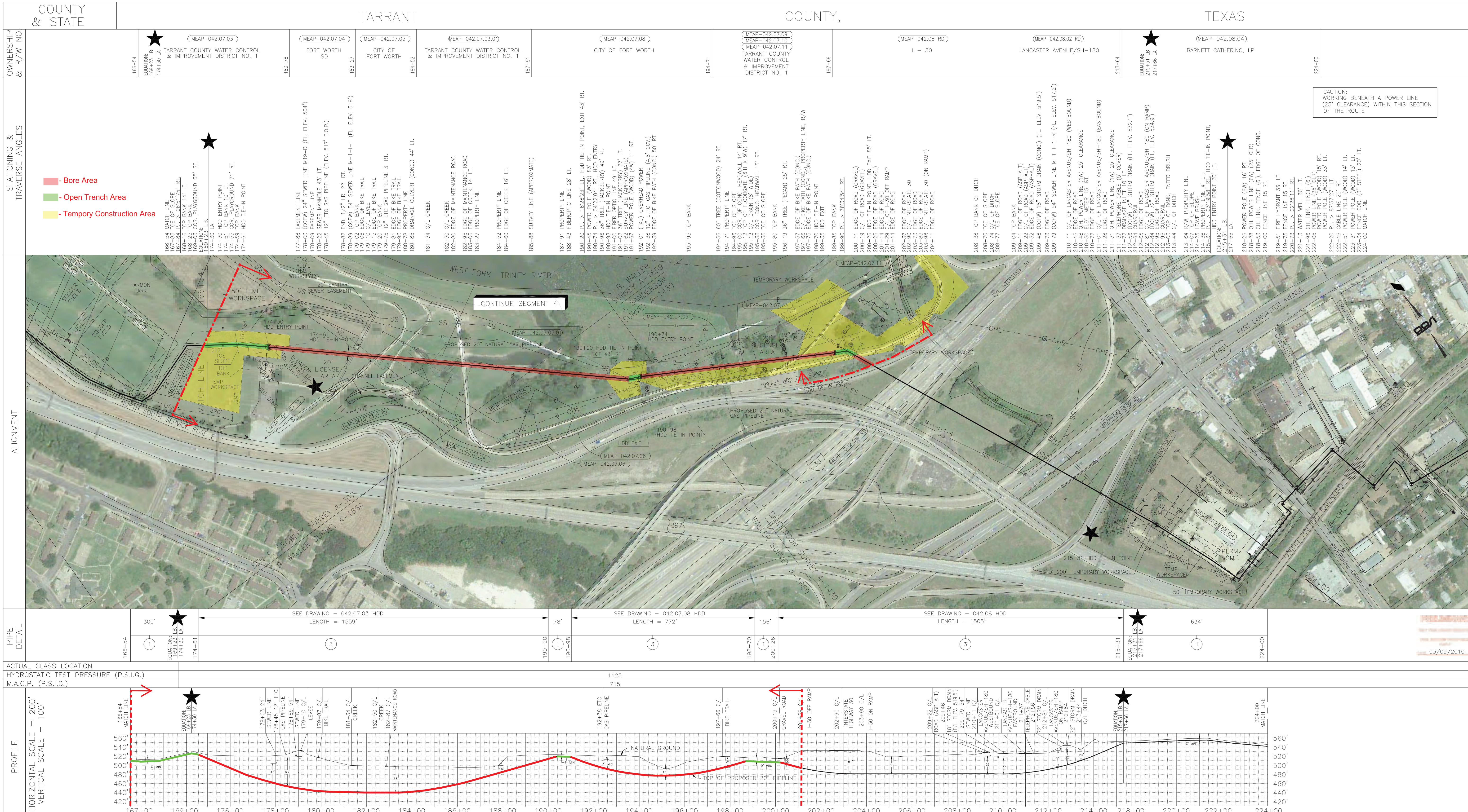
Appendix B

Exhibit A



GENERAL INFORMATION

CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.

DATUM BASED ON TEXAS STATE PLANE COORDINATES SYSTEM, NAD 83 NORTH CENTRAL ZONE, NAVD 88, DERIVED FROM GPS OBSERVATIONS.

TITLE INFORMATION PROVIDED BY TEXAS MIDSTREAM GAS SERVICES, L.L.C.

200 0 200 400
HORIZ. SCALE IN FEET

100 0 100 200
VERT. SCALE IN FEET

LEGEND

	TREE	W.V.	WATER VALVE
M.B.	MAIL BOX	G.L.	GAS LIGHT
	SIGN	L.P.	LIGHT POLE
P.P.	POWER POLE		CULVERT
	GUY	— P —	POWER LINE
P.P.w/BOX	P.POLE & UNDERGROUND CABLE BOX	— G —	GAS LINE
U.C.B.	U'GND. CABLE BOX	— T —	TELEPHONE LINE
F.H.	FIRE HYDRANT	— SS —	SEWER LINE
M.H.	SEWER MANHOLE	— W —	WATER LINE
W.M.	WATER METER	— X —	FENCE LINE
G.M.	GAS METER		TREE LINE
G.V.	GAS VALVE	☒	TEST LOCATION

EXISTING UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS GENERATED FROM PREVIOUS MAPS AND SURVEY. CONTRACTOR SHALL VERIFY EXACT LOCATION AND ELEVATION OF ALL EXISTING UTILITIES IN AREA OF WORK PRIOR TO CONSTRUCTION AND CALL TEXAS ONE CALL SYSTEM AT 1-800-245-4545 AND ALL OTHER UTILITY COMPANIES AT LEAST 2 WORKING DAYS (48 HOURS) PRIOR TO CONSTRUCTION.

1-800-245-4545
WWW.TEXASONECALL.COM
TEXAS ONE CALL SYSTEM

FIELD NOTES

STA. TO STA.	BOOK NO.	PAGE
172+00 – 180+75	1296001 B41-BB41	49 – 51
180+63 – 185+00	1296001 B25	54 – 55
185+00 – 203+42	1296001 A43	36 – 39
203+42 – 214+31	1296001 G01	1 – 3
214+31 – 221+96	1296001 G02-GG03	3 – 4
221+96 – 224+00	1296001 C38	63

SUMMARY OF MATERIALS

	DESCRIPTION	
1	20" O.D. X 0.375" W.T. API5L, X-65,	1,168 LF
	12-14 MILS FBE	
2	20" O.D. X 0.375" W.T. API5L, X-65,	0 LF
	12-14 MILS FBE, 16-18 MILS ARO	
3	20" O.D. X 0.500" W.T. API5L, X-65,	3,836 LF
	12-14 MILS FBE, 16-18 MILS ARO	

REFERENCE DRAWINGS

MEAP-ALIGN-3	ALIGNMENT SHEET
MEAP-ALIGN-4A	ALIGNMENT SHEET
MEAP-042.08 RD	INTERSTATE HIGHWAY 30
MEAP-042.08 HDD	INTERSTATE HIGHWAY 30
MEAP-042.08.02 RD	LANCASTER AVENUE
MEAP-042.07.03-HDD	WATER CONTROL DISTRICT LEVEE
MEAP-042.07.08-HDD	WATER CONTROL DISTRICT LEVEE
MEAP-042.07.03.03UT	CoFW 24" SANITARY SEWER LINE (STA. 178+03)
MEAP-042.07.03.04UT	CoFW 54" SANITARY SEWER LINE (STA. 178+89)
MEAP-042.08.02UT	CoFW 18" STORM DRAIN (STA. 209+46)
MEAP-042.08.00.02UT	CoFW 54" SANITARY SEWER LINE (STA. 209+79)

REVISION

NO.	DATE	DESCRIPTION	BY	CHK'D.	PROJ. ENGR.	ENG. APPR.
11	01/27/11	REVISED TEMPORARY WORKSPACE	TJA	RLC		
10	11/29/10	REVISED PER ENGINEERING COMMENTS	TJA	RLC		
9	9/27/10	REVISED PER ENGINEERING COMMENTS	TJA	RLC		
8	8/24/10	REVISED DEPTH IN ROW	TJA	RLC		
7	7/16/10	REVISE F/L & CLEARANCES	MBJ	RLC		
6	6/17/10	ADD SEGMENT LABEL	TJA	RLC		
5	6/09/10	REVISED PER Q.C. FOLLOW UP MEETING	MBJ	RLC		
4	5/19/10	REVISED PER Q.C. MEETING	SDS	RLC		
3	2/17/10	REVISED ROUTE, WORKSPACE, STATIONING, & PROFILE FOR CONSISTENCY WITH RESPECTIVE DRILL DRAWING	CLF	TLH		

texas MIDSTREAM GAS SERVICES

Amendment #1 - West Fork Levee Loop - Harmon Park

PROPOSED PIPELINE
20" MERCADO TO ARC PARK NATURAL GAS PIPELINE
CITY OF FORT WORTH, TARRANT COUNTY, TEXAS

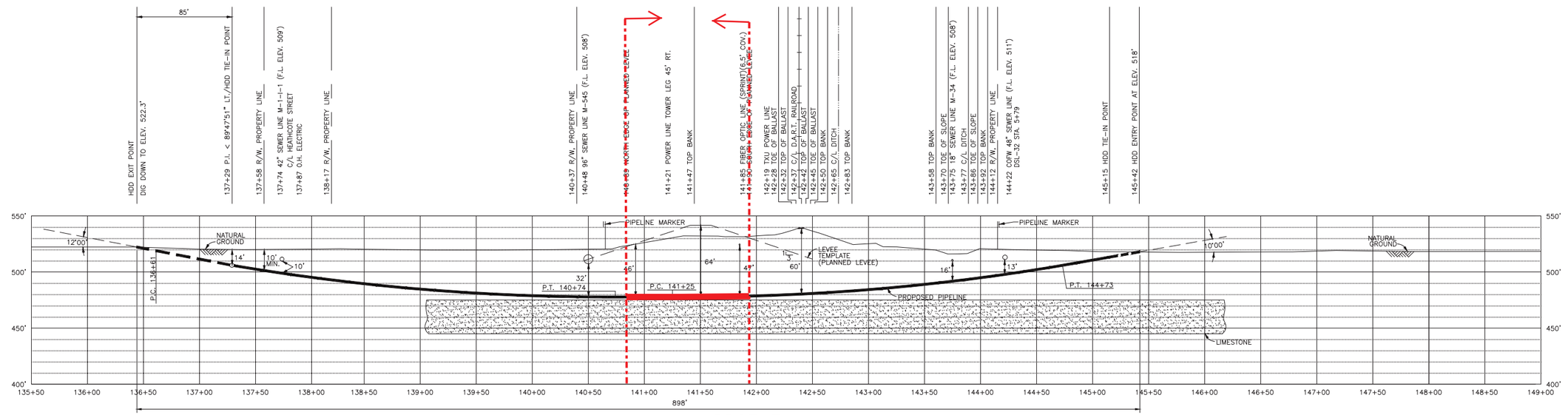
DATE:	06/06/08	SURVEYED BY:	MUSTANG – 12960
SCALE:	AS SHOWN	SEGMENT ID: 569316	AFE NO. 901423
DRAWN BY:	JCP	PROJ. ENGR.	
CHECKED:		ENG. APPROVAL	

DWG. NO. TX-TARR-MEAP-ALIGN-4 REV11

Exhibit B

TARRANT COUNTY, TEXAS
B. F. CROWLEY SURVEY, A-307

PLAN



PROFILE

CURVE DATA (EXIT)
D = 12°00'00"
R = 2000'
L = 418.9'
T = 210.2'

DATUM BASED ON TEXAS STATE PLANE COORDINATES SYSTEM, NAD 83 NORTH CENTRAL ZONE, NAVD 88, ELEVATIONS MSL, DERIVED FROM GPS OBSERVATIONS.

CURVE DATA (ENTRY)
D = 10°00'00"
R = 2000'
L = 349.00'
T = 175.00'

50' 0 50'
HORIZ. & VERT. SCALE IN F

20" HDD under Ham Branch Levee, Lower West Fork (MEAP)
and
8" HDD under Ham Branch Levee, Lower West Fork (Westgate)
(parallel pipelines, lateral spacing approx 20')

NOTES:

1. All welds are 100% X-Rayed. (Per AREMA 5.1.6.3)
2. All welded joints are sandblasted, heated to 160 degrees & the matching epoxy kit, per factory pipe coating, is applied.
3. The pipe is electrically tested "jeeped" for coating imperfections.
4. Two types of factory coating are used in the industry.
   1. F.B.E. "Fusion Bonded Epoxy" is used on open ditch applications. This coating is very durable but pliable.
   2. ARO coating is used in H.D.D. "Horizontal Directional Drill applications. The pipe is first coated with F.B.E. and then coated with ARO, which makes the coating pliable but impervious to scraps and scratches caused by rocks.
5. After the pipeline section is assembled, test heads are welded on both ends and hydrostatically tested to 1.5 times the M.A.O.P., Maximum Allowable Operating Pressure, for 8 hours with a "Deadweight Chart Recorder". The chart is then filed in the "Closing Package" of that project. (Per AREMA 5.1.6.3)
6. H.D.D. pipe = 20" O.D. x 0.500" W.T., API 5L X-65, 12-14 Mils FBE, W 16/18 Mils ARO.
7. Sacrificial anodes are used for temporary cathodic protection until the completed pipeline system is engineered for a rectified, 24 volt D.C. system with anode beds. D.O.T. requires an annual inspection of pipeline cathodic protection systems, but TMGS inspection requirements are bi-annual. No Dart above ground facilities are in the area. (Per AREMA 5.1.6b)
8. Per the DART railroad and TMGS pipeline, hydrostatic testing exceptions will be made to insure the safety of the DART railway system. The working pressure of this pipeline system is estimated to be 325 psig to 550 psig when the system is flowing to the Arc Park Compressor Facility. TMGS will set their hydrostatic test M.A.O.P. at 715 psig thus making the actual maximum testing pressure 1,125. (Per AREMA 5.1.6.3)
9. The pipe to be installed under said DART project is 20" O.D., 0.500" wall thickness, X-65 yield strength, 2,600 psi mill tested and 100% SMYS is 65,000 psi.

REV	DATE	BY	DESCRIPTION	CHK	ENGR	APPR	CLIENT
11	02/11/11	TJA	REVISED WORKSPACE	RLC			
10	01/26/11	TJA	REVISED WORKSPACE, HDD ENTRY/EXIT	RLC			
9	12/30/10	TJA	REVISE PER ENGINEERING MARKUP	RLC			
8	09/27/10	TJA	REVISE PER ENGINEERING COMMENTS	RLC			
7	07/16/10	MBJ	REVISE HDD PROFILE	RLC			
6	06/17/10	TJA	ADD SEGMENT NAME	RLC			
5	05/18/10	HLM	REVISED PER Q.C. MEETING/ADD LEVEE TEMPLATE	RLC			
4	03/09/10	TJA	REVISED STATIONING	RLC			

1-800-245-4545
WWW.TEXASONECALL.COM
TEXAS ONE CALL SYSTEM

PROJECT NO. 12960	SEGMENT ID: 569316	
DESIGNED BY		
DRAWN BY	RSH	03/07/08
CHECKED BY	CPD	07/03/08
APPROVED BY		
SCALE 1"= 50'		DATE

texas MIDSTREAM GAS SERVICES

PROPOSED MERCADO TO ARC PARK PIPELINE
SEGMENT 4 - 4TH ST. C.F. TO ALVARADO V.S.
HDD PLAN & PROFILE
DART RAILROAD
TARRANT COUNTY, TEXAS

DWG. NO. TX-TARR-MEAP-042.01 HDD REV. 11

Exhibit C

COUNTY & STATE	TARRANT COUNTY, TEXAS

OWNERSHIP & R/W NO.

