

STORMWATER RUNOFF MANAGEMENT

(REQUIRED FOR ALL SITES GREATER THAN 1 ACRE (43,560 SQ.FT.))

1. THE OWNER, SITE DEVELOPER, CONTRACTOR AND/OR THEIR AUTHORIZED AGENTS SHALL EACH DAY REMOVE ALL SEDIMENT MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN DISCHARGED TO, OR ACCUMULATE IN, THE PUBLIC RIGHTS OF WAYS OF CLARK COUNTY AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS SITE DEVELOPMENT OR CONSTRUCTION PROJECT. SUCH MATERIALS SHALL BE PREVENTED FROM ENTERING THE STORM SEWER SYSTEM.
2. ADDITIONAL CONSTRUCTION SITE DISCHARGE BEST MANAGEMENT PRACTICES MAY BE REQUIRED OF THE OWNER AND HIS OR HER AGENTS DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE SUBMITTED PLAN DOES NOT MEET THE PERFORMANCE STANDARDS SPECIFIED IN TITLE 24.40 AND THE LAS VEGAS VALLEY CONSTRUCTION SITE BEST MANAGEMENT PRACTICES MANUAL.
3. TEMPORARY OR PERMANENT STABILIZATION PRACTICES WILL BE INSTALLED ON DISTURBED AREAS AS SOON AS PRACTICABLE AND NO LATER THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. SOME EXCEPTIONS MAY APPLY; REFER TO NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVRI00000, SECTION III.A.5.
4. AT A MINIMUM, THE CONTRACTOR OR HIS AGENT SHALL INSPECT ALL DISTURBED AREAS, AREAS USED FOR STORAGE OF MATERIALS AND EQUIPMENT THAT ARE EXPOSED TO PRECIPITATION, VEHICLE ENTRANCE AND EXIT LOCATIONS AND ALL BMPs WEEKLY, AND WITHIN 24 HOURS AFTER ANY ACTUAL RAIN EVENT OF 0.5 INCHES OR MORE. THE CONTRACTOR OR HIS AGENT SHALL UPDATE OR MODIFY THE STORMWATER POLLUTION PREVENTION PLAN AS NECESSARY. SOME EXCEPTIONS TO WEEKLY INSPECTIONS MAY APPLY, SUCH AS SUSPENSION OF LAND DISTURBANCE ACTIVITIES. REFER TO NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVRI00000, SECTION III.A.12.
5. ACCUMULATED SEDIMENT IN BMPs SHALL BE REMOVED WITHIN SEVEN DAYS AFTER A STORMWATER RUNOFF EVENT OR PRIOR TO THE NEXT ANTICIPATED STORM EVENT, WHICHEVER IS EARLIER. SEDIMENT MUST BE REMOVED WHEN BMP DESIGN CAPACITY HAS BEEN REDUCED BY 50 PERCENT OR MORE.

SOUTHERN NEVADA - SOUTHWEST GAS CORPORATION GENERAL NOTES

1. IN THE EVENT OF NATURAL GAS EMERGENCIES CALL 911 AND 1-877-860-6020
 2. THERE SHALL BE A MINIMUM HORIZONTAL AND VERTICAL CLEARANCE OF 12-INCHES BETWEEN NATURAL GAS FACILITIES AND ANY UNDERGROUND FACILITIES AND/OR STRUCTURES, INCLUDING BUT NOT LIMITED TO WATER, SEWER, STORM DRAIN, COMMUNICATIONS, AND ELECTRIC
 3. FOR VALVE ADJUSTMENT CONTACT 702-668-6107 48 HOURS PRIOR TO CONSTRUCTION.
 4. IN THE EVENT OF NATURAL GAS CONFLICT WITH PROPOSED UTILITIES AND/OR STRUCTURES CONTACT 702-365-2099
- CAUTION: HIGH PRESSURE GAS
- CALL SOUTHWEST GAS AT 702-400-1789 FOR STANDBY WHEN EXCAVATING OVER OR NEAR HIGH PRESSURE GAS LINES 48 HOURS PRIOR TO CONSTRUCTION

2.2 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 (12") DIAMETER. CONNECTIONS TO FIFTEEN (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 LVWD STANDARDS WHENEVER A SEWER MAIN CROSSES OVER A WATER MAIN OR THE SEWER IS LESS THAN EIGHTEEN INCH (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 REJECTED 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 PIPE WHICH ALLOWS FOR PIPE DEFLECTION AT THE JOINTS.

LAS VEGAS VALLEY WATER DISTRICT (LVVWD) STANDARD NOTES

LVVWD PROJECT # 136070 (REVISED 08/01/2017)

1. NO WORK SHALL BEGIN UNTIL THE WATER PLANS HAVE BEEN APPROVED FOR CONSTRUCTION BY THE LVVWD. FOLLOWING WATER PLAN APPROVAL, NOTICE SHALL BE GIVEN TO THE LVVWD COMMUNICATION SUPPORT CENTER (258-7171) TWO (2) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION FOR FUTURE INSPECTIONS. NOTICE MUST BE GIVEN TO THE BUSINESS DAY PRIOR TO THE REQUESTED LVVWD INSPECTION. WHEN REQUESTING INSPECTIONS, PLEASE REFER TO THE PROJECT # IDENTIFIED ABOVE.
 2. ALL WORK SHALL CONFORM TO LVVWD STANDARD PLANS, DRAWINGS, AND SPECIFICATIONS, AND TO THE 2010 EDITION OF THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS' CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA, AS AMENDED. THE LATEST EDITION OF UGACS SHALL SUPERSEDE ANY CONFLICTS CONTAINED IN THE APPROVED DRAWINGS AND/OR SPECIFICATIONS.
 3. ALL WORK, EXCEPT AS MODIFIED BY THESE PLANS OR BY NOTE 2 ABOVE, SHALL BE DONE IN ACCORDANCE WITH THE MOST RECENT DRAFT OR EDITION OF THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENT, CLARK COUNTY AREA.
 4. A SINGLE PIPE MATERIAL SHALL BE USED THROUGHOUT THE PROJECT UNLESS OTHERWISE APPROVED BY THE LVVWD.
 5. ALL SERVICE LATERALS TWO (2) INCHES IN DIAMETER AND SMALLER SHALL BE TYPE K COPPER TUBING WITH LVVWD APPROVED SERVICE SADDLES.
 6. ALL WATER METER BOXES SHALL BE LOCATED OUTSIDE OF DRIVEWAY AREAS.
 7. ALL VALVES SHALL BE LOCATED OUTSIDE OF DRIVEWAYS, VALLEY AND CURB GUTTERS.
 8. ALL WATER AND STORM DRAIN OR SANITARY SEWER CROSSINGS SHALL CONFORM TO SECTION 2.22 OF THE 2010 EDITION OF THE UGACS.
 9. ALL WATER FACILITIES AND APPURTENANCES SHALL BE DISINFECTED, PRESSURE TESTED, AND HAVE AN ACCEPTABLE PASSING HEALTH WATER SAMPLE OBTAINED, PRIOR TO OPERATION AND USE.
 10. THE CONTRACTOR MUST OBTAIN ALL METERS TWO (2) INCHES AND SMALLER FROM LVVWD CENTRAL STORES. TELEPHONE 258-3152 OR 258-3802, TWO (2) WORKING DAYS PRIOR TO METER PICKUP.
 11. ANY INTERRUPTION OF SERVICE MUST BE PERFORMED IN ACCORDANCE WITH UGACS NOTIFICATION 3.14.01, AND APPROVED BY THE LVVWD INSPECTION DIVISION PRIOR TO SHUTDOWN. PROPER WRITTEN NOTICE MUST BE GIVEN TO ALL AFFECTED CUSTOMERS.
 12. ALL WATER FACILITY CONSTRUCTION MATERIALS USED MUST BE AS LISTED ON THE LVVWD APPROVED PRODUCTS LIST FOR NEW FACILITIES, LATEST REVISION, OR SPECIFICALLY APPROVED ON THESE PLANS BY SUBMITTING SHOP DRAWINGS.
 13. TELEPHONE "CALL BEFORE YOU DIG" AT "811" OR 1-800-227-2600.
 14. THE INSTALLATION OF LVVWD MUNICIPAL WATER FACILITIES WITH ALL STREETS IS ASSUMED TO BE IN COMPLIANCE WITH THE UNIFORM STANDARDS, INCLUDING THE PLACEMENT OF ASPHALT PAVING STREET SURFACES. ANY REPAIR WORK DONE BY THE LVVWD TO THE MUNICIPAL WATER FACILITIES WILL INCLUDE THE PLACEMENT OF AN APPROPRIATELY SIZED ASPHALT REPAIR PATCH ON THE STREET SURFACE.
- ANY DECORATIVE PAVING SURFACE WITHIN THE STREET IS THE RESPONSIBILITY OF THE OWNER'S ASSOCIATION, OR THE INDIVIDUAL PROPERTY OWNERS IF NO OWNER'S ASSOCIATION IS IN EXISTENCE, OR THE AGENCY HAVING JURISDICTION. DECORATIVE SURFACE MATERIALS PLACED WITHIN THE TEN FOOT EASEMENT ABUTTING A PUBLIC OR PRIVATE STREET, IF DISTURBED BY THE LVVWD DURING THE REPAIR OR OPERATION OF ITS FACILITIES, WILL BE REPLACED BY LVVWD WITH AN APPROPRIATELY SIZED PLAIN FINISH CONCRETE PATCH. THE LVVWD WILL NOT RESTORE, AND WILL NOT BE RESPONSIBLE FOR THE RESTORATION OF, ANY DECORATIVE PAVING SURFACE WITHIN THE STREET. THE LVVWD WILL NOT ATTEMPT TO MATCH COLOR OR FINISH OF ANY ADJACENT MATERIALS.

IS NO LEAD COMPLIANCE NOTE TO COMPLY WITH THE FEDERAL SAFE DRINKING WATER ACT, ALL WATER WORKS BRASS PRODUCTS PROPOSED TO BE RELOCATED, OR INSTALLED AS NEW MUST BE INSTALLED WITH THE LEAD FREE APPROVED PRODUCT. THE OLD LEAD PRODUCT MAY NOT BE REUSED.

LAS VEGAS VALLEY CONSTRUCTION SITE BMP GUIDELINES

(REQUIRED FOR ALL SITES GREATER THAN 1 ACRE (43,560 SQ.FT.))

1. THE OWNER, SITE DEVELOPER, CONTRACTOR, AND/OR THEIR AUTHORIZED AGENTS SHALL EACH DAY REMOVE ALL SEDIMENT, MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN DISCHARGED TO, OR ACCUMULATED IN, THE PUBLIC RIGHTS OF WAY OF CLARK COUNTY AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS SITE DEVELOPMENT OR CONSTRUCTION PROJECT. SUCH MATERIALS SHALL BE PREVENTED FROM ENTERING THE STORM SEWER SYSTEM.
2. ADDITIONAL CONSTRUCTION SITE DISCHARGE BEST MANAGEMENT PRACTICES MAY BE REQUIRED OF THE OWNER AND HIS OR HER AGENTS DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE SUBMITTED PLAN DOES NOT MEET THE PERFORMANCE STANDARDS SPECIFIED IN CLARK COUNTY TITLE 24.40 AND IN THE LAS VEGAS VALLEY CONSTRUCTION SITE BMP GUIDANCE MANUAL.
3. TEMPORARY OR PERMANENT STABILIZATION PRACTICES WILL BE INSTALLED ON DISTURBED AREAS AS SOON AS PRACTICABLE AND NO LATER THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. SOME EXCEPTIONS MAY APPLY; REFER TO THE NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVRI00000, SECTION III.A.5.
4. AT A MINIMUM, THE CONTRACTOR OR HIS AGENT SHALL INSPECT ALL DISTURBED AREAS, AREAS USED FOR STORAGE OF MATERIALS AND EQUIPMENT THAT ARE EXPOSED TO PRECIPITATION, VEHICLE ENTRANCE AND EXIT LOCATIONS, AND ALL BMPs WEEKLY, AND WITHIN 24 HOURS AFTER A RAIN EVENT OF 0.5 INCHES OR MORE. THE CONTRACTOR OR HIS AGENT SHALL UPDATE OR MODIFY THE STORMWATER POLLUTION PREVENTION PLAN AS NECESSARY. SOME EXCEPTIONS TO WEEKLY INSPECTIONS MAY APPLY, SUCH AS SUSPENSION OF LAND DISTURBANCE ACTIVITIES. REFER TO THE NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVRI00000, SECTION III.A.12.
5. ACCUMULATED SEDIMENT IN BMPs SHALL BE REMOVED WITHIN SEVEN DAYS AFTER A STORMWATER RUNOFF EVENT OR PRIOR TO THE NEXT ANTICIPATED STORM EVENT, WHICHEVER IS EARLIER. SEDIMENT MUST BE REMOVED WHEN BMP DESIGN CAPACITY HAS BEEN REDUCED BY 50 PERCENT OR MORE.

CITY OF LAS VEGAS FIRE AND RESCUE GENERAL 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 DISTRICTS - APPROVED PRODUCTS LIST ARE ALLOWED TO BE INSTALLED.
3. A PERMIT IS REQUIRED FROM LAS VEGAS FIRE AND RESCUE FOR ALL 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 [FC 105.1.12]
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. [FC 5310.3.12]
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. [FC 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. [FC 100.3]
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. [FC 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. [FC 507.5]
9. PRIVATE HYDRANTS SHALL BE PAINTED RED. [FC 507.5.7.1]
10. PRIOR TO THE FINAL OCCUPANCY, A FLOW TEST SHALL BE WITNESSED BY LAS VEGAS FIRE AND RESCUE, FIRE PREVENTION DIVISION TO VERIFY AVAILABILITY OF THE REQUIRED FIRE FLOW. [FC 507]
11. FIRE HYDRANT SPACING SHALL BE AS FOLLOWS: [FC 102]
- RESIDENTIAL - 500 FT UNSPRINKLERED; 600 FT SPRINKLERED.
- COMMERCIAL - 300 FT UNSPRINKLERED; 400 FT SPRINKLERED.
12. WHEN NEW 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 1,000 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. [FC 102.8]
13. NO FIRE HYDRANTS SHALL BE LOCATED WITHIN THE RADIUS OF A CUL-DE-SAC OR WITHIN 200 FEET 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. [FC 102.12]
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. [FC 102.4]
16. THE MAXIMUM DISTANCE FROM A FIRE HYDRANT TO A FIRE DEPARTMENT CONNECTION (FDC) SHALL NOT EXCEED 100 FT, AS MEASURED BY AN APPROVED ROUTE. [FC 102.7]
17. THE MAXIMUM DISTANCE FROM A HYDRANT TO THE END OF A DEAD-END STREET SHALL NOT EXCEED 200 FT. [FC 102.6]
18. TWO (2) SOURCES OF SUPPLY ARE REQUIRED WHENEVER THERE ARE 4 OR MORE FIRE HYDRANTS/SPRINKLER HEADS 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. [FC 104]
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 [FC 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 FEET PRIOR TO, OR AFTER THE GRADE CHANGE. ADJACENT TO THE STRUCTURES GRADIENT SHALL NOT EXCEED 6%. [FC 503.2.7, 503.2.8]
21. THE TURNING RADIUS OF THE FIRE APPARATUS ACCESS ROADS SHALL BE NO LESS THAN 52 FEET OUTSIDE AND 28 FEET INSIDE TURNING RADIUS. [FC 503.2.4]
22. VERTICAL CLEARANCE OF ALL FIRE APPARATUS ACCESS ROADS SHALL NOT BE LESS THAN 13 FT 6 INS. [FC 503.2.1]
23. FIRE APPARATUS 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 ON ONE SIDE, OR 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 NOT BE LESS THAN 24 FT. [FC 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. THE DISTANCE COULD BE INCREASED TO 250 FT IF THE BUILDING IS SPRINKLERED. [FC 503.1.1]
25. APPROVED SECONDARY FIRE APPARATUS ACCESS SHALL BE PROVIDED FOR 100 OR MORE DWELLING UNITS, ROADS WITH DEAD-ENDS OR WITH A SINGLE POINT OF ACCESS IN EXCESS OF 600 FT, COMMERCIAL AND INDUSTRIAL DEVELOPMENTS WHERE BUILDINGS EXCEED 2 STORIES OR 30 FEET IN HEIGHT, OR EXCEEDING 62,000 SQUARE FEET IN AREA. [FC 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 TURNING AROUND HAVING A MINIMUM DIAMETER OF 81 FT. [FC 503.2.3]
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 FEET 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 HIGHER THAN 10 FT OR LESS THAN 6 FT FROM THE ROADWAY LINE. 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. [FC 503.3]
28. ELECTRICALLY CONTROLLED ACCESS GATES SHALL BE PROVIDED WITH AN APPROVED EMERGENCY VEHICLE DETECTOR/RECEIVER SYSTEM. SAID SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE FC 503.6 AND FC APPENDIX M.

2.5 CITY OF LAS VEGAS GRADING NOTES

1. IN THE EVENT THAT ANY UNFORESEEN CONDITIONS NOT COVERED BY THESE NOTES ARE ENCOUNTERED DURING 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 WAS 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" |
| 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, BEMS, ROAD SIGNS AND BARRICADES, ETC.

UTILITY LOCATION NOTE TO CONTRACTOR

EXISTING UTILITY LOCATIONS SHOWN HEREIN 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 EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATIONS. CALL BEFORE YOU DIG: 1 (800) 227-2600, SOUTHWEST GAS CORPORATION. 702-400-1789 (STANDBY CONTACT NUMBER)

2.1 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 "SOUTHWEST IMPROVEMENT STANDARDS FOR WORK IN THE SUBMERGED 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 CIVIL 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 INTERFERENCES 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 APPROXIMATIONS 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 UP 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 233. 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 THE TRANSITIONS TO BE AS SHOWN ON PLANS.
 12. ALL GRADING WORK SHALL CONFORM TO THE SOILS REPORT AS PREPARED BY SOUTHWEST GEOTECHNICAL REPORT #182267, 7/12/18 APPROVED BY THE CITY ENGINEER, AND AS SHOWN ON THESE PLANS.
 13. EXACT LOCATION OF ALL SAWCUT LINES MAY BE ADJUSTED OR DETERMINED IN THE FIELD BY A CITY OF LAS VEGAS ENGINEER. LOCATION ON PLANS IS NOT CLEARLY SHOWN, OR EXISTING PAVEMENT CONDITION REQUIRES RELOCATIONS.
 14. 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. 623.380 & CITY OF LAS VEGAS TITLE 18, APPENDIX D.
 15. 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:
1. 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.
 2. ASHLT MIX DESIGN MUST BE SUBMITTED AND APPROVED BY THE CITY ENGINEER PRIOR TO THE PLACEMENT OF ASPHALT WITHIN CITY RIGHT OF WAY.
 3. 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.
 4. 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.
 5. 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.
 6. 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 THE PUBLIC SEWER MANHOLES, STORM DRAIN MANHOLES AND TRANSITION STRUCTURES, STORM DRAIN LATERALS AT THE CONNECTION TO THE STORM DRAIN MAIN AND THE CONNECTION TO A DROP INLET, THE CONNECTION OF SEWER SERVICE LATERALS TO THE SEWER MAIN AND WHERE THE SEWER SERVICE LATERALS EXIT THE PUBLIC RIGHT-OF-WAY, SEWER AND STORM DRAIN MAIN ALIGNMENT, INCLUDING DEFLECTION POINTS. THE LOCATION SHALL BE DESCRIBED BY COORDINATES WHICH SHALL BE BASED ON THE OFFICIAL HORIZONTAL AND VERTICAL CONTROL NETWORKS OF THE CITY OF LAS VEGAS. FINAL LOCATION MAP(S) MUST BE SEALED AND CARRIED BY A NEVADA PROFESSIONAL LAND SURVEYOR TO HAVE POSITIONAL CERTAINIES OF ± 0.09 METERS (± 0.3 FEET) HORIZONTALLY AND VERTICALLY. A SEPARATION 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).
 7. 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.
 8. A SEPARATE BORING PERMIT IS REQUIRED FOR ALL BORING ACTIVITIES.

2.3 CITY OF LAS VEGAS TRAFFIC NOTES

1. ALL CONSTRUCTION SIGNING, BARRICAADING, 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 CITY STREETS WHERE CONSTRUCTION ACTIVITIES ARE OCCURRING. ADVANCE WARNING SIGNS SHALL BE 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 ENCLOSED UPON BY A CONSTRUCTION WORK ZONE AND PAVING WORKS STAFF INITIATES A NEED FOR STUDENTS TO BE ASSURED 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 MARKINGS, 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 VP CLASS 3 REFLECTIVE SHEETING OR APPROVED EQUAL. ALL NEW TRAFFIC SIGNS, EXCEPT STREET NAME AND SCHOOL SPEED LIMIT SIGNS, SHALL HAVE 3M SERIES 1150 OR APPROVED EQUIVALENT 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 INSTALLED, 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 HEREUNDER. THE STATUS OF THE STATUS OF COMPLETION OF PAVING OR OTHER OFF-SITE IMPROVEMENTS CALLED FOR BY THESE PLANS.
9. STREET SIGNS AND STOP 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 ATESA TRAFFIC CONTROL TECHNICIAN OR MESA 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 CONTRACTOR WILL BE CLOSING OR RELOCATING 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 # 828-3442) WHO WILL PROVIDE OFFICERS PROPERLY TRAINED IN TRAFFIC CONTROL. FEE 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 OTHERWISE DIRECTED BY THE CITY OF LAS VEGAS TRAFFIC ENGINEER.
15. THE 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 TRAFFIC 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.

2.4 CITY OF LAS VEGAS STREETLIGHT 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 (USS), AND THE "UNIFORM STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA" (USD), LATEST REVISION.
2. DESIGN PROFESSIONAL AND CONTRACTOR SHALL VERIFY CITY'S LATEST LED FIXTURE SPECIFICATIONS AND APPROVED FIXTURES PER QTY WEBSITE, UNDER BUILDING AND SAFETY FORMS, PRIOR TO ORDERING MATERIALS.
3. NO DEVIATION OF STREET LIGHT, PULL BOX, CONDUITS ETC., LOCATIONS SHALL BE PERMITTED WITHOUT WRITTEN APPROVAL OF TRAFFIC AND CITY ENGINEER. ANY DEVIATION FROM THE PLAN LOCATION WILL REQUIRE COMPLIANCE WITH SECTION 623 OF THE USS.
4. ALL EXISTING STREET LIGHTING SHALL REMAIN OPERATIONAL DURING CONSTRUCTION IN ACCORDANCE WITH SECTION 623 G.03.01 OF THE USS.
5. ALL EMPTY CONDUIT SHALL HAVE AT LEAST ONE GREEN NO. 8 AWG WIRE INSTALLED AS TRACER WIRE IN ACCORDANCE WITH SECTION 623 G.02.01 OF THE USS PRIOR TO BACKFILLING AND FINAL INSPECTION.
6. ANY STRUCTURE SUCH AS BLOCK WALLS, CHAIN LINK FENCES, RETAINING WALLS, ETC., SHALL LEAVE A MINIMUM CLEARANCE IN ACCORDANCE WITH THE USS NO. 3024. WHEN POLES ARE INSTALLED BETWEEN SIDEWALKS, AND SHALL AT NO TIME COMPLETELY ENCLOSE THE STREET LIGHTING POLE.
7. AS-BUILT DRAWINGS SHALL BE SUPPLIED TO THE TRAFFIC ENGINEERING DIVISION PRIOR TO ANY PRE-FINAL INSPECTION. THE AS-BUILT DRAWING NEEDS TO BE STAMPED AS-BUILT AND SIGNED BY THE PREPARER.
8. SERVICE POINT SHALL BE COORDINATED WITH NV ENERGY, AND WHEREVER POSSIBLE, BE LOCATED NEAR THE CENTER OF THE CURB PLATE. SERVICE POINTS SHALL BE SHOWN ON THE PLANS.
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 STREETLIGHT BASES ARE INSTALLED. AT NO EXPENSE TO THE CITY OF LAS VEGAS.
10. THE CONTRACTOR SHALL FURNISH COMPLETE CONDUIT, WIRE, ETC. FROM SERVICE TO TRANSFORMERS AND CONTROL SYSTEMS IF REQUIRED ON THE PLANS.

DEVIATIONS FROM STANDARDS

NONE

SOUTHWEST GAS APPROVAL

James H. Hanks 3/18/19
SOUTHWEST GAS CORPORATION DATE

APPROVED FOR CONSTRUCTION

James H. Hanks
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT NO: 136070 FIRST APPROVED DATE: 3-20-19



SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

KBHOME
BRISTLE VALE - UNIT 1
GENERAL NOTES

DATE: 3/14/19
DRAFTER: OIQ
DESIGNER: OIQ
CHECKED: DP
PROJECT NO. KBH1804-000

PROFESSIONAL ENGINEER - STATE OF NEVADA
TIMOTHY M. MURPHY
Exp. 12/31/2019
CIVIL
3/14/19

C-2
SHEET 2 OF 54
119-00027
101Y5102

PROJ#: 136070A QS:137-33-NB

ABBREVIATIONS

AC	ASPHALTIC CONCRETE OR ACRE	FL	FLOWLINE	PM	POINT OF VERTICAL INTERSECTION
AGG	AGGREGATE BASE	FT	FEET OR FOOT	QTY	QUANTITY
APN	ASSESSORS PARCEL NUMBER	FUT	FUTURE	R	RADIUS
APPROX OR --	APPROXIMATE	GRD	GRADE OR GROUND	RCA	REINFORCED CONCRETE ARCH
AVE	AVENUE	GB	GRADE BREAK OR GRADE CHANGE	RCB	REINFORCED CONCRETE BOX
AT	AT	GV	GATE VALVE	RCP	REINFORCED CONCRETE PIPE
BC	BEGIN CURVE OR BACK OF CURB	HDPE	HIGH DENSITY POLYETHYLENE	RD	ROADWAY EASEMENT
BCR	BEGINNING OF CURB RETURN	HOA	HOME OWNERS ASSOCIATION	REQD	REQUIRED
BHW	BOTTOM OF HEADWALL	HORZ	HORIZONTAL	REV	REVISION
BLDG	BUILDING	HP	HIGH POINT	RG	ROUGH GRADE
BLVD	BOULEVARD	HQWL	HIGH WATER LEVEL	RT OR R	RIGHT OF WAY
BM	BENCHMARK	HOWL OR HW	HEADWALL	S	SECTION
BVC	BEGIN VERTICAL CURVE	HYD	HYDRAULIC OR HYDRANT	SCH	SCHEDULE
BWV	BACK WATER VALVE	ID	INSIDE DIAMETER	SD	STORM DRAIN
CC	CLARK COUNTY	IN	INTERSECTION	SDI	STORM DRAIN DROP INLET
CCAUSD	CLARK COUNTY AREA UNIFORM STANDARD DRAWINGS	INT	INTERSECTION	SDMH	STORM DRAIN MANHOLE
CCPW	CLARK COUNTY PUBLIC WORKS	INV	INVERT ELEVATION	SEC	SQUARE FEET
CCWCD	CLARK COUNTY REGIONAL FLOOD DISTRICT	IP	IRON PIPE	SHT	SHEET
CE	COMMON ELEMENT	IRRG	IRRIGATION	SLIC	STREET LIGHT & TRAFFIC CONTROL ESMIT
CLC/LC	CENTERLINE	LF	LINEAR FEET	SNWA	SOUTHERN NEVADA WATER AUTHORITY
CLR	CLEAR OR CLEARANCE	LMC	LANDSCAPE MAINTENANCE CORPORATION	SPECS	SPECIFICATIONS
CLM	CONTROLLED LOW STRENGTH MATERIAL	LT OR L	LEFT	ST	STREET
CLV	CITY OF LAS VEGAS	LVVWD	LAS VEGAS VALLEY WATER DISTRICT	SSMH	SANITARY SEWER MANHOLE
CM&C	CEMENT MORTAR LINED AND COATED	LWL	LOW WATER LEVEL	STA	STATION
CMU	CONCRETE MASONRY UNIT	MAX	MAXIMUM	STD	STANDARD
CNV	CITY OF NORTH LAS VEGAS	MECH	MECHANICAL	STL	STEEL
COH	CITY OF HENDERSON	MH	MANHOLE	STLT	STREET LIGHT
CONC	CONCRETE	MIN	MINIMUM	SW	SIDEWALK
CT	COURT	MISC	MISCELLANEOUS	SWG	SOUTHWEST GAS
CY OR CU YD	CUBIC YARD	MUE	MUNICIPAL UTILITY EASEMENT	SWR OR SS	SANITARY SEWER SQUARE YARD
DCWCS	DESIGN AND CONSTRUCTION FOR WASTEWATER COLLECTION SYSTEMS	NDOT	NEVADA DEPARTMENT OF TRANSPORTATION	TAN	TANGENT
DET	DETAIL	NTS	NOT TO SCALE	TC	TOP OF CURB
DI	DUCTILE IRON OR DRAIN INLET	NUE	NONEXCLUSIVE UTILITY EASEMENT	TF	TOP OF FLOOR OR TOP OF FOOTING
DIA	DIAMETER	NVE	NV ENERGY	TG	TOP OF GRADE
DIP	DUCTILE IRON PIPE	OC	ON CENTER	THRU	THROUGH
DR	DRIVE	OD	OUTSIDE DIAMETER OR OVERALL DIMENSION	TP	TOP OF PIPE
DWG(S)	DRAWING	OFF	OFFSET	TRW	TOP OF RETAINING WALL
DWY	DRIVEWAY	ORIG	ORIGINAL	TSW	TOP OF SCREEN WALL
EA	EACH	PAC	PUBLIC OR PEDESTRIAN ACCESS EASEMENT	TYP	TYPICAL
ECR	END CURB RETURN	PB	PULL BOX	UDACS	UNIFORM DESIGN AND CONSTRUCTION STANDARDS
EG	EXISTING GROUND	PC	POINT OF CURVE	VC	VERTICAL CURVE
ELEV	ELEVATION	PCC	POINT OF COMPOUND CURVE	VERT	VERTICAL
ESMT	EASEMENT	POE	POINT OF BEGINNING	VG	VALLEY GUTTER
EP	EDGE OF PAVEMENT	POC	POINT OF CURVATURE	WI	WROUGHT IRON
ERU	EQUIVALENT RESIDENTIAL UNIT	POE	POINT OF ENDING	WL	WATER LINE
EX	EXISTING	PRC	POINT OF REVERSE CURVATURE	WP2	WATER PRESSURE ZONE
EX OR EXIST	EXISTING	PRELIM	PRELIMINARY	WT	WEIGHT
FC	FACE OF CURB	PROP	PROPOSED	WTR	WATER LINE
FF	FINISHED FLOOR	PRV	PRESSURE REDUCING VALVE		
FG	FINISHED GRADE	PUE	PUBLIC UTILITY EASEMENT		
FGH	FINISHED GRADE, HIGH SIDE	PT	POINT OF TANGENT OR POINT		
FGL	FINISHED GRADE, LOW SIDE	PVC	POLYVINYL CHLORIDE		
FI	FIRE HYDRANT				

SPECIAL NOTE

IN THE EVENT THAT ANY TEMPORARY CONSTRUCTION ITEM IS REQUIRED WHICH 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 OF LAS VEGAS DEPT. OF PUBLIC WORKS. TEMPORARY CONSTRUCTION ITEMS INCLUDE: PAVEMENT TRANSITIONS, PROTECTIVE DITCHES AND BERMS, ROAD SIGNS AND BARRICADES, ETC.

NOTICE TO CONTRACTOR

-QUANTITIES SHOWN ARE ESTIMATES ONLY AND ARE INTENDED TO ILLUSTRATE SCOPE OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXACT QUANTITIES INVOLVED.

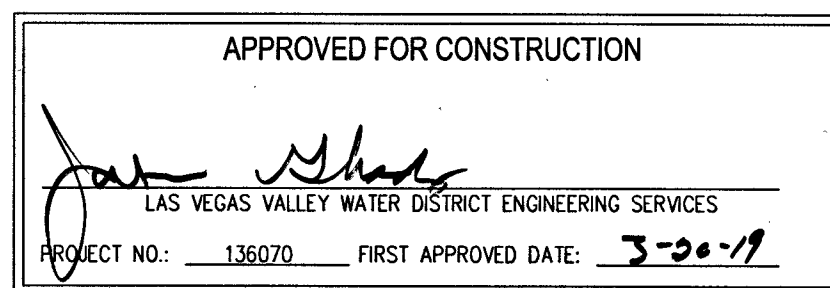
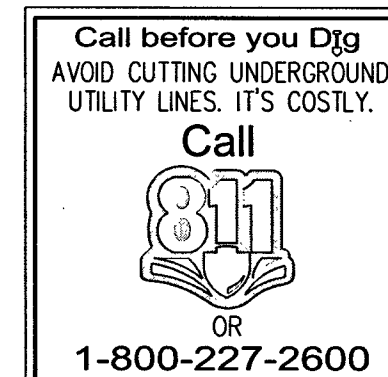
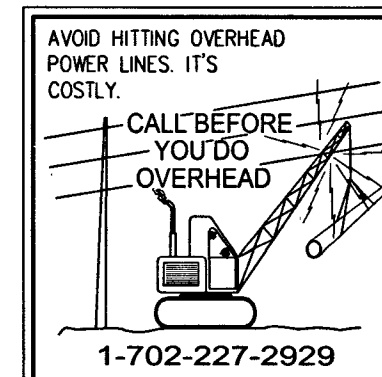
-EXISTING UTILITY LOCATIONS SHOWN HEREIN ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATIONS. CALL BEFORE YOU DIG: (800) 227-2600

LEGEND

EXISTING	PROPOSED	DESCRIPTION
		5' CONTOUR
		1' CONTOUR
		STRIPING
		SEWER MANHOLE
		CURB AND GUTTER
		SANITARY SEWER PIPE AND FLOW ARROW
		WATER PIPE
		WATER GATE VALVE
		FIRE HYDRANT
		WATER BLOW-OFF
		WATER LATERAL W/ METER
		SANITARY SEWER LATERAL
		STREETLIGHT
		EDGE OF PAVEMENT
		TRAFFIC SIGN
		PAD ELEVATION
		FINISHED FLOOR ELEVATION
		ELEVATION
		RETAINING WALL
		STORM DRAIN W/ MANHOLE
		EXISTING GAS GATE VALVE
		EXISTING UNKNOWN MANHOLE
		EXISTING GAS, SIZE PER PLAN
		EXISTING POWER POLE
		EXISTING TRAFFIC SIGNAL
		EXISTING WALL
		WATER PIPE FITTING
		WATER POINT OF CONNECTION
		SEWER POINT OF CONNECTION
		DAYLIGHT LINE
		STREET CENTERLINE
		RIGHT-OF-WAY
		MATCHLINE
		BOUNDARY LINE
		PHASE LINE
		PROPERTY LINE
		FLOWLINE
		SAWCUT
		CUT/FILL TRANSITION LINE
		SIDEWALK
		EX STRIPING TO BE OBLITERATED
		GRADE BREAK LINE
		REFLECTIVE RAISED PAVEMENT MARKERS
		BACK WATER VALVE
		WROUGHT IRON FENCE
		WROUGHT IRON FENCE WITH RETAINING
		PONY WALL
		DECORATIVE PERIMETER WALL
		DECORATIVE PERIMETER RETAINING WALL
		PROPOSED CURB AND GUTTER WITH RIGHT-OF-WAY AT BACK OF CURB
		EXISTING CURB AND GUTTER WITH RIGHT-OF-WAY AT BACK OF CURB
		FUTURE CURB AND GUTTER WITH RIGHT-OF-WAY AT BACK OF CURB

QUANTITIES

		PRIVATE	PUBLIC
DRAINAGE			
1. 48" TYPE II STORM DRAIN MANHOLE	EA	4	-
2. 48" TYPE III STORM DRAIN MANHOLE	EA	2	-
3. 5" TYPE "CM2" DROP INLET	EA	1	-
4. 7.5" TYPE "CM2" DROP INLET	EA	3	-
5. 10" TYPE "CM2" DROP INLET	EA	1	-
6. 20" TYPE "CM2" DROP INLET	EA	1	-
7. 18" RCP CLASS III STORM DRAIN	LF	560	-
8. 24" RCP CLASS III STORM DRAIN	LF	84	-
9. 36" RCP CLASS III STORM DRAIN	LF	290	-
10. 18" C-900 PVC STORM DRAIN	LF	21	-
11. 36" C-900 PVC STORM DRAIN	LF	80	-
12. 8" WIDE CONCRETE VALLEY GUTTER W/10" TYPE I AGGREGATE BASE	EA	8	-
13. NDOT TYPE II DROP INLET	EA	1	-
14. SIDEWALK DRAIN	EA	2	-
15. RIPRAP D50=6", THK=12"	SF	780	-
16. RIPRAP D50=12", THK=24"	SF	1,900	-
SEWER SYSTEM			
1. 4" PVC SEWER LATERAL (PRIVATE)	LF	4,300	-
2. 8" PVC SEWER PIPE (PUBLIC)	LF	-	4,840
3. STANDARD 48" SEWER MANHOLE (PUBLIC)	EA	-	35
4. BACK WATER VALVE (PRIVATE)	EA	45	-
5. 8" C-900 SEWER (PUBLIC)	LF	-	360
6. 8" C-900 SEWER LATERAL (PRIVATE)	LF	300	-
7. ABANDON 8" SEWER	LF	-	50
8. MODIFY MANHOLE BASE (PUBLIC)	EA	-	1
WATER SYSTEM			
1. FIRE HYDRANT ASSEMBLY W/6" GATE VALVE PER UDACS PLATE NO. 40	EA	-	12
2. 6" PVC WATER PIPE (CLASS 150)	LF	-	400
3. 8" PVC WATER PIPE (CLASS 150)	LF	-	4,700
4. 8" DIP WATER PIPE (CLASS 350)	LF	-	120
5. 8" GATE VALVE WITH VALVE BOX PER UDACS PLATE NO. 30 & 39	EA	-	18
6. 8" x 6" TEE PER UDACS PLATE NO. 31	EA	-	9
7. 8" x 8" TEE PER UDACS PLATE NO. 31	EA	-	6
8. 6" 5 DEGREE BEND WITH RESTRAINED JOINTS	EA	-	1
9. 6" 11.25 DEGREE BEND PER UDACS PLATE NO. 31	EA	-	1
10. 6" 22.5 DEGREE BEND PER UDACS PLATE NO. 31	EA	-	-
11. 6" 45 DEGREE BEND PER UDACS PLATE NO. 31	EA	-	2
12. 8" 5 DEGREE BEND WITH RESTRAINED JOINTS	EA	-	18
13. 8" 11.25 DEGREE BEND PER UDACS PLATE NO. 31	EA	-	20
14. 8" 22.5 DEGREE BEND PER UDACS PLATE NO. 31	EA	-	6
15. 8" 45 DEGREE BEND PER UDACS PLATE NO. 31	EA	-	5
16. 8" 90 DEGREE BEND PER UDACS PLATE NO. 31	EA	-	-
17. CAP AND 2" BLOW-OFF ASSEMBLY W/CAP PER UDACS PLATE NO. 36	EA	-	6
18. 1" COPPER SERVICE W/ 3/4" METER PER UDACS PLATE NO. 1	EA	-	102
19. 1.5" COPPER SERVICE W/ 3/4" METER PER UDACS PLATE NO. 1	EA	-	47
20. 1" COPPER SERVICE W/ 3/4" METER & 1" RPPA PER UDACS PLATE NO. 4 & 8	EA	-	3
21	-	-	-
22	-	-	-
STREET IMPROVEMENTS			
1. 2" A.C. PAVEMENT W/ 4" TYPE II OVER 6" TYPE I AGGREGATE BASE	SY	20,100	-
2. STANDARD 18" TYPE "L" ISLAND CURB & GUTTER W/6" TYPE I AGGREGATE BASE	LF	700	-
3. STANDARD 8" TYPE "A" ISLAND CURB W/6" TYPE I AGGREGATE BASE	LF	600	-
4. STANDARD 30" TYPE "ROLL" CURB & GUTTER W/6" TYPE I AGGREGATE BASE	LF	8,500	-
5. 4" WIDE CONCRETE SIDEWALK W/4" TYPE II AGGREGATE BASE	SF	18,400	-
6. 5" WIDE CONCRETE SIDEWALK W/4" TYPE II AGGREGATE BASE	SF	3,400	-
7. 8" WIDE CONCRETE VALLEY GUTTER W/10" TYPE II AGGREGATE BASE	SF	3,000	-
8. SIDEWALK RAMP	EA	10	-
TRAFFIC SIGNS			
1. 36" STOP SIGN WITH POST (R1-1)	EA	-	1
2. 12" STREET NAME SIGN (D-3, BROWN W/ WHITE LETTERS) (2 PER POLE)	EA	-	2
3. 30" STOP SIGN WITH POST (R1-1)	EA	-	9
4. 9" STREET NAME SIGN (D-3, BROWN W/ WHITE LETTERS)(6 POLES x 2 PER POLE=12)	EA	-	20
5. BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKER	EA	-	9
6. TYPE III BARRICADE	EA	-	2
7.	-	-	-
8.	-	-	-
DRY UTILITIES			
1. 100W H.P.S. LUMINAIRE STREET LIGHT W/DECORATIVE POLE	EA	34	-
2. 1-1/4" PVC STREET LIGHT CONDUIT WITH (2) #4 AND (1) #8 CONDUCTORS	LF	4,700	-
3. NO. 3-1/2 PULL BOX W/METAL COVER	EA	8	-
4. 150 AMP SERVICE PEDESTAL (RR)	EA	1	-
5. 200 AMP SERVICE PEDESTAL (STLT)	EA	2	-



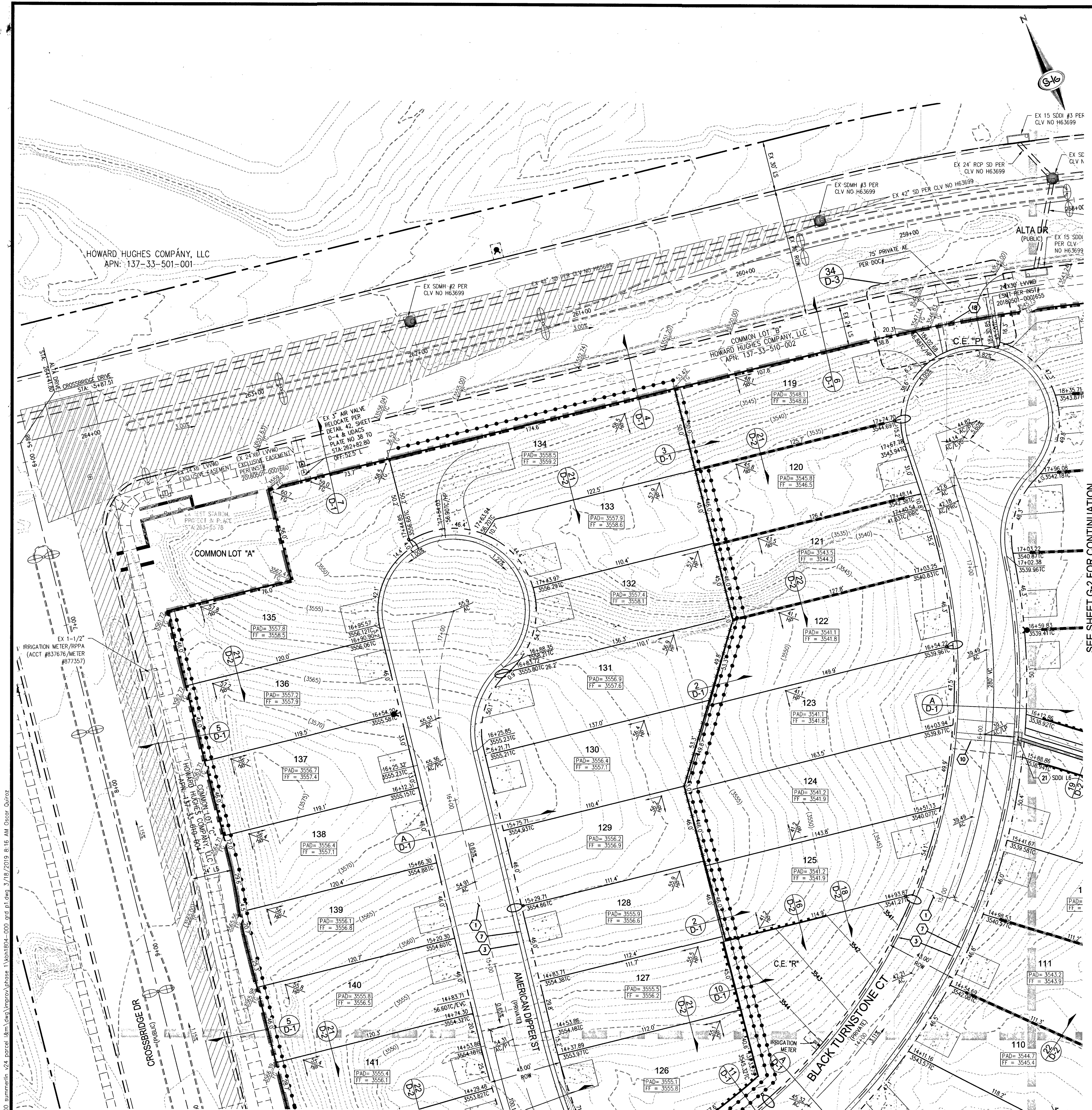
SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5309

KBHOME
BRISTLE VALE - UNIT 1
LEGEND, ABBREVIATIONS, AND QUANTITIES

DATE: 3/14/19
DRAFTER: OIQ
DESIGNER: OIQ
CHECKED: DP
PROJECT NO. KBH1804-000

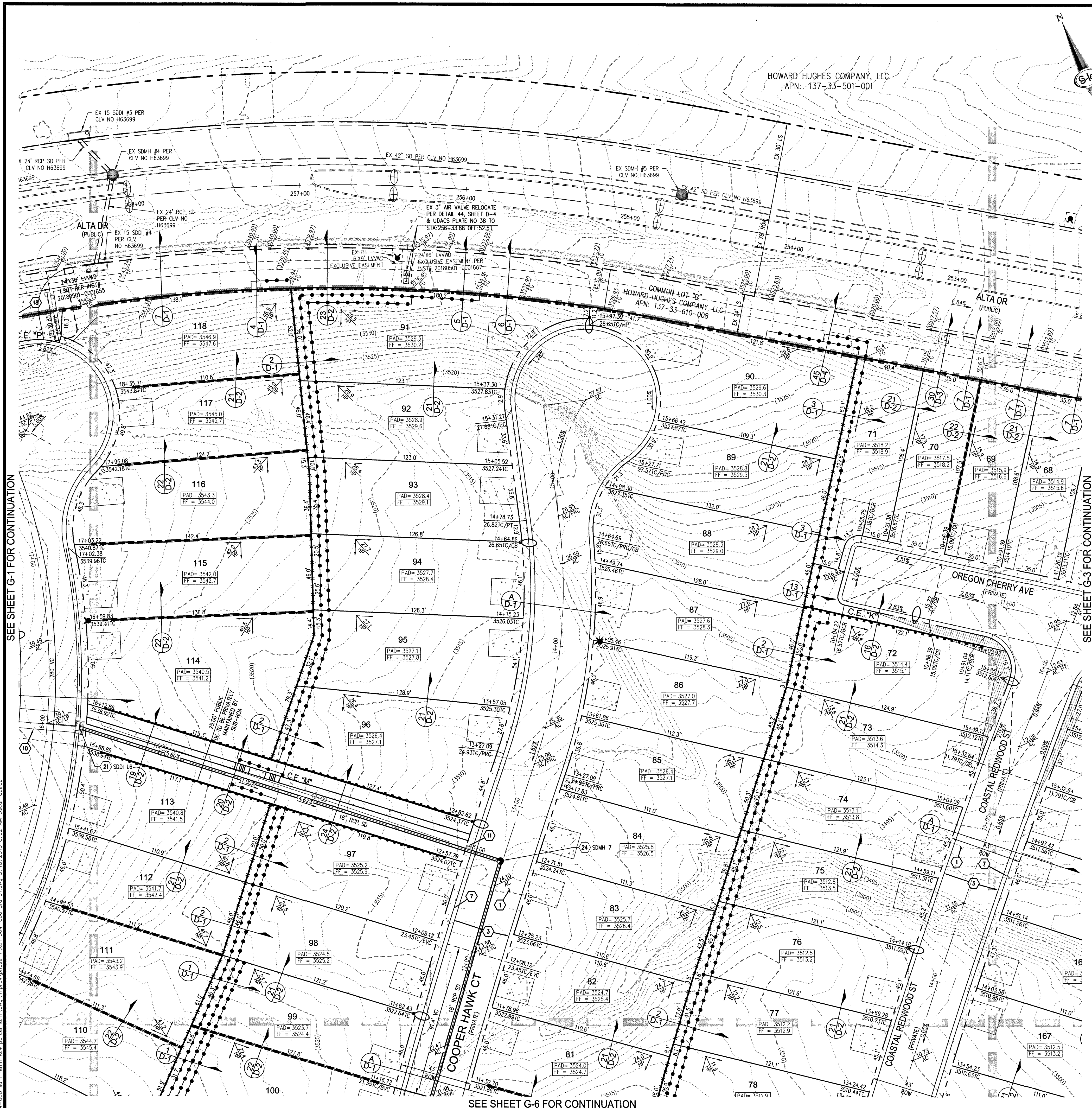
C-3
SHEET 3 OF 54
L19-00027
1071501

PROJ.#: 136070A QS:137-33-NE



3: KbH1804-000 summerlin_v24 parcel item data\improvement\KbH1804-000 and p.dwg 3/18/2019 8:52 AM Oscar Quinz

SEE SHEET G-1 FOR CONTINUATION



0 30 60
SCALE - 1"=30'
FEET

SURVEY NOTE

OWNER RESPONSIBLE TO PROVIDE SURVEY MONUMENTATION AS SHOWN AND TO REPLACE ALL SURVEY MONUMENTATION DAMAGED, DISTURBED, DESTROYED, OR OBSOLETE DURING CONSTRUCTION.

SOILS REPORT

SOILS REPORT BY SOUTHWEST GEOTECHNICAL
PROJECT NO. 182267 DATED 7/12/18

EARTHWORKS

EARTHWORK QUANTITIES (RAW):
CUT= 278,300 CU YDS
FILL= 308,400 CU YDS

EXPORTED MATERIAL TO BE DISPOSED OF AT AN APPROVED LICENSED DISPOSAL FACILITY OR AT A SITE WITH AN APPROVED AND ACTIVE GRADING PERMIT.

DRAINAGE IMPROVEMENT QUANTITIES

1. 18" RCP STORM DRAIN	LF	560
2. 24" RCP STORM DRAIN	LF	84
3. 36" RCP STORM DRAIN	LF	290
4. 18" C-900 PVC STORM DRAIN	LF	21
5. 36" C-900 PVC STORM DRAIN	LF	80
6. 5" TYPE "CM2" DROP INLET	EA	1
7. 7.5" TYPE "CM2" DROP INLET	EA	3
8. 10" TYPE "CM2" DROP INLET	EA	1
9. 20" TYPE "CM2" DROP INLET	EA	1
10. NDOT TYPE II INLET	EA	1
11. 48" TYPE II STORM DRAIN MANHOLE	EA	4
12. 48" TYPE III STORM DRAIN MANHOLE	EA	2
13. 8" WIDE CONCRETE VALLEY GUTTER	EA	8
14. SIDEWALK DRAIN	EA	2
15. D50=6" RIP-RAP	SF	780
16. D50=12" RIP-RAP	SF	1,900

LEGAL DESCRIPTION

LYING WITHIN THE NORTH EAST QUARTER (NE1/4) OF SECTION 33, TOWNSHIP 20 SOUTH, RANGE 59 EAST M.D.M. CITY OF LAS VEGAS, CLARK COUNTY, NEVADA.

EASEMENT NOTES

1. ALL PRIVATE STREETS ARE P.U.E. PUBLIC SEWER EASEMENTS AND PUBLIC DRAINAGE EASEMENTS TO BE PRIVATELY MAINTAINED BY HOA.
2. ALL COMMON ELEMENTS ARE PUBLIC DRAINAGE EASEMENTS TO BE PRIVATELY MAINTAINED.

