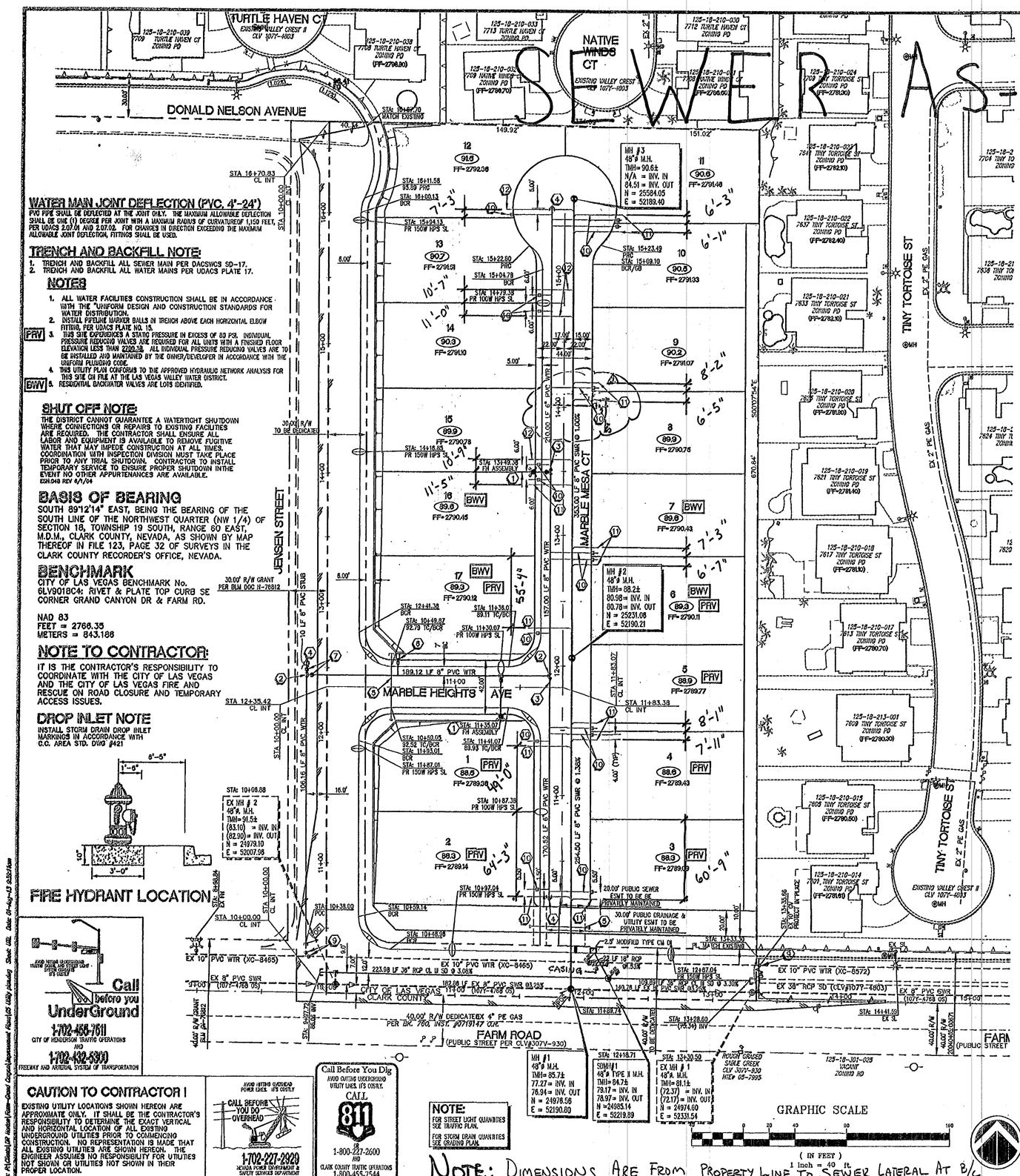
SEWER AS-BUILT



NOTE: DIMENSIONS ARE FROM PROPERTY LINE TO SEWER LATERAL AT B/C

WATER MAIN JOINT DEFLECTION (PVC, 4"-24")