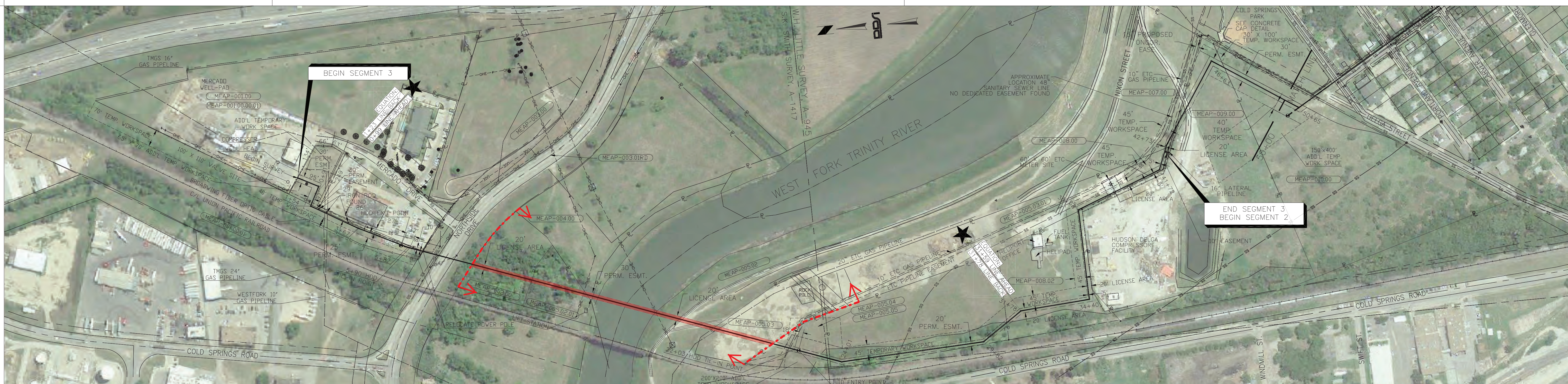
Tract	Owner	Stations
		0+00
MEAP-001.00 / MEAP-001.00.00.01	CHESAPEAKE EXPLORATION, L.P.	EQUATION: 1+23 LB, 0+99 LA; 1+49
MEAP-001.00.01	UNION PACIFIC RAILROAD	6+42
MEAP-003.01 RD	NORTHSIDE DRIVE	8+51
MEAP-002.00	TARRANT REGIONAL WATER DISTRICT	11+01
MEAP-005.02.01	TEXAS ELECTRIC SERVICE COMPANY	13+32
MEAP-004.00	LEGEND BANK NA	13+58
	WEST FORK TRINITY RIVER	
MEAP-005.02	TARRANT REGIONAL WATER DISTRICT	18+64
MEAP-005.03	CITY OF FORT WORTH	21+13
MEAP-005.04 / MEAP-005.05	FRANCES ELLEN GINSBURG	31+06
		EQUATION: 31+78 LB, 31+59 LA
MEAP-008.02	CITY OF FORT WORTH	38+00
MEAP-005.03.01	CITY OF FORT WORTH	41+21
MEAP-008.00	CITY OF FORT WORTH	42+63
MEAP-007.00	CITY OF FORT WORTH	43+44
MEAP-009.00	HUDSON CONSTRUCTION INC., et al	47+23
MEAP-010.00	CHERYL SUE ELLISTON	50+00

STATIONING & TRAVERSE ANGLES

- Bore Area
- Open Trench Area
- Tempory Construction Area

0+00 BEGIN SURVEY, FENCE LINE
0+40 CONCRETE SLAB 7' RT.
0+42 ENVIR. MONITOR WELL 9' RT.
0+44 CONCRETE SLAB 7' RT.
0+91 P.I.< 90°00'00" RT.
1+23 CONCRETE PARKING LOT 26' LT.
EQUATION:
1+23 LINE BACK
0+99 LINE AHEAD
1+38 O.H. ELECTRIC, POWER POLE 10' RT.
1+43 GUY WIRE 100' RT.
1+46 FENCE CORNER (4" STEEL PIPE) 100' RT.
1+49 R/W, PROPERTY LINE
1+54 P.I.< 86°38'01" LT.
1+77 PARKING LOT (CONC.) 13' LT.
2+16 TMGS 24" GAS PIPELINE (ELEV. 506.3' T.O.P.)
2+29 WESTFORK 10" GAS PIPELINE (ELEV. 509.3' T.O.P.)
3+59 POWER POLE 6' LT.
3+67 P.I.< 04°00'32" LT., CONCRETE PARKING LOT 18' LT.
3+91 POWER POLE 7' LT.
4+42 FENCE (6' CHAIN LINK)
4+59 FENCE (6' CHAIN LINK)
5+82 P.I.< 06°12'36" LT., CONCRETE PARKING LOT 8' LT.,
BROADWING FIBER OPTIC CABLE 37' RT.
5+90 HDD TIE-IN POINT
HDD EXIT POINT 37' RT.
6+03 POWER POLE 5' LT.
6+42 R/W, PROPERTY LINE
6+43 GUY ANCHOR, POWER POLE 1' LT.
6+44 BURIED TELEPHONE (2' COV.)
6+45 CORNER CONCRETE PARKING LOT 1' RT.
6+51 POWER POLE 20' LT.
6+96 12" SANITARY SEWER (F/L ELEV. 518')
7+04 O.H. ELECTRIC
7+12 EDGE OF ROAD
7+42 C/L NORTHSIDE DRIVE
7+60 O.H. ELECTRIC
7+75 EDGE OF ROAD
8+51 R/W, PROPERTY LINE
11+01 PROPERTY LINE
13+18 O.H. ELECTRIC
13+32 PROPERTY LINE
13+49 LIFT STATION 52' RT.
13+58 PROPERTY LINE
13+80 EDGE OF WATER
14+96 C/L WEST FORK TRINITY RIVER
16+21 EDGE OF WATER
16+22 O.H. ELECTRIC (TXU)
17+19 EDGE OF ROAD
17+25 C/L GRAVEL ROAD
17+25 TRANSMISSION TOWER 91' RT.
17+31 EDGE OF ROAD
17+95 EDGE OF ROAD
18+07 C/L GRAVEL ROAD
18+19 EDGE OF ROAD
18+64 PROPERTY LINE
18+82 ETC 20" GAS PIPELINE (ELEV. 529' T.O.P.)
19+26 C/L OF LEVEE
21+13 PROPERTY LINE
21+79 ETC 10" GAS PIPELINE (ELEV. 530.7' T.O.P.)
22+03 P.I.< 16°33'31" LT., HDD TIE-IN POINT
22+21 HDD ENTRY POINT
23+07 TOP OF BANK
23+40 SURVEY LINE (APPROXIMATE)
23+52 PROPERTY LINE
24+01 P.I.< 22°50'44" LT.
26+26 MANHOLE 10' RT.
26+33 48" COFW SANITARY SEWER #M-245-B (F/L ELEV. 508.9')
29+82 P.I.< 31°36'36" LT.
31+04 PROPERTY LINE
31+06 TOP OF BANK
31+78 P.I.< 30°00'00" RT.
EQUATION:
31+78 LINE BACK
31+59 LINE AHEAD
34+40 P.I.< 87°18'09" LT.
34+84 FENCE CORNER 15' RT.
35+90 HELIPAD CORNER 178' LT.
36+77 POLICE HELIPORT OFFICE 160' LT.
36+78 FUEL TANK 120' LT.
37+28 POLICE HELIPORT OFFICE 160' LT.
38+00 PROPERTY LINE
38+05 P.I.< 70°39'00" RT.
38+16 FENCE CORNER 15' RT.
38+67 GUY ANCHOR 7' RT.
38+93 POWER POLE (WOOD) 7' RT.
39+39 ENTER 60' X 60' ETC METER SITE
39+71 6" TMGS GAS PIPELINE (ELEV. 530' T.O.P.)
39+99 EXIT 60' X 60' ETC METER SITE
41+21 PROPERTY LINE
41+33 POWER POLE (WOOD) 7' RT.
41+59 GUY ANCHOR 8' RT.
41+72 P.I.< 47°53'00" LT., ELECTRIC METER 11' RT.
41+76 POWER POLE (WOOD) 12' RT.
41+79 GUY ANCHOR 15' RT.
41+95 POWER POLE (WOOD) 13' RT.
42+50 20" X 16" STD. TEE, WE BLOCK VALVE, CAP
42+63 PROPERTY LINE
42+73 P.I.< 12°13'30" RT.
43+38 O.H. ELECTRIC
43+44 PROPERTY LINE
43+86 FENCE
44+19 FENCE
44+23 POWER POLE 18' LT.
44+35 EDGE OF ROAD
44+49 C/L GRAVEL ROAD
44+64 EDGE OF ROAD
46+63 P.I.< 90°00'00" RT.
47+23 PROPERTY LINE
50+00 MATCH LINE

ALIGNMENT



PIPE DETAIL

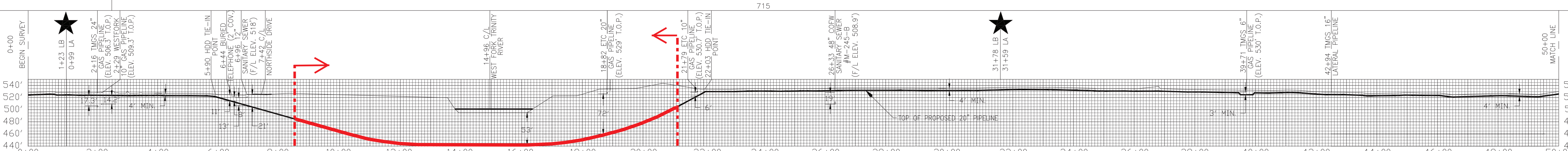
Stations	Pipe	Length
0+00 – 5+90 (L.B. 1+23 / L.A. 0+99)	1	614'
5+90 – 22+03 (HDD-SEE DWG. MEAP-005.00 HDD)	3	1613'
22+03 – 50+00 (L.B. 31+78 / L.A. 31+59)	1	2,816'

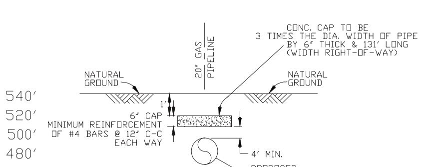
03/09/2010

ACTUAL CLASS LOCATION	
HYDROSTATIC TEST PRESSURE (P.S.I.G.)	1125
M.A.O.P. (P.S.I.G.)	715

PROFILE

HORIZONTAL SCALE = 200'
VERTICAL SCALE = 100'





North Main Levee Loop, Lower West Fork

(MEAP at Northside Drive)

GENERAL INFORMATION

CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.

DATUM BASED ON TEXAS STATE PLANE COORDINATES SYSTEM, NAD 83 NORTH CENTRAL ZONE, NAVD 88, DERIVED FROM GPS OBSERVATIONS.

TITLE INFORMATION PROVIDED BY TEXAS MIDSTREAM GAS SERVICES, L.L.C.

200 0 200 400
HORIZ. SCALE IN FEET

100 0 100 200
VERT. SCALE IN FEET

LEGEND

Symbol		Symbol	
	TREE	WV	WATER VALVE
	MAIL BOX		GAS LIGHT
	SIGN		LIGHT POLE
	POWER POLE	—OHE—	POWER LINE
	GUY ANCHOR	—G—	GAS LINE
	CABLE BOX	—T—	TELEPHONE LINE
	FIRE HYDRANT	—SD—	STORM SEWER LINE
	SEWER MANHOLE	—SS—	SANITARY SEWER LINE
	DRAINAGE MANHOLE	—W—	WATER LINE
	WATER METER	—X—	FENCE LINE
	GAS METER		TREE LINE
	GAS VALVE		WELL
			TEST LOCATION

EXISTING UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS GENERATED FROM PREVIOUS MAPS AND SURVEY. CONTRACTOR SHALL VERIFY EXACT LOCATION AND ELEVATION OF ALL EXISTING UTILITIES IN AREA OF WORK PRIOR TO CONSTRUCTION AND CALL TEXAS ONE CALL SYSTEM AT 1-800-245-4545 AND ALL OTHER UTILITY COMPANIES AT LEAST 2 WORKING DAYS (48 HOURS) PRIOR TO CONSTRUCTION.

1-800-245-4545
WWW.TEXASONECALL.COM
TEXAS ONE CALL SYSTEM

FIELD NOTES

STA. TO STA.	BOOK NO.	PAGE
0+00 – 6+15	1296001–B	60 – 63
6+15 – 31+17	1296001–B1	28 – 35
31+17 – 47+84	1296001–B	2 – 5
47+84 – 54+29	1296001–?	4
54+29 – 57+00	1296001–B	6 & 7

SUMMARY OF MATERIALS

	DESCRIPTION	
1	20" O.D. X 0.375" W.T. API–5L, X65,	3,430 LF
	12–14 MILS FBE	
2	20" O.D. X 0.375" W.T. API–5L, X65,	0 LF
	12–14 MILS FBE, 16–18 MILS ARO	
3	20" O.D. X 0.500" W.T. API–5L, X65,	1,613 LF
	12–14 MILS FBE, 16–18 MILS ARO	

REFERENCE DRAWINGS

MEAP–ALIGN–2	ALIGNMENT SHEET
MEAP–003.01RD	NORTHSIDE DRIVE
MEAP–005.00 HDD	NORTHSIDE DRIVE & WEST FORK TRINITY RIVER HDD PROFILE
MEAP–005.06UT	48" COFW SANITARY SEWER #M–245–B

REVISION

NO.	DATE	DESCRIPTION	BY	CH'KD.	PROJ. ENGR.	ENG. APPR.
15	01/27/11	REVISED ROUTE FOR SAN. SEWER LINE, ADD ONCOR EASE.	TJA	RLC		
14	01/17/11	REVISED PER ENGINEERING COMMENTS	TJA	RLC		
13	09/27/10	REVISED PER ENGINEERING COMMENTS	TJA	RLC		
12	09/16/10	REMOVED VALVE SITE, ADDED 12" LATERAL	TJA	RLC		
11	07/15/10	ADD T.O.P. ELEVATIONS, REVISE CLEARANCES	MBJ	RLC		
10	07/01/10	REVISED HDD ACROSS RIVER, ADDED SAN. SEWER	TJA	RLC		
9	06/17/10	ADD SEGMENT LABEL	TJA	RLC		
8	06/09/10	REVISED PER Q.C. FOLLOW UP MEETING	TJA	RLC		
7	05/14/10	REVISED PER Q.C. MEETING	MBJ	RLC		

texas MIDSTREAM GAS SERVICES

DDSi

PROPOSED PIPELINE
MERCADO TO ARC PARK
TARRANT COUNTY, TEXAS

DATE: 08/22/2007	SURVEYED BY: MUSTANG – 12960
SCALE: AS SHOWN	SEGMENT ID: 569316
DRAWN BY: RSH	PROJ. ENGR.
CHECKED: CHK_BY	ENG. APPROVAL

DWG. NO. TX–TARR–MEAP–ALIGN–1–REV15

J:\Chesapeake\2009-035 (Mercado To Arc Park)\Working Drawings\ALIGNMENT SHEETS\TX-TARR-MEAP-ALIGN-1-REV15.dwg, 1/31/2011 11:10:16 AM, DWG To PDF.pc3

Exhibit D1

COUNTY & STATE: TARRANT COUNTY, TEXAS

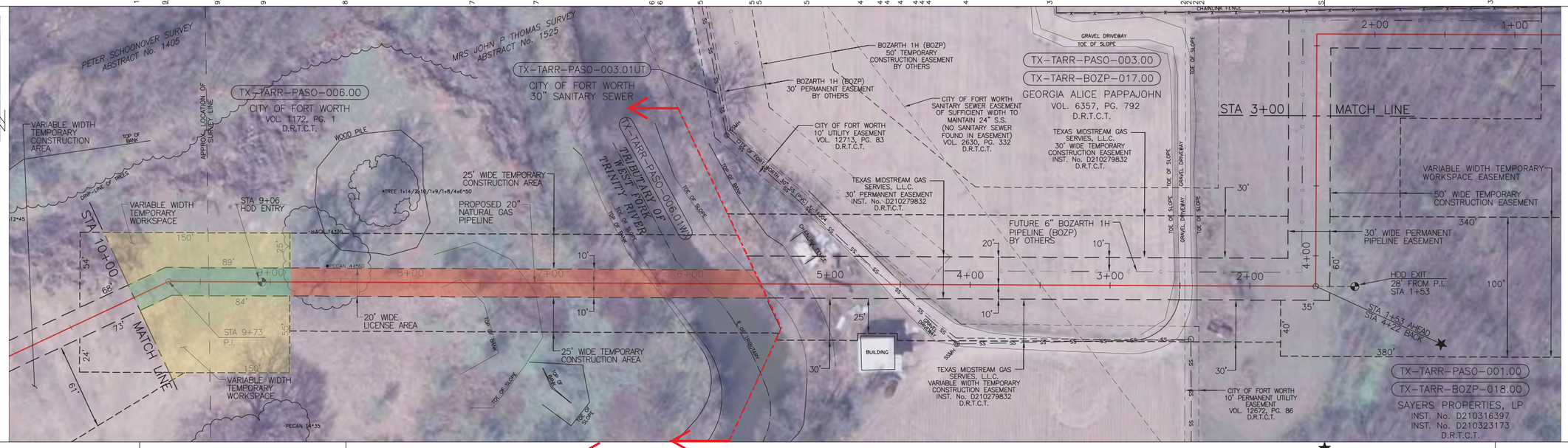
OWNERSHIP & R/W NO.