KEY MAP

NOT TO SCALE

CONSTRUCTION NOTES

1. INSTALL 2" ASPHALT PAVEMENT OVER 4" TYPE II AGGREGATE BASE
 2. INSTALL "L" TYPE CURB PER CCAUSD NO. 216
 3. INSTALL MODIFIED ROLL TYPE CURB PER CCAUSD NO. 217.1
 4. INSTALL "L" TYPE ISLAND CURB PER CCAUSD NO. 219
 5. INSTALL "A" TYPE ISLAND CURB PER CCAUSD NO. 219
 6. INSTALL 10" TYPE "CM2" DROP INLET PER CCAUSD NO. 219
 7. CONSTRUCT 4" WIDE SIDEWALK PER CCAUSD NO. 234
 8. CONSTRUCT 5" WIDE SIDEWALK PER CCAUSD NO. 234
 9. CONSTRUCT SIDEWALK RAMPS USING ARMOR TILE TRUNCATED DOMES OR EQUIVALENT PER DETAIL 33, SHEET D-3
 10. CONSTRUCT 6" CROSS GUTTER PER CCAUSD NO. 228
 11. CONSTRUCT SIDEWALK DRAIN PER CCAUSD NO. 236
 12. INSTALL 18" RCP STORM DRAIN PIPE
 13. INSTALL 24" RCP STORM DRAIN PIPE
 14. INSTALL 30" RCP STORM DRAIN PIPE
 15. INSTALL 36" RCP STORM DRAIN PIPE
 16. INSTALL 48" RCP STORM DRAIN PIPE
 17. INSTALL 4.5" RCP DRAIN TYPE 2A DROP INLET PER DETAIL R-4.2.1, SHEET D-4, CCAUSD NO. 421
 18. INSTALL WROUGHT IRON FENCE WITH VEHICLE ACCESS GATE AND EMERGENCY KNOX PADLOCK PER CCAUSD NO. 425.51
 19. INSTALL DROP INLET CONCRETE APRON PER DETAIL R-4.2.7, SHEET D-4 & CCAUSD NO. 421
 20. CUT EXISTING SD PIPE WHERE SHOWN ON PLANS
 21. INSTALL 7.5" TYPE "CM2" DROP INLET PER CCAUSD NO. 421
 22. INSTALL 10" TYPE "CM2" DROP INLET PER CCAUSD NO. 421
 23. INSTALL 20" TYPE "CM2" DROP INLET PER CCAUSD NO. 421
 24. INSTALL 48" TYPE II SDMH PER CCAUSD NO. 401, 402 & 405.2
 25. INSTALL 5" TYPE "CM2" DROP INLET PER CCAUSD NO. 421
 26. INSTALL 48" TYPE III SDMH PER CCAUSD NO. 401, 402 & 406
 27. INSTALL 48" TYPE I SDMH CCAUSD NO. 401, 402 & 403
 28. INSTALL D50=6" RIPRAP THICKNESS=24" OVER 6" TYPE II AGGREGATE BASE
 29. AGGREGATE BASE
- SEE SHEET G-3 FOR LEGEND, ABBREVIATIONS, & QUANTITIES

GRADING NOTES

1. FINAL GRADES ADJACENT TO STRUCTURES SHALL BE IN CONFORMANCE WITH IBC 2012, SECTION 2304.11.2.2.
 2. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AND REPORT ALL DISCREPANCIES TO THE ENGINEER.
 3. ALL IMPROVEMENTS TO BE PROTECTED FROM EROSION BY SWPPP.
 4. MAXIMUM MINIMUM SLOPES AND MINIMUM STREET SECTIONS NOT TO EXCEED THAT SHOWN ON GEOTECH REPORT.
 5. SEE DETAIL SHEET FOR STREET SECTIONS AND DETAILS.
 6. ALL PUBLIC AND PRIVATE DRAINAGE IMPROVEMENTS TO BE BONDED FOR AND INSPECTED.
 7. CONSTRUCTION OF BLOCK WALLS REQUIRES A SEPARATE BUILDING PERMIT AND APPROVAL BY THE CITY LAS VEGAS BUILDING DEPARTMENT.
 8. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING UTILITY STRUCTURES AND FACILITIES AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. CONTRACTOR TO PROTECT IN PLACE DURING CONSTRUCTION. ENGINEER/OWNER SHALL BE NOTIFIED OF PRIOR DAMAGE TO EXISTING FACILITIES PRIOR TO CONSTRUCTION. CONTRACTOR WILL BE RESPONSIBLE FOR REPAIR/REPLENISHING FACILITIES IF ENGINEER/OWNER IS NOT NOTIFIED OF EXISTING DAMAGE PRIOR TO CONSTRUCTION COMMENCING.
 9. NO STRUCTURE, VEGETATION, OR OBJECTS OF ANY KIND IS PERMITTED OVER TWENTY-FOUR (24) INCHES IN HEIGHT (MEASURED FROM THE TOP OF THE ADJACENT CURB IF CURB EXIST) WITHIN THE SIGHT VISIBILITY ZONES.
- WATER TIGHT MANHOLE

FLOOD ZONE

THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED ZONE X (UNSHADED) AS DEPICTED ON FLOOD INSURANCE RATE MAP (FIRM) PANEL 320032C2125E & 320032C2150, DATED SEPTEMBER 27, 2002. A ZONE X (UNSHADED) IS DESCRIBED AS AN AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAIN.

DISCLAIMER NOTE

1. 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 EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.
2. FOR ROADWAY WIDENING AND HALF STREET IMPROVEMENTS THE CONTRACTOR SHALL VERIFY CROSS SLOPES FROM EXISTING PAVEMENT SAWCUT LINE TO PROPOSED EDGE OF PAVEMENT OR PROJECTED UP OF CURB PRIOR TO SUBGRADE PREPARATION AND CONSTRUCTION OF PROPOSED CURB LINE. IF MINIMUM OR MAXIMUM CROSS SLOPES DO NOT MEET AGENCY STANDARDS THE CONTRACTOR SHALL NOTIFY THE ENGINEER.

BENCHMARK

CITY OF LAS VEGAS BENCHMARK 7109 345W6
RIVET AND ROUND PLATE IN THE TOP OF CURB AT THE SOUTHEAST CORNER OF DESERT MOON RD. AND SKY VISTA DR.
ELEVATION = 1011.422 METERS (NAVD '88)
ELEVATION = 3318.31 US SURVEY FEET (NAVD '88)

BASIS OF BEARINGS

NORTH 05°59'55" WEST, BEING THE BEARING OF THE WEST LINE OF SECTION 34, TOWNSHIP 20 SOUTH, RANGE 59 EAST, M.D.M. CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF ON FILE IN THE CLARK COUNTY, NEVADA RECORDER'S OFFICE IN BOOK 135, PAGE 71 OF PLATS.



FLOOD CERTIFICATION

I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED GEOTECHNICAL DRAINAGE STUDY D550339 ON FILE AT CITY OF LAS VEGAS FOR THE SUBJECT PROJECT.

Timothy M. Mulrooney 3/18/19
TIMOTHY M. MULROONEY 22936
DATE

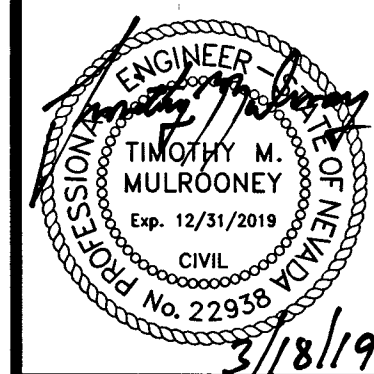
DATE: 3/14/19

DRAFTER: OIQ

DESIGNER: OIQ

CHECKED: DP

PROJECT NO.
KBH1804-000





0 30 60
SCALE - 1"=30' FEET

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

SURVEY NOTE
OWNER RESPONSIBLE TO PROVIDE SURVEY MONUMENTATION AS SHOWN AND TO REPLACE ALL SURVEY MONUMENTATION DAMAGED, DISTURBED, DESTROYED, OR OBLISCURED DURING CONSTRUCTION.

SOILS REPORT
SOILS REPORT BY SOUTHWEST GEOTECHNICAL PROJECT NO. 182267 DATED 7/12/18

EARTHWORKS
EARTHWORK QUANTITIES (RAW):
CUT= 278,300 CU YDS
FILL= 309,400 CU YDS
EXPORTED MATERIAL TO BE DISPOSED OF AT AN APPROVED LICENSED DISPOSAL FACILITY OR AT A SITE WITH AN APPROVED AND ACTIVE GRADING PERMIT.

DRAINAGE IMPROVEMENT QUANTITIES

1. 18" RCP STORM DRAIN	LF 560
2. 24" RCP STORM DRAIN	LF 84
3. 36" RCP STORM DRAIN	LF 290
4. 18" C-900 PVC STORM DRAIN	LF 21
5. 36" C-900 PVC STORM DRAIN	LF 80
6. 5" TYPE "CM2" DROP INLET	EA 1
7. 7.5" TYPE "CM2" DROP INLET	EA 3
8. 10" TYPE "CM2" DROP INLET	EA 1
9. 20" TYPE "CM2" DROP INLET	EA 1
10. NDOT TYPE II INLET	EA 1
11. 48" TYPE II STORM DRAIN MANHOLE	EA 4
12. 48" TYPE III STORM DRAIN MANHOLE	EA 2
13. 8" WIDE CONCRETE VALLEY GUTTER	EA 8
14. SIDEWALK DRAIN	EA 2
15. D50=6" RIP-RAP	SF 780
16. D50=12" RIP-RAP	SF 1,900

LEGAL DESCRIPTION
LYING WITHIN THE NORTH EAST QUARTER (NE1/4) OF SECTION 33, TOWNSHIP 20 SOUTH, RANGE 59 EAST W.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA.

EASEMENT NOTES

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- ALL COMMON ELEMENTS ARE PUBLIC DRAINAGE EASEMENTS TO BE PRIVATELY MAINTAINED.

GRADING NOTES

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- ALL IMPROVEMENTS TO BE PROTECTED FROM EROSION BY SWPPP.
- MAXIMUM MINIMUM SLOPES AND MINIMUM STREET SECTIONS NOT TO EXCEED THAT SHOWN ON GEOTECH REPORT.
- SEE DETAIL SHEET FOR STREET SECTIONS AND DETAILS.
- ALL PUBLIC AND PRIVATE DRAINAGE IMPROVEMENTS TO BE BONDED FOR AND INSPECTED.
- CONSTRUCTION OF BLOCK WALLS REQUIRES A SEPARATE BUILDING PERMIT AND APPROVAL BY THE CITY OF LAS VEGAS BUILDING DEPARTMENT.
- CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING UTILITY STRUCTURES AND FACILITIES AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. CONTRACTOR TO PROTECT IN PLACE DURING CONSTRUCTION. ENGINEER/OWNER SHALL BE NOTIFIED OF PRIOR DAMAGE TO EXISTING FACILITIES PRIOR TO CONSTRUCTION. CONTRACTOR WILL BE RESPONSIBLE FOR REPAIR/REPLENISHING FACILITIES IF ENGINEER/OWNER IS NOT NOTIFIED OF EXISTING DAMAGE PRIOR TO CONSTRUCTION COMMENCING.
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- WATER TIGHT MANHOLE

FLOOD ZONE
THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED ZONE X (UNSHADED) AS DEPICTED ON FLOOD INSURANCE RATE MAP (FIRM) PANEL 320032C2125E & 320032C2150, DATED SEPTEMBER 27, 2002. A ZONE X (UNSHADED) IS DESCRIBED AS AN AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAIN.

DISCLAIMER NOTE

- 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 EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.
- FOR ROADWAY WIDENING AND HALF STREET IMPROVEMENTS THE CONTRACTOR SHALL VERIFY CROSS SLOPES FROM EXISTING PAVEMENT SAWCUT LINE TO PROPOSED EDGE OF PAVEMENT PROJECTED UP OF CURB PRIOR TO SUBGRADE PREPARATION AND CONSTRUCTION OF PROPOSED CURB LINE. IF MINIMUM OR MAXIMUM CROSS SLOPES DO NOT MEET AGENCY STANDARDS THE CONTRACTOR SHALL NOTIFY THE ENGINEER.

BENCHMARK
CITY OF LAS VEGAS BENCHMARK 7LV09 345W6
RIVET AND ROUND PLATE IN THE TOP OF CURB AT THE SOUTHEAST CORNER OF DESERT MOON RD. AND SKY VISTA DR.
ELEVATION = 1011.422 METERS (NAVD '88)
ELEVATION = 3318.31 US SURVEY FEET (NAVD '88)

BASIS OF BEARINGS
NORTH 05°59'55" WEST, BEING THE BEARING OF THE WEST LINE OF SECTION 34, TOWNSHIP 20 SOUTH, RANGE 59 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF ON FILE IN THE CLARK COUNTY, NEVADA RECORDER'S OFFICE IN BOOK 135, PAGE 71 OF PLATS.

FLOOD CERTIFICATION
I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED TECHNICAL DRAINAGE STUDY 055039 ON FILE AT CITY OF LAS VEGAS FOR THE SUBJECT PROJECT.
TIM M. MULROONEY 3/18/19 DATE

FAST
Call before you Dig
UnderGround
1-702-432-5300
FREEWAY & ARTERIAL SYSTEM OF TRANSPORTATION (F.A.S.T.)

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY.
CALL BEFORE YOU DIG OVERHEAD
1-702-227-2929

Call before you Dig
AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.
Call 811
OR
1-800-227-2600

KEY MAP
NOT TO SCALE

CONSTRUCTION NOTES

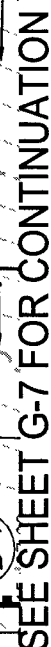
- INSTALL 2" ASPHALT PAVEMENT OVER 4" TYPE II AGGREGATE BASE
- INSTALL 1" TYPE CURB PER CCAUSD NO. 216
- INSTALL MODIFIED ROLL TYPE CURB PER CCAUSD NO. 217.1
- INSTALL 1" TYPE ISLAND CURB PER CCAUSD NO. 219
- INSTALL "A" TYPE ISLAND CURB PER CCAUSD NO. 219
- INSTALL 10" TYPE CURB TO MODIFIED ROLL CURB TRANSITION PER DETAIL 31, SHEET D-3
- CONSTRUCT 4" WIDE SIDEWALK PER CCAUSD NO. 234
- CONSTRUCT 5" WIDE SIDEWALK PER CCAUSD NO. 234
- CONSTRUCT SIDEWALK RAMP USING ARMOR TILE TRUNCATED DORIES OR EQUIVALENT PER DETAIL 33, SHEET D-3
- CONSTRUCT 8" CROSS GUTTER PER CCAUSD NO. 228
- CONSTRUCT SIDEWALK DRAIN PER CCAUSD NO. 236
- INSTALL 18" RCP STORM DRAIN PIPE
- INSTALL 24" RCP STORM DRAIN PIPE
- INSTALL 30" RCP STORM DRAIN PIPE
- INSTALL 36" RCP STORM DRAIN PIPE
- INSTALL 48" RCP STORM DRAIN PIPE
- INSTALL 4.5" NDOT TYPE 2A DROP INLET PER DETAIL R-4.2.1, SHEET D-4, CCAUSD NO. 421
- INSTALL WROUGHT IRON FENCE WITH VEHICLE ACCESS GATE AND EMERGENCY KNOX PADLOCK PER CCAUSD NO. 425.51
- INSTALL DROP INLET CONCRETE APRON PER DETAIL R-4.2.7, SHEET D-4 & CCAUSD NO. 421
- CUT EXISTING SD PIPE WHERE SHOWN ON PLANS
- INSTALL 7.5" TYPE "CM2" DROP INLET PER CCAUSD NO. 421
- INSTALL 10" TYPE "CM2" DROP INLET PER CCAUSD NO. 421
- INSTALL 20" TYPE "CM2" DROP INLET PER CCAUSD NO. 421
- INSTALL 48" TYPE II SDMH PER CCAUSD NO. 401, 402 & 403
- INSTALL 48" TYPE I SDMH CCAUSD NO. 401, 402 & 403
- INSTALL D50=6" RIPRAP THICKNESS=12" OVER 6" TYPE II AGGREGATE BASE
- INSTALL RIPRAP D50=12" THICKNESS=24" OVER 6" TYPE II AGGREGATE BASE

SEE SHEET D-3 FOR LEGEND, ABBREVIATIONS, & QUANTITIES

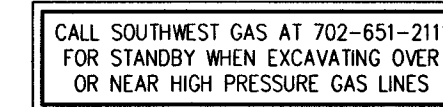
SLATER HANIFAN GROUP
CONSULTING ENGINEERS & PLANNERS
9740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

KBHOME
BRISTLE VALE - UNIT 1
GRADING PLAN III

DATE: 3/14/19
DRAFTER: OIQ
DESIGNER: OIQ
CHECKED: DP
PROJECT NO. KBH1804-000
TIMOTHY M. MULROONEY
3/18/19
G-3
SHEET 6 OF 54
L19-00027
1074502



SEE SHEET C-5 FOR CONTINUATION



OWNER RESPONSIBLE TO PROVIDE SURVEY
MONUMENTATION AS SHOWN AND TO REPLACE ALL
SURVEY MONUMENTATION DAMAGED, DISTURBED,
DESTROYED, OR OBSCURED DURING CONSTRUCTION.

SOILS REPORT BY SOUTHWEST GEOTECHNICAL
PROJECT NO. 182267 DATED 7/12/18

EARTHWORK QUANTITIES (RAW):
CUT= 278,300 CU YDS
FILL= 309,400 CU YDS

EXPORTED MATERIAL TO BE DISPOSED OF AT AN
APPROVED LICENSED DISPOSAL FACILITY OR AT A
SITE WITH AN APPROVED AND ACTIVE GRADING
PERMIT.

GRADING NOTES

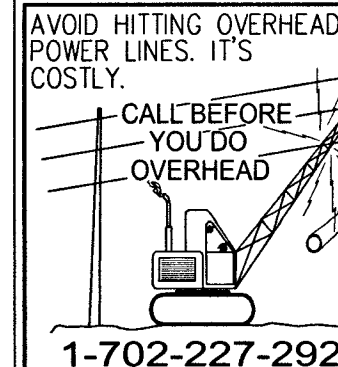
- FLOOD ZONE

THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED ZONE X (UNSHADED) AS
DEPICTED ON FLOOD INSURANCE RATE MAP (FIRM) PANEL 320032C2125E & 320032C2150
DATED SEPTEMBER 27, 2002. A ZONE X (UNSHADED) IS DESCRIBED AS AN AREA
DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAIN.

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2. FOR ROADWAY WIDENING AND HALF STREET IMPROVEMENTS THE CONTRACTOR SHALL VERIFY CROSS SLOPES FROM EXISTING PAVEMENT SAWCUT LINE TO PROPOSED EDGE OF FURNISHMENT OR PROJECTED UP OF CURB PRIOR TO SUBGRADE PREPARATION AND THE EXISTING CROSS SLOPES OF THE EXISTING ROADWAY OR MAJOR CROSS SLOPES DO NOT MEET AGENCY STANDARDS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER.

CITY OF LAS VEGAS BENCHMARK 7LV09 34SW6
RIVET AND ROUND PLATE IN THE TOP OF CURB AT THE SOUTHEAST CORNER OF DESERT
MOON RD. AND SKY VISTA DR.
ELEVATION = 1011.422 METERS (NAVD '88)
ELEVATION = 3318.31 US SURVEY FEET (NAVD '88)

NORTH 05°59'55" WEST, BEING THE BEARING OF THE WEST LINE OF SECTION 34, TOWNSHIP 20 SOUTH, RANGE 59 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF ON FILE IN THE CLARK COUNTY, NEVADA RECORDER'S OFFICE IN BOOK 135, PAGE 71 OF PLATS.



FLOOD CERTIFICATION

I CERTIFY THAT THIS GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED TECHNICAL DRAINAGE STUDY D55039 ON FILE AT CITY OF LAS VEGAS FOR THE SUBJECT PROJECT.

Timothy J. Mulrooney 3/18/19
TIM. MULROONEY, PE. 22938 DATE



LYING WITHIN THE NORTH EAST QUARTER
(NE1/4) OF SECTION 33, TOWNSHIP 20 SOUTH,
RANGE 59 EAST M.D.M., CITY OF LAS VEGAS,
CLARK COUNTY, NEVADA.

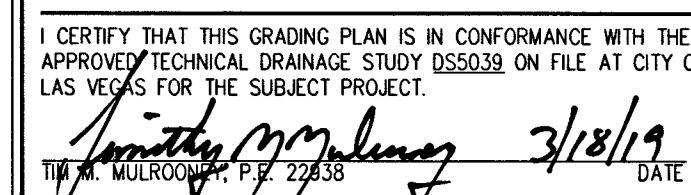
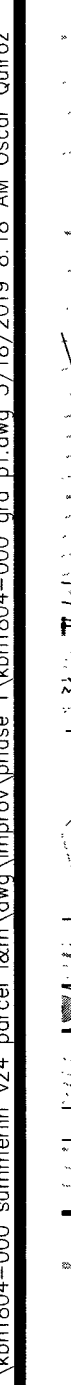
1. ALL PRIVATE STREETS ARE P.U.E., PUBLIC SEWER EASEMENTS AND PUBLIC DRAINAGE EASEMENTS TO BE PRIVATELY MAINTAINED BY HOA.
2. ALL COMMON ELEMENTS ARE PUBLIC DRAINAGE EASEMENTS TO BE PRIVATELY MAINTAINED.

CONSTRUCTION NOTES	
1	INSTALL 2" ASPHALT PAVEMENT OVER 4" TYPE II AGGREGATE BASE
2	INSTALL "L" TYPE CURB PER CCAUSD NO. 216
3	INSTALL MODIFIED ROLL TYPE CURB PER CCAUSD NO. 217.1
4	INSTALL "L" TYPE ISLAND CURB PER CCAUSD NO. 219
5	INSTALL "A" TYPE ISLAND CURB PER CCAUSD NO. 219
6	INSTALL 10" TYPE CURB TO MODIFIED ROLL CURB
7	TRANSITION PER DETAIL 3, SHEET D-9
8	CONSTRUCT 4' WIDE SIDEWALK PER CCAUSD NO. 234
9	CONSTRUCT 5' WIDE SIDEWALK PER CCAUSD NO. 234
10	CONSTRUCT SIDEWALK DRAIN PER CCAUSD NO. 236 TRUNCATED DOWNS OR EQUIVALENT PER DETAIL 33, SHEET D-9
11	CONSTRUCT 8' CROSS GUTTER PER CCAUSD NO. 228
12	CONSTRUCT SIDEWALK DRAIN PER CCAUSD NO. 236
13	INSTALL 18" RCP STORM DRAIN PIPE
14	INSTALL 24" RCP STORM DRAIN PIPE
15	INSTALL 36" RCP STORM DRAIN PIPE
16	INSTALL 48" RCP STORM DRAIN PIPE
17	INSTALL 4.5X5' SLOOT TYPE 2A DRAIN INLET PER DETAIL R-4.2.11, SHEET D-4, CCAUSD NO. 421
18	CONSTRUCT SLOOT TYPE 2A DRAIN INLET PER DETAIL ACCESS AREA AND EMERGENCY KNOX PADLOCK PER CCAUSD NO. 425.51
19	INSTALL DRAIN DROP INLET CONNECTION PER DETAIL R-4.2.7, SHEET D-4, CCAUSD NO. 421
20	CUT EXISTING SO PIPE WHERE SHOWN ON PLANS
21	INSTALL 7.5" TYPE "CM2" DRAIN INLET PER CCAUSD NO. 421
22	INSTALL 10" TYPE "CM2" DRAIN INLET PER CCAUSD NO. 421
23	INSTALL 20" TYPE "CM2" DRAIN INLET PER CCAUSD NO. 421
24	INSTALL 48" TYPE I SDMH PER CCAUSD NO. 401, 402 & 405.2
25	INSTALL 5" TYPE "CM2" DRAIN INLET PER CCAUSD NO. 421
26	INSTALL 48" TYPE III SDMH CCAUSD NO. 401, 402 & 406
27	INSTALL 48" TYPE I SDMH CCAUSD NO. 401, 402 & 403
28	INSTALL D50=6" RIRRAP THICKNESS=12" OVER 6" TYPE II AGGREGATE BASE
29	INSTALL RIRRAP D50=12" THICKNESS=24" OVER 6" TYPE II AGGREGATE BASE
30	INSTALL 12" TYPE III SDMH PER CCAUSD NO. 401, 402 & 405.2



G-7
SHEET 10 OF 54
L19-00027
10785102

SEE SHEET G-7 FOR CONTINUATION



G-8
SHEET 11 OF 54
L19-00027
10785102



FAST
Call before you
UnderGround
1-702-432-5300
FREEWAY & ARTERIAL SYSTEM
OF TRANSPORTATION (E.A.S.T.)

