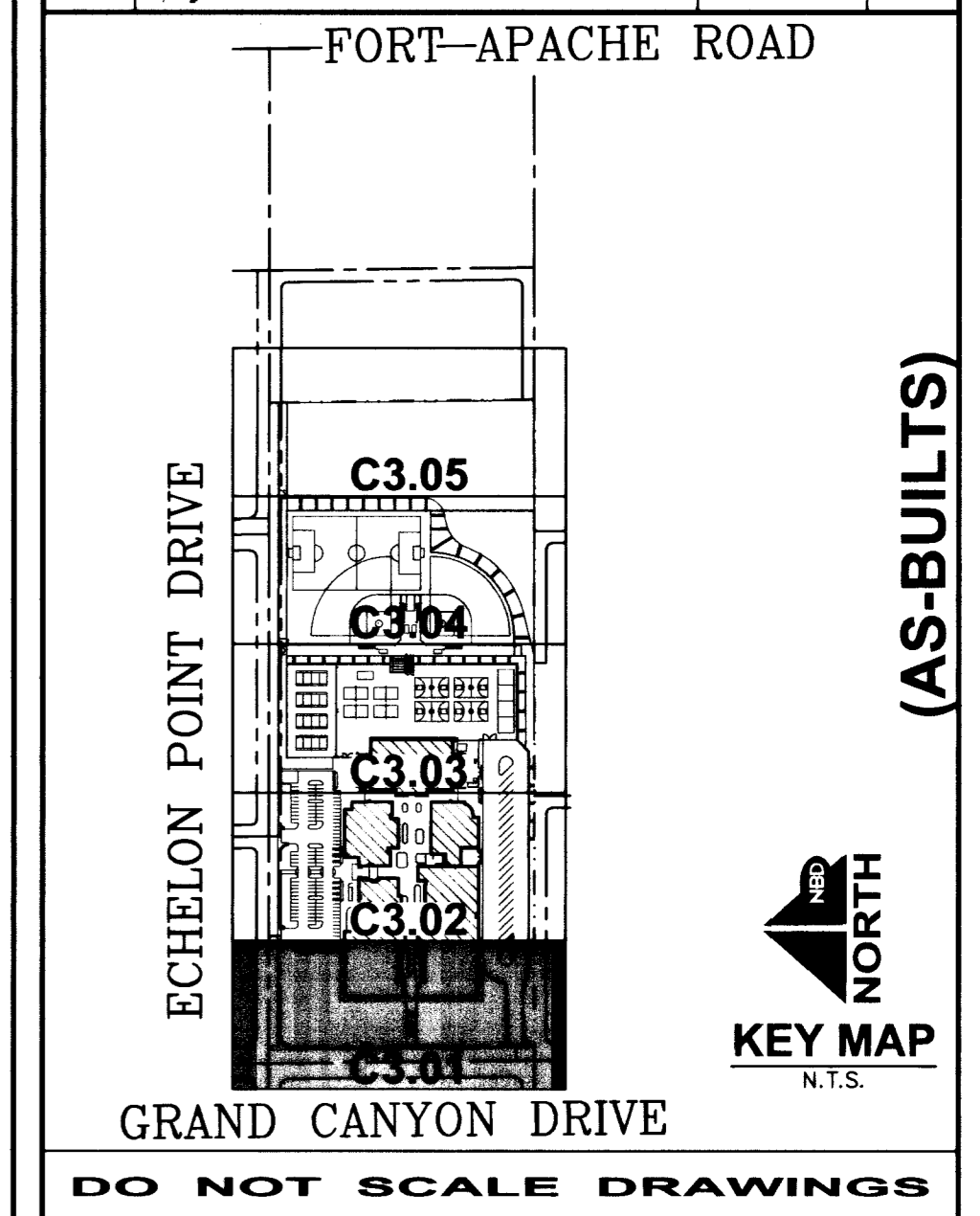


**FIRE FLOW CALCULATIONS:**  
 Fire Flow Requirement is 2,625 gallons per minute at 20 psi residual pressure.  
 Based on:  
 Square Footage: 63,024 square feet  
 3 largest successive floors: N/A  
 Building height: 41'-10"  
 Number of Stories: ONE (1) floor(s)  
 Type of Construction: II-B  
 Occupancy: E  
 Full Automatic Fire Sprinkler System:  Yes  No  
 Reviewed By: \_\_\_\_\_ Date: \_\_\_\_\_  
 Las Vegas Fire Dept.