- 10+00 – 5+50: TX-TARR-PASO-006.00 — CITY OF FORT WORTH
- 5+50 – 2+46: TX-TARR-PASO-003.00, TX-TARR-BOZP-017.00 — GEORGIA ALICE PAPPAJOHN
- 2+46 – 3+00: TX-TARR-PASO-001.00, TX-TARR-BOZP-018.00 — SAYERS PROPERTIES, LP

STATIONING & TRAVERSE ANGLES

10+00 MATCH LINE; 9+73 BEND 25°16'46" L; 9+44 SURVEY LINE; 9+06 HDD ENTRY; 8+53 CONNECTION POINT; 7+62 TOP BANK; 7+16 TOE SLOPE; 6+27 TOP BANK; 6+22 TOE OF SLOPE; 5+92 FL OF TRIBUTARY; 5+51 TOE OF SLOPE; 5+50 PROPERTY LINE; 5+16 TOP BANK; 4+78 BUILDING CORNER 37' L; 4+63 EDGE GRAVEL DRIVE; 4+56 CITY OF FORT WORTH 30" SANITARY SEWER EASEMENT; 4+56 CITY OF FORT WORTH 10' UTILITY EASEMENT; 4+54 BUILDING CORNER 37' L; 4+47 EDGE GRAVEL DRIVE; 4+40 CITY OF FORT WORTH 10' UTILITY EASEMENT; 4+09 SANITARY SEWER MANHOLE 42' L; 3+49 CITY OF FORT WORTH SANITARY SEWER EASEMENT; 2+50 EDGE GRAVEL DRIVE; 2+28 PROPERTY LINE; 2+27 SANITARY SEWER MANHOLE 38' L; 2+27 EDGE GRAVEL DRIVE; STATION EQUATION STA 1+53 AHEAD STA 4+22 BACK 1+53 BEND 90°00'00" R. CONNECTION POINT, HDD EXIT 28' FROM P.I.; 3+00 MATCH LINE

ALIGNMENT



PIPE DETAIL

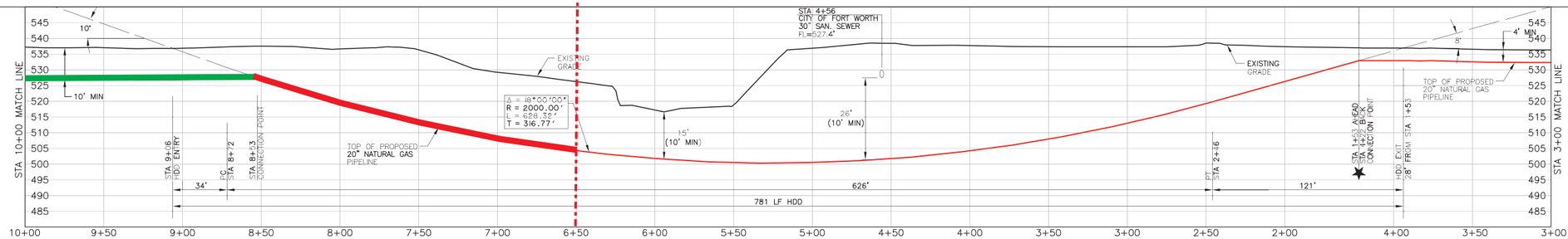
①	②	①
10+00 – 8+53		STATION EQUATION STA 1+53 AHEAD STA 4+22 BACK – 3+00
147'	700'	122'

ACTUAL CLASS LOCATION

HYDROSTATIC TEST PRESSURE (P.S.I.G.)

M.A.O.P. (P.S.I.G.)

PROFILE HORIZONTAL SCALE = 40' VERTICAL SCALE = 20'



GENERAL INFORMATION

CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.

BEARINGS SHOWN HEREON ARE CORRELATED TO THE TEXAS STATE PLANE COORDINATE SYSTEM, NORTH CENTRAL ZONE, 4202, NAD OF 1983, AS DERIVED BY FIELD OBSERVATIONS UTILIZING THE RTK NETWORK ADMINISTRATED BY WESTERN DATA SYSTEMS.

VERTICAL DATUM IS BASED ON THE NAVD OF 1988, AS DERIVED BY FIELD OBSERVATIONS UTILIZING THE RTK NETWORK ADMINISTRATED BY WESTERN DATA SYSTEMS.

TITLE INFORMATION PROVIDED BY TEXAS MIDSTREAM GAS SERVICES, L.L.C.

40 0 40 80 HORIZ. SCALE IN FEET

20 0 20 40 VERT. SCALE IN FEET

LEGEND

SIGN	PROPOSED PIPELINE
POWER POLE	℄ ROAD
GUY ANCHOR	℄ CREEK/DITCH
FIRE HYDRANT	PROPERTY/R.O.W. LINE
SEWER MANHOLE	TEMPORARY EASEMENT/WS
DRAINAGE MANHOLE	PERMANENT EASEMENT
WATER METER	EASEMENT
GAS METER	FIBER OPTIC
GAS VALVE	UNDERGROUND ELECTRIC
BORE/HDD ENTRY/EXIT	OVERHEAD ELECTRIC
WATER VALVE	GAS LINE
GAS LIGHT	TELEPHONE LINE
LIGHT POLE	STORM SEWER LINE
TEST LEAD	SANITARY SEWER LINE
	WATER LINE
	FENCE LINE
	WELL

EXISTING UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS GENERATED FROM PREVIOUS MAPS AND SURVEYS. CONTRACTOR SHALL VERIFY EXACT LOCATION AND ELEVATION OF ALL EXISTING UTILITIES IN AREA OF WORK PRIOR TO CONSTRUCTION. DEPICTED LOCATION MAY VARY SIGNIFICANTLY FROM ACTUAL LOCATION. CALL TEXAS ONE CALL SYSTEM AT 1-800-245-4545 AND ALL OTHER UTILITY COMPANIES AT LEAST 2 WORKING DAYS (48 HOURS) PRIOR TO CONSTRUCTION.

1-800-245-4545
WWW.TEXASONECALL.COM
TEXAS ONE CALL SYSTEM

IFA
(ISSUED FOR APPROVAL)

DATE: FEBRUARY 14, 2011

SUMMARY OF MATERIALS

	DESCRIPTION		REFERENCE DRAWINGS	
1	20.000" O.D. X 0.375" W.T. API-5L-X65, I2-I4 MILS FBE	269'	PASO-003.01UT	30" SANITARY SEWER (PERMIT)
			PASO-006.01WX	TRIBUTARY OF WEST FORK TRINITY RIVER (PERMIT)
2	20.000" O.D. X 0.375" W.T. API-5L-X65, I2-I4 MILS FBE, W/I6-I8 MILS ARO	700'		

REVISION

NO.	DATE	DESCRIPTION	BY	CH'KD.	PROJ. ENGR.	ENG. APPR.
5	02/11/11	REV. VERT. ALIGN. TO 10' PER CITY REQUEST	TAH	TWR		
4	09/27/10	REVISED EASEMENTS & ADDED FUTURE PIPELINE	TAH	TWR		
3	08/26/10	REVISED EASEMENTS	TAH	PLG		
2	07/09/10	REVISED HDD AND EASEMENTS	AED	TAH		
1	05/25/10	ADDED TEMPORARY WORKSPACE EASEMENT	AED	TAH		

texas MIDSTREAM GAS SERVICES

Amendment #1 - Brookside Levee Sump 12
(Sheet 1 of 3)

20" PAPPAJOHN TO SHADY OAKS
NATURAL GAS PIPELINE
PHASE THREE
CITY OF FORT WORTH, TARRANT COUNTY, TEXAS

DATE:	02-11-2011	AFE No.	910184
SCALE:	AS SHOWN	SEGMENT ID:	563356
DRAWN BY:	CLM	PROJ. ENGR.	
CHECKED:	TAH	ENG. APPROVAL	

DWG. FILE. TX-TARR-PASO-ALIGN1-REV5

12:41 WA#09074 TX-TARR-PASO-ALIGN-REV5.dwg

Exhibit D2

COUNTY & STATE — TARRANT COUNTY, TEXAS

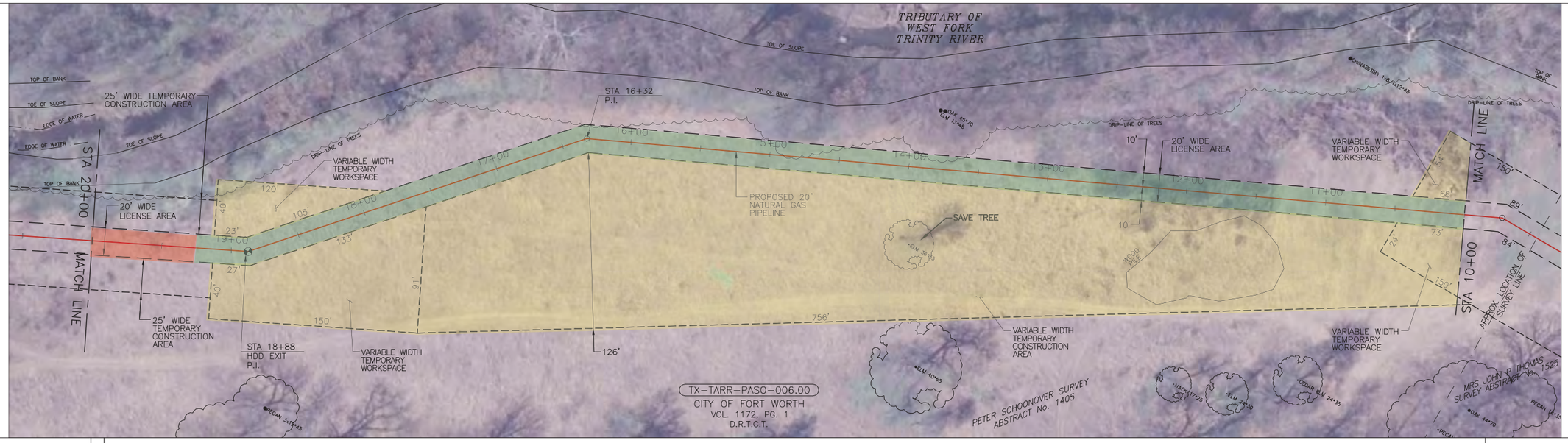
OWNERSHIP & R/W NO.

TX-TARR-PASO-006.00
CITY OF FORT WORTH

STATIONING & TRAVERSE ANGLES

20+00 MATCH LINE
19+90 CONNECTION POINT
18+88 BEND 22°23'27" R
18+88 HDD EXIT
16+32 BEND 23°25'10" L
10+00 MATCH LINE

ALIGNMENT



PIPE DETAIL

20+00	19+90	18+88	16+32	10+00
③ 10'			① 990'	

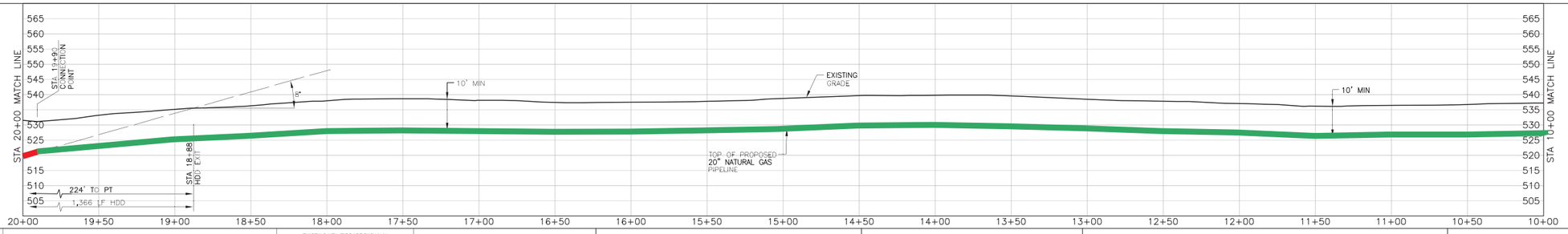
ACTUAL CLASS LOCATION

HYDROSTATIC TEST PRESSURE (P.S.I.G.)

M.A.O.P. (P.S.I.G.)

PROFILE

HORIZONTAL SCALE = 40'
VERTICAL SCALE = 20'



GENERAL INFORMATION

CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.

BEARINGS SHOWN HEREON ARE CORRELATED TO THE TEXAS STATE PLANE COORDINATE SYSTEM, NORTH CENTRAL ZONE, 4202, NAD OF 1983, AS DERIVED BY FIELD OBSERVATIONS UTILIZING THE RTK NETWORK ADMINISTRATED BY WESTERN DATA SYSTEMS.

VERTICAL DATUM IS BASED ON THE NAVD OF 1988, AS DERIVED BY FIELD OBSERVATIONS UTILIZING THE RTK NETWORK ADMINISTRATED BY WESTERN DATA SYSTEMS.

TITLE INFORMATION PROVIDED BY TEXAS MIDSTREAM GAS SERVICES, L.L.C.

40 0 40 80
HORIZ. SCALE IN FEET

20 0 20 40
VERT. SCALE IN FEET

LEGEND

- SIGN
- POWER POLE
- GUY ANCHOR
- FIRE HYDRANT
- SEWER MANHOLE
- DRAINAGE MANHOLE
- WATER METER
- GAS METER
- GAS VALVE
- BORE/HDD ENTRY/EXIT
- WATER VALVE
- GAS LIGHT
- LIGHT POLE
- TEST LEAD
- PROPOSED PIPELINE
- ROAD
- CREEK/DITCH
- PROPERTY/R.O.W. LINE
- TEMPORARY EASEMENT/WS
- PERMANENT EASEMENT
- EASEMENT
- FIBER OPTIC
- UNDERGROUND ELECTRIC
- OVERHEAD ELECTRIC
- GAS LINE
- TELEPHONE LINE
- STORM SEWER LINE
- SANITARY SEWER LINE
- WATER LINE
- FENCE LINE
- WELL

EXISTING UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS GENERATED FROM PREVIOUS MAPS AND SURVEYS. CONTRACTOR SHALL VERIFY EXACT LOCATION AND ELEVATION OF ALL EXISTING UTILITIES IN AREA OF WORK PRIOR TO CONSTRUCTION. DEPICTED LOCATION MAY VARY SIGNIFICANTLY FROM ACTUAL LOCATION. CALL TEXAS ONE CALL SYSTEM AT 1-800-245-4545 AND ALL OTHER UTILITY COMPANIES AT LEAST 2 WORKING DAYS (48 HOURS) PRIOR TO CONSTRUCTION.

