARK COUNTY AREA NEVADA, LATEST EDITION.

   INTERAGENCY QUALITY ASSURANCE COMMITTEE (IQAC)

2. SEE SPECS SEC 31 20 00 FOR ACCEPTABLE METHODS OF COMPACTION.
3. TRENCH EXCAVATION: COMPLY WITH THE CURRENT REGULATIONS AS DETERMINED BY NEVADA OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION.
4. DURING CONSTRUCTION 24" MINIMUM COVER MUST BE MAINTAINED FROM TOP OF PIPE TO GRADE.
5. MINIMUM COVER IS REFERENCED TO FUTURE FINISHED FINAL GRADES AT PIPE OR TOP OF CASING UNLESS OTHERWISE SHOWN ON PROFILE DRAWINGS.
6. SUPPORT PIPE AND FIBER OPTIC CONDUITS (IF REQUIRED) WITH SANDBAGS AND SPOT LOAD AS REQUIRED DURING INSTALLATION OF CLSM IN PIPE ZONE AND PIPE BEDDING AREAS.
7. DIAGONAL PAVEMENT REPLACEMENT IS NOT PERMITTED.
8. INSTALL CONCRETE DAMS AT MAXIMUM INTERVALS OF 400' TO THE HEIGHT OF THE DRAIN ROCK AS REQUIRED.
9. IN THE EVENT OF A CONFLICT BETWEEN THE ABOVE REQUIREMENTS AND THE NDOT PERMIT, THE PERMIT REQUIREMENTS WILL TAKE PRECEDENCE.
10. SEE SPECIFICATIONS FOR APPROVED CLSM MIX REQUIREMENTS.



NOTES:

1. PLACE 6" WIDE, YELLOW CLASS 4 REFLECTIVE TAPE (PER STANDARD SPECIFICATIONS, SECTION 716), 4" DOWN FROM TOP, FOR FULL DIAMETER ON ALL BOLLARDS.
2. CONTRACTOR TO ASSURE THAT BOLLARDS ARE PLACED TO ALLOW FULL ACCESS TO THE PROTECTED FACILITY.
3. INSTALL LVWD PROVIDED LOCK AFTER INSTALLATION IS COMPLETE
4. CONTRACTOR TO SUBMIT SHOP DRAWING ON BOLLARD ASSEMBLY

REMOVABLE VEHICULAR PROTECTION BOLLARD

NOT TO SCALE

3 CD1

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LAS VEGAS, NEVADA 89153
(702) 870-2011

VERIFY SCALE
1/2" 0 1/2" 1"
BAR REPRESENTS ONE INCH ON ORIGINAL

MISCELLANEOUS SMALL BACKFLOW INSTALLATIONS, PHASE XV

STANDARD DETAILS I

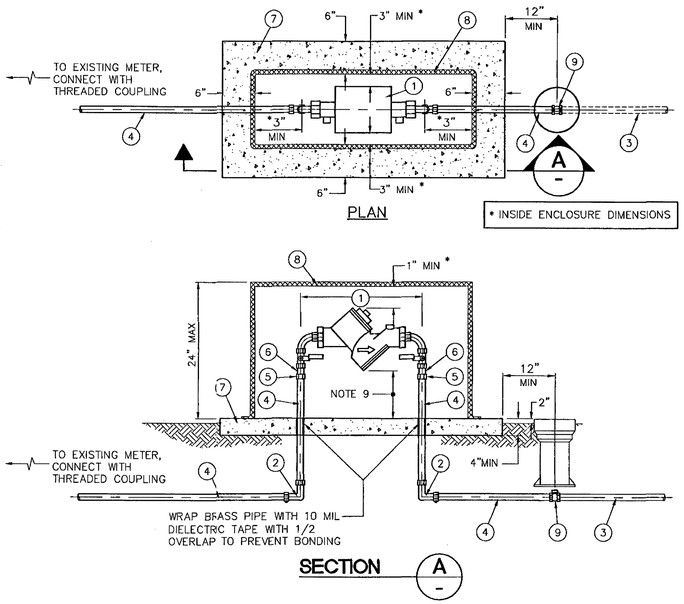
SCALE AS SHOWN

DRAWN BY: STEPHEN D. MILLER	9/19/16	
CHECKED BY: ZACHARY D. HILLS	9/19/16	
RECOMMENDED BY: CHRISTOPHER M. LUQUETTE	DATE	
ACCEPTED BY: RYAN C. PEARSON	DATE	

