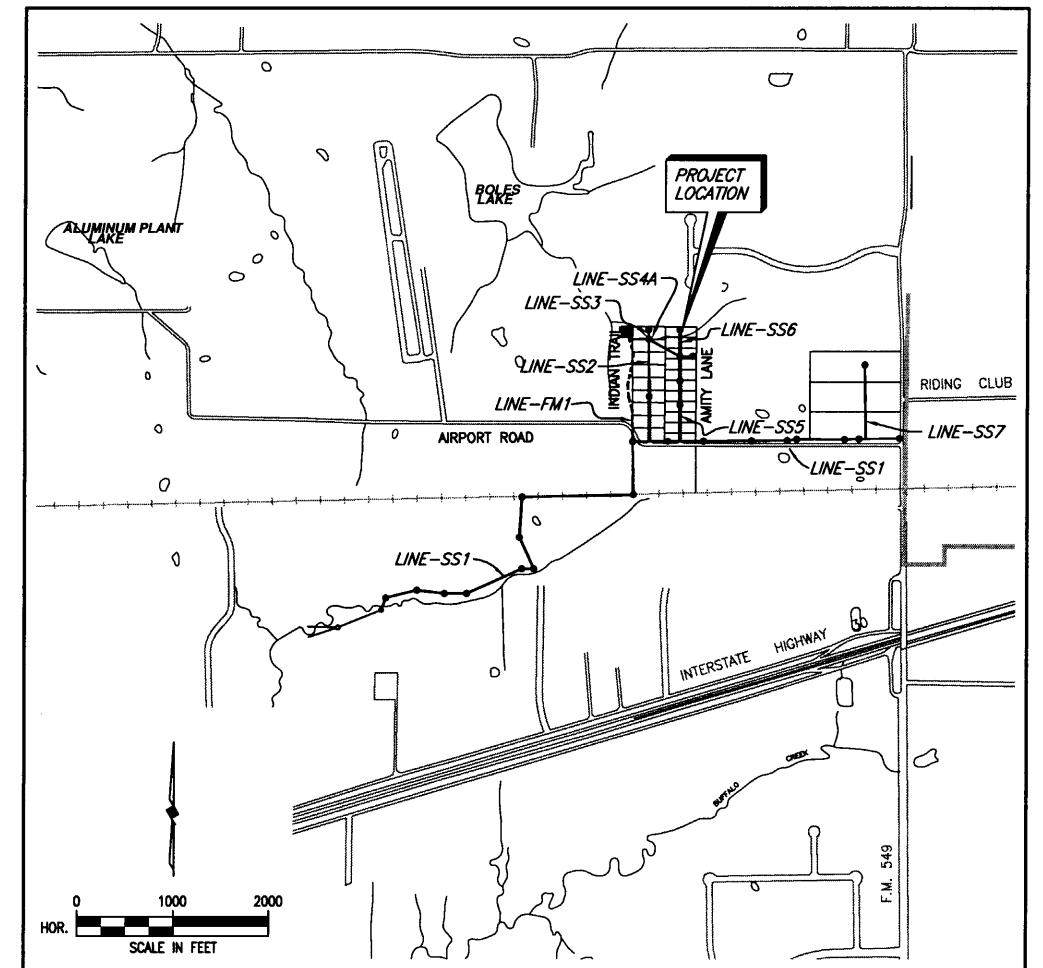


CITY OF ROCKWALL, TEXAS

CONSTRUCTION PLANS FOR:

