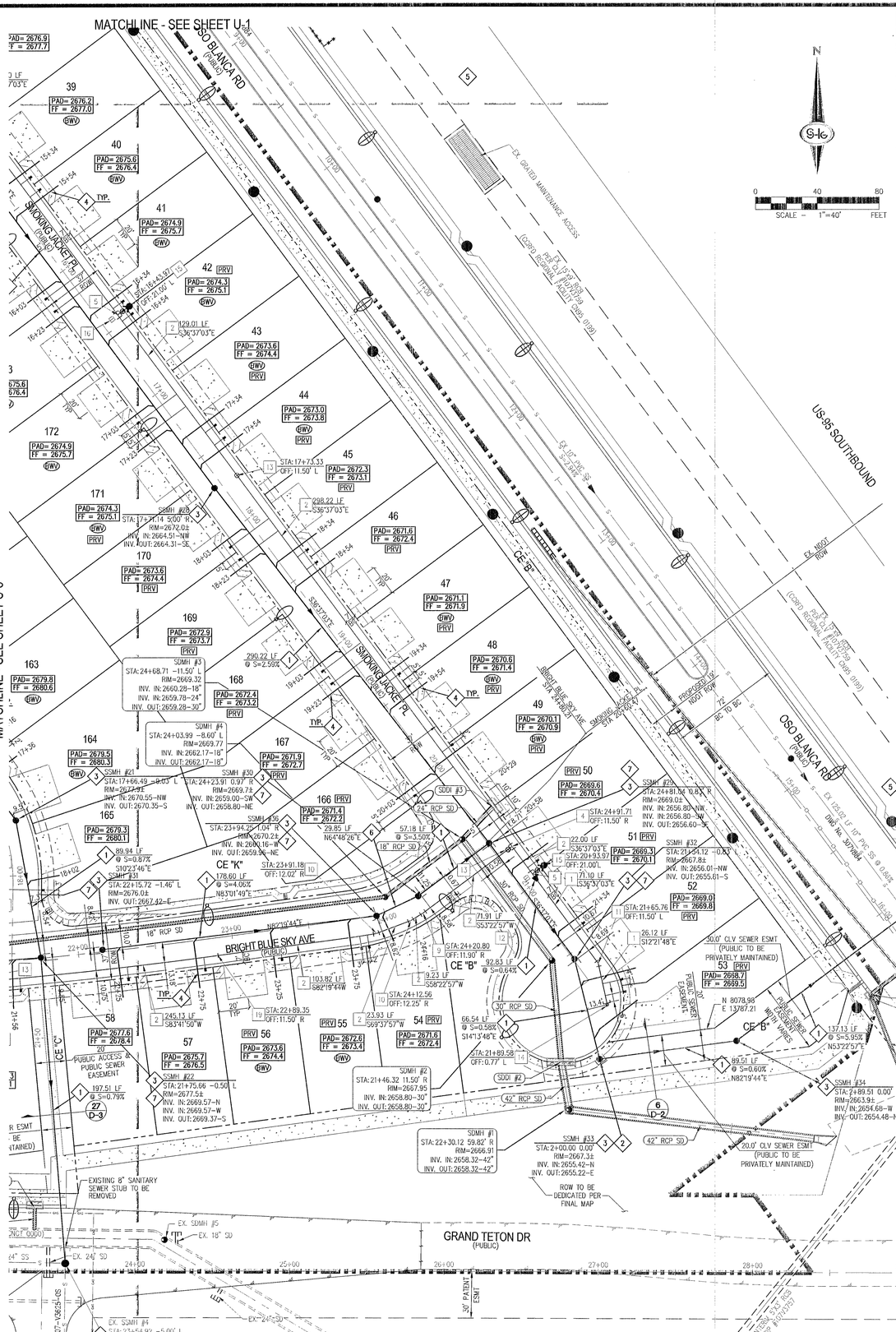