PROFESSIONAL ENGINEER STATE OF NEVADA
ZACHARY D. HILLS
Exp. June 30, 2017
CIVIL
No. 20641
3/27/17

CONTRACT NUMBER
C1467
DRAWING NUMBER CD 1
SHEET 12 OF 14

REVISIONS:



LEGEND:

1. APPROVED COMPACT REDUCED PRESSURE PRINCIPLE ASSEMBLY, SIZE TO MATCH METER (1" MIN)
2. BRASS 90° BEND – IRON PIPE THREAD (IPF x IPF)
3. EXISTING ONSITE PIPE (MATERIAL UNKNOWN), CONNECT WITH TRANSITION COUPLING AS REQUIRED
4. BRASS PIPE (TBE, LENGTH AS REQUIRED), SIZE TO MATCH BACKFLOW DEVICE
5. BRASS UNION – IRON PIPE THREAD (IPF x IPF), IF NOT PROVIDED WITH ASSEMBLY
6. BRASS CLOSE NIPPLE (TBE)
7. CONCRETE PAD – 3000 PSI
8. APPROVED ENCLOSURE, ANCHOR TO CONCRETE PAD PER MANUFACTURERS REQUIREMENTS
9. BRASS CURB STOP WITH STANDARD VALVE BOX, 6" SCHEDULE 80 PVC TOE NIPPLE (THREAD x SLIP) AND A SCH 80 PVC COUPLING FOR CONNECTION TO EXISTING ONSITE PVC PIPING

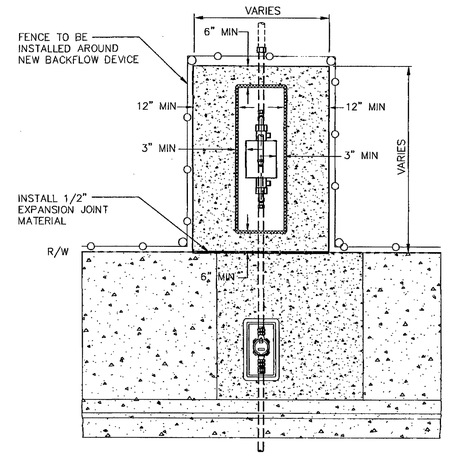
   DIELECTRIC CONNECTION REQUIRED WHEN EXISTING ONSITE PIPING IS METALLIC

NOTES:

1. BACKFLOW DEVICE INCLUDING ABOVE GRADE PIPING NOT TO BE PAINTED.
2. FOR BACKFLOW DEVICE LOCATION, SEE SITE DRAWINGS.
3. COMPACT ALL EXCAVATION AND CONCRETE PAD AREAS PER SPECIFICATIONS.
4. ALL COPPER TUBING AND BURIED BRASS PIPE SHALL BE WRAPPED WITH TWO LAYERS OF SIX (6) MIL POLYETHYLENE AND BACKFILLED ALL AROUND WITH 4" MINIMUM OF SAND.
5. BACKFLOW DEVICE INSTALLED ON PRIVATE PROPERTY ONLY, UNLESS SPECIFICALLY APPROVED BY DISTRICT AND JURISDICTIONAL AUTHORITY.
6. IF ASPHALT PATCH IS REQUIRED, THE PATCH SHOULD HAVE A MINIMUM DIMENSION OF TWELVE INCHES (12") IN ANY DIRECTION.
7. ALL THREADED PVC FITTINGS TO BE SCH 80 PVC.
8. SITE CONDITIONS SHALL ACCOMMODATE 36" MIN CLEAR CLEARANCE AROUND ALL SIDES OF DEVICE FOR LVVWD MAINTENANCE.
9. 12" MIN CLEARANCE FROM THE RELIEF VALVE TO CONCRETE PAD OR HIGH WATER LEVEL OF THE SURROUNDING AREA.