AMITY LANE SANITARY SEWER IMPROVEMENTS



LOCATION MAP

SHEET INDEX

SHEET NO.	SHEET DESCRIPTION
-	COVER SHEET & LOCATION MAP
1-8	SANITARY SEWER LINE 'SS1' PLAN/PROFILE
8A	SANITARY SEWER LINE 'SS7' PLAN/PROFILE
9	SANITARY SEWER LINE 'SS2' & 'SS3' PLAN/PROFILE
10	SANITARY SEWER LINE 'SS2' PLAN/PROFILE
11	SANITARY SEWER LINE 'SS4' PLAN/PROFILE
12	SANITARY SEWER LINE 'SS5' & 'SS6' PLAN/PROFILE
13	SANITARY SEWER LINE 'SS5' PLAN/PROFILE
14 & 15	FORCE MAIN LINE 'FM1'
16	INDIAN TRAIL LIFT STATION
17	INDIAN TRAIL LIFT STATION SITE PLAN
18 & 19	DETAILS

COUNCIL MEMBERS

KEN JONES, MAYOR
TIM McCALLUM, MAYOR PRO-TEM
STEPHEN STRAUGHAN
BOB COTTI
JOHN KING
TERRY RAULSTON
BILL CECIL

CITY MANAGER

JULIE COUCH

ASSISTANT CITY MANAGER

RICHARD CROWLEY

CITY ENGINEER

CHUCK TODD, P.E.



BIRKHOFF, HENDRICKS & CONWAY, L.L.P.
CONSULTING ENGINEERS
Dallas, Texas

SEPTEMBER, 2004

THESE DOCUMENTS ARE FOR
BIDDING, CONSTRUCTION
AND PERMIT PURPOSES.