DATE:	3/14/19
DRAFTER:	OIO
DESIGNER:	OIO
CHECKED:	DP
PROJECT NO.	KBH1804-000

3/18/19

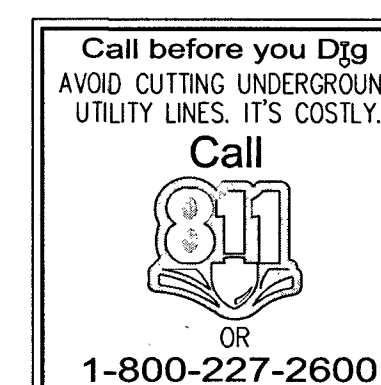
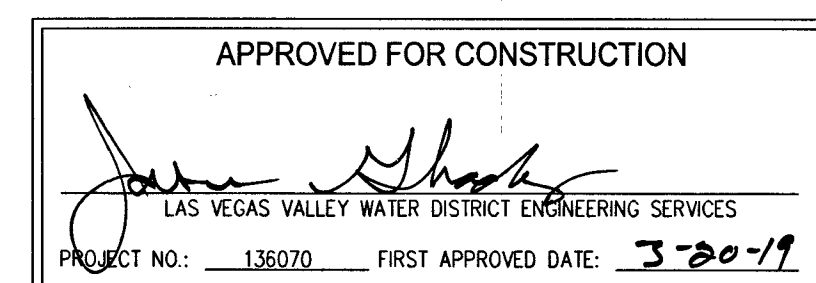
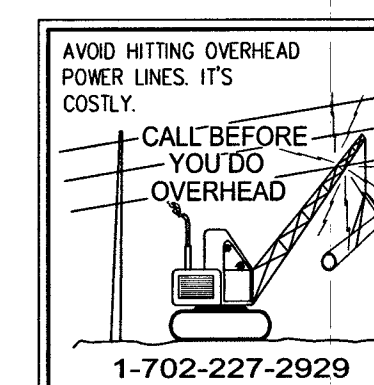
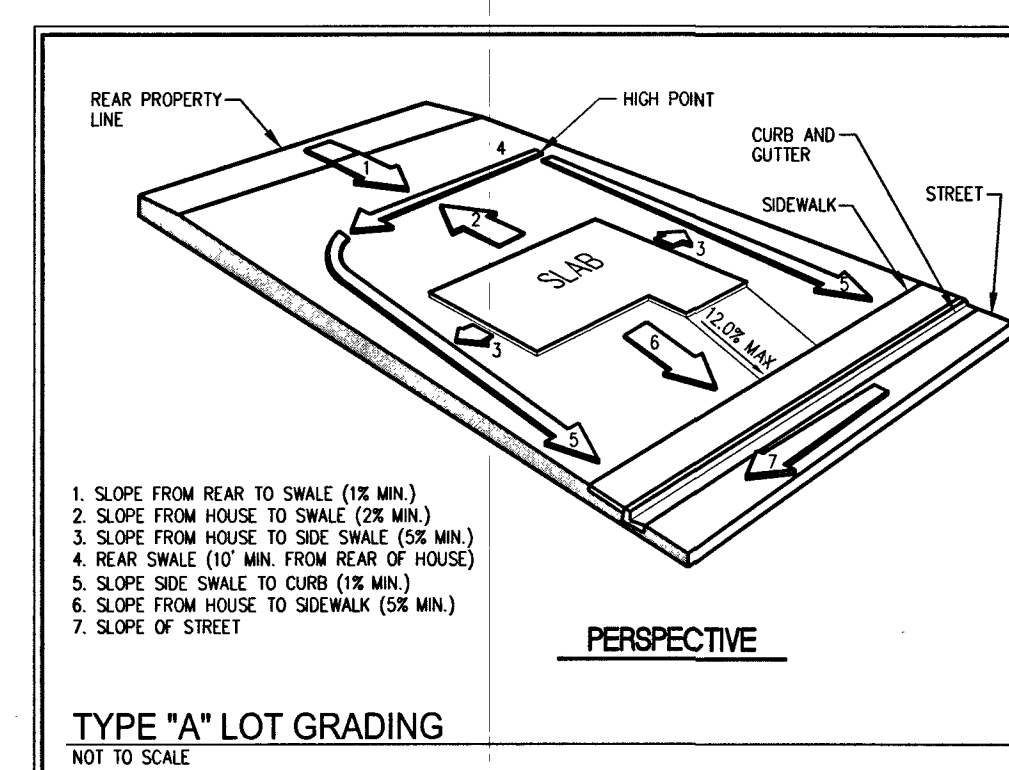
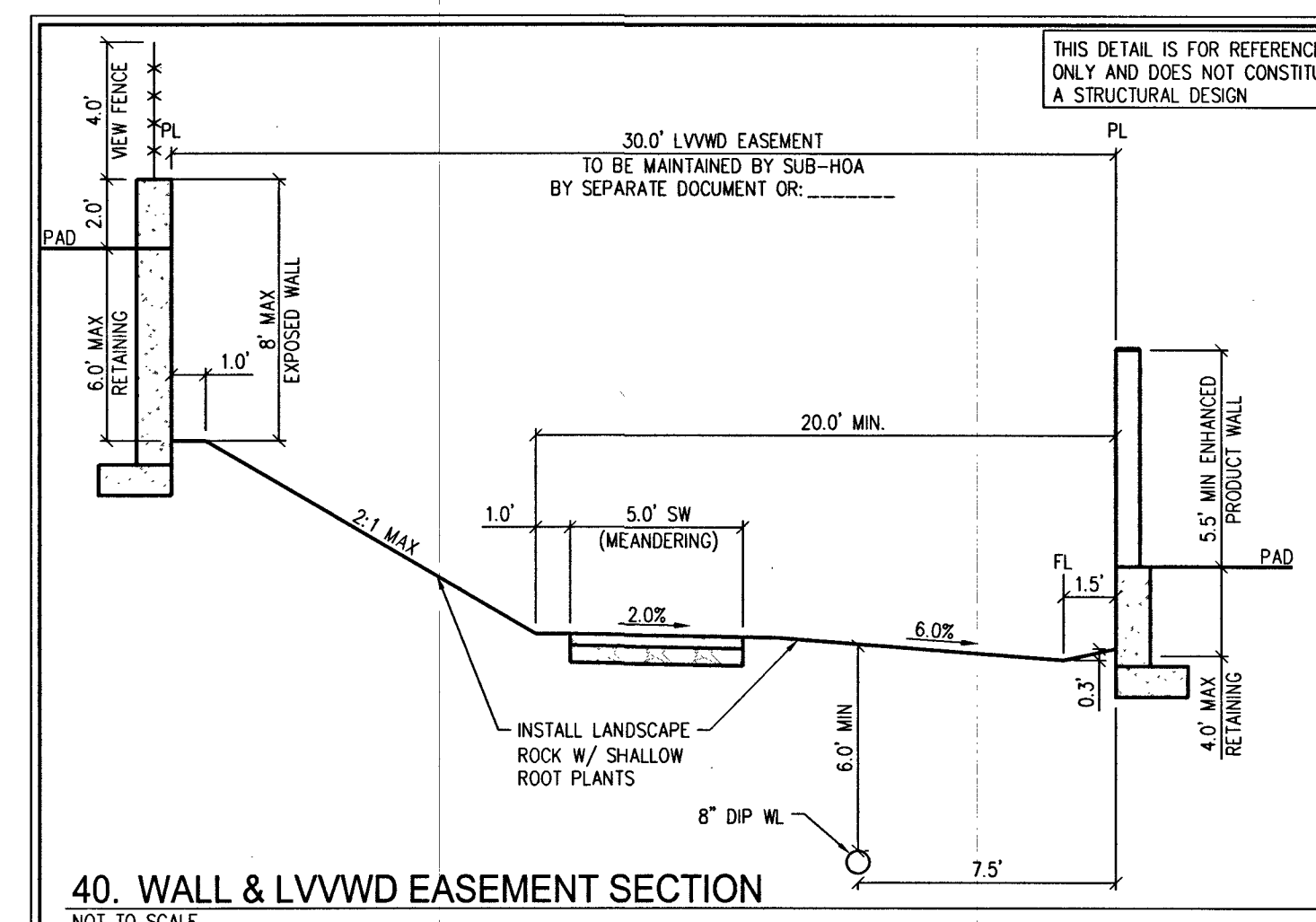
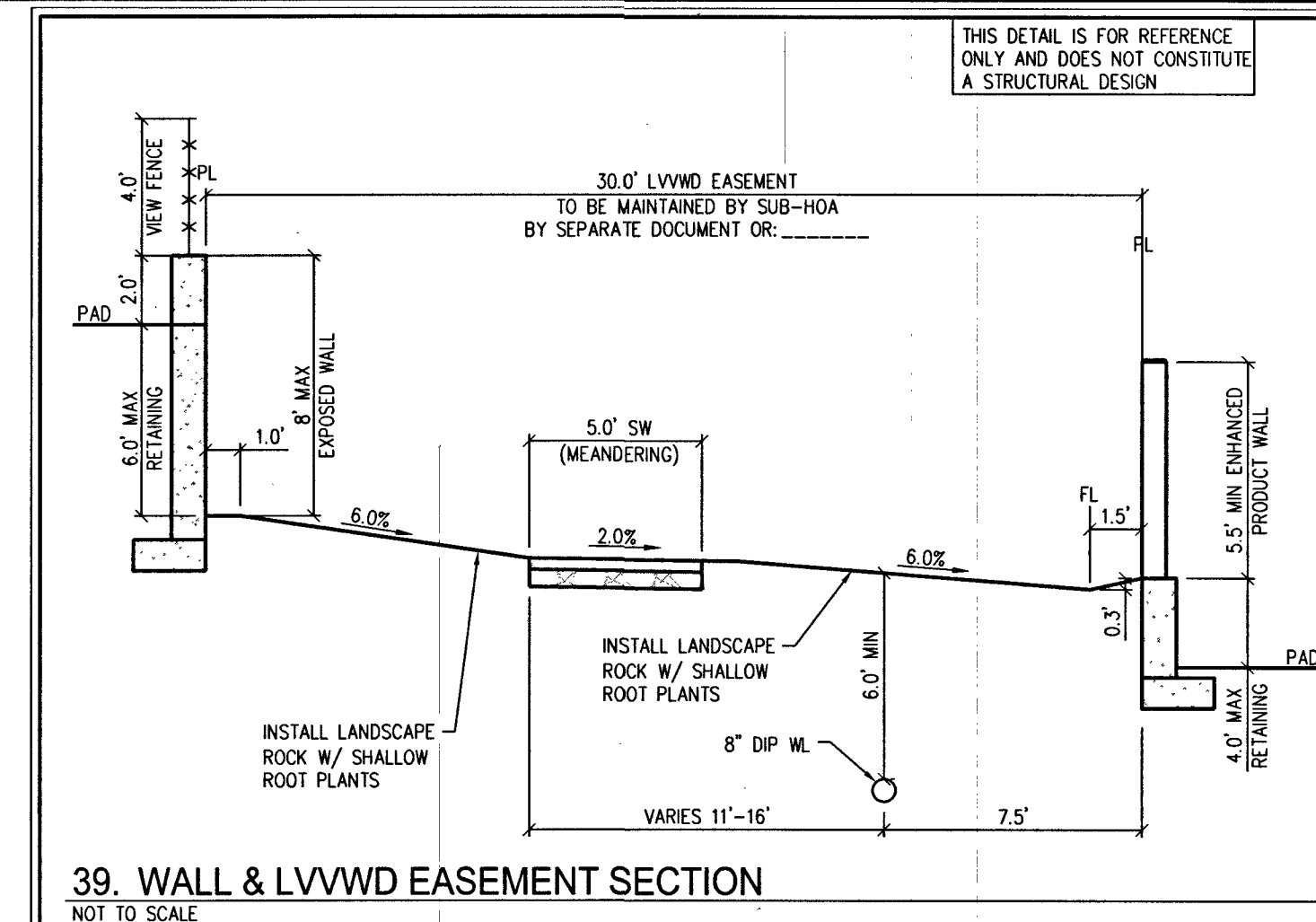
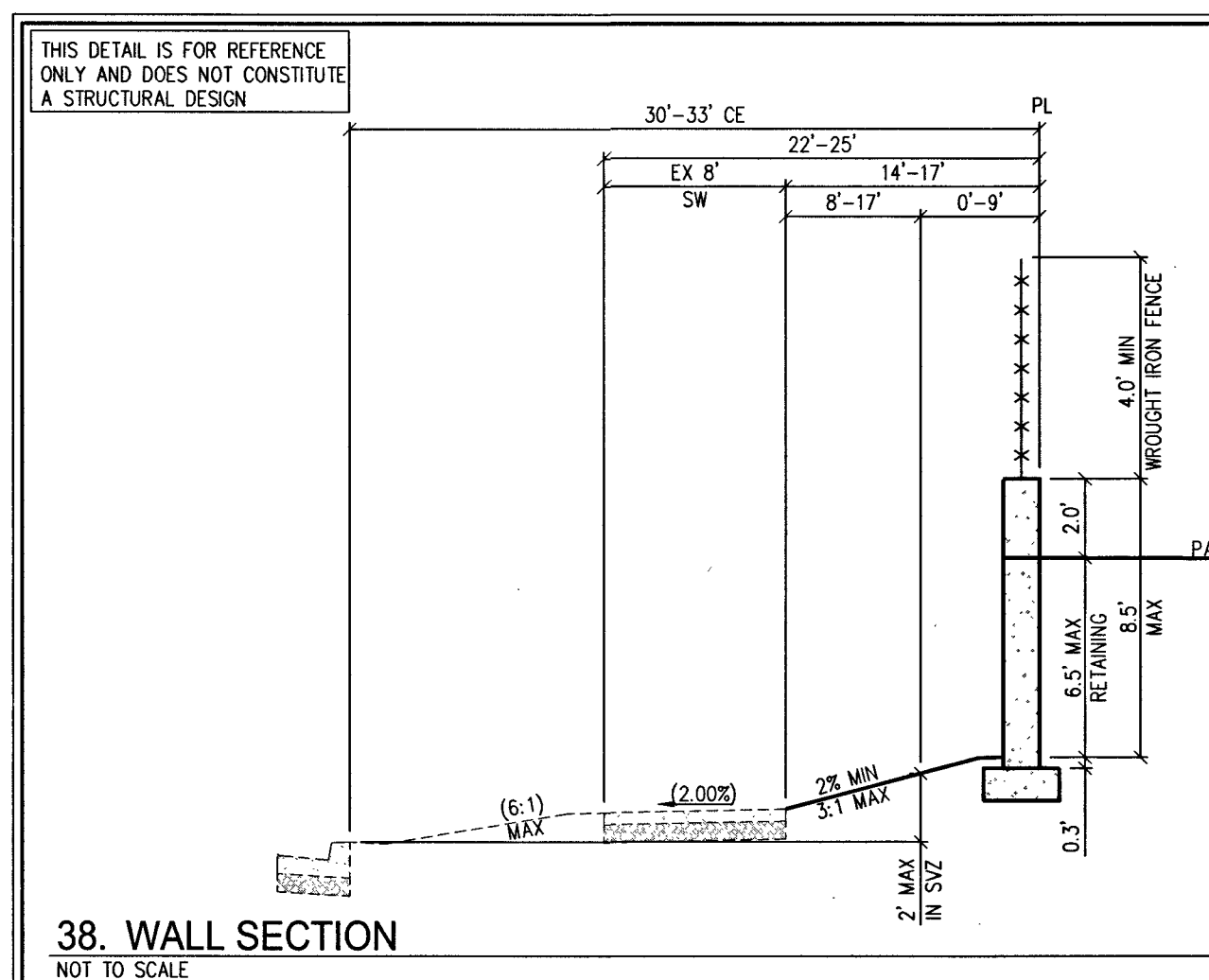
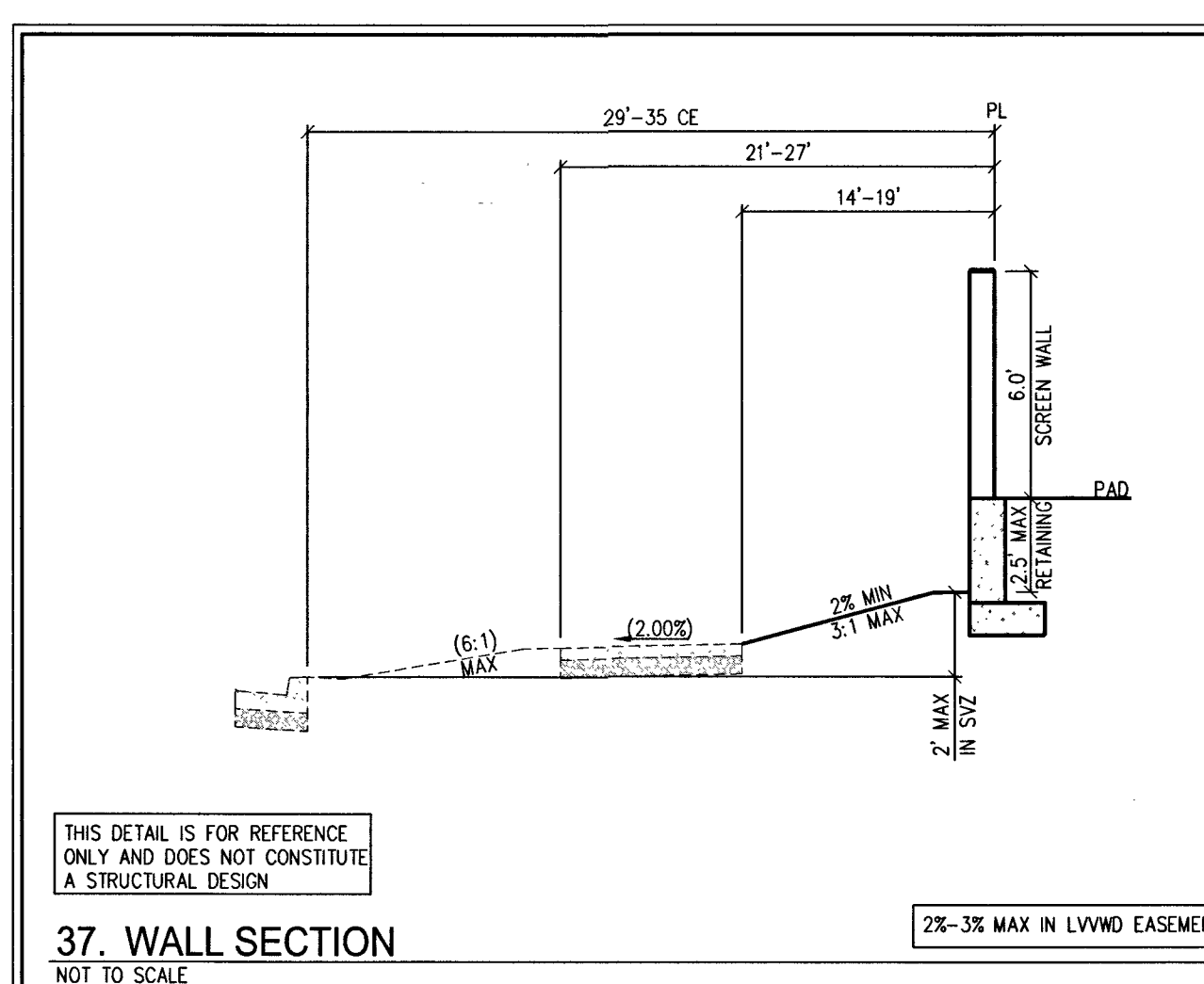
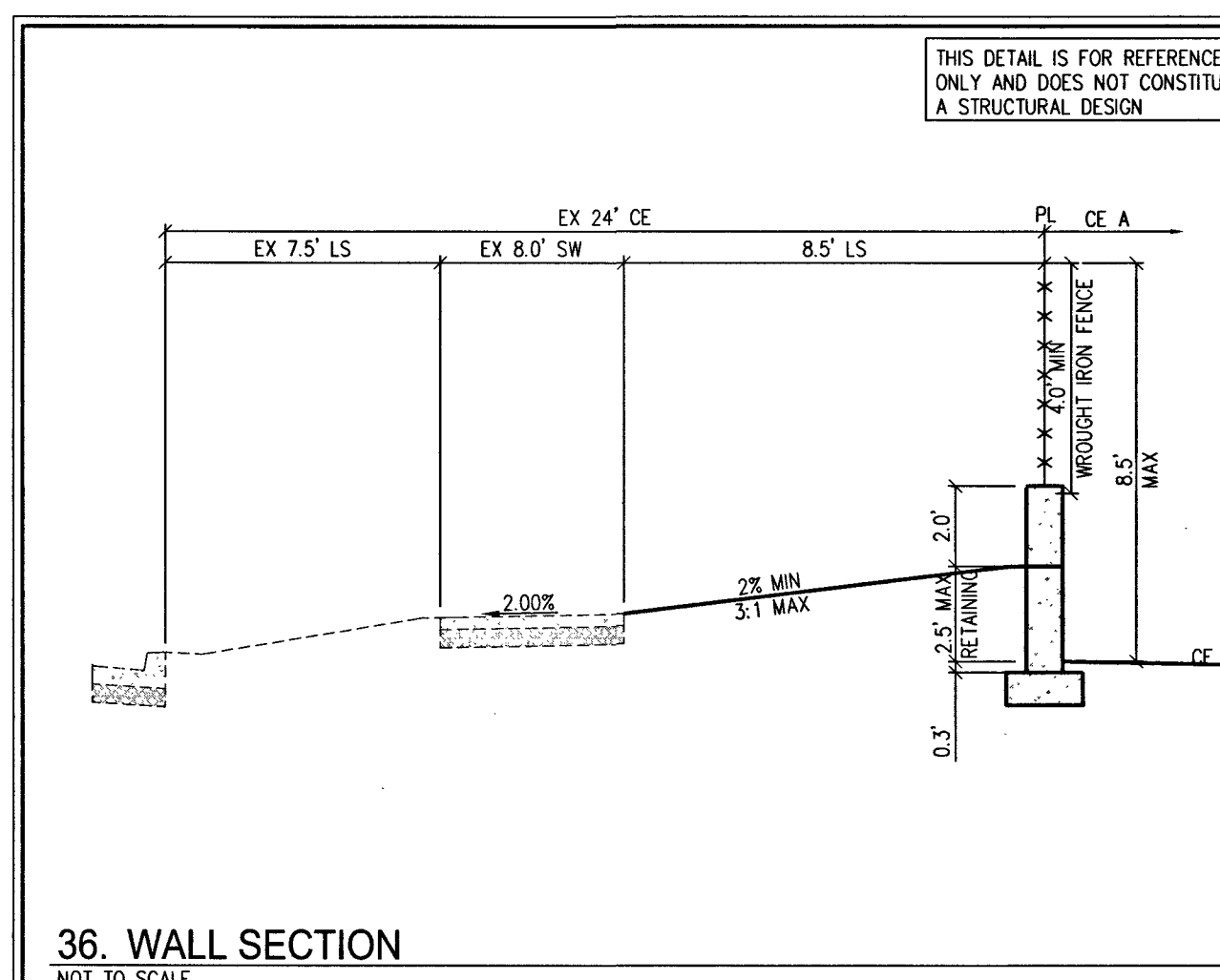
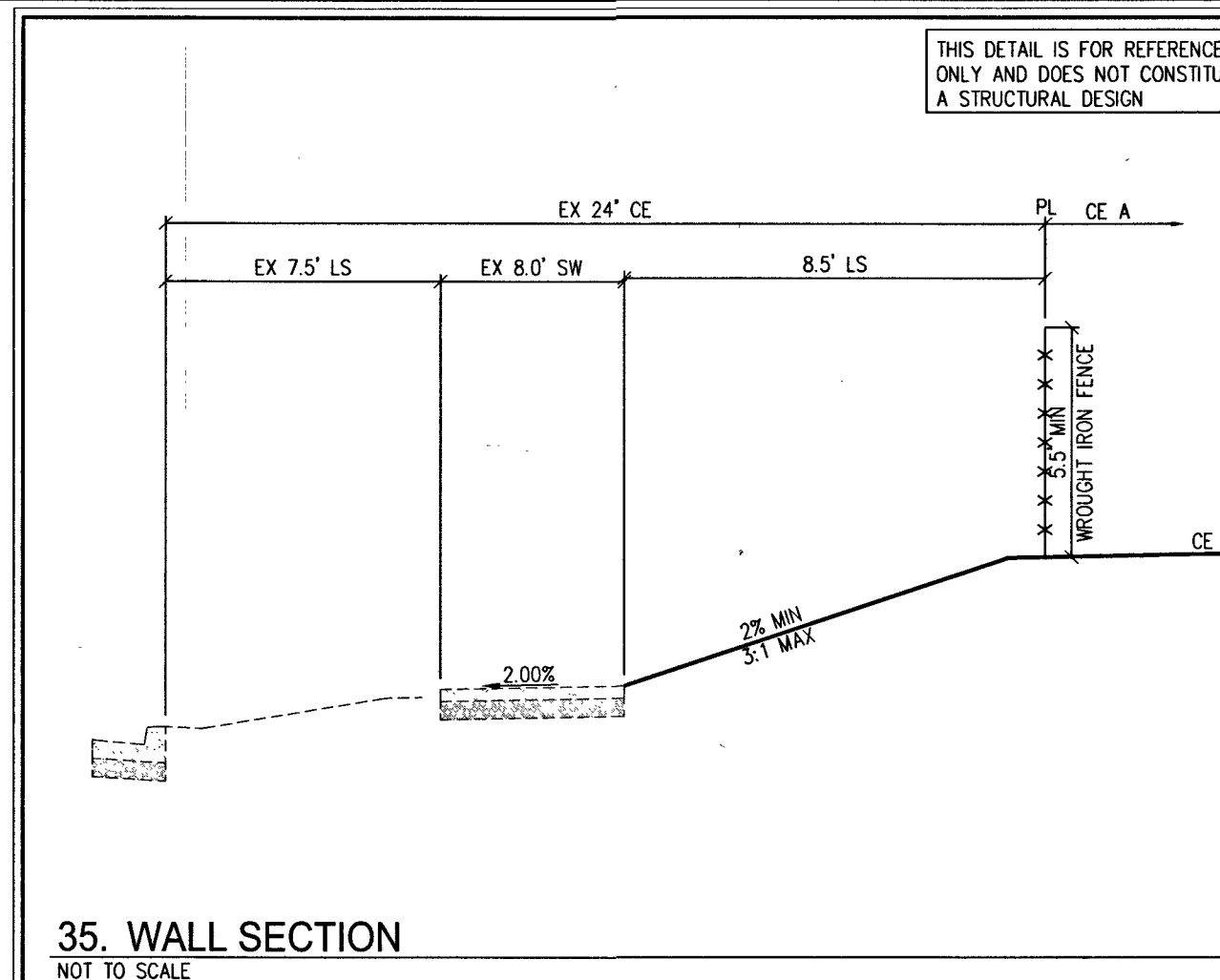
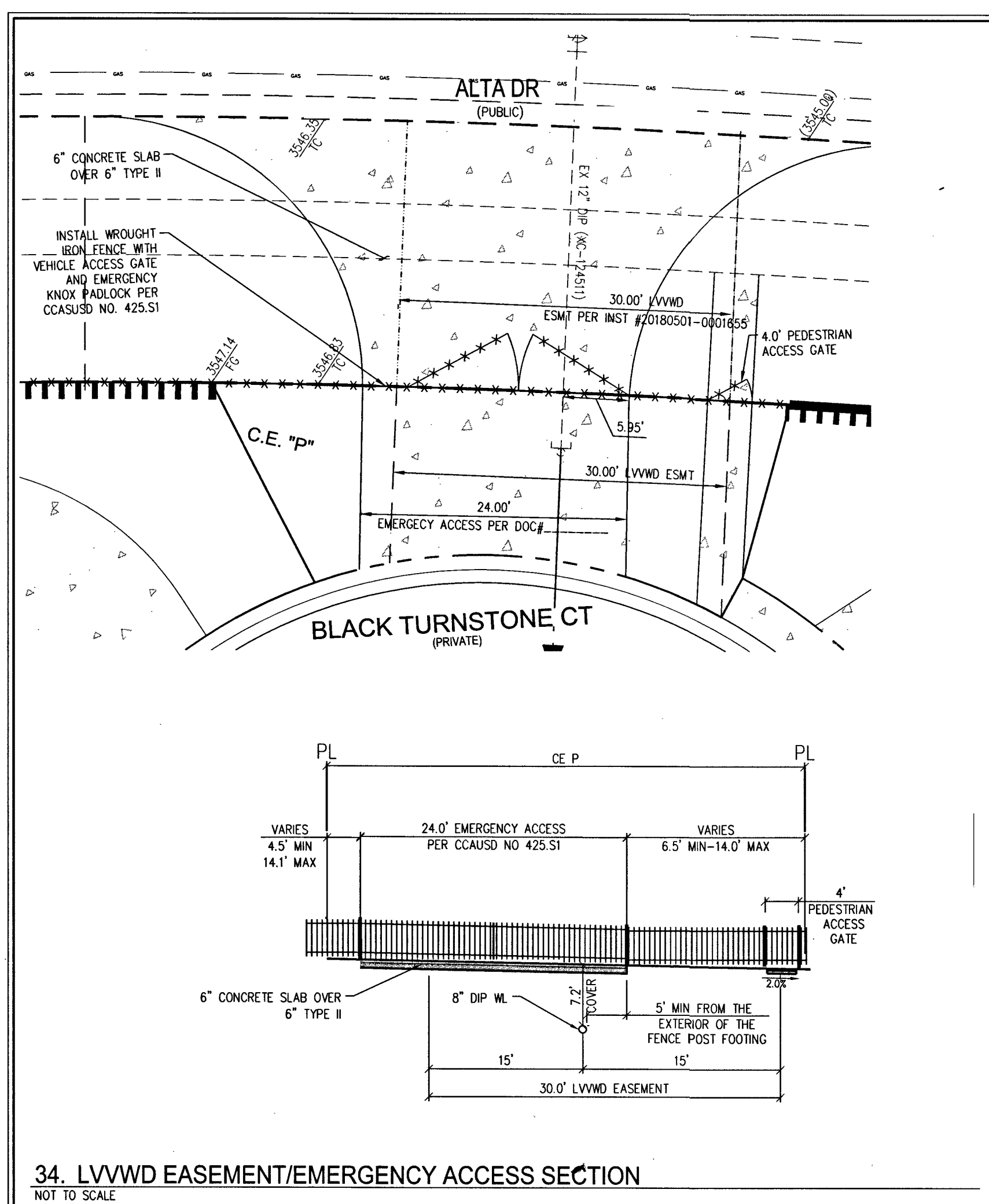
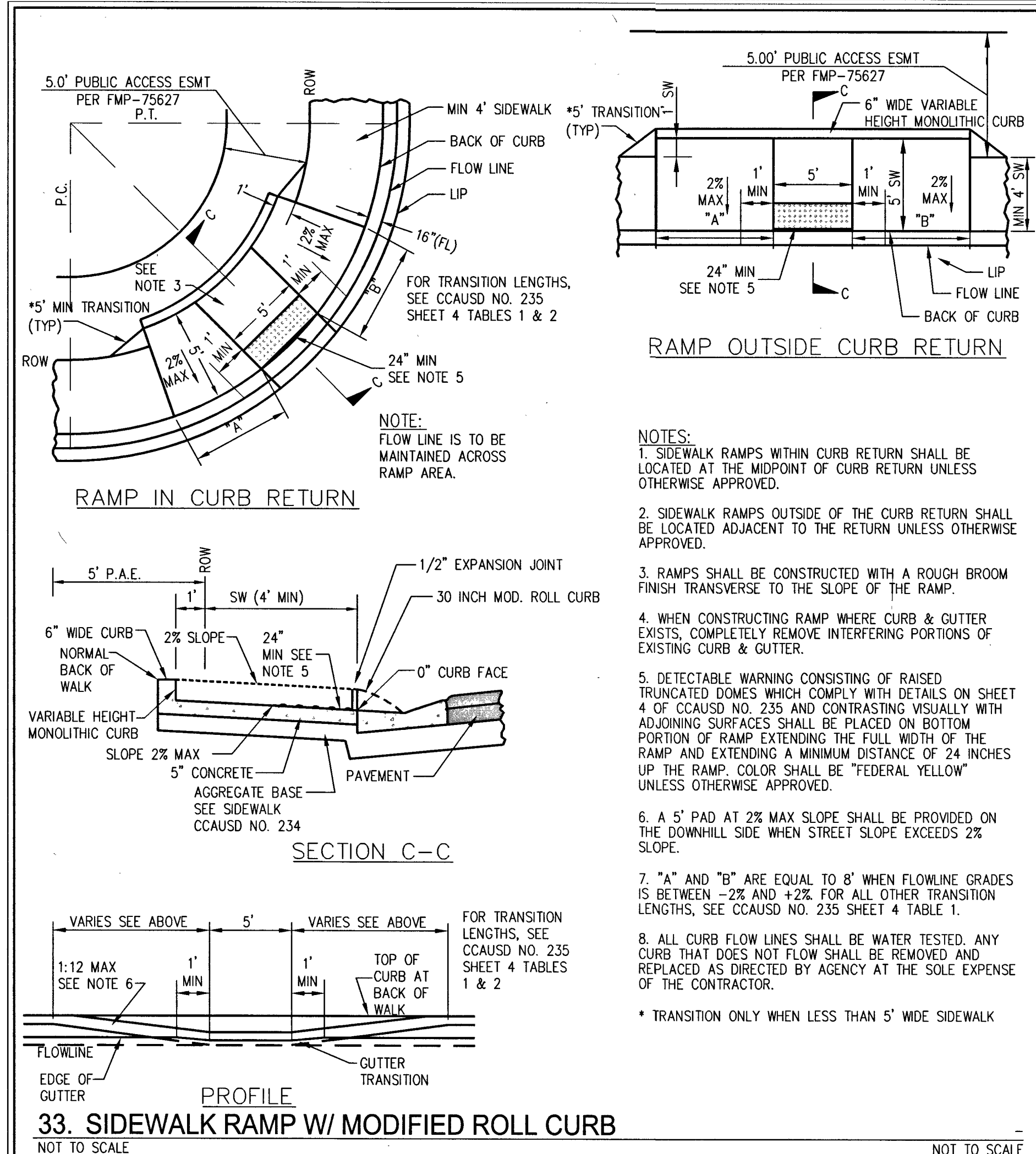
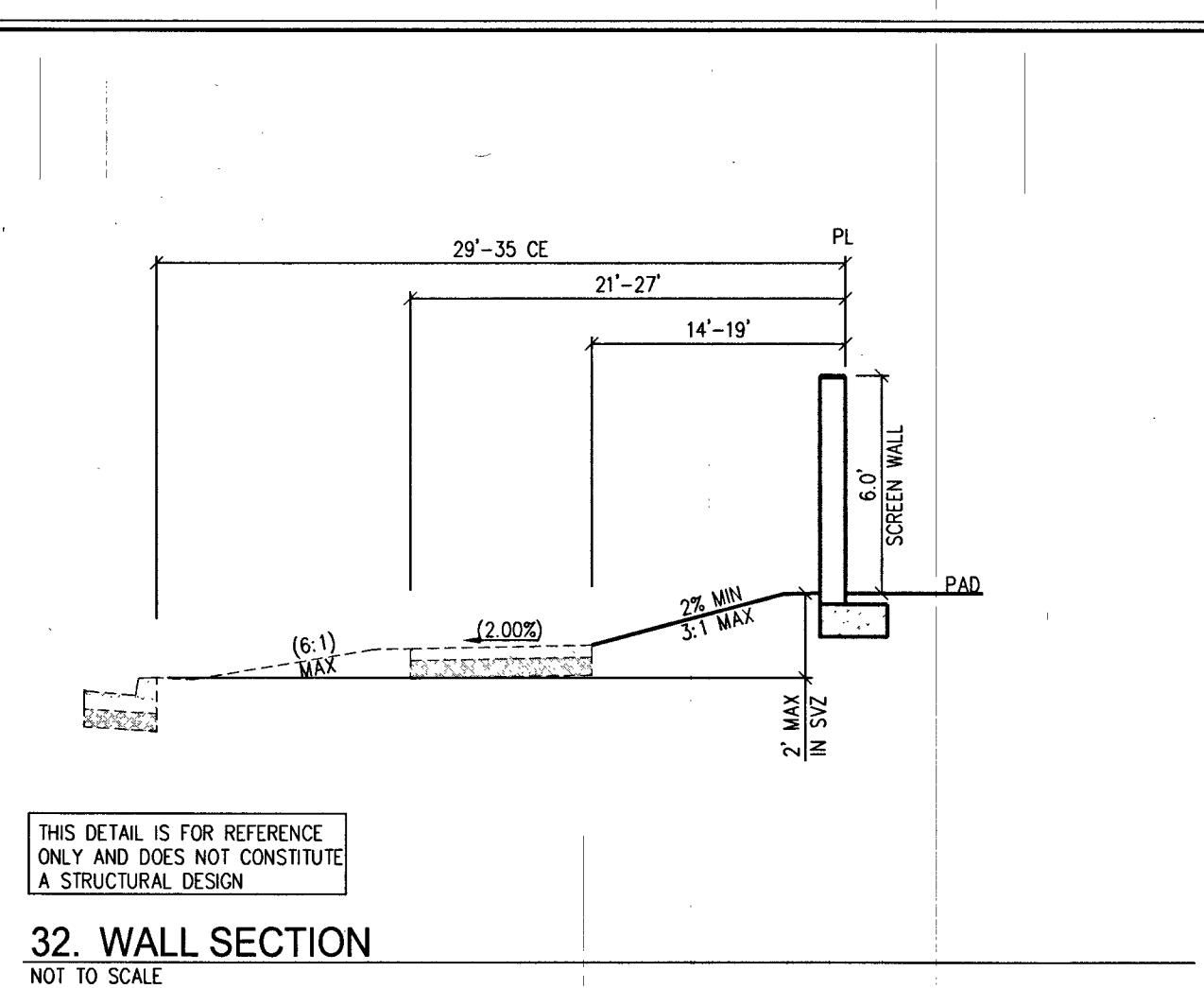
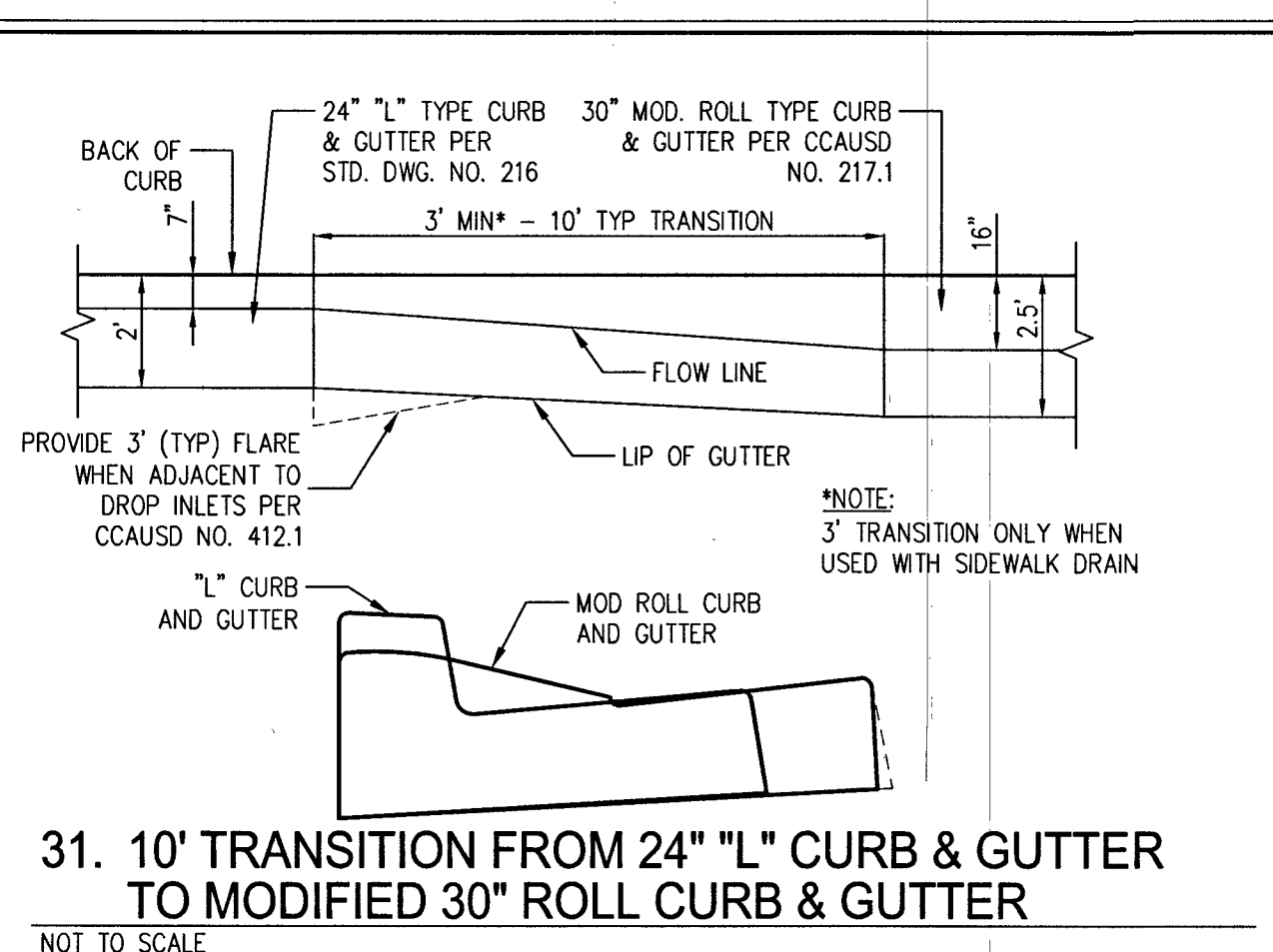
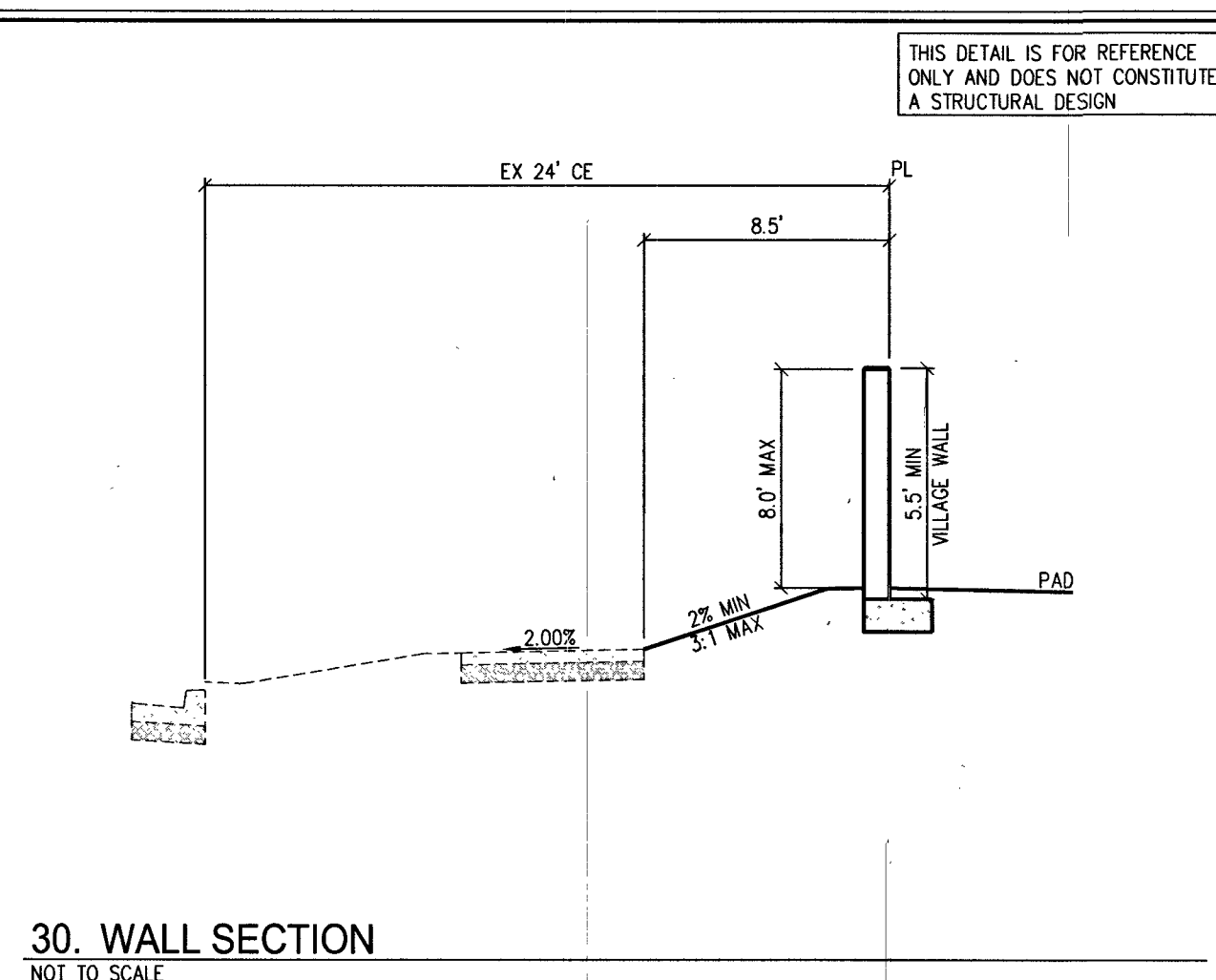
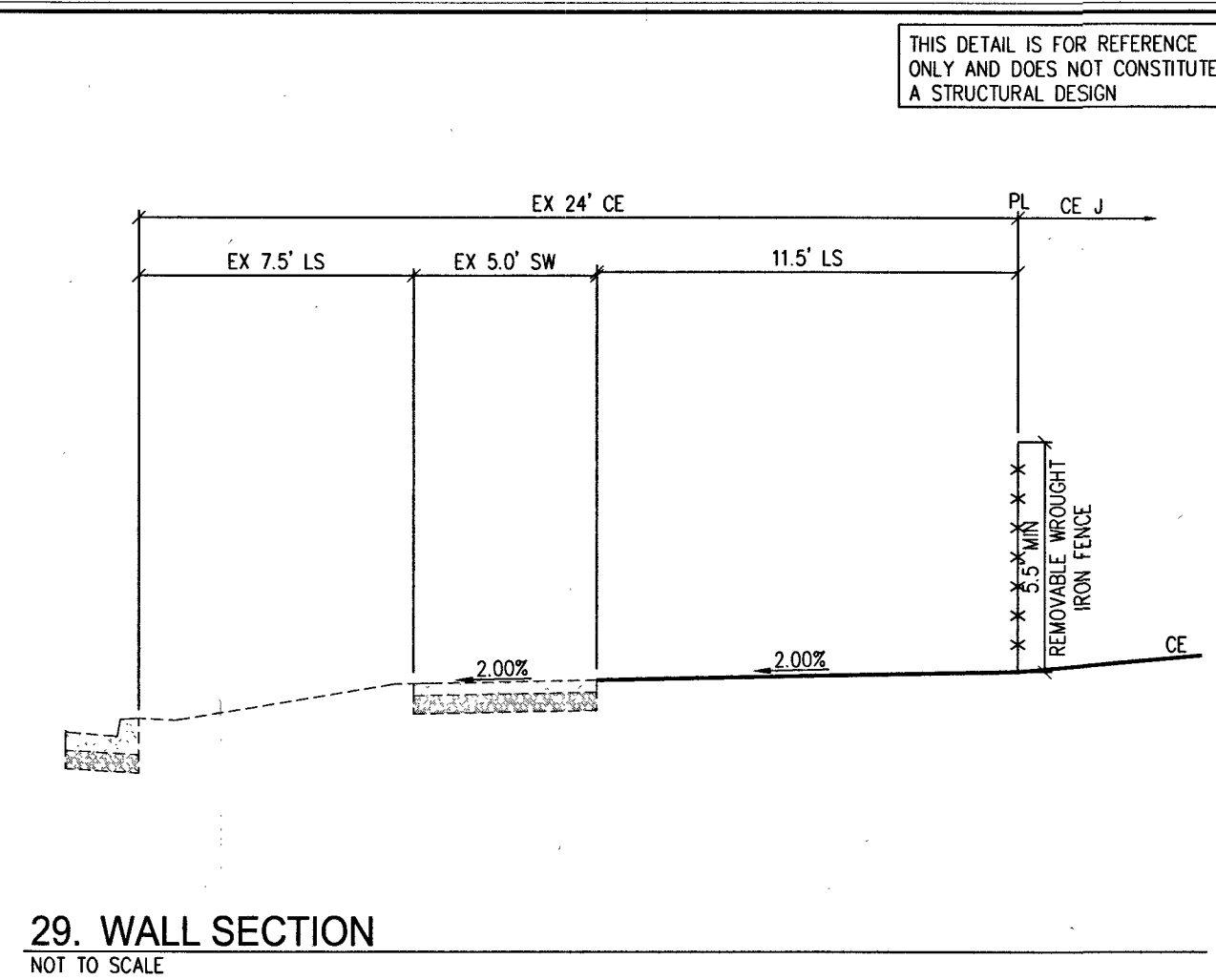
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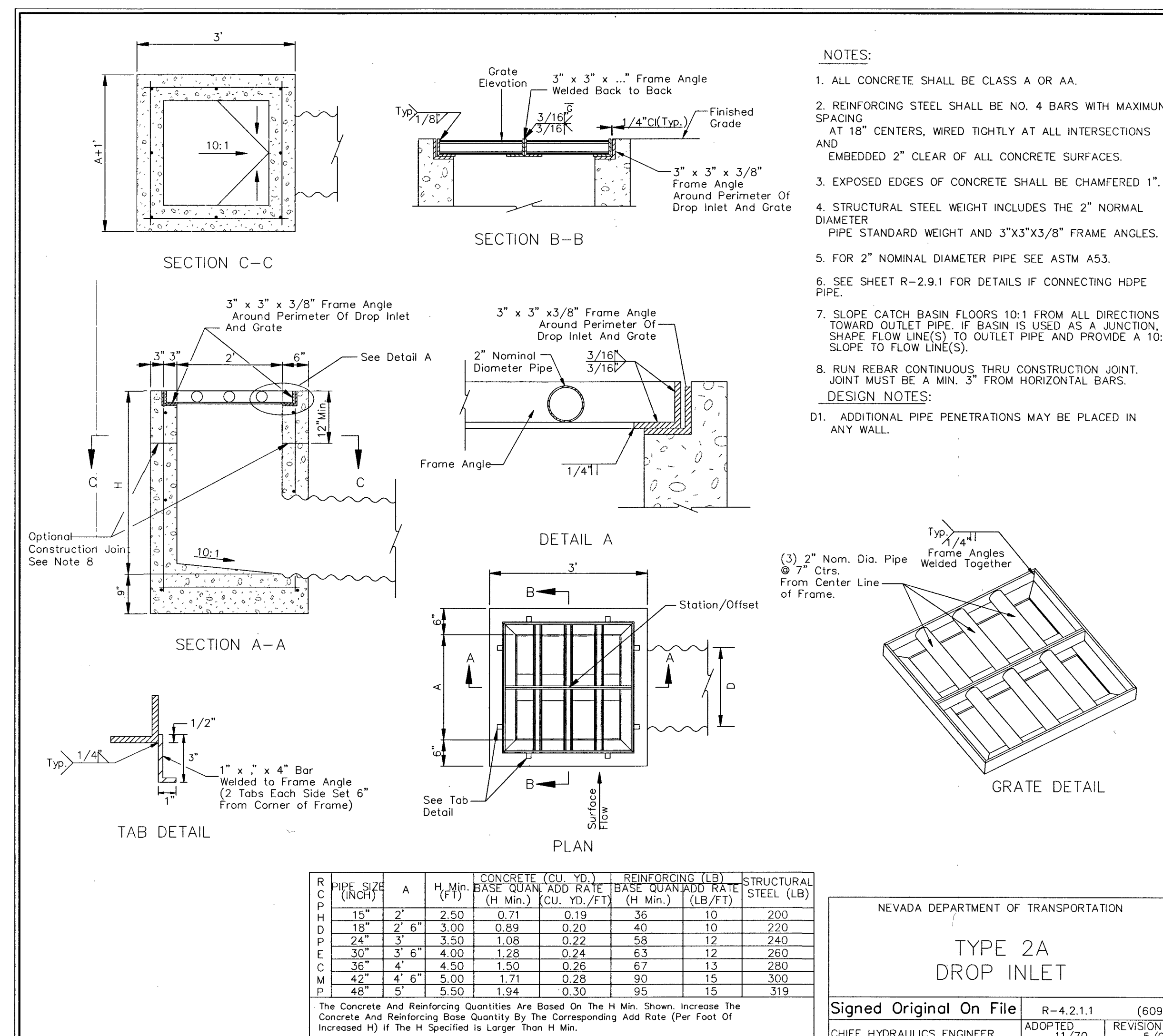
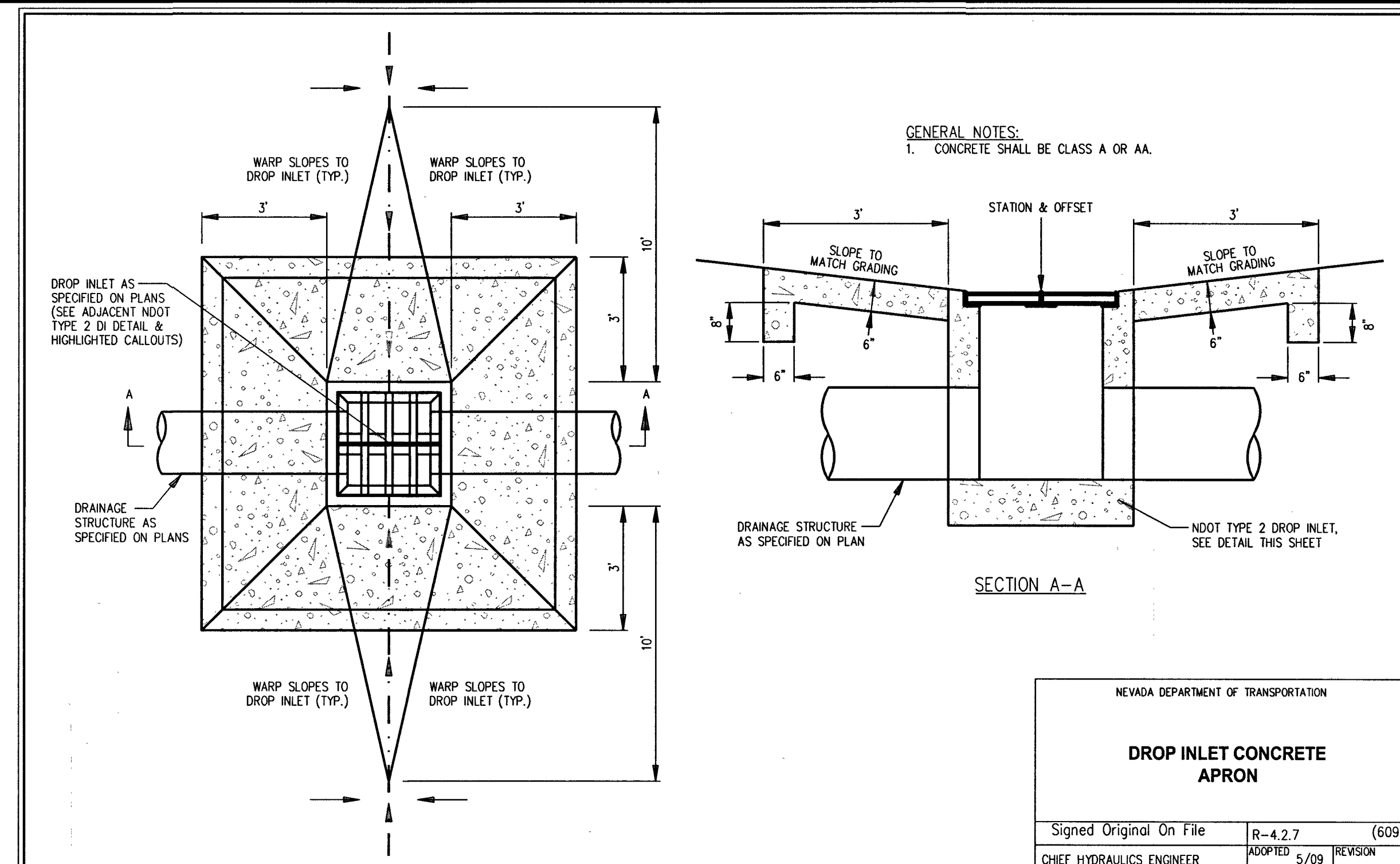
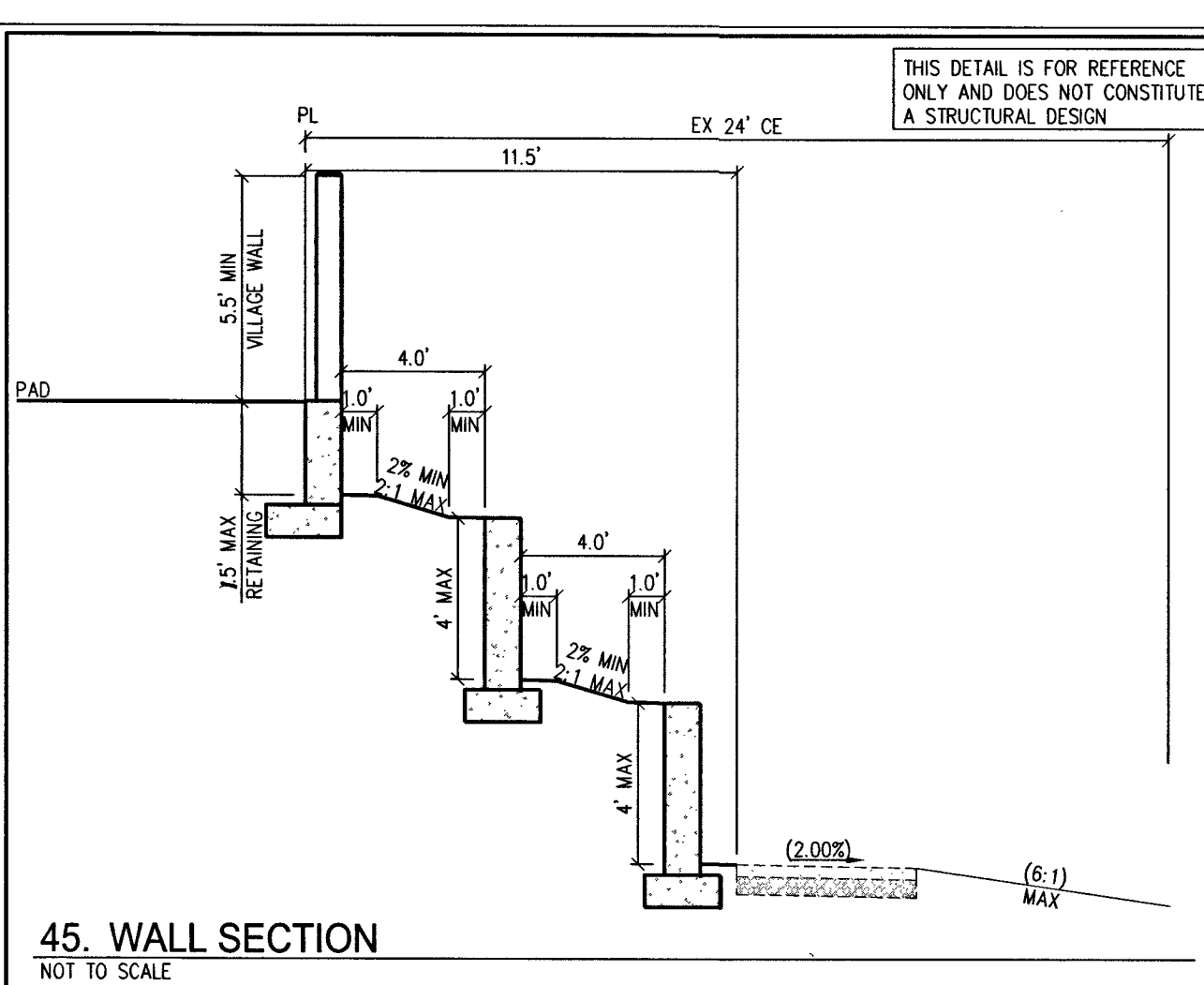
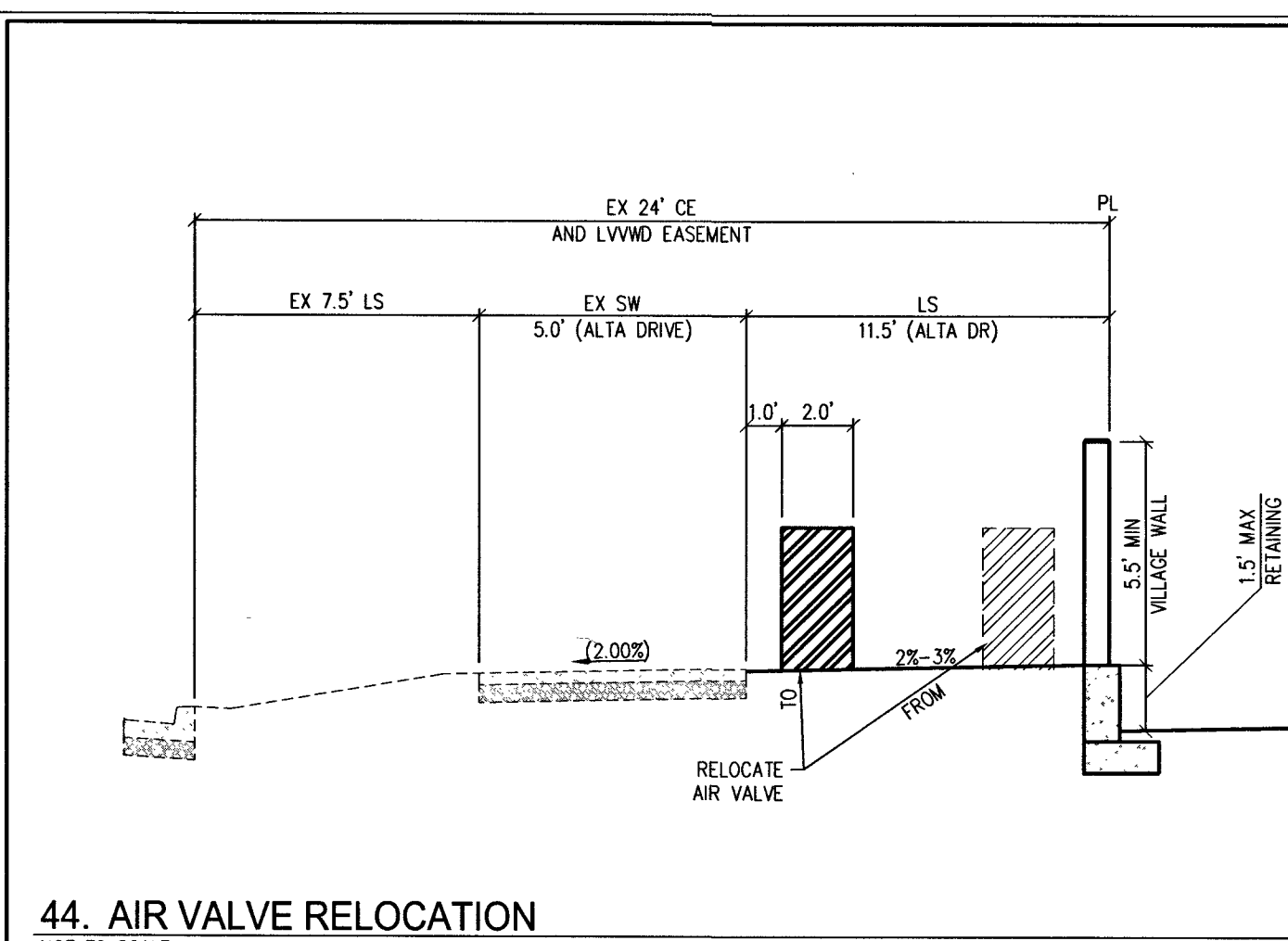
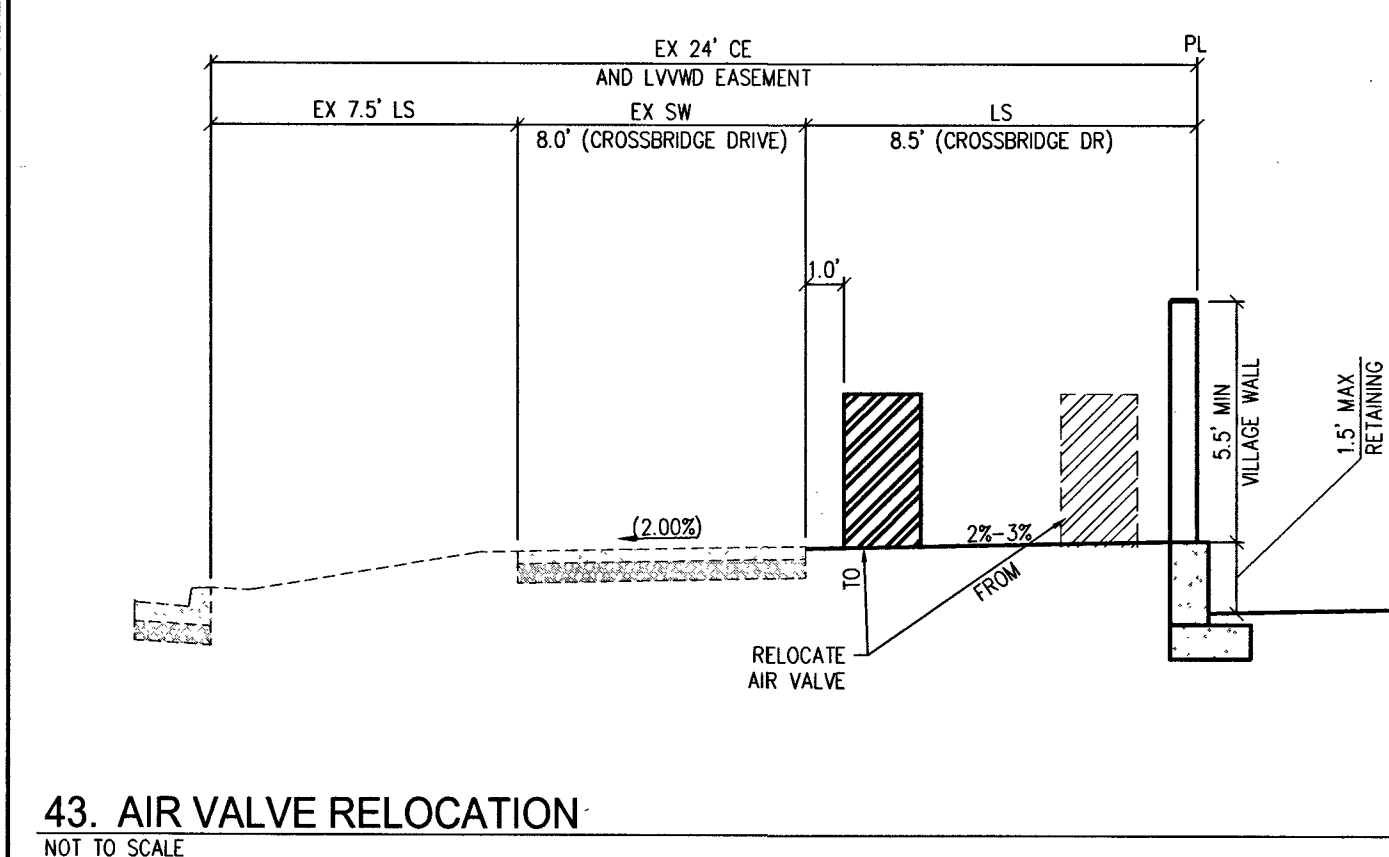
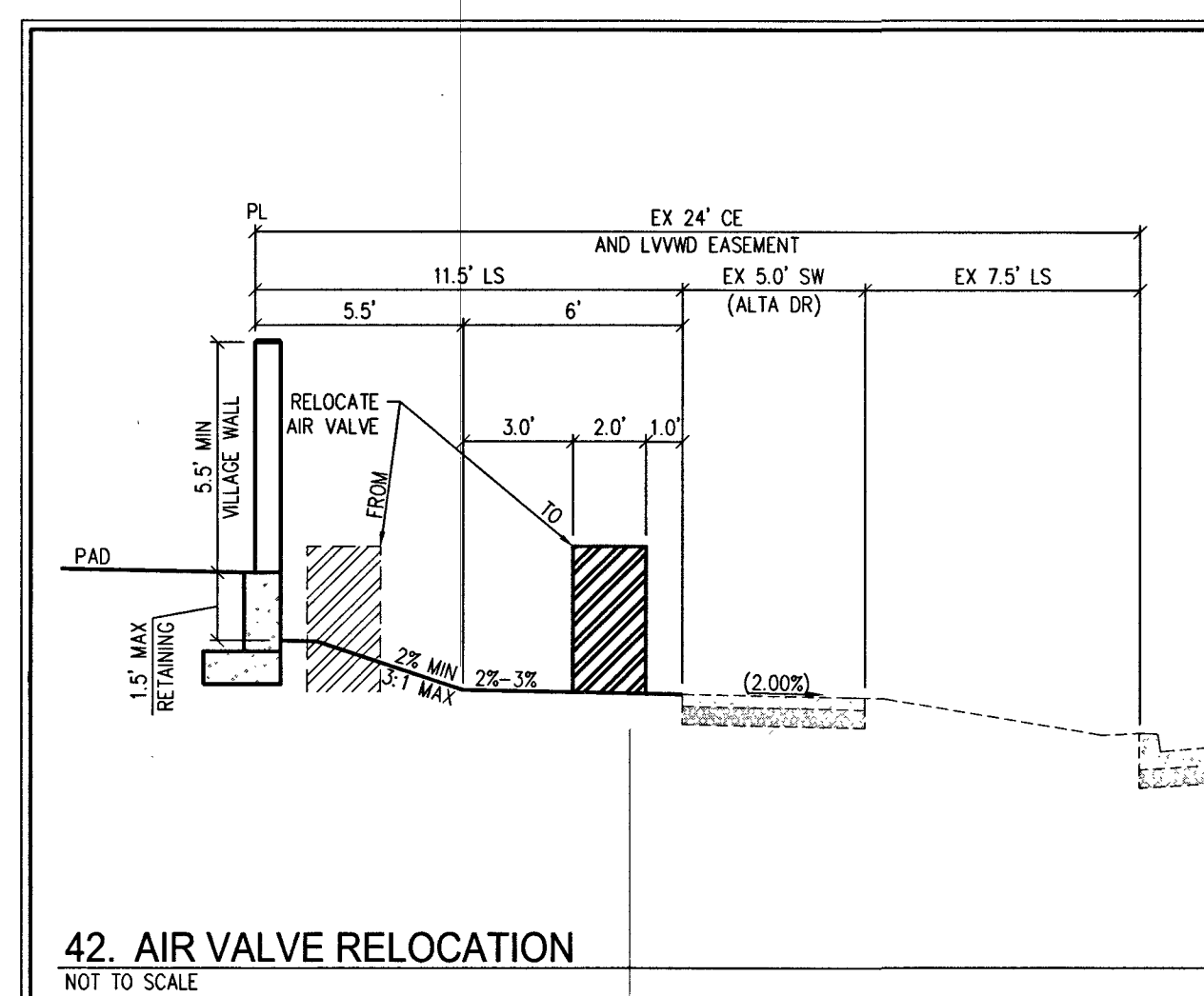
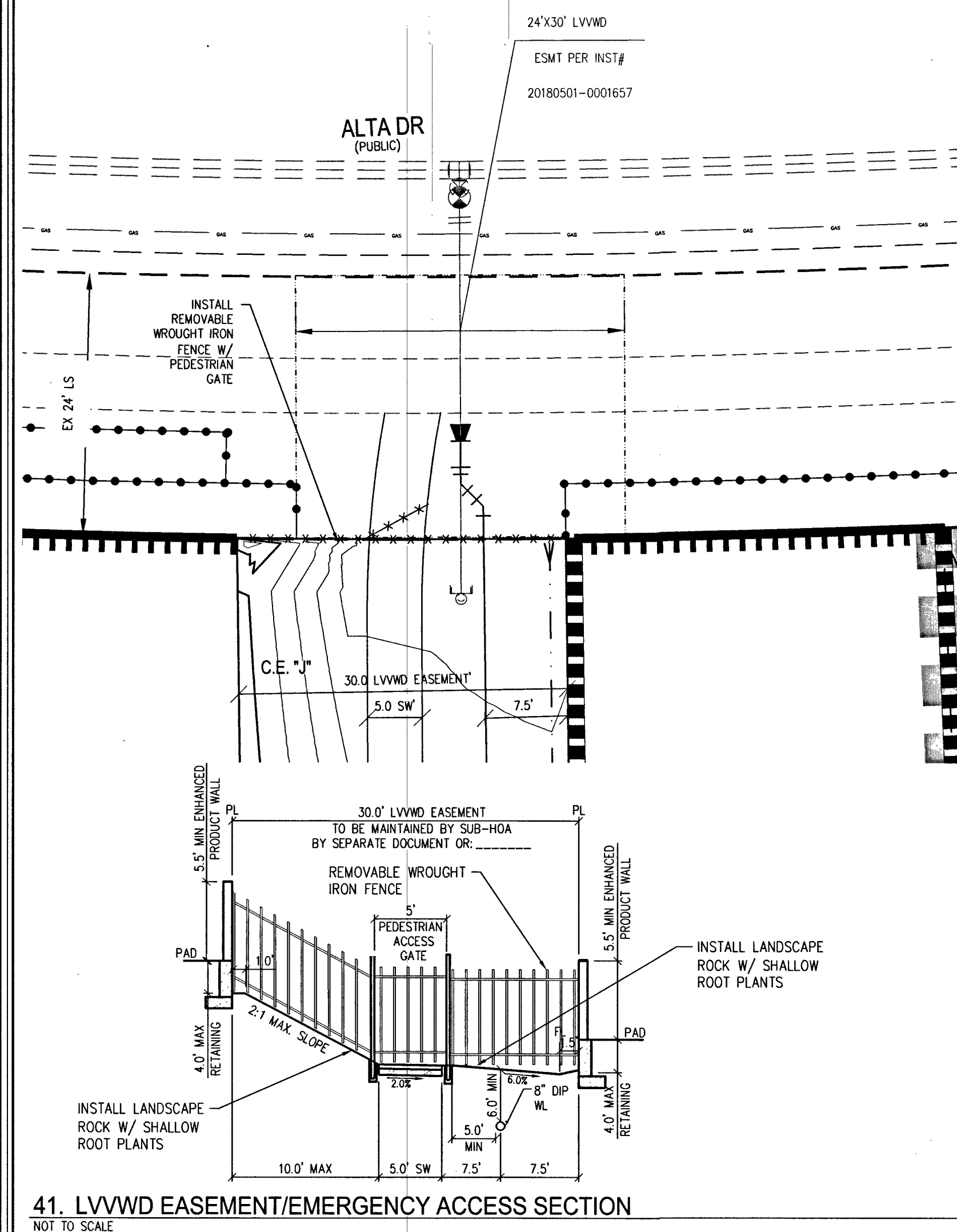
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119-00027

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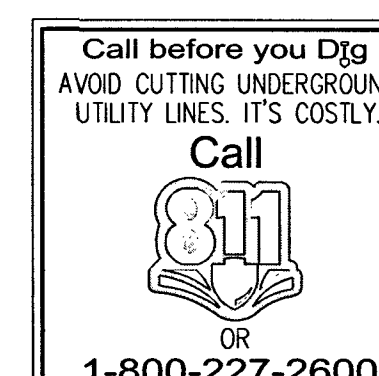
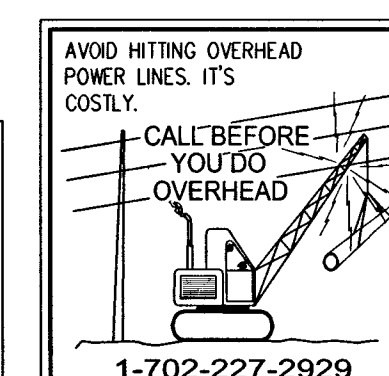
DBQ #136070A OS-137-33-NF





APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT NO. 136070 FIRST APPROVED DATE: 3-20-71



**SLATER
HANIFAN
GROUP**

CONSULTING ENGINEERS & PLANNERS

4000 ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300
FAX (702) 284-5399

[illegible]

LAS VEGAS, NV	NO.								

KB HOME

BRISTLE VALE - UNIT 1

DETAIL SHEET IV

933
T 20S
R 59E

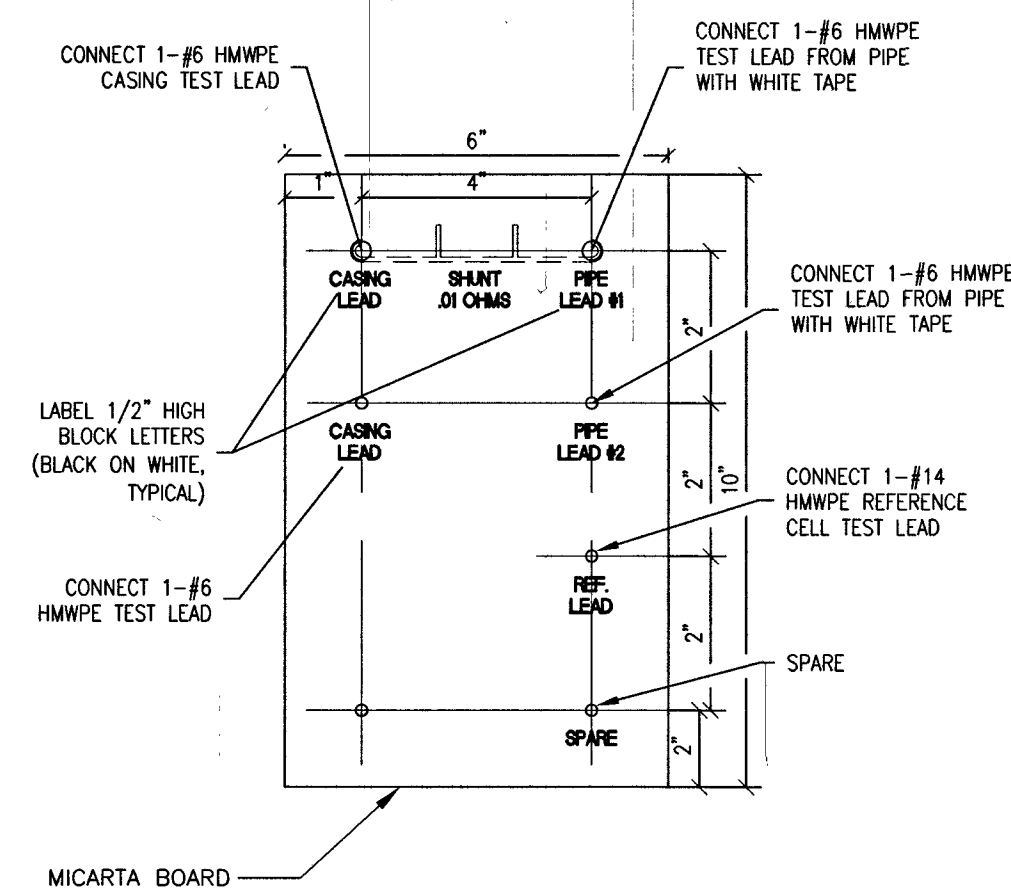
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DRAFTER:	OIQ
DESIGNER:	OIQ
CHECKED:	DP
PROJECT NO.	
KBH1804-000	

D-4
SHEET 15 OF 54
L19-00027
107YS102

BP014136070A OS:137-33-NF

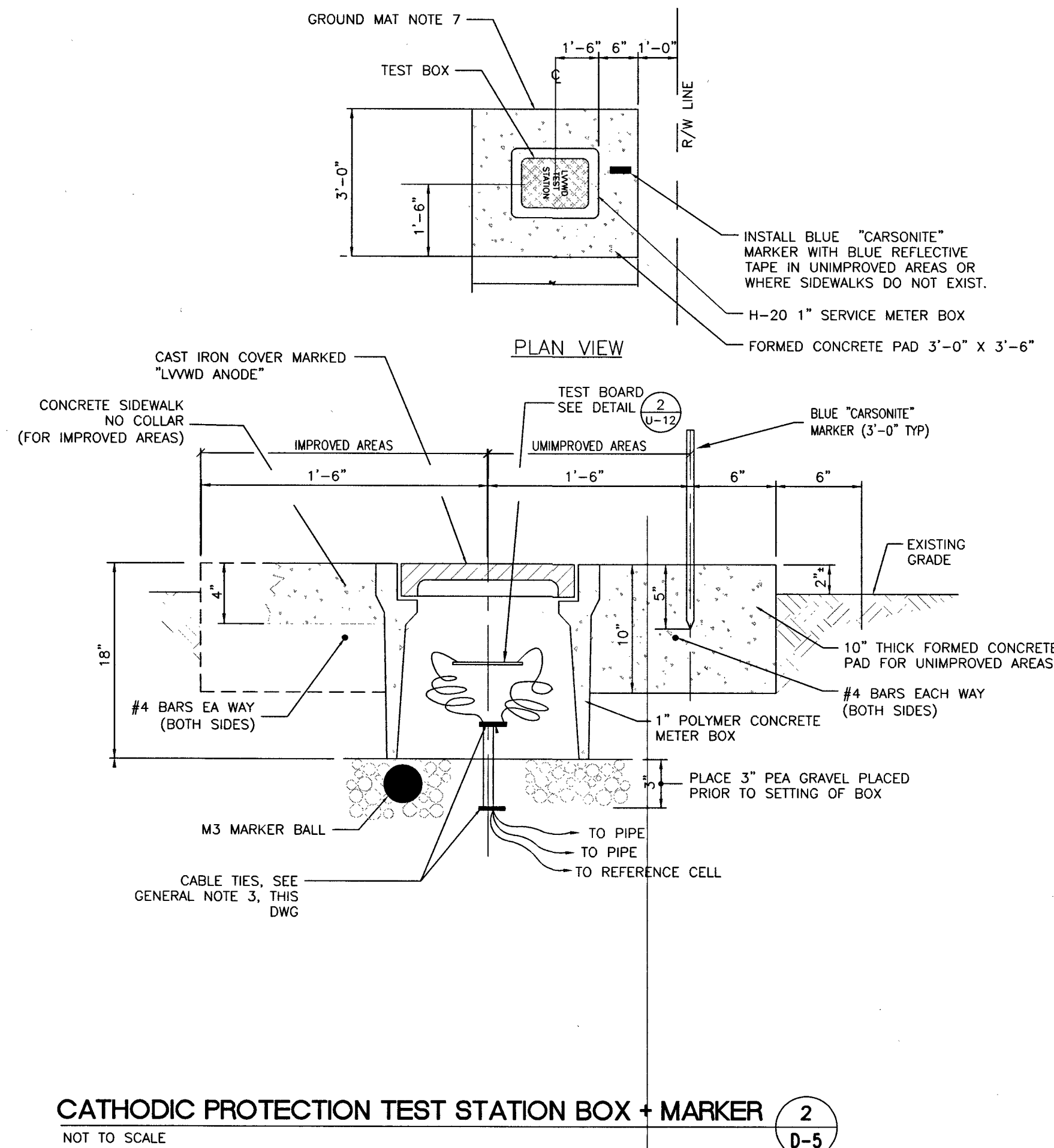
PROCEDURES TO RELOCATE A CORROSION TEST STATION

1. CONTACT LVWD INSPECTIONS AT 702-258-7171. PRIOR TO START FOR PRE-TEST.
2. THE LEADS THAT ARE CONNECTED TO THE PIPE REQUIRE #6 COPPER WIRE WITH A HMWPE JACKET SUCH AS RAYCHEM PERMARAD.
3. THE LEAD THAT IS CONNECTED TO THE REFERENCE CELL REQUIRES #14 COPPER WIRE WITH A HMWPE JACKET SUCH AS RAYCHEM PERMARAD.
4. CONNECT THE TWO WIRES TO BE SPLICED WITH A COPPER BUTT CONNECTION USING THE PROPER CRIMPING TOOL.
5. MAKE EACH SPLICE USING A 3M SCOTCHCAST RESIN SPLICING KIT.
6. RECONNECT THE TEST BOARD TO PROPER LEADS, AND PLACE THE TEST BOX AT THE NEW SITE.
7. THE TEST BOX AT THE NEW SITE WILL BE INSTALLED ACCORDING TO THE TYPICAL TEST BOX DETAILS.
8. ALL TEST LEADS AND ANODE LEADS INSIDE THE TEST BOX SHALL BE BUNDLED TOGETHER AT 8 INCH INTERVALS WITH NYLON TIES AND SHALL BE PROVIDED WITH A MINIMUM OF 4 FEET OF SLACK.
9. ALL TEST LEADS AND ANODE LEADS SHALL BE COLOR CODED WITH COLORED TAPE AT EACH END, AND AT 4 FEET INTERVALS.
9. SCHEDULE FINAL TEST WITH LVWD INSPECTIONS.

