

BENCHMARK:  
CITY OF ROCKWALL CONTROL MONUMENT #R010 © OF  
N. LAKESHORE DRIVE NORTH OF N. ALAMO IN MEDIAN  
ELEV. 524.79 (NAVD88)

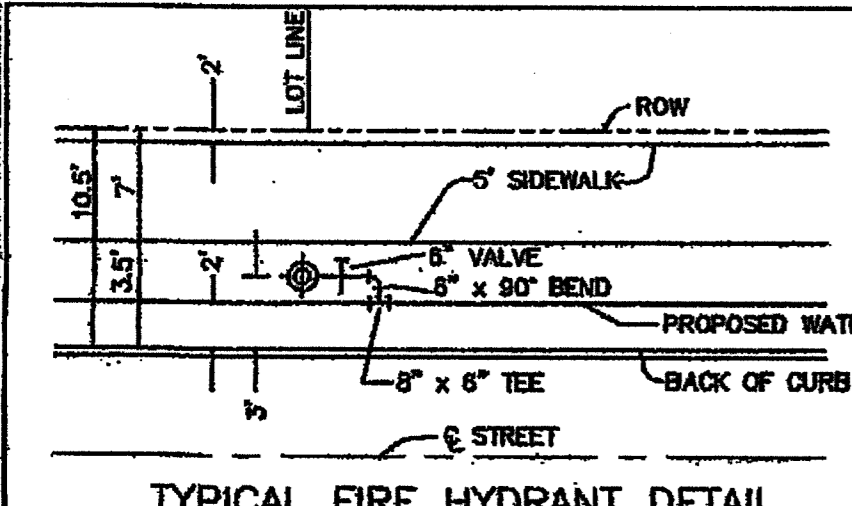
BENCHMARK:  
CITY OF ROCKWALL CONTROL MONUMENT #R011 © OF  
N. LAKESHORE DR. NORTH OF N. HAVEN HILL CT. IN MEDIAN  
ELEV. 518.83 (NAVD88)

SANITARY SEWER LINE "A" & LINE  
"E" ALONG HIGHLAND DRIVE TO BE  
CONSTRUCTED CONCURRENTLY WITH  
PHASE 3 PLANS.

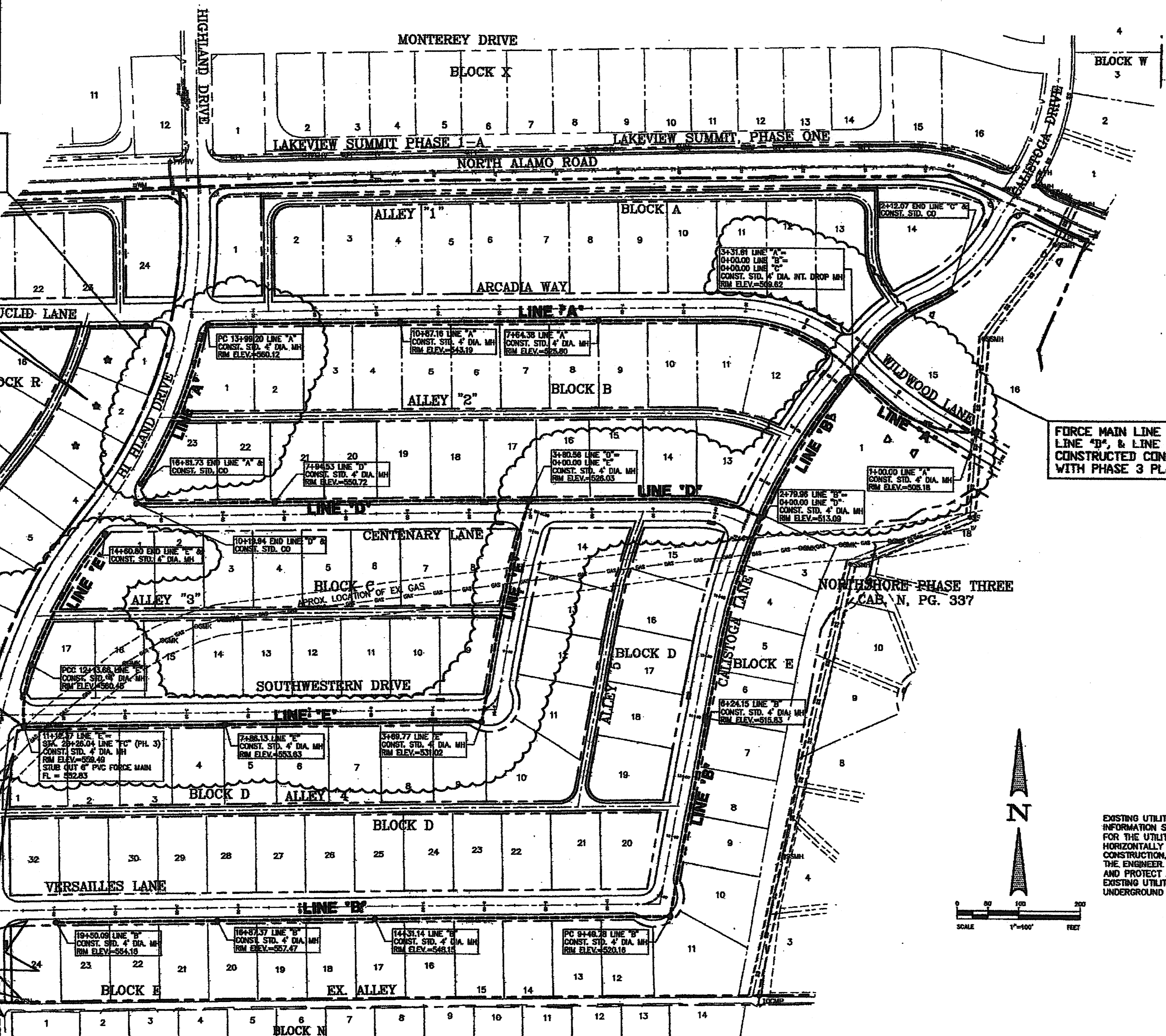
LOTS 1, 2, & 3 OF BLOCK  
R ARE UNABLE TO BE  
BUILT UNTIL PHASE 1  
CONSTRUCTION.