PVC PIPE SHALL BE DEFLECTED AT THE JOINT ONLY. THE MAXIMUM ALLOWABLE DEFLECTION SHALL BE ONE (1) DEGREE PER JOINT WITH A MAXIMUM RADIUS OF CURVATUREOF 1,150 FEET, PER UDACS 2.07.01 AND 2.07.02. FOR CHANGES IN DIRECTION EXCEEDING THE MAXIMUM ALLOWABLE JOINT DEFLECTION, FITTINGS SHALL BE USED.

TRENCH AND BACKFILL NOTE:

1. TRENCH AND BACKFILL ALL SEWER MAIN PER DACSWCS SD-17.
2. TRENCH AND BACKFILL ALL WATER MAINS PER UDACS PLATE 17.

NOTES

1. ALL WATER FACILITIES CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE "UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR WATER DISTRIBUTION.
2. INSTALL PITCLINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING, PER UDACS PLATE NO. 15.
3. PRV THIS SITE EXPERIENCES A STATIC PRESSURE IN EXCESS OF 80 PSI. INDIVIDUAL PRESSURE REDUCING VALVES ARE REQUIRED FOR ALL UNITS WITH A FINISHED FLOOR ELEVATION LESS THAN 2200.38. ALL INDIVIDUAL PRESSURE REDUCING VALVES ARE TO BE INSTALLED AND MAINTAINED BY THE OWNER/DEVELOPER IN ACCORDANCE WITH THE UNIFORM PLUMBING CODE.
4. THIS UTILITY PLAN CONFORMS TO THE APPROVED HYDRAULIC NETWORK ANALYSIS FOR THIS SITE ON FILE AT THE LAS VEGAS VALLEY WATER DISTRICT.
5. BWV RESIDENTIAL BACKFLOW VALVES ARE LOTS IDENTIFIED.

SHUT OFF NOTE:

THE DISTRICT CANNOT GUARANTEE A WATERTIGHT SHUTDOWN WHERE CONNECTIONS OR REPAIRS TO EXISTING FACILITIES ARE REQUIRED. THE CONTRACTOR SHALL ENSURE ALL LABOR AND EQUIPMENT IS AVAILABLE TO REMOVE FUGITIVE WATER THAT MAY IMPEDE CONSTRUCTION AT ALL TIMES. COORDINATION WITH INSPECTION DIVISION MUST TAKE PLACE PRIOR TO ANY TRIAL SHUTDOWN. CONTRACTOR TO INSTALL TEMPORARY SERVICE TO ENSURE PROPER SHUTDOWN IN THE EVENT NO OTHER APPURTENANCES ARE AVAILABLE.
ESN.048 REV 6/1/04

BASIS OF BEARING

SOUTH 89°12'14" EAST, BEING THE BEARING OF THE SOUTH LINE OF THE NORTHWEST QUARTER (NW 1/4) OF SECTION 18, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN FILE 123, PAGE 32 OF SURVEYS IN THE CLARK COUNTY RECORDER'S OFFICE, NEVADA.

BENCHMARK

CITY OF LAS VEGAS BENCHMARK No. 6LV9018C4: RIVET & PLATE TOP CURB SE CORNER GRAND CANYON DR & FARM RD.

NAD 83
FEET = 2766.35
METERS = 843.186

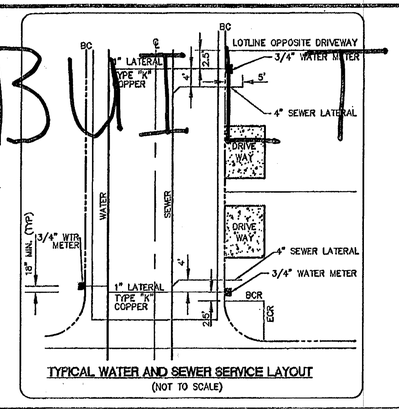
NOTE TO CONTRACTOR:

IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH THE CITY OF LAS VEGAS AND THE CITY OF LAS VEGAS FIRE AND RESCUE ON ROAD CLOSURE AND TEMPORARY ACCESS ISSUES.