1-800-245-4545
WWW.TEXASONECALL.COM
TEXAS ONE CALL SYSTEM

IFA
(ISSUED FOR APPROVAL)

DATE: FEBRUARY 14, 2011

SUMMARY OF MATERIALS

	DESCRIPTION	
1	20.000" O.D. X 0.375" W.T. API-5L-X65, I2-I4 MILS FBE	990'
2	20.000" O.D. X 0.375" W.T. API-5L-X65, I2-I4 MILS FBE, W/I6-I8 MILS ARO	0'
3	20.000" O.D. X 0.500" W.T. API-5L-X65, I2-I4 MILS FBE, W/I6-I8 MILS ARO	I0'

REFERENCE DRAWINGS

REVISION

NO.	DATE	DESCRIPTION	BY	CH'KD.	PROJ. ENGR.	ENG. APPR.
3	02/11/11	REV. VERT. ALIGN. TO 10' DEPTH PER CITY REQUEST	TAH	TWR		
2	07/15/10	REVISED EASEMENTS	AED	TAH		
1	05/25/10	REVISED W.T. & ADDED TEMPORARY WORKSPACE EASEMENT	AED	TAH		

texas MIDSTREAM GAS SERVICES

Amendment #1 - Brookside Levee Sump 12
(Sheet 2 of 3)

20" PAPPAJOHN TO SHADY OAKS
NATURAL GAS PIPELINE
PHASE THREE
CITY OF FORT WORTH, TARRANT COUNTY, TEXAS

DATE:	02-11-2011	AFE No.	910184
SCALE:	AS SHOWN	SEGMENT ID:	563356
DRAWN BY:	CLM	PROJ. ENGR.	
CHECKED:	TAH	ENG. APPROVAL	

DWG. FILE. TX-TARR-PASO-ALIGN2-REV3

TX-TARR-PASO-ALIGN2-REV3.dwg
WA#90074
11:48

Exhibit D3

COUNTY & STATE — TARRANT COUNTY, TEXAS

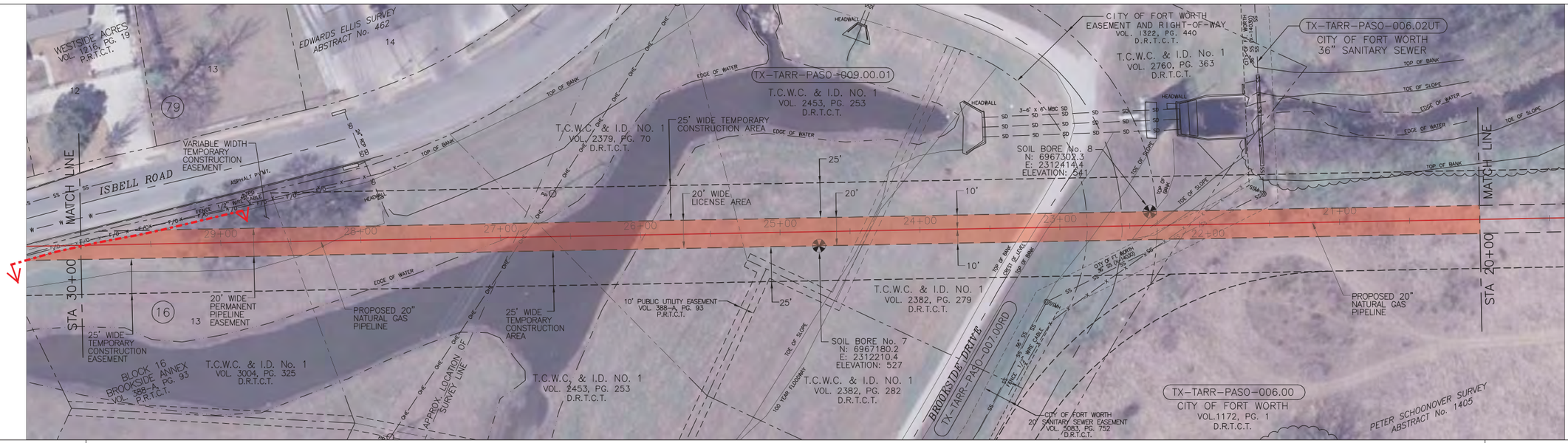
OWNERSHIP & R/W NO.

30+00 — TX-TARR-PASO-009.00.01 T.C.W.C. & I.D. No. 1 — 22+07 — TX-TARR-PASO-006.00 CITY OF FORT WORTH — 20+00

STATIONING & TRAVERSE ANGLES

30+00 MATCH LINE
29+68 TOP BANK
28+83 TELEPHONE PEDESTAL 32' R
28+52 PROPERTY LINE
28+19 TOP BANK
27+85 STORM DRAIN HEADWALL 29' R
26+95 EDGE WATER
26+89 SURVEY LINE
26+83 OVERHEAD ELECTRIC LINE
26+62 POWER POLE 31' R
25+97 EDGE WATER
24+73 SOIL BORE No. 7 10' LT.
24+38 TOE OF SLOPE
24+36 100 YR. FLOODWAY
23+25 TOP BANK/EDGE GRAVEL ROAD
23+17 CREST OF LEVEE
23+08 TOP BANK/EDGE GRAVEL ROAD
22+72 TOE SLOPE
22+41 TOP BANK
22+36 SOIL BORE No. 8 10' RT.
22+32 TOE SLOPE
22+22 CITY OF FORT WORTH 20' SANITARY SEWER EASEMENT, TOP OF BANK
22+08 WIRE CABLE FENCE
22+07 PROPERTY LINE
21+97 CITY OF FORT WORTH 36" SANITARY SEWER FL=528.8'
21+75 CITY OF FORT WORTH 20' SANITARY SEWER EASEMENT
21+54 SANITARY SEWER MANHOLE 21' R
20+00 MATCH LINE

ALIGNMENT



PIPE DETAIL

30+00 — ③ — 1,000' — 20+00

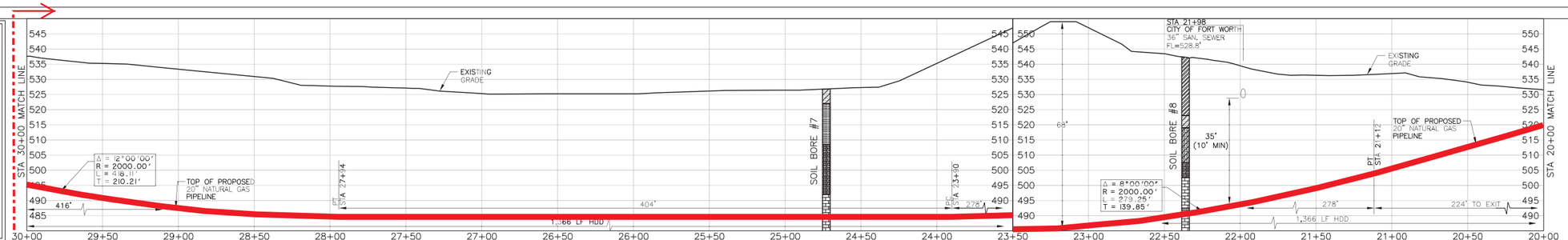
ACTUAL CLASS LOCATION

HYDROSTATIC TEST PRESSURE (P.S.I.G.)

M.A.O.P. (P.S.I.G.)

PROFILE

HORIZONTAL SCALE = 40'
VERTICAL SCALE = 20'



SOIL BORE LEGEND

COMMON UNIFIED SOIL CLASSIFICATION SYSTEM GROUPS
- SANDY LEAN CLAY (CL)
- LEAN CLAY (CL)
- CLAYEY SAND (SC)
- POORLY GRADED SAND WITH SILT (SP-SM)
- SILTY SAND (SM)
- SANDY SILTY CLAY (CL-ML)
- FAT CLAY (CH)

MISCELLANEOUS MATERIALS
- FILL

SEDIMENTARY ROCKS
- LIMESTONE

GENERAL INFORMATION

CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.

BEARINGS SHOWN HEREON ARE CORRELATED TO THE TEXAS STATE PLANE COORDINATE SYSTEM, NORTH CENTRAL ZONE, 4202, NAD OF 1983, AS DERIVED BY FIELD OBSERVATIONS UTILIZING THE RTK NETWORK ADMINISTRATED BY WESTERN DATA SYSTEMS.

VERTICAL DATUM IS BASED ON THE NAVD OF 1988, AS DERIVED BY FIELD OBSERVATIONS UTILIZING THE RTK NETWORK ADMINISTRATED BY WESTERN DATA SYSTEMS.

TITLE INFORMATION PROVIDED BY TEXAS MIDSTREAM GAS SERVICES, L.L.C.

40 0 40 80
HORIZ. SCALE IN FEET

20 0 20 40
VERT. SCALE IN FEET

LEGEND

- SIGN
- POWER POLE
- GUY ANCHOR
- FIRE HYDRANT
- SEWER MANHOLE
- DRAINAGE MANHOLE
- WATER METER
- GAS METER
- GAS VALVE
- BORE/HDD ENTRY/EXIT
- WATER VALVE
- GAS LIGHT
- LIGHT POLE
- TEST LEAD
- PROPOSED PIPELINE
- ℄ ROAD
- ℄ CREEK/DITCH
- PROPERTY/R.O.W. LINE
- TEMPORARY EASEMENT/WS
- PERMANENT EASEMENT
- EASEMENT
- FIBER OPTIC
- UGE UNDERGROUND ELECTRIC
- OHE OVERHEAD ELECTRIC
- G GAS LINE
- T TELEPHONE LINE
- SD STORM SEWER LINE
- SS SANITARY SEWER LINE
- W WATER LINE
- X FENCE LINE
- WELL

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1-800-245-4545
WWW.TEXASONECALL.COM
TEXAS ONE CALL SYSTEM

IFA
(ISSUED FOR APPROVAL)

DATE: FEBRUARY 14, 2011

SUMMARY OF MATERIALS

	DESCRIPTION		REFERENCE DRAWINGS	
1	20.000" O.D. X 0.375" W.T. API-5L-X65,	0'	PASO-006.02UT	36" SANITARY SEWER (PERMIT)
	12-14 MILS FBE		PASO-009.00LEVEE	T.C.W.C.I.D. LEVEE (PERMIT)
2	20.000" O.D. X 0.375" W.T. API-5L-X65,	0'		
	12-14 MILS FBE, W/16-18 MILS ARO			
3	20.000" O.D. X 0.500" W.T. API-5L-X65,	1,000'		
	12-14 MILS FBE, W/16-18 MILS ARO			

REVISION

NO.	DATE	DESCRIPTION	BY	CH'KD.	PROJ. ENGR.	ENG. APPR.
4	02/13/11	REVISED OWNER INFORMATION AND BOUNDARY LINES	JPR	TAH		
3	11/12/10	ADDED SOIL BORE LOGS TO PROFILE	TVW	TVW		
2	07/15/10	UPDATED TRACT NUMBERS, OWNERSHIP INFO & ADDED SOIL BORE LOCATIONS	AED	TAH		
1	05/25/10	REVISED W.T.	AED	TAH		

texas MIDSTREAM GAS SERVICES

Amendment #1 - Brookside Levee Sump 12
(Sheet 3 of 3)

20" PAPPAJOHN TO SHADY OAKS
NATURAL GAS PIPELINE
PHASE THREE
CITY OF FORT WORTH, TARRANT COUNTY, TEXAS

DATE:	02-13-2011	AFE No.	910184
SCALE:	AS SHOWN	SEGMENT ID:	563356
DRAWN BY:	CLM	PROJ. ENGR.	
CHECKED:	TAH	ENG. APPROVAL	

DWG. FILE. TX-TARR-PASO-ALIGN3-REV4

TX-TARR-PASO-ALIGN3-REV4.dwg
W&#09074
12 of 17

Exhibit E1

COUNTY & STATE | **TARRANT COUNTY, TEXAS**

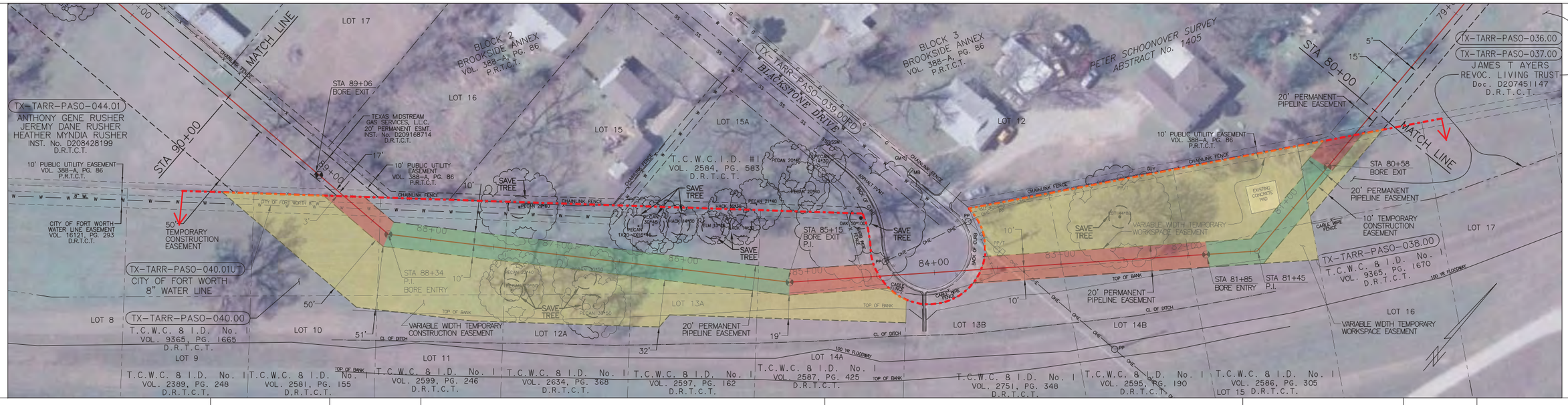
OWNERSHIP & R/W NO.

90+00	TX-TARR-PASO-044.01 ANTHONY GENE RUSHER, JEREMY DANE RUSHER, HEATHER MYNDIA RUSHER	88+80	TX-TARR-PASO-040.00 T.C.W.C.I.D. #1	84+44	TX-TARR-PASO-039.00ORD BLACKSTONE DRIVE CITY OF FORT WORTH	83+63	TX-TARR-PASO-038.00 T.C.W.C.I.D. #1	80+84	TX-TARR-PASO-036.00, TX-TARR-PASO-037.00 JAMES T. AYERS REVOCABLE LIVING TRUST	80+00

STATIONING & TRAVERSE ANGLES

90+00 MATCH LINE
89+35 PROPERTY CORNER 44' L
89+15 PROPERTY CORNER 21' R
89+06 BORE EXIT
88+80 10' UTILITY EASEMENT
88+80 CHAINLINK FENCE
88+80 PROPERTY LINE
88+72 10' UTILITY EASEMENT
88+63 CITY OF FORT WORTH 8" WATER LINE PIPE LOOP
88+57 PROPERTY CORNER 18' R
88+56 10' UTILITY EASEMENT
88+52 PROPERTY CORNER 23' R
88+51 CHAIN LINK FENCE CORNER 23' R
88+43 PROPERTY LINE
88+34 BEND 33°47'03" R, BORE ENTRY
87+43 PROPERTY CORNER 37' R
87+40 PROPERTY LINE
87+32 PECAN 29*50 33' L
87+30 PECAN 22*40 20' L
86+75 PECAN 30*50 16' L
86+66 PECAN 30*50 37' L
86+59 CHAIN LINK FENCE CORNER 44' R
86+40 PROPERTY LINE
86+38 PECAN 20-10*45 30' R
86+27 PECAN 30*45 32' R
86+07 HACKBERRY 14*30 35' R
85+80 ELM 13*26 36' R
85+58 HACKBERRY 14*30 40' R
85+40 PROPERTY LINE
85+15 BEND 10°36'50" R
85+15 BORE EXIT
84+56 CABLE WIRE FENCE CORNER 7' L
84+55 CABLE WIRE FENCE
84+44 RIGHT-OF-WAY LINE
84+39 PROPERTY CORNER 7' L
84+35 BACK OF CURB
84+09 CONCRETE FLUME 15' L
84+03 CL BLACKSTONE DRIVE
84+02 CABLE WIRE FENCE CORNER 17' L
83+75 BACK OF CURB
83+71 POWER POLE 38' R
83+70 CHAINLINK CABLE WIRE FENCE CORNER 49' R
83+65 PROPERTY CORNER 4' L
83+64 GUY WIRE 48' R LINE
83+54 CABLE WIRE FENCE
83+50 POWER POLE 15' L
83+44 POWER POLE 49' R
83+34 OVERHEAD ELECTRIC LINE
82+99 PROPERTY LINE
82+51 COTTONWOOD 44*80 34' R
82+31 PROPERTY LINE
81+99 PROPERTY LINE
81+85 BORE ENTRY
81+45 BEND 46°17'44" R
81+25 CORNER CONC. PAD 22' R
81+23 PROPERTY LINE
81+11 CORNER CONC. PAD 40' R
81+06 CORNER CONC. PAD 8' R
81+00 PROPERTY CORNER 18' L
80+93 CORNER CONC. PAD 25' R
80+84 CABLE WIRE FENCE
80+58 BORE EXIT
80+38 CHAIN LINK FENCE CORNER 15' R
80+31 PROPERTY CORNER 13' R
80+31 10' UTILITY EASEMENT
80+25 PROPERTY LINE
80+17 10' UTILITY EASEMENT
80+00 MATCH LINE

ALIGNMENT

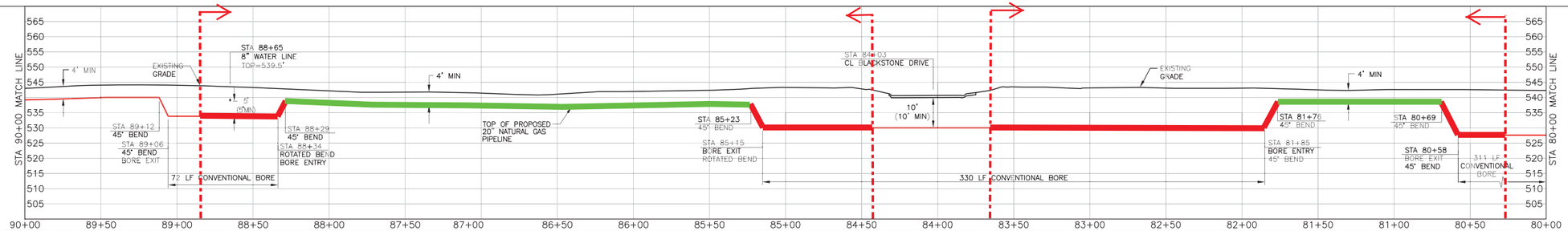


PIPE DETAIL

90+00	① 94'	89+06	② 72'	88+34	① 319'	85+15	② 330'	81+85	① 127'	80+58	② 58'	80+00

ACTUAL CLASS LOCATION
HYDROSTATIC TEST PRESSURE (P.S.I.G.)
M.A.O.P. (P.S.I.G.)