CAUTION  
EXIST. HIGH PRESSURE GAS LINE  
USE CAUTION WHEN WORKING  
IN/UNDER CONTRACTOR TO FIELD  
VERIFY EXACT LOCATION & DEPTH  
OF EXIST. GAS LINE

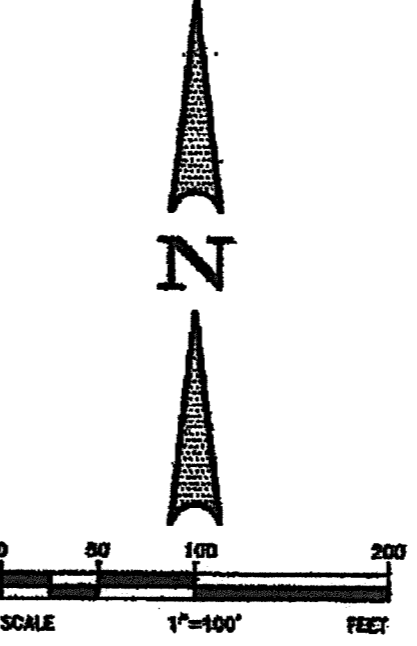
CITY OF ROCKWALL  
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- FIRE HYDRANTS ARE TO BE LOCATED BETWEEN THE BACK OF CURB & THE SIDEWALK.
- ALL FIRE HYDRANTS AT STREET INTERSECTIONS ARE TO BE LOCATED AT THE CR AND FIRE HYDRANTS LOCATED MID-BLOCK ARE TO BE LOCATED ON A LOT LINE.



FORCE MAIN LINE "A", LINE "B",  
LINE "D", & LINE "E" TO BE  
CONSTRUCTED CONCURRENTLY  
WITH PHASE 3 PLANS.