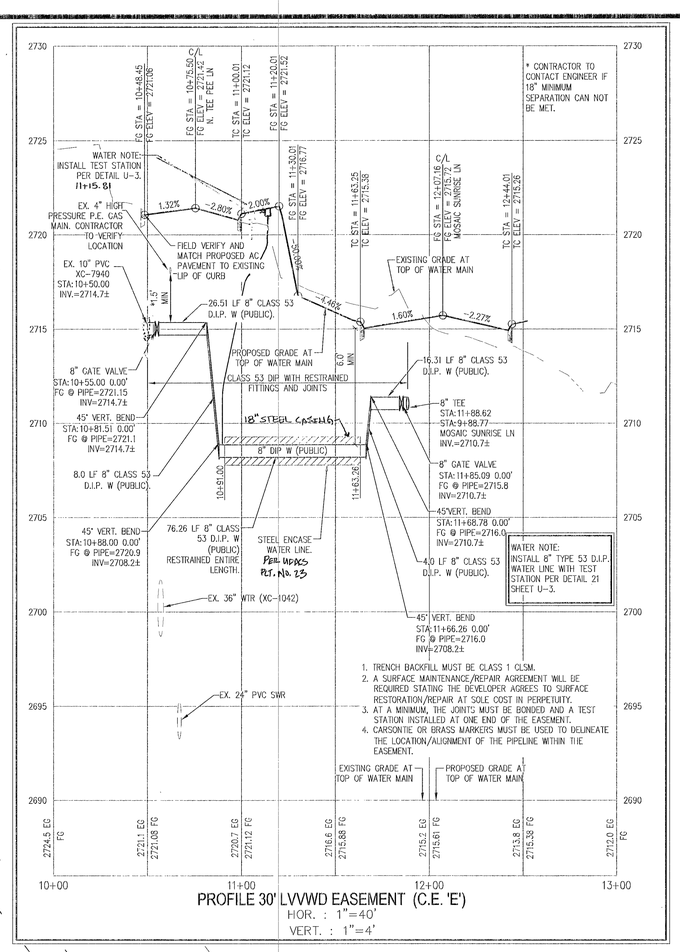


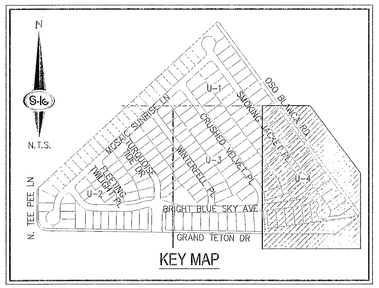


1. TRENCH BACKFILL MUST BE CLASS 1 CLSM.
2. A SURFACE MAINTENANCE/REPAIR AGREEMENT WILL BE REQUIRED STATING THE DEVELOPER AGREES TO SURFACE RESTORATION/REPAIR AT SOLE COST IN PERPETUITY.
3. AT A MINIMUM, THE JOINTS MUST BE BONDED AND A TEST STATION INSTALLED AT ONE END OF THE EASEMENT.
4. CARSONITE OR BRASS MARKERS MUST BE USED TO DELINEATE THE LOCATION/ALIGNMENT OF THE PIPELINE WITHIN THE EASEMENT.

PROFILE 30' LVVWD EASEMENT (C.E. 'E')
HOR. : 1"=40'
VERT. : 1"=4'

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

INSTALL PIPELINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING PER UDACS PLATE NO. 15



KEY MAP

GENERAL NOTES

1. REPLACE ALL TRAFFIC CONTROL DEVICES (SIGNS AND/OR PAVEMENT MARKINGS), UNDER CLARK COUNTY'S JURISDICTION, THAT ARE DISTURBED, DESTROYED, MOVED OR MODIFIED BY TRENCHING ACTIVITIES TO CLARK COUNTY'S SATISFACTION. ALL MATERIAL USED SHALL MEET CLARK COUNTY'S SPECIFICATIONS OR WILL WILL BE AN APPROVED EQUIVALENT.
2. IN THE EVENT THAT THE TRAFFIC SIGNAL CONDUITS, LOOP DETECTORS OR ASSOCIATED EQUIPMENT ARE DAMAGED BY CONTRACTOR, THE CONTRACTOR WILL HIRE AN IMSA LEVEL II ELECTRICAL CONTRACTOR TO MAKE REPAIRS PER UNIFORM SPECIFICATION NO. 623.G.01.02
3. ALL SEWER/ STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.
4. THE CONTRACTOR IS TO VERIFY THE ACTUAL FIELD CONDITIONS OF ALL LOTS AND INSTALL SEWER CHECK VALVES WHERE REQUIRED PER THE LATEST EDITION OF THE UNIFORM PLUMBING CODE.
5. FITTINGS SHALL NOT FALL UNDER CURBS, GUTTERS OR SIDEWALK.

WATER NOTES

1	6" PVC WATER PIPE (2860 WPZ)
2	8" PVC WATER PIPE (2860 WPZ)
3	8" DIP WATER PIPE (CLASS 53)
4	8" X 8" TEE PER UDACS PLATE NO. 31
5	8" X 6" TEE PER UDACS PLATE NO. 31
6	10" X 8" TAPPING SLEEVE WITH 8" TAPPING VALVE PER UDACS PLATE NO. 34, 39, & UDACS SECTION 2.24.01A
7	12" X 8" TAPPING SLEEVE WITH 8" TAPPING VALVE PER UDACS PLATE NO. 34, 39, & UDACS SECTION 2.24.01B
8	1 DEGREE MAXIMUM JOINT DEFLECTION PER UDACS SECTION 2.07.01
9	5 DEGREE BEND WITH RESTRAINED JOINTS
10	11.25 DEGREE BEND PER UDACS PLATE NO. 31
11	22.5 DEGREE BEND PER UDACS PLATE NO. 31
12	8"x6" REDUCER PER UDACS PLATE NO. 30
13	8" GATE VALVE WITH VALVE BOX PER UDACS PLATE NO. 30 & 39
14	CAP AND 2" BLOW-OFF VALVE PER UDACS PLATE NO. 36
15	FIRE HYDRANT ASSEMBLY W/6" GATE VALVE PER UDACS PLATE NO. 40
16	INSTALL BLUE REFLECTIVE RAISED PAVEMENT MARKERS
17	1" COPPER SERVICE W/ 3/4" METER PER UDACS PLATE NO. 2
18	1" COPPER SERVICE W/ 1" IRRIGATION METER AND 1" RPPA PER UDACS PLATE NO. 4 & 8 (BRASS BETWEEN METER AND RPPA)
19	POINT OF CURVATURE OF WATER MAIN USING 1° JOINT DEFLECTIONS PER UDACS SECTION 2.07.01
20	45 DEGREE BEND PER UDACS PLATE NO. 31
21	45 DEGREE VERT. BEND. SEE SHEET U-1 FOR PROFILE AND WATER LINE QUANTITIES.

SEWER NOTES

1	8" PVC SANITARY SEWER PIPE
2	INSTALL MANHOLE CONCRETE COLLAR PER DCSWCS SD-4
3	48" DIAMETER SANITARY SEWER MANHOLE WITH PRECAST BASE PER DCWCS SD-1A
4	INSTALL 4" PVC SANITARY SEWER LATERAL, PLUG AND 4"x4" POST PER DCSWCS SD-22
5	ADJUST PROPOSED MANHOLE TO EXISTING GRADE
6	8" C-900 WATER QUALITY PIPE (SANITARY SEWER)
7	48" DIAMETER SANITARY SEWER MANHOLE WITH PRECAST BASE PER DCWCS-1A INSTALLED WITH WATERTIGHT JOINTS USING LVVWD APPROVED INTERNAL ELASTOMERIC JOINT SEALANT IN COMPLIANCE WITH ASTM C920.

SEE SHEET C-2 FOR LEGEND, ABBREVIATIONS AND QUANTITIES

Call before you Dig
Avoid cutting underground utility lines. It's costly.
Call 811
or
1-800-227-2600
AND
CLARK COUNTY TRAFFIC OPERATIONS
1-702-455-6000

AVOID HITTING UNDERGROUND TRAFFIC SIGNAL SYSTEMS AND STREET LIGHT SYSTEM CONDUITS. IT'S COSTLY.
Call before you do UnderGround
1-702-455-6000
CLARK COUNTY TRAFFIC OPERATIONS
AND
1-702-432-5300
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

NDOT NOTE:

NO WORK WITHIN NDOT RIGHT-OF-WAY UNTIL AN ENCROACHMENT PERMIT HAS BEEN ISSUED.

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.

WATER MAIN JOINT DEFLECTION (DIP, 4" – 12")
DIP PIPE SHALL BE DEFLECTED AT THE JOINT ONLY. THE MAXIMUM ALLOWABLE DEFLECTION SHALL BE (2.5) DEGREE PER JOINT WITH A MINIMUM RADIUS OF CURVATURE OF 415' (18' SEC)/460' (20' SEC), PER UDACS 2.07.03.

FOR CHANGES IN DIRECTION EXCEEDING THE MAXIMUM ALLOWABLE JOINT DEFLECTION, FITTINGS SHALL BE USED.

REDUCED PRESSURE PRINCIPLE ASSEMBLY (2) 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 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. EASEMENTS SHALL BE CLEARLY MARKED OR STAKED PRIOR TO THE START OF CONSTRUCTION.

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 MINIMUM RADIUS OF CURVATURE OF 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.

APPROVED FOR CONSTRUCTION
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER
DATE 07/17/13 PROJECT NO. 121258
LVVWD APPROVED FIRE FLOW 1150 GPM AT 20 PSI RESIDUAL

NOTE

PER 19.08 & 19.12 ALL ABOVE-GROUND UTILITY BOXES SHALL BE FULLY SCREENED FROM ALL RIGHTS OF WAY.

FIRE FLOW CALCULATIONS

FIRE FLOW REQUIREMENT IS 1150 GALLONS PER MINUTE AT 20 P.S.I. RESIDUAL PRESSURE.

USE/OCCUPANCY	SINGLE FAMILY
TYPE OF CONSTRUCTION (IBC)	TYPE V-B
AUTOMATIC FIRE SPRINKLERS	NO
SQUARE FOOTAGE	2,400
LARGEST AREA BETWEEN 4 HOUR WALLS	N/A
BUILDING HEIGHT	<35
NO OF STORIES INCLUDING BASEMENT	2
HIGH PILED COMBUSTIBLE STORAGE	NO
NO OF HYDRANTS INSTALLED	12

BENCHMARK

RIVET & PLATE ON NORTHEND OF HEADWALL ON THE WEST SIDE OSO BLANCA RD. 200' SSE OF FORT APACHE & RACEL.
7LV9085WB6
NAVD 88 ELEV=814.651 METERS=2672.73 FEET

BASIS OF BEARING

NORTH 00°48'23" WEST, BEING THE BEARING OF THE WEST LINE OF THE NORTHWEST QUARTER (NW1/4) OF THE SOUTHEAST QUARTER (SE1/4) OF SECTION 7, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN BY MAP THEREOF IN BOOK 122, PAGE 37 OF PLATS IN THE CLARK COUNTY RECORDER'S OFFICE, NEVADA.

APPROVAL
LAS VEGAS FIRE AND RESCUE — DATE 7/16/13

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

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

CITY OF LAS VEGAS, NV

D·R·HORTON

GRAND TETON AND TEE PEE
UTILITY PLAN IV

S 07 & 08
T 19
R 60 E

DATE: 04/09/13
DRAFTER: DSP
DESIGNER: DSP
CHECKED: DJP
PROJECT NO.
DRH1213-000

PROFESSIONAL ENGINEER - STATE OF NEVADA
DARRIN PAPPA
CIVIL
No. 15815
7/16/13