PROFILE HORIZONTAL SCALE = 40' VERTICAL SCALE = 20'



GENERAL INFORMATION

CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.

BEARINGS SHOWN HEREON ARE CORRELATED TO THE TEXAS STATE PLANE COORDINATE SYSTEM, NORTH CENTRAL ZONE, 4202, NAD OF 1983, AS DERIVED BY FIELD OBSERVATIONS UTILIZING THE RTK NETWORK ADMINISTRATED BY WESTERN DATA SYSTEMS.

VERTICAL DATUM IS BASED ON THE NAVD OF 1988, AS DERIVED BY FIELD OBSERVATIONS UTILIZING THE RTK NETWORK ADMINISTRATED BY WESTERN DATA SYSTEMS.

TITLE INFORMATION PROVIDED BY TEXAS MIDSTREAM GAS SERVICES, L.L.C.

40 0 40 80
HORIZ. SCALE IN FEET
20 0 20 40
VERT. SCALE IN FEET

LEGEND

SIGN	PROPOSED PIPELINE
POWER POLE	℄ ROAD
GUY ANCHOR	℄ CREEK/DITCH
FIRE HYDRANT	PROPERTY/R.O.W. LINE
SEWER MANHOLE	TEMPORARY EASEMENT/WS
DRAINAGE MANHOLE	PERMANENT EASEMENT / EASEMENT
WATER METER	FIBER OPTIC
GAS METER	UNDERGROUND ELECTRIC
GAS VALVE	OVERHEAD ELECTRIC
BORE/HDD ENTRY/EXIT	GAS LINE
WATER VALVE	TELEPHONE LINE
GAS LIGHT	STORM SEWER LINE
LIGHT POLE TEST LEAD	SANITARY SEWER LINE
	WATER LINE
	FENCE LINE
	WELL

EXISTING UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS GENERATED FROM PREVIOUS MAPS AND SURVEYS. CONTRACTOR SHALL VERIFY EXACT LOCATION AND ELEVATION OF ALL EXISTING UTILITIES IN AREA OF WORK PRIOR TO CONSTRUCTION. DEPICTED LOCATION MAY VARY SIGNIFICANTLY FROM ACTUAL LOCATION. CALL TEXAS ONE CALL SYSTEM AT 1-800-245-4545 AND ALL OTHER UTILITY COMPANIES AT LEAST 2 WORKING DAYS (48 HOURS) PRIOR TO CONSTRUCTION.

1-800-245-4545
WWW.TEXASONECALL.COM
TEXAS ONE CALL SYSTEM

IFA
(ISSUED FOR APPROVAL)

DATE: SEPTEMBER 7, 2010

SUMMARY OF MATERIALS

	DESCRIPTION		REFERENCE DRAWINGS	
1	20.000" O.D. X 0.375" W.T. API-5L-X65,	540'	PASO-039.00RD	BLACKSTONE DRIVE (PERMIT)
	12-14 MILS FBE		PASO-040.01UT	8" WATER LINE (PERMIT)
2	20.000" O.D. X 0.375" W.T. API-5L-X65,	460'		
	12-14 MILS FBE, W/16-18 MILS ARO			

REVISION

NO.	DATE	DESCRIPTION	BY	CH'KD.	PROJ. ENGR.	ENG. APPR.
3	08/04/10	REVISED VERTICAL ALIGNMENT	JPR	TAH		
2	07/09/10	REVISED EASEMENTS	AED	TAH		
1	05/17/10	ADDED DIMENSIONS FOR TEMPORARY WORKSPACE EASEMENT	AED	TAH		

texas MIDSTREAM GAS SERVICES

Brookside Levee at Blackstone Drive
(Sheet 1 of 2)

20" PAPPAJOHN TO SHADY OAKS NATURAL GAS PIPELINE PHASE THREE
CITY OF FORT WORTH, TARRANT COUNTY, TEXAS

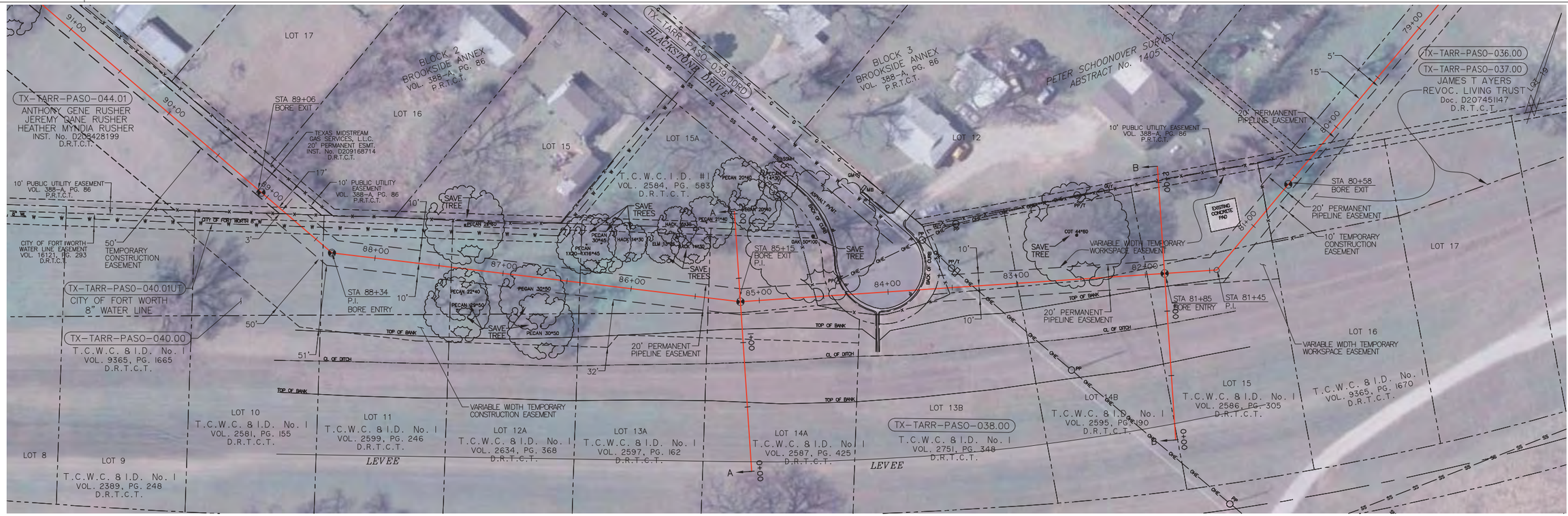
DATE:	08-05-2010	AFE No.	910184
SCALE:	AS SHOWN	SEGMENT ID:	563356
DRAWN BY:	AED	PROJ. ENGR.	
CHECKED:	TAH	ENG. APPROVAL	

DWG. FILE. TX-TARR-PASO-ALIGN9-REV3

TX-TARR-PASO-ALIGN9-REV3.dwg
WA#030714
16 43

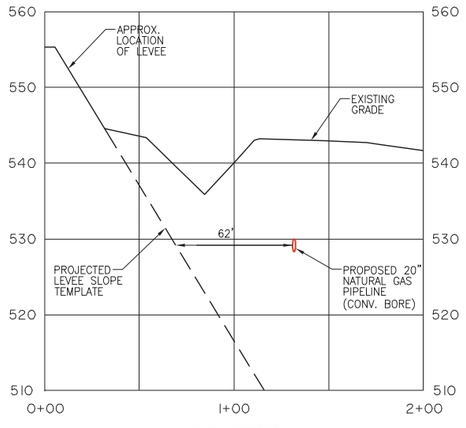
Exhibit E2

COUNTY & STATE	TARRANT	COUNTY,	TEXAS



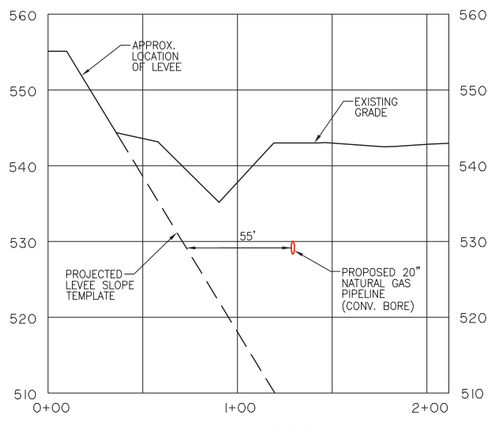
PLAN
SCALE: 1"=40'
0 40 80 120

SECTION "A-A"



PROFILE
SCALE: 1" = 40' HORIZ.
SCALE: 1" = 10' VERT.

SECTION "B-B"



PROFILE
SCALE: 1" = 40' HORIZ.
SCALE: 1" = 10' VERT.

Brookside Levee at Blackstone Drive
(Sheet 2 of 2)

GENERAL INFORMATION

CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.

BEARINGS SHOWN HEREON ARE CORRELATED TO THE TEXAS STATE PLANE COORDINATE SYSTEM, NORTH CENTRAL ZONE, 4202, NAD OF 1983, AS DERIVED BY FIELD OBSERVATIONS UTILIZING THE RTK NETWORK ADMINISTRATED BY WESTERN DATA SYSTEMS.

VERTICAL DATUM IS BASED ON THE NAVD OF 1988, AS DERIVED BY FIELD OBSERVATIONS UTILIZING THE RTK NETWORK ADMINISTRATED BY WESTERN DATA SYSTEMS.

TITLE INFORMATION PROVIDED BY TEXAS MIDSTREAM GAS SERVICES, L.L.C.

LEGEND

SIGN	PROPOSED PIPELINE
POWER POLE	℄ ROAD
GUY ANCHOR	℄ CREEK/DITCH
FIRE HYDRANT	PROPERTY/R.O.W. LINE
SEWER MANHOLE	PERMANENT EASEMENT
DRAINAGE MANHOLE	EASEMENT
WATER METER	FIBER OPTIC
GAS METER	UNDERGROUND ELECTRIC
GAS VALVE	OVERHEAD ELECTRIC
PIPELINE MARKER	GAS LINE
	TELEPHONE LINE
TEST LEAD	STORM SEWER LINE
	SANITARY SEWER LINE
WATER VALVE	WATER LINE
GAS LIGHT	FENCE LINE
LIGHT POLE	WELL

EXISTING UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS GENERATED FROM PREVIOUS MAPS AND SURVEY. CONTRACTOR SHALL VERIFY EXACT LOCATION AND ELEVATION OF ALL EXISTING UTILITIES IN AREA OF WORK PRIOR TO CONSTRUCTION AND CALL TEXAS ONE CALL SYSTEM AT 1-800-245-4545 AND ALL OTHER UTILITY COMPANIES AT LEAST 2 WORKING DAYS (48 HOURS) PRIOR TO CONSTRUCTION.

1-800-245-4545
WWW.TEXASONECALL.COM
TEXAS ONE CALL SYSTEM

PRELIMINARY

NOT FOR CONSTRUCTION

FOR REVIEW PURPOSES ONLY

DATE: 02/17/2011

SUMMARY OF MATERIALS

	DESCRIPTION	

REFERENCE DRAWINGS

REVISION

NO.	DATE	DESCRIPTION	BY	CH'KD.	PROJ. ENGR.	ENG. APPR.

texas MIDSTREAM GAS SERVICES

LEVEE EXHIBIT
AT BLACKSTONE DRIVE

20" PAPPAJOHN TO SHADY OAKS
NATURAL GAS PIPELINE
PHASE THREE
CITY OF FORT WORTH, TARRANT COUNTY, TEXAS

DATE:	AFE No.: 910184
SCALE: 1" = 40'	SEGMENT ID: 563356
DRAWN BY: AED	PROJ. ENGR.
CHECKED: TAH	ENG. APPROVAL
DWG. FILE: EXH-TX-TARR-PASO-LEVEE-039.00RD	REV. 0

TIME: 10:58 W.A. #09074 FILE: EXH-TX-TARR-PASO-LEVEE-BLACKSTONE.dwg

Exhibit F

COUNTY & STATE | **TARRANT COUNTY, TEXAS**

OWNERSHIP & R/W NO.

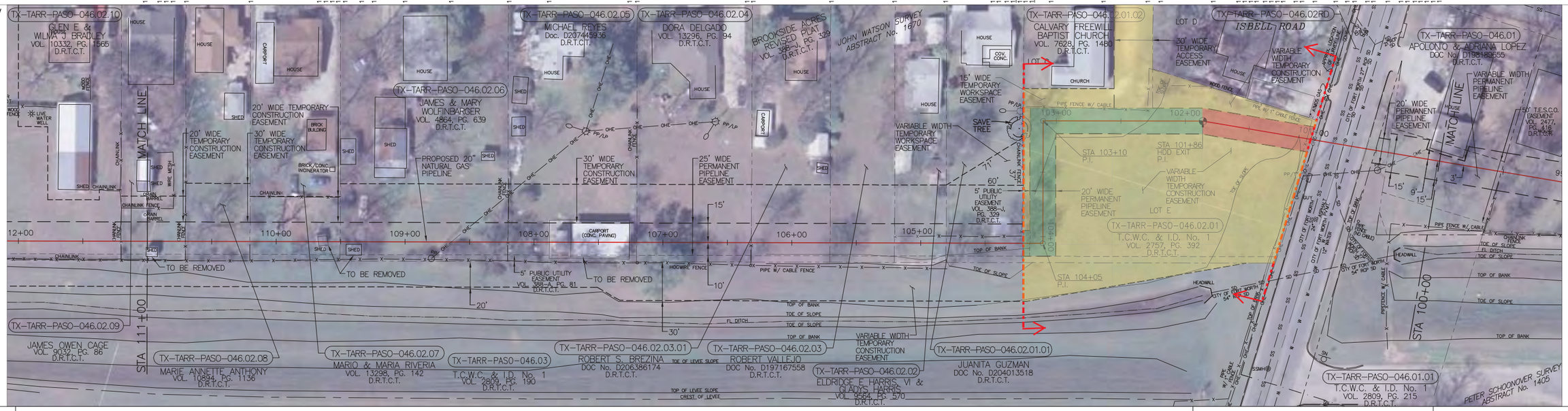
111+00 | TX-TARR-PASO-046.02.09 JAMES OWEN CAGE | 110+70 | TX-TARR-PASO-046.02.08 MARIE ANNETTE ANTHONY | 110+20 | TX-TARR-PASO-046.02.07 MARIO & MARIA RIVERIA | 109+50 | TX-TARR-PASO-046.02.06 JAMES & MARY WOLFINBARGER | 108+20 | TX-TARR-PASO-046.02.05 MICHAEL REYES | 107+20 | TX-TARR-PASO-046.02.04 DORA DELGADO | 106+31 | TX-TARR-PASO-046.02.03 ROBERT VALLEJO | 105+70 | 105+20 | TX-TARR-PASO-046.02.01.01 JUANITA GUZMAN | 104+80 | 104+20 | TX-TARR-PASO-046.02.01 T.C.W.C. & I.D. No. 1 | TX-TARR-PASO-046.02RD ISBELL ROAD CITY OF FORT WORTH | 101+01 | 100+51 | 100+40 | TX-TARR-PASO-046.01 APOLONIO & ADRIANA LOPEZ | 100+00

STATIONING & TRAVERSE ANGLES

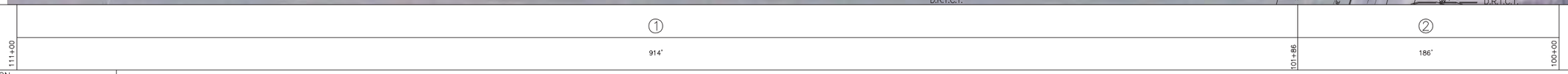
TX-TARR-PASO-046.02.09 JAMES OWEN CAGE
TX-TARR-PASO-046.02.08 MARIE ANNETTE ANTHONY
TX-TARR-PASO-046.02.03.01 ROBERT S. BREZINA
TX-TARR-PASO-046.02.02 ELDRIDGE E HARRIS, VI & GLADYS HARRIS
TX-TARR-PASO-046.01.01 T.C.W.C. & I.D. No. 1
TX-TARR-PASO-046.01 APOLONIO & ADRIANA LOPEZ