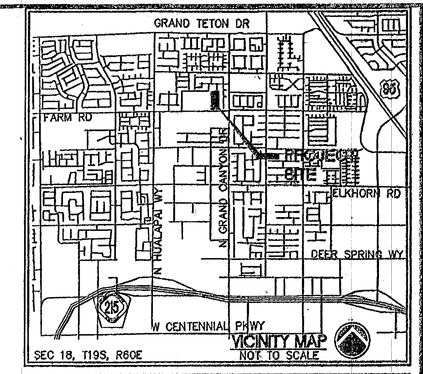
DROP INLET NOTE

INSTALL STORM DRAIN DROP INLET MARKINGS IN ACCORDANCE WITH C.C. AREA STD. DWG #421

FIRE HYDRANT LOCATION



TYPICAL WATER AND SEWER SERVICE LAYOUT
(NOT TO SCALE)



VICINITY MAP
NOT TO SCALE
SEC 18, T19S, R60E

WATER QUANTITIES

		PUBLIC	PRIVATE
1	INSTALL FIRE HYD W/ASSEMBLY PER UDACS PLATE #40	2 EA	– EA
2	INSTALL 8" TEE PER UDACS PLATE #31	2 EA	– EA
3	INSTALL 8" X 6" REDUCER PER UDACS PLATE #30	2 EA	– EA
4	INSTALL CAP & 2" BLOW OFF ASSEMBLY PER UDACS PLATE #38	3 EA	– EA
5	INSTALL 2-4" LANDSCAPE SLEEVES	– LF	200 LF
6	INSTALL 1" LANDSCAPE METER & 1" RPPA PER UDACS PLATE #4 & 8	1 EA	– EA
7	INSTALL 8" GATE VALVE PER UDACS PLATE #30 & 39 ONLY IF REQUIRED PER CLV&LVVWD AR&A	2 EA	– EA
8	INSTALL 3/4" METER PER UDACS PLATE #2	17 EA	– EA
9	ADJUST WATER VALVE BOX TO FINISHED GRADE PER UDACS PLATE #39 VALVES SHALL BE ACCESSIBLE AT ALL TIMES		
	8" PVC WATER MAIN	295 LF	– LF
	6" PVC WATER MAIN	371 LF	– LF
10	1" COPPER (TYPE K) WATER LATERAL	521 LF	– LF

SEWER QUANTITIES

		PUBLIC	PRIVATE
	60" MANHOLE	– EA	– EA
	48" MANHOLE	3 EA	– EA
	8" PVC SEWER MAIN	608 LF	– LF
11	4" SEWER LATERAL	– LF	521 LF
12	4" C900 PVC SWR LATERAL PER UDACS SECTION 2.22.03B.2.	– LF	284 LF

ALL QUANTITIES ARE AN ESTIMATE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR QUANTITIES FOR BIDDING PURPOSES

LEGEND

SYMBOLS EXISTING	SYMBOLS PROPOSED	DESCRIPTION
		RIGHT-OF-WAY
		CENTERLINE
		PROPERTY LINE
		EASEMENT
		SIDEWALK RAMP
		FIRE HYDRANT
		STREET LIGHT
CTV	CTV	CABLE TV BOX
TEL	TEL	TELEPHONE BOX
		STORM DRAIN MH
		SEWER MANHOLE
		GATE VALVE
8" WTR	8" WTR	WATER LINE
8" SWR	8" SWR	SEWER LINE
24" RCP SD	24" RCP SD	STORM DRAIN LINE
4" GAS	4" GAS	GAS LINE
		3/4" WATER METER