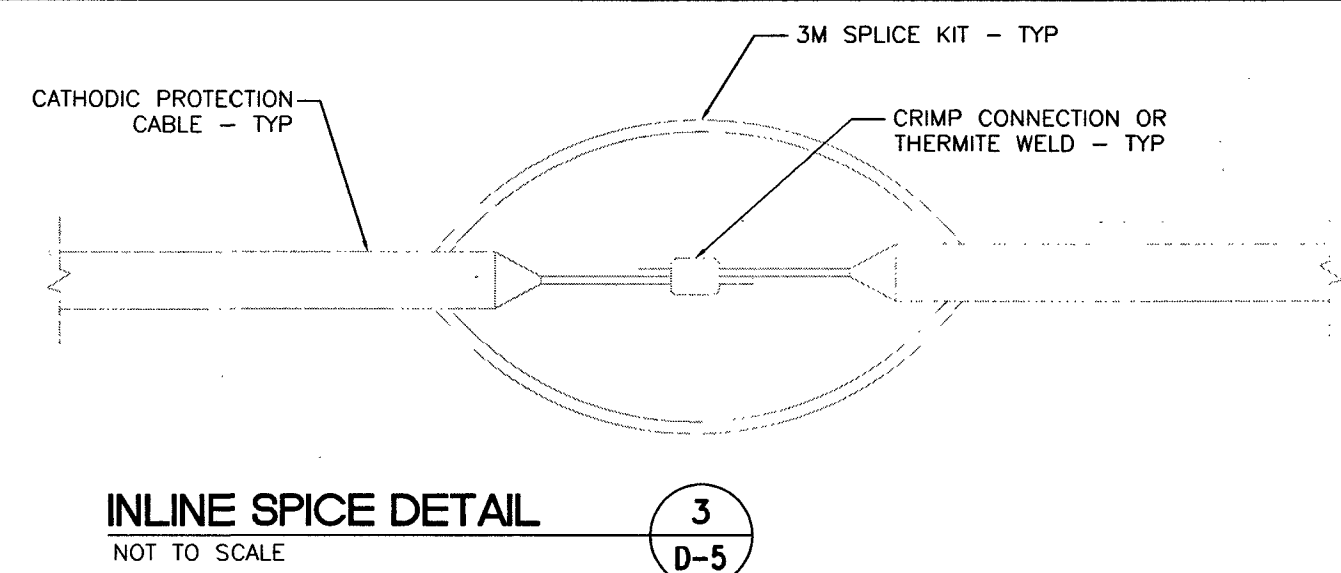


STANDARD TEST BOARD INSTALLATION
NOT TO SCALE PL12-3A 062007

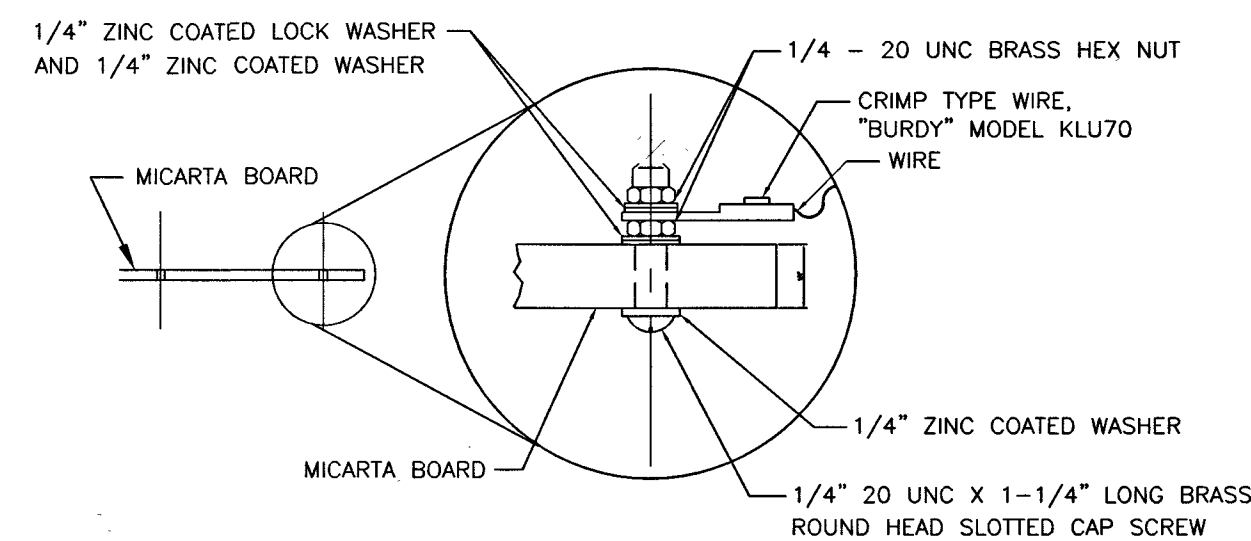
TEST STATION RELOCATION DETAILS
NOT TO SCALE



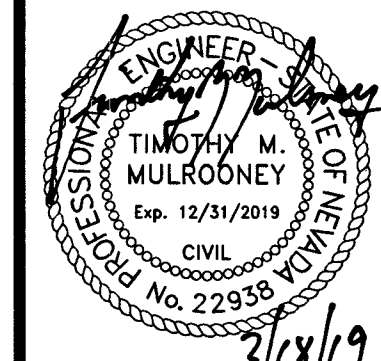
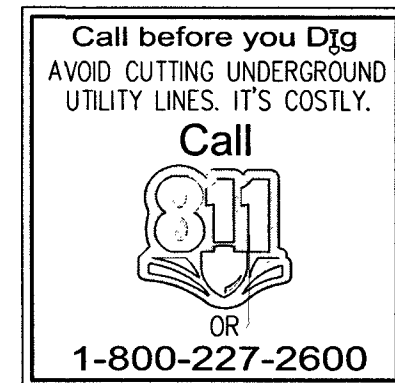
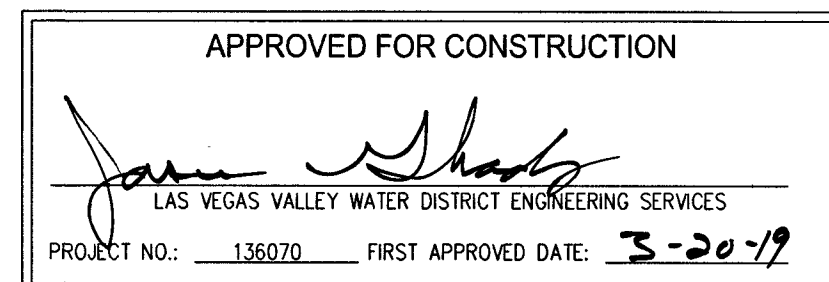
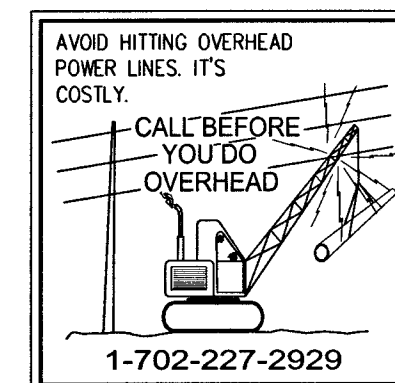
CATHODIC PROTECTION TEST STATION BOX + MARKER
NOT TO SCALE

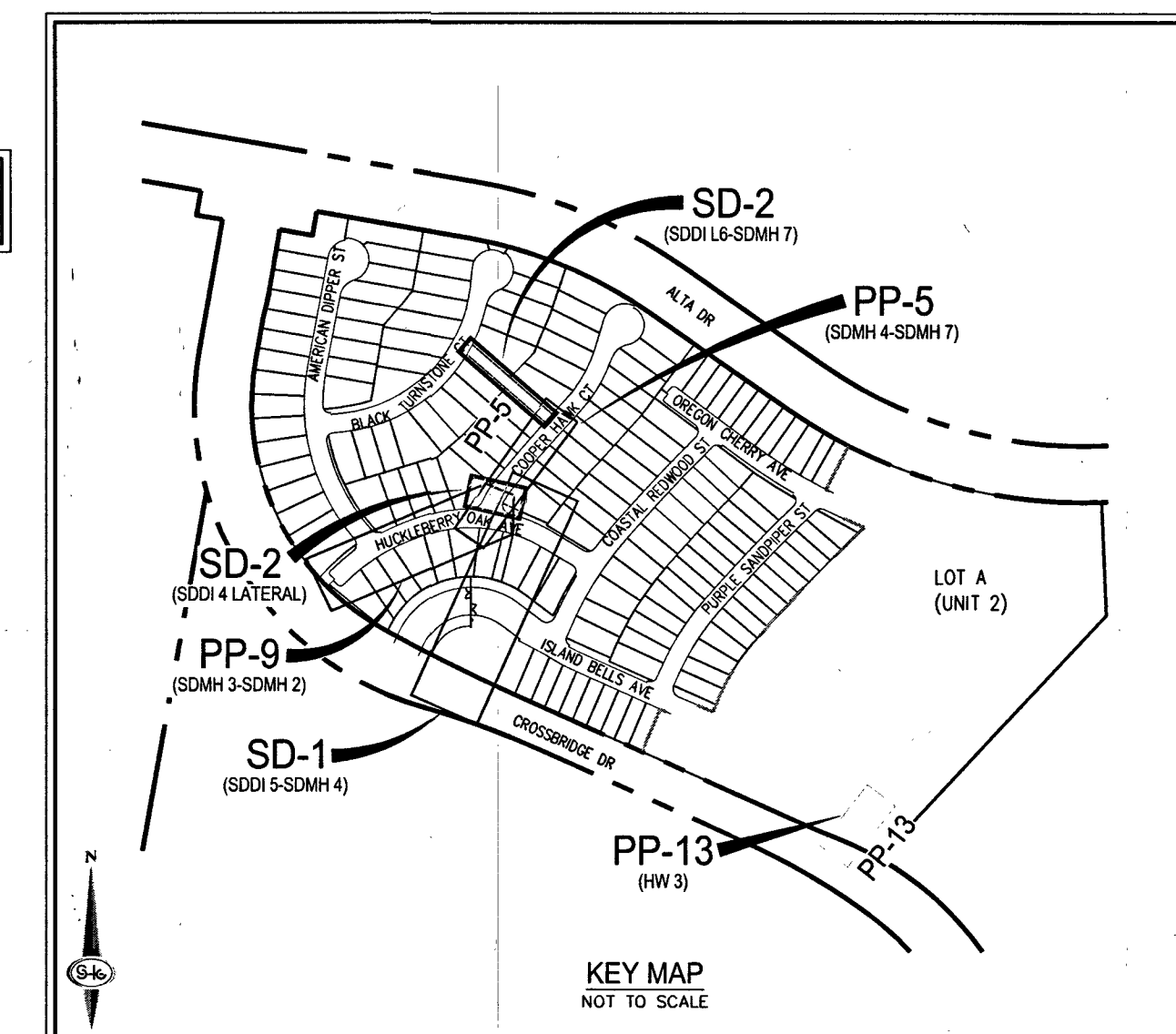
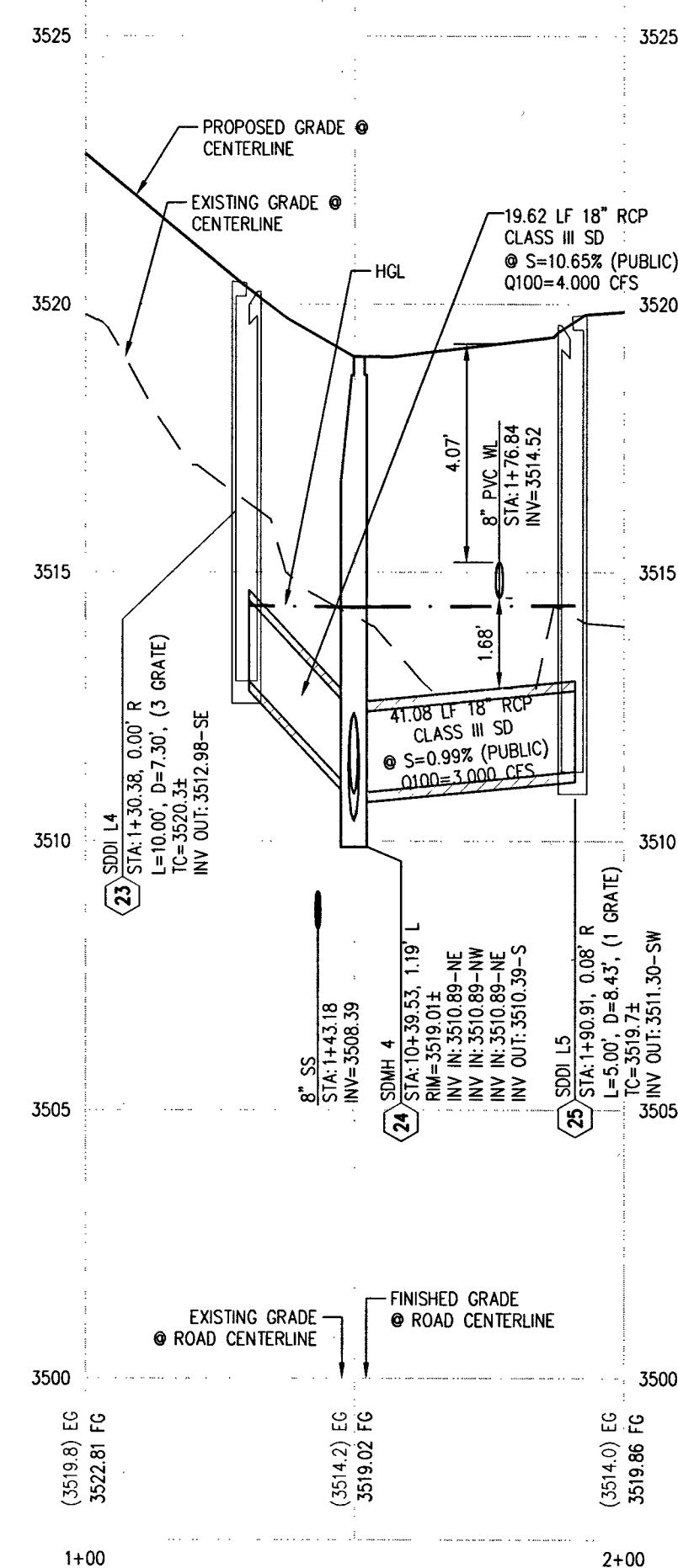
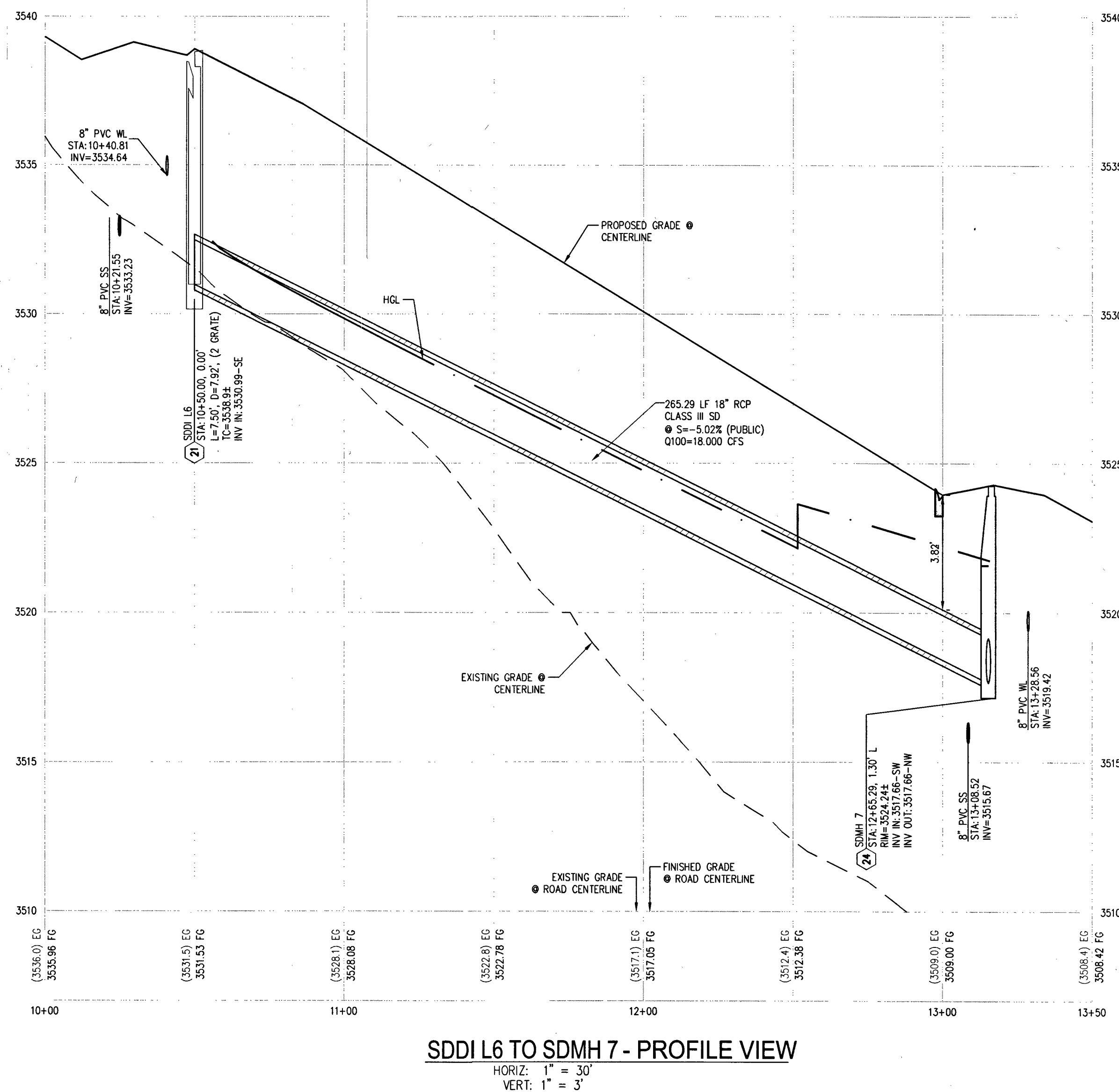
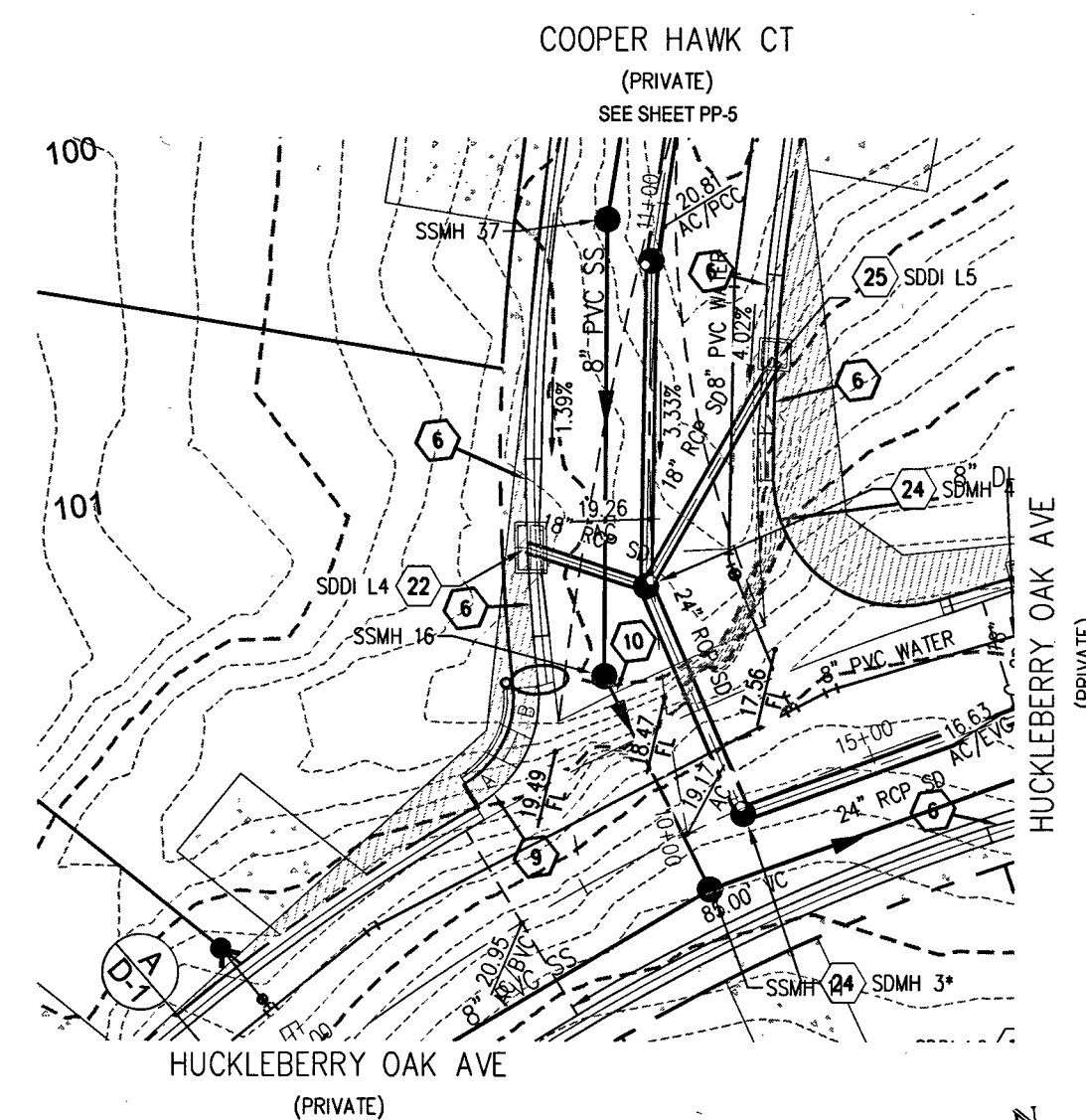
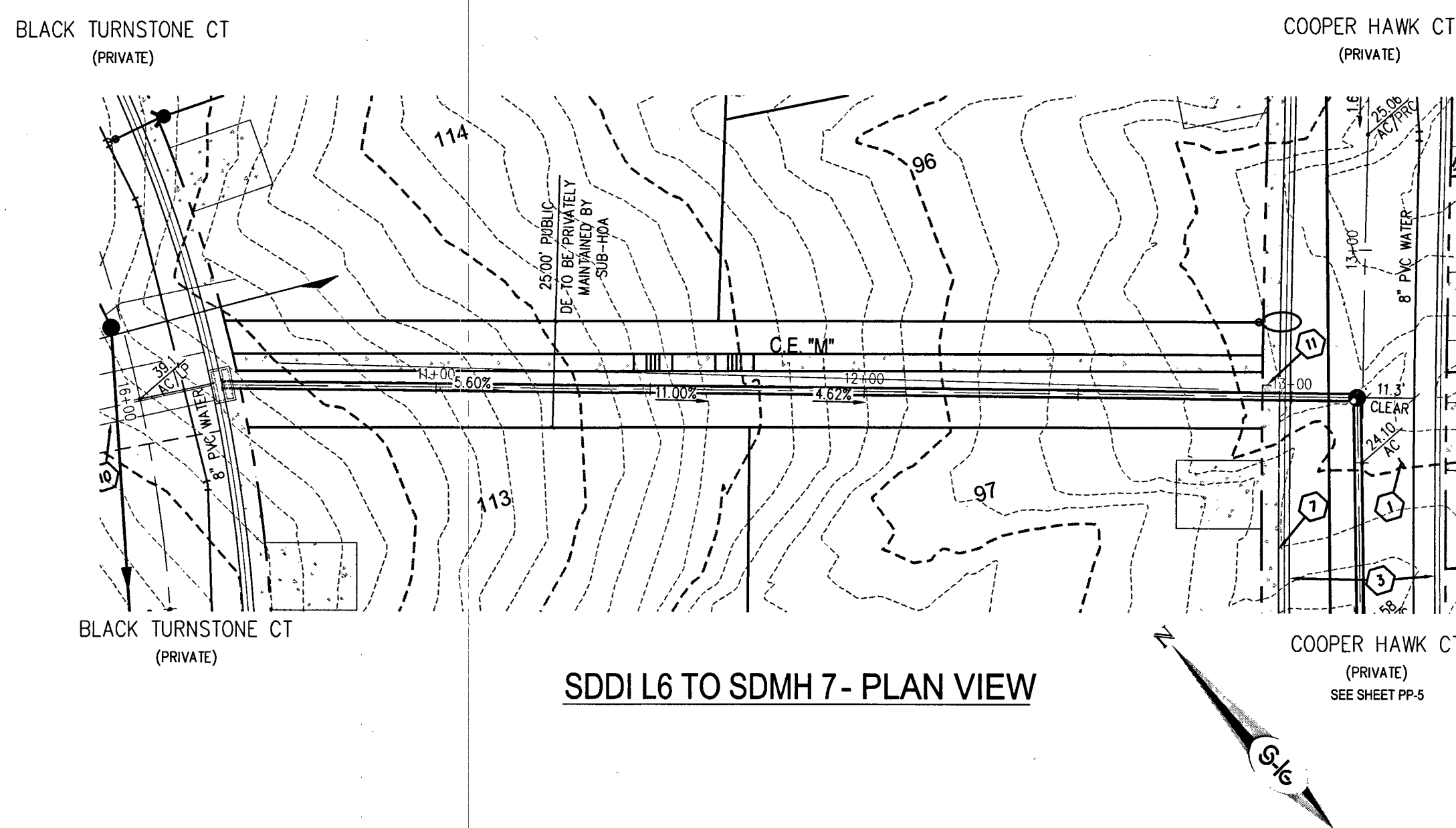


INLINE SPLICE DETAIL
NOT TO SCALE



TEST BOARD DETAIL - TYPICAL LUG AND STUD CONNECTION
NOT TO SCALE





LEGAL DESCRIPTION

LYING WITHIN THE NORTH EAST QUARTER
(NE1/4) OF SECTION 33, TOWNSHIP 20 SOUTH,
RANGE 59 EAST M.D.M., CITY OF LAS VEGAS,
CLARK COUNTY, NEVADA.

EASEMENT NOTES

1. ALL PRIVATE STREETS ARE P.U.E. PUBLIC SEWER EASEMENTS AND PUBLIC DRAINAGE EASEMENTS TO BE PRIVATELY MAINTAINED BY HOA.
2. ALL COMMON ELEMENTS ARE PUBLIC DRAINAGE EASEMENTS TO BE PRIVATELY MAINTAINED.

STORM DRAIN NOTES

DISCLAIMER NOTE

1. 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 EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

2. FOR ROADWAY WIDENING AND HALF STREET IMPROVEMENTS THE CONTRACTOR SHALL VERIFY CROSS SLOPES FROM EXISTING PAVEMENT SAWCUT LINE TO PROPOSED EDGE OF PAVEMENT OR CURB OR TO CURB LINE TO SUBGRADE PREPARATION AREA. THE CONTRACTOR SHALL VERIFY THE MINIMUM OR MAXIMUM CROSS SLOPES TO CONSTRUCTION OF PROPOSED CURB LINE IF MINIMUM OR MAXIMUM CROSS SLOPES DO NOT MEET AGENCY STANDARDS THE CONTRACTOR SHALL NOTIFY THE ENGINEER.

BENCHMARK

CITY OF LAS VEGAS BENCHMARK 7LV09 34SW6
RIVET AND ROUND PLATE IN THE TOP OF CURB AT THE SOUTHEAST CORNER OF DESERT
MOON RD. AND SKY VISTA DR.
ELEVATION = 1011.422 METERS (NAVD '88)
ELEVATION = 3318.31 US SURVEY FEET (NAVD '88)

BASIS OF BEARINGS

NORTH 05°59'55" WEST, BEING THE BEARING OF THE WEST LINE OF SECTION 34, TOWNSHIP 20 SOUTH, RANGE 59 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF ON FILE IN THE CLARK COUNTY, NEVADA RECORDER'S OFFICE IN BOOK 135, PAGE 71 OF PLATS.

Call before you Dig
AVOID CUTTING UNDERGROUND
UTILITY LINES. IT'S COSTLY.

Call
811
OR
1-800-227-2600

S-I-E
SLATER
HANIFAN
GROUP
a Westwood team

5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
FAX (702) 284-5399
PHONE (702) 284-5300

[illegible]

DESCRIPTION

[illegible]

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S 33	
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R 59	

DRAFTER: OIQ

CHECKED: DP

PROJECT NO.
KBH1804-000

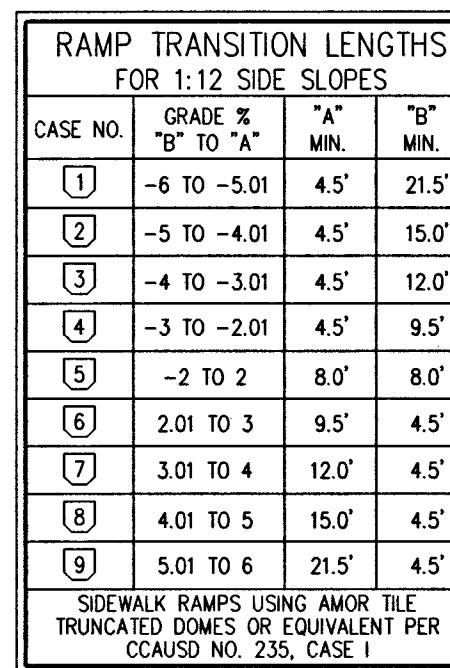


ON A TIMOTHY M. STATE OF

4/4/79

SHEET 18 OF 54

10745102



CURVE TABLE

LEGAL DESCRIPTION

LYING WITHIN THE NORTH EAST QUARTER
(NE1/4) OF SECTION 33, TOWNSHIP 20 SOUTH,
RANGE 59 EAST M.D.M., CITY OF LAS VEGAS,
CLARK COUNTY, NEVADA.

EASEMENT NOTES

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2. ALL COMMON ELEMENTS ARE PUBLIC DRAINAGE EASEMENTS TO BE PRIVATELY MAINTAINED.

SEWER NOTES

1. INSTALL 8" PVC SANITARY SEWER PER DCSWCS SD-15 & SD-17
2. INSTALL 48" DIAMETER SANITARY SEWER MANHOLE WITH PRECAST BASE PER DCSWCS SD-1A, SD-1B, SD-4, SD-9, AND SINGLE LID (24")
3. MANHOLE BASE AND CORROSION PROTECTED WITH FIELD APPLIED COATING PER DCSWCS SECTION 3.16.BB
4. INSTALL 4" PVC SEWER LATERAL PER DCSWCS SD-22 & SD-25
5. REMOVE CAP AND CONNECT TO EXISTING 8" SS
6. INSTALL 8" C900 PVC SEWER LATERAL PER DCSWCS SD-22 & SD-25 FOR LOTS 123 AND 124 ONLY
7. INSTALL 8" C900 PVC SANITARY SEWER PER DCSWCS SD-15

LVWD NOTES

- ALL DUCTILE IRON PIPE (DIP) TO BE CLASS 350 DIP UNLESS OTHERWISE SPECIFIED.
- MAINTAIN MINIMUM TWENTY-FOUR (24") INCH COVER PER UDACS SEC. 2.08.04. GRADING MUST BE COMPLETED PRIOR TO WATERLINE INSTALLATION
- WATER PRESSURE ZONE 3665

DISCLAIMER NOTE

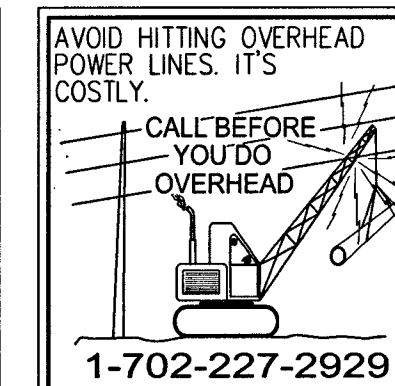
1. EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE USER'S CORRELATION RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.
2. FOR ROADWAY WIDENING AND HALF STREET IMPROVEMENTS THE CONTRACTOR SHALL VERIFY CROSS SLOPES FROM EXISTING PAVEMENT SAWCUT LINE TO PROPOSED EDGE OF PAVEMENT OR PROJECTED LINE OF CURB PRIOR TO SUBMIT PREPARATION AND PROTECTION OF PAVEMENT. THE CONTRACTOR SHALL VERIFY THAT ALL CROSS SLOPES DO NOT MEET AGENCY STANDARDS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER.

BENCHMARK

CITY OF LAS VEGAS BENCHMARK 7LV09 34SW6
RIVET AND ROUND PLATE IN THE TOP OF CURB AT THE SOUTHEAST CORNER OF DESERT
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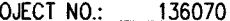
Call

 OR
1-800-227-2600

STORM DRAIN NOTES

- * WATER TIGHT MANHOLE

APPROVED FOR CONSTRUCTION


LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT NO.: 136070 FIRST APPROVED DATE: 3-30

**SLATER
HANIFAN
GROUP**
a Westwood team

5740 S. ARVILLE STREET #218, LAS VEGAS, NV 89118
PHONE (702) 294-5300
FAX (702) 294-5309

[illegible]

D 13+50

KB HOME
BRISTLE VALE - UNIT
AMERICAN DIPPER S

PLAN & PROFILE - AMERICAN DIPPER ST STA 9+50 TO 13+50

S 33 T 20S R 59E	PL
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DATE: 3/14/19

DRAFTER: OIQ

DESIGNER: OIQ

CHECKED: DP

PROJECT NO.

KBH1804-000

TIMOTHY M.

Exp. 12/31/2019



5/4/19

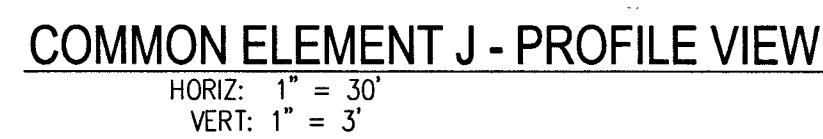
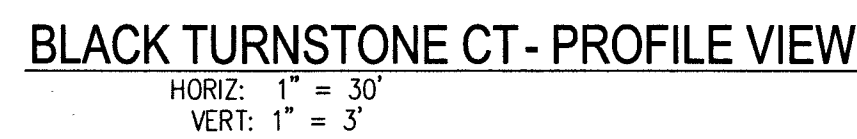
DD 1

SHEET 19 OF 54

L19-00027

10745102

PROJ#:136070A QS:137-33-NE



RAMP TRANSITION LENGTHS FOR 1:12 SIDE SLOPES			
CASE NO.	GRADE % "B" TO "A"	"A" MIN.	"B" MIN.
①	-6 TO -5.01	4.5'	21.5'
②	-5 TO -4.01	4.5'	15.0'
③	-4 TO -3.01	4.5'	12.0'
④	-3 TO -2.01	4.5'	9.5'
⑤	-2 TO 2	8.0'	8.0'
⑥	2.01 TO 3	9.5'	4.5'
⑦	3.01 TO 4	12.0'	4.5'
⑧	4.01 TO 5	15.0'	4.5'
⑨	5.01 TO 6	21.5'	4.5'

SIDEWALK RAMPS: USE AMOR TLE
TRUNCATED DOWNS OR EQUIVALENT PER
CAUSA NO. 235, CASE 1

CURVE	LENGTH	RADIUS	DELTA	TANGENT
C7	198.16'	1298.50'	8°44'37"	99.27'
C21	32.33'	1298.50'	1°25'35"	16.16'
C29	24.63'	20.00'	70°34'13"	14.15'
C30	31.84'	1279.00'	1°25'35"	19.92'
C31	195.18'	1279.00'	8°44'37"	97.78'
C55	33.27'	20.00'	95°19'29"	21.95'
C62	33.32'	20.00'	95°27'19"	22.00'
C63	87.16'	440.50'	11°20'11"	43.72'
C68	421.27'	479.50'	51°03'18"	228.99'
C84	36.83'	20.00'	105°29'47"	26.30'
C85	152.36'	1318.00'	6°37'23"	76.26'

LEGAL DESCRIPTION

LYING WITHIN THE NORTH EAST QUARTER
(NE1/4) OF SECTION 33, TOWNSHIP 20 SOUTH
RANGE 59 EAST M.D.M., CITY OF LAS VEGAS,
CLARK COUNTY, NEVADA.

EASEMENT NOTES

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2. ALL COMMON ELEMENTS ARE PUBLIC DRAINAGE EASEMENTS TO BE PRIVATELY MAINTAINED.

CONSTRUCTION NOTES

- 1 INSTALL 2" ASPHALT PAVEMENT OVER 4" TYPE II AGGREGATE BASE
 - 2 INSTALL 1" TYPE CURB PER CCAUSD NO. 216
 - 3 INSTALL MODIFIED ROLL TYPE CURB PER CCAUSD NO. 217.1
 - 4 INSTALL 1" TYPE ISLAND CURB PER CCAUSD NO. 219
 - 5 INSTALL 4" TYPE ISLAND CURB PER CCAUSD NO. 219
 - 6 INSTALL 10' 1" TYPE CURB TO MODIFIED ROLL CURB TRANSITION PER DETAIL 31, SHEET D-3
 - 7 CONSTRUCT 4" WIDE SIDEWALK PER CCAUSD NO. 234
 - 8 CONSTRUCT 5" WIDE SIDEWALK PER CCAUSD NO. 234
 - 9 CONSTRUCT SIDEWALK RAMPS USING ARMOR TILE TRUNCATED DOWNS OR EQUIVALENT PER DETAIL 33, SHEET D-3
 - 10 CONSTRUCT 8" CROSS GUTTER PER CCAUSD NO. 228
 - 11 CONSTRUCT SIDEWALK DRAIN PER CCAUSD NO. 236
 - 12 INSTALL 18" RCP STORM DRAIN PIPE
 - 13 INSTALL 24" RCP STORM DRAIN PIPE
 - 14 INSTALL 30" RCP STORM DRAIN PIPE
 - 15 INSTALL 36" RCP STORM DRAIN PIPE
 - 16 INSTALL 48" RCP STORM DRAIN PIPE
 - 17 INSTALL 4.5X6" NDOT TYPE 2A DROP INLET PER DETAIL 9, SHEET D-4 & CCAUSD NO. 421
 - 18 INSTALL WROUGHT IRON FENCE WITH VEHICLE ACCESS GATE AND EMERGENCY KNICK PADLOCK PER CCAUSD NO. 425.51
 - 19 INSTALL 12" WIDE INLET WITH 12" AGGREGATE APRON PER DETAIL R-4.2.7, SHEET D-4 & CCAUSD NO. 421
 - 20 CUT EXISTING SD PIPE WHERE SHOWN ON PLANS
 - 21 INSTALL 7.5" TYPE "CM2" DROP INLET PER CCAUSD NO. 421
 - 22 INSTALL 10" TYPE "CM2" DROP INLET PER CCAUSD NO. 421
 - 23 INSTALL 20" TYPE "CM2" DROP INLET PER CCAUSD NO. 421
 - 24 INSTALL 48" TYPE I SDMH PER CCAUSD NO. 401, 402 & 405.2
 - 25 INSTALL 5" TYPE "CM2" DROP INLET PER CCAUSD NO. 421
 - 26 INSTALL 48" TYPE III SDMH CCAUSD NO. 401, 402 & 406
 - 27 INSTALL 48" TYPE I SDMH CCAUSD NO. 401, 402 & 403
 - 28 INSTALL D50=6" RIPRAP THICKNESS=12" OVER 6" TYPE II AGGREGATE BASE
 - 29 INSTALL RIPRAP D50=12" THICKNESS=24" OVER 6" TYPE II AGGREGATE BASE
- SEE SHEET C-3 FOR LEGEND, ABBRIVATIONS, & QUANTITIES

SEWER NOTES

- | | |
|---|--|
| 1 | INSTALL 8" PVC SANITARY SEWER PER DCSWCS SD-15 & SD-17 |
| 2 | INSTALL 48" DIAMETER SANITARY SEWER MANHOLE WITH 12" THICK 15' DEEP CONCRETE DCSWCS SD-1A, SD-1B, SD-54, SD-9, AND SINGLE LD 24" |
| 3 | MANHOLE SHALL BE CORROSION PROTECTED WITH FIELD APPLIED COATING PER DCSWCS SECTION 3.16.BB |
| 4 | INSTALL 4" PVC SEWER LATERAL PER DCSWCS SD-22 & SD-23 |
| 5 | REMOVE CAP AND CONNECT TO EXISTING 8" SS |
| 6 | INSTALL 4" C900 PVC SEWER LATERAL PER DCSWCS SD-22 & SD-25 FOR LOTS 123 AND 124 ONLY |
| 7 | INSTALL 8" C900 PVC SANITARY SEWER PER DCSWCS SD-15 & SD-17 |
- SEE SHEET C-3 FOR QUANTITIES AND ABBREVIATIONS

SOUTHWEST GAS APPROVAL

Ken Blank 3/18/19
SOUTHWEST GAS CORPORATION DATE

DISCLAIMER NOTE

1. EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY IN DETERMINING THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.
2. FOR ROADWAY WIDENING AND HALF STREET IMPROVEMENTS THE CONTRACTOR SHALL VERIFY CROSS SLOPES FROM EXISTING PAVEMENT SAWTOOTH LINE TO PROPOSED EDEGE OF CURB. THE CONTRACTOR SHALL VERIFY CURB PRIOR TO SUBGRADE PREPARATION AND CONSTRUCTION OF PROPOSED CURB LINE. A MINIMUM OF MAXIMUM CROSS SLOPES DO NOT MEET AGENCY STANDARDS THE CONTRACTOR SHALL NOTIFY THE ENGINEER.

BENCHMARK

CITY OF LAS VEGAS BENCHMARK 7LV09 34SW6
RIVET AND ROUND PLATE IN THE TOP OF CURB AT THE SOUTHEAST CORNER OF DESERT
MOON RD. AND SKY VISTA DR.
ELEVATION = 1011.422 METERS (NAVD '88)
ELEVATION = 3318.31 US SURVEY FEET (NAVD '88)

BASIS OF BEARINGS

NORTH 05°59'55" WEST, BEING THE BEARING OF THE WEST LINE OF SECTION 34, TOWNSHIP 20 SOUTH, RANGE 59 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF ON FILE IN THE CLARK COUNTY, NEVADA RECORDER'S OFFICE IN BOOK 135, PAGE 71 OF PLATS.

LVWD NOTES

- ALL DUCTILE IRON PIPE (DIP) CLASS 350 DIP UNLESS OTHERWISE SPECIFIED.
- MAINTAIN MINIMUM TWENTY-FOUR INCH COVER PER UDACS SEC. 2.08.04. MUST BE COMPLETED PRIOR TO VERTICAL INSTALLATION
- WATER PRESSURE ZONE 3665

STORM DRAIN NOTES

- WATER TIGHT MANHOLE

APPROVED FOR CONSTRUCTION


 LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
 PROJECT NO.: 136070 FIRST APPROVED DATE: 3-20

FAST

 **Call**
before you
Underground
1-702-432-5300
FREEWAY & ARTERIAL SYSTEM
OF TRANSPORTATION (F.A.S.T.)

AVOID HITTING OVERHEAD
POWER LINES. IT'S
COSTLY.

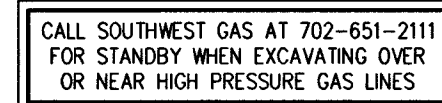
CALL BEFORE
YOU DO
OVERHEAD

1-702-227-2929

Call before you Dig
AVOID CUTTING UNDERGROUND
UTILITY LINES. IT'S COSTLY.
Call

OR
1-800-227-2600

[illegible]



SIDEWALK RAMPS USING AMOR TILE
TRUNCATED DOMES OR EQUIVALENT PER
CCAUSD NO. 235, CASE 1

CURVE TABLE

LYING WITHIN THE NORTH EAST QUARTER
(NE1/4) OF SECTION 33, TOWNSHIP 20 SOUTH,
RANGE 59 EAST M.D.M., CITY OF LAS VEGAS,
CLARK COUNTY, NEVADA.

1. ALL PRIVATE STREETS ARE P.U.E., PUBLIC SEWER EASEMENTS AND PUBLIC DRAINAGE EASEMENTS TO BE PRIVATELY MAINTAINED BY HOA.
2. ALL COMMON ELEMENTS ARE PUBLIC DRAINAGE EASEMENTS TO BE PRIVATELY MAINTAINED.

- 1) INSTALL 2" ASPHALT PAVEMENT OVER 4" TYPE II AGGREGATE BASE
- 2) INSTALL 1" TYPE CURB PER CCAUSD NO. 216
- 3) INSTALL MODIFIED ROLL TYPE CURB PER CCAUSD NO. 217.1
- 4) INSTALL 1" TYPE ISLAND CURB PER CCAUSD NO. 219
- 5) INSTALL 1" TYPE ISLAND CURB PER CCAUSD NO. 219
- 6) INSTALL 10' "1" TYPE CURB TO MODIFIED ROLL CURB TRANSITION PER CCAUSD 31, SHEET D-3
- 7) CONSTRUCT 4' WIDE SIDEWALK PER CCAUSD NO. 234
- 8) CONSTRUCT 5' WIDE SIDEWALK PER CCAUSD NO. 234
- 9) CONSTRUCT SIDEWALK RAMPS USING ARMOR TILE TRUNCATED DUMES OR EQUIVALENT PER DETAIL 33, SHEET D-3
- 10) CONSTRUCT 8' CROSS GUTTER PER CCAUSD NO. 228
- 11) CONSTRUCT SIDEWALK DRAIN PER CCAUSD NO. 236
- 12) INSTALL 18" RCP STORM DRAIN PIPE
- 13) INSTALL 24" RCP STORM DRAIN PIPE
- 14) INSTALL 30" RCP STORM DRAIN PIPE
- 15) INSTALL 36" RCP STORM DRAIN PIPE
- 16) INSTALL 48" RCP STORM DRAIN PIPE
- 17) INSTALL 4.5X6" NDOT TYPE 2A DRO INLET PER CCAUSD 42. SHEET D-4 & CCAUSD NO. 421
- 18) INSTALL WROUGHT IRON FENCE WITH VEHICLE ACCESS GATE AND EMERGENCY KNICK PADLOCK PER CCAUSD NO. 425.51
- 19) INSTALL 18" WIDE NYLON OR POLYESTER APRON PER DETAIL R-4.2.7, SHEET D-4 & CCAUSD NO. 421
- 20) CUT EXISTING SD PIPE WHERE SHOWN ON PLANS
- 21) INSTALL 7.5" TYPE "CM2" DRO INLET PER CCAUSD NO. 421
- 22) INSTALL 10" TYPE "CM2" DRO INLET PER CCAUSD NO. 421
- 23) INSTALL 20" TYPE "CM2" DRO INLET PER CCAUSD NO. 421
- 24) INSTALL 48" TYPE 1 SDMH PER CCAUSD NO. 401, 402 & 405.1
- 25) INSTALL 5" TYPE "CM2" DRO INLET PER CCAUSD NO. 421
- 26) INSTALL 48" TYPE III SDMH CCAUSD NO. 401, 402 & 406
- 27) INSTALL 48" TYPE 1 SDMH CCAUSD NO. 401, 402 & 403
- 28) INSTALL D50=6" RIPRAP THICKNESS=12" OVER 6" TYPE II AGGREGATE BASE
- 29) INSTALL RIPRAP D50=12" THICKNESS=24" OVER 6" TYPE II AGGREGATE BASE

SEE SHEET C-3 FOR LEGEND, ABBREVIATIONS, & QUANTITIES

1	INSTALL 8" PVC SANITARY SEWER PER DCSWCS SD-15 & SD-25
2	INSTALL 48" DIAMETER SANITARY SEWER MANHOLE WITH 48" DIAMETER PER DCSWCS SD-1A, SD-1B, SD-4, SD-9, AND SING LID (2-7)
3	MANHOLE SHALL BE CORROSION PROTECTED WITH FIELD APPLIED COATING PER DCSWCS SECTION 316.BB
4	INSTALL 4" PVC SEWER LATERAL PER DCSWCS SD-22 & SD-25.
5	REMOVE CAP AND CONNECT TO EXISTING 8" SS
6	INSTALL 4" C900 PVC SEWER LATERAL PER DCSWCS SD-22 & SD-25 FOR LOTS 123 AND 124 ONLY
7	INSTALL 8" C900 PVC SANITARY SEWER PER DCSWCS SD-15 & SD-17
SEE SHEET C-3 FOR QUANTITIES AND ABBREVIATIONS	

Bryan Stunk 3/18/19
SOUTHWEST GAS CORPORATION DATE

1. 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 EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.
2. FOR ROADWAY WIDENING AND HALF STREET IMPROVEMENTS THE CONTRACTOR SHALL VERIFY CROSS SLOPES FROM EXISTING PAVEMENT SLOUT LINE TO PROPOSED EDGE OF PAVEMENT OR CURB OR TO THE CENTERLINE TO SUBGRADE PREPARATION AND CONSTRUCTION OF PROPOSED CURB LINE. IF MINIMUM OR MAXIMUM CROSS SLOPES DO NOT MEET AGENCY STANDARDS THE CONTRACTOR SHALL NOTIFY THE ENGINEER.

CITY OF LAS VEGAS BENCHMARK 7LV09 34SW6
RIVET AND ROUND PLATE IN THE TOP OF CURB AT THE SOUTHEAST CORNER OF DESER
MOON RD. AND SKY VISTA DR.
ELEVATION = 1011.422 METERS (NAVD '88)
ELEVATION = 3318.31 US SURVEY FEET (NAVD '88)

NORTH 05°59'55" WEST, BEING THE BEARING OF THE WEST LINE OF SECTION 34, TOWNSHIP 20 SOUTH, RANGE 59 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF ON FILE IN THE CLARK COUNTY, NEVADA RECORDER'S OFFICE IN BOOK 135, PAGE 71 OF PLATS.

- ALL DUCTILE IRON PIPE (DIP) TO BE CLASS 350 DIP UNLESS OTHERWISE SPECIFIED.
- MAINTAIN MINIMUM TWENTY-FOUR (24") IN COVER PER UDACS SEC. 2.08.04. GRADING MUST BE COMPLETED PRIOR TO WATERLINE INSTALLATION
- WATER PRESSURE ZONE 3665

* WATER TIGHT MANHOLE


VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES

AVOID HITTING OVERHEAD
POWER LINES. IT'S
COSTLY.