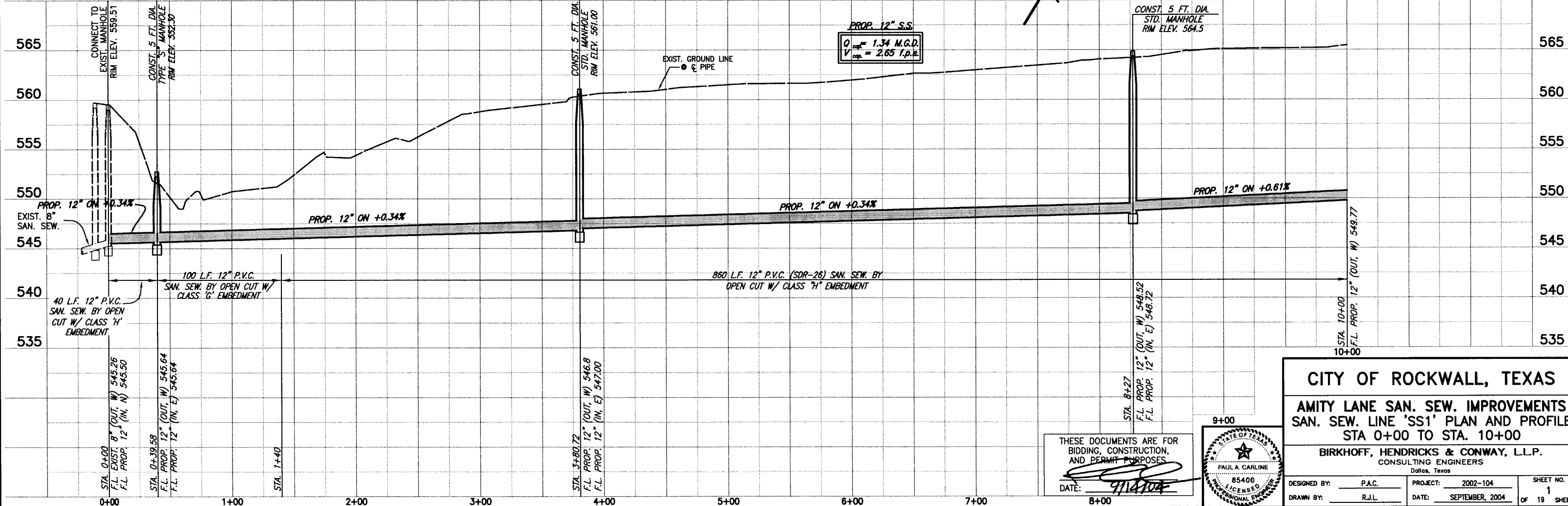
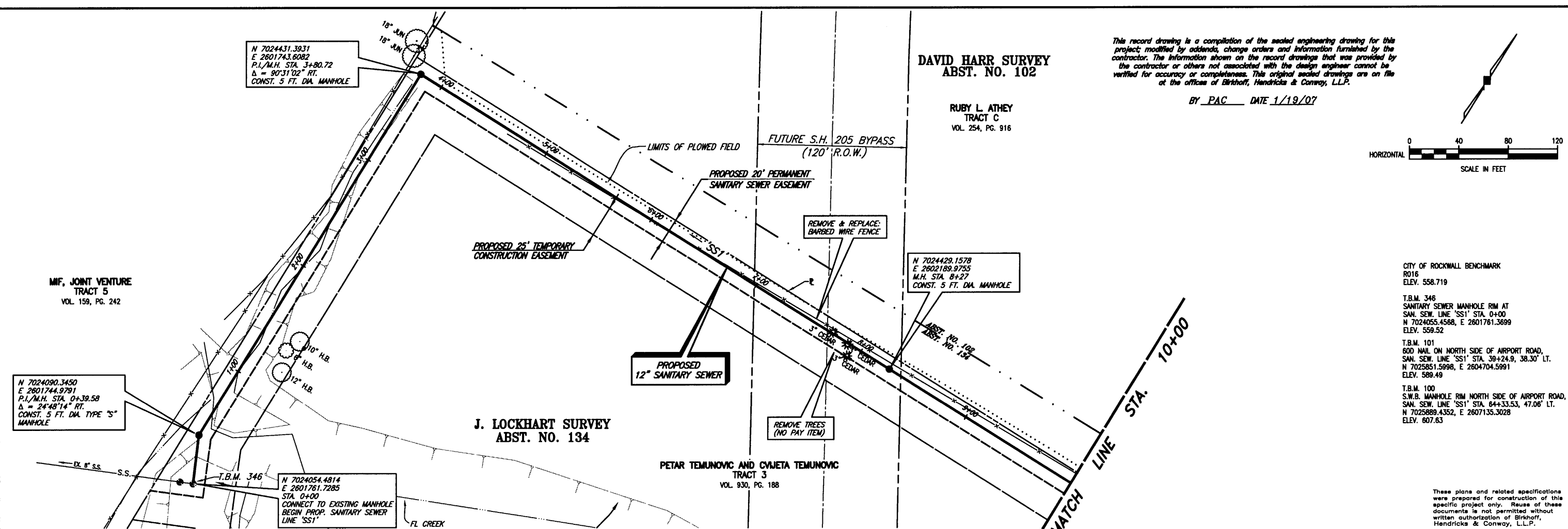
DATE: 9/14/04

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BY PAC DATE 1/19/07



09/14/04 KAB H:\ROCKWALL\2002\04\BASE\MASTER SURVEY, NEW-SS-SS1, TOPO-BASE SCALE: 1"=40' XREF: ROCKWALL\2002\04\BASE\MASTER SURVEY, NEW-SS-SS1, TOPO-BASE

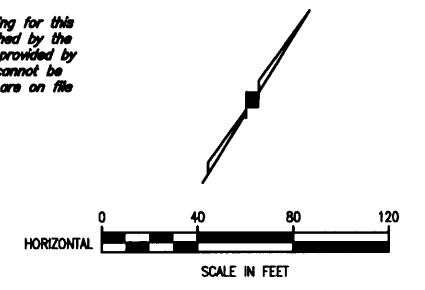


**DAVID HARR SURVEY
ABST. NO. 102**

RUBY L. ATHEY
TRACT C
VOL. 254, PG. 916

This record drawing is a compilation of the sealed engineering drawing for this project; modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawings are on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.