REDUCED PRESSURE PRINCIPLE ASSEMBLY BACKFLOW INSTALLATION

NOT TO SCALE — UDAC PLATE NO. 8 MODIFIED — 1 / CD2



NOTES:

1. CONTRACTOR TO INSTALL FOUR NEW CORNER POSTS FOR NEW FENCE INSTALLATION.
2. CONCRETE ANCHOR FOR FENCE CORNER POSTS TO BE 6" RADIUS AROUND POST AND 16" DEEP.
3. NEW FENCE INSTALLATION TO MATCH EXISTING FENCE IN EVERY WAY UNLESS APPROVED BY LVVWD ENGINEER AND PROPERTY OWNER.
4. BACKFLOW DEVICE TO BE CENTERED ON CONCRETE PAD UNLESS APPROVED BY LVVWD ENGINEER.
5. SITE CONDITIONS SHALL ACCOMMODATE 36" MIN CLEAR CLEARANCE AROUND ALL SIDES OF DEVICE FOR LVVWD MAINTENANCE

FENCE RELOCATION AROUND BACKFLOW

NOT TO SCALE — 2 / CD2

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VERIFY SCALE
1/2" 0 1/2" 1"
BAR REPRESENTS ONE AND ONE-HALF INCHES ON ORIGINAL

MISCELLANEOUS SMALL BACKFLOW INSTALLATIONS, PHASE XV

STANDARD DETAILS II

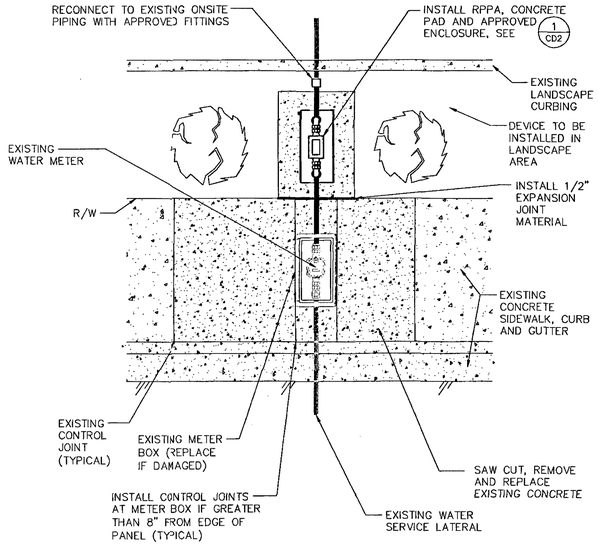
SCALE AS SHOWN

DRAWN BY: STEPHEN D. MILLER 9/19/16
CHECKED BY: ZACHARY D. HILLS 9/19/16
RECOMMENDED BY: CHRISTOPHER M. LUQUETTE DATE
ACCEPTED BY: RYAN C. PEARSON DATE

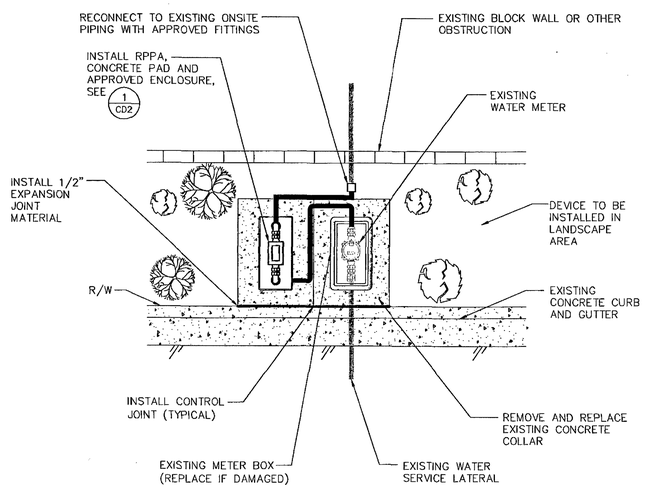
PROFESSIONAL ENGINEER STATE OF NEVADA ZACHARY D. HILLS Exp: June 30, 20 CIVIL No. 20641
3/31/17