**CAUTION: HIGH PRESSURE GAS LINE**  
 CALL SOUTHWEST GAS AT 300-2296 FOR STANDBY 24 HOURS PRIOR TO CONSTRUCTION WHEN EXCAVATING OVER OR NEAR HIGH PRESSURE GAS LINES.

*\*Tad Inc  
 Dwayne 4-2-08*

REV.	DESCRIPTION	DATE	BY



DO NOT SCALE DRAWINGS

PROJECT NO.	1512
DATE	01/18/06
DRAWN BY	JSG
CHECKED BY	MK
DATE	07/19/06
PROJECT NO.	07199

**UTILITY GENERAL NOTES:**

- CONTRACTOR TO LOCATE AND VERIFY SIZE, LINE TYPE, CONDITION, DEPTH, PRESSURE, AND LOCATION OF ALL EXISTING UTILITIES WITHIN THE CONSTRUCTION AREA PRIOR TO CONSTRUCTION. THE CIVIL ENGINEER SHALL BE CONTACTED ONCE THE UTILITY LINE IS LOCATED.
- THESE DRAWINGS MAY NOT INDICATE ALL EXISTING BURIED UTILITY LINES. CONTRACTOR IS TO EXERCISE EXTREME CAUTION DURING EXCAVATION IN ORDER TO AVOID MAKING CONTACT WITH ANY EXISTING UTILITY LINES. IF UTILITY LINES ARE DAMAGED BY THE CONTRACTOR, SUCH DAMAGE SHALL BE REPLACED TO THE SATISFACTION OF THE OWNER AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR TO SAWCUT AND REMOVE EXISTING ASPHALT AND CONCRETE AS NECESSARY FOR UTILITY TRENCHES, BACKFILL AND PATCH ALL TRENCHES AS INDICATED ON DETAILS AND/OR ACCORDING TO THE GOVERNING ENTITY.
- THE FIRE SAFETY CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING THE SIZE OF PIPING THAT IS REQUIRED TO CONNECT FROM THE FIRE WATER LOOP TO THE FIRE SPRINKLER RISER. LINE SIZE SHOWN FOR INFORMATION PURPOSES ONLY.
- CONTRACTOR TO VERIFY UTILITY STUB LOCATIONS AND SIZE WITH PLUMBING PLANS PRIOR TO INSTALLATION OF NEW UTILITIES.
- ALL DIMENSIONS TO UTILITIES ARE TO CENTERLINE OF PIPE UNLESS INDICATED OTHERWISE.
- THE EXISTING GAS LINE LOCATIONS SHOWN ON THESE PLANS ARE APPROXIMATIONS ONLY.
- ALL WATER FACILITIES CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE "UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR WATER DISTRIBUTION SYSTEMS" (U.D.A.C.S.), LATEST EDITION.
- FDC SHALL BE INTERCONNECTED TO BUILDING SPRINKLER SYSTEMS.
- FIRE CODE REQUIREMENTS: TWO SOURCES OF WATER SUPPLY ARE REQUIRED WHENEVER THERE ARE MORE THAN THREE (3) FIRE HYDRANTS INSTALLED ON A SINGLE SYSTEM.
- NEVADA BY DESIGN (NBD) HAS PROVIDED UTILITY INFORMATION BASED ON THE MOST CURRENT DATA AVAILABLE TO THE CONTRACTORS INFORMATION. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF UNDERGROUND UTILITIES SHOWN OR NOT SHOWN ON THESE PLANS WITH RESPECT TO LINE AND GRADE PRIOR TO CONSTRUCTION.
- ALL ONSITE UTILITY FACILITIES ARE PRIVATE AND ALL OFFSITE UTILITY FACILITIES ARE PUBLIC.