CALL BEFORE
YOU DO
OVERHEAD

1-702-227-2929

Call
811



KB HOME
BRISTLE VALE - UNIT 1
BLACK TURNSTONE CT 13+50 TO

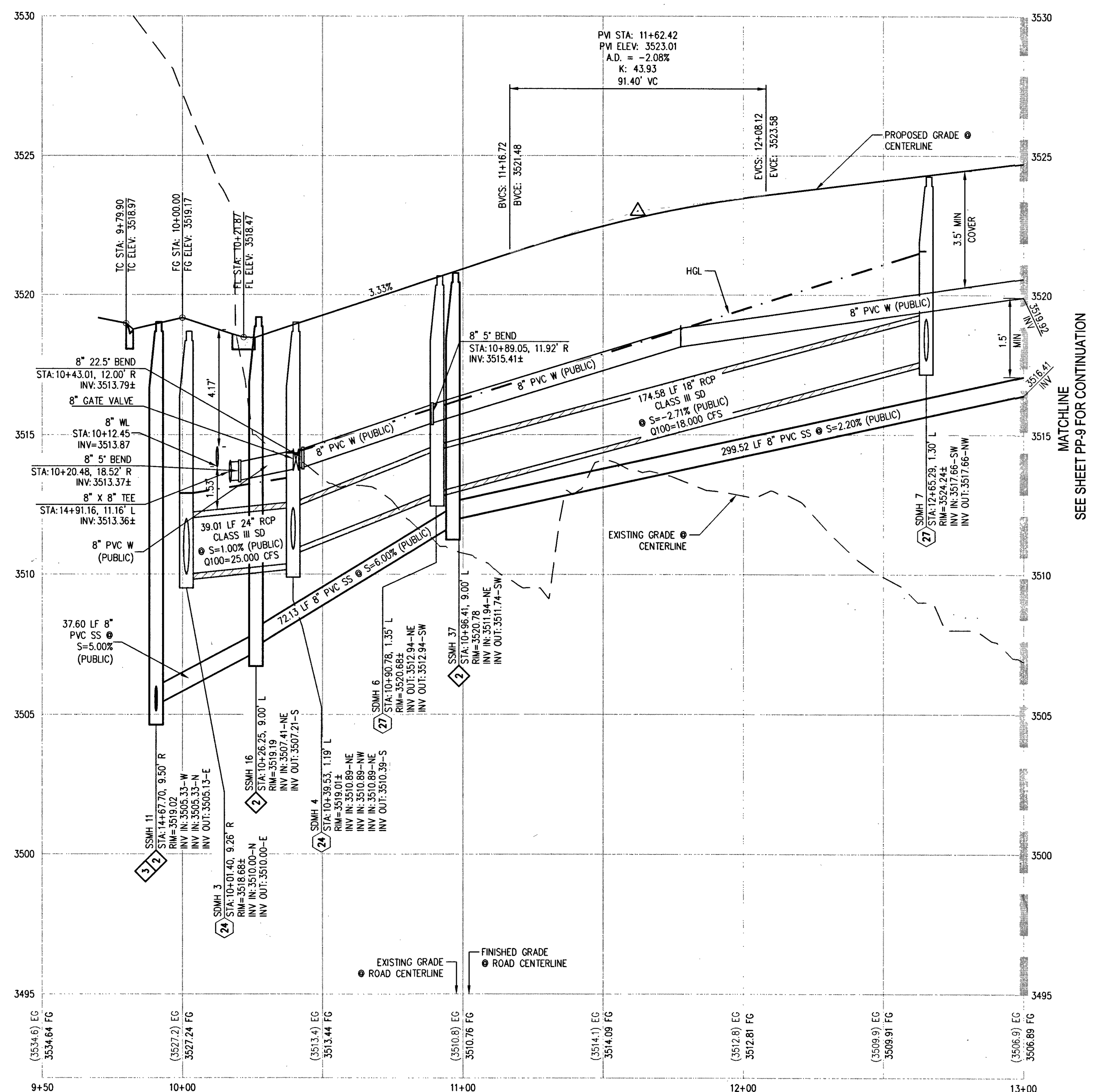
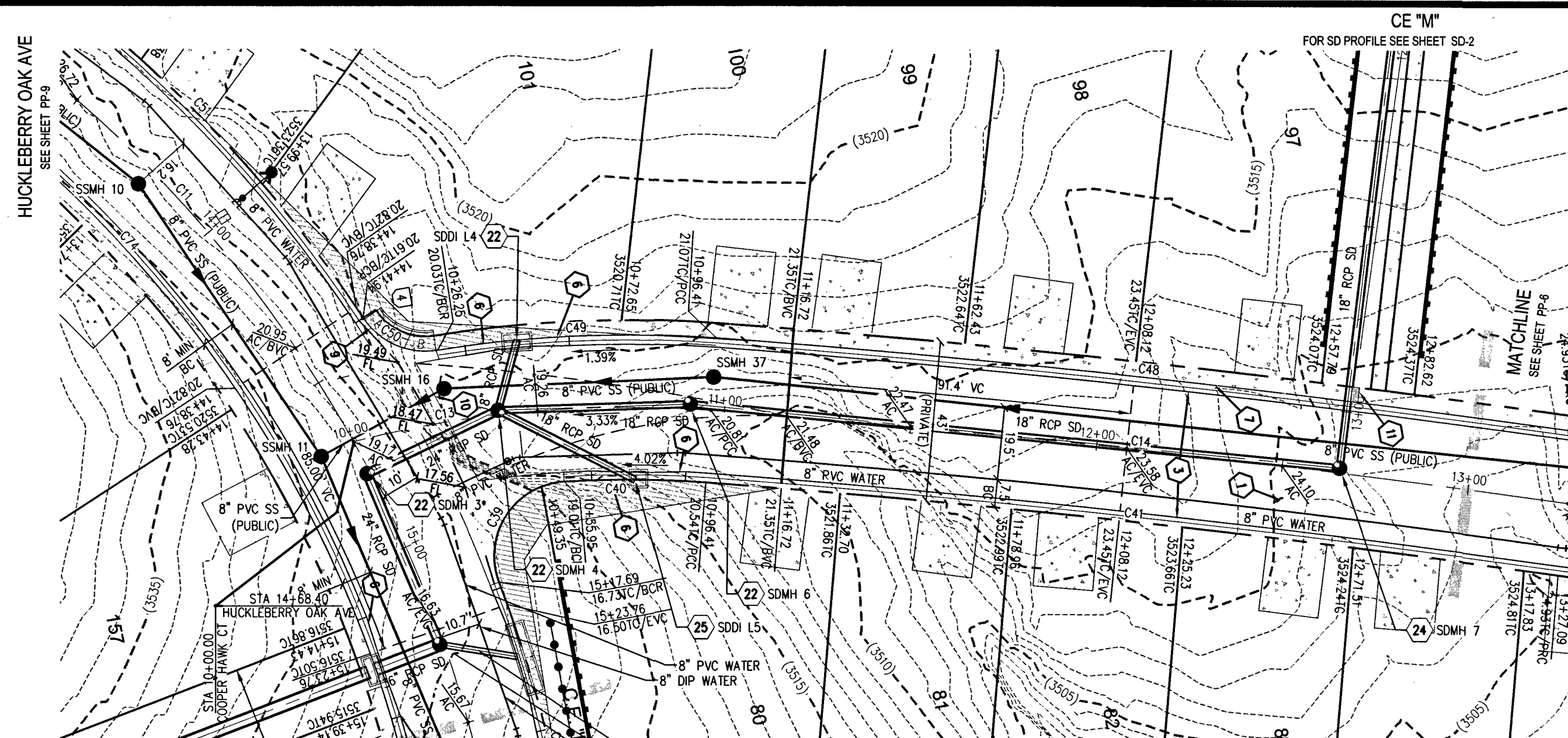
PLAN & PROFILE -

DATE:	3/14/19
DRAFTER:	OIQ
DESIGNER:	OIQ
CHECKED:	DP

PROJECT NO.
KBH1804-000

PP-4
SHEET 22 OF 54
L19-00027
10745102

PROJ#:136070A QS:137-33-NE



RAMP TRANSITION LENGTHS FOR 1:12 SIDE SLOPES			
GRADE NO.	"B" TO "A"	"A" MIN.	"B" MIN.
①	-6 TO -5.01	4.5'	21.5'
②	-5 TO -4.01	4.5'	15.0'
③	-4 TO -3.01	4.5'	12.0'
④	-3 TO -2.01	4.5'	9.5'
⑤	-2 TO 2	8.0'	8.0'
⑥	2.01 TO 3	9.5'	4.5'
⑦	3.01 TO 4	12.0'	4.5'
⑧	4.01 TO 5	15.0'	4.5'
⑨	5.01 TO 6	21.5'	4.5'

SIDEWALK RAMP TRANSITION LENGTHS PER
TRUCKING CODES OR EQUIPMENT PER
CAUSD NO. 235, CASE I

CURVE TABLE				
CURVE	LENGTH	RADIUS	DELTA	TANGENT
C10	151.99'	343.00'	25°23'20"	77.26'
C11	160.25'	343.00'	26°46'07"	81.61'
C13	96.41'	296.00'	18°39'42"	48.64'
C14	236.68'	3496.00'	3°46'50"	115.38'
C38	107.65'	362.50'	17°00'54"	54.22'
C39	37.41'	20.00'	17°00'21"	21.11'
C40	37.78'	276.50'	7°49'52"	18.93'
C41	229.39'	3476.50'	3°46'50"	114.74'
C48	231.96'	3515.50'	3°46'50"	116.02'
C49	74.79'	315.50'	13°34'52"	37.57'
C50	23.01'	20.00'	65°55'28"	12.99'
C51	142.28'	362.50'	22°29'19"	72.07'
C74	151.14'	323.50'	26°46'07"	76.97'
C75	143.35'	323.50'	25°23'20"	72.87'

LEGAL DESCRIPTION

EASEMENT NOTES

SEWER NOTES

LVWD NOTES

DISCLAIMER NOTE

BENCHMARK

BASIS OF BEARINGS

STORM DRAIN NOTES

APPROVED FOR CONSTRUCTION

FAST
Call before you
Underground
1-702-432-5300
FREEWAY & ARTERIAL SYSTEMS
OF TRANSPORTATION (F.A.S.)

AVOID HITTING OVERHEAD
POWER LINES. IT'S
COSTLY.

CALL BEFORE
YOU DO
OVERHEAD



1-702-227-2929

Call before you Dig
AVOID CUTTING UNDERGROUND
UTILITY LINES. IT'S COSTLY.

Call
811
OR
1-800-227-2600

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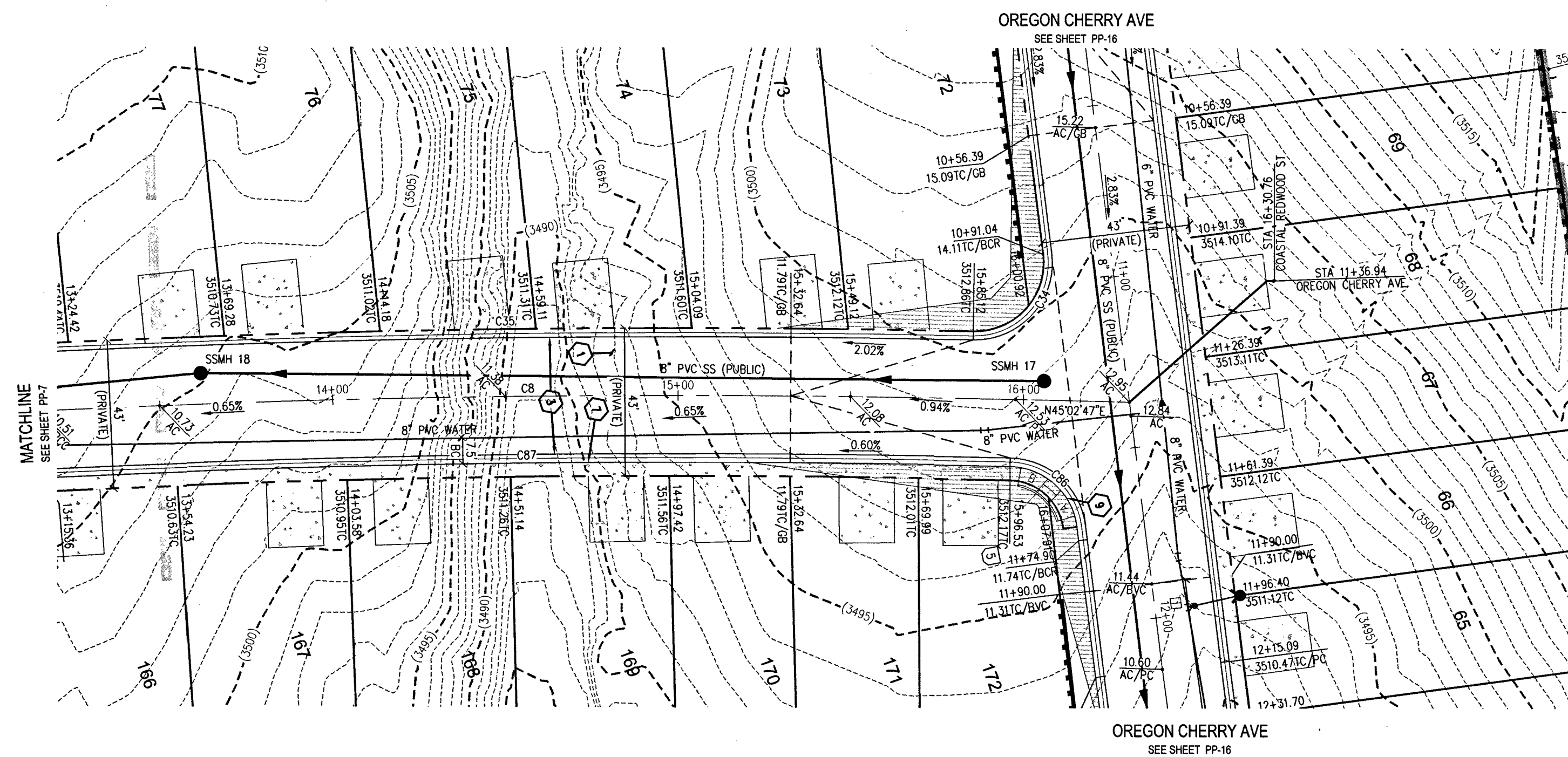
KB HOME
BRISTLE VALE - UNIT 1

PLAN & PROFILE - COOPER HAWK CT STA 9+00 TO 13+00

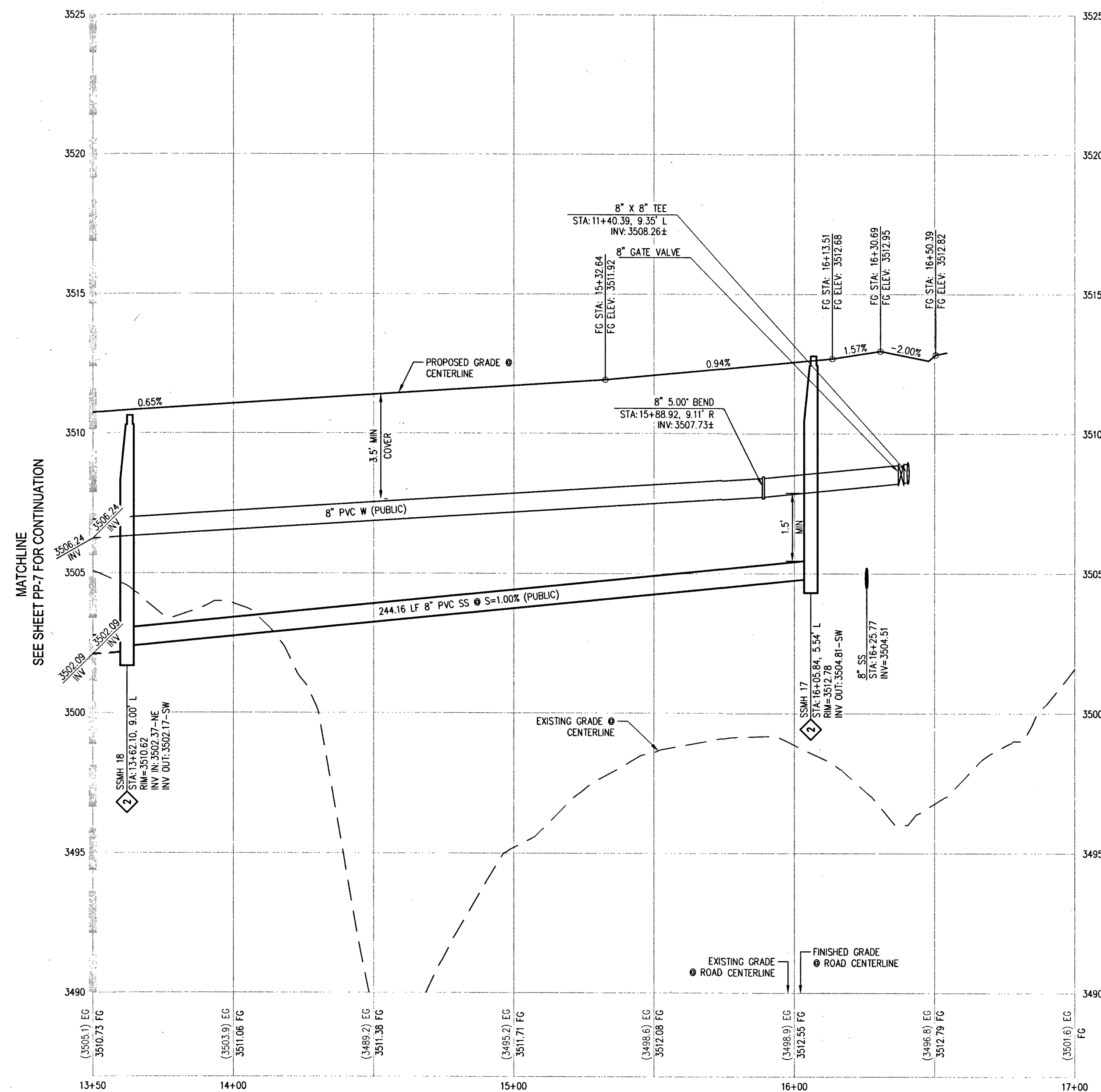
DATE: 3/14/19
DRAFTER: OIQ
DESIGNER: OIQ
CHECKED: DP
PROJECT NO.
KBH1804-0000


PROFESSIONAL ENGINEER
TIMOTHY M. MULROONEY
Exp. 12/31/2019
CIVIL
No. 22958
STATE OF NEW YORK
3/14/19

PP-5
SHEET 23 OF 54
L19-00027
107Y5102

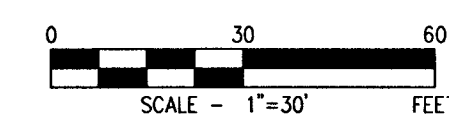


COASTAL REDWOOD ST - PLAN VIEW
(PRIVATE)



COASTAL REDWOOD ST - PROFILE VIEW

HORIZ: 1" = 30'
VERT: 1" = 3'



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

CASE NO.	GRADE "B" TO "A"	"A" MIN.	"B" MIN.
1	-6 TO -5.01	4.5'	21.5'
2	-5 TO -4.01	4.5'	15.0'
3	-4 TO -3.01	4.5'	12.0'
4	-3 TO -2.01	4.5'	9.5'
5	-2 TO 2	8.0'	8.0'
6	2.01 TO 3	9.5'	4.5'
7	3.01 TO 4	12.0'	4.5'
8	4.01 TO 5	15.0'	4.5'
9	5.01 TO 6	21.5'	4.5'

SIDEWALK RAMP USING ARMOR TILE
TRUNCATED DOWNS OR EQUIVALENT PER
CALSD NO. 235, CASE I

CURVE	LENGTH	RADIUS	DELTA	TANGENT
C8	282.37'	3960.90'	47°05'04"	141.24'
C34	34.25'	20.00'	98°07'55"	23.06'
C35	271.09'	3980.40'	3°54'08"	135.60'
C86	28.52'	20.00'	81°42'11"	17.29'
C87	279.78'	3941.40'	47°04'02"	139.95'

LEGAL DESCRIPTION

LYING WITHIN THE NORTH EAST QUARTER
(NE1/4) OF SECTION 33, TOWNSHIP 20 SOUTH,
RANGE 59 EAST, M.D.M., CITY OF LAS VEGAS,
CLARK COUNTY, NEVADA.

EASEMENT NOTES

- ALL PRIVATE STREETS ARE P.U.E., PUBLIC
SEWER EASEMENTS AND PUBLIC DRAINAGE
EASEMENTS TO BE PRIVATELY MAINTAINED
BY HOA.
- ALL COMMON ELEMENTS ARE PUBLIC
DRAINAGE EASEMENTS TO BE PRIVATELY
MAINTAINED.

SEWER NOTES

- INSTALL 8" PVC SANITARY SEWER PER DCSWS SD-15 &
SD-17.
 - INSTALL 48" DIAMETER SANITARY SEWER MANHOLE WITH
PRECAST BASE PER DCSWS SD-1A, SD-1B, SD-4, SD-9,
AND SINGLE LID (24").
 - MANHOLE SHALL BE CORROSION PROTECTED WITH FIELD
APPLIED COATING PER DCSWS SECTION 3.16.88.
 - INSTALL 4" PVC SEWER LATERAL PER DCSWS SD-22 &
SD-17.
 - REMOVE CAP AND CONNECT TO EXISTING 8" SS.
 - INSTALL 4" C900 PVC SEWER LATERAL PER DCSWS SD-22
& SD-17 FOR LOTS 123 AND 124 ONLY.
 - INSTALL 8" C900 PVC SANITARY SEWER PER DCSWS SD-15
& SD-17.
- SEE SHEET C-3 FOR QUANTITIES AND ABBREVIATIONS

LWWWD NOTES

- ALL DUCTILE IRON PIPE (DIP) TO BE
CLASS 350 DIP UNLESS OTHERWISE
SPECIFIED.
- MAINTAIN MINIMUM TWENTY-FOUR (24") INCH
COVER PER UDACS SEC. 2.08.04. GRADING
MUST BE COMPLETED PRIOR TO WATERLINE
INSTALLATION.
- WATER PRESSURE ZONE 3665

DISCLAIMER NOTE

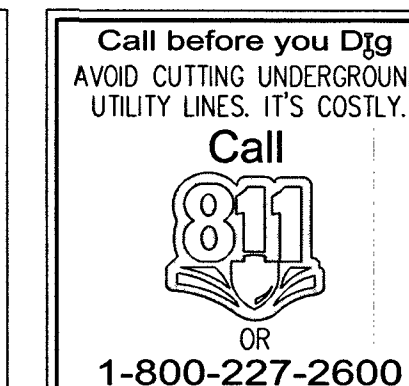
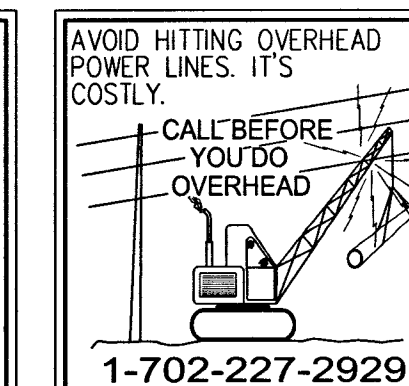
- EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE
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HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO
COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING
UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR
UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.
- FOR ROADWAY WIDENING AND HALF STREET IMPROVEMENTS THE CONTRACTOR SHALL
VERIFY CROSS SLOPES FROM EXISTING PAVEMENT SAWCUT LINE TO PROPOSED EDGE
OF PAVEMENT OR PROJECTED UP OF CURB PRIOR TO SUBGRADE PREPARATION AND
CONSTRUCTION OF PROPOSED CURB LINE. IF MINIMUM OR MAXIMUM CROSS SLOPES DO
NOT MEET AGENCY STANDARDS THE CONTRACTOR SHALL NOTIFY THE ENGINEER.

BENCHMARK

CITY OF LAS VEGAS BENCHMARK 7LV99 345W6
RIVET AND ROUND PLATE IN THE TOP OF CURB AT THE SOUTHEAST CORNER OF DESERT
MOON RD. AND SKY VISTA DR.
ELEVATION = 1011.422 METERS (NAVD '88)
ELEVATION = 3318.31 US SURVEY FEET (NAVD '88)

BASIS OF BEARINGS

NORTH 02°59'53" WEST, BEING THE BEARING OF THE WEST LINE OF SECTION 34,
TOWNSHIP 20 SOUTH, RANGE 59 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY,
NEVADA, AS SHOWN BY MAP THEREOF ON FILE IN THE CLARK COUNTY, NEVADA
RECORDER'S OFFICE IN BOOK 135, PAGE 71 OF PLATS.



STORM DRAIN NOTES

- WATER TIGHT MANHOLE

APPROVED FOR CONSTRUCTION

VAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT NO.: 136070 FIRST APPROVED DATE: 3-20-19



DATE	BY	APP.	APP.

DESCRIPTION	NO.

LAS VEGAS, NV

KBHOME
BRISTLE VALE - UNIT 1
PLAN & PROFILE - COASTAL REDWOOD ST
STA 13+50 TO 17+00

DATE: 3/14/19

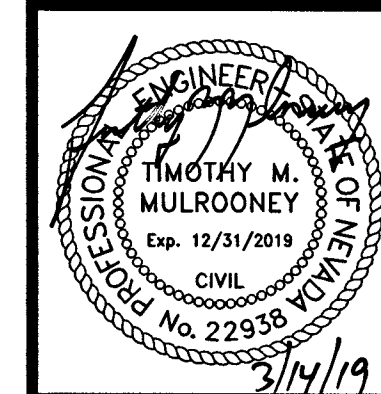
DRAFTER: OIO

DESIGNER: OIO

CHECKED: DP

PROJECT NO.

KBH1804-000



PP-8

SHEET 26 OF 54

L19-00027

107V5102

PROJ: 136070A QS-137-33-NE



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

RAMP TRANSITION LENGTHS FOR 1:12 SIDE SLOPES			
CASE NO.	GRADE % "B" TO "A"	"A" MIN.	"B" MIN.
①	-6 to -5.01	4.5'	21.5'
②	-5 TO -4.01	4.5'	15.0'
③	-4 to -3.01	4.5'	12.0'
④	-3 TO -2.01	4.5'	9.5'
⑤	-2 TO 2	8.0'	8.0'
⑥	2.01 TO 3	9.5'	4.5'
⑦	3.01 TO 4	12.0'	4.5'
⑧	4.01 TO 5	15.0'	4.5'
⑨	5.01 TO 6	21.5'	4.5'

SIDEWALK RAMP UPS USING AMJOR 1/4" TRUNCATED DOMES OR EQUIVALENT PER CAUSD NO. 235, CLASS A

CURVE TABLE				
CURVE	LENGTH	RADIUS	DELTA	TANGENT
C9	283.21'	860.90'	18°50'55"	142.90'
C10	151.99'	343.00'	25°23'20"	77.26'
C11	160.25'	343.00'	26°46'07"	81.61'
C13	96.41'	296.00'	18°39'42"	48.64'
C2	72.78'	880.40'	44°11'32"	36.41'
C37	29.62'	20.00'	84°51'44"	18.28'
C38	107.65'	362.50'	17°00'54"	54.22'
C39	37.41'	20.00'	107°10'20"	27.11'
C40	37.79'	276.50'	74°9'52"	19.83'
C49	74.79'	315.50'	13°34'52"	37.57'
C50	23.01'	20.00'	65°55'28"	12.97'
C74	151.14'	323.50'	26°46'07"	76.97'
C75	143.35'	323.50'	25°23'20"	72.87'
C76	31.45'	20.00'	90°06'14"	20.04'
C77	107.76'	880.40'	70°00'47"	53.95'
C88	276.30'	841.40'	18°48'52"	139.40'

LYING WITHIN THE NORTH EAST QUARTER
(NE1/4) OF SECTION 33, TOWNSHIP 20 SOUTH,
RANGE 59 EAST M.D.M., CITY OF LAS VEGAS,
CLARK COUNTY, NEVADA.

1. ALL PRIVATE STREETS ARE P.U.E., PUBLIC SEWER EASEMENTS AND PUBLIC DRAINAGE EASEMENTS TO BE PRIVATELY MAINTAINED BY HOA.
2. ALL COMMON ELEMENTS ARE PUBLIC DRAINAGE EASEMENTS TO BE PRIVATELY MAINTAINED.

1	INSTALL 8" PVC SANITARY SEWER PER DCSWC SD-15 & PRECAST BASE PER DCSWC SD-17A, SD-16, SD-4, SD-9, AND SD-25.
2	INSTALL 48" DIAMETER SANITARY SEWER MANHOLE WITH PRECAST BASE PER DCSWC SD-17A, SD-16, SD-4, SD-9, AND SD-25.
3	MANHOLE SHALL BE CORROSION PROTECTED WITH FIELD APPLIED COATING PER DCSWC SECTION 3.16.BB
4	INSTALL 4" PVC SEWER LATERAL PER DCSWC SD-22 & SD-25.
5	REMOVE CAP AND CONNECT TO EXISTING 8" SS
6	INSTALL 4" C900 PVC SEWER LATERAL PER DCSWC SD-22 & SD-25 FOR LOTS 123 AND 124 ONLY.
7	INSTALL 8" C900 PVC SANITARY SEWER PER DCSWC SD-15 & SD-17.
SEE SHEET C-2 FOR QUANTITIES AND ABBREVIATIONS	

- ALL DUCTILE IRON PIPE (DIP) TO BE CLASS 350 DIP UNLESS OTHERWISE SPECIFIED.
- MAINTAIN MINIMUM TWENTY-FOUR (24") INC COVER PER UDACS SEC. 2.08.04. GRADING MUST BE COMPLETED PRIOR TO WATERLINE INSTALLATION
- WATER PRESSURE ZONE 3665

1. 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 EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

2. FOR ROADWAY WIDENING AND HALF STREET IMPROVEMENTS THE CONTRACTOR SHALL VERIFY CROSS SLOPES FROM EXISTING PAVEMENT SAWTOOTH LINE TO PROPOSED EDGE OF TRAIL OR CURB OR TO SUBGRADE FOR SUBGRADE PREPARATION AND FOR CONSTRUCTION OF PROPOSED CURB LINE. IF MINIMUM OR MAXIMUM CROSS SLOPES DO NOT MEET AGENCY STANDARDS THE CONTRACTOR SHALL NOTIFY THE ENGINEER.

CITY OF LAS VEGAS BENCHMARK 7LV09 34SW6
RIVET AND ROUND PLATE IN THE TOP OF CURB AT THE SOUTHEAST CORNER OF DESERT
MOON RD. AND SKY VISTA DR.
ELEVATION = 1011.422 METERS (NAVD '88)
ELEVATION = 3318.31 US SURVEY FEET (NAVD '88)

NORTH 05°59'55" WEST, BEING THE BEARING OF THE WEST LINE OF SECTION 34, TOWNSHIP 20 SOUTH, RANGE 59 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF ON FILE IN THE CLARK COUNTY, NEVADA RECORDER'S OFFICE IN BOOK 135, PAGE 71 OF PLATS.

1. INSTALL 2" ASPHALT PAVEMENT OVER 4" TYPE II AGGREGATE BASE
2. INSTALL 1" TYPE CURB PER CCAUSD NO. 216
3. INSTALL MODIFIED ROLL TYPE CURB PER CCAUSD NO. 217.1
4. INSTALL 1" TYPE ISLAND CURB PER CCAUSD NO. 219
5. INSTALL 4" TYPE ISLAND CURB PER CCAUSD NO. 219
6. INSTALL 10' 1" TYPE CURB TO MODIFIED ROLL CURB TRANSITION PER DETAIL 31, SHEET D-3
7. CONSTRUCT 4" WIDE SIDEWALK PER CCAUSD NO. 234
8. CONSTRUCT 5" WIDE SIDEWALK PER CCAUSD NO. 234
9. CONSTRUCT SIDEWALK RAMPUS USING ARMOR TILE TRUNCATED DUMES OR EQUIVALENT PER DETAIL 33, SHEET D-3
10. CONSTRUCT 8" CROSS GUTTER PER CCAUSD NO. 228
11. CONSTRUCT SIDEWALK DRAIN PER CCAUSD NO. 236
12. INSTALL 18" RCP STORM DRAIN PIPE
13. INSTALL 24" RCP STORM DRAIN PIPE
14. INSTALL 30" RCP STORM DRAIN PIPE
15. INSTALL 36" RCP STORM DRAIN PIPE
16. INSTALL 48" RCP STORM DRAIN PIPE
17. INSTALL 4.5X6" NOT TYPE 2A DROD INLET PER DETAIL 12, SHEET D-3
18. INSTALL WROUGHT IRON FENCE WITH VEHICLE ACCESS GATE AND EMERGENCY KNOY PADLOCK PER CCAUSD NO. 425.1
19. INSTALL DROD INLET CONCRETE APRON PER CCAUSD R-4-2.7, DETAIL 12 AND C CAUSD NO. 427
20. CUT EXISTING SD PIPE WHERE SHOWN ON PLANS
21. INSTALL 7.5" TYPE "CM2" DROD INLET PER CCAUSD NO. 421
22. INSTALL 10" TYPE "CM2" DROD INLET PER CCAUSD NO. 421
23. INSTALL 20" TYPE "CM2" DROD INLET PER CCAUSD NO. 421
24. INSTALL 48" TYPE I SDWH PER CCAUSD NO. 401, 402 & 405.2
25. INSTALL 5" TYPE "CM2" DROD INLET PER CCAUSD NO. 421
26. INSTALL 48" TYPE I SDWH CCAUSD NO. 401, 402 & 406
27. INSTALL 48" TYPE I SDWH CCAUSD NO. 401, 402 & 403
28. INSTALL 0.50" B6 RIPRAP THICKNESS=12" OVER 6" TYPE II AGGREGATE BASE
29. INSTALL RIPRAP 0.50" 12" THICKNESS=24" OVER 6" TYPE II AGGREGATE BASE

* WATER TIGHT MANHOLE


 LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
 PROJECT NO: 136070 FIRST APPROVED DATE: 3-20-19

FAST

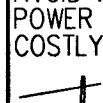
Call before you UnderGround

1-702-432-5300

FREEWAY & ARTERIAL SYSTEMS OF TRANSPORTATION (F.A.S.)

**AVOID HITTING OVERHEAD
POWER LINES. IT'S
COSTLY.**

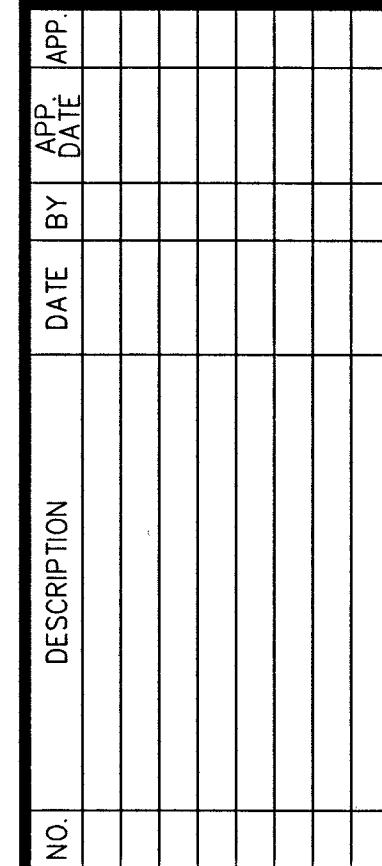
**CALL BEFORE
YOU DO
OVERHEAD**



1-702-227-2929

Call before you Dig
AVOID CUTTING UNDERGROUND
UTILITY LINES. IT'S COSTLY.

Call
811
OR
1-800-227-2600



BRISTLE VALE - UNIT 1

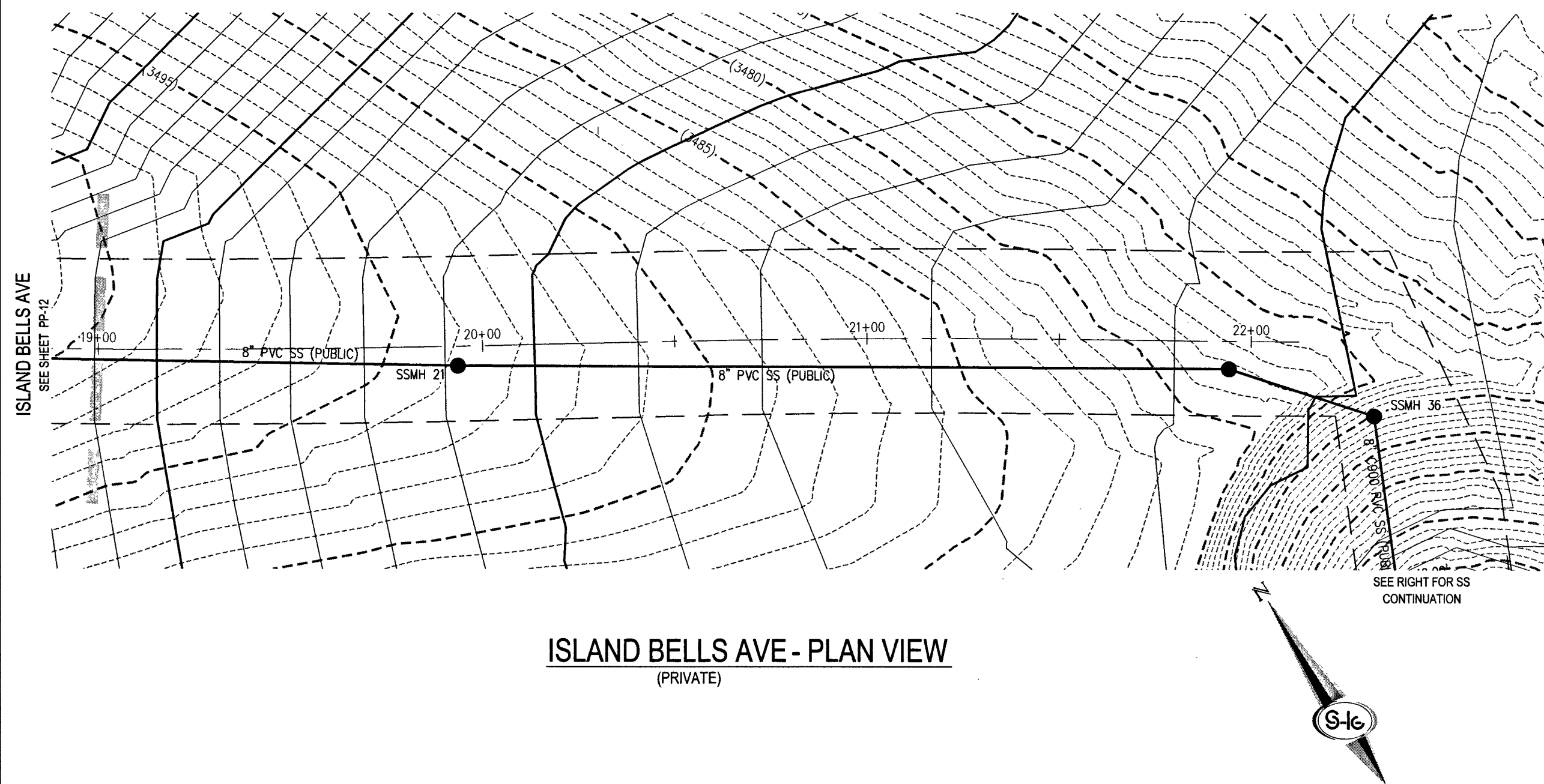
PLAN & PROFILE - HUCKLEBERRY OAK AVE STA 15+50 TO 18+00

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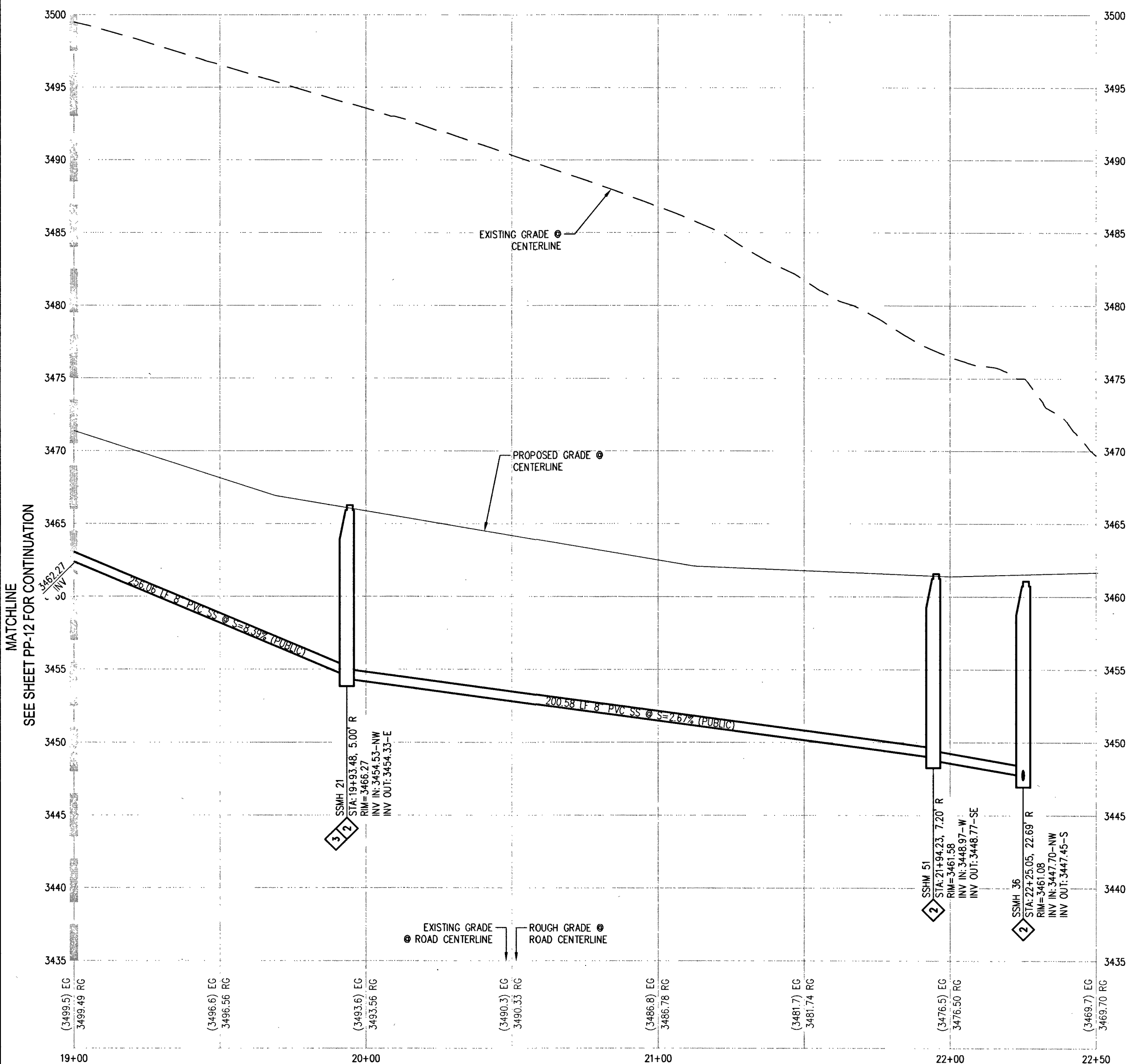
PP-10
SHEET 28 OF 54
L19-00027
10245102

PROJ#:136070A QS:137-33-NE

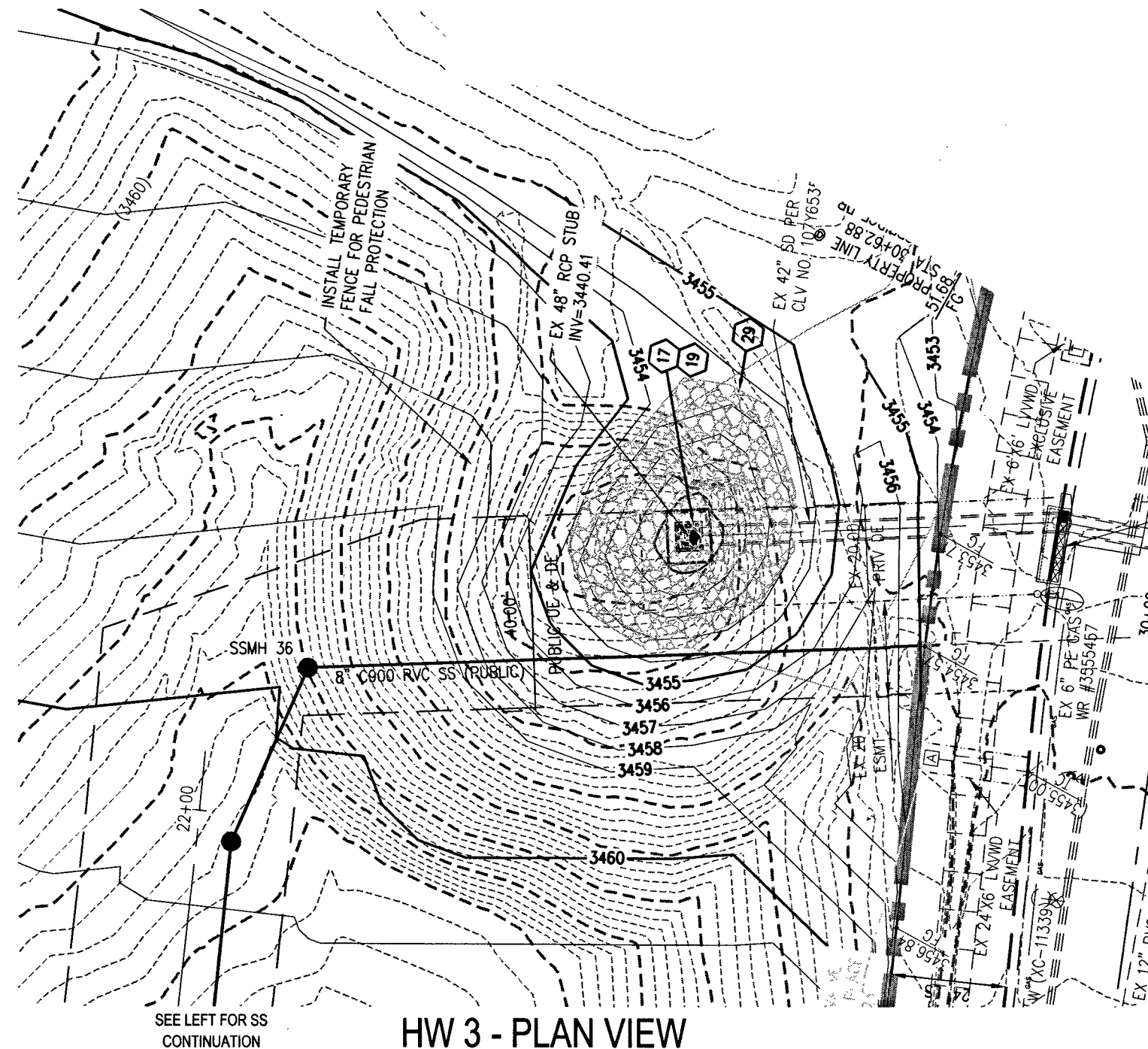
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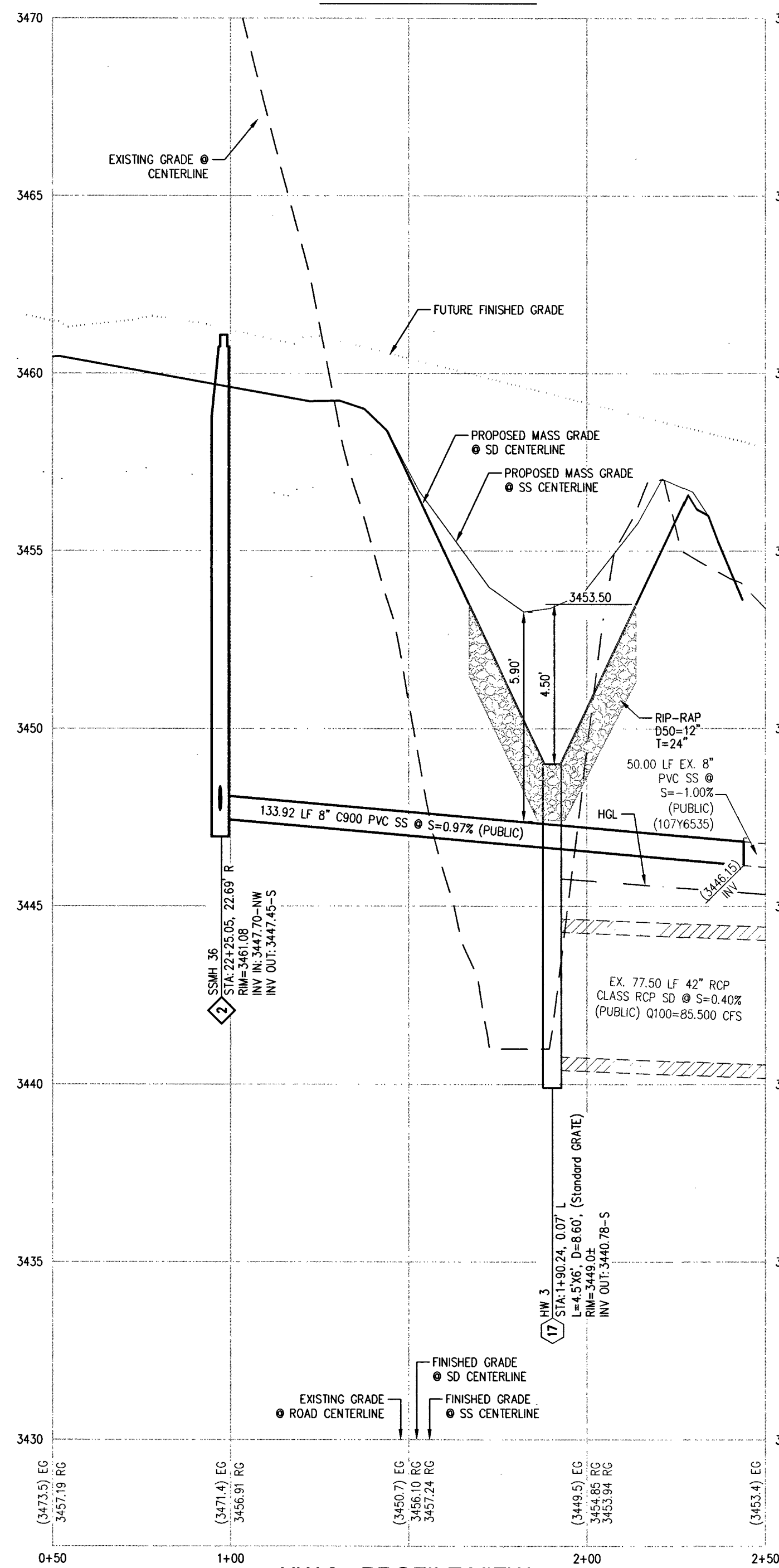
ISLAND BELLS AVE - PLAN VIEW
(PRIVATE)



ISLAND BELLS AVE - PROFILE VIEW
HORIZ: 1" = 30'
VERT: 1" = 6'



HW 3 - PLAN VIEW



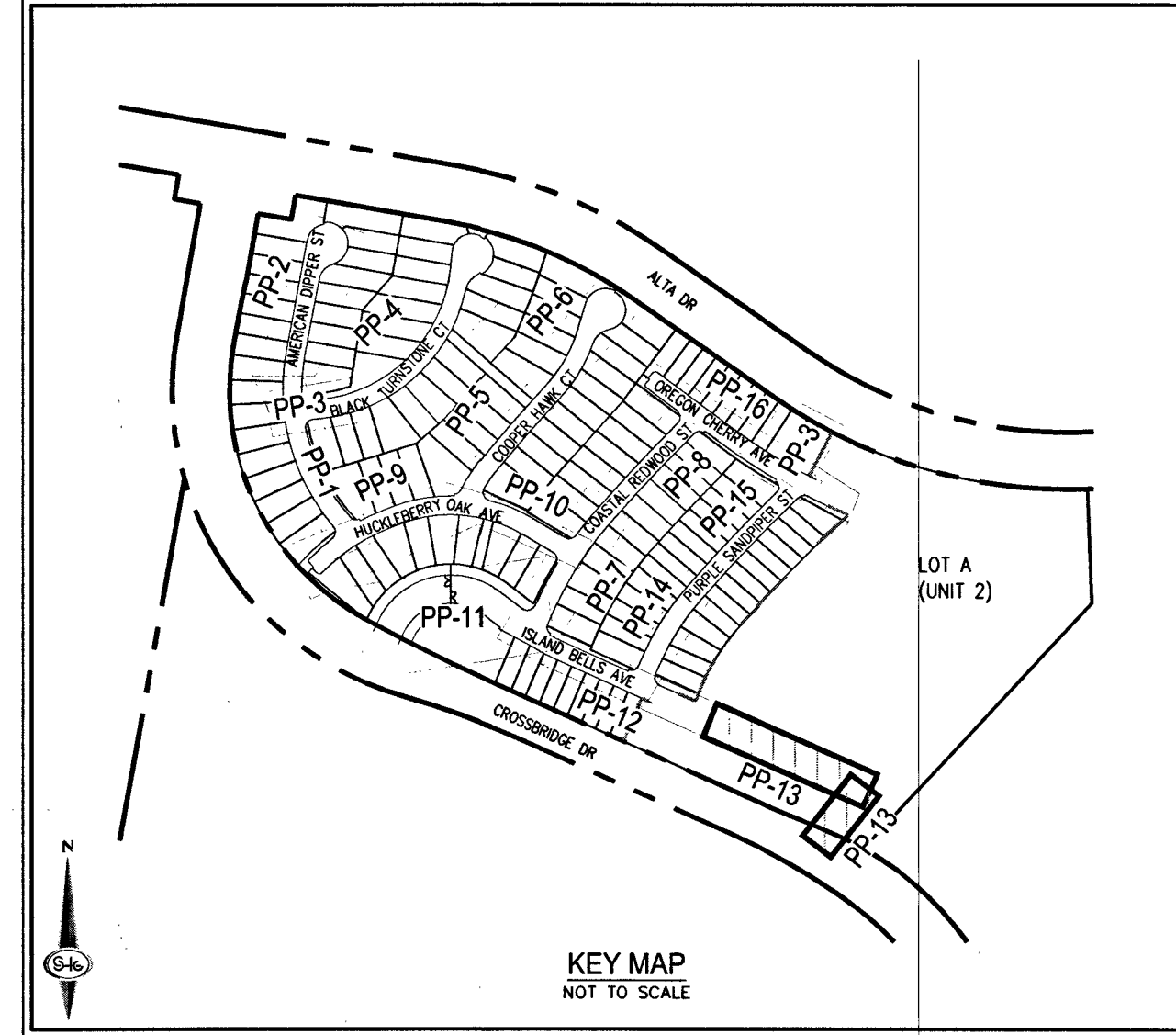
HW 3 - PROFILE VIEW
HORIZ: 1" = 30'
VERT: 1" = 3'

SCALE - 1"=30' FEET

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

CASE NO.	GRADE %	"A" MIN.	"B" MIN.
1	-6 TO -5.01	4.5'	21.5'
2	-5 TO -4.01	4.5'	15.0'
3	-4 TO -3.01	4.5'	12.0'
4	-3 TO -2.01	4.5'	9.5'
5	-2 TO 2	8.0'	8.0'
6	2.01 TO 3	9.5'	4.5'
7	3.01 TO 4	12.0'	4.5'
8	4.01 TO 5	15.0'	4.5'
9	5.01 TO 6	21.5'	4.5'

SIDEWALK RAMP USING ARMOR TILE TRUNCATED DOWNS OR EQUIVALENT PER CCAUSD NO. 235, CASE 1



KEY MAP
NOT TO SCALE

LEGAL DESCRIPTION

LYING WITHIN THE NORTH EAST QUARTER (NE1/4) OF SECTION 33, TOWNSHIP 20 SOUTH, RANGE 59 EAST M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA.

EASEMENT NOTES

1. ALL PRIVATE STREETS ARE P.U.E., PUBLIC SEWER EASEMENTS AND PUBLIC DRAINAGE EASEMENTS TO BE PRIVATELY MAINTAINED BY HOA.
2. ALL COMMON ELEMENTS ARE PUBLIC DRAINAGE EASEMENTS TO BE PRIVATELY MAINTAINED.

SEWER NOTES

1. INSTALL 8" PVC SANITARY SEWER PER DCSWCS SD-15 & PRECAST BASE PER DCSWCS SD-1A, SD-1B, SD-4, SD-9, AND SINGLE LID (24").
 2. MANHOLE SHALL BE CORROSION PROTECTED WITH FIELD APPLIED COATING PER DCSWCS SECTION 316.8B.
 3. INSTALL 4" PVC SEWER LATERAL PER DCSWCS SD-22 & SD-25.
 4. REMOVE CAP AND CONNECT TO EXISTING 8" SS.
 5. INSTALL 4" C900 PVC SEWER LATERAL PER DCSWCS SD-22 & SD-25 FOR LOTS 123 AND 124 ONLY.
 6. INSTALL 8" C900 PVC SANITARY SEWER PER DCSWCS SD-15 & SD-25.
- SEE SHEET C-3 FOR QUANTITIES AND ABBREVIATIONS

SOUTHWEST GAS APPROVAL

[Signature] 3/15/19
SOUTHWEST GAS CORPORATION DATE

DISCLAIMER NOTE

1. 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 EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.
2. FOR ROADWAY WIDENING AND HALF STREET IMPROVEMENTS THE CONTRACTOR SHALL VERIFY CROSS SLOPES FROM EXISTING PAVEMENT SAWCUT LINE TO PROPOSED EDGE OF PAVEMENT OR PROPOSED LIP OF CURB PRIOR TO SUBGRADE PREPARATION AND CONSTRUCTION OF PROPOSED CURB LINE. IF MINIMUM OR MAXIMUM CROSS SLOPES DO NOT MEET AGENCY STANDARDS THE CONTRACTOR SHALL NOTIFY THE ENGINEER.

BENCHMARK

CITY OF LAS VEGAS BENCHMARK 7LV09 345W6
RIVET AND ROUND PLATE IN THE TOP OF CURB AT THE SOUTHEAST CORNER OF DESERT MOON RD. AND SKY VISTA DR.
ELEVATION = 1011.422 METERS (NAVD '88)
ELEVATION = 3318.31 US SURVEY FEET (NAVD '88)

BASIS OF BEARINGS

NORTH 05°59'55" WEST, BEING THE BEARING OF THE WEST LINE OF SECTION 34, TOWNSHIP 20 SOUTH, RANGE 59 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF ON FILE IN THE CLARK COUNTY, NEVADA RECORDER'S OFFICE IN BOOK 135, PAGE 71 OF PLATS.



