

**LOT SERVICES DETAIL**  
N.T.S.

**NTMWD NOTE-5**  
FOR OPEN CUT WHERE CROSSING UNDER THE NTMWD PIPELINE, WITHIN TEN FEET EITHER SIDE OF CENTERLINE OF PIPELINE, THE TRENCH WIDTH TO BE CUT SHALL BE LIMITED TO FOUR-FOOT VERTICAL WALLS, NO SLOPING BANK WITH THE APPROPRIATE TRENCH SAFETY. THE ENTIRE EXCAVATION WITHIN THE LIMITS NOTED ABOVE SHALL BE BACKFILLED WITH GRAVEL TO ONE-FOOT ABOVE TOP OF NTMWD PIPELINE. ONE-FOOT MINIMUM VERTICAL CLEARANCE IS REQUIRED BETWEEN NTMWD PIPELINE AND PROPOSED UTILITIES.

**WARNING!!!**  
EXIST. HIGH PRESSURE GAS LINE; CONTRACTOR TO VERIFY LOCATION AND DEPTH OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.

**NOTE:**  
WATER & SANITARY SEWER SERVICES ARE TO BE INSTALLED AT THE TIME OF CONSTRUCTION OF PHASE 6A FOR FUTURE LOTS ON PHASE 6B & PHASE 7  
BLOCK A - LOT 15 TO LOT 19 SANITARY SEWER & WATER;  
BLOCK B - LOT 8 TO LOT 3 SANITARY SEWER & WATER.

**NTMWD NOTE-1**  
FRANCHISED UTILITIES ARE NOT PERMITTED IN NTMWD EASEMENT EXCEPT FOR CROSSINGS.

**NTMWD NOTES-2**  
A. NORTH TEXAS MUNICIPAL WATER DISTRICT (NTMWD) 30-INCH WATER TRANSMISSION PIPELINE IS LOCATED WITHIN LIMITS OF CONSTRUCTION.  
B. OPERATION OF HEAVY EARTHMOVING EQUIPMENT, COMPACTION EQUIPMENT OR HEAVY CONSTRUCTION EQUIPMENT, SUCH AS CONCRETE TRUCKS, SHALL BE RESTRICTED TO SPECIFIC CROSSING POINTS ACROSS NTMWD EASEMENTS, AS APPROVED BY THE NTMWD. THE CROSSINGS SHALL BE DESIGNATED AND VERIFIED TO PROVIDE A MINIMUM OF FIVE-FOOT OF COVER.  
C. TO ASSURE THAT PLACING OF SIGNIFICANT LOADS OVER THE NTMWD PIPELINE DOES NOT DAMAGE THE EXISTING PIPELINE, NO MATERIALS SHALL BE STOCKPILED ON THE NTMWD EASEMENT, WITHOUT AUTHORIZATION FROM THE NTMWD. IF THE CONTRACTOR DESIRES TO USE THE NTMWD'S EASEMENT FOR STOCKPILE OF MATERIALS, CONTACT NTMWD ENGINEERING AT (972) 442-5405 SO YOUR PLANS FOR USE OF NTMWD'S EASEMENT CAN BE REVIEWED.  
D. A MINIMUM OF THREE FEET SEPARATION BETWEEN THE BOTTOM OF THE PAVEMENT AND TOP OF NTMWD PIPELINE IS REQUIRED. IN ADDITION, IF SEPARATION BETWEEN THE BOTTOM OF THE PAVEMENT AND THE TOP OF THE PIPELINE IS LESS THAN 3.5 FEET, A THICKENED PAVEMENT SECTION IS REQUIRED.  
E. CROSSING OF THE NTMWD EASEMENT WITH OTHER UTILITIES, SUCH AS TV CABLE, PHONE, GAS AND ELECTRIC, SHALL BE COORDINATED WITH THE NTMWD TO AVOID DAMAGE TO THE NTMWD FACILITIES.  
F. OUTDOOR LIGHTING, LANDSCAPING, SCREENING WALLS OR OTHER FACILITIES SHALL NOT BE INSTALLED IN NTMWD EASEMENTS WITHOUT WRITTEN APPROVAL OF THE NTMWD.  
G. UNLESS OTHERWISE SHOWN OR REQUIRED A MINIMUM OF ONE-FOOT CLEARANCE SHALL BE PROVIDED FOR ALL UTILITIES CROSSING THE NTMWD PIPELINES.  
H. "THE CONTRACTOR SHALL CONTACT NTMWD ENGINEERING AT (972) 442-5405 AT LEAST 48 HOURS PRIOR TO PERFORMING ANY WORK IN THE VICINITY OF THE NTMWD FACILITIES."