BY PAC DATE 1/19/07



MIF, JOINT VENTURE
TRACT 5
VOL. 159, PG. 242

N 7024090.3450
E 2601744.9791
P.L./M.H. STA. 0+39.58
Δ = 24°48'14" RT.
CONST. 5 FT. DIA. TYPE "S" MANHOLE

N 7024431.3931
E 2601743.6082
P.L./M.H. STA. 3+80.72
Δ = 90°31'02" RT.
CONST. 5 FT. DIA. MANHOLE

N 7024054.4814
E 2601761.7285
STA. 0+00
CONNECT TO EXISTING MANHOLE
BEGIN PROP. SANITARY SEWER
LINE "SS1"

**J. LOCKHART SURVEY
ABST. NO. 134**

PETAR TEMUNOVIC AND CVJETA TEMUNOVIC
TRACT 3
VOL. 930, PG. 188

N 7024429.1578
E 2602189.9755
M.H. STA. 8+27
CONST. 5 FT. DIA. MANHOLE

CITY OF ROCKWALL BENCHMARK
R016
ELEV. 558.719

T.B.M. 346
SANITARY SEWER MANHOLE RIM AT
SAN. SEW. LINE "SS1" STA. 0+00
N 7024055.4568, E 2601761.3699
ELEV. 559.52

T.B.M. 101
600 MAIL ON NORTH SIDE OF AIRPORT ROAD,
SAN. SEW. LINE "SS1" STA. 38+24.9, 38.30' LT.
N 7025851.5998, E 2604704.5991
ELEV. 589.49

T.B.M. 100
S.W.B. MANHOLE RIM NORTH SIDE OF AIRPORT ROAD,
SAN. SEW. LINE "SS1" STA. 64+33.53, 47.06' LT.
N 7025869.4352, E 2607135.3028
ELEV. 607.63

These plans and related specifications were prepared for construction of this specific project only. Reuse of these documents is not permitted without written authorization of Birkhoff, Hendricks & Conway, L.L.P.

PROP. 12" S.S.
 $Q_{cap} = 1.34$ M.G.D.
 $V_{cap} = 2.65$ I.P.K.

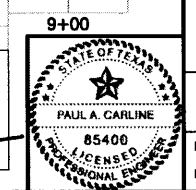
CONST. 5 FT. DIA.
STD. MANHOLE
RIM ELEV. 564.5