CONSTRUCTION NOTES

1. INSTALL 2" ASPHALT PAVEMENT OVER 4" TYPE II AGGREGATE BASE.
 2. INSTALL "L" TYPE CURB PER CCAUSD NO. 216.
 3. INSTALL MODIFIED ROLL TYPE CURB PER CCAUSD NO. 217.1.
 4. INSTALL "L" TYPE ISLAND CURB PER CCAUSD NO. 219.
 5. INSTALL "A" TYPE ISLAND CURB PER CCAUSD NO. 219.
 6. INSTALL 10" "L" TYPE CURB TO MODIFIED ROLL CURB TRANSITION PER DETAIL 31, SHEET D-3.
 7. CONSTRUCT 4" WIDE SIDEWALK PER CCAUSD NO. 234.
 8. CONSTRUCT 5" WIDE SIDEWALK PER CCAUSD NO. 234.
 9. CONSTRUCT SIDEWALK RAMP USING ARMOR TILE TRUNCATED DOWNS OR EQUIVALENT PER DETAIL 33, SHEET D-3.
 10. CONSTRUCT 8" CROSS GUTTER PER CCAUSD NO. 228.
 11. CONSTRUCT SIDEWALK DRAIN PER CCAUSD NO. 236.
 12. INSTALL 18" RCP STORM DRAIN PIPE.
 13. INSTALL 24" RCP STORM DRAIN PIPE.
 14. INSTALL 30" RCP STORM DRAIN PIPE.
 15. INSTALL 36" RCP STORM DRAIN PIPE.
 16. INSTALL 48" RCP STORM DRAIN PIPE.
 17. INSTALL 4.5"X6" NO. 12 TYPE 2A DROP INLET PER DETAIL R-4.2.1, SHEET D-4, CCAUSD NO. 421.
 18. INSTALL WROUGHT IRON FENCE WITH VEHICLE ACCESS GATE AND EMERGENCY KNOX PADLOCK PER CCAUSD NO. 425.51.
 19. INSTALL DROP INLET CONCRETE APRON PER DETAIL R-4.2.7, SHEET D-4 & CCAUSD NO. 421.
 20. CUT EXISTING SD PIPE WHERE SHOWN ON PLANS.
 21. INSTALL 7.5" TYPE "CM2" DROP INLET PER CCAUSD NO. 421.
 22. INSTALL 10" TYPE "CM2" DROP INLET PER CCAUSD NO. 421.
 23. INSTALL 20" TYPE "CM2" DROP INLET PER CCAUSD NO. 421.
 24. INSTALL 48" TYPE II SDMH PER CCAUSD NO. 401, 402 & 405.2.
 25. INSTALL 5" TYPE "CM2" DROP INLET PER CCAUSD NO. 421.
 26. INSTALL 48" TYPE II SDMH CCAUSD NO. 401, 402 & 406.
 27. INSTALL 48" TYPE I SDMH CCAUSD NO. 401, 402 & 403.
 28. INSTALL D50=6" RIPRAP THICKNESS=12" OVER 6" TYPE II AGGREGATE BASE.
 29. INSTALL RIPRAP D50=12" THICKNESS=24" OVER 6" TYPE II AGGREGATE BASE.
- SEE SHEET C-3 FOR LEGEND, ABBREVIATIONS, & QUANTITIES

LVVWD NOTES

- ALL DUCTILE IRON PIPE (DIP) TO BE CLASS 350 DIP UNLESS OTHERWISE SPECIFIED.
- MAINTAIN MINIMUM TWENTY-FOUR (24") INCH COVER PER UDACS SEC. 2.08.04. GRADING MUST BE COMPLETED PRIOR TO WATERLINE INSTALLATION.
- WATER PRESSURE ZONE 3665

STORM DRAIN NOTES

- WATER TIGHT MANHOLE

APPROVED FOR CONSTRUCTION

[Signature]
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT NO.: 136070 FIRST APPROVED DATE: 3-2-19

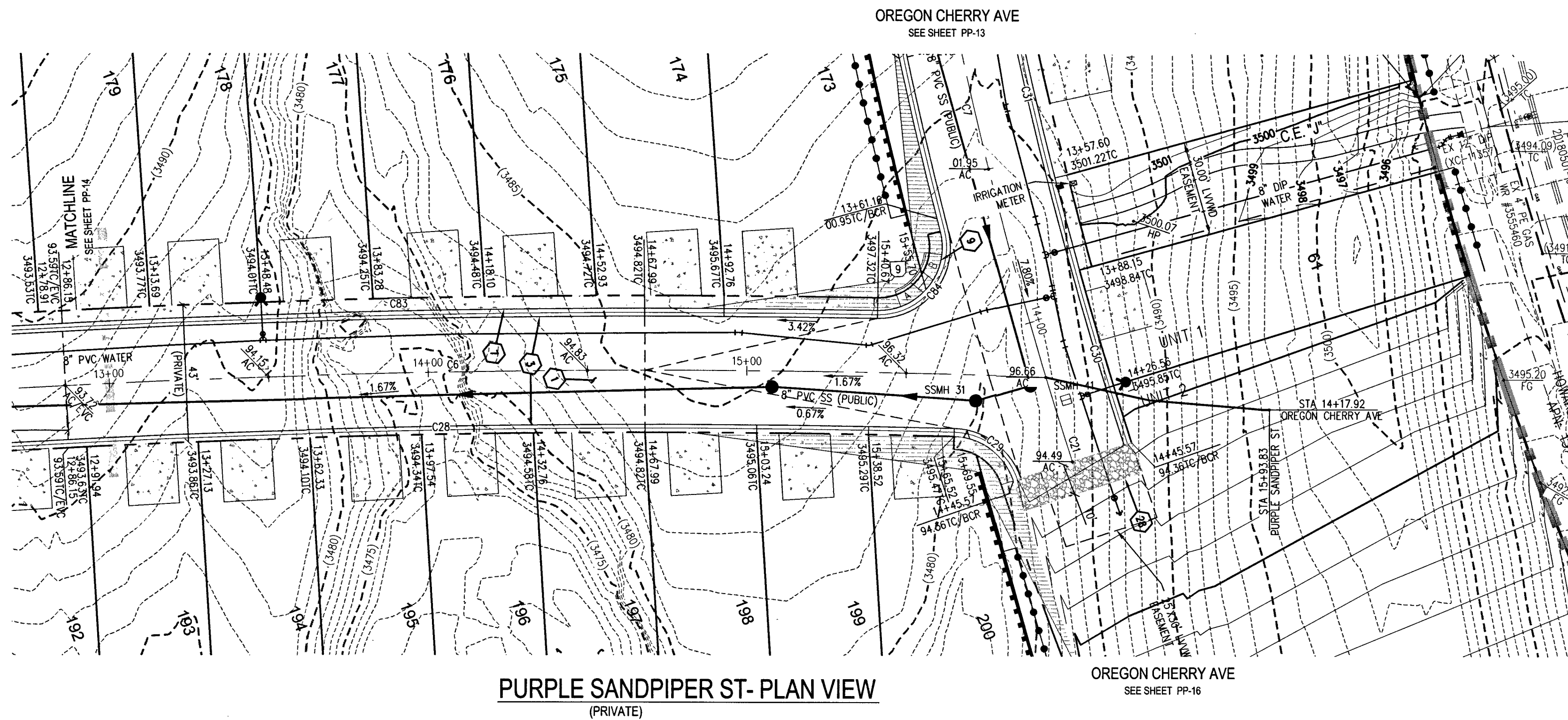
SLATER HANIFAN GROUP
a Westwood team
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

KBHOME
BRISTLE VALE - UNIT 1
PLAN & PROFILE - ISLAND BELLS AVE STA 19+00 TO 22+50 AND HW 3

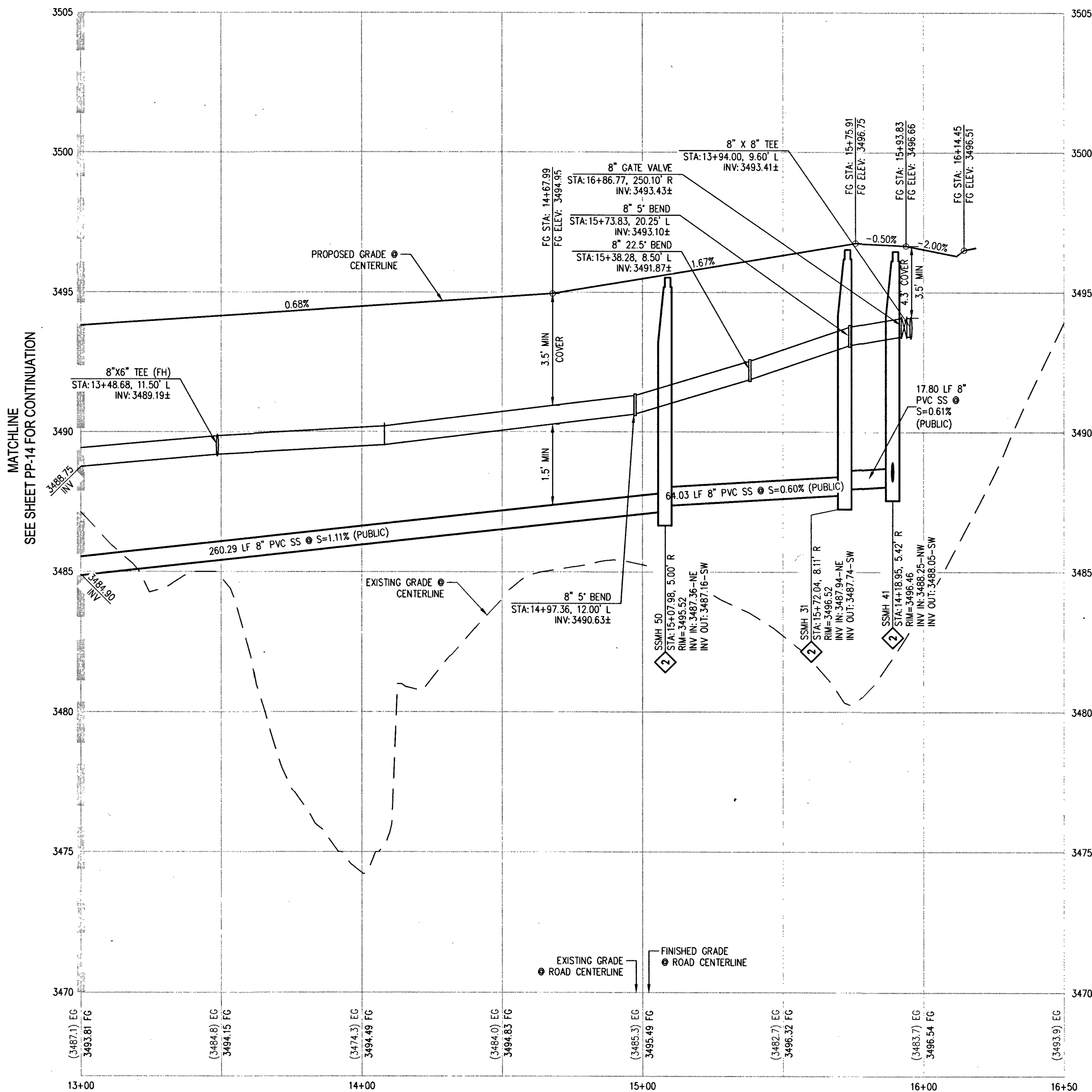
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DRAFTER: OIQ
DESIGNER: OIQ
CHECKED: DP
PROJECT NO.: KBH1804-000

PP-13
SHEET 31 OF 54
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107Y5102

PROJ.#:136070A QS:137-33-NE

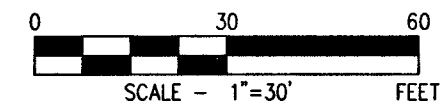


PURPLE SANDPIPER ST- PLAN VIEW
(PRIVATE)



PURPLE SANDPIPER ST- PROFILE VIEW

HORIZ: 1" = 30'
VERT: 1" = 3'



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

RAMP TRANSITION LENGTHS FOR 1:12 SIDE SLOPES				
CASE NO.	GRADE % "B" TO "A"	"A" MIN.	"B" MIN.	
1	-6 TO -5.01	4.5'	21.5'	
2	-5 TO -4.01	4.5'	15.0'	
3	-4 TO -3.01	4.5'	12.0'	
4	-3 TO -2.01	4.5'	9.5'	
5	-2 TO 2	8.0'	8.0'	
6	2.01 TO 3	9.5'	4.5'	
7	3.01 TO 4	12.0'	4.5'	
8	4.01 TO 5	15.0'	4.5'	
9	5.01 TO 6	21.5'	4.5'	

SIDEWALK RAMP USING ARMOR TILE
TRUNCATED DOWNS OR EQUIVALENT PER
CCAUSS NO. 235, CASE 1

CURVE TABLE				
CURVE	LENGTH	RADIUS	DELTA	TANGENT
C6	351.96'	3686.90'	5°28'11"	176.12'
C7	198.16'	1298.50'	8°44'37"	99.27'
C21	32.33'	1298.50'	1°25'35"	16.16'
C28	321.95'	3667.40'	5°01'47"	161.08'
C29	24.63'	20.00'	70°34'13"	14.15'
C30	31.84'	1279.00'	1°25'35"	15.92'
C31	195.18'	1279.00'	8°44'37"	97.78'
C83	300.39'	3706.40'	4°38'37"	150.28'
C84	36.83'	20.00'	105°29'47"	26.30'

LEGAL DESCRIPTION

LYING WITHIN THE NORTH EAST QUARTER
(NE1/4) OF SECTION 33, TOWNSHIP 20 SOUTH,
RANGE 59 EAST M.D.M., CITY OF LAS VEGAS,
CLARK COUNTY, NEVADA.

EASEMENT NOTES

- ALL PRIVATE STREETS ARE P.U.E., PUBLIC
SEWER EASEMENTS AND PUBLIC DRAINAGE
EASEMENTS TO BE PRIVATELY MAINTAINED
BY HOA.
- ALL COMMON ELEMENTS ARE PUBLIC
DRAINAGE EASEMENTS TO BE PRIVATELY
MAINTAINED.

SEWER NOTES

- INSTALL 8" PVC SANITARY SEWER PER DCSWCS SD-15 &
SD-17.
 - INSTALL 48" DIAMETER SANITARY SEWER MANHOLE WITH
PRECAST BASE PER DCSWCS SD-1A, SD-1B, SD-4, SD-9,
AND SINGLE LID (24").
 - MANHOLE SHALL BE CORROSION PROTECTED WITH FIELD
APPLIED COATING PER DCSWCS SECTION 316.88.
 - INSTALL 4" PVC SEWER LATERAL PER DCSWCS SD-22 &
SD-23.
 - REMOVE CAP AND CONNECT TO EXISTING 8" SS.
 - INSTALL 4" C900 PVC SEWER LATERAL PER DCSWCS SD-22
& SD-23 FOR LOTS 123 AND 124 ONLY.
 - INSTALL 8" C900 PVC SANITARY SEWER PER DCSWCS SD-15
& SD-17.
- SEE SHEET C-3 FOR QUANTITIES AND ABBREVIATIONS

SOUTHWEST GAS APPROVAL

[Signature] 3/14/19
SOUTHWEST GAS CORPORATION DATE

DISCLAIMER NOTE

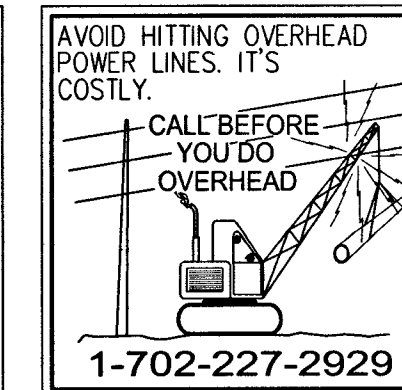
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THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND
HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO
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UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.
- FOR ROADWAY WIDENING AND HALF STREET IMPROVEMENTS THE CONTRACTOR SHALL
VERIFY CROSS SLOPES FROM EXISTING PAVEMENT SAWCUT LINE TO PROPOSED EDGE
OF PAVEMENT OR PROJECTED LIP OF CURB PRIOR TO SUBGRADE PREPARATION AND
CONSTRUCTION OF PROPOSED CURB LINE. IF MINIMUM OR MAXIMUM CROSS SLOPES DO
NOT MEET AGENCY STANDARDS THE CONTRACTOR SHALL NOTIFY THE ENGINEER.

BENCHMARK

CITY OF LAS VEGAS BENCHMARK 7LV09 345W6
RIVET AND ROUND PLATE IN THE TOP OF CURB AT THE SOUTHEAST CORNER OF DESERT
MOON RD. AND SKY VISTA DR.
ELEVATION = 1011.422 METERS (NAVD '88)
ELEVATION = 3318.31 US SURVEY FEET (NAVD '88)

BASIS OF BEARINGS

NORTH 05°59'55" WEST, BEING THE BEARING OF THE WEST LINE OF SECTION 34,
TOWNSHIP 20 SOUTH, RANGE 59 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY,
NEVADA, AS SHOWN BY MAP THEREOF ON FILE IN THE CLARK COUNTY, NEVADA
RECORDERS' OFFICE IN BOOK 135, PAGE 71 OF PLATS.



LVVWD NOTES

- ALL DUCTILE IRON PIPE (DIP) TO BE
CLASS 350 DIP UNLESS OTHERWISE
SPECIFIED.
- MAINTAIN MINIMUM TWENTY-FOUR (24") INCH
COVER PER UDACS SEC. 2.08.04. GRADING
MUST BE COMPLETED PRIOR TO WATERLINE
INSTALLATION.
- WATER PRESSURE ZONE 3665

STORM DRAIN NOTES

- WATER TIGHT MANHOLE

APPROVED FOR CONSTRUCTION

[Signature]
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT NO.: 136070A FIRST APPROVED DATE: 3-20-19



LAS VEGAS, NV

KBHOME

BRISTLE VALE - UNIT 1

PLAN & PROFILE - PURPLE SANDPIPER ST STA 13+00 TO 16+50

DATE: 3/14/19

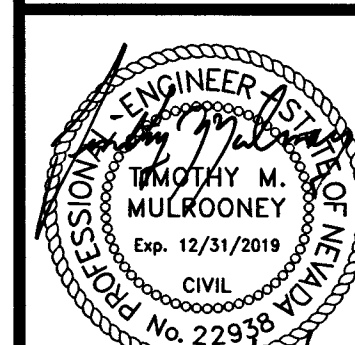
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DESIGNER: OIQ

CHECKED: DP

PROJECT NO.

KBH1804-000



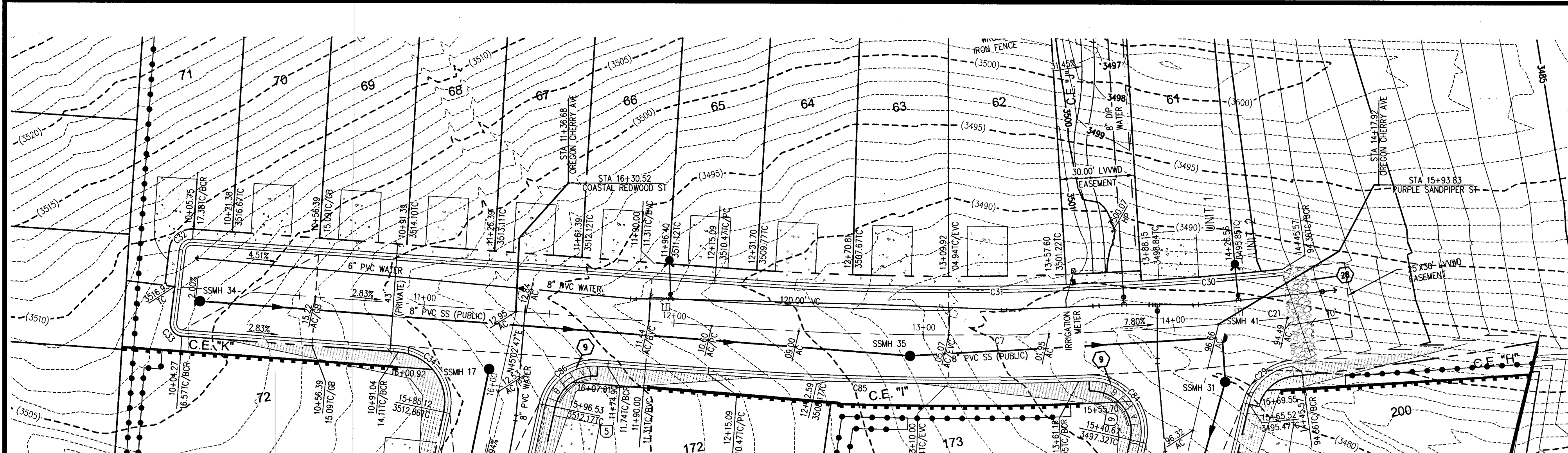
PP-15

SHEET 33 OF 54

L19-00027

10145102

PROJ#136070A QS-137-33-NE



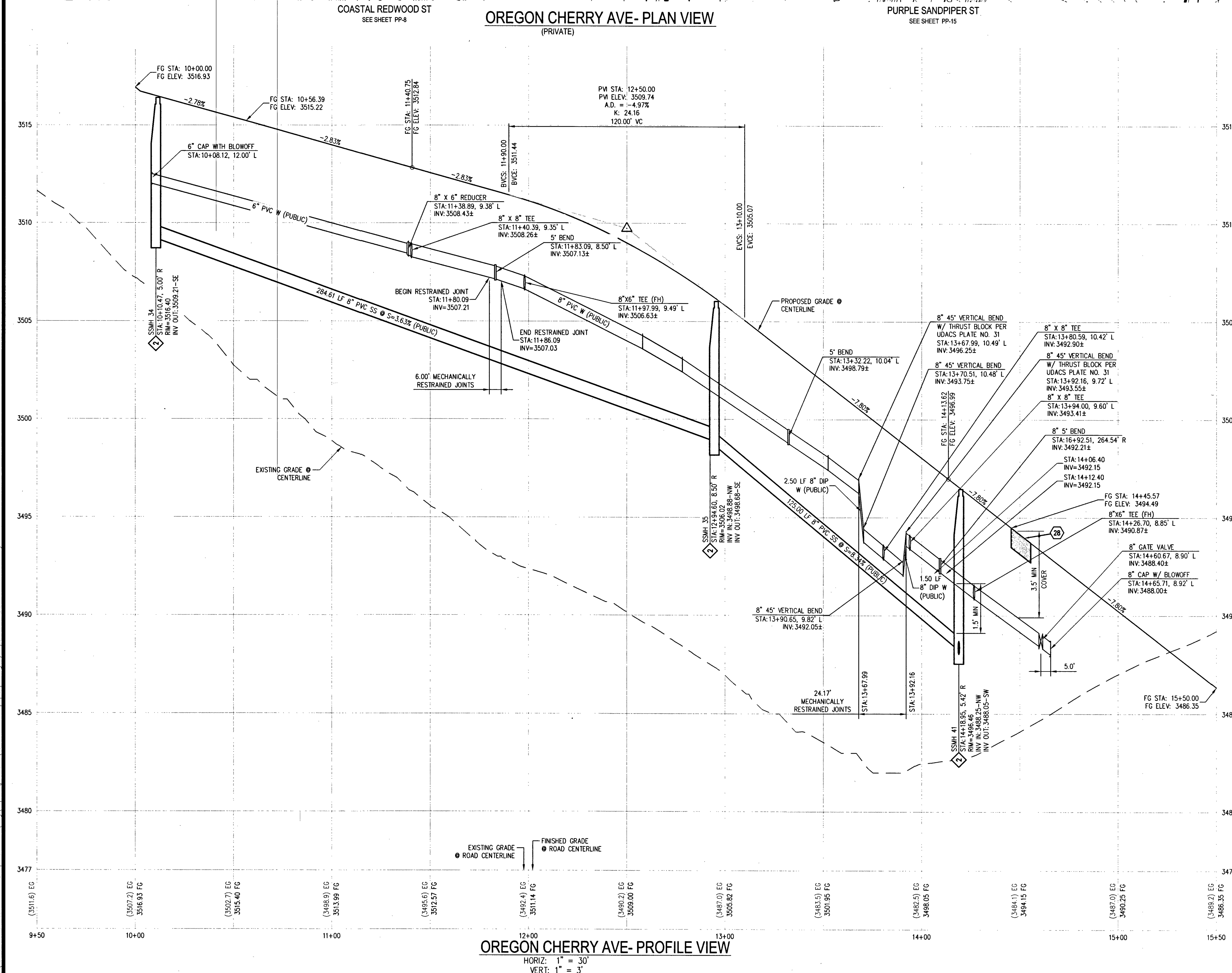
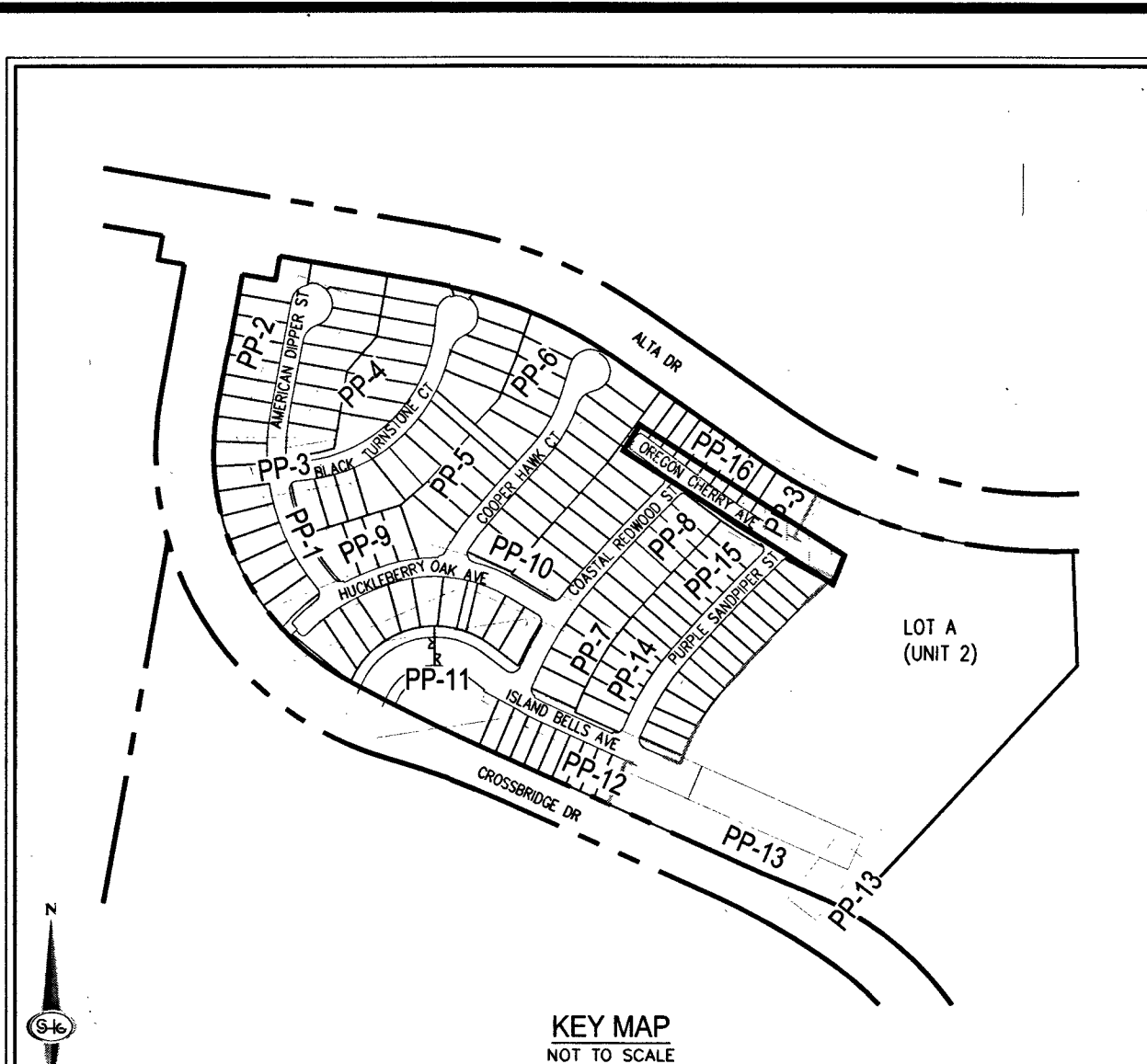
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SCALE - 1"=30' FEET

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

CASE NO.	GRADE %	"A" MIN.	"B" MIN.
1	-6 TO -5.01	4.5'	21.5'
2	-5 TO -4.01	4.5'	15.0'
3	-4 TO -3.01	4.5'	12.0'
4	-3 TO -2.01	4.5'	9.5'
5	-2 TO 2	8.0'	8.0'
6	2.01 TO 3	9.5'	4.5'
7	3.01 TO 4	12.0'	4.5'
8	4.01 TO 5	15.0'	4.5'
9	5.01 TO 6	21.5'	4.5'

SIDEWALK RAMPS USING AMOR TILE
TRUNCATED DOWNS OR EQUIVALENT PER
CAASD NO. 235, CASE 1

CURVE	LENGTH	RADIUS	DELTA	TANGENT
C7	198.16'	1298.50'	84°43'	99.27'
C21	32.33'	1298.50'	125°35'	16.16'
C29	24.63'	20.00'	70°34'13"	14.15'
C30	31.84'	1279.00'	125°35'	15.92'
C31	195.18'	1279.00'	84°43'	97.78'
C32	7.60'	5.00'	87°04'34"	4.75'
C33	8.11'	5.00'	92°55'26"	5.26'
C34	34.25'	20.00'	98°07'55"	23.06'
C84	36.83'	20.00'	105°29'47"	26.30'
C85	152.36'	1318.00'	63°37'23"	76.26'
C86	28.52'	20.00'	81°42'11"	17.29'



LEGAL DESCRIPTION
LYING WITHIN THE NORTH EAST QUARTER
(NE1/4) OF SECTION 33, TOWNSHIP 20 SOUTH,
RANGE 59 EAST, M.D.M., CITY OF LAS VEGAS,
CLARK COUNTY, NEVADA.

EASEMENT NOTES
1. ALL PRIVATE STREETS ARE P.U.E. PUBLIC
SEWER EASEMENTS AND PUBLIC DRAINAGE
EASEMENTS TO BE PRIVATELY MAINTAINED
BY HOA.
2. ALL COMMON ELEMENTS ARE PUBLIC
MAINTAINED.

SEWER NOTES
1. INSTALL 8" PVC SANITARY SEWER PER DCSWCS SD-15 &
SD-11.
2. INSTALL 48" DIAMETER SANITARY SEWER MANHOLE WITH
PRECAST BASE PER DCSWCS SD-1A, SD-1B, SD-4, SD-9,
AND SINGLE LID (24").
3. MANHOLE SHALL BE CORROSION PROTECTED WITH FIELD
APPLIED COATING PER DCSWCS SECTION 3.16.88.
4. INSTALL 4" PVC SEWER LATERAL PER DCSWCS SD-22 &
SD-11.
5. REMOVE CAP AND CONNECT TO EXISTING 8" SS.
6. INSTALL 4" CS90 PVC SEWER LATERAL PER DCSWCS SD-22
& SD-25 FOR LOTS 123 AND 124 ONLY.
7. INSTALL 8" CS90 PVC SANITARY SEWER PER DCSWCS SD-15
& SD-11.
SEE SHEET C-3 FOR QUANTITIES AND ABBREVIATIONS.

LVWVD NOTES
• ALL DUCTILE IRON PIPE (DIP) TO BE
CLASS 350 DIP UNLESS OTHERWISE
SPECIFIED.
• MAINTAIN MINIMUM TWENTY-FOUR (24") INCH
COVER PER UDACCS SEC. 2.08.04. GRADING
MUST BE COMPLETED PRIOR TO WATERLINE
INSTALLATION.
• WATER PRESSURE ZONE 3665

DISCLAIMER NOTE
1. 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 EXISTING
UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR
UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.
2. FOR ROADWAY WIDENING AND HALF STREET IMPROVEMENTS THE CONTRACTOR SHALL
VERIFY CROSS SLOPES FROM EXISTING PAVEMENT SAWCUT LINE TO PROPOSED EDGE
OF PAVEMENT OR PROTECTED LIP OF CURB PRIOR TO SUBGRADE PREPARATION AND
CONSTRUCTION OF PROPOSED CURB LINE. IF MINIMUM OR MAXIMUM CROSS SLOPES DO
NOT MEET AGENCY STANDARDS THE CONTRACTOR SHALL NOTIFY THE ENGINEER.

BENCHMARK
CITY OF LAS VEGAS BENCHMARK 7LV09 345W6
RIVET AND ROUND PLATE IN THE TOP OF CURB AT THE SOUTHEAST CORNER OF DESERT
MOON RD. AND SKY VISTA DR.
ELEVATION = 1011.422 METERS (NAVD '88)
ELEVATION = 3318.31 US SURVEY FEET (NAVD '88)

BASIS OF BEARINGS
NORTH 05°59'55" WEST, BEING THE BEARING OF THE WEST LINE OF SECTION 34,
TOWNSHIP 20 SOUTH, RANGE 59 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY,
NEVADA, AS SHOWN BY MAP THEREOF ON FILE IN THE CLARK COUNTY, NEVADA
RECORDERS' OFFICE IN BOOK 135, PAGE 71 OF PLATS.

STORM DRAIN NOTES
• WATER TIGHT MANHOLE

APPROVED FOR CONSTRUCTION
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT NO. 136070 FIRST APPROVED DATE: 3-20-19

FAST
Call before you
Underground
1-702-432-5300
FREEWAY & ARTERIAL SYSTEM
OF TRANSPORTATION (F.A.S.T.)

Call before you Dig
AVOID HITTING OVERHEAD
POWER LINES. IT'S
COSTLY.
CALL BEFORE
YOU DIG
OVERHEAD
1-702-227-2929

Call before you Dig
AVOID CUTTING UNDERGROUND
UTILITY LINES. IT'S COSTLY.
Call
811
OR
1-800-227-2600

SLATER HANIFAN GROUP
a Westwood team
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

KB HOME
BRISTLE VALE - UNIT 1
PLAN & PROFILE - OREGON CHERRY AVE STA 9+50 TO 15+50

DATE: 3/14/19
DRAFTER: OIQ
DESIGNER: OIQ
CHECKED: DP
PROJECT NO. KBH1804-000

PP-16
SHEET 34 OF 54
L19-00027
10TV5102

33
205
P 35E

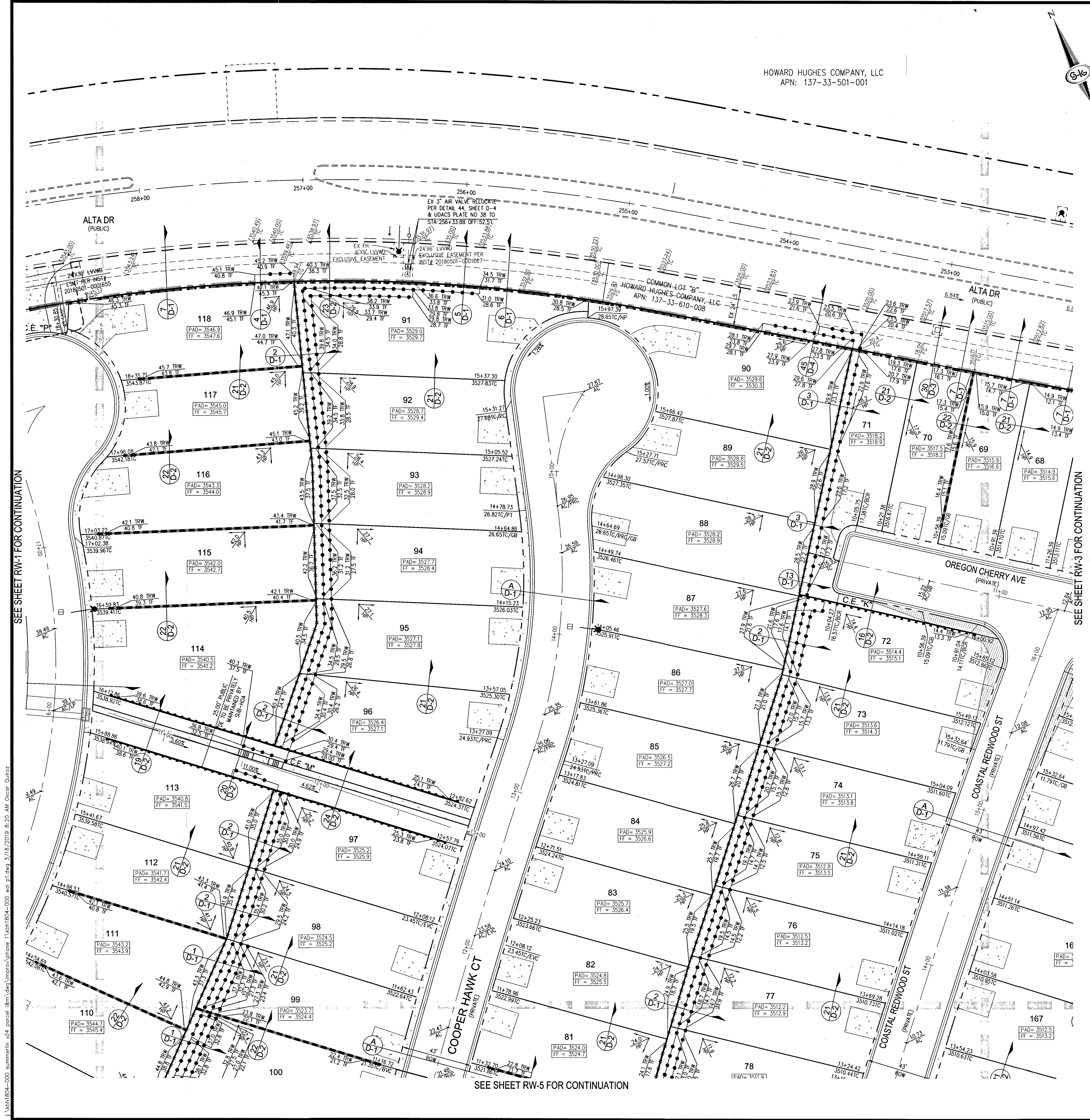
APPROVED FOR CONSTRUCTION
TIMOTHY M. MULROONEY
CIVIL
Exp. 12/31/2019
No. 22939
3/14/19

PROJECT NO. 136070
FIRST APPROVED DATE: 3-20-19

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Underground
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FREEWAY & ARTERIAL SYSTEM
OF TRANSPORTATION (F.A.S.T.)

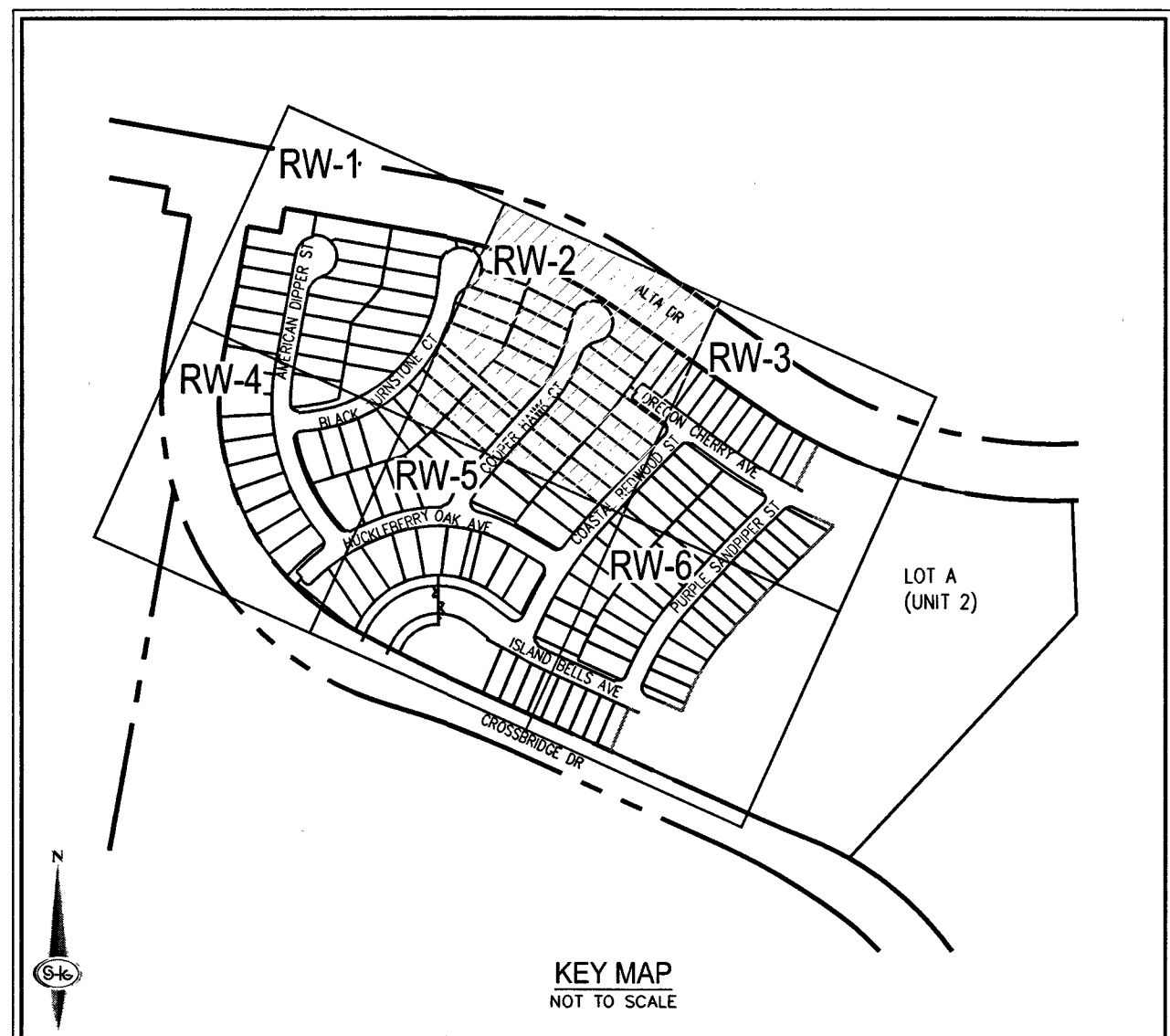
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COSTLY.
CALL BEFORE
YOU DIG
OVERHEAD
1-702-227-2929

Call before you Dig
AVOID CUTTING UNDERGROUND
UTILITY LINES. IT'S COSTLY.
Call
811
OR
1-800-227-2600



SEE SHEET RW-3 FOR CONTINUATION

SEE SHEET RW-5 FOR CONTINUATION



BENCHMARK
CITY OF LAS VEGAS BENCHMARK 7LV09 345W6
RIVET AND ROUND PLATE IN THE TOP OF CURB AT THE
SOUTHEAST CORNER OF DESERT MOON RD. AND SKY VISTA
DR.
ELEVATION = 1011.422 METERS (NAVD '88)
ELEVATION = 3318.51 US SURVEY FEET (NAVD '88)

BASIS OF BEARINGS
NORTH 05°59'55" WEST, BEING THE BEARING OF THE
WEST LINE OF SECTION 34, TOWNSHIP 20 SOUTH, RANGE
59 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY,
NEVADA, AS SHOWN BY MAP THEREOF ON FILE IN THE
CLARK COUNTY, NEVADA RECORDER'S OFFICE IN BOOK
135, PAGE 71 OF PLATS.

FAST
Call before you
Underground
1-702-432-5300
FREEWAY & ARTERIAL SYSTEM
OF TRANSPORTATION (F.A.S.T.)

AVOID HITTING OVERHEAD
POWER LINES. IT'S
COSTLY.
CALL BEFORE
YOU DO
OVERHEAD
1-702-227-2929

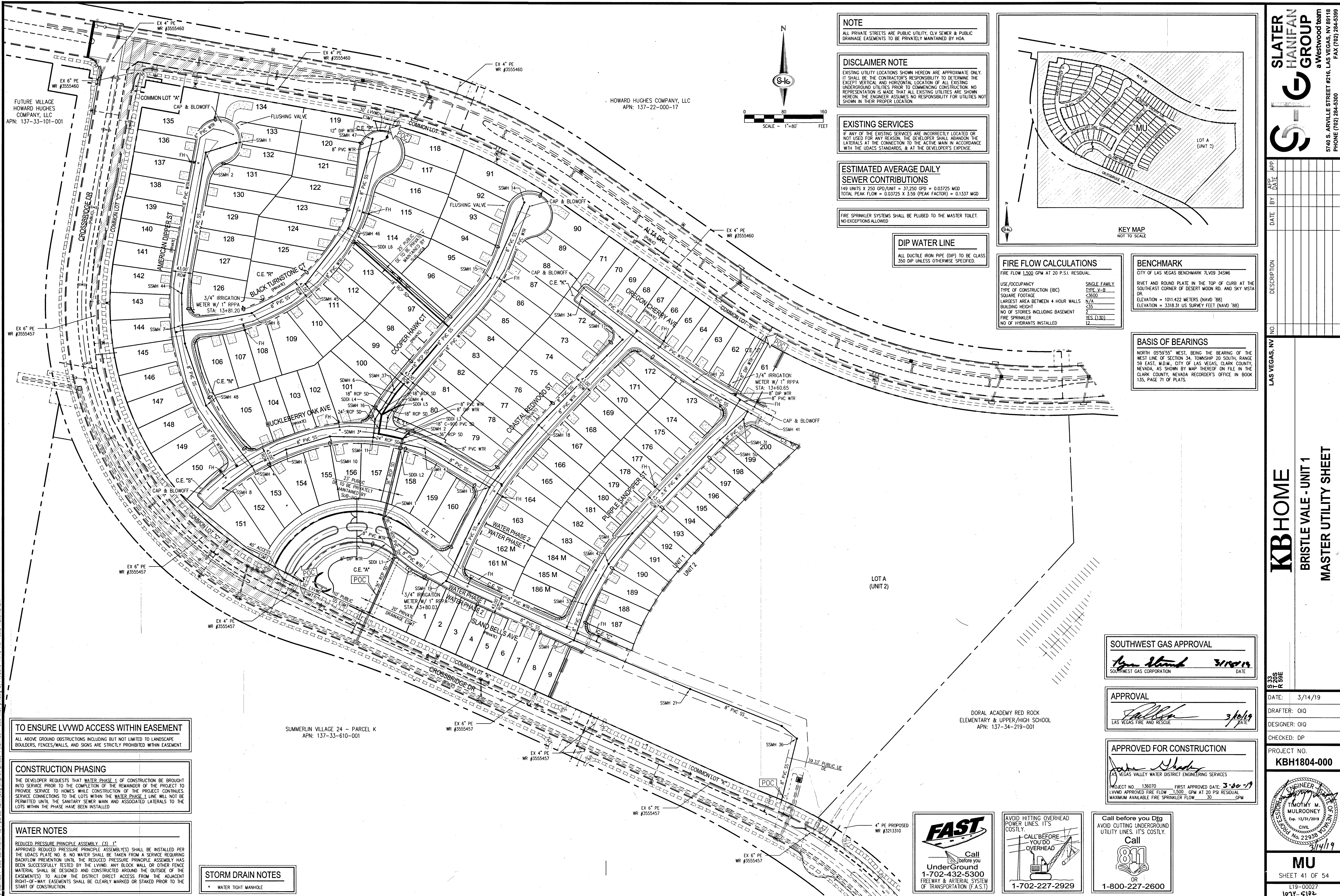
Call before you Dig
AVOID CUTTING UNDERGROUND
UTILITY LINES. IT'S COSTLY.
Call
811
OR
1-800-227-2600

SLATER HANIFAN GROUP
a Westwood team
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 384-5300 FAX (702) 284-5399

KB HOME
BRISTLE VALE - UNIT 1
RETAINING WALL PLAN II

DATE: 3/14/19
DRAFTER: OIQ
DESIGNER: OIQ
CHECKED: DP
PROJECT NO.
KBH1804-000

RW-2
SHEET 36 OF 54
L19-00027
1075502



NOTE
ALL PRIVATE STREETS ARE PUBLIC UTILITY. CLV SEWER & PUBLIC DRAINAGE EASEMENTS TO BE PRIVATELY MAINTAINED BY HOA.

DISCLAIMER NOTE
EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXCEPT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

EXISTING SERVICES
IF ANY OF THE EXISTING SERVICES ARE INCORRECTLY LOCATED OR NOT USED FOR ANY REASON, THE DEVELOPER SHALL ABANDON THE LATERALS AT THE CONNECTION TO THE ACTIVE MAIN IN ACCORDANCE WITH THE UDACS STANDARDS, & AT THE DEVELOPER'S EXPENSE.

ESTIMATED AVERAGE DAILY SEWER CONTRIBUTIONS
149 UNITS X 250 GPD/UNIT = 37,250 GPD = 0.03725 MGD
TOTAL PEAK FLOW = 0.03725 X 3.59 (PEAK FACTOR) = 0.1337 MGD

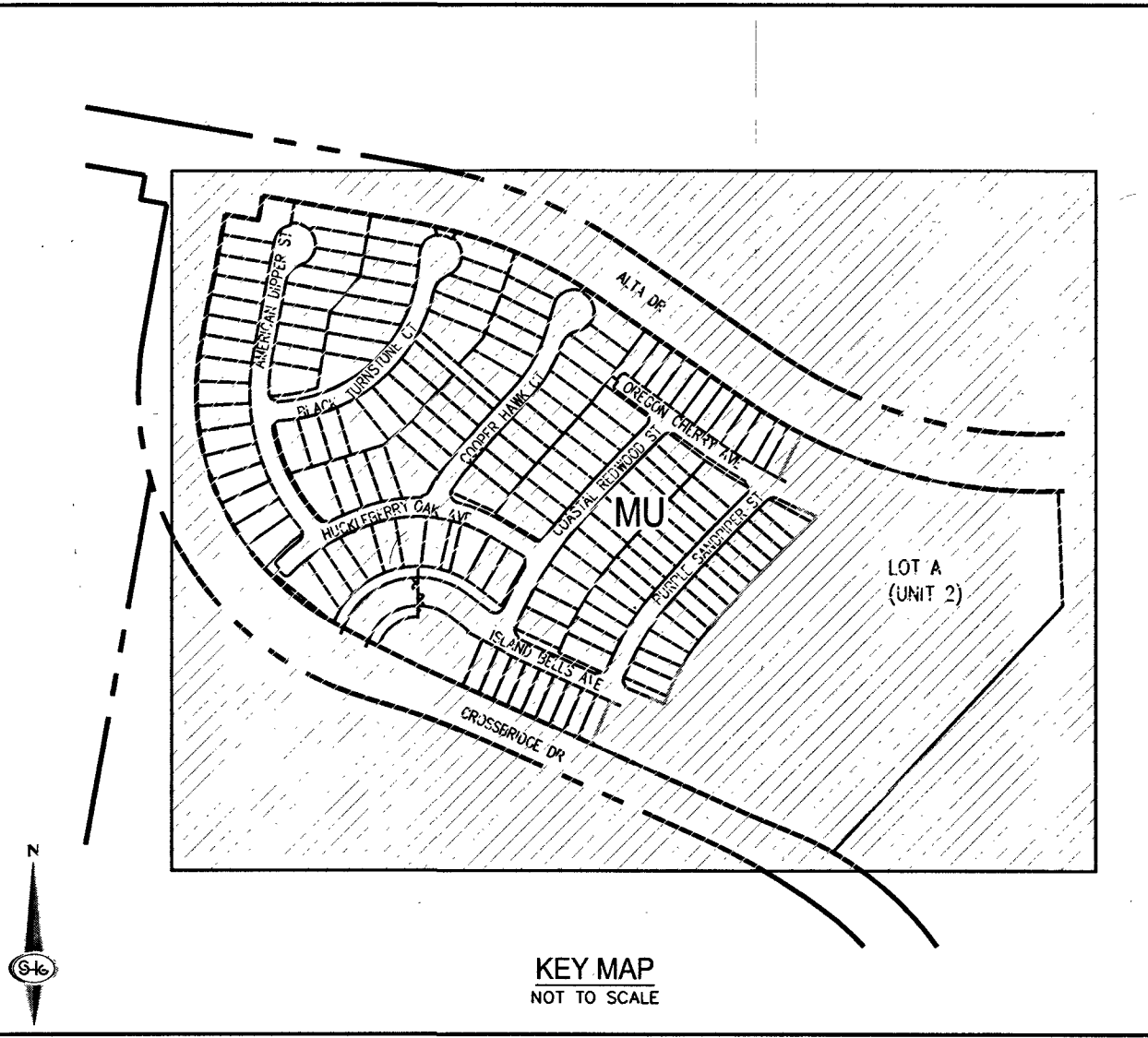
FIRE SPRINKLER SYSTEMS SHALL BE PLUMED TO THE MASTER TOILET. NO EXCEPTIONS ALLOWED.

DIP WATER LINE
ALL DUCTILE IRON PIPE (DIP) TO BE CLASS 350 DIP UNLESS OTHERWISE SPECIFIED.

FIRE FLOW CALCULATIONS
FIRE FLOW 1,500 GPM AT 20 P.S.I. RESIDUAL
USE/OCCUPANCY: SINGLE FAMILY
TYPE OF CONSTRUCTION (IBC): TYPE V-B
SQUARE FOOTAGE: <3600
LARGEST AREA BETWEEN 4 HOUR WALLS: N/A
BUILDING HEIGHT: 3.55
NO OF STORIES INCLUDING BASEMENT: 2
FIRE SPRINKLER: YES (130)
NO OF HYDRANTS INSTALLED: 12

BENCHMARK
CITY OF LAS VEGAS BENCHMARK 7LV09 345W6
RIVET AND ROUND PLATE IN THE TOP OF CURB AT THE SOUTHEAST CORNER OF DESERT MOON RD. AND SKY VISTA DR.
ELEVATION = 1011.422 METERS (NAVD '88)
ELEVATION = 3318.31 US SURVEY FEET (NAVD '88)

BASIS OF BEARINGS
NORTH 05°59'35" WEST, BEING THE BEARING OF THE WEST LINE OF SECTION 34, TOWNSHIP 20 SOUTH, RANGE 59 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF ON FILE IN THE CLARK COUNTY, NEVADA RECORDER'S OFFICE IN BOOK 135, PAGE 71 OF PLATS.