**NTMWD NOTE 3**  
WATER & SANITARY SEWER SERVICES AND/OR METERS ARE NOT ALLOWED WITHIN THE NTMWD EASEMENT

**NTMWD NOTE-4**  
EXCAVATION ADJACENT TO NTMWD PIPELINE AND APPURTENANCES TO INSTALL THE PROPOSED IMPROVEMENTS SHALL BE PERFORMED SO THAT THE PIPELINE OR APPURTENANCES ARE NOT DISPLACED OR DAMAGED. ANY DAMAGE TO THE PIPELINE OR APPURTENANCES SHALL BE REPAIRED TO THE SATISFACTION OF THE NTMWD. FURTHER, ANY COST FOR REPAIR OF DAMAGE TO THE PIPELINE OR APPURTENANCES RESULTING FROM CONSTRUCTION BY THE DEVELOPER OR CONTRACTOR WILL BE THE RESPONSIBILITY OF THE DEVELOPER.

**SANITARY SEWER CURVE TABLE**

CURVE	RADIUS	DELTA	TANGENT	LENGTH	CHORD	BEARING
CS-9	278.50'	36°49'05"	92.69'	178.96'	175.90'	N68°55'19"E
CS-10	321.50'	36°44'17"	106.76'	206.15'	202.63'	N68°52'55"E
CS-11	948.50'	07°35'57"	62.99'	125.80'	126.71'	N83°27'05"E
CS-12	721.50'	51°11'08"	345.57'	644.55'	623.34'	N74°45'19"W
CS-18	200.00'	23°46'46"	42.11'	83.00'	82.41'	S87°27'04"E
CS-19	700.00'	18°22'10"	113.18'	224.42'	223.46'	S84°44'46"E
CS-20	200.00'	25°06'22"	44.59'	87.75'	87.05'	S81°21'40"E

**WATER CURVE TABLE**

CURVE	RADIUS	DELTA	TANGENT	LENGTH	CHORD	BEARING
WTC-11	680.50'	51°11'08"	325.94'	607.93'	587.91'	S74°45'19"E
WTC-12	989.50'	07°35'57"	65.72'	131.24'	131.14'	N83°27'05"E
WTC-13	280.50'	36°44'17"	93.14'	173.86'	176.78'	N68°52'55"E
WTC-14	319.50'	38°08'40"	110.46'	212.71'	208.80'	N69°35'06"E

**BENCHMARK:**  
"X" CHISELED IN E OF ALLEY EAST OF MORNINGSTAR DRIVE WITHIN 3RD LOT NORTH OF MIDNIGHT PASS. ELEV. 513.26

**BENCHMARK:**  
PK NAIL IN E OF CARUTH LANE & ALLEY INTERSECTION 150'± EAST OF MORNINGSTAR DRIVE. ELEV. 491.68

**Winkelman & Associates, Inc.**  
CONSULTING CIVIL ENGINEERS & SURVEYORS  
6720 Mesquite Plaza Drive, Suite 100  
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(972) 442-5405  
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NO. DATE REVISION APPROV.  
07/02/04 REVISED SANITARY SEWER LINE ALIGNMENT NK  
08/15/05 ADDED 2" WATER TAP RB