CITY OF ROCKWALL, TEXAS

**AMITY LANE SAN. SEW. IMPROVEMENTS
SAN. SEW. LINE "SS1" PLAN AND PROFILE
STA 0+00 TO STA. 10+00**

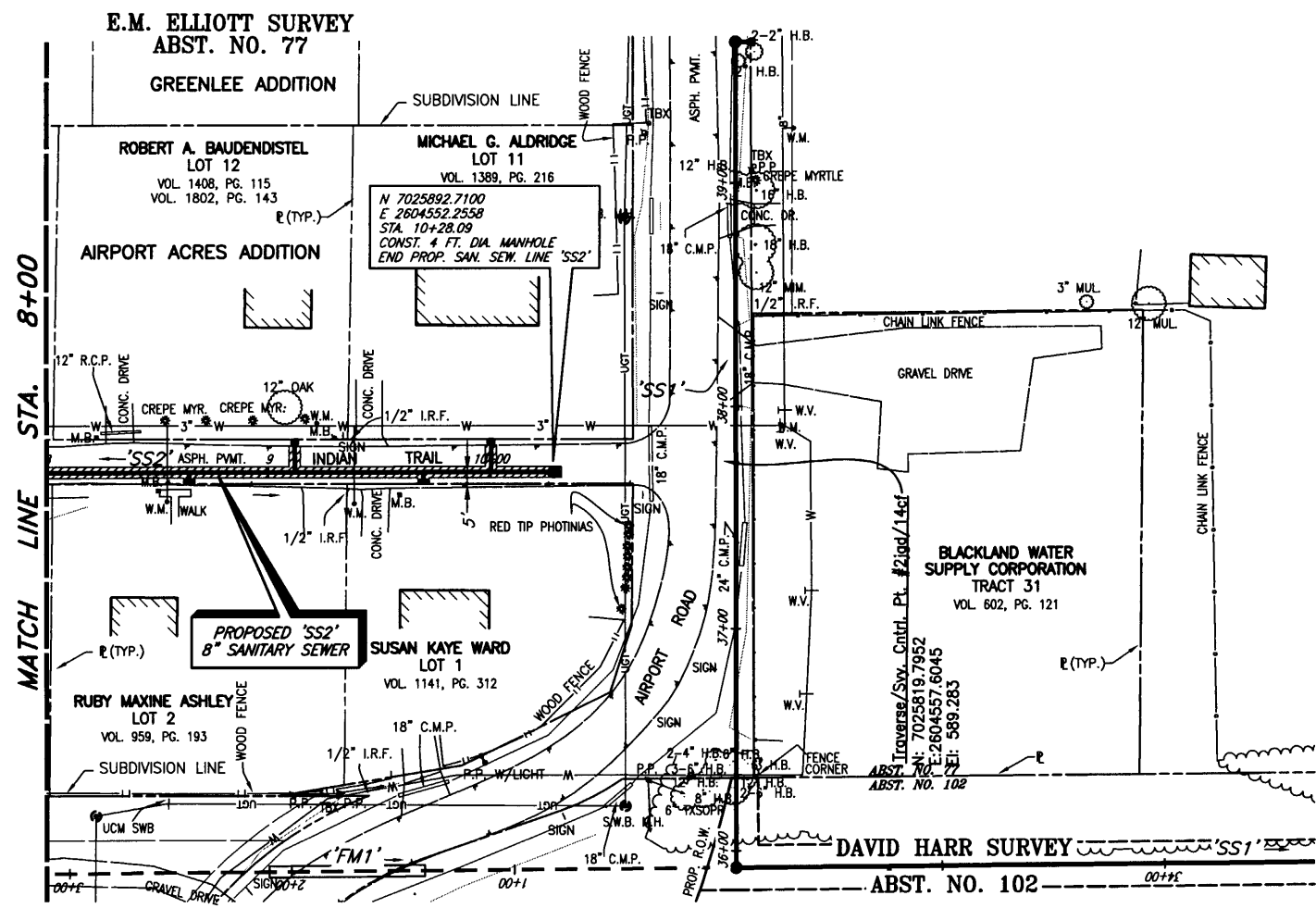
BIRKHOFF, HENDRICKS & CONWAY, L.L.P.
CONSULTING ENGINEERS
Dallas, Texas

THESE DOCUMENTS ARE FOR
BIDDING, CONSTRUCTION,
AND PERMIT PURPOSES.
DATE: 9/14/04



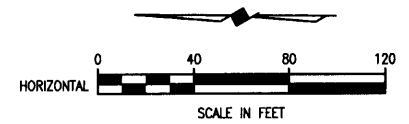
DESIGNED BY: P.A.C.	PROJECT: 2002-104	SHEET NO. 1
DRAWN BY: R.J.L.	DATE: SEPTEMBER, 2004	OF 19 SHEETS

08/14/04 KAB H:\ROCKWALL\2002\04\BASE\TOPO-BASE-MASTER SURVEY_SanSewSS1 Rev(2) XREF: ROCKWALL\2002\04\BASE\TOPO-BASE-MASTER SURVEY_SanSewSS1 Rev(2) SCALE: 1"=40'



SANITARY SEWER SERVICES	
LOCATION	PROP. 4" SERVICES (L.F.)
STA. 8+64.42 (SS2)	5' WEST
STA. 9+11.84 (SS2)	15' EAST
STA. 9+70 (SS2)	5' WEST
STA. 10+00 (SS2)	15' EAST