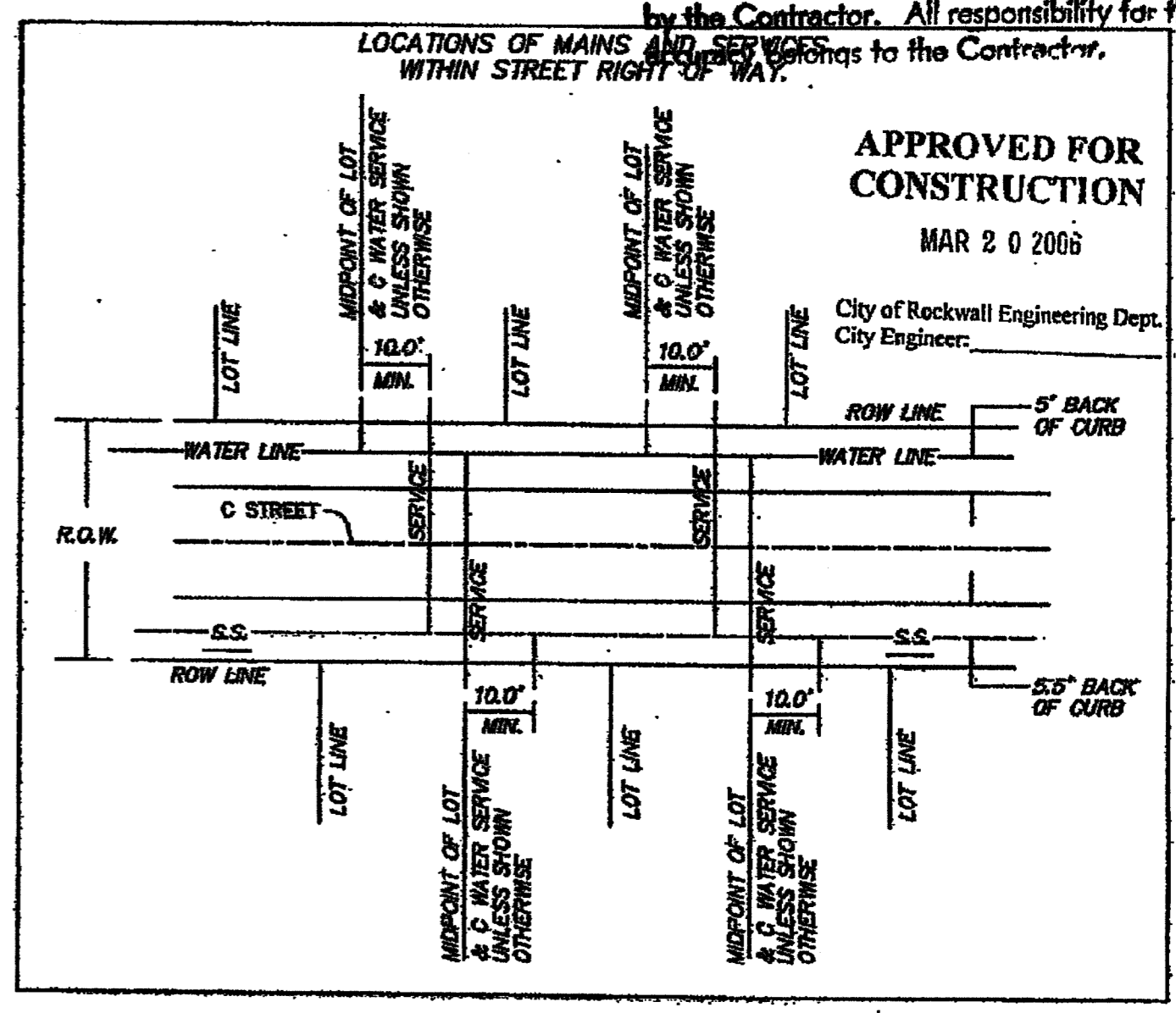
- LEGEND**
- Proposed Fire Hydrant
  - Proposed Gate Valve
  - Proposed Waterline
  - Proposed Water Service
  - Proposed Sanitary Sewer
  - Proposed Sanitary Sewer Service
  - Proposed Sanitary Manhole
  - Proposed Sanitary Cleanout
  - Lots Unable to Be Built with Phase 3 Construction

- WATER & SANITARY SEWER GENERAL NOTES**
- Unless otherwise noted all materials and construction shall conform to the applicable specifications and standards of the City of Rockwall and the North Central Texas Council of Governments - Standard Specifications for Public Works Construction, latest edition.
  - All sanitary sewer and water main construction within public right-of-way or easement shall conform to the requirements of the Texas Natural Resources Conservation Commission (TNRCC) guidelines for construction of public water and sewer systems. Contractor shall maintain a copy of the design documents at the jobsite at all times.
  - Contractor shall maintain existing sanitary sewer and water service at all times during construction.
  - The locations, elevations and dimensions of existing utilities shown on the plans were obtained from available city and utility company records and plans and are considered APPROXIMATE. It shall be the contractor's responsibility to verify all locations, elevations and dimensions of adjacent and/or conflicting utilities sufficiently in advance of construction in order that adjustments can be made to provide adequate clearances. The contractor shall preserve and protect public utilities at all times during construction. Any damage to utilities resulting from contractor's operations, shall be restored at his expense. The engineer shall be notified when proposed sanitary sewer or water line grade conflict with existing utility grades. At least forty-eight (48) hours prior to beginning construction in the vicinity of existing utilities, the contractor shall notify utility companies to locate all underground utilities.
  - All dimensions shown are to centerline of pipe unless noted otherwise.
  - All water mains shall be CLASS 200, DR-14 PVC pipe.
  - All sanitary sewer lines shall be SDR-35 PVD pipe (10'-12' deep) or SDR-20 PVC pipe (over 10' deep).
  - The contractor shall provide a trench safety plan prior to beginning his work.
  - All sanitary sewer lines and water mains shall have a minimum cover to the top of pipe equal to 42" and 48" respectively, unless shown otherwise.
  - All fittings shall be mechanical and shall be polypropylene.
  - Pipe embedment and thrust blocking shall be per "M.C.T.C.O.G. Standard Details".
  - Green EMS locator posts shall be installed at every sanitary sewer manhole, service & cleanout. Blue EMS locator posts shall be installed at every waterline change in direction, service, fire hydrant and valve.
  - All proposed water lines shall be pressure tested, flushed and sterilized and meet all Federal and state testing requirements.
  - All fire hydrants shall be a type approved by the City of Rockwall and shall be installed and color-coded in accordance with all of the City of Rockwall requirements.
  - Put proposed water and sanitary sewer lines on necessary to clear lot bays. Do not exceed the manufacturer's minimum deflection. (use 200' min. radius)
  - Where a sanitary sewer service line ties into a manhole, the service shall be raised above the finished grade of the man. by one foot (1') to allow for maintenance related issues.
  - Where a sanitary sewer service line ties into a manhole, the service shall be