**WATER NOTES:**  
 (NOT ALL KEY NOTES ARE USED ON THIS DRAWING)

- INSTALL 6" FIRE HYDRANT ASSEMBLY PER U.D.A.C.S. PLATE No. 7. PROVIDE A MINIMUM OF 3' CLEARANCE AROUND FIRE HYDRANT.
- INSTALL 6", 90 DEGREE BEND PER U.D.A.C.S. PLATE No. 5.
- INSTALL 8" DOUBLE CHECK DETECTOR ASSEMBLY ABOVE FINISH GRADE, ON A 4"x8" (OFFSET 5.1") CONCRETE PAD PER U.D.A.C.S. PLATE No. 11C.
- INSTALL 2" WATER METER PER U.D.A.C.S. PLATE No. 10.
- INSTALL 2" RPPA PER U.D.A.C.S. PLATE No. 11A.
- INSTALL 8"x2" REDUCER PER U.D.A.C.S. PLATE No. 3.
- INSTALL 4"x2" REDUCER PER U.D.A.C.S. PLATE No. 3.
- INSTALL 8"x8" MECHANICAL JOINT TAPPING SLEEVE AND 8" TAPPING VALVE PER U.D.A.C.S. PLATE No. 22.
- INSTALL 8"x6" TAPPING SLEEVE AND 6" TAPPING VALVE PER U.D.A.C.S. PLATE No. 22.
- INSTALL A GATE VALVE (WITH PIPE SIZE AS NOTED) PER U.D.A.C.S. PLATE No. 3 AND No. 8.
- INSTALL 10"x8" TEE PER U.D.A.C.S. PLATE No. 5.
- INSTALL 10"x6" TEE PER U.D.A.C.S. PLATE No. 5.
- INSTALL 10", 90 DEGREE BEND PER U.D.A.C.S. PLATE No. 5.
- INSTALL 4", 90 DEGREE BEND PER U.D.A.C.S. PLATE No. 5.
- INSTALL 10", 45 DEGREE BEND PER U.D.A.C.S. PLATE No. 5.
- INSTALL 4", 45 DEGREE BEND PER U.D.A.C.S. PLATE No. 5.
- REFER TO LANDSCAPE PLANS FOR CONTINUATION.
- REFER TO MECHANICAL AND PLUMBING PLANS FOR CONTINUATION.
- REFER TO MECHANICAL/PLUMBING AND FIRE SPRINKLER CONTRACTOR PLANS FOR ADDITIONAL INFORMATION.
- INSTALL 10"x8" REDUCER PER U.D.A.C.S. PLATE No. 3.
- INSTALL 10"x10" TEE PER U.D.A.C.S. PLATE No. 5.
- INSTALL 6", 45 DEGREE BEND PER U.D.A.C.S. PLATE No. 5.
- REMOVE EXIST BLOW OFF AND CAP.
- INSTALL 8"x6" TEE PER U.D.A.C.S. PLATE No. 5.

**WATER NOTES: (continued)**

- INSTALL 8"x3" REDUCER PER U.D.A.C.S. PLATE No. 3.
- INSTALL 12"x8" TEE PER U.D.A.C.S. PLATE No. 5.
- INSTALL 4"x4" TEE PER U.D.A.C.S. PLATE No. 5.
- INSTALL 3" TURBO METER PER U.D.A.C.S. PLATE No. 18-A AND DWG. C-475.
- INSTALL 3" RPPA PER U.D.A.C.S. PLATE No. 11C.
- INSTALL 4"x3" REDUCER PER U.D.A.C.S. PLATE No. 3.
- INSTALL 2" SERVICE SADDLE
- INSTALL 2", 90 DEGREE BRASS BEND.