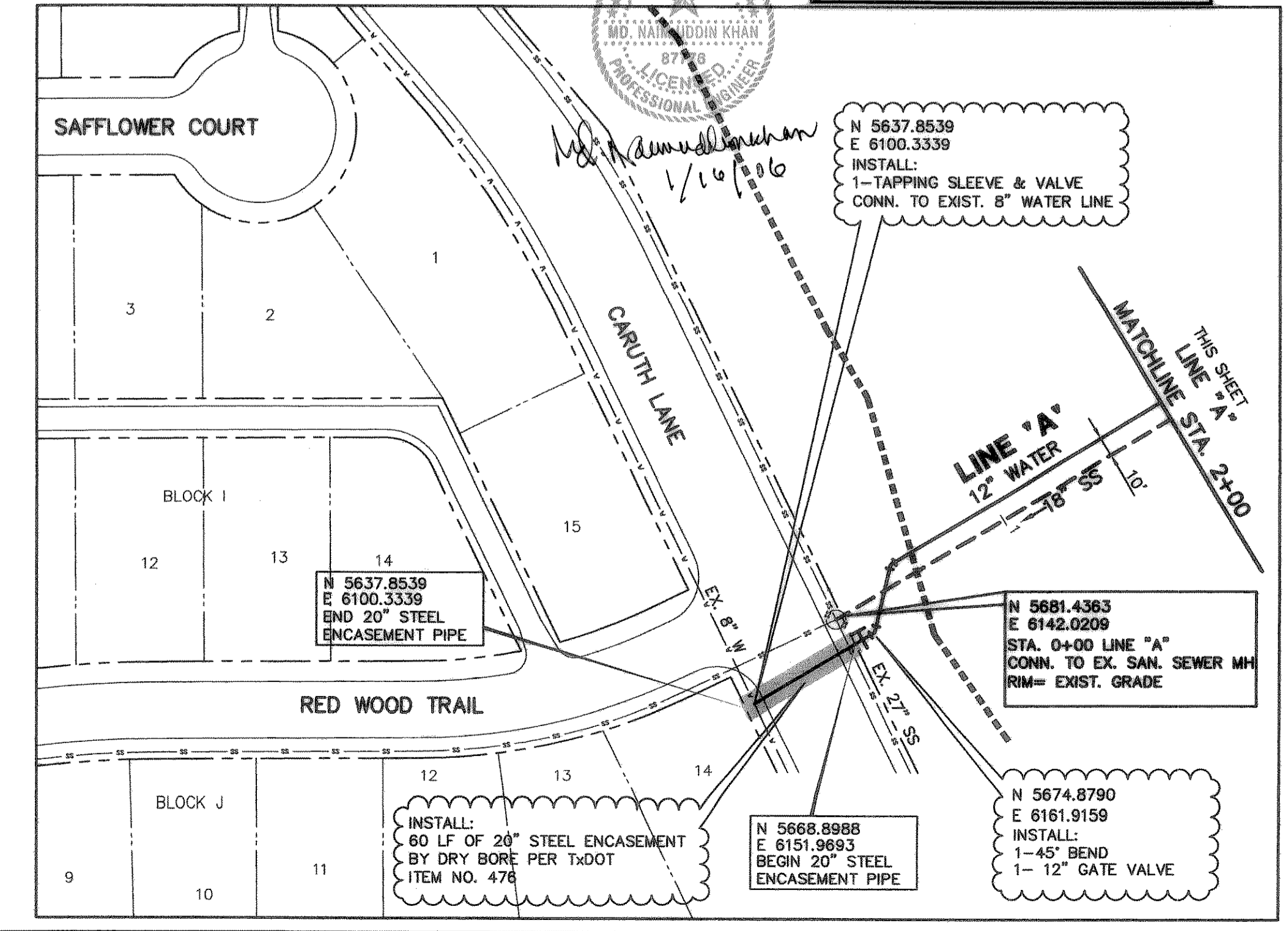
STATE OF TEXAS  
M.D. NAIM UDDIN KHAN  
REGISTERED PROFESSIONAL ENGINEER  
NO. 87776

M.B. JONES SURVEY ABSTRACT NO. 122  
CITY OF ROCKWALL  
ROCKWALL COUNTY, TEXAS  
LUMBERMEN'S INVESTMENT CORPORATION  
5495 BELTLINE ROAD #225  
DALLAS, TEXAS 75240

**WATER & SANITARY SEWER PLAN  
( PHASE 6 & PHASE 6A )**

Scale: 1"=60'  
Date: 08-18-05  
Designed By: MS  
Drawn By: MS  
Checked By: NK  
File: 1464646ANWS3.DWG  
Project No.: 14694.01

**SHEET 36 OF 57**



STATE OF TEXAS  
M.D. NAIM UDDIN KHAN  
REGISTERED PROFESSIONAL ENGINEER  
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**RECORD DRAWING**  
RECORD INFORMATION PROVIDED BY  
PRECISION MANAGEMENT, FORTNEY, TEXAS &  
RODMAN COMPANIES, FRISCO, TEXAS

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MD. NAIM UDDIN KHAN, # 87776