**CAUTION !!!**  
**UNDERGROUND UTILITIES**

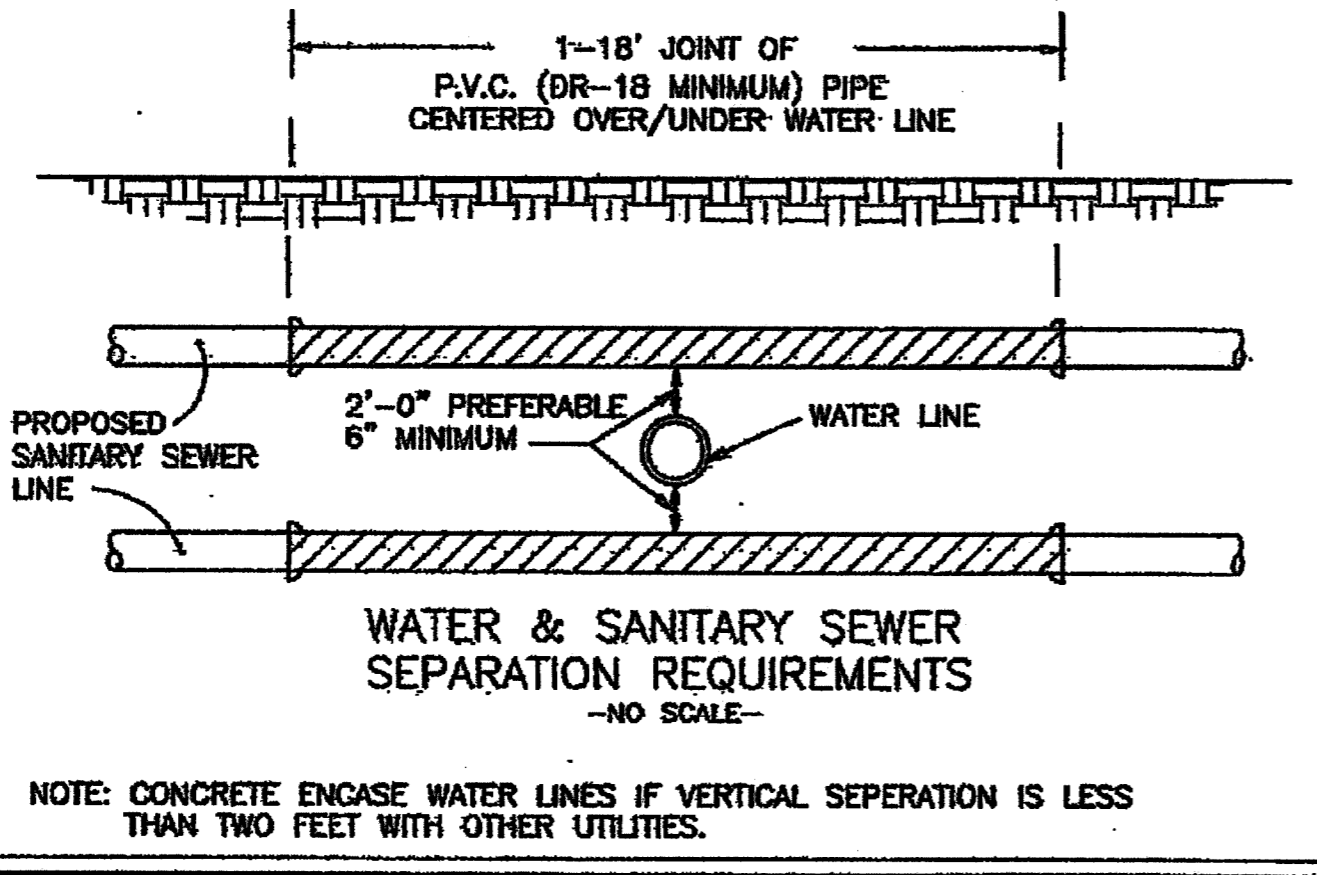
EXISTING UTILITIES AND UNDERGROUND FACILITIES INDICATED ON THESE PLANS HAVE BEEN LOCATED FROM REFERENCE INFORMATION SUPPLIED BY VARIOUS OWNERS OF THE FACILITIES. THE ENGINEER DOES NOT ACCEPT THE RESPONSIBILITY FOR THE UTILITY LOCATIONS SHOWN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY BOTH HORIZONTALLY AND VERTICALLY THE LOCATION OF ALL EXISTING UTILITIES AND UNDERGROUND FACILITIES PRIOR TO CONSTRUCTION, TO TAKE NECESSARY PRECAUTIONS TO PROTECT ALL FACILITIES ENCOUNTERED, AND TO NOTIFY THE ENGINEER PROMPTLY OF ALL CONFLICTS OF THE WORK WITH EXISTING FACILITIES. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION. ANY DAMAGE BY THE CONTRACTOR TO EXISTING UTILITIES SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE. CONTACT ALL POSSIBLE UTILITY AND UNDERGROUND FACILITY OWNERS.

