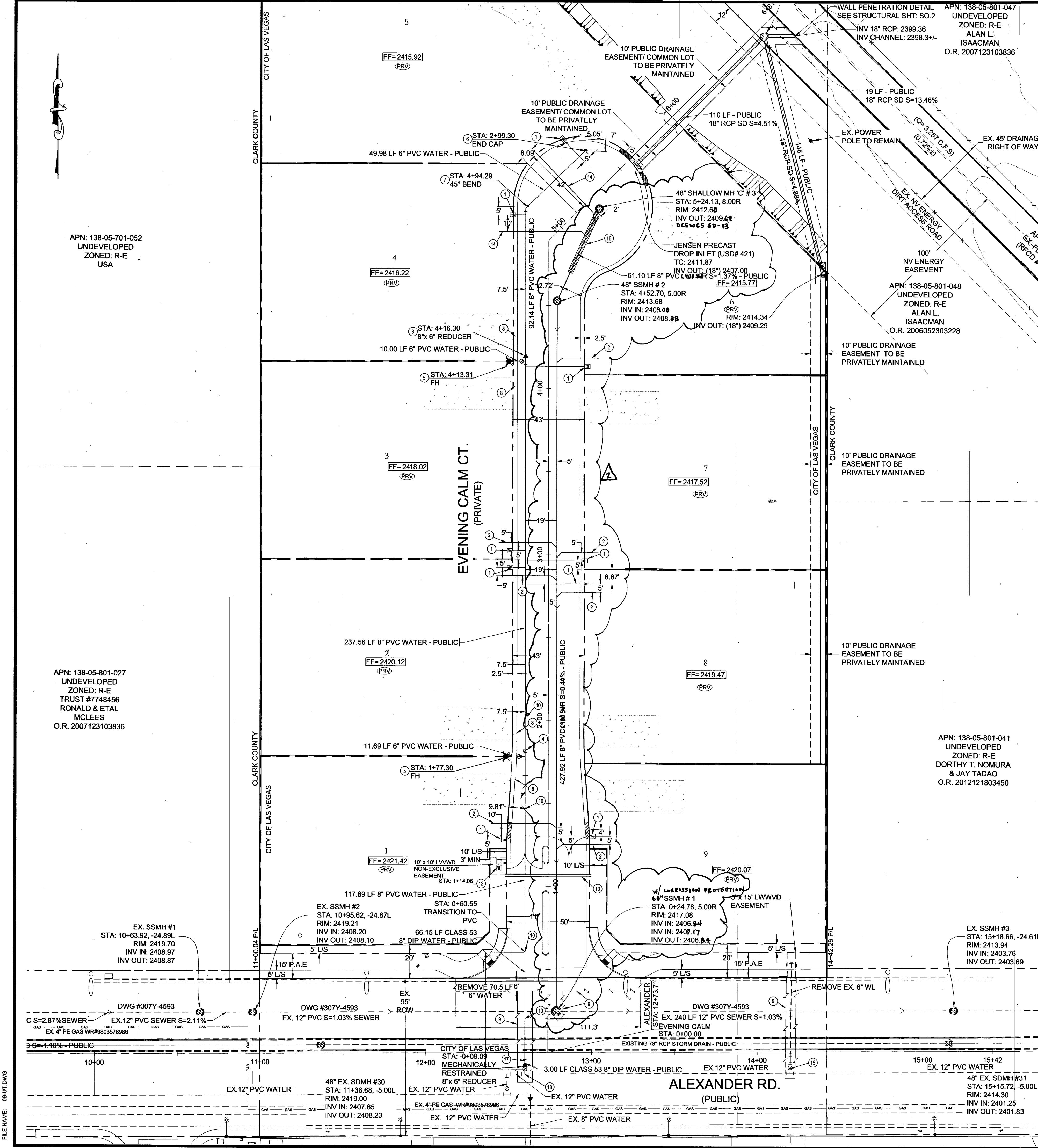




APN: 138-05-801-047
UNDEVELOPED
ZONED: R-E
ALAN L. ISAACMAN
O.R. 2007123103836

APN: 138-05-801-048
UNDEVELOPED
ZONED: R-E
ALAN L. ISAACMAN
O.R. 2006052303228

APN: 138-05-801-049
UNDEVELOPED
ZONED: R-E
DORTHY T. NOMURA & JAY TADAO
O.R. 2012121803450

Call before you Dig
Avoid cutting underground utility lines. It's costly.

811
OR
1-800-227-2600

FAST
Call before you Dig
Underground
1-702-432-5300

Call before you Dig
Avoid overhead power line contact. It's costly.

Call before you Dig
Overhead
1-702-227-2929

WALL PENETRATION DETAIL
SEE STRUCTURAL SHT. SO.2
INV 18" RCP: 2399.36
INV CHANNEL: 2398.34

19 LF - PUBLIC
18" RCP SD S=13.46%

EX. POWER POLE TO REMAIN

EX. 45' DRAINAGE RIGHT OF WAY

100' NV ENERGY EASEMENT

10' PUBLIC DRAINAGE EASEMENT TO BE PRIVATELY MAINTAINED

10' PUBLIC DRAINAGE EASEMENT TO BE PRIVATELY MAINTAINED

10' PUBLIC DRAINAGE EASEMENT TO BE PRIVATELY MAINTAINED

10' PUBLIC DRAINAGE EASEMENT TO BE PRIVATELY MAINTAINED

One grade ring 3" to 12" max. also permitted if required

36" inside diameter manhole barrel section per SD-1A and SD-1B

Cast-in-place base per SD-7

Frame and cover

48" min.

SPECIAL MH "C" RISER RING

NOTES:
1. Special shallow manholes may be used upon Agency approval only.
2. Concrete collar required around manhole frame per SD-4.
3. Manhole frame and cover per SD-2 or SD-3 as applicable.
4. Flow channel per SD-9.
5. For shallow manholes sewer pipe having less than 5-feet of cover shall be C-900 PVC or DIP as required by Agency. The C-900 or DIP pipe shall extend to the next manholes upstream and downstream.
6. Granular bedding and foundation under special shallow manholes shall conform to SD-1A and SD-1B for pre-cast manhole bases and SD-7 for cast-in-place manhole bases.

SPECIAL SHALLOW MANHOLES

ISSUED: NUMBER: SD-13

NOTE

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

"ALL ABOVE GROUND UTILITY APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF TITLE 19, 06 & 08

WASTEWATER CALCS

FACILITY TYPE: SINGLE FAMILY RESIDENTIAL
TOTAL UNITS AT BUILD OUT: 9 HOUSES

AVERAGE FLOW (MGD) = 0.00221
PEAK FLOW (MGD) = 0.00776

CALCULATIONS:
AVG FLOW = $\frac{9 \times 90,000}{365} \times \frac{1}{1,000,000} = 0.00221$ MGD
PEAK FLOW = $0.00221 \times 3.5 = 0.00776$ MGD

SEWER LATERAL NOTE

LATERALS MUST MEET ALL DESIGN STANDARDS WHEN LOTS ARE DEVELOPED.

FIRE HYDRANT DETAIL

PER UDACS PLT. #40

TYPICAL LATERAL LAYOUT

FIRE FLOW CALCULATIONS

FIRE FLOW REQUIREMENT IS 2,250 GALLONS PER MINUTE AT 20 POUNDS PER SQUARE INCH RESIDUAL BASED ON:
SQUARE FOOTAGE: 6,500 SQ FT MAX
HEIGHT: 35-FT
SPRINKLER SYSTEM: NO
ROOF CONSTRUCTION: TILE
HIGH PILED COMBUSTIBLE STORAGE: NO

LARGEST AREA BETWEEN SEPARATE WALLS: N/A
TYPE OF CONSTRUCTION: V-B
OCCUPANCY: R-3
STORIES: 2
ESFR SYSTEM: NO

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 CURVATURE OF 1,150 FEET, PER UDACS 2.07.01 AND 2.07.02.

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

LEGEND

	EXISTING	PROPOSED
CENTERLINE	---	---
RIGHT-OF-WAY	---	---
CUT LINE-ASPHALT	---	---
CURB AND GUTTER	---	---
FENCE	---	---
POWER POLE	---	---
CURB DROP INLET	---	---
STORM DRAIN MANHOLE	---	---
SIDEWALK	---	---
PROPERTY LINE	---	---
EDGE OF PAVEMENT	---	---
CAP & 2" BLOW OFF VALVE	---	---
WATERLINE FITTINGS	---	---
GATE VALVE	---	---
FIRE HYDRANT	---	---
SEWER LINE MANHOLE	---	---
SEWER LATERAL	---	---
WATER LINE	---	---
WATER LATERAL W/METER	---	---
PRESSURE REDUCING VALVE	---	---
BACK WATER VALVE	---	---

UTILITY DISCLAIMER NOTE

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 CALL BEFORE YOU OVERHEAD: 1-702-227-2929

UTILITY NOTES

1. ALL WATER FACILITIES CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE "UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR WATER DISTRIBUTION SYSTEMS" (UDACS), LATEST EDITION.

2. FIRE, WATER, AND SEWER SERVICES, AS APPROVED ON THIS PLAN, ARE INTENDED SPECIFICALLY FOR THE LOT AND USE SHOWN, AND ARE NOT INTENDED TO SERVICE ADDITIONAL PARCELS OR STRUCTURES WHICH MAY BE CREATED IN THE FUTURE. IN THE EVENT THAT THE PARCELS AND LOTS SHOWN ON THIS PLAN ARE FURTHER DIVIDED TO CREATE ADDITIONAL PARCELS OR LOTS, THE OWNER IS REQUIRED TO PROVIDE SEPARATE FIRE, WATER, & SEWER SERVICES TO EACH.

3. WATER AND SEWER LATERALS SHALL BE INSTALLED A MINIMUM OF 48" APART IN SEPARATE TRENCHES. WATER LATERALS SHALL BE A MINIMUM OF 12" ABOVE THE SEWER LATERAL. (REF. UNIFORM PLUMBING CODE)

4. LOCATOR WIRE SHALL BE USED FOR ALL SERVICE LATERALS NOT PERPENDICULAR TO THE MAIN. (TYPICAL)

5. ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF "UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR WATER DISTRIBUTION SYSTEMS" (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.

6. ALL WORK TO BE PERFORMED OUTSIDE OF THE PROJECT BOUNDARY AND ON PRIVATE PROPERTY SHALL NOT BE PERFORMED UNTIL WRITTEN PERMISSION AND EASEMENTS HAVE BEEN OBTAINED FROM THE OFFSITE OWNER AND GIVEN TO CLARK COUNTY.

7. ALL ONSITE STREETS AND DRAINAGE EASEMENTS ARE TO BE PRIVATELY OWNED AND MAINTAINED.

ABANDON 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 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 (2000) PSI. THE LATERAL MUST BE CUT WITHIN ONE (1) FOOT OF THE ABANDONED VALVE OR AS SHOWN ON PLANS, AND CAPPED. THE CONTRACTOR SHALL CUT THE EXISTING WHERE SHOWN ON DRAWINGS AND INSTALL A CAP COMPLETE WITH THRUST BLOCK, WHERE A JOINT OR COUPLER IN THE EXISTING PIPE IS UNCOVERED AT THE CUT AND CAP LOCATION. THE INSTALLATION OF A PLUG MAY BE PERMITTED WITH THE DISTRICT APPROVAL. A CONCRETE THRUST BLOCK SHALL BE INSTALLED AT ALL CAP OR PLUG LOCATIONS IN ACCORDANCE WITH THE PROVISIONS OF UDACS PLATE 31.

CONSTRUCTION NOTES

1. 1" WATER SERVICE W/ 1" METER (UDACS PLT. 4)
2. 4" SEWER LATERAL
3. INSTALL 8" X 6" REDUCER (UDACS PLT. 30)
4. 8" GATE VALVE (UDACS PLT. 30)
5. FIRE HYDRANT ASSEMBLY W/ 6" GATE VALVE (UDACS PLT. 40) - PUBLIC
6. INSTALL END CAP & 2" BLOW-OFF ASSEMBLY (UDACS PLT. 36)
7. 6" 45° HORIZONTAL WATERLINE BEND (UDACS PLT. 31)
8. PAINT CURB RED 15" EACH SIDE OF HYDRANT (CURB LENGTH PERMITTING)
9. TRENCH, BACKFILL, & PAVEMENT RESTORATION PER CCAUSD # 503, 500.4
10. DEFLECT WATER LINE HORIZONTALLY UP TO 1" AS NEEDED
11. REMOVE CAP AND BLOW OFF PER UDACS PLATE NO. 36 AND CONNECT TO EXISTING MAIN
12. 1" IRRIGATION METER W/ 1" RPPA (UDACS PLT. 4 & 8)
13. (2) 4" PVC IRRIGATION CONDUIT
14. 4" C900 SEWER LATERAL
15. CUT AND CAP LATERAL AND ABANDON VALVE PER NOTE ON THIS SHEET AND REMOVE ALL EX. P.W. OFF THIS LATERAL
16. CONCRETE CAP PER DCSWCS SD #21
17. 8" 45° VERTICAL CLASS 53 DIP BEND MECHANICALLY RESTRAINED
18. EXISTING 6" X 12" TEE W/ 6" GATE VALVE, PROTECT IN PLACE

SCALE

0 15 30 60 120
(IN FEET)
1 inch = 30 ft.

APPROVAL SIGNATURES

THM ENTERPRISES
9205 W. RUSSELL RD. STE. 235
LAS VEGAS, NV 89148
(702) 928-3131 FAX: (702) 928-5233

TANEY ENGINEERING
600 S. LAS VEGAS BLVD STE 100
LAS VEGAS, NV 89101
(702) 362-8844 FAX: (702) 362-5233

ALEXANDER & DURANGO
A RESIDENTIAL SUBDIVISION

UTILITY PLAN

ROBERT D. HANSEN
Exp. 6-30-17
CIVIL
No. 11521
ENGINEER'S SEAL

DATE: 4/26/2016
SCALE: 1"=30'
JOB NO: THM-13-002
DESIGNED BY: JFD
CHECKED BY: RH
SHEET NAME: UT1
SHEET: 09 OF 10
10745038
CLV 57982