TO ENSURE LVWD ACCESS WITHIN EASEMENT
ALL ABOVE GROUND OBSTRUCTIONS INCLUDING BUT NOT LIMITED TO LANDSCAPE BOULDERS, FENCES/WALLS, AND SIGNS ARE STRICTLY PROHIBITED WITHIN EASEMENT.

CONSTRUCTION PHASING
THE DEVELOPER REQUESTS THAT WATER PHASE 1 OF CONSTRUCTION BE BROUGHT INTO SERVICE PRIOR TO THE COMPLETION OF THE REMAINDER OF THE PROJECT TO PROVIDE SERVICE TO HOMES WHILE CONSTRUCTION OF THE PROJECT CONTINUES. SERVICE CONNECTIONS TO THE LOTS WITHIN THE WATER PHASE 1 LINE WILL NOT BE PERMITTED UNTIL THE SANITARY SEWER MAIN AND ASSOCIATED LATERALS TO THE LOTS WITHIN THE PHASE HAVE BEEN INSTALLED.

WATER NOTES
REDUCED PRESSURE PRINCIPLE ASSEMBLY (3) "1"
APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED PER THE UDACS PLATE NO. 8. NO WATER SHALL BE TAKEN FROM A SERVICE REQUIRING BACKFLOW PREVENTION UNTIL THE REDUCED PRESSURE PRINCIPLE ASSEMBLY HAS BEEN SUCCESSFULLY TESTED BY THE LVWD. ANY BLOCK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AROUND THE OUTSIDE OF THE EASEMENT(S) TO ALLOW THE DISTRICT DIRECT ACCESS FROM THE ADJACENT RIGHT-OF-WAY EASEMENTS SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION.

STORM DRAIN NOTES
WATER TIGHT MANHOLE

SUMMERLIN VILLAGE 24 - PARCEL K
APN: 137-33-610-001

DORAL ACADEMY RED ROCK
ELEMENTARY & UPPER/HIGH SCHOOL
APN: 137-34-219-001

SOUTHWEST GAS APPROVAL
[Signature] 3/15/19
SOUTHWEST GAS CORPORATION DATE

APPROVAL
[Signature] 3/15/19
LAS VEGAS FIRE AND RESCUE DATE

APPROVED FOR CONSTRUCTION
[Signature]
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT NO. 136070 FIRST APPROVED DATE: 3-30-19
LVWD APPROVED FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL
MAXIMUM AVAILABLE FIRE SPRINKLER FLOW 30 GPM

FAST
Call before you dig
UnderGround
1-702-432-5300
FREEWAY & ARTERIAL SYSTEM OF TRANSPORTATION (F.A.S.T.)

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY.
CALL BEFORE YOU DIG OVERHEAD
1-702-227-2929

Call before you dig
AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.
Call 811
OR
1-800-227-2600

SLATER HANIFAN GROUP
a Westwood team
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89116
PHONE (702) 284-5390
FAX (702) 284-5399

KBHOME

BRISTLE VALE - UNIT 1

MASTER UTILITY SHEET

PROJ. NO. 136070

DATE 3/14/19

DRAWN BY OIO

DESIGNED BY OIO

CHECKED BY DP

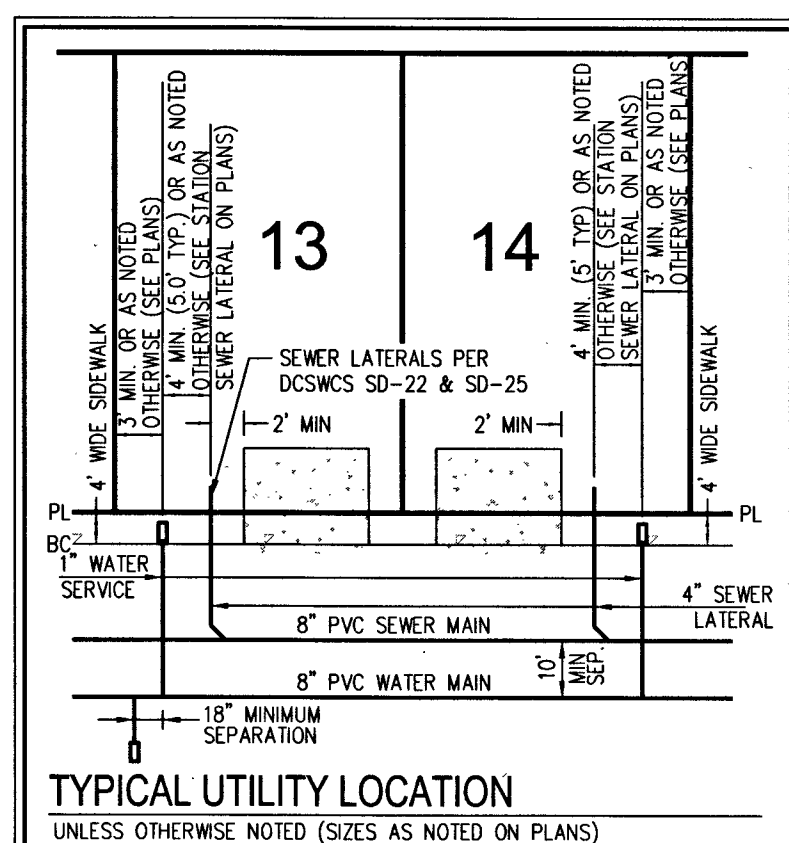
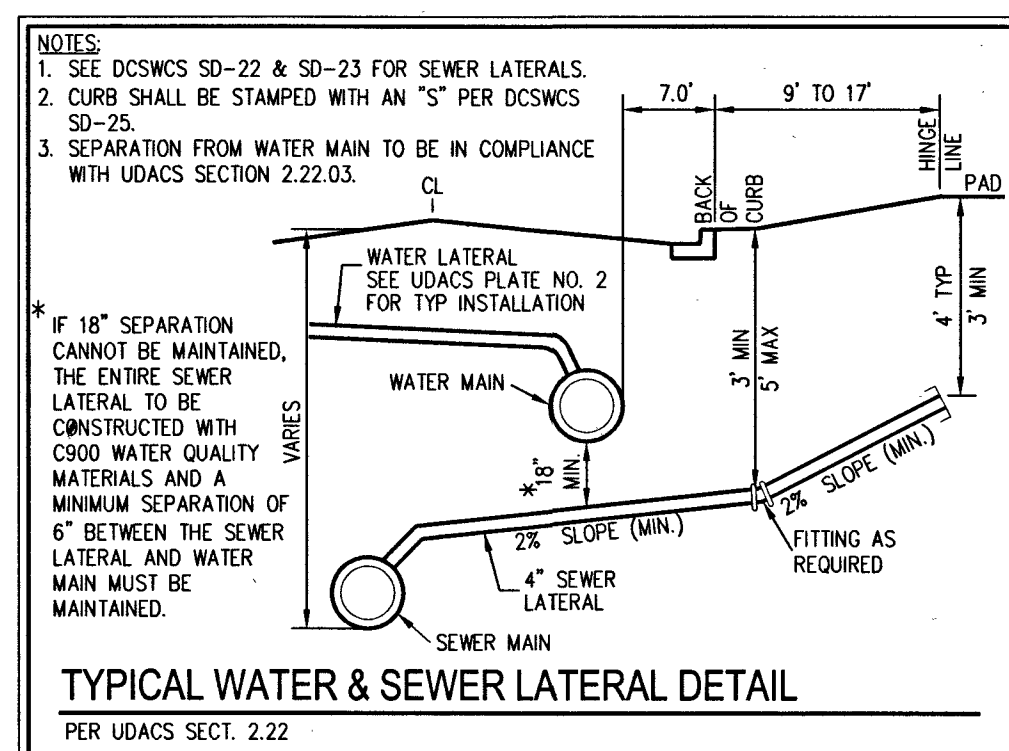
PROJECT NO. KBH1804-000

ENGINEER
TIMOTHY M. MULROONEY
CIVIL
No. 22938
3/14/19

MU
SHEET 41 OF 54
L19-00027
1031-5102

\\nash1804-000 Summerlin_24 parcel k.dwg 3/14/2019 11:18 AM Tashu_Hallendorn

PROJ. NO. 136070 QA: 137-33-NE



NOTE

ALL PRIVATE STREETS ARE PUBLIC UTILITY, CLV SEWER & PUBLIC DRAINAGE EASEMENTS TO BE PRIVATELY MAINTAINED BY HOA.

DISCLAIMER NOTE

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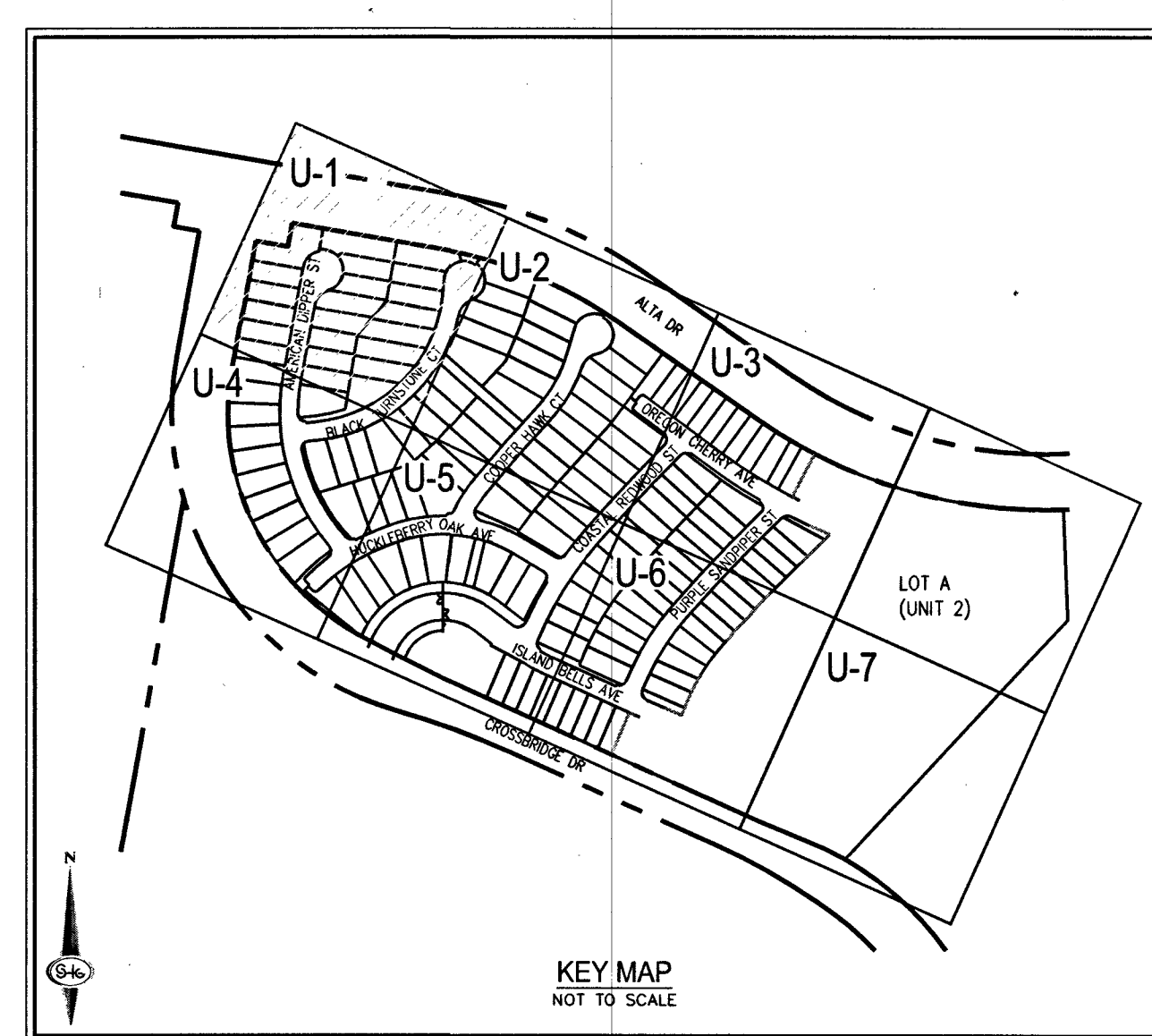
FIRE SPRINKLER SYSTEMS SHALL BE PLUMBED TO THE MASTER TOWEL.

NO EXCEPTIONS ALLOWED

DROP INLET NOTE

WHERE 10 FEET PARALLEL SEPARATION IS NOT PRACTICABLE

CAST-IN-PLACE MONOLITHIC POUR WITH WATERSTOP BETWEEN SLAB AND BASE. WALLS AND TOP TO BE CONSTRUCTED WITH WATERSTOPS, CENTER BULB OR FLAT STRIP. (VINYLK, GREENSTREAK PLASTIC PRODUCTS OR APPROVED EQUIV.)



FIRE FLOW CALCULATIONS	
FIRE FLOW <u>1,500</u> GPM AT 20 P.S.I. RESIDUAL	
USE/OCCUPANCY	<u>SINGLE FAMILY</u>
TYPE OF CONSTRUCTION (IBC)	<u>TYPE V-B</u>
SQUARE FOOTAGE	<u><3600</u>
LARGEST AREA BETWEEN 4 HOUR WALLS	<u>N/A</u>
BUILDING HEIGHT	<u><35</u>
NO. OF STORIES INCLUDING BASEMENT	<u>2</u>
FIRE SPRINKLER	<u>YES (1.0D)</u>
NO. OF HYDRANTS INSTALLED	<u>12</u>

BENCHMARK
CITY OF LAS VEGAS BENCHMARK 7LV09 34SW6
RIVET AND ROUND PLATE IN THE TOP OF CURB AT THE
SOUTHEAST CORNER OF DESERT MOON RD. AND SKY VISTA
DR.
ELEVATION = 1011.422 METERS (NAVD '88)
ELEVATION = 3318.31 US SURVEY FEET (NAVD '88)

BASIS OF BEARINGS

NORTH 05°59'55" WEST, BEING THE BEARING OF THE WEST LINE OF SECTION 34, TOWNSHIP 20 SOUTH, RANGE 59 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF ON FILE IN THE CLARK COUNTY, NEVADA RECORDER'S OFFICE IN BOOK 135, PAGE 71 OF PLATS.

- # GENERAL NOTES
1. FOR FIRE HYDRANT LOCATION, UTILITY LOCATION, AND OTHER UTILITY LATERAL DETAIL, SEE SHEET U-1.
 2. ALL SEWER/SURFACE DRAIN CROSSING WATER LINE MUST COMPLY WITH UOACS SECTION 2.2.2.
 3. ALL NEWLY INSTALLED FIRE HYDRANT MARKERS, PER UOACS PLATE NO. 15.
 4. DEPTH OF COVER DURING CONSTRUCTION MAINTAIN MINIMUM TWENTY FOUR (24) INCH COVER PER UOACS SECTION 2.0.8.04.
 5. ALL NEWLY INSTALLED WATER LATERALS SHALL BE TO THE FINAL LOCATION. ALL ABOVE GROUND UTILITY APPEARANCES SHALL CONFORM TO UOACS SECTION 2.0.8.04.
 6. THE LVWMD CANNOT GUARANTEE A WATERTIGHT SHUTDOWN WHERE CONNECTIONS OR REPAIRS TO EXISTING FACILITIES ARE REQUIRED.
 7. IN THE EVENT OF A SHUTDOWN, THE SHUT DOWN EQUIPMENT IS AVAILABLE TO REMOVE REMAINING WATER. COORDINATION WITH INSPECTION DIVISION MUST TAKE PLACE PRIOR TO ANY TRIAL SHUTDOWN.
 8. CONTRACTOR TO INSTALL TEMPORARY SERVICE TO ENSURE PROPER WATER FLOW. IN THE EVENT NO OTHER APPEARANCES ARE AVAILABLE.
 9. WATER RIGHT WHIMMOLE.
 10. WATER RIGHT DEFLECTION, PER UOACS 2.0.7.0.1 AND 2.0.7.0.3.
- ## FOR ALL WATER UTILITY CROSSINGS
9. MAINTAIN MINIMUM 12" VERTICAL SEPARATION AT ALL POINTS OF CROSSING FOR DRY UTILITIES.
 10. MAINTAIN MINIMUM 18" VERTICAL SEPARATION FOR DRY UTILITIES.
 11. ANY EXCAVATION AT BACK OF CURB MUST REMAIN OPEN FOR INSPECTION OF COPPER SERVICE LATERALS. ANY COPPER SERVICE EXPOSED, BENT, OR OTHERWISE DAMAGED MUST BE REPLACED FROM THE MAIN TO THE ANGLE METER STOP FOR DRY UTILITIES.

TO ENSURE LVWD ACCESS WITHIN EASEMENT
ALL ABOVE GROUND OBSTRUCTIONS INCLUDING BUT NOT LIMITED TO
LANDSCAPE BOULDERS, FENCES/WALLS, AND SIGNS ARE STRICTLY
PROHIBITED WITHIN EASEMENT.

WATER NOTES

REDUCED PRESSURE PRINCIPLE ASSEMBLY (3) 1"

APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED PER THE UDACS PLATE NO. 8. NO WATER SHALL BE TAKEN FROM A SERVICE REQUIRING BACKFLOW PREVENTION UNTIL THE REDUCED PRESSURE PRINCIPLE ASSEMBLY HAS BEEN SUCCESSFULLY TESTED BY THE LVVMD. ANY BLOCK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AROUND THE OUTSIDE OF THE EASEMENT(S) TO ALLOW THE DISTRICT DIRECT ACCESS FROM THE ADJACENT RIGHT-OF-WAY. EASEMENTS SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION.

CONSTRUCTION PHASING

THE DEVELOPER REQUESTS THAT WATER PHASE 1 OF CONSTRUCTION BE BROUGHT INTO SERVICE PRIOR TO THE COMPLETION OF THE REMAINDER OF THE PROJECT TO PROVIDE SERVICE TO HOMES WHILE CONSTRUCTION OF THE PROJECT CONTINUES. SERVICE CONNECTIONS TO THE LOTS WITHIN THE WATER PHASE 1 LINE WILL NOT BE PERMITTED UNTIL THE SANITARY SEWER MAIN AND ASSOCIATED LATERALS TO THE LOTS WITHIN THE PHASE HAVE BEEN INSTALLED.

APPROVAL _____

 LAS VEGAS FIRE AND RESCUE
 3/16/19 DATE

SOUTHWEST GAS APPROVAL

Byron Stunk 3/18/19
SOUTHWEST GAS CORPORATION DATE

APPROVED FOR CONSTRUCTION

John Shady
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICE

PROJECT NO. 136070 FIRST APPROVED DATE: 2
LUVWD APPROVED FIRE FLOW 1,500 GPM AT 20 PSI RE
MAXIMUM AVAILABLE FIRE SPRINKLER FLOW 30

FAST
Call before you
UnderGround
1-702-432-5300
FREEWAY & ARTERIAL SYSTEM
OF TRANSPORTATION (F.A.S.T.)



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COSTLY.

CALL BEFORE
YOU DO
OVERHEAD

1-702-227-2929

Call before you Dig
AVOID CUTTING UNDERGROUND
UTILITY LINES. IT'S COSTLY.

Call

811

OR

1-800-227-2600

**SLATER
HANIFAN
GROUP**

a Westwood team

7740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300
FAX (702) 284-5399

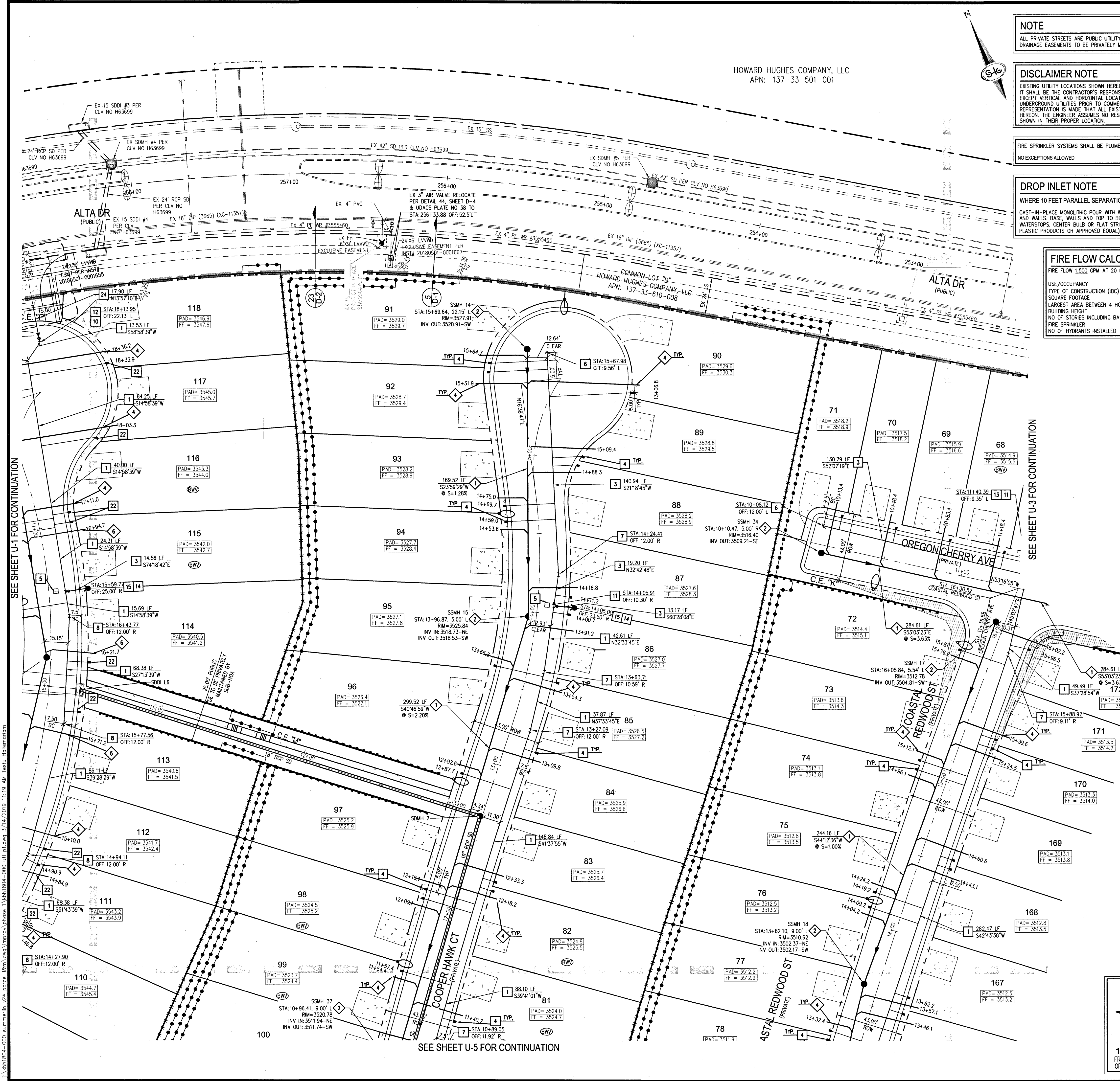
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KB HOME
BRISTLE VALE - UNIT 1
UTILITY PLAN I

DATE:	3/14/19
DRAFTER:	OIQ
DESIGNER:	OIQ
CHECKED:	DP
PROJECT NO.	
KBH1804-000	

ENGINEER
STATE OF NEW YORK
PROFESSIONAL
TIMOTHY M. MULROONEY
Exp. 12/31/2019
CIVIL
No. 22938
3/14/19

PROJ#:136070A QS:137-33-NE



HOWARD HUGHES COMPANY, LLC
APN: 137-33-501-001

NOTE
ALL PRIVATE STREETS ARE PUBLIC UTILITY, CLV SEWER & PUBLIC DRAINAGE EASEMENTS TO BE PRIVATELY MAINTAINED BY HOA.

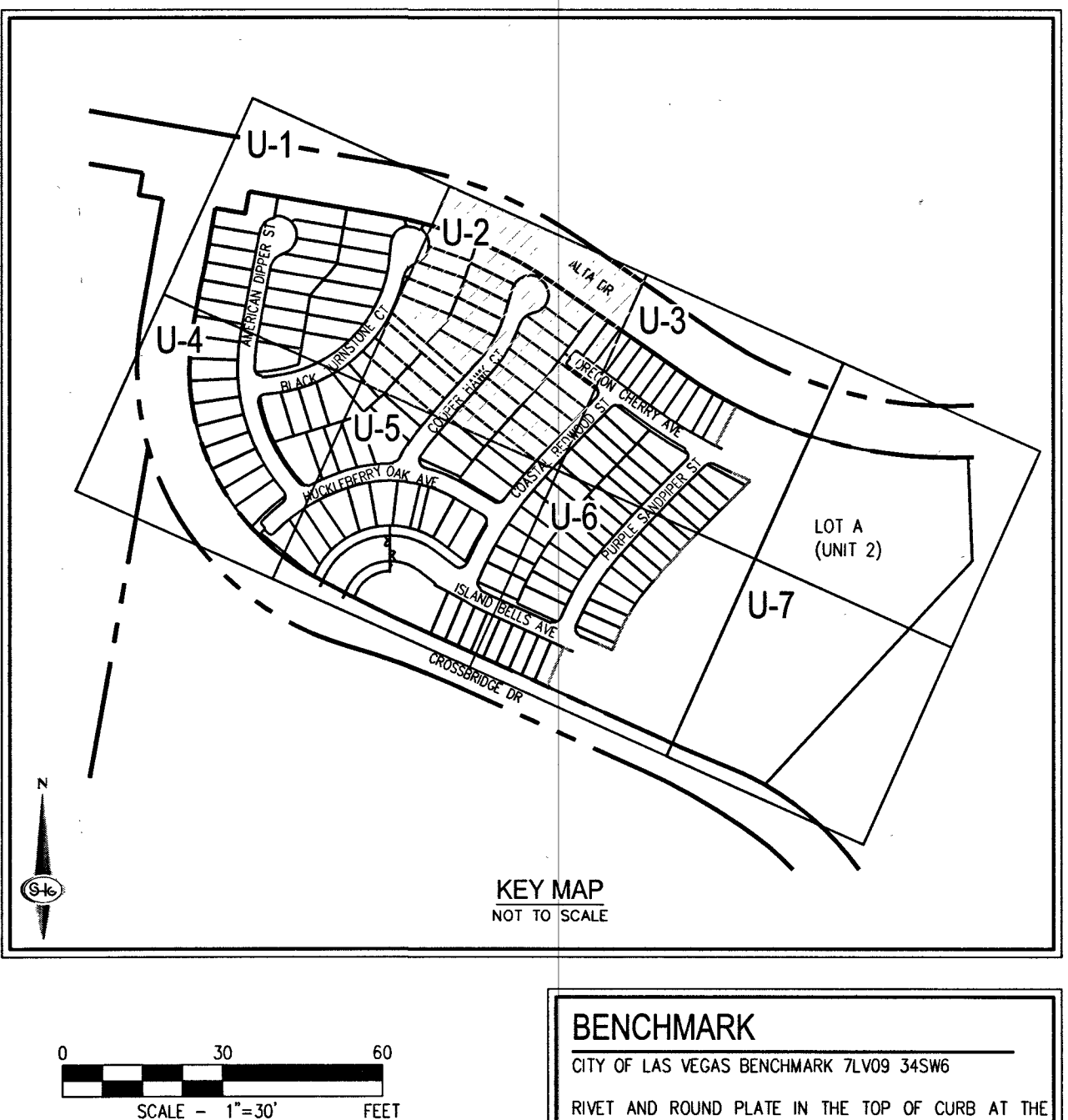
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FIRE SPRINKLER SYSTEMS SHALL BE PLUMBED TO THE MASTER TOILET.
NO EXCEPTIONS ALLOWED.

DROP INLET NOTE
WHERE 10 FEET PARALLEL SEPARATION IS NOT PRACTICABLE
CAST-IN-PLACE MONOLITHIC POUR WITH WATERSTOP BETWEEN SLAB AND WALLS, BASE, WALLS AND TOP TO BE CONSTRUCTED WITH WATERSTOPS, CENTER BULK OR FLAT STRIP (VINYLEX, GREENSTREAK PLASTIC PRODUCTS OR APPROVED EQUAL)

FIRE FLOW CALCULATIONS

FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL	SINGLE FAMILY
USE/OCCUPANCY	TYPE V-R
TYPE OF CONSTRUCTION (IBC)	<3600
SQUARE FOOTAGE	N/A
LARGEST AREA BETWEEN 4 HOUR WALLS	<35
BUILDING HEIGHT	2
NO OF STORIES INCLUDING BASEMENT	12.1 (30)
FIRE SPRINKLER	YES
NO OF HYDRANTS INSTALLED	12



BENCHMARK
CITY OF LAS VEGAS BENCHMARK 7LV09 345W6
RIVET AND ROUND PLATE IN THE TOP OF CURB AT THE SOUTHEAST CORNER OF DESERT MOON RD. AND SKY VISTA DR.
ELEVATION = 1011.422 METERS (NAVD '88)
ELEVATION = 3318.31 US SURVEY FEET (NAVD '88)

BASIS OF BEARINGS
NORTH 03°59'55" WEST, BEING THE BEARING OF THE WEST LINE OF SECTION 34, TOWNSHIP 20 SOUTH, RANGE 59 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF ON FILE IN THE CLARK COUNTY, NEVADA RECORDER'S OFFICE IN BOOK 135, PAGE 71 OF PLATS.

WATER NOTES

1. INSTALL 8" PVC WATER PIPE (3665 WP2)
2. INSTALL 8" DIP WATER PIPE (3665 WP2)
3. INSTALL 6" PVC WATER PIPE (3665 WP2)
4. INSTALL 1" COPPER SERVICE W/ 3/4" METER PER UDACS PLATE NO. 1
5. INSTALL BLUE REFLECTIVE RAISED PAVEMENT MARKERS PER 2009 IFC APPENDIX C, SECT C107.1
6. INSTALL CAP AND 2" BLOWOFF VALVE PER UDACS PLATE NO. 36
7. INSTALL 5" BEND PER UDACS PLATE NO. 31
8. INSTALL 11.25" BEND PER UDACS PLATE NO. 31
9. INSTALL 22.5" BEND PER UDACS PLATE NO. 31
10. INSTALL 45" BEND PER UDACS PLATE NO. 31
11. INSTALL 8"x6" REDUCER PER UDACS PLATE NO. 30
12. INSTALL 8" GATE VALVE WITH VALVE BOX PER UDACS PLATE NO. 30 & 35
13. INSTALL 8"x8" TEE PER UDACS PLATE NO. 31
14. INSTALL 8"x6" TEE PER UDACS PLATE NO. 31
15. INSTALL FIRE HYDRANT ASSEMBLY W/ 6" GATE VALVE PER UDACS PLATE NO. 40
16. INSTALL 1" COPPER SERVICE W/ 3/4" IRRIGATION METER AND 1" SHUTDOWN PER UDACS PLATE NO. 8 & 9. SEE DETAIL ON SHEET U-3
17. FIELD VERIFY LOCATION, REMOVE CAP AND BLOW OFF VALVE PER UDACS PLATE NO. 36 & CONNECT TO EX. 12" C900 PVC WATER PIPE
18. NOT USED
19. FIELD VERIFY LOCATION, REMOVE CAP AND BLOW OFF VALVE PER UDACS PLATE NO. 36 & CONNECT TO EX. 12" DIP WATER PIPE
20. INSTALL 12"x8" REDUCER PER UDACS PLATE NO. 30
21. EXISTING UTILITY, PROTECT IN PLACE
22. NO. 1. ADD ADAPTER FITTINGS TO ACCOMMODATE THE 1-1/2" INCH (106-152)
23. INSTALL 6" END CAP PER UDACS PLATE NO. 31
24. INSTALL 12" DIP WATER PIPE (3665 WP2)

SEWER NOTES

1. INSTALL 8" PVC SANITARY SEWER PER DCSWCS SD-15 & SD-17
 2. INSTALL 48" DIAMETER SANITARY SEWER MANHOLE WITH PRECAST BASE PER DCSWCS SD-1A, SD-1B, SD-4, SD-9, AND SINGLE LID (24")
 3. MANHOLE SHALL BE CORROSION PROTECTED WITH FIELD APPLIED COATING PER DCSWCS SECTION 3.16.08
 4. INSTALL 4" PVC SEWER LATERAL PER DCSWCS SD-22 & SD-25
 5. REMOVE CAP AND CONNECT TO EXISTING 8" SS
 6. INSTALL 4" C900 PVC SEWER LATERAL PER DCSWCS SD-22 & SD-25 FOR LOTS 123 AND 124 ONLY
 7. INSTALL 8" C900 PVC SANITARY SEWER PER DCSWCS SD-15 & SD-17
- PROTECT IN PLACE AND ADJUST LVWD EXISTING FACILITIES TO FINISHED GRADE PER UDACS. ALL LVWD FACILITIES SHALL BE ACCESSIBLE AT ALL TIMES.

SOUTHWEST GAS APPROVAL
Ryan M. Smith 3/14/19
SOUTHWEST GAS CORPORATION DATE

APPROVED FOR CONSTRUCTION
John M. Shuck
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT NO. 136070 FIRST APPROVED DATE 3-20-19
LVWD APPROVED FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL
MAXIMUM AVAILABLE FIRE SPRINKLER FLOW 30 GPM

FAST
Call before you dig
UnderGround
1-702-432-5300
FREEWAY & ARTERIAL SYSTEM OF TRANSPORTATION (F.A.S.T.)

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY.
CALL BEFORE YOU DIG OVERHEAD
1-702-227-2929

Call before you Dig
AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.
Call 811
OR
1-800-227-2600

GENERAL NOTES

1. FOR FIRE HYDRANT LOCATION, TYPICAL UTILITY LOCATION, AND TYPICAL SEWER LATERAL DETAIL, SEE SHEET U-1
2. ALL SEWER/STORM DRAIN CROSSING WATER LINES MUST COMPLY WITH UDACS SECTION 2.22
3. NOTE: INSTALL PIPELINE MARKER BALLS, PER UDACS PLATE NO. 15
4. DEPTH OF COVER DURING CONSTRUCTION MAINTAIN MINIMUM TWENTY FOUR (24) INCH COVER PER UDACS SECTION 2.08.04. GRADING MUST BE COMPLETED PRIOR TO WATERLINE INSTALLATION.
5. ALL ABOVE GROUND UTILITY APPEARANCES SHALL CONFORM TO THE REQUIREMENTS OF TITLE 19.08 & 19.08
6. THE LVWD CANNOT GUARANTEE A WATER TIGHT SHUTDOWN WHERE CONNECTIONS OR REPAIRS TO EXISTING FACILITIES ARE REQUIRED. THE CONTRACTOR SHALL ENSURE ALL LABOR AND EQUIPMENT IS AVAILABLE TO REMOVE REMAINING WATER. COORDINATION WITH INSPECTION DIVISION MUST TAKE PLACE PRIOR TO ANY TRIAL SHUTDOWN.
7. CONTRACTOR TO INSTALL TEMPORARY SERVICE TO ENSURE PROPER SHUTDOWN IN THE 1-1/2" INCH PRIVATE LATERAL (LOTS 106-152)
8. WATER TIGHT MANHOLE
9. WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03
10. ALL DRY UTILITIES CROSSINGS
11. MAINTAIN MINIMUM 12" VERTICAL SEPARATION AT ALL POINTS OF CROSSING FOR DRY UTILITIES
12. MAINTAIN MINIMUM 3" PARALLEL SEPARATION FOR DRY UTILITIES
13. ANY EXCAVATION AT BACK OF CURB MUST REMAIN OPEN FOR INSPECTION OF COPPER SERVICE LATERALS. ANY COPPER SERVICE LATERAL KINKED, BENT OR OTHERWISE DAMAGED MUST BE REPLACED FROM THE MAIN TO THE ANGLE METER STOP FOR DRY UTILITIES.

TO ENSURE GROUND ACCESS WITHIN EASEMENT
ALL ABOVE GROUND OBSTRUCTIONS INCLUDING BUT NOT LIMITED TO LANDSCAPE BOLLARDS, FENCES/WALLS, AND SIGNS ARE STRICTLY PROHIBITED WITHIN EASEMENT.

WATER NOTES
REDUCED PRESSURE PRINCIPLE ASSEMBLY (3) 1" APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED PER THE UDACS PLATE NO. 8. NO WATER SHALL BE TAKEN FROM A SERVICE REQUIRING BACKFLOW PREVENTION UNTIL THE REDUCED PRESSURE PRINCIPLE ASSEMBLY HAS BEEN SUCCESSFULLY TESTED BY THE LVWD. ANY BLOCK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AROUND THE OUTSIDE OF THE EASEMENT(S) TO ALLOW THE DISTRICT DIRECT ACCESS FROM THE ADJACENT RIGHT-OF-WAY. EASEMENTS SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION.

CONSTRUCTION PHASING
THE DEVELOPER REQUESTS THAT WATER PHASE I OF CONSTRUCTION BE BROUGHT INTO SERVICE PRIOR TO THE COMPLETION OF THE REMAINDER OF THE PROJECT TO PROVIDE SERVICE TO HOMES WHILE CONSTRUCTION OF THE PROJECT CONTINUES. SERVICE CONNECTIONS TO THE LOTS WITHIN THE WATER PHASE I LINE WILL NOT BE PERMITTED UNTIL THE SANITARY SEWER MAIN AND ASSOCIATED LATERALS TO THE LOTS WITHIN THE PHASE HAVE BEEN INSTALLED.

APPROVAL
John M. Shuck
LAS VEGAS FIRE AND RESCUE
3/14/19 DATE

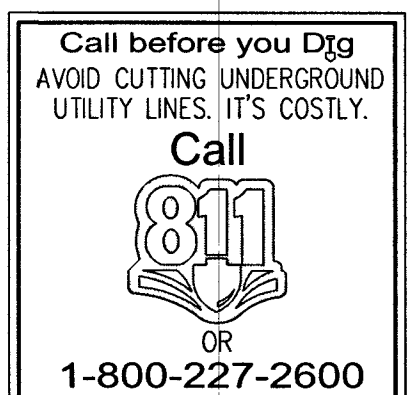
SLATER HANIFAN GROUP
a WestGroup team
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89115
PHONE (702) 284-5300 FAX (702) 284-5399

KBHOME
BRISTLE VALE - UNIT 1
UTILITY PLAN II

DATE: 3/14/19
DRAFTER: OIO
DESIGNER: OIO
CHECKED: DP
PROJECT NO. KBH1804-000

U-2
SHEET 43 OF 54
119-00027
1019-5102

PROJ. # 136070 QS-137-33-NE



930 330 R-502	
	DATE: 3/14/19
	DRAFTER: OIQ
	DESIGNER: OIQ
	CHECKED: DP
PROJECT NO.	
KBH1804-000	
U-3 SHEET 44 OF 54 L19-00027 107X-5102	

PROJ#:136070A QS:137-33-NE

SEE SHEET U-1 FOR CONTINUATION

NOTE

ALL PRIVATE STREETS ARE PUBLIC UTILITY. CLV SEWER & PUBLIC DRAINAGE EASEMENTS TO BE PRIVATELY MAINTAINED BY HOA.

DISCLAIMER NOTE

EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXISTING VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

FIRE SPRINKLER SYSTEMS SHALL BE PLUMBED TO THE MASTER TOILET. NO EXCEPTIONS ALLOWED.

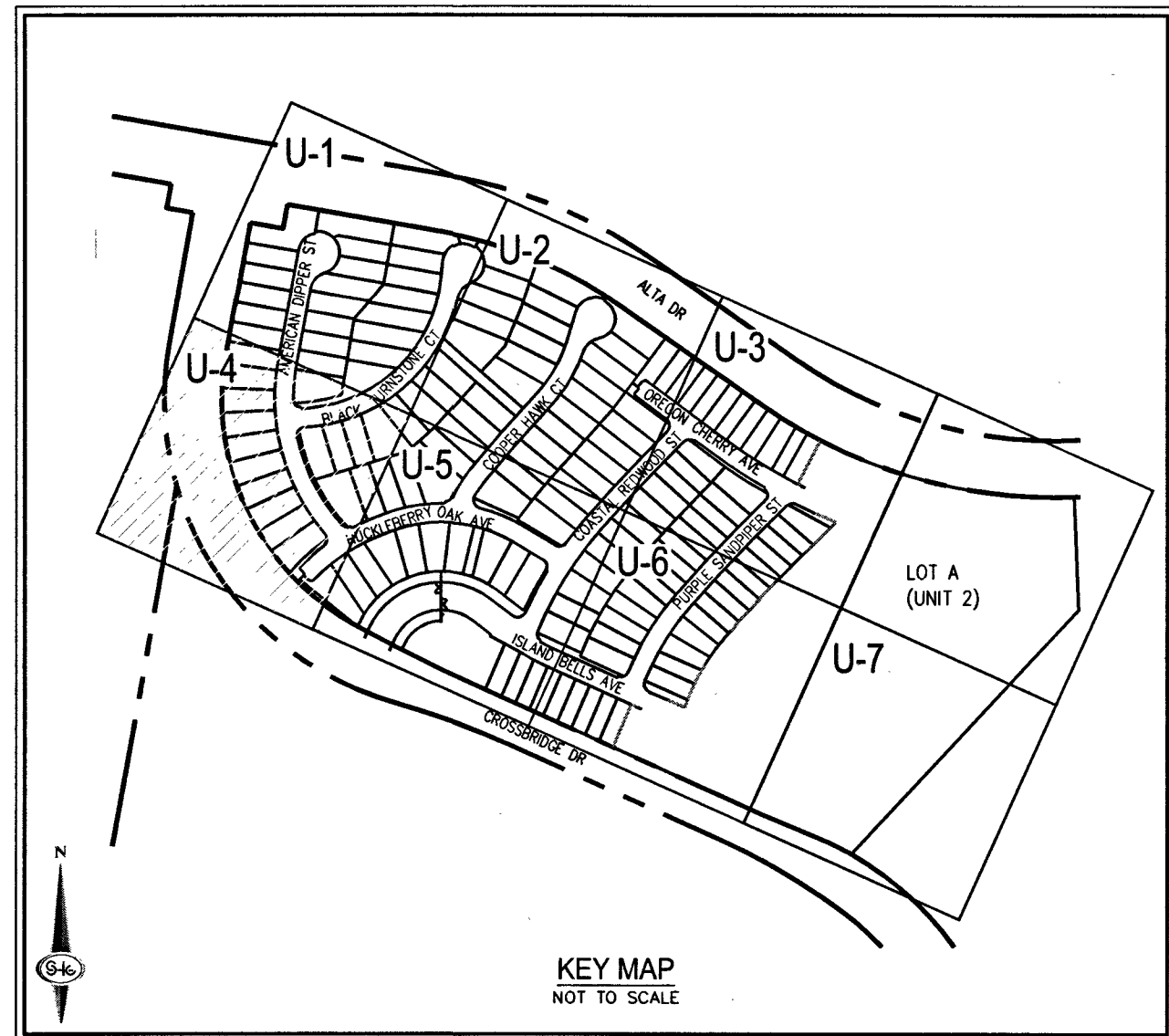
DROP INLET NOTE

WHERE 10 FEET PARALLEL SEPARATION IS NOT PRACTICABLE, CAST-IN-PLACE MONOLITHIC POUR WITH WATERSTOP BETWEEN SLAB AND WALLS, BASE, WALLS AND TOP TO BE CONSTRUCTED WITH WATERSTOPS, CENTER BUILT UP FLAT STRIP (VINTLEX, GREENSTREAK PLASTIC PRODUCTS OR APPROVED EQUAL).

FIRE FLOW CALCULATIONS

FIRE FLOW 1,500 GPM AT 20 P.S.I. RESIDUAL

USE/OCCUPANCY	SINGLE
TYPE OF CONSTRUCTION (IBC)	TYPE
SQUARE FOOTAGE	<3600
LARGEST AREA BETWEEN 4 HOUR WALLS	N/A
BUILDING HEIGHT	<35
NO OF STORIES INCLUDING BASEMENT	2
FIRE SPRINKLER	YES (
NO OF HYDRANTS INSTALLED	12



BENCHMARK

CITY OF LAS VEGAS BENCHMARK 7LV09 34SW6
RIVET AND ROUND PLATE IN THE TOP OF CURB AT THE
SOUTHEAST CORNER OF DESERT MOON RD. AND SKY VISTA
DR.
ELEVATION = 1011.422 METERS (NAVD 88)
ELEVATION = 3318.31 US SURVEY FEET (NAVD 88)

BASIS OF BEARINGS

NORTH 055°55' WEST, BEING THE BEARING OF THE
WEST LINE OF SECTION 34, TOWNSHIP 20 SOUTH, RANGE
59 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY,
NEVADA, AS SHOWN BY MAP THEREOF ON FILE IN THE
CLARK COUNTY, NEVADA RECORDER'S OFFICE IN BOOK
135, PAGE 71 OF PLATS.

GENERAL NOTES

- FOR FIRE HYDRANT LOCATION, TYPICAL UTILITY LOCATION, AND TYPICAL SEWER LATERAL DETAIL SEE SHEET U-1.
- ALL SEWER/STORM DRAIN CROSSING WATER LINES MUST COMPLY WITH UDACS SECTION 2.2.2.
- NOTE: INSTALL PIPELINE MARKER BALLS, PER UDACS PLATE NO. 15.
- DEPTH OF COVER DURING CONSTRUCTION MAINTAIN MINIMUM TWENTY FOUR (24) INCH COVER PER UDACS SECTION 2.2.2.4. GRADING MUST BE COMPLETED PRIOR TO WATERLINE INSTALLATION.
- ALL ABOVE GROUND UTILITY APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF TITLE 19.06 & 19.08.
- THE LVWD CANNOT GUARANTEE A WATER-TIGHT SHUTDOWN WHERE CONNECTIONS OR REPAIRS TO EXISTING FACILITIES ARE REQUIRED. THE CONTRACTOR SHALL ENSURE ALL LABOR AND EQUIPMENT IS AVAILABLE TO REMOVE REMAINING WATER. COORDINATION WITH INSURANCE DIVISION MUST TAKE PLACE PRIOR TO ANY TIEAL SHUTDOWN.
- FIELD VERIFY LOCATION, REMOVE CAP AND BLOW OFF VALVE PER UDACS PLATE NO. 36 & CONNECT TO EX 12" DIP WATER PIPE.
- FIELD VERIFY LOCATION, REMOVE CAP AND BLOW OFF VALVE PER UDACS PLATE NO. 36 & CONNECT TO EX 12" DIP WATER PIPE.
- INSTALL 12"X8" REDUCER PER UDACS PLATE NO. 30.
- INSTALL 8"X6" GATE VALVE WITH VALVE BOX PER UDACS PLATE NO. 30 & 39.
- INSTALL 8"X6" TEE PER UDACS PLATE NO. 31.
- INSTALL 8"X6" TEE PER UDACS PLATE NO. 31.
- INSTALL FIRE HYDRANT ASSEMBLY W/6" GATE VALVE PER UDACS PLATE NO. 40.
- INSTALL 1" COPPER SERVICE W/ 3/4" METER PER UDACS PLATE NO. 36 & CONNECT TO EX 12" DIP WATER PIPE.
- FIELD VERIFY LOCATION, REMOVE CAP AND BLOW OFF VALVE PER UDACS PLATE NO. 36 & CONNECT TO EX 12" DIP WATER PIPE.
- INSTALL 12"X8" REDUCER PER UDACS PLATE NO. 30.
- EXISTING UTILITY, PROTECT IN PLACE.
- INSTALL 1.5" COPPER SERVICE W/ 3/4" METER PER UDACS PLATE NO. 1. ADD ADAPTER FITTINGS TO ACCOMMODATE THE 1-1/2" INCH PUBLIC LATERAL AND THE 1-1/2" INCH PRIVATE LATERAL (LOTS 106-152).
- INSTALL 6" END CAP PER UDACS PLATE NO. 31.
- INSTALL 12" DIP WATER PIPE (3665 WP2).

TO ENSURE LVWD ACCESS WITHIN EASEMENT

ALL ABOVE GROUND OBSTRUCTIONS INCLUDING BUT NOT LIMITED TO LANDSCAPE BOLLARDS, FENCES, WALLS, AND SIGNS ARE STRICTLY PROHIBITED WITHIN EASEMENT.

WATER NOTES

REDUCED PRESSURE PRINCIPLE ASSEMBLY (3") 1"
APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED PER THE UDACS PLATE NO. 8. NO WATER SHALL BE TAKEN FROM A SERVICE REQUIRING BACKFLOW PREVENTION UNTIL THE REDUCED PRESSURE PRINCIPLE ASSEMBLY HAS BEEN SUCCESSFULLY TESTED BY THE LVWD. ANY BLOCK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AROUND THE OUTSIDE OF THE EASEMENT(S) TO ALLOW THE DISTRICT DIRECT ACCESS FROM THE ADJACENT RIGHT-OF-WAY. EASEMENTS SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION.

CONSTRUCTION PHASING

THE DEVELOPER REQUESTS THAT WATER PHASE I OF CONSTRUCTION BE BROUGHT INTO SERVICE PRIOR TO THE COMPLETION OF THE REMAINDER OF THE PROJECT TO PROVIDE SERVICE TO HOMES WHILE CONSTRUCTION OF THE PROJECT CONTINUES. SERVICE CONNECTIONS TO THE LOTS WITHIN THE WATER PHASE I LINE WILL NOT BE PERMITTED UNTIL THE SANITARY SEWER MAIN AND ASSOCIATED LATERALS TO THE LOTS WITHIN THE PHASE HAVE BEEN INSTALLED.

APPROVAL

LAS VEGAS FIRE AND RESCUE
3/16/19

SOUTHWEST GAS APPROVAL

APPROVED FOR CONSTRUCTION
3/16/19

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT NO. 136070 FIRST APPROVED DATE: 3-20-19
LVWD APPROVED FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL
MAXIMUM AVAILABLE FIRE SPRINKLER FLOW 30 GPM



ABANDONED VALVES CUT AND CAP

ALL VALVES TO BE ABANDONED SHALL BE ABANDONED IN THE CLOSED POSITION UNLESS SHOWN OTHERWISE, BY REMOVING A MINIMUM OF THE TOP TWENTY-FOUR (24) INCHES OF THE VALVE BOX, AND THEN FILLING THE BOTTOM OF THE BOX WITH A MINIMUM OF EIGHT (8) INCHES OF SAND OR TYPE II AGGREGATE BASE. THE REMAINING PORTION OF THE VALVE BOX SHALL BE FILLED WITH CONCRETE HAVING A COMPRESSIVE STRENGTH OF AT LEAST TWO THOUSAND (2,000) PSI. THE LATERAL MUST BE CUT WITHIN ONE (1) FOOT OF THE ABANDONED VALVE, OR AS SHOWN ON THE PLANS, AND CAPPED, IN ACCORDANCE WITH THE PROVISIONS OF UDACS PLATE NO. 31.

SLATER HANIFAN GROUP
a Westwood team

5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300
FAX (702) 284-5399

LAS VEGAS, NV

KB HOME
BRISTLE VALE - UNIT 1
UTILITY PLAN IV

DATE: 3/14/19

DRAFTER: OIQ

DESIGNER: OIQ

CHECKED: DP

PROJECT NO.

