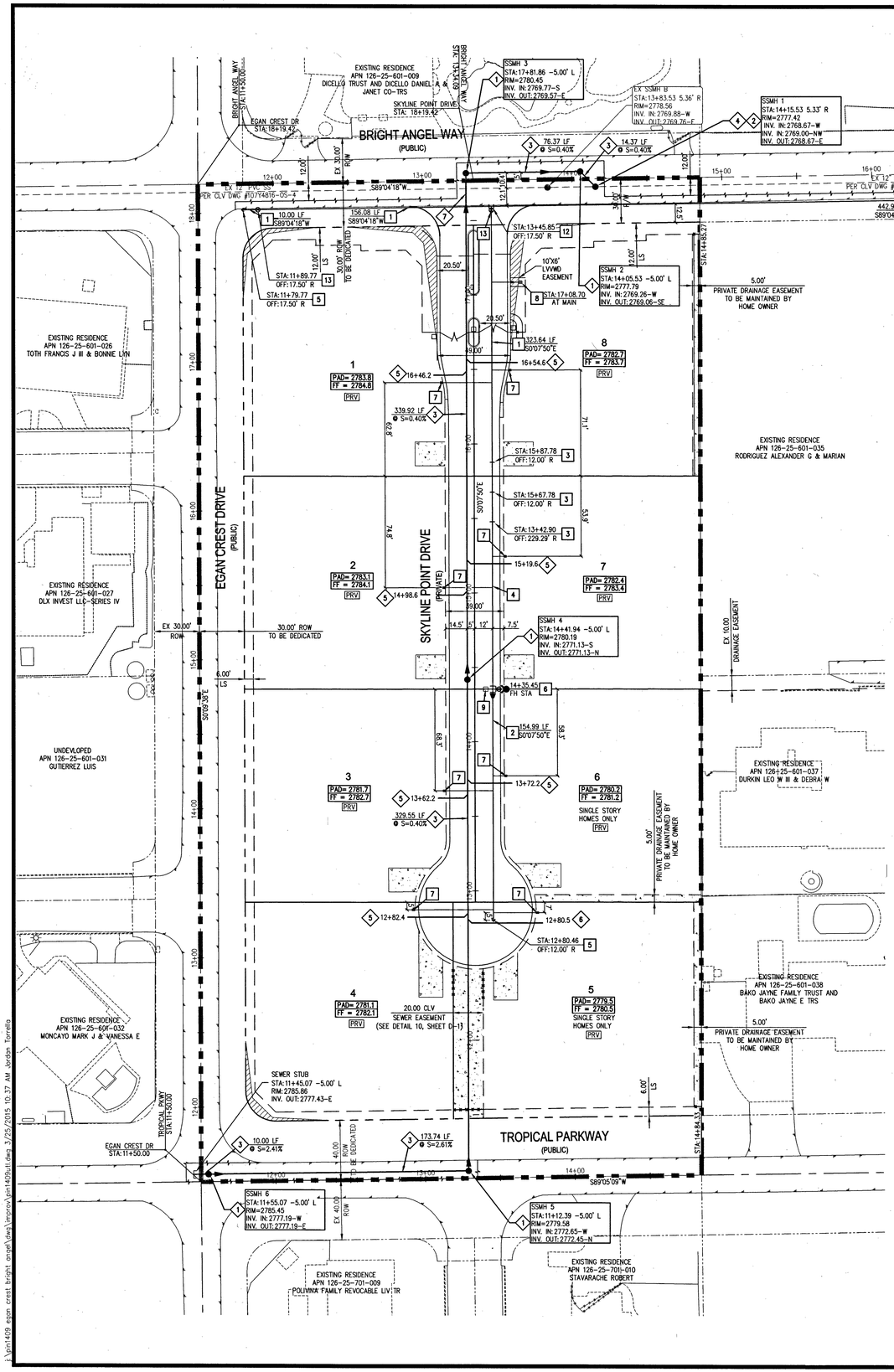
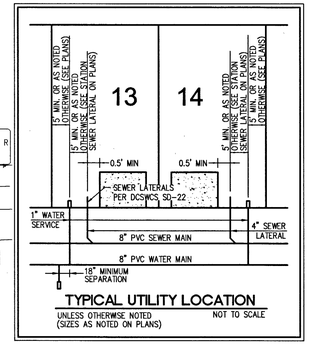




TYPICAL UTILITY LOCATION

UNLESS OTHERWISE NOTED (SIZES AS NOTED ON PLANS) — NOT TO SCALE

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.

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

FOR ALL DRY UTILITY CORSSING
- MAINTAIN MINIMUM 12" VERTICAL SEPERATION AT ALL POINTS OF CROSSING
- MAINTAIN MINIMUM 3' PARALLEL SEPERATION
- ANY EXCAVATION AT BACK OF CURB MUST REMAIN OPEN FOR INSPECTION OF COPPER SERVICE LATERALS. ANY COPPER SERVICE LATERAL KINKED, BENT OR OTHERWIST DAMAGED MUST BE REPLACED FROM THE MAIN TO THE ANGLE METER STOP.

EXISTING SERVICES (ALL LOTS)

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. AND AT THE DEVELOPER'S EXPENSE.

THIS PROPERTY MAY HAVE STATIC WATER PRESSURE IN EXCESS OF 80 PSI. THE UNIFORM PLUMBING CODE REQUIRES THAT INDIVIDUAL, ON-SITE (PRIVATE), PRESSURE-REDUCING VALVES BE INSTALLED WHENEVER THE PRESSURE EXCEEDS 80 PSI PRV'S ARE THE DEVELOPER'S RESPONSIBILITY, AND WILL NOT BE INSPECTED OR INCLUDED IN THE ACCEPTANCE OF LVVWD FACILITIES.

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.

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

MANHOLE LINING AND ENCASEMENT NOTE

A. TO PROTECT AGAINST CORROSION, THE SEWER MANHOLE WILL BE INSTALLED IN ACCORDANCE WITH DCSWCS (2.2.10.I OR AGENCY APPROVED "RAVEN LINING SYSTEM" OR AGENCY APPROVED EQUAL. (SEWER MANHOLE ONLY)
B. TO HELP ENSURE WATER TIGHTNESS, THE MANHOLE WILL BE CONSTRUCTED AS FOLLOWS:
   1. USE OF FULL STRENGTH GROUT PER DCSWCS STANDARDS.
   2. WATERTIGHT JOINTS USING AGENCY APPROVED SEALS AT MANHOLE SECTIONS AND GRADE RINGS PER DCSWCS STANDARDS.
C. ALL OF THE FOLLOWING APPLY:
   1. ENCASEMENT OF MANHOLE WITH A MINIMUM OF FOUR (4) INCHES OF CEMENT SLURRY (300 PSI+). THE SLURRY WILL EXTEND FROM 6 INCHES ABOVE THE JOINT WHERE THE CONE MEETS THE TOP OF THE BARREL TO A DEPTH OF AT LEAST 12 INCHES BELOW THE INVERT OF THE WATER MAIN PER UDACS 2.22.01.B.2.0(2).
   2. THE SEWER LINE (MAIN) SHALL BE INSTALLED PER UDACS 2.22.02.B.3(b) IN A SLEEVE OF WATER QUALITY PIPE.

MANHOLES SHALL BE TESTED FOR LEAKAGE IN ACCORDANCE WITH DCSWCS 3.19.1.

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.

COUNTY OF CLARK
FIRE DEPARTMENT
APPROVED

BY: [signature] 3/26/15

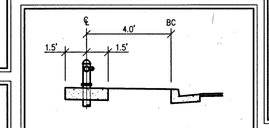
APPROVAL OF THESE PLANS SHALL NOT BE CONSTRUED TO BE A PERMIT FOR, OR AN APPROVAL OF, ANY VIOLATION OF ANY OF THE PROVISIONS OF THE STATE OR COUNTY LAWS. FIRE FLOW 1,500 GPM AT 20 P.S.I. RESIDUAL.
CLWW 14-52967

AVOID HITTING UNDERGROUND TRAFFIC SIGNAL SYSTEMS AND STREET LIGHT SYSTEM CONDUITS. IT'S COSTLY.
Call before you do UnderGround
1-702-455-7511
CLARK COUNTY TRAFFIC OPERATIONS
AND
1-702-432-5300
LAS VEGAS AREA
COMPUTERIZED TRAFFIC SYSTEM

Call before you Dig
Avoid cutting underground utility lines. It's costly.
Call 811
OR
1-800-227-2600
AND
CLARK COUNTY TRAFFIC OPERATIONS
1-702-455-7544

LEGEND

- ROADWAY CENTERLINE
- RIGHT-OF-WAY
- LOT LINE
- CURB AND GUTTER
- EASEMENT LINE
- WATER PIPE FITTING
- WATER GATE VALVE
- FIRE HYDRANT
- REFLECTIVE RAISED PAVEMENT MARKERS
- SANITARY SEWER MANHOLE
- SANITARY SEWER FLOW DIRECTION
- POINT OF CONNECTION
- STREETLIGHT



A. FIRE HYDRANT LOCATION

NOT TO SCALE — PER UDACS PLATE NO. 40

SEWER NOTES

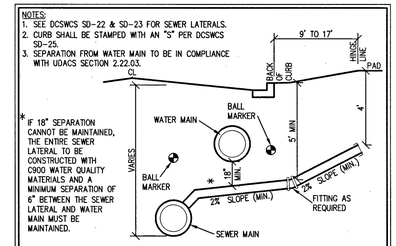
1. INSTALL 48" DIAMETER SANITARY SEWER MANHOLE WITH PRECAST BASE PER DCSWCS SD-1A, SD-1B AND SD-4
2. INSTALL 60" DIAMETER SANITARY SEWER MANHOLE WITH PRECAST BASE PER DCSWCS SD-1A, SD-1B AND SD-4 AND CORROSION PROTECTION PER DCSWCS 3.16.8
3. INSTALL 8" PVC SANITARY SEWER PIPE PER DCSWCS SD-17
4. FIELD VERIFY AND CONNECT TO EXISTING SEWER
5. INSTALL 4" PVC SANITARY SEWER PIPE PER DCSWCS SD-22
6. INSTALL 4" C900 SANITARY SEWER PIPE PER DCSWCS SD-22
7. INSTALL CONCRETE ENCASEMENT PER DCSWCS SD-21

SEE SHEET C-3 FOR ABBREVIATIONS AND QUANTITIES

ESTIMATED AVERAGE DAILY SEWER CONTRIBUTIONS

8 UNITS X 250 GPD/UNIT = 2,000 GPD = 0.0020 MGD
TOTAL PEAK FLOW = 0.0020 X 3.82 (PEAK FACTOR) = 0.00764 MGD

NOTES:
1. SEE DCSWCS SD-22 & SD-23 FOR SEWER LATERALS.
2. CURB SHALL BE STAMPED WITH AN "S" PER DCSWCS SD-25.
3. SEPARATION FROM WATER MAIN TO BE IN COMPLIANCE WITH UDACS SECTION 2.22.03.



TYPICAL SEWER LATERAL

NOT TO SCALE

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	<7,700
LARGEST AREA BETWEEN 4 HOUR WALLS	N/A
BUILDING HEIGHT	<35
NO OF STORIES INCLUDING BASEMENT	2
FIRE SPRINKLERED (NFPA 13D)	YES (LOTS 1-8)
NO OF HYDRANTS INSTALLED	1

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.

REDUCED PRESSURE PRINCIPLE ASSEMBLY (1) 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.

BASIS OF BEARING

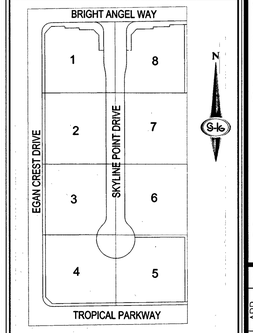
SOUTH 89°03'27" WEST, BEING THE BEARING OF THE NORTH LINE OF THE SOUTHEAST QUARTER (SE1/4) OF THE NORTHEAST QUARTER (NE1/4) OF SECTION 25, TOWNSHIP 19 SOUTH, RANGE 59 EAST, M.D.M., CLARK COUNTY NEVADA, AS SHOWN BY MAP THEREOF ON FILE 160, PAGE 62 OF SURVEYS IN THE CLARK COUNTY RECORDER'S OFFICE, NEVADA.

BENCHMARK

CITY OF LAS VEGAS BENCHMARK NUMBER: 6LV99 2556
RIVET AND PLATE IN A CONCRETE TELEPHONE VAULT IN THE NORTHWEST CORNER OF EGAN CREST WAY AND TROPICAL PARKWAY, 52' NORTHWEST OF P.I.
ELEVATION: 2786.74 US SURVEY FEET (NAVD88)
849.400 METERS

APPROVED FOR CONSTRUCTION
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER
DATE 3/24/15 PROJECT No. 123445
LVVWD APP'D FIRE FLOW 1500gpm AT 20 PSI RESIDUAL

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



KEY MAP

NOT TO SCALE

WATER NOTES

1. INSTALL 8" PVC WATER PIPE PER UDACS PLATE NO. 17 (2975 WPZ)
2. INSTALL 6" PVC WATER PIPE PER UDACS PLATE NO. 17 (2975 WPZ)
3. INSTALL 1' MAXIMUM JOINT DEFLECTION PER UDACS SECTION 2.07
4. INSTALL 8" X 6" REDUCER PER UDACS PLATE NO. 30
5. INSTALL CAP AND 2" BLOW-OFF VALVE PER UDACS PLATE NO. 36
6. INSTALL FIRE HYDRANT ASSEMBLY W/6" GATE VALVE PER UDACS PLATE NO. 40 (SEE DETAIL A SHEET U-1)
7. INSTALL 1" COPPER SERVICE LATERAL W/ 3/4" METER PER UDACS PLATE NO. 2
8. INSTALL 1" COPPER SERVICE LATERAL W/ 3/4" IRRIGATION METER AND 1" RPPA PER UDACS PLATE NO. 4 & 8 (BRASS BETWEEN METER & RPPA)
9. INSTALL BLUE REFLECTIVE RAISED PAVEMENT MARKERS PER 2009 IFC APPENDIX C, SECT C107.1
10. REMOVE EXISTING CAP AND BLOW-OFF PER UDACS PLATE 36 AND CONNECT TO EXISTING WATER MAIN
11. FIELD VERIFY LOCATION AND CONNECT TO EXISTING WATER
12. INSTALL 8" TEE PER UDACS PLATE NO. 31
13. INSTALL 8" GATE VALVE WITH VALVE BOX PER UDACS PLATE NO. 30 & 39
14. INSTALL 10" X 8" REDUCER PER UDACS PLATE NO. 30

H# 57396

SLATER HANIFAN 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.

CLARK COUNTY, NEVADA

PINNACLE HOMES
SKYLINE POINT (AKA EGAN CREST/TROPICAL)
UTILITY PLAN

S 25 T 19 R 59E

DATE: 3/5/15
DRAFTER: CZ
DESIGNER: CZ
CHECKED: TJS
PROJECT NO. PIN1409

PROFESSIONAL ENGINEER - STATE OF NEVADA
TODD J. STEADHAM
Exp. 06/30/2016
CIVIL
No. 15292
3/25/15

U-1
SHEET 11 OF 12

3071-1105