REVISIONS:

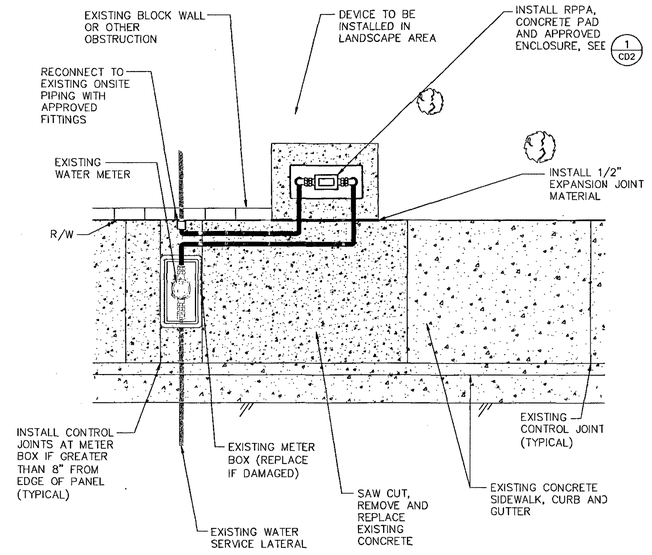
CONTRACT NUMBER
C1467
DRAWING NUMBER CD.2
SHEET 13 OF 14



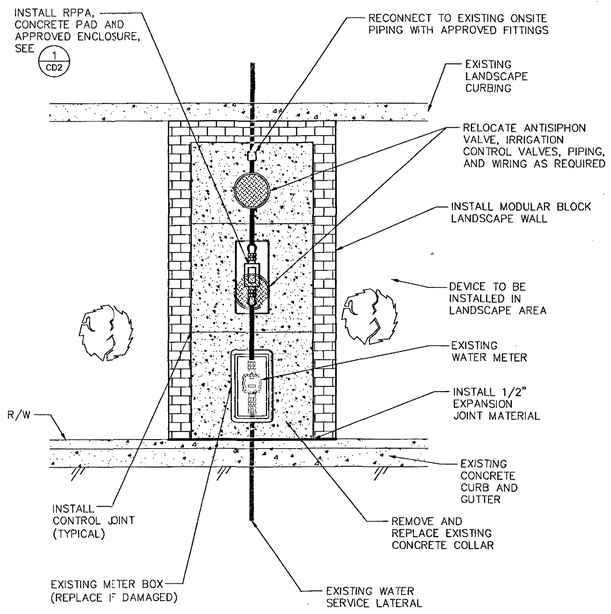
BACKFLOW ASSEMBLY LOCATION - TYPE 1A



BACKFLOW ASSEMBLY LOCATION - TYPE 2A



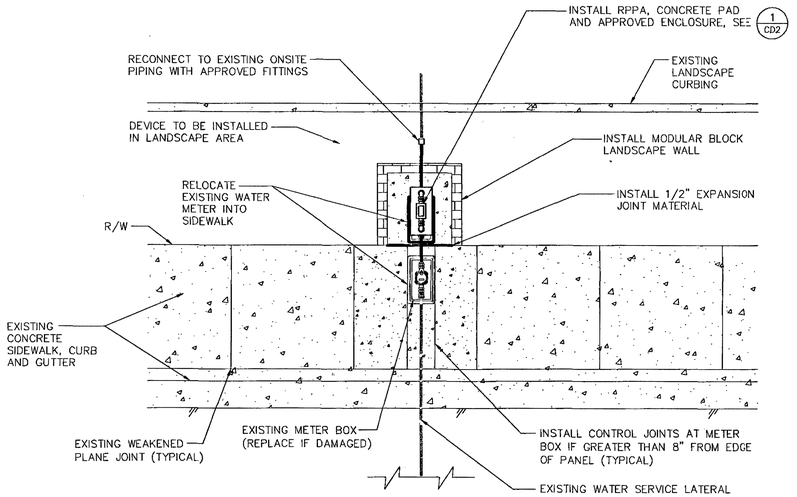
BACKFLOW ASSEMBLY LOCATION - TYPE 3A



BACKFLOW ASSEMBLY LOCATION - TYPE 4A

NOTES:

1. REFERENCES:
   INTERAGENCY QUALITY ASSURANCE COMMITTEE (IQAC)
2. SEE SPECS SEC 02300 FOR BACKFILL AND ACCEPTABLE METHODS OF COMPACTION
3. ALL EXCAVATIONS MUST COMPLY WITH THE CURRENT REGULATIONS AS DETERMINED BY NEVADA OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
4. IF LANDSCAPE IS AFFECTED DURING WORK, REPAIR DAMAGE TO LANDSCAPE. LANDSCAPED AREA SHALL BE RESTORED TO ORIGINAL CONDITION INCLUDING VEGETATION OF LIKE QUALITY, TYPE AND SIZE. REMOVE AND REPLACE IRRIGATION LINES AS REQUIRED. ADD ADDITIONAL IRRIGATION FACILITIES TO PROVIDE COMPLETE COVERAGE AS NECESSARY
5. ALL COPPER TUBING AND BRASS PIPE BELOW GRADE SHALL BE WRAPPED WITH TWO LAYERS OF SIX (6) MIL POLYETHYLENE AND ENCASED ALL AROUND WITH 4" MINIMUM OF SAND
6. PIPING BETWEEN METER AND BACKFLOW ASSEMBLY TO BE BRASS
7. PIPING FROM BRASS TRANSITION COUPLING AFTER BACKFLOW DEVICE TO ONSITE PIPING SHALL BE SCH 40 PVC
8. FOR ACTUAL DIMENSIONS OF CONCRETE COLLAR/PAD, SEE SITE DRAWINGS
9. FINAL LOCATION OF ANTISIPHON VALVE AND IRRIGATION CONTROL VALVES TO BE DETERMINED BY DISTRICT AND PROPERTY OWNER.
10. WEAKENED PLANE CONTROL JOINTS TO BE INSTALLED AT METER BOX IF GREATER THAN 8" FROM EDGE OF SIDEWALK PANEL
11. COORDINATE ALL FENCE/WALL INSTALLATIONS WITH DISTRICT AND PROPERTY OWNER.
12. SITE CONDITIONS SHALL ACCOMMODATE 36" MIN CLEAR CLEARANCE AROUND ALL SIDES OF DEVICE FOR LVVWD MAINTENANCE



BACKFLOW ASSEMBLY LOCATION - TYPE 5A

REDUCED PRESSURE PRINCIPLE ASSEMBLY BACKFLOW - LOCATION DETAILS

NOT TO SCALE

1 CD3

LAS VEGAS VALLEY WATER DISTRICT
1001 S. VALLEY VIEW BOULEVARD
LAS VEGAS, NEVADA 89153
(702) 876-2011

VERIFY SCALE
1/2 0 1/2 1
BAR REPRESENTS ONE INCH IF NOT ONE INCH ON ORIGINAL

MISCELLANEOUS SMALL BACKFLOW INSTALLATIONS, PHASE XV

STANDARD DETAILS III

SCALE AS SHOWN

DRAWN BY: STEPHEN D. MILLER 9/19/16
CHECKED BY: ZACHARY D. HILLS 9/19/16
RECOMMENDED BY: CHRISTOPHER M. LUQUETTE DATE
ACCEPTED BY: RYAN C. PEARSON DATE

PROFESSIONAL ENGINEER STATE OF NEVADA
ZACHARY D. HILLS
Exp: June 30, 20
CIVIL
No. 20641
3/27/17

CONTRACT NUMBER
C1467
DRAWING NUMBER CD3
SHEET 14 OF 14

REVISIONS: