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 2.06.02. For changes in direction exceeding the maximum allowable joint deflection, fittings shall be used.

Note:
Install pipeline marker balls in trench above each horizontal elbow fitting. Per UDACS Plate No.27

REDUCED PRESSURE PRINCIPLE ASSEMBLY (2) 1" RPPA

Approved Reduced Pressure Principle Assembly shall be installed per the UDACS Plate #11A. No water shall be taken from a service requiring backflow 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 to allow the District direct access from the adjacent right-of-way.

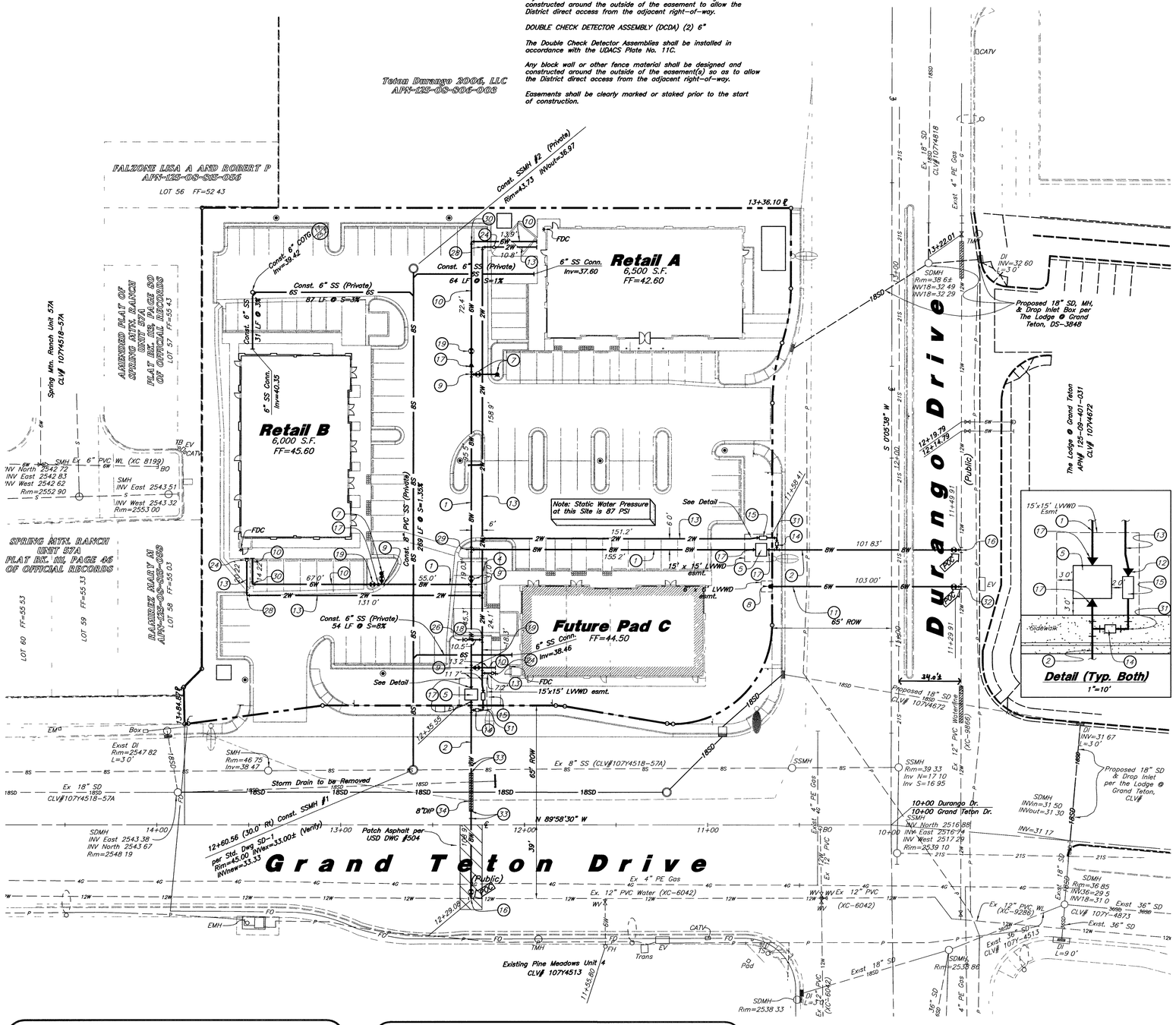
DOUBLE CHECK DETECTOR ASSEMBLY (DCDA) (2) 6"

The Double Check Detector Assemblies shall be installed in accordance with the UDACS Plate No. 11C.

Any block wall or other fence material shall be designed and constructed around the outside of the easement(s) so as 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.

All sewer/storm drains crossing water lines must conform to Section 2.19 of the Uniform Design and Construction Standards for Portable Water Systems (UDACS) for water and storm main crossings and clearances.



Utility Piping Materials:

All piping to be installed per manufacturers recommendations. Refer to project specifications for more detailed information regarding materials, installation, etc.

Culinary Service Laterals

1. 3/4" to 2" diameter pipe – HDPE, SDR-9 (200 psi) PE 3408
2. Over 2" diameter pipe – AWWA C-900 Class 150 pipe

Water Main Lines and Fire Lines

1. Pipe material as shown on utility plan view or to meet LVWD & city standards.

Sanitary Sewer Lines

1. All sewer piping to be Polyvinyl Chloride (PVC) sewer pipe, ASTM D 3034, Type PSM, SDR 35

Sanitary Sewer Notes:

1. Coordinate all utility connections to building with plumbing plans and building contractor.
2. Verify depth and location of all existing utilities prior to constructing any new utility lines. Notify Civil Engineer of any discrepancies or conflicts prior to any connections being made.

General Utility Notes:

1. Coordinate all utility connections to building with plumbing plans and building contractor.
2. Verify depth and location of all existing utilities prior to constructing any new utility lines. Notify Civil Engineer of any discrepancies or conflicts prior to any connections being made.
3. All catch basin and inlet box grates are to be bicycle proof.
4. All inlet boxes located in curb and gutter are to be rectangular and cast in place to ensure proper placement. Pre-cast or square boxes will not be accepted.
5. Refer to the site electrical plan for details and locations of electrical lines, transformers and light poles.
6. Gas lines, telephone lines, and cable TV lines are not a part of these plans.
7. Water meters are to be installed per LVWD standards and specifications. It will be the contractor's responsibility to install all items required.
8. Water lines, valves, fire hydrants, fittings etc. are to be constructed as shown. Contractor is responsible, at no cost to the owner, to construct any vertical adjustments necessary to clear sewer, storm drain, or other utilities as necessary including valve boxes and hydrant spools to proper grade.
9. All utility structures shall comly with Title 19.12.040 & be placed 3 feet behind sidewalk.

Waterline Construction Notes:

(1) Const. 8" PVC C-900 Waterline (Private)
(2) Const. 8" PVC C-900 Waterline (Public)
(3) Const. 8" Gate Valve per UDACS Plate No. 3 & 8 (Public)
(4) Const. 8" Gate Valve per UDACS Plate No. 3 & 8 (Private)
(5) Const. 6" DCDA per UDACS Plate No. 11C (Private)
(6) Const. 8" 90° Bend
(7) Const. Fire Hydrant Assembly (Complete) per UDACS Plate No. 7 (Private)
(8) Const. Fire Hydrant Assembly (Complete) per UDACS Plate No. 7 (Public)
(9) Const. 8" x 8" x 6" Tee
(10) Const. 6" PVC C-900 Waterline (Private)
(11) Const. 6" PVC C-900 Waterline (Public)
(12) Const. 1" x 2" Reducer
(13) Const. 2" Waterline (Private)
(14) Const. 1" Meter & Service per UDACS Plate No. 1D (Public)
(15) Const. 1" RPPA per UDACS Plate No. 11A (Public)
(16) Wet Tap Exist. 12" PVC WL. Const. 12" x 12" x 8" Tapping Sleeve w/8" Tapping Valve per UDACS Plate No. 22
(17) Const. 8" x 6" Reducer
(18) Const. 1.5" Irrigation Service
(19) Const. 6" Gate Valve per UDACS Plate No. 3 & 8 (Public)
(20) Not Used
(21) Not Used
(22) Not Used
(23) Not Used
(24) Const. 2" Submeter in Box (Private)
(25) Not Used
(26) Const. 1.5" Submeter in Box (Private)
(27) Not Used
(28) Const. 2" 90° Bend
(29) Const. 8" x 8" x 8" Tee
(30) Const. 6" 90° Bend
(31) All Brass Fittings Required
(32) Wet Tap Exist. 12" PVC WL. Const. 12" x 12" 6" Tapping Sleeve w/ 6" Tapping Valve per UDACS Plate No. 22
(33) Const. 8" 45° Bend
(34) Const. 8" DIP Waterline (Public)