**SANITARY SEWER NOTES:**  
 (NOT ALL KEY NOTES ARE USED ON THIS DRAWING)

- CONSTRUCT 48" DIA. STANDARD ECCENTRIC MANHOLE PER D.C.S.W.C.S. DWG. No. SD-1. INSTALL CONCRETE COLLAR PER SD-2.
- INSTALL CLEANOUT PER PLAN, W/NEENAH H-20 TRAFFIC LOAD RATED COVERS OR APPROVED EQUAL.
- SEE PLUMBING PLANS FOR BUILDING SANITARY SEWER STUB SIZES. WHERE BUILDING STUBS IS 3" OR 4", PROVIDE 6"x3" REDUCER FOR 3" AND 6"x4" REDUCER FOR 4".
- CONSTRUCT LATERAL CONNECTION PER D.C.S.W.C.S. #SD-17 @ 1% MIN. SLOPE (OVER OBSTRUCTION).
- CONSTRUCT LATERAL CONNECTION PER D.C.S.W.C.S. #SD-17 @ 1% MIN. SLOPE (UNDER OBSTRUCTION).

**L.V.V.W.D. APPROVAL**

L.V.V.W.D. PROJ# 111984 \_\_\_\_\_ DATE \_\_\_\_\_

UTILITY GENERAL NOTE:  
 1. ALL ABOVE GROUND UTILITY APPURTENANCES WILL BE IN CONFORMANCE WITH TITLE 19.12.040.

**STORM DRAIN NOTES:**  
 (NOT ALL KEY NOTES ARE USED ON THIS DRAWING)

- INSTALL 72" STANDARD ECCENTRIC MANHOLE PER C.C.A.U.S.D. No. 403 WITH MANHOLE COVER AND RING PER C.C.A.U.S.D. No. 409.
- INSTALL 48" STANDARD ECCENTRIC MANHOLE PER C.C.A.U.S.D. No. 403 WITH MANHOLE COVER AND RING PER C.C.A.U.S.D. No. 409.
- INSTALL JENSEN PRECAST 36" x 36" DROP INLET (MODEL No. 4848-HD) WITH STANDARD TRAFFIC GRATE PER DETAIL 23-C9.03 AND CONCRETE COLLAR PER DETAIL 28, SHEET C9.03.
- INSTALL 12" ADS INLINE DRAIN INLET WITH 12" PEDESTRIAN H-10 RATED HINGED LOOKING GRATE PER DETAIL 21-C9.03.
- INSTALL CLEANOUT PER PLAN WITH NEENAH H-20 TRAFFIC LOAD RATED COVERS OR APPROVED EQUAL.
- INSTALL 48" STANDARD ECCENTRIC MANHOLE PER C.C.A.U.S.D. No. 403 WITH NEENAH MODEL R-2558-A FRAME AND GRATE.
- INSTALL A PRECAST TRENCH CHANNEL UNIT EQUIPPED W/6" PVC PIPE VERTICAL OUTLET FOR CONNECTION W/STORM DRAIN PIPING PER DETAIL 22-C9.03. THE CHANNEL UNIT SHALL BE ACO DRAIN K100S CHANNEL W/TYPE 478 GRATE BY ACO PLYMER PRODUCTS OR APPROVED EQUAL.
- CONNECT STORM DRAIN LATERAL TO BUILDING ROOF DRAIN. REFER TO MECHANICAL AND PLUMBING PLANS FOR CONTINUATION. WHERE BUILDING STUBS ARE 3", 4", AND 5" PROVIDE 6"x3" REDUCER FOR 3", 6"x4" REDUCER FOR 4", AND 6"x5" REDUCER FOR 5".
- INSTALL 60" STANDARD ECCENTRIC MANHOLE PER C.C.A.U.S.D. No. 403 WITH MANHOLE COVER AND RING PER C.C.A.U.S.D. No. 409.
- CONSTRUCT STORM DRAIN PIPE CONNECTION WITH CONCRETE CHANNEL WALL PER DETAIL "2" ON SHEET C9.06.
- INSTALL JENSEN PRECAST 48" x 48" DROP INLET (MODEL No. 4848 HD) WITH STANDARD TRAFFIC GRATE PER DETAIL 28-C9.03 AND CONCRETE COLLAR PER DETAIL 28, SHEET C9.03.
- INSTALL 12.5" TYPE "CM" D.I. W/ 5 GRATES PER DETAIL 29-C9.03.
- INSTALL 5" TYPE "CM" D.I. W/ 2 GRATES PER DETAIL 29-C9.03.
- INSTALL 72" STANDARD ECCENTRIC MANHOLE PER C.C.A.U.S.D. No. 403 WITH NEENAH MODEL R-2395-1 GRATE AND FRAME.
- INSTALL 60" STANDARD ECCENTRIC MANHOLE PER C.C.A.U.S.D. No. 406 WITH MANHOLE COVER AND RING PER C.C.A.U.S.D. No. 409.