111+00 MATCHLINE
110+97 SHED CORNER 39' R
110+92 SHED CORNER 5' L
110+80 FENCE CORNER 25' R
110+70 PROPERTY LINE, CHAINLINK FENCE
110+20 FENCE CORNER 35' R, PROPERTY LINE
109+67 SHED
109+60 SHED
109+51 FENCE CORNER 34' R
109+51 FENCE CORNER 5' L
109+46 SHED CORNER 2' L
109+34 SHED CORNER 2' L
109+24 SHED CORNER 50' R
109+00 SHED CORNER 50' R
108+64 OVERHEAD ELECTRIC
108+20 CHAINLINK FENCE, PROPERTY LINE
107+88 CARPORT
107+26 CARPORT
107+20 PROPERTY LINE
106+32 CHAINLINK FENCE
106+31 PROPERTY LINE
105+70 PROPERTY LINE
105+20 FENCE CORNER 5' R, PROPERTY LINE
104+80 PROPERTY LINE
104+22 FENCE CORNER 6' R
104+20 PROPERTY LINE
104+15 EXISTING EASEMENT
104+05 BEND 90°00'00" R
103+50 TOE OF SLOPE
103+10 BEND 90°00'00" L
103+04 CHURCH CORNER 28' R
102+63 CHURCH CORNER 27' R
102+29 TOE OF SLOPE, FENCE CORNER 8' R
102+28 FENCE CORNER 41' R
101+86 HDD EXIT, CONNECTION POINT
101+77 WOOD FENCE CORNER 27' R
101+77 HOUSE CORNER 37' R
101+56 HOUSE CORNER 35' R
101+55 CONCRETE PAD CORNER 23' R, GUY WIRE
101+11 TOE OF SLOPE
101+06 CONCRETE PAD CORNER 16' R
101+05 FENCE CORNER 15' R
101+03 FENCE CORNER 15' R
101+02 TRANSFORMER 29' L
101+01 RIGHT-OF-WAY, BEGIN CURB RETURN
100+99 2" ATMOS GAS LINE (TOP=544.4'), BACK OF CURB, ELECTRIC
100+95 BACK OF CURB
100+83 CITY OF FORT WORTH 24" SANITARY SEWER (FL=532.2')
100+76 CENTERLINE ISBELL ROAD, 27" RCP
100+75 CITY OF FORT WORTH 27" RCP STORM DRAIN LINE (FL=538.9')
100+69 12" CAST IRON WATER LINE (TOP=541.4')
100+58 BACK OF CURB
100+54 RIGHT-OF-WAY, BEGIN CURB RETURN
100+40 PROPERTY LINE
100+33 OVERHEAD ELECTRIC
100+13 PROPERTY LINE
100+00 MATCH LINE

ALIGNMENT



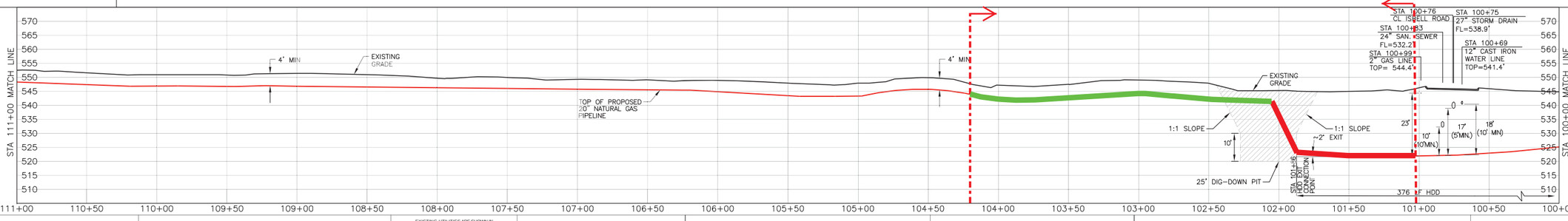
PIPE DETAIL



ACTUAL CLASS LOCATION
HYDROSTATIC TEST PRESSURE (P.S.I.G.)
M.A.O.P. (P.S.I.G.)

PROFILE

HORIZONTAL SCALE = 40'
VERTICAL SCALE = 20'



GENERAL INFORMATION

CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.

BEARINGS SHOWN HEREON ARE CORRELATED TO THE TEXAS STATE PLANE COORDINATE SYSTEM, NORTH CENTRAL ZONE, 4202, NAD OF 1983, AS DERIVED BY FIELD OBSERVATIONS UTILIZING THE RTK NETWORK ADMINISTRATED BY WESTERN DATA SYSTEMS.

VERTICAL DATUM IS BASED ON THE NAVD OF 1988, AS DERIVED BY FIELD OBSERVATIONS UTILIZING THE RTK NETWORK ADMINISTRATED BY WESTERN DATA SYSTEMS.

TITLE INFORMATION PROVIDED BY TEXAS MIDSTREAM GAS SERVICES, L.L.C.

40 0 40 80
HORIZ. SCALE IN FEET
20 0 20 40
VERT. SCALE IN FEET

LEGEND

SIGN
POWER POLE
GUY ANCHOR
FIRE HYDRANT
SEWER MANHOLE
DRAINAGE MANHOLE
WATER METER
GAS METER
GAS VALVE
BORE/HDD ENTRY/EXIT
WATER VALVE
GAS LIGHT
LIGHT POLE
TEST LEAD
PROPOSED PIPELINE
℄ ROAD
℄ CREEK/DITCH
PROPERTY/R.O.W. LINE
TEMPORARY EASEMENT/WS
PERMANENT EASEMENT
EASEMENT
FIBER OPTIC
UNDERGROUND ELECTRIC
OVERHEAD ELECTRIC
GAS LINE
TELEPHONE LINE
STORM SEWER LINE
SANITARY SEWER LINE
WATER LINE
FENCE LINE
WELL

EXISTING UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS GENERATED FROM PREVIOUS MAPS AND SURVEYS. CONTRACTOR SHALL VERIFY EXACT LOCATION AND ELEVATION OF ALL EXISTING UTILITIES IN AREA OF WORK PRIOR TO CONSTRUCTION. DEPICTED LOCATION MAY VARY SIGNIFICANTLY FROM ACTUAL LOCATION. CALL TEXAS ONE CALL SYSTEM AT 1-800-245-4545 AND ALL OTHER UTILITY COMPANIES AT LEAST 2 WORKING DAYS (48 HOURS) PRIOR TO CONSTRUCTION.

1-800-245-4545
WWW.TEXASONECALL.COM
TEXAS ONE CALL SYSTEM

IFA
(ISSUED FOR APPROVAL)

DATE: SEPTEMBER 7, 2010

SUMMARY OF MATERIALS

	DESCRIPTION			
1	20.000" O.D. X 0.375" W.T. API-5L-X65,	914'	PASO-046.02RD	ISBELL ROAD (PERMIT)
	12-14 MILS FBE			
2	20.000" O.D. X 0.375" W.T. API-5L-X65,	186'		
	12-14 MILS FBE, W/16-18 MILS ARO			

REFERENCE DRAWINGS

REVISION

NO.	DATE	DESCRIPTION	BY	CH'KD.	PROJ. ENGR.	ENG. APPR.
4	08/23/10	REVISED ALIGNMENT PER ENGINEERING COMMENTS	AED	TAH		
3	08/02/10	LABELED TWS EASEMENTS AND ADDED PIT	DCC	TAH		
2	07/15/10	REVISED ALIGNMENT	AED	TAH		
1	05/24/10	ADDED DIMENSIONS TO LEVEE	AED	TAH		

texas MIDSTREAM GAS SERVICES

Brookside Levee - Isbell Road

20" PAPPAJOHN TO SHADY OAKS
NATURAL GAS PIPELINE
PHASE THREE
CITY OF FORT WORTH, TARRANT COUNTY, TEXAS

DATE:	09-06-2010	AFE No.	910184
SCALE:	AS SHOWN	SEGMENT ID:	563356
DRAWN BY:	CLM	PROJ. ENGR.	
CHECKED:	TAH	ENG. APPROVAL	

DWG. FILE. TX-TARR-PASO-ALIGN11-REV4

9.50 WA#93074 TX-TARR-PASO-ALIGN11-REV4.dwg

Exhibit G1

COUNTY & STATE	TARRANT	COUNTY,	TEXAS

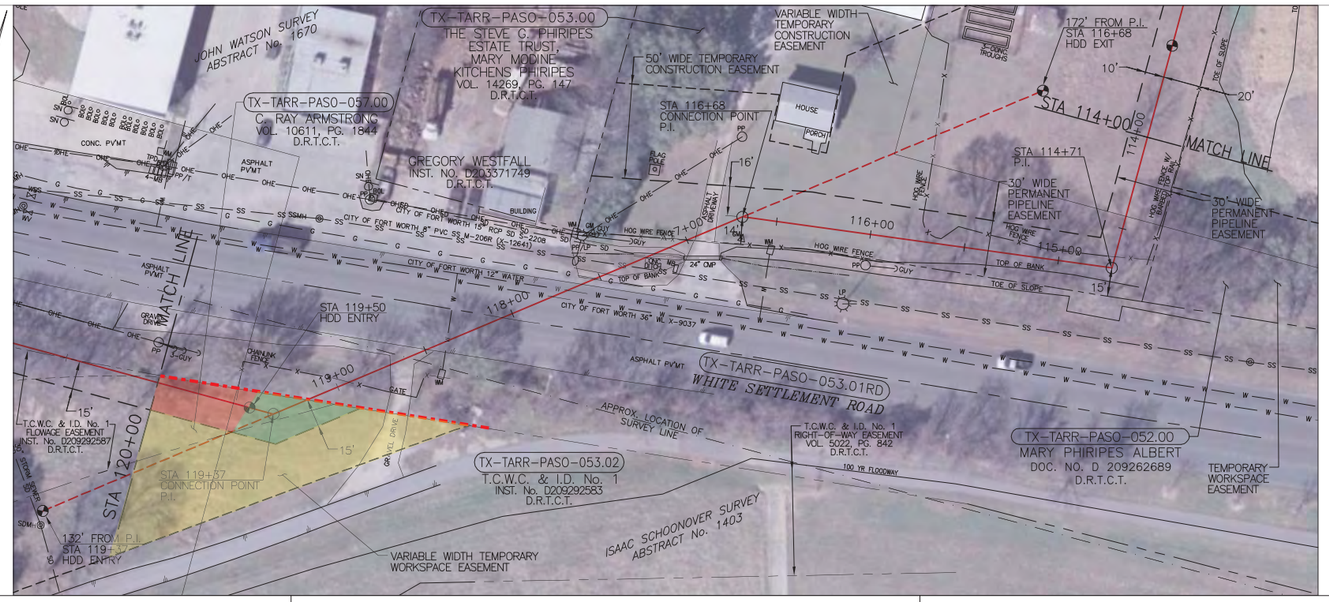
OWNERSHIP & R/W NO.

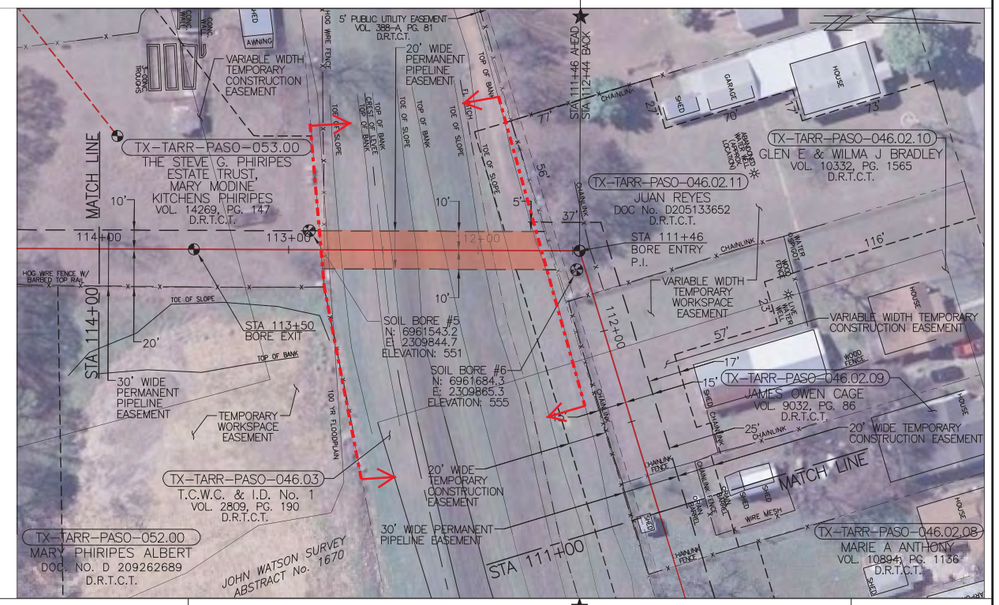
120+00 | TX-TARR-PASO-057.00 C. RAY ARMSTRONG | 119+17 | TX-TARR-PASO-053.01RD WHITE SETTLEMENT ROAD CITY OF FORT WORTH | 117+00 | TX-TARR-PASO-053.00 THE STEVE G. PHIRIPES ESTATE TRUST, MARY MODINE KITCHENS PHIRIPES | 112+83 | TX-TARR-PASO-046.03 T.C.W.C. & I.D. No. 1 | 111+62 | TX-TARR-PASO-046.02.11 JUAN REYES | 112+20 | TX-TARR-PASO-046.02.10 GLEN E & WILMA J BRADLEY | 111+20 | 111+00 | TX-TARR-PASO-046.02.09 JAMES OWEN CAGE

STATIONING & TRAVERSE ANGLES

120+00 MATCH LINE
118+87 GUY WIRE 20' R
119+92 GUY WIRE 20' R
119+84 GUY WIRE 21' R
119+80 CONNECTION POINT
119+59 CHAIN LINK FENCE CORNER 23' R
119+58 CHAIN LINK FENCE CORNER 2' R
119+50 HDD ENTRY
119+37 HDD P.I. HDD ENTRY
119+37 HDD CONNECTION POINT
119+37 BEND 37°57'41" R
119+17 RIGHT-OF-WAY LINE
118+93 CHAIN LINK FENCE
118+70 EDGE OF GRAVEL DRIVE
118+64 CHAIN LINK FENCE CORNER 21' L
118+60 CHAIN LINK FENCE CORNER 12' L
118+49 WATER METER 15' L
118+44 CHAIN LINK FENCE CORNER 19' L
118+37 TOP=549.3'
118+06 CL WHITE SETTLEMENT ROAD
117+96 BUILDING CORNER 56' R
117+77 TOP=544.0'
117+71 BUILDING CORNER 38' R
117+68 TOP=546.2'
117+69 EDGE OF ASPHALT PAVEMENT
117+53 WATER METER 26' R
117+52 TOP=546.1'
117+50 POWER/LIGHT POLE 24' R
117+45 GAS METER 23' R
117+28 81" SANITARY SEWER, FL=540.1'
117+23 EDGE OF CONCRETE LINED DITCH
117+21 CL CONCRETE LINED DITCH
117+18 EDGE OF CONCRETE LINED DITCH
117+11 MAILBOX 12' L
117+10 24" CMP BANK
117+01 FLAG POLE 41' R
117+00 WATER METER 15' L
117+00 RIGHT-OF-WAY LINE
116+95 EDGE OF ASPHALT DRIVEWAY
116+87 EDGE OF ASPHALT DRIVEWAY
116+73 GAS METER 10' L
116+68 CONNECTION POINT P.I. HDD EXIT
116+68 BEND 30°39'05" R
116+68 POWER POLE N 15°19'20"W 42'
116+58 CORNER OF HOUSE 53' R
116+51 WATER METER 15' L
116+29 CORNER OF HOUSE 50' R
116+10 LIGHT POLE 38' L
116+00 POWER POLE 16' L
115+85 GUY WIRE 16' L
115+63 WIRE FENCE CORNER 3' R
115+55 WIRE FENCE CORNER 10' R
114+71 BEND 82°39'18" R
114+65 WOVEN WIRE FENCE
114+62 WOVEN WIRE FENCE CORNER 18' L
113+50 BORE EXIT
112+89 SOIL BORE No. 5 10' R
112+81 PROPERTY CORNER 20' L
112+81 BARBED WIRE FENCE
112+79 100 YR. FLOODPLAIN
112+73 TOE OF SLOPE
112+55 CREST OF BANK
112+46 TOP OF BANK
112+32 TOE OF SLOPE
112+18 TOP OF BANK
111+98 TOE OF SLOPE
111+93 CL DITCH
111+84 TOE OF SLOPE
111+68 TOP OF BANK
111+62 PROPERTY LINE
111+61 5' PUBLIC UTILITY EASEMENT
111+59 5' PUBLIC UTILITY EASEMENT
111+46 STATION EQUATION STA 111+46 AHEAD = STA 112+44 BACK
111+46 BORE ENTRY
112+20 PROPERTY LINE, CHAINLINK FENCE
111+69 SHED CORNER 40' R
111+45 SHED CORNER 40' R
111+20 FENCE CORNER 26' R, CHAINLINK FENCE, SHED CORNER 39' R
111+08 SHED CORNER 36' R
111+02 RAIN BARREL 36' R
111+01 SHED CORNER 5' L
111+00 MATCH LINE