KBH1804-000

ENGINEER
TIMOTHY M. MULROONEY
Exp. 12/31/2019
3/14/19

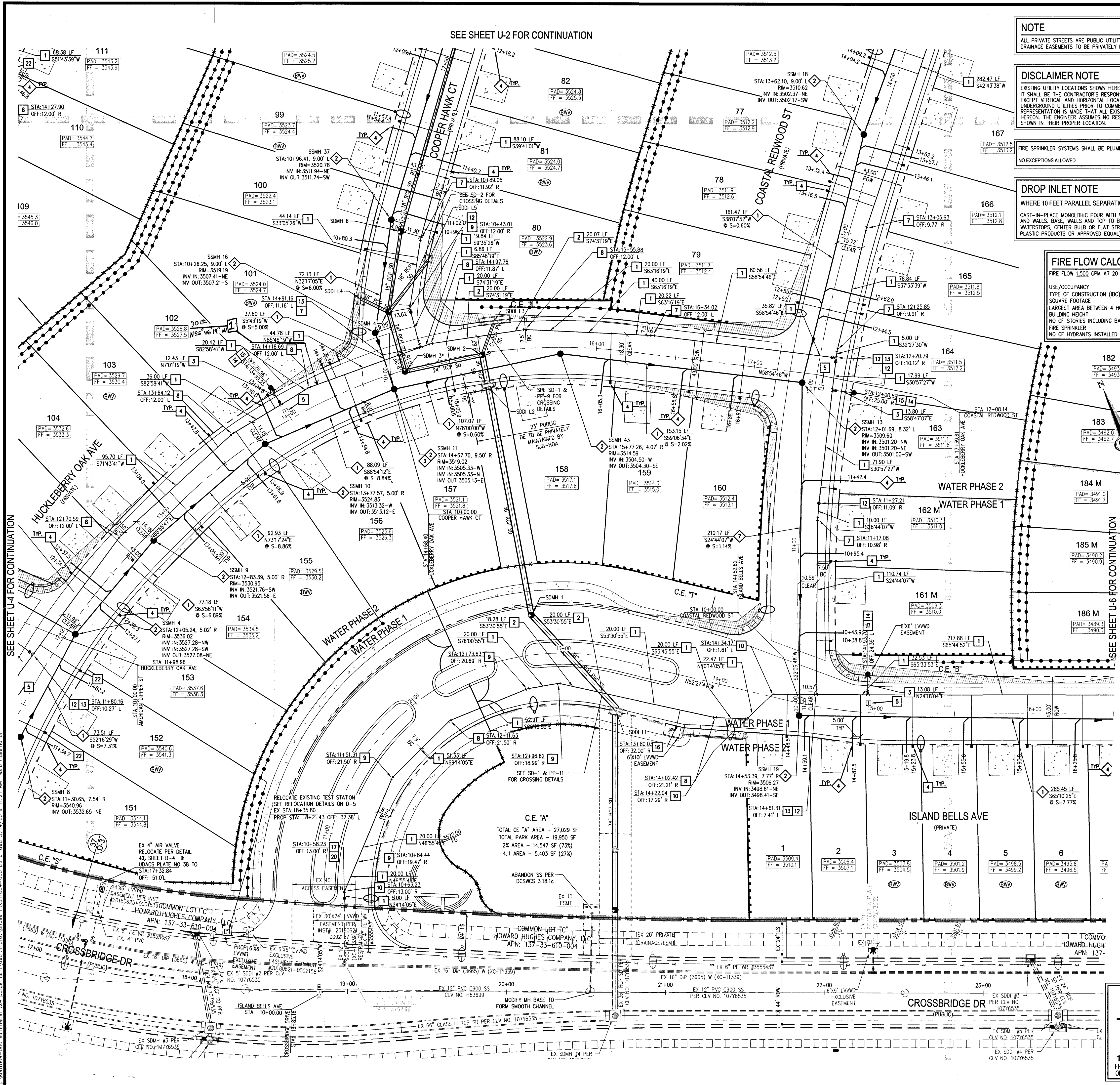
U-4

SHEET 45 OF 54

L19-00027

1071-5102

PROJ: 136070A QS: 137-33-NV

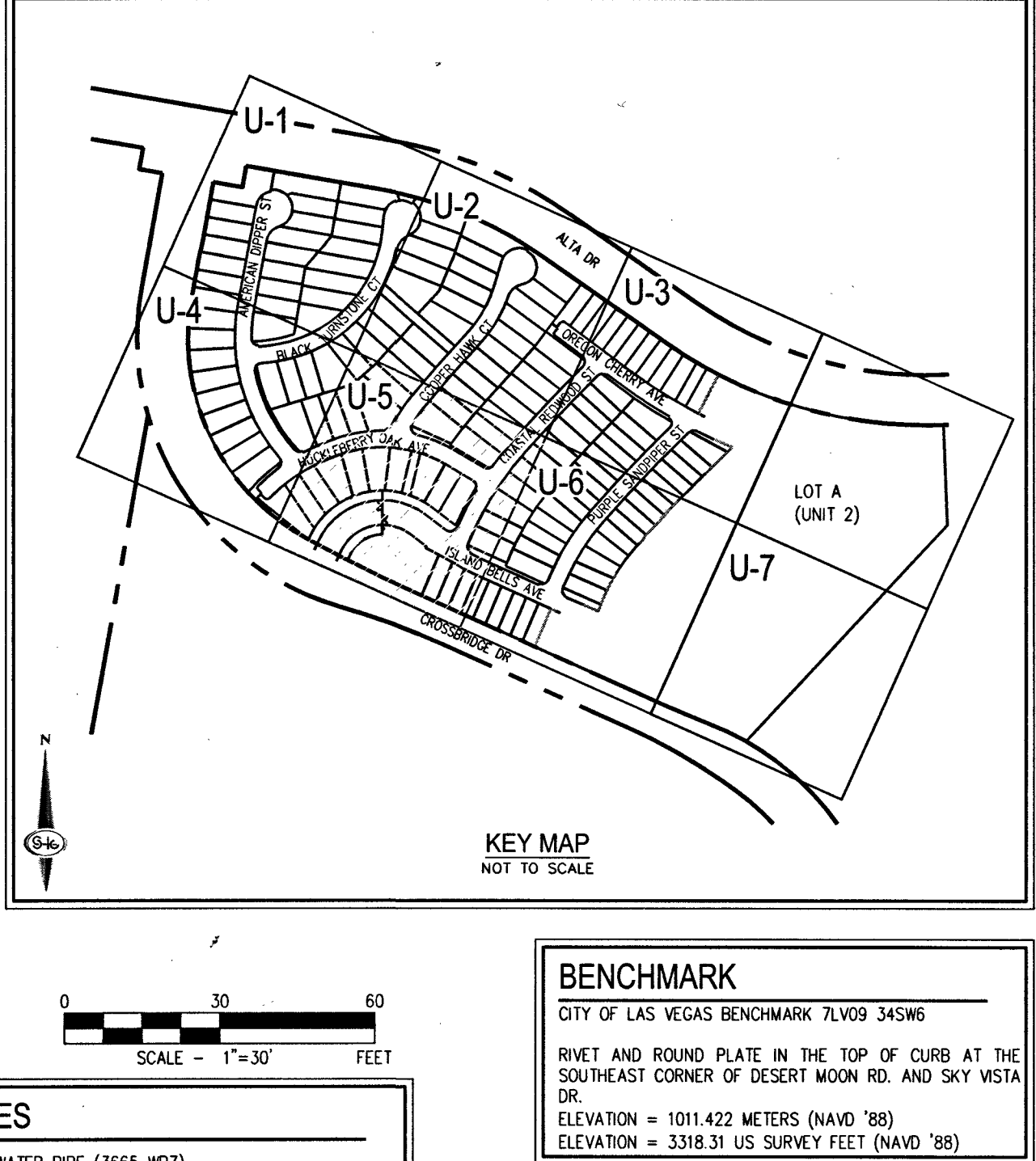


NOTE
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DISCLAIMER NOTE
EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXCEPT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

DROP INLET NOTE
WHERE 10 FEET PARALLEL SEPARATION IS NOT PRACTICABLE
CAST-IN-PLACE MONOLITHIC POUR WITH WATERSTOP BETWEEN SLAB AND WALLS. BASE, WALLS AND TOP TO BE CONSTRUCTED WITH WATERSTOPS, CENTER BULB OR FLAT STOP (WVWEX, GREENSTREAK PLASTIC PRODUCTS OR APPROVED EQUAL).

FIRE FLOW CALCULATIONS
FIRE FLOW 1,500 GPM AT 20 P.S.I. RESIDUAL
USE/OCCUPANCY: SINGLE FAMILY
TYPE OF CONSTRUCTION (BC): TYPE V-R
SQUARE FOOTAGE: 2,800
LARGEST AREA BETWEEN 4 HOUR WALLS: N/A
BUILDING HEIGHT: <35
NO. OF STORIES INCLUDING BASEMENT: 2
FIRE SPRINKLER: YES (130)
NO. OF HYDRANTS INSTALLED: 12



- WATER NOTES**
1. INSTALL 8" PVC WATER PIPE (3665 WP2)
 2. INSTALL 8" DIP WATER PIPE (3665 WP2)
 3. INSTALL 6" PVC WATER PIPE (3665 WP2)
 4. INSTALL 1" COPPER SERVICE W/ 3/4" METER PER UDACS PLATE NO. 31
 5. INSTALL BLUE REFLECTIVE RAISED PAVEMENT MARKERS PER 2009 IPC APPENDIX C, SECT C107.1
 6. INSTALL CAP AND 2" BLOWOFF VALVE PER UDACS PLATE NO. 36
 7. INSTALL 5" BEND PER UDACS PLATE NO. 31
 8. INSTALL 11.25" BEND PER UDACS PLATE NO. 31
 9. INSTALL 22.5" BEND PER UDACS PLATE NO. 31
 10. INSTALL 45" BEND PER UDACS PLATE NO. 31
 11. INSTALL 8"x8" REDUCER PER UDACS PLATE NO. 30
 12. INSTALL 8" GATE VALVE WITH VALVE BOX PER UDACS PLATE NO. 30 & 39
 13. INSTALL 8"x8" TEE PER UDACS PLATE NO. 31
 14. INSTALL 8"x8" TEE PER UDACS PLATE NO. 31
 15. INSTALL FIRE HYDRANT ASSEMBLY W/6" GATE VALVE PER UDACS PLATE NO. 40
 16. APPROX PER UDACS PLATE NO. 4 & 8. SEE DETAIL ON SHEET U-3
 17. FIELD VERIFY LOCATION, REMOVE CAP AND BLOW OFF VALVE PER UDACS PLATE NO. 36 & CONNECT TO EX 12" CS900 PVC WATER PIPE
 18. NOT USED
 19. FIELD VERIFY LOCATION, REMOVE CAP AND BLOW OFF VALVE PER UDACS PLATE NO. 36 & CONNECT TO EX 12" DIP WATER PIPE
 20. INSTALL 12"x8" REDUCER PER UDACS PLATE NO. 30
 21. EXISTING UTILITY, PROTECT IN PLACE
 22. INSTALL 1.5" COPPER SERVICE W/ 3/4" METER PER UDACS PLATE NO. 1. ADD ADAPTER FITTINGS TO ACCOMMODATE THE 1-1/2" INCH PUBLIC LATERAL AND THE 1-1/2" INCH PRIVATE LATERAL (LOTS 106-152)
 23. INSTALL 6" END CAP PER UDACS PLATE NO. 31
 24. INSTALL 12" DIP WATER PIPE (3665 WP2)

- SEWER NOTES**
1. INSTALL 8" PVC SANITARY SEWER PER DCSWCS SD-15 & SD-17
 2. INSTALL 48" DIAMETER SANITARY SEWER MANHOLE WITH PRECAST BASE PER DCSWCS SD-1A, SD-1B, SD-4, SD-9, AND SINGLE LID (24")
 3. MANHOLE SHALL BE CORROSION PROTECTED WITH FIELD APPLIED COATING PER DCSWCS SECTION 3.16.88
 4. INSTALL 4" PVC SEWER LATERAL PER DCSWCS SD-22 & SD-25
 5. REMOVE CAP AND CONNECT TO EXISTING 8" SS
 6. INSTALL 4" CS900 PVC SEWER LATERAL PER DCSWCS SD-22 & SD-25 FOR LOTS 123 AND 124 ONLY
 7. INSTALL 8" CS900 PVC SANITARY SEWER PER DCSWCS SD-15 & SD-17

SOUTHWEST GAS APPROVAL
Tom Stank 3/15/19
SOUTHWEST GAS CORPORATION DATE

APPROVED FOR CONSTRUCTION
Tom Stank
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT NO. 136070 FIRST APPROVED DATE 3-20-19
LVWD APPROVED FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL
MAXIMUM AVAILABLE FIRE SPRINKLER FLOW 30 GPM

BENCHMARK
CITY OF LAS VEGAS BENCHMARK 7LV09 34SW6
RIVET AND ROUND PLATE IN THE TOP OF CURB AT THE SOUTHEAST CORNER OF DESERT MOON RD. AND SKY VISTA DR.
ELEVATION = 1011.422 METERS (NAVD 88)
ELEVATION = 3318.31 US SURVEY FEET (NAVD 88)

BASIS OF BEARINGS
NORTH 05°55'55" WEST, BEING THE BEARING OF THE WEST LINE OF SECTION 34, TOWNSHIP 20 SOUTH, RANGE 59 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF ON FILE IN THE CLARK COUNTY, NEVADA RECORDER'S OFFICE IN BOOK 135, PAGE 71 OF PLATS.

GENERAL NOTES

1. FOR FIRE HYDRANT LOCATION, TYPICAL UTILITY LOCATION, AND TYPICAL SEWER LATERAL DETAIL SEE SHEET U-1
2. ALL SEWER/STORM DRAIN CROSSING WATER LINES MUST COMPLY WITH UDACS SECTION 2.22
3. NOTE: INSTALL PIPELINE MARKER BALLS, PER UDACS PLATE NO. 15
4. DEPTH OF COVER DURING CONSTRUCTION MAINTAIN MINIMUM TWENTY FOUR (24) INCH COVER PER UDACS SECTION 2.08.04. GRADING MUST BE COMPLETED PRIOR TO WATERLINE INSTALLATION.
5. ALL ABOVE GROUND UTILITY APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF TITLE 19.06 & 19.08
6. THE LVWD CANNOT GUARANTEE A WATER TIGHT SHUTDOWN WHERE CONNECTIONS OR REPAIRS TO EXISTING FACILITIES ARE REQUIRED. THE CONTRACTOR SHALL ENSURE ALL LABOR AND EQUIPMENT IS AVAILABLE TO REMOVE REMAINING WATER. COORDINATION WITH INSPECTION DIVISION MUST TAKE PLACE PRIOR TO ANY TRIAL SHUTDOWN.
7. CONTRACTOR TO INSTALL TEMPORARY SERVICE TO ENSURE PROPER SHUTDOWN IN THE EVENT NO OTHER APPURTENANCES ARE AVAILABLE.
8. WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03.

FOR ALL DRY UTILITIES CROSSINGS

9. MAINTAIN MINIMUM 12" VERTICAL SEPARATION AT ALL POINTS OF CROSSING FOR DRY UTILITIES
10. MAINTAIN MINIMUM 3' PARALLEL SEPARATION FOR DRY UTILITIES
11. ANY EXCAVATION AT BACK OF CURB MUST REMAIN OPEN FOR INSPECTION OF COPPER SERVICE LATERALS. ANY COPPER SERVICE LATERAL KNOWN, BENT OR OTHERWISE DAMAGED MUST BE REPLACED FROM THE MAIN TO THE ANGLE METER STOP FOR DRY UTILITIES.

TO ENSURE LVWD ACCESS WITHIN EASEMENT
ALL ABOVE GROUND OBSTRUCTIONS INCLUDING BUT NOT LIMITED TO LANDSCAPE BOLDERS, FENCES/WALLS, AND SIGNS ARE STRICTLY PROHIBITED WITHIN EASEMENT.

WATER NOTES
REDUCED PRESSURE PRINCIPLE ASSEMBLY (3) 1" APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED PER THE UDACS PLATE NO. 8 NO WATER SHALL BE TAKEN FROM A SERVICE REQUIRING BACKFLOW PREVENTION UNTIL THE REDUCED PRESSURE PRINCIPLE ASSEMBLY HAS BEEN SUCCESSFULLY TESTED BY THE LVWD. ANY BLOCK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AROUND THE OUTSIDE OF THE EASEMENT(S) TO ALLOW THE DISTRICT DIRECT ACCESS FROM THE ADJACENT RIGHT-OF-WAY. EASEMENTS SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION.

CONSTRUCTION PHASING
THE DEVELOPER REQUESTS THAT WATER PHASE 1 OF CONSTRUCTION BE BROUGHT INTO SERVICE PRIOR TO THE COMPLETION OF THE REMAINDER OF THE PROJECT TO PROVIDE SERVICE TO HOMES WHILE CONSTRUCTION OF THE PROJECT CONTINUES. SERVICE CONNECTIONS TO THE LOTS WITHIN THE WATER PHASE 1 LINE WILL NOT BE PERMITTED UNTIL THE SANITARY SEWER MAIN AND ASSOCIATED LATERALS TO THE LOTS WITHIN THE PHASE HAVE BEEN INSTALLED.

APPROVAL
Tom Stank 3/15/19
LAS VEGAS FIRE AND RESCUE DATE

FAST
Call before you dig
Underground
1-702-432-5300
FREEWAY & ARTERIAL SYSTEM OF TRANSPORTATION (F.A.S.T.)

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY.
CALL BEFORE YOU DIG
OVERHEAD
1-702-227-2929

Call before you dig
AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.
Call 811
OR
1-800-227-2600

SLATER HANIFAN GROUP
a Westwood team
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 384-5300 FAX (702) 384-5399

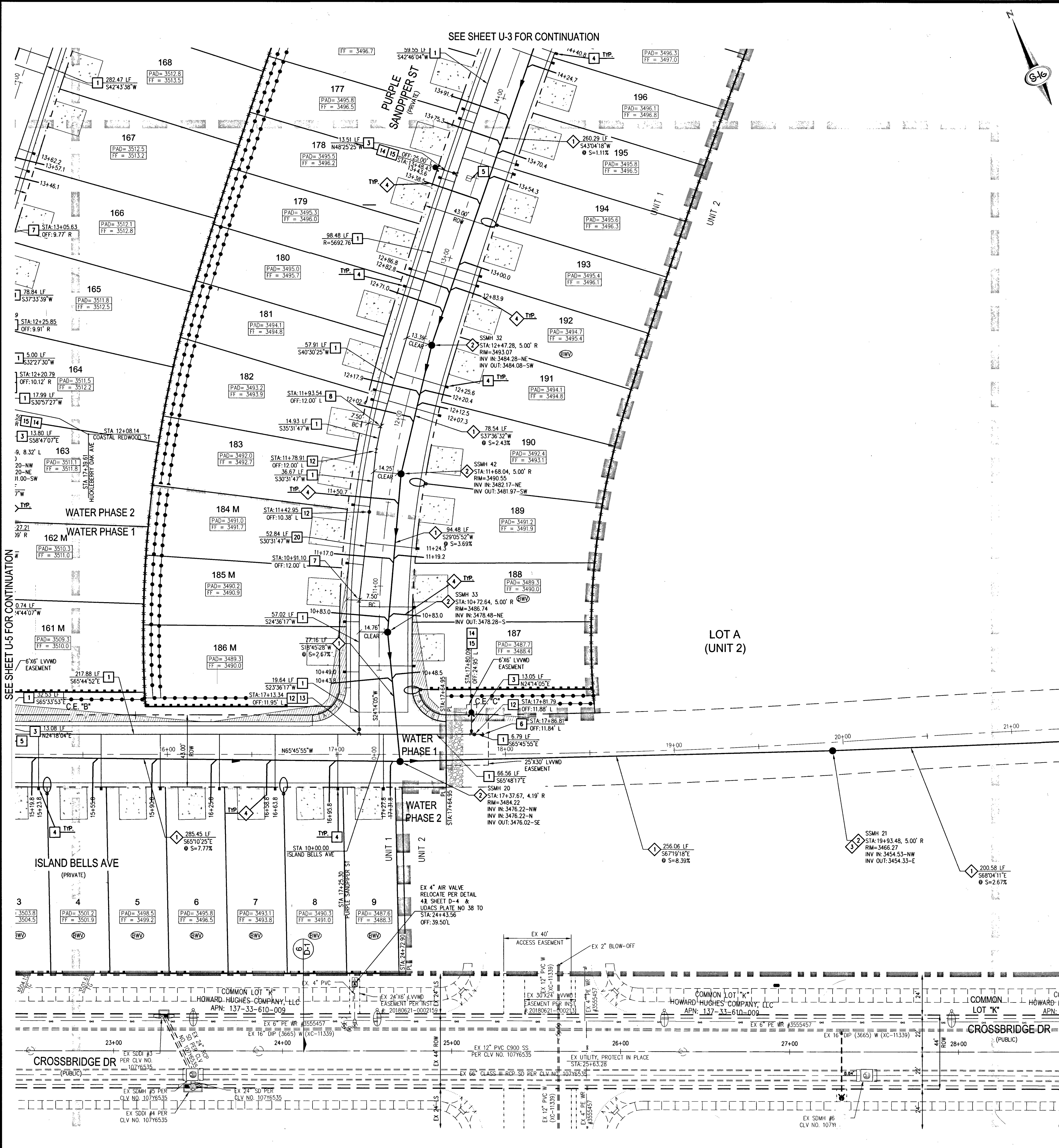
KB HOME
BRISTLE VALE - UNIT 1
UTILITY PLAN V

DATE: 3/14/19
DRAFTER: OIO
DESIGNER: OIO
CHECKED: DP
PROJECT NO. KBH1804-000

U-5
SHEET 46 OF 54
119-00027
1012-6102

PROJ# 136070A QS-137-33-NE

\\nash1804-000 sumeditin_424 parcel (km) dms (arcsec) \\nash1804-000 ut of dms 3/14/2019 11:21 AM Testa Testa



SEE SHEET U-7 FOR CONTINUATION

NOTE
ALL PRIVATE STREETS ARE PUBLIC UTILITY, CLV SEWER & PUBLIC DRAINAGE EASEMENTS TO BE PRIVATELY MAINTAINED BY HOA.

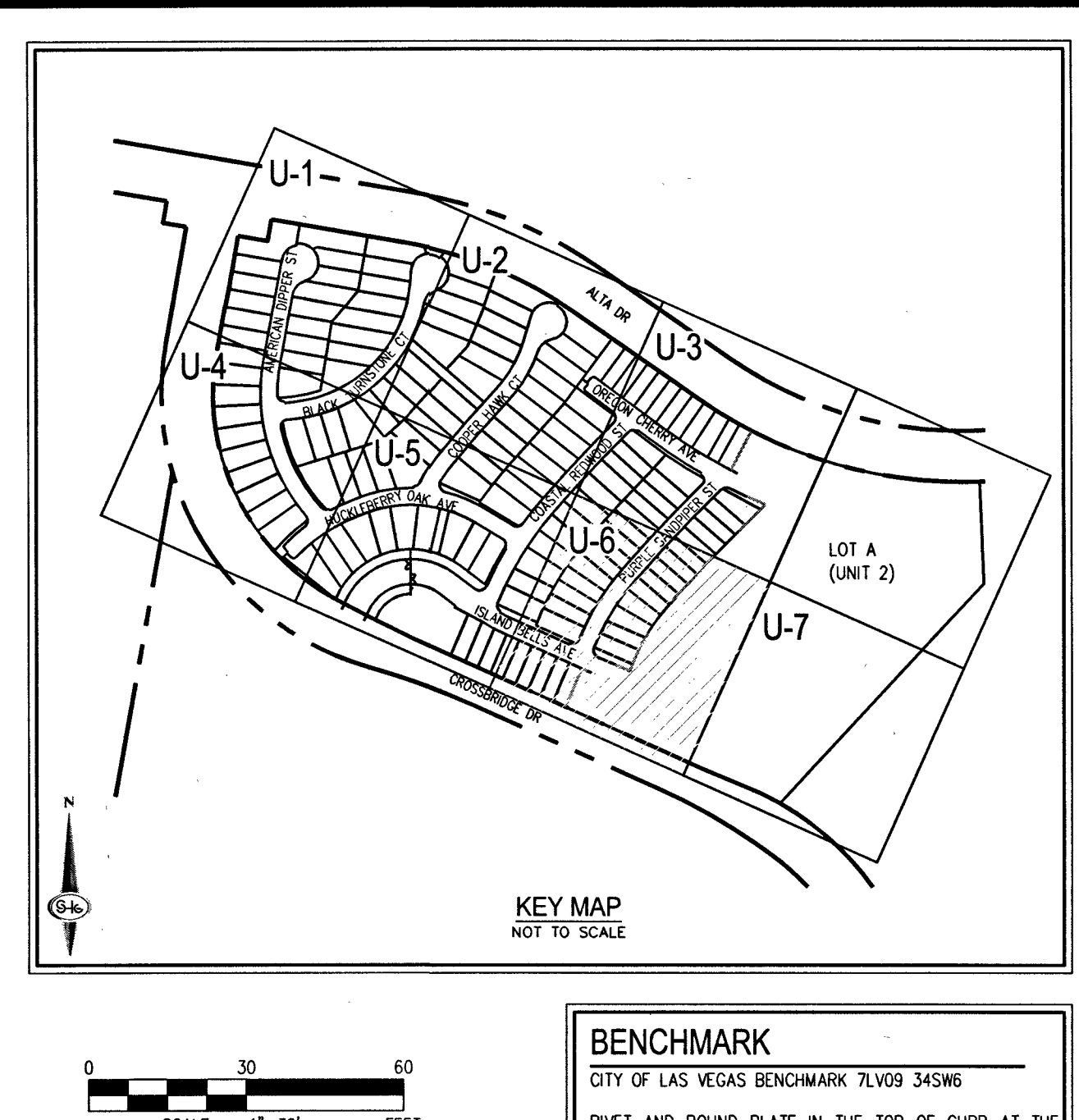
DISCLAIMER NOTE
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DROP INLET NOTE
WHERE 10 FEET PARALLEL SEPARATION IS NOT PRACTICABLE
CAST-IN-PLACE MONOLITHIC POUR WITH WATERSTOP BETWEEN SLAB AND WALLS. BASE, WALLS AND TOP TO BE CONSTRUCTED WITH WATERSTOPS, CENTER BUILT OR FLAT STRIP (VINYLEX, GREENSTREAK PLASTIC PRODUCTS OR APPROVED EQUAL)

FIRE FLOW CALCULATIONS

FIRE FLOW 1,500 GPM AT 20 P.S.I. RESIDUAL

USE/OCCUPANCY	SINGLE FAMILY
TYPE OF CONSTRUCTION (IBC)	TYPE V-B
SQUARE FOOTAGE	<3500
LARGEST AREA BETWEEN 4 HOUR WALLS	N/A
BUILDING HEIGHT	<35
NO OF STORIES INCLUDING BASEMENT	2
FIRE SPRINKLER	YES (130)
NO OF HYDRANTS INSTALLED	12



WATER NOTES

1. INSTALL 8" PVC WATER PIPE (3665 WP2)
2. INSTALL 8" DIP WATER PIPE (3665 WP2)
3. INSTALL 6" PVC WATER PIPE (3665 WP2)
4. INSTALL 1" COPPER SERVICE W/ 3/4" METER PER UDACS PLATE NO. 31
5. INSTALL BLUE REFLECTIVE RAISED PAVEMENT MARKERS PER 2009 IFC APPENDIX C, SECT C107.1
6. INSTALL CAP AND 2" BLOWOFF VALVE PER UDACS PLATE NO. 36
7. INSTALL 5" BEND PER UDACS PLATE NO. 31
8. INSTALL 11/25" BEND PER UDACS PLATE NO. 31
9. INSTALL 22/5" BEND PER UDACS PLATE NO. 31
10. INSTALL 45" BEND PER UDACS PLATE NO. 31
11. INSTALL 8"x6" REDUCER PER UDACS PLATE NO. 30
12. INSTALL 8" GATE VALVE WITH VALVE BOX PER UDACS PLATE NO. 30 & 39
13. INSTALL 8"x8" TEE PER UDACS PLATE NO. 31
14. INSTALL 8"x6" TEE PER UDACS PLATE NO. 31
15. INSTALL FIRE HYDRANT ASSEMBLY W/ 6" GATE VALVE PER UDACS PLATE NO. 40
16. INSTALL 1" COPPER SERVICE W/ 3/4" IRRIGATION METER AND 1" COPPER PER UDACS PLATE NO. 4 & 8. SEE DETAIL ON SHEET U-3
17. FIELD VERIFY LOCATION, REMOVE CAP AND BLOW OFF VALVE PER UDACS PLATE NO. 36 & CONNECT TO EX. 12" C900 PVC WATER PIPE
18. NOT USED
19. FIELD VERIFY LOCATION, REMOVE CAP AND BLOW OFF VALVE PER UDACS PLATE NO. 36 & CONNECT TO EX. 12" C900 PVC WATER PIPE
20. INSTALL 12"x8" REDUCER PER UDACS PLATE NO. 30
21. EXISTING UTILITY, PROTECT IN PLACE
22. INSTALL 1.5" COPPER SERVICE W/ 3/4" METER PER UDACS PLATE NO. 1. ADD ADAPTER FITTINGS TO ACCOMMODATE THE 1-1/2" INCH PUBLIC LATERAL AND THE 1-1/2" INCH PRIVATE LATERAL (LOTS 106-152)
23. INSTALL 6" END CAP PER UDACS PLATE NO. 31
24. INSTALL 12" DIP WATER PIPE (3665 WP2)

SEWER NOTES

1. INSTALL 8" PVC SANITARY SEWER PER DCSWCS SD-15 & SD-17
2. INSTALL 48" DIAMETER SANITARY SEWER MANHOLE WITH PRECAST BASE PER DCSWCS SD-1A, SD-1B, SD-4, SD-9, AND SINGLE LOT (24")
3. MANHOLE SHALL BE CORROSION PROTECTED WITH FIELD APPLIED COATING PER DCSWCS SECTION 3.16.8B
4. INSTALL 4" PVC SEWER LATERAL PER DCSWCS SD-22 & SD-25
5. REMOVE CAP AND CONNECT TO EXISTING 8" SS
6. INSTALL 4" C900 PVC SEWER LATERAL PER DCSWCS SD-22 & SD-25 FOR LOTS 123 AND 124 ONLY
7. INSTALL 8" C900 PVC SANITARY SEWER PER DCSWCS SD-15 & SD-17

SOUTHWEST GAS APPROVAL

Am Htand 3/18/19
SOUTHWEST GAS CORPORATION DATE

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT NO. 136070 FIRST APPROVED DATE 3-20-19
LVWD APPROVED FIRE FLOW 1,500 GPM AT 20 PSI RESIDUAL
MAXIMUM AVAILABLE FIRE SPRINKLER FLOW 30 GPM

FAST
Call before you dig
UnderGround
1-702-432-5300
FREEWAY & ARTERIAL SYSTEM OF TRANSPORTATION (F.A.S.T.)

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY.
CALL BEFORE YOU DIG
1-702-227-2929

Call before you Dig
AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.
Call 811
OR
1-800-227-2600

BENCHMARK

CITY OF LAS VEGAS BENCHMARK 7LV09 345W6
RIVET AND ROUND PLATE IN THE TOP OF CURB AT THE SOUTHEAST CORNER OF DESERT MOON RD. AND SKY VISTA DR
ELEVATION = 1011.422 METERS (NAVD '88)
ELEVATION = 3318.31 US SURVEY FEET (NAVD '88)

BASIS OF BEARINGS

NORTH 05°55'55" WEST, BEING THE BEARING OF THE WEST LINE OF SECTION 34, TOWNSHIP 20 SOUTH, RANGE 59 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF ON FILE IN THE CLARK COUNTY, NEVADA RECORDER'S OFFICE IN BOOK 135, PAGE 71 OF PLATS.

GENERAL NOTES

1. FOR FIRE HYDRANT LOCATION, TYPICAL UTILITY LOCATION, AND TYPICAL SEWER LATERAL DETAIL SEE SHEET U-1
2. ALL SEWER/STORM DRAIN CROSSING WATER LINES MUST COMPLY WITH UDACS SECTION 2.22
3. NOTE: INSTALL PIPELINE MARKER BALLS, PER UDACS PLATE NO. 15
4. DEPTH OF COVER DURING CONSTRUCTION MAINTAIN MINIMUM TWENTY FOUR (24) INCH COVER PER UDACS SECTION 2.08.04. GRADING MUST BE COMPLETED PRIOR TO WATERLINE INSTALLATION.
5. ALL ABOVE GROUND UTILITY APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF TITLE 19.06 & 19.08
6. THE LVWD CANNOT GUARANTEE A WATERPROOF SHUTDOWN WHERE CONNECTIONS OR REPAIRS TO EXISTING FACILITIES ARE REQUIRED. THE CONTRACTOR SHALL ENSURE ALL LABOR AND EQUIPMENT IS AVAILABLE TO REMOVE REMAINING WATER. COORDINATION WITH INSPECTION DIVISION MUST TAKE PLACE PRIOR TO ANY TOTAL SHUTDOWN.
7. CONTRACTOR TO INSTALL TEMPORARY SERVICE TO ENSURE PROPER SHUTDOWN IN THE EVENT NO OTHER APPURTENANCES ARE AVAILABLE.
8. WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03.
9. FOR ALL DRY UTILITIES CROSSINGS
10. MAINTAIN MINIMUM 12" VERTICAL SEPARATION AT ALL POINTS OF CROSSING FOR DRY UTILITIES
11. MAINTAIN MINIMUM 3' PARALLEL SEPARATION FOR DRY UTILITIES
12. ANY EXCAVATION AT BACK OF CURB MUST REMAIN OPEN FOR INSPECTION OF COPPER SERVICE LATERALS. ANY COPPER SERVICE LATERAL, KINKED, BENT OR OTHERWISE DAMAGED MUST BE REPLACED FROM THE MAIN TO THE ANGLE METER STOP FOR DRY UTILITIES.

TO ENSURE LVWD ACCESS WITHIN EASEMENT

ALL ABOVE GROUND OBSTRUCTIONS INCLUDING BUT NOT LIMITED TO LANDSCAPE BOULDERS, FENCES/WALLS, AND SIGNS ARE STRICTLY PROHIBITED WITHIN EASEMENT

WATER NOTES

REDUCED PRESSURE PRINCIPLE ASSEMBLY (3) 1"
APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED PER THE UDACS PLATE NO. 8. NO WATER SHALL BE TAKEN FROM A SERVICE REQUIRING BACKFLOW PREVENTION UNTIL THE REDUCED PRESSURE PRINCIPLE ASSEMBLY HAS BEEN SUCCESSFULLY TESTED BY THE LVWD. ANY BLOCK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AROUND THE OUTSIDE OF THE EASEMENT(S) TO ALLOW THE DISTRICT DIRECT ACCESS FROM THE ADJACENT RIGHT-OF-WAY. EASEMENTS SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION

CONSTRUCTION PHASING

THE DEVELOPER REQUESTS THAT WATER PHASE 1 OF CONSTRUCTION BE BROUGHT INTO SERVICE PRIOR TO THE COMPLETION OF THE REMAINDER OF THE PROJECT TO PROVIDE SERVICE TO HOMES WHILE CONSTRUCTION OF THE PROJECT CONTINUES. SERVICE CONNECTIONS TO THE LOTS WITHIN THE WATER PHASE 1 LINE WILL NOT BE PERMITTED UNTIL THE SANITARY SEWER MAIN AND ASSOCIATED LATERALS TO THE LOTS WITHIN THE PHASE HAVE BEEN INSTALLED

APPROVAL

Callahan 3/18/19
LAS VEGAS FIRE AND RESCUE DATE

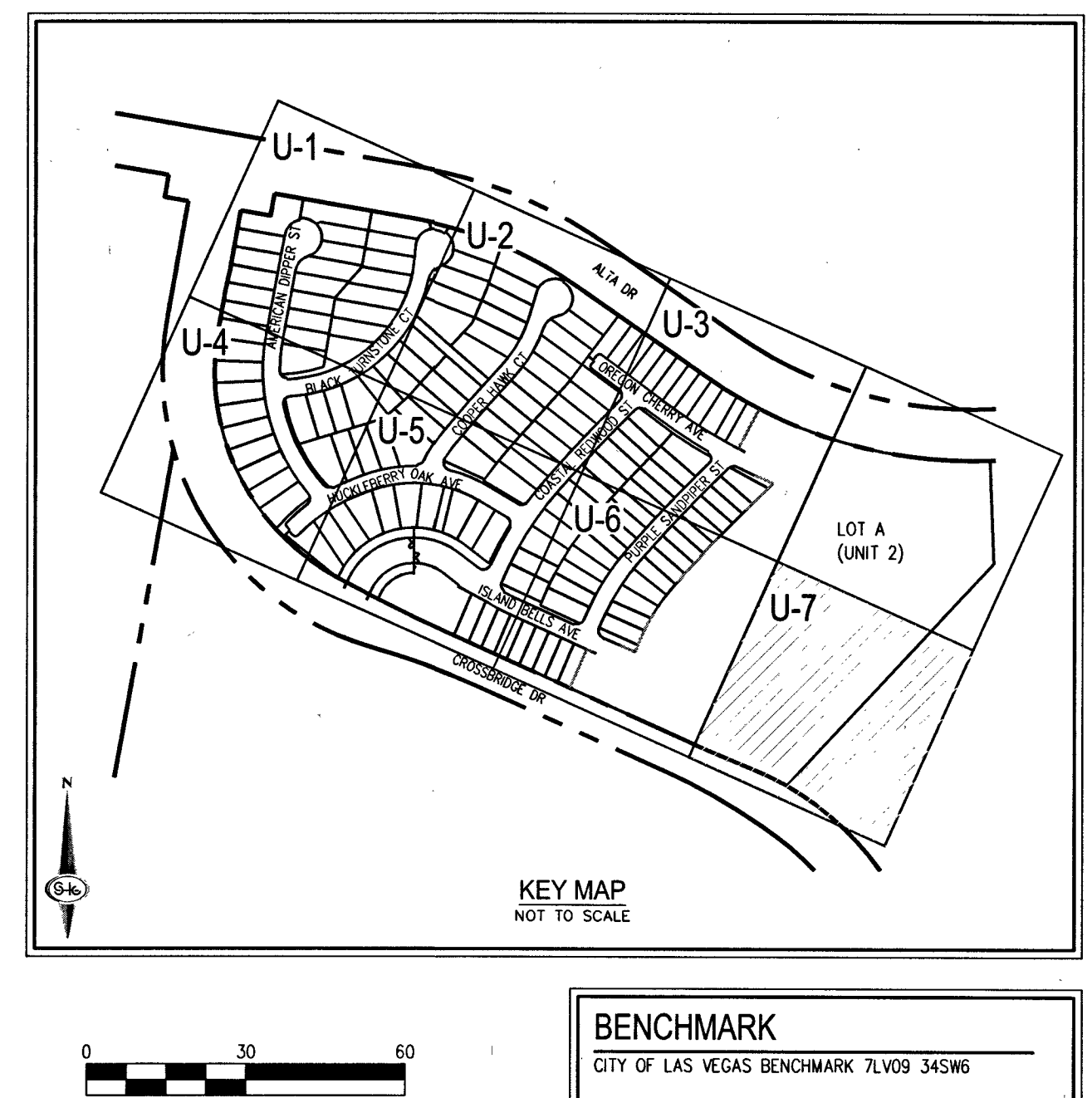
SLATER HANIFAN GROUP
a Westwood team
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5500 FAX (702) 284-5399

KBHOME
BRISTLE VALE - UNIT 1
UTILITY PLAN VI

DATE: 3/14/19
DRAFTER: OIO
DESIGNER: OIO
CHECKED: DP
PROJECT NO. KBH1804-000

U-6
SHEET 47 OF 54
119-00027
103X-5102

PROJ#136070A QS-137-33-NE



FIRE FLOW CALCULATIONS	
FIRE FLOW <u>1,500</u> GPM AT 20 P.S.I. RESIDUAL.	
USE/OCCUPANCY	SINGLE FAMILY
TYPE OF CONSTRUCTION (IBC)	TYPE V-B
SQUARE FOOTAGE	<3600
LARGEST AREA BETWEEN 4 HOUR WALLS	N/A
BUILDING HEIGHT	<35
NO OF STORIES INCLUDING BASEMENT	2
FIRE SPRINKLER	YES (130)
NO OF HYDRANTS INSTALLED	12

BASIS OF BEARINGS

NORTH 05°59'55" WEST, BEING THE BEARING OF THE WEST LINE OF SECTION 34, TOWNSHIP 20 SOUTH, RANGE 59 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF ON FILE IN THE CLARK COUNTY, NEVADA RECORDER'S OFFICE IN BOOK 135, PAGE 71 OF PLATS.

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APPROVED FOR CONSTRUCTION

[Signature]

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES

PROJECT NO. 136070 FIRST APPROVED DATE: 3-20-74
LVWMD APPROVED FIRE FLOW 1500 GPM AT 20 PSI RESIDUAL
MAXIMUM AVAILABLE FIRE SPRINKLER FLOW 30 GPM

Call before you Dig
AVOID CUTTING UNDERGROUND
UTILITY LINES. IT'S COSTLY.

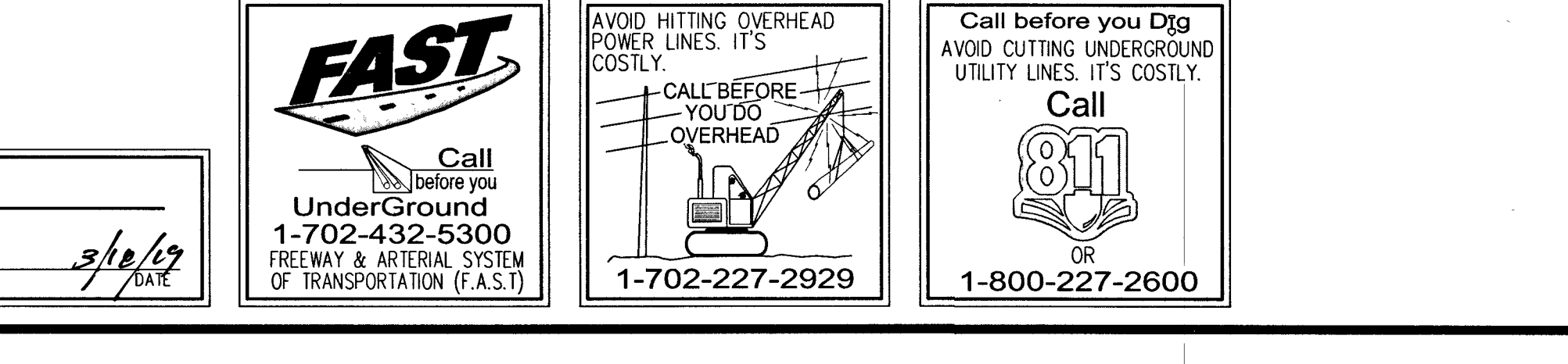
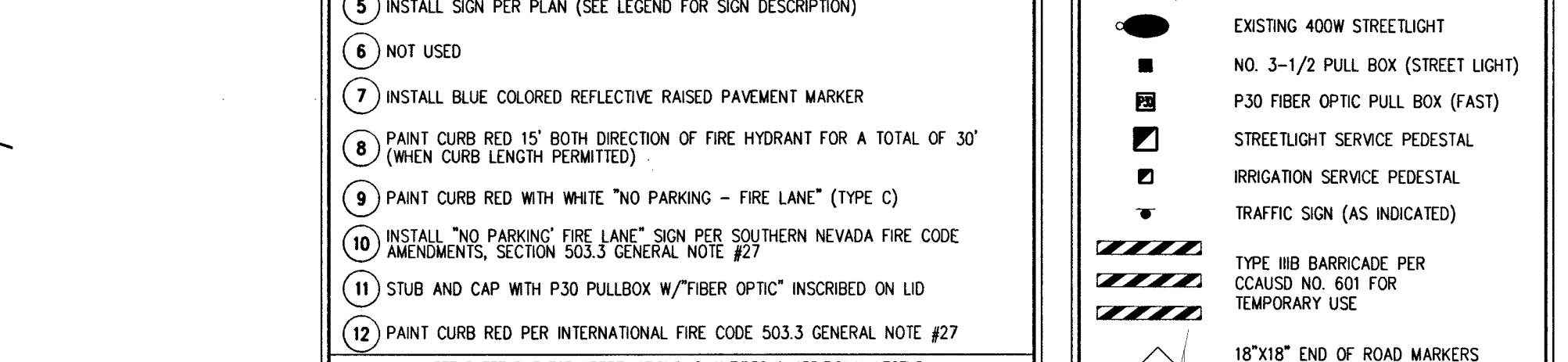
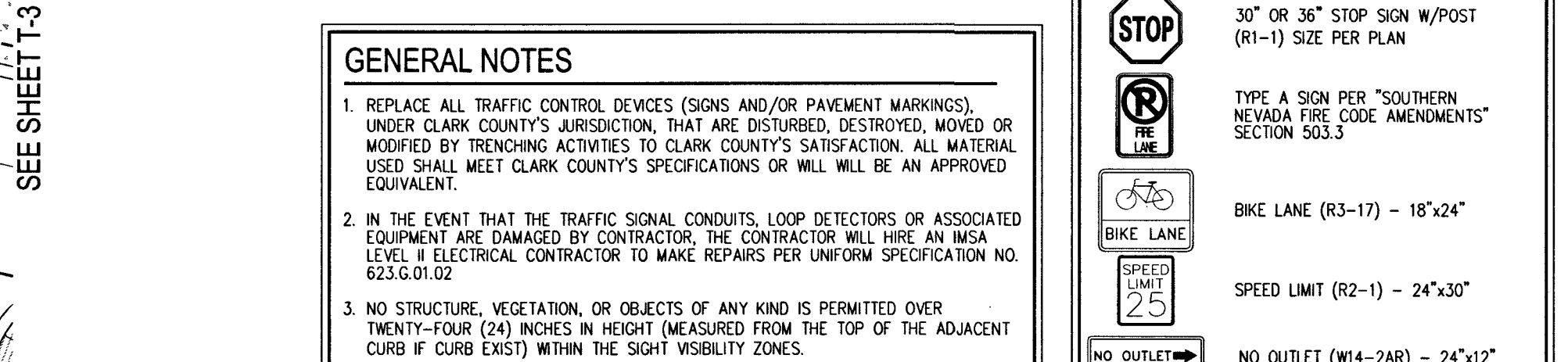
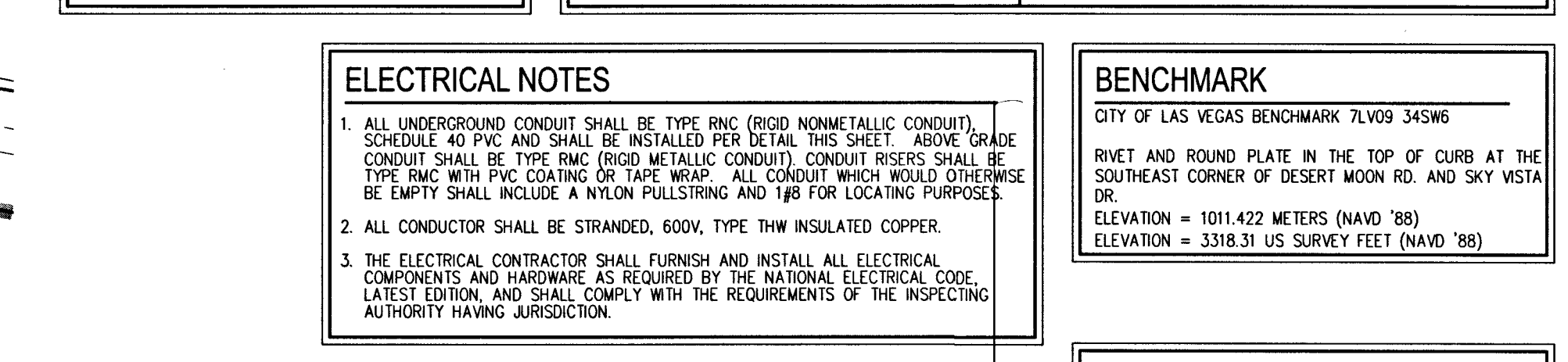
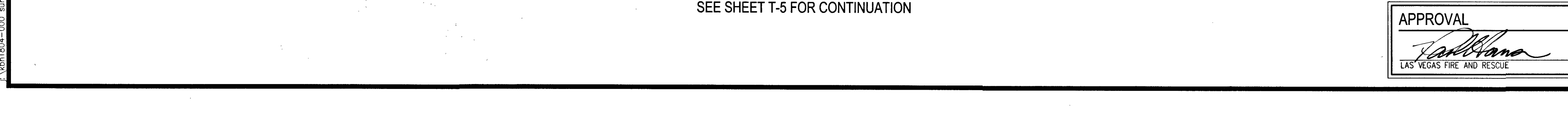
Call

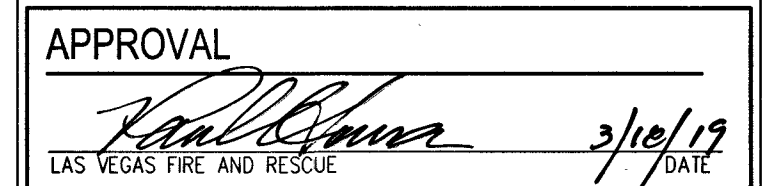
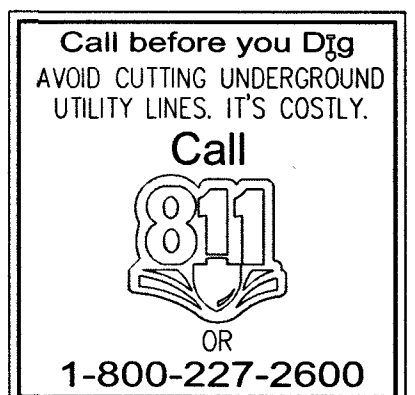
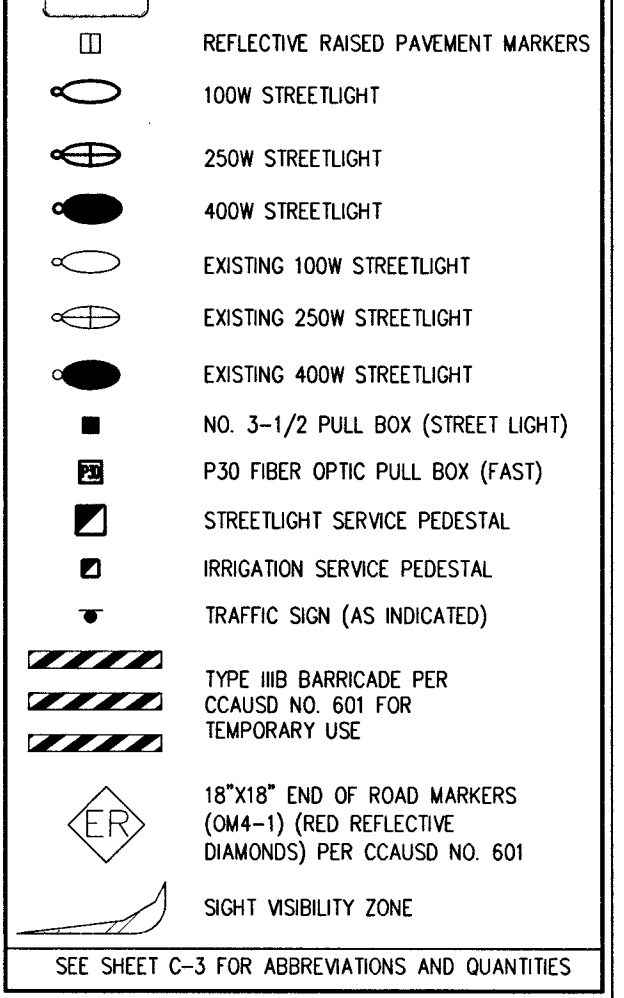
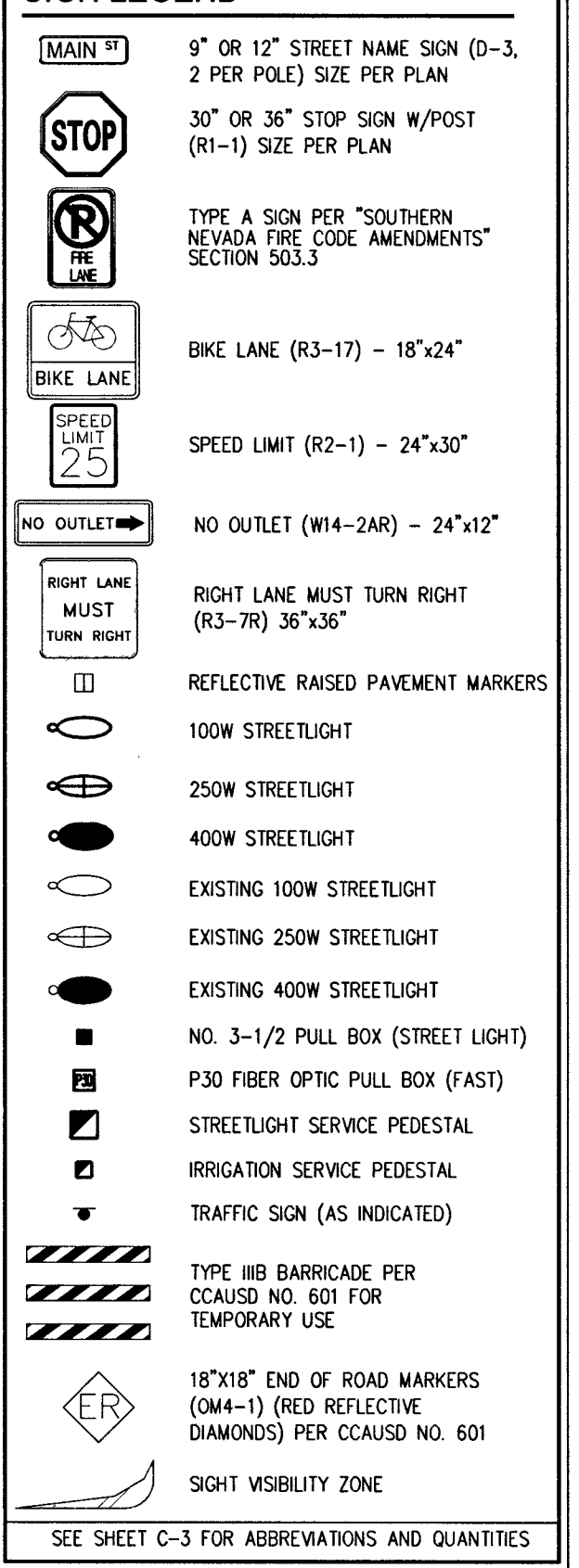
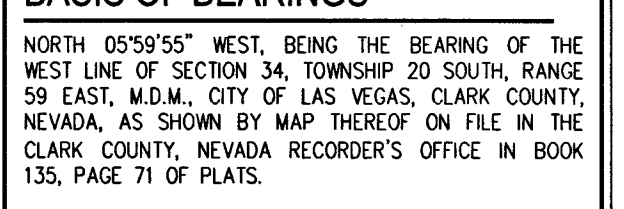
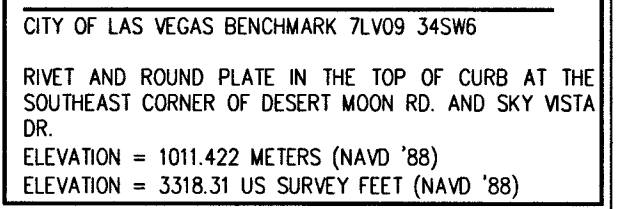
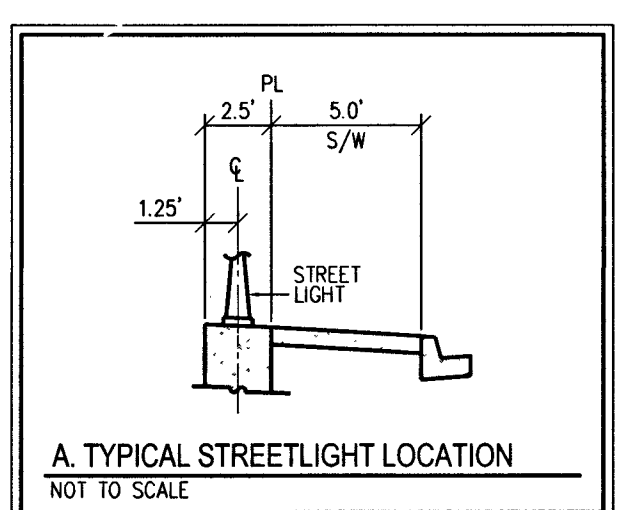
811

OR

1-800-227-2600

PRUJ#:136070A QS:137-33-NE





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