Sanitary Sewer Contribution

Average Daily Flow= 0.0325 mgd
Peak Daily Flow= 0.1137 mgd

Legend

Proposed Manhole	
Existing Manhole	
Telephone Box	TB
Fire hydrant	
Existing hydrant	
Water Valve	
Existing Water Valve	
Sanitary Sewer	S
Culinary Water	W
Storm Drain	SD
Existing Sewer	S
Existing Water	W
Existing Storm Drain	SD
Existing Gas	G
Existing Power	P
Existing Telephone	T
Power pole	
Power pole w/guy	
Fence	X
Power line	
Reinforced Conc. Pipe	RCP
Top of Grate	TG
Flowline	FL
Proposed Light Pole	
Existing Light Pole	
Existing Street Light	

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 LVWD facilities.

Replace all Traffic Control Devices (Signs or Pavement Markings), under Clark County's Jurisdiction, that are disturbed, destroyed, moved or modified by trenching activity to Clark County's satisfaction. All material used shall meet Clark County's Specifications or will be an approved equivalent.

This is a Recorded Commercial Subdivision All Property, that is not Directly Under a Building Footprint, is a Common Utility Easement, for Sewer, Water, Fire and Electrical, Regardless of any, and all "Property Lines".

Fire Flow Calculations:

Fire Flow Requirement is 1,500 gallons per minute @ 20 PSI residual pressure.

Based On:	Retail A	Retail B	Future Retail C
Square Footage:	6,500 SF	6,000 SF	5,000 SF
Largest Area Between 4-hour Area Seperation Walls:	N/A	N/A	N/A
Building Height:	26'-4"	26'-4"	26'-4"
Number of Stories:	1	1	1
Type of Construction:	V-B	V-B	V-B
Occupancy:	M	M	M
Full Automatic Fire Sprinkler System:	Yes	Yes	Yes

Reviewed by: K Smith
Las Vegas Fire Department
Date: 9/24/06

Approved for Construction

Las Vegas Valley Water District — Date
Proj. 113060

Basis of Bearings

North 89°58'30" West, being the South line of the Southeast quarter (SE 1/4) of section 8, township 19 South, range 60 East, M.D.M., as shown on plat book 98, page 7 on file in the office of the county recorder, Clark County, Nevada.

Benchmark

City of Las Vegas vertical control no. OLV90 17NES rivet and plate in top of curb @ SW corner of Grand Teton & Durango

Elevation – 774.1140 (Meters) / 2539.74 (Feet)
North American Vertical Datum of 1988

SAFETY ALERT
Call before you OVERHEAD
1-702-227-2929
OVERHEAD SERVICE ALERT

Avoid cutting underground utility lines it's costly
Call before you Dig.
1-800-227-2600
UNDERGROUND SERVICE ALERT (USA)

CAUTION :
The location and/or elevation of existing utilities as shown on these plans is based on records of the various utility companies and, where possible, measurements taken in the field. The information is not to be relied on as being exact or complete.

REV	DATE	DESCRIPTION

Designed by: JR
Drafted by: SP
Client Name: Nova Source
05-118UT

GREAT BASIN ENGINEERING - SOUTH
CONSULTING ENGINEERS and LAND SURVEYORS
2010 North Redwood Road, P.O. Box 16747
Salt Lake City, Utah 84116
Salt Lake City (801)521-8529 Ogden (801)394-7288 Fax (801)521-3551

Utility Plan
Durango Center
NW Corner of Durango Drive & Grand Teton Drive
Las Vegas, Nevada

PROFESSIONAL ENGINEER – STATE OF NEVADA
BRET C. WAHLEN
Exp. 6-30-08
No. 11109

21 Aug, 2006

SHEET NO.
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