ALIGNMENT





PIPE DETAIL

120+00 | TX-TARR-PASO-053.01HDD WHITE SETTLEMENT ROAD HDD | ② 332' | 116+68 | ① 318' | 113+50 | TX-TARR-PASO-046.03 LEVEE BORE | ③ 204' | STATION EQUATION STA 111+46 AHEAD = STA 112+44 BACK | ① 143' | 111+00

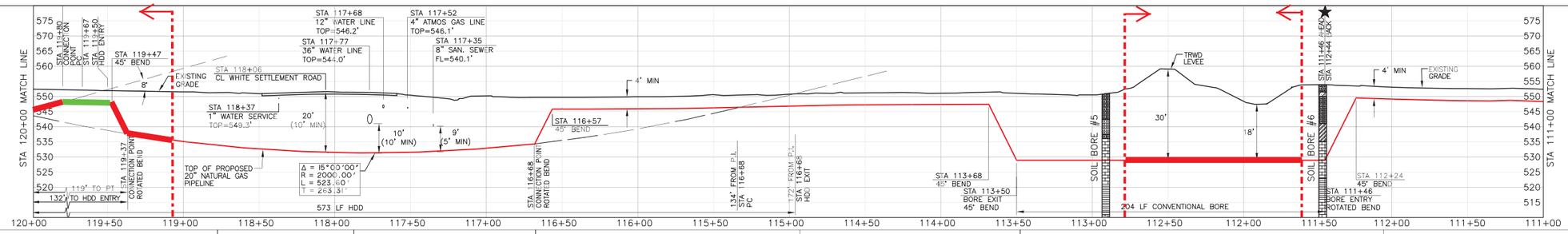
ACTUAL CLASS LOCATION
HYDROSTATIC TEST PRESSURE (P.S.I.G.)
M.A.O.P. (P.S.I.G.)

PROFILE

HORIZONTAL SCALE = 40'
VERTICAL SCALE = 20'

SOIL BORE LEGEND
COMMON UNIFIED SOIL CLASSIFICATION SYSTEM GROUPS
- SANDY LEAN CLAY (CL)
- LEAN CLAY (CL)
- CLAYEY SAND (SC)
- POORLY GRADED SAND WITH SILT (SP-SM)
- SILTY SAND (SM)
- SANDY SILTY CLAY (CL-ML)
- FAT CLAY (CH)

SEDIMENTARY ROCKS
- LIMESTONE
- SHALE



GENERAL INFORMATION

CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.

BEARINGS SHOWN HEREON ARE CORRELATED TO THE TEXAS STATE PLANE COORDINATE SYSTEM, NORTH CENTRAL ZONE, 4202, NAD OF 1983, AS DERIVED BY FIELD OBSERVATIONS UTILIZING THE RTK NETWORK ADMINISTRATED BY WESTERN DATA SYSTEMS.

VERTICAL DATUM IS BASED ON THE NAVD OF 1988, AS DERIVED BY FIELD OBSERVATIONS UTILIZING THE RTK NETWORK ADMINISTRATED BY WESTERN DATA SYSTEMS.

TITLE INFORMATION PROVIDED BY TEXAS MIDSTREAM GAS SERVICES, L.L.C.

40 0 40 80
HORIZ. SCALE IN FEET
20 0 20 40
VERT. SCALE IN FEET

LEGEND

SIGN	PROPOSED PIPELINE
POWER POLE	℄ ROAD
GUY ANCHOR	℄ CREEK/DITCH
FIRE HYDRANT	PROPERTY/R.O.W. LINE
SEWER MANHOLE	TEMPORARY EASEMENT/WS
DRAINAGE MANHOLE	PERMANENT EASEMENT
WATER METER	EASEMENT
GAS METER	FIBER OPTIC
GAS VALVE	UNDERGROUND ELECTRIC
BORE/HDD ENTRY/EXIT	OVERHEAD ELECTRIC
WATER VALVE	GAS LINE
GAS LIGHT	TELEPHONE LINE
LIGHT POLE	STORM SEWER LINE
TEST LEAD	SANITARY SEWER LINE
	WATER LINE
	FENCE LINE
	WELL

EXISTING UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS GENERATED FROM PREVIOUS MAPS AND SURVEYS. CONTRACTOR SHALL VERIFY EXACT LOCATION AND ELEVATION OF ALL EXISTING UTILITIES IN AREA OF WORK PRIOR TO CONSTRUCTION. DEPICTED LOCATION MAY VARY SIGNIFICANTLY FROM ACTUAL LOCATION. CALL TEXAS ONE CALL SYSTEM AT 1-800-245-4545 AND ALL OTHER UTILITY COMPANIES AT LEAST 2 WORKING DAYS (48 HOURS) PRIOR TO CONSTRUCTION.

1-800-245-4545
WWW.TEXASONECALL.COM
TEXAS ONE CALL SYSTEM

IFA
(ISSUED FOR APPROVAL)

DATE: NOVEMBER 12, 2010

SUMMARY OF MATERIALS

	DESCRIPTION		
1	20.000" O.D. X 0.375" W.T. API-5L-X65, 12-14 MILS FBE	461'	PASO-046.03HDD HDD LEVEE BORE
			PASO-053.01HDD WHITE SETTLEMENT RD HDD
			PASO-053.01RD WHITE SETTLEMENT RD (PERMIT)
2	20.000" O.D. X 0.375" W.T. API-5L-X65, 12-14 MILS FBE, W/16-18 MILS ARO	332'	PASO-057.01RD2 WHITE SETTLEMENT RD (PERMIT)
			PASO-046.03LEVEE LEVEE CROSSING (PERMIT)
3	20.000" O.D. X 0.500" W.T. API-5L-X65, 12-14 MILS FBE, W/16-18 MILS ARO	204'	

REFERENCE DRAWINGS

PASO-046.03HDD	HDD LEVEE BORE
PASO-053.01HDD	WHITE SETTLEMENT RD HDD
PASO-053.01RD	WHITE SETTLEMENT RD (PERMIT)
PASO-057.01RD2	WHITE SETTLEMENT RD (PERMIT)
PASO-046.03LEVEE	LEVEE CROSSING (PERMIT)

REVISION

NO.	DATE	DESCRIPTION	BY	CH'KD.	PROJ. ENGR.	ENG. APPR.
5	11/12/10	ADDED SOIL BORE LOGS TO PROFILE	TVW	TVW		
4	08/23/10	UPDATED STATIONING PER ALIGNMENT REVISION	AED	TAH		
3	08/2/10	REVISED PIPE SPECIFICATIONS BETWEEN HDD'S	DCC	TAH		
2	07/15/10	REVISED PLAN VIEW TO SHOW 24" CMP, REVISED ALIGNMET AND REVISED EASEMENTS	AED	TAH		
1	05/24/10	REVISED HDD & W.T.	AED	TAH		

texas MIDSTREAM GAS SERVICES

Amendment #1
Brookside Levee between Isbell and Church Hill
(Sheet 1 of 2)

20" PAPPAJOHN TO SHADY OAKS
NATURAL GAS PIPELINE
PHASE THREE
CITY OF FORT WORTH, TARRANT COUNTY, TEXAS

DATE:	11-12-2010	AFE No.	910184
SCALE:	AS SHOWN	SEGMENT ID:	563356
DRAWN BY:	CLM	PROJ. ENGR.	
CHECKED:	TAH	ENG. APPROVAL	

DWG. FILE. TX-TARR-PASO-ALIGN12-REV5

13:55 WA#09074 TX-TARR-PASO-ALIGN12-REV5.dwg

Exhibit G2

GENERAL INFORMATION

CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.

BEARINGS SHOWN HEREON ARE CORRELATED TO THE TEXAS STATE PLANE COORDINATE SYSTEM, NORTH CENTRAL ZONE, 4202, NAD OF 1983, AS DERIVED BY FIELD OBSERVATIONS UTILIZING THE RTK NETWORK ADMINISTRATED BY WESTERN DATA SYSTEMS.

VERTICAL DATUM IS BASED ON THE NAVD OF 1988, AS DERIVED BY FIELD OBSERVATIONS UTILIZING THE RTK NETWORK ADMINISTRATED BY WESTERN DATA SYSTEMS.

TITLE INFORMATION PROVIDED BY TEXAS MIDSTREAM GAS SERVICES, L.L.C.

40 0 40 80
HORIZ. SCALE IN FEET

20 0 20 40
VERT. SCALE IN FEET

LEGEND

SIGN	PROPOSED PIPELINE
POWER POLE	℄ ROAD
GUY ANCHOR	℄ CREEK/DITCH
FIRE HYDRANT	PROPERTY/R.O.W. LINE
SEWER MANHOLE	TEMPORARY EASEMENT/WS
DRAINAGE MANHOLE	PERMANENT EASEMENT
WATER METER	EASEMENT
GAS METER	F/O FIBER OPTIC
GAS VALVE	UGE UNDERGROUND ELECTRIC
BORE/HDD ENTRY/EXIT	OHE OVERHEAD ELECTRIC
WV WATER VALVE	G GAS LINE
GAS LIGHT	T TELEPHONE LINE
LIGHT POLE	SD STORM SEWER LINE
TEST LEAD	SS SANITARY SEWER LINE
	W WATER LINE
	X FENCE LINE
	WELL

EXISTING UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS GENERATED FROM PREVIOUS MAPS AND SURVEYS. CONTRACTOR SHALL VERIFY EXACT LOCATION AND ELEVATION OF ALL EXISTING UTILITIES IN AREA OF WORK PRIOR TO CONSTRUCTION. DEPICTED LOCATION MAY VARY SIGNIFICANTLY FROM ACTUAL LOCATION. CALL TEXAS ONE CALL SYSTEM AT 1-800-245-4545 AND ALL OTHER UTILITY COMPANIES AT LEAST 2 WORKING DAYS (48 HOURS) PRIOR TO CONSTRUCTION.

1-800-245-4545
WWW.TEXASONECALL.COM
TEXAS ONE CALL SYSTEM

IFA
(ISSUED FOR APPROVAL)
DATE: SEPTEMBER 7, 2010

SUMMARY OF MATERIALS

	DESCRIPTION	
1	20.000" O.D. X 0.375" W.T. API-5L-X65,	202'
	12-14 MILS FBE	
2	20.000" O.D. X 0.375" W.T. API-5L-X65,	798'
	12-14 MILS FBE, W/16-18 MILS ARO	

REFERENCE DRAWINGS

PASO-057.01RD1	WHITE SETTLEMENT RD. (PERMIT)
PASO-057.01RD2	WHITE SETTLEMENT RD. (PERMIT)

REVISION

NO.	DATE	DESCRIPTION	BY	CH'KD.	PROJ. ENGR.	ENG. APPR.
3	08/2/10	ADDRESSED REVIEW COMMENTS FOR OWNERSHIPS, EASEMENT CHANGES	DCC	TAH		
2	07/15/10	REVISED VERTICAL ALIGNMENT PER ENGINEERING COMMENTS	RDC	TAH		
1	05/24/10	REVISED HDD & VALVE SITE LOCATION	AED	TAH		

texas MIDSTREAM GAS SERVICES

Amendment #1
Brookside Levee between Isbell and Church Hill
(Sheet 2 of 2)

20" PAPPAJOHN TO SHADY OAKS NATURAL GAS PIPELINE
PHASE THREE
CITY OF FORT WORTH, TARRANT COUNTY, TEXAS

DATE:	09-06-2010	AFE No.	910184
SCALE:	AS SHOWN	SEGMENT ID:	563356
DRAWN BY:	CLM	PROJ. ENGR.	
CHECKED:	TAH	ENG. APPROVAL	

DWG. FILE. TX-TARR-PASO-ALIGN13-REV3

TX-TARR-PASO-ALIGN13-REV3.dwg WA#09074 9:52

Exhibit H1

COUNTY & STATE	TARRANT COUNTY, TEXAS

OWNERSHIP & R/W NO.

180+00 — TX-TARR-PASO-082.00 T.C.W.C. & I.D. No. 1 — 178+95

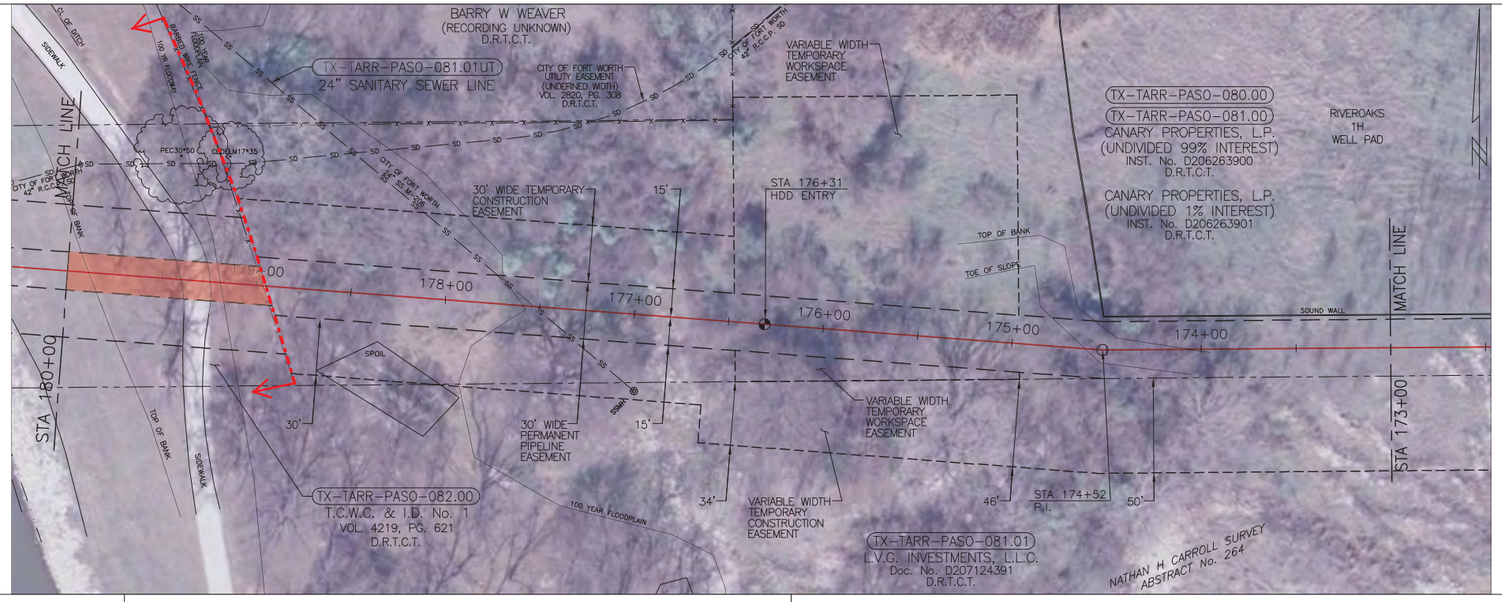
TX-TARR-PASO-080.00
TX-TARR-PASO-081.00
CANARY PROPERTIES, L.P.