**INSTALLATION OF METER AND VAULT (1-3" TURBO WITH BYPASS):**  
 THE METER(S) AND VAULET(S) WITH NON-TRAFFIC BEARING COVER(S) SHALL BE INSTALLED ACCORDANCE WITH U.D.A.C.S. PLATE No. 18-A AND WITH STANDARD VAULT DRAWING C-475, LATEST REVISION.  
 ANY BLOCK WALL OR OTHER FENCE MATERIAL SHALL BE DESIGNED AND CONSTRUCTED AND 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.

**INSTALLATION OF REDUCED PRESSURE PRINCIPLE ASSEMBLY (2-2" PLATE 11A):**  
 APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED PER THE U.D.A.C.S. PLATE No. 11A. NO WATER SHALL BE TAKEN FROM A SERVICE REQUIRING BACK FLOW 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.

**BENCHMARK:**  
 CITY OF LAS VEGAS BENCHMARK #BLV90-19C4  
 CITY OF LAS VEGAS PIN AND ROUND ALUMINUM PLATE IN CONCRETE PAD, ±200' NORTHWEST OF DEER SPRINGS AND GRAND CANYON DR.  
 ELEVATION = 832.7831 METERS, 2732.22 FEET (NAVD 88)

**BASIS OF BEARINGS:**  
 SOUTH 89°38'06" EAST BEING THE SOUTH LINE OF THE NORTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 19, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., AS SHOWN PER RECORD OF SURVEY FILE 89, PAGE 3.

**Call before you Dig**

Call before you Dig  
 1-702-455-7511  
 CLARK COUNTY TRAFFIC OPERATIONS  
 1-702-229-6611  
 LAS VEGAS AREA COMPUTERIZED TRAFFIC SYSTEM

Call before you Dig  
 1-702-593-6111

Call before you Dig  
 1-800-227-2600

CL OR SURVEY LINE	EASEMENT LINE	HEAVY AC PV.	MANHOLES & DESCRIPTIONS	CAP	DESCRIPTION	BO VALVE	CLEAN OUT	FDC	FIRE HYDRANT	GATE VALVE	REDUCER	100W HPS STREETLIGHT	150W HPS STREETLIGHT	200W HPS STREETLIGHT	250W HPS STREETLIGHT	400W HPS STREETLIGHT	5' CONTOUR LINE	1' CONTOUR LINE	EDGE OF PWMT.	"A" TYPE CURBS	"L" TYPE CURBS	WALLS	FENCES	SPOT ELEVATIONS	SIGNS
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**Nevada By Design**  
 NBD ARCHITECTS L.L.C.  
 2480 e. Tompkins Avenue, Suite 222, Las Vegas, Nevada 89121  
 ph: 702.455.1150 fax: 702.455.1999 e-mail: webdesign@nbdarch.com

**CLARK COUNTY SCHOOL DISTRICT**  
 CONSTRUCTION MANAGEMENT  
 4828 PEARL STREET  
 LAS VEGAS, NEVADA 89121

**GRAND CANYON / ROME MIDDLE SCHOOL**  
 SOUTHEAST CORNER OF GRAND CANYON DRIVE AND ECHELON POINT DRIVE

**UTILITY PLAN**

**C3.01**  
 SHEET 10 of 51  
 715-163  
 HTE #06-19436