FIRE FLOW INFORMATION BLOCK

USE/OCCUPANCY R-3 SINGLE FAMILY HOMES
TYPE OF CONSTRUCTION (IBC) V-B
FIRE FLOW 1750 GPM @ 20 PSI.
AUTOMATIC FIRE SPRINKLERS NO
NFPA 13 13R 13D
ESFR NO
SQUARE FOOTAGE 4,400
LARGEST AREA BETWEEN 4 HOURS WALLS N/A
BUILDING HEIGHT 2 STORY - 35'
OF STORIES INCLUDING BASEMENT 2
HIGH PILED COMBUSTIBLE STORAGE NO
OF HYDRANTS INSTALLED 1

WASTEWATER FLOW CALCULATION

SINGLE FAMILY HOMES = 17 UNITS
WASTEWATER FLOW = 1.0 ERU PER UNIT
1 ERU = 250 GPD
PEAK FACTOR = 3.5
WET WEATHER FACTOR = 1.25

AVERAGE FLOW = 17 x 1.00 x 250 = 4,250 GPD
PEAK FLOW = (3.5 + 1.25) x 4,250 = 18,594 GPD = 0.2 MGD

REDUCED PRESSURE PRINCIPLE ASSEMBLY (1) 1"

APPROVED REDUCED PRESSURE PRINCIPLE ASSEMBLY(S) SHALL BE INSTALLED PER THE UDACS PLATE 8. NO WATER SHALL BE TAKEN FROM A SERVICE REQUIRING BACKFLOW PREVENTION UNTIL THE REDUCED PRESSURE PRINCIPLE ASSEMBLY HAS BEEN SUCCESSFULLY TESTED BY THE LVVWD. 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. EASEMENT SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION.

NOTE

ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARD FOR PORTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSING AND CLEARANCE.

Completed By:
KNL Construction, LLC
04/29/14
Robert M Walker
Robert M Walker

Scott Neimer 8/29/13
CITY OF LAS VEGAS FIRE AND RESCUE DATE

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER

DATE 9/03/13 PROJECT NUMBER 121594
LVVWD APPROVED FIRE FLOW 1,750 AT 20 PSI RESIDUAL

DEVELOPER
D·R·HORTON DHI NYSE
America's Builder
330 CAROUSEL PARKWAY
HENDERSON, NV 89014
CLV# 107Y4987
H# 48854
HTE# 13-12503

CAUTION TO CONTRACTOR!

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 OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

AVOID CUTTING OUTDOOR POWER LINES. IT'S COSTLY
CALL BEFORE YOU DO OVERHEAD
1-702-227-2929
NEVADA POWER ENVIRONMENT & SAFETY SERVICE DEPARTMENT

Call Before You Dig
AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.
CALL 811
1-800-227-2600
AND
CLARK COUNTY TRAFFIC OPERATIONS
1-800-455-7544

Call before you UnderGround
1-702-455-7611
CITY OF HENDERSON TRAFFIC OPERATIONS
AND
1-702-432-5300
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

NOTE:
FOR STREET LIGHT QUANTITIES SEE TRAFFIC PLAN.
FOR STORM DRAIN QUANTITIES SEE GRADING PLAN.

REV	REVISION DESCRIPTION	APP DATE
A	MOVE WTR LAT FOR LOT 8, 20' SWR	12/2/13

SHEETS 5 | APP BY

TITLE: UTILITY PLAN SEWER AS-BUILT

PROJECT: MARBLE CANYON ESTATES CITY OF LAS VEGAS, NEVADA

REGISTERED PROFESSIONAL ENGINEER STATE OF NEVADA PETER J. LAAS Exp:12/31/13 CIVIL No. 14444 7/31/13

Impulse Civil Engineering & Planning
CIVIL ENGINEERS • PLANNERS 520 CARMI AL NIDE, SUITE 254 PHOENIX, AZ 85021 (602) 870-8001 FAX: (602) 535-9012

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W.O. # 20120560
BY: REN
DATE: 1/10/13
SCALE: 1"=40'

SHEET 5 OF 11