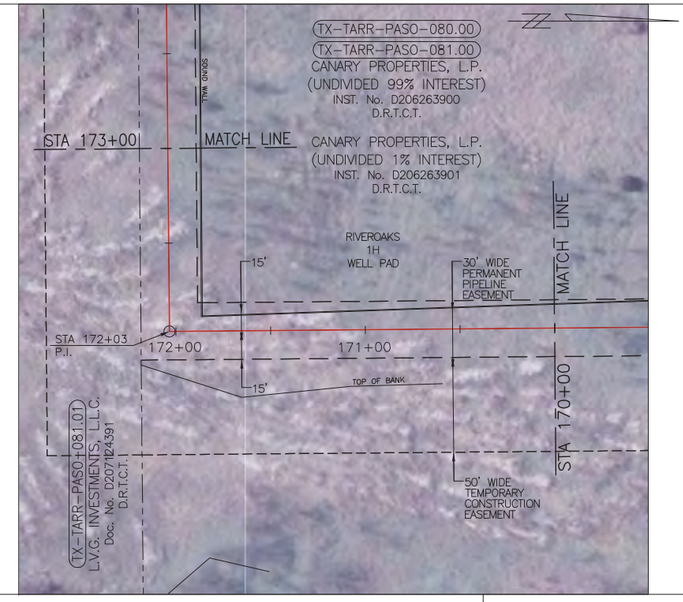
170+00

STATIONING & TRAVERSE ANGLES

180+00 MATCH LINE
179+89 TOP OF BANK
179+40 EDGE CONC. SIDEWALK
179+24 EDGE CONC. SIDEWALK
179+19 100 YEAR FLOODWAY
178+97 BARBED WIRE FENCE
178+88 PROPERTY LINE
177+59 100 YEAR FLOOD PLAIN
177+53 CITY OF FORT WORTH 24" SANITARY SEWER, FL=542.0'
176+97 SANITARY SEWER MANHOLE 40' L
176+48 CONNECTION POINT
176+31 HDD ENTRY
174+61 TOE OF SLOPE
174+52 BEND 4°52'18" R
174+51 SOUND REDUCTION WALL 18' R
174+07 TOP OF BANK
172+03 BEND 90°00'00" R
171+86 SOUND REDUCTION WALL 8' R
170+00 MATCH LINE

ALIGNMENT





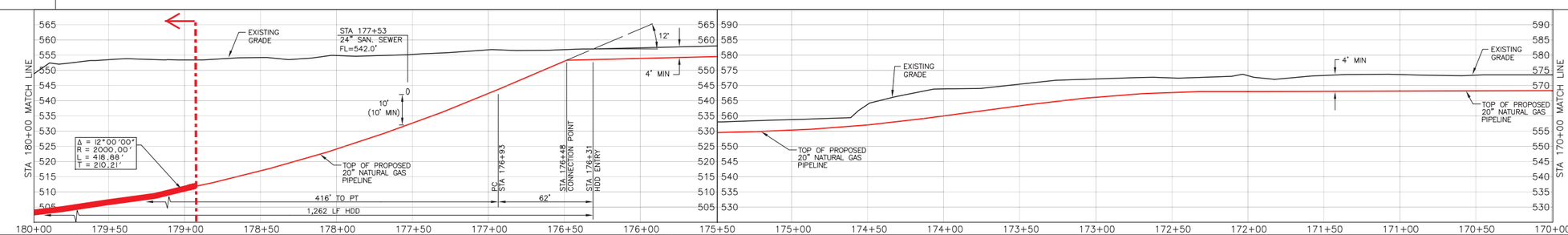
PIPE DETAIL

180+00 — ③ 352' — 176+48 | 176+48 — ① 648' — 170+00

ACTUAL CLASS LOCATION
HYDROSTATIC TEST PRESSURE (P.S.I.G.)
M.A.O.P. (P.S.I.G.)

PROFILE

HORIZONTAL SCALE = 40'
VERTICAL SCALE = 20'



GENERAL INFORMATION

CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.

BEARINGS SHOWN HEREON ARE CORRELATED TO THE TEXAS STATE PLANE COORDINATE SYSTEM, NORTH CENTRAL ZONE, 4202, NAD OF 1983, AS DERIVED BY FIELD OBSERVATIONS UTILIZING THE RTK NETWORK ADMINISTRATED BY WESTERN DATA SYSTEMS.

VERTICAL DATUM IS BASED ON THE NAVD OF 1988, AS DERIVED BY FIELD OBSERVATIONS UTILIZING THE RTK NETWORK ADMINISTRATED BY WESTERN DATA SYSTEMS.

TITLE INFORMATION PROVIDED BY TEXAS MIDSTREAM GAS SERVICES, L.L.C.

40 0 40 80
HORIZ. SCALE IN FEET
20 0 20 40
VERT. SCALE IN FEET

LEGEND

SIGN	PROPOSED PIPELINE
POWER POLE	℄ ROAD
GUY ANCHOR	℄ CREEK/DITCH
FIRE HYDRANT	PROPERTY/R.O.W. LINE
SEWER MANHOLE	TEMPORARY EASEMENT/WS
DRAINAGE MANHOLE	PERMANENT EASEMENT
WATER METER	EASEMENT
GAS METER	FIBER OPTIC
GAS VALVE	UNDERGROUND ELECTRIC
BORE/HDD ENTRY/EXIT	OVERHEAD ELECTRIC
WATER VALVE	GAS LINE
GAS LIGHT	TELEPHONE LINE
LIGHT POLE	STORM SEWER LINE
TEST LEAD	SANITARY SEWER LINE
	WATER LINE
	FENCE LINE
	WELL

EXISTING UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS GENERATED FROM PREVIOUS MAPS AND SURVEYS. CONTRACTOR SHALL VERIFY EXACT LOCATION AND ELEVATION OF ALL EXISTING UTILITIES IN AREA OF WORK PRIOR TO CONSTRUCTION. DEPICTED LOCATION MAY VARY SIGNIFICANTLY FROM ACTUAL LOCATION. CALL TEXAS ONE CALL SYSTEM AT 1-800-245-4545 AND ALL OTHER UTILITY COMPANIES AT LEAST 2 WORKING DAYS (48 HOURS) PRIOR TO CONSTRUCTION.

1-800-245-4545
WWW.TEXASONECALL.COM
TEXAS ONE CALL SYSTEM

IFA
(ISSUED FOR APPROVAL)

DATE: SEPTEMBER 7, 2010

SUMMARY OF MATERIALS

	DESCRIPTION		REFERENCE DRAWINGS	
1	20.000" O.D. X 0.375" W.T. API-5L-X65,	648'	PASO-081.01UT	24" SANITARY SEWER (PERMIT I
	12-14 MILS FBE			
2	20.000" O.D. X 0.375" W.T. API-5L-X65,	0'		
	12-14 MILS FBE, W/16-18 MILS ARO			
3	20.000" O.D. X 0.500" W.T. API-5L-X65,	352'		
	12-14 MILS FBE, W/16-18 MILS ARO			

REFERENCE DRAWINGS

PASO-081.01UT	24" SANITARY SEWER (PERMIT I

REVISION

NO.	DATE	DESCRIPTION	BY	CH'KD.	PROJ. ENGR.	ENG. APPR.
2	07/09/10	NO REVISION TO THIS SHEET	AED	TAH		
1	05/24/10	ADDED TCE AND REVISED W.T.	AED	TAH		

texas MIDSTREAM GAS SERVICES

White Settlement Levee Upstream of Upper White Settlement Road River Bridge (Trinity River)
(Sheet 1 of 2)

20" PAPPAJOHN TO SHADY OAKS
NATURAL GAS PIPELINE
PHASE THREE
CITY OF FORT WORTH, TARRANT COUNTY, TEXAS

DATE:	09-06-2010	AFE No.	910184
SCALE:	AS SHOWN	SEGMENT ID:	563356
DRAWN BY:	CLM	PROJ. ENGR.	
CHECKED:	TAH	ENG. APPROVAL	

DWG. FILE. TX-TARR-PASO-ALIGN18-REV2

TX-TARR-PASO-ALIGN18-REV2.dwg
W#P39074
10.01

Exhibit H2

COUNTY & STATE: TARRANT COUNTY, TEXAS

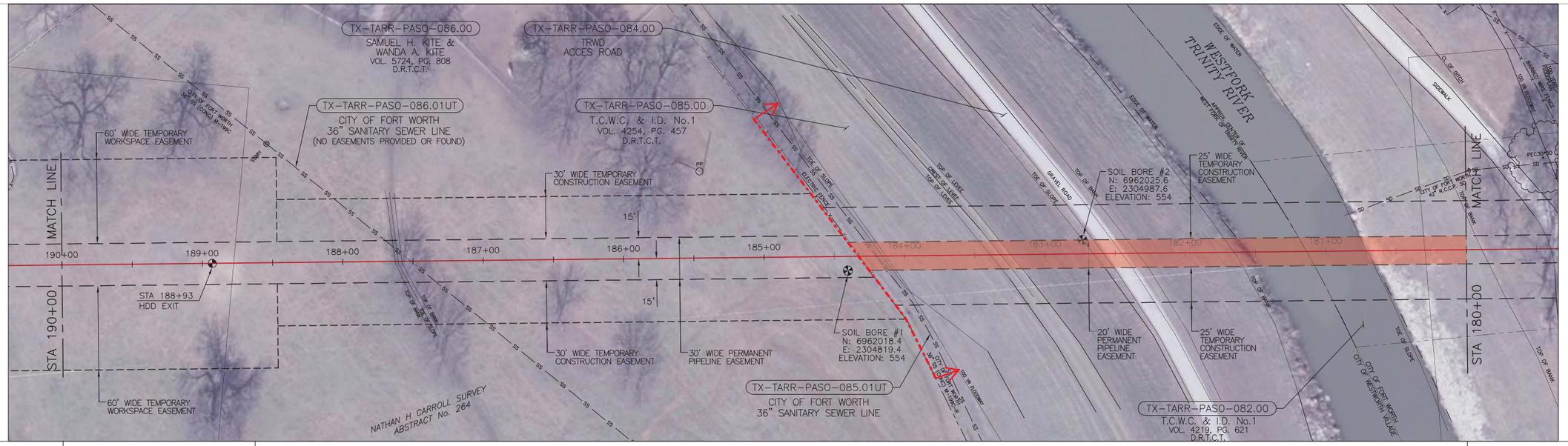
OWNERSHIP & R/W NO.

190+00 — TX-TARR-PASO-086.00 SAMUEL H. KITE & WANDA A. KITE — 184+33 — TX-TARR-PASO-082.00 / TX-TARR-PASO-085.00 T.C.W.C. & I.D. No.1 — 180+00

STATIONING & TRAVERSE ANGLES

190+00 MATCH LINE
188+93 HDD EXIT
188+63 CONNECTION POINT
187+63 TOP OF BANK
187+61 CL DITCH
187+58 TOE OF BANK
187+52 CITY OF FORT WORTH 36" SANITARY SEWER, FL=542.6'
184+40 SOIL BORE No. 1 10' L
184+33 PROPERTY LINE
184+32 WIRE ELECTRIC FENCE
184+20 CITY OF FORT WORTH 36" SANITARY SEWER, FL=541.7'
184+16 TOE OF SLOPE
184+13 100 YEAR FLOODWAY
183+39 TOP OF LEVEE
183+24 TOP OF LEVEE
182+73 SOIL BORE No. 2 10' R
182+65 TOE OF SLOPE
182+58 EDGE GRAVEL ROAD
182+52 CL TRWD ACCESS ROAD
182+45 EDGE GRAVEL ROAD
182+34 TOP OF BANK
181+65 TOP OF BANK
181+56 EDGE WATER
181+13 CL WEST FORK TRINITY RIVER
180+86 42" RCP STORM DRAIN 25' R
180+71 TOE OF SLOPE
180+70 EDGE WATER
180+00 MATCH LINE

ALIGNMENT



PIPE DETAIL

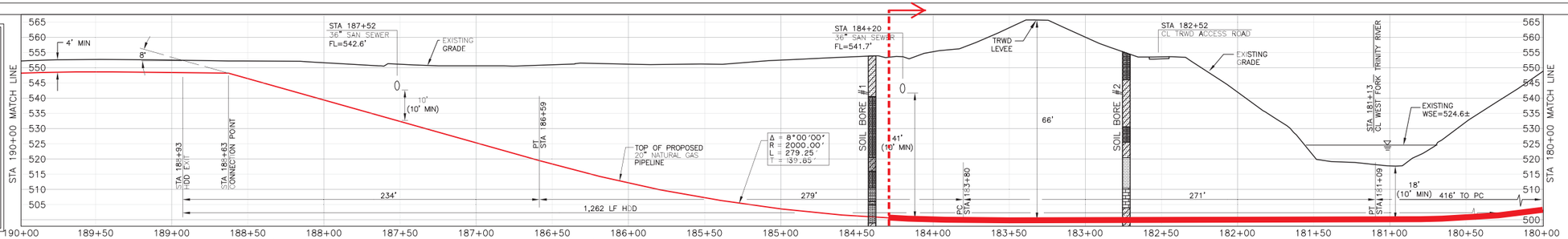
190+00 — ① 137' — 188+63 — ③ 863' — 180+00

ACTUAL CLASS LOCATION

HYDROSTATIC TEST PRESSURE (P.S.I.G.)

M.A.O.P. (P.S.I.G.)

PROFILE HORIZONTAL SCALE = 40' VERTICAL SCALE = 20'



SOIL BORE LEGEND

COMMON UNIFIED SOIL CLASSIFICATION SYSTEM GROUPS
- SANDY LEAN CLAY (CL)
- LEAN CLAY (CL)
- CLAYEY SAND (SC)
- POORLY GRADED SAND WITH SILT (SP-SM)
- SILTY SAND (SM)
- SANDY SILTY CLAY (CL-ML)
- POORLY GRADED SAND (SP)

SEDIMENTARY ROCKS
- LIMESTONE
- SHALE

GENERAL INFORMATION

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TITLE INFORMATION PROVIDED BY TEXAS MIDSTREAM GAS SERVICES, L.L.C.

40 0 40 80
HORIZ. SCALE IN FEET

20 0 20 40
VERT. SCALE IN FEET

LEGEND

- SIGN
- POWER POLE
- GUY ANCHOR
- FIRE HYDRANT
- SEWER MANHOLE
- DRAINAGE MANHOLE
- WATER METER
- GAS METER
- GAS VALVE
- BORE/HDD ENTRY/EXIT
- WATER VALVE
- GAS LIGHT
- LIGHT POLE
- TEST LEAD
- PROPOSED PIPELINE
- ℄ ROAD
- ℄ CREEK/DITCH
- PROPERTY/R.O.W. LINE
- TEMPORARY EASEMENT/WS
- PERMANENT EASEMENT
- EASEMENT
- FIBER OPTIC
- UNDERGROUND ELECTRIC
- OVERHEAD ELECTRIC
- GAS LINE
- TELEPHONE LINE
- STORM SEWER LINE
- SANITARY SEWER LINE
- WATER LINE
- FENCE LINE
- WELL

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1-800-245-4545
WWW.TEXASONECALL.COM
TEXAS ONE CALL SYSTEM

IFA
(ISSUED FOR APPROVAL)

DATE: NOVEMBER 12, 2010

SUMMARY OF MATERIALS

	DESCRIPTION		REFERENCE DRAWINGS	
1	20.000" O.D. X 0.375" W.T. API-5L-X65,	137'	PASO-085.00LEVEE	LEVEE CROSSING (PERMIT)
	12-14 MILS FBE		PASO-085.01UT	36" SAN. SEWER (PERMIT)
			PASO-086.01UT	36" SAN. SEWER (PERMIT)
2	20.000" O.D. X 0.375" W.T. API-5L-X65,	0'		
	12-14 MILS FBE, W/16-18 MILS ARO			
3	20.000" O.D. X 0.500" W.T. API-5L-X65,	863'		
	12-14 MILS FBE, W/16-18 MILS ARO			

REVISION

NO.	DATE	DESCRIPTION	BY	CH'KD.	PROJ. ENGR.	ENG. APPR.
3	11/12/10	ADDED SOIL BORE LOGS TO PROFILE	TVW	TVW		
2	07/09/10	UPDATED TRACT NUMBERS	AED	TAH		
1	05/24/10	REVISED W.T.	AED	TAH		

texas MIDSTREAM GAS SERVICES

White Settlement Levee Upstream of Upper White Settlement Road River Bridge (Trinity River)
(Sheet 2 of 2)

20" PAPPAJOHN TO SHADY OAKS NATURAL GAS PIPELINE, PHASE THREE
CITY OF FORT WORTH AND WESTWORTH VILLAGE, TARRANT COUNTY, TEXAS

DATE:	11-12-2010	AFE No.	910184
SCALE:	AS SHOWN	SEGMENT ID:	563356
DRAWN BY:	CLM	PROJ. ENGR.	
CHECKED:	TAH	ENG. APPROVAL	

DWG. FILE. TX-TARR-PASO-ALIGN19-REV3

TX-TARR-PASO-ALIGN19-REV3.dwg
WA#090074
14:02