**"AS BUILT"**



LOCATIONS OF MAINS AND SERVICES  
N.T.S.

CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD	BEARING
C100	192.16	1340.00	81°2'58"	96.24	191.99	S14°04'48"W
C101	101.30	225.00	25°47'41"	51.52	100.44	S06°23'16"W
C102	247.14	726.00	19°30'15"	124.78	245.95	S29°02'14"W
C103	461.74	930.00	28°59'44"	235.24	457.48	S23°28'11"W
C104	69.36	170.00	23°22'31"	35.17	68.88	N79°08'23"W
C105	118.00	230.00	29°23'41"	60.33	116.71	S51°38'54"W
C106	47.00	270.00	9°58'26"	23.56	46.94	N61°22'31"E
C107	182.54	225.00	41°23'22"	85.00	159.03	S72°02'15"E
C108	69.07	534.58	7°24'10"	34.58	69.02	S47°35'35"E
C109	222.55	280.00	45°32'25"	117.53	216.74	N68°03'28"W
C110	45.20	225.00	11°30'37"	22.68	45.12	S20°07'50"W
C111	237.33	774.00	17°34'06"	119.60	236.40	N23°09'35"E



NOTE: CONCRETE ENCASE WATER LINES IF VERTICAL SEPARATION IS LESS THAN TWO FEET WITH OTHER UTILITIES.

APPROVED FOR CONSTRUCTION  
MAR 20 2006  
City of Rockwall Engineering Dept.  
City Engineer:

DESIGNED BY: MS  
DRAWN BY: MS  
CHECKED BY: NK  
FILE: 406023W.dwg | View: W2  
PROJECT NO.: 406023.01

Scale: 1"=100' Date: 15-1-06

**SHEET 36 OF 46**

**Winkelmann & Associates, Inc.**  
CONSULTING CIVIL ENGINEERS & ARCHITECTS  
2000 W. HILL STREET, SUITE 100  
DALLAS, TEXAS 75208  
(972) 462-2800  
FAX (972) 462-2899

**SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY**  
MD. NAIM UDDIN KHAN, P.E. #57778

**THESE CONSTRUCTION PLANS WERE PREPARED UNDER THE RESPONSIBLE SUPERVISION OF**  
MD. NAIM UDDIN KHAN, REGISTERED PROFESSIONAL ENGINEER NO. 87778

**MD. NAIM UDDIN KHAN 5/2/06**

**A. HANNA SURVEY, ABSTRACT NO. 98  
J.H.B. JONES SURVEY, ABSTRACT NO. 124  
CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS**

**ELAND ENERGY INC.  
6150 N. CENTRAL EXPRESSWAY, SUITE 400  
DALLAS, TEXAS 75206  
214-365-0061**

**SANITARY SEWER PLAN  
THE PRESERVE, PHASE 1**