FURNISH & INSTALL:
 1'-8"x4" WYE
 4" P.V.C. WASTEWATER LATERAL CONNECTION

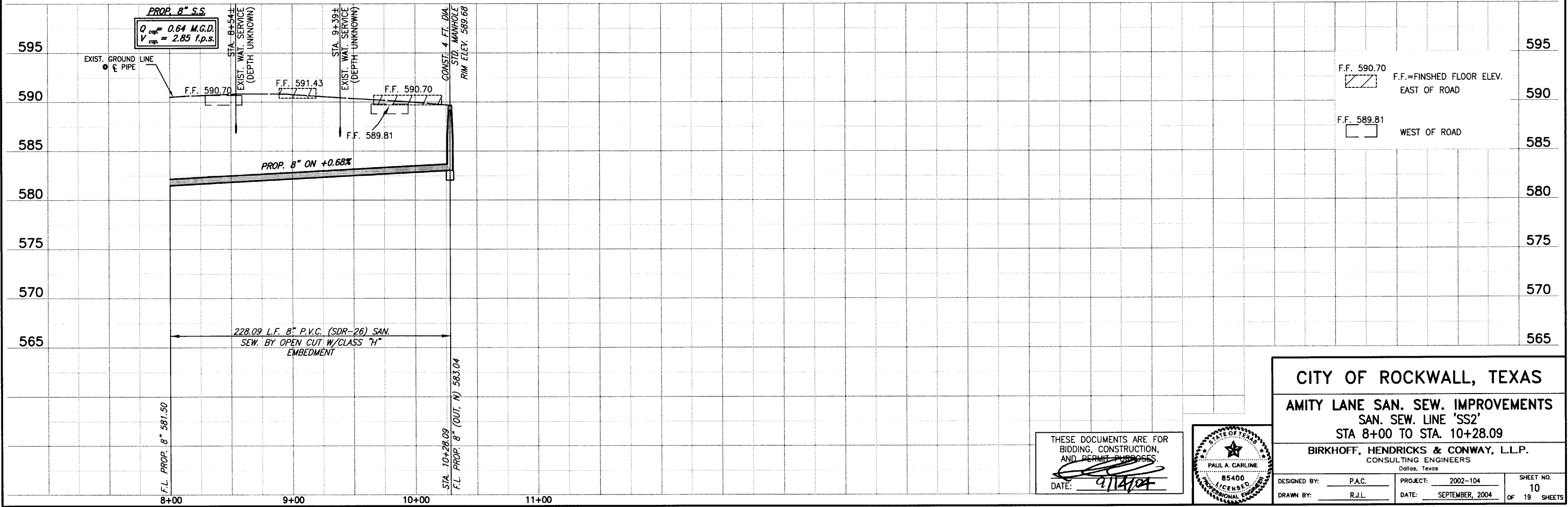


- CITY OF ROCKWALL BENCHMARK
R016
ELEV. 558.719
- T.B.M. 346
SANITARY SEWER MANHOLE RIM AT
SAN. SEW. LINE 'SS1' STA. 0+00
N 7024055.4568, E 2601761.3699
ELEV. 559.52
- T.B.M. 101
60D NAIL ON NORTH SIDE OF AIRPORT ROAD,
SAN. SEW. LINE 'SS1' STA. 39+24.9, 38.30" LT.
N 7025851.5998, E 2604704.5991
ELEV. 589.49
- T.B.M. 100
S.W.B. MANHOLE RIM NORTH SIDE OF AIRPORT ROAD,
SAN. SEW. LINE 'SS1' STA. 64+33.53, 47.06" LT.
N 7025889.4352, E 2607135.3028
ELEV. 607.63

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BY PAC DATE 1/19/07

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THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.
 DATE: 9/14/04



CITY OF ROCKWALL, TEXAS

AMITY LANE SAN. SEW. IMPROVEMENTS
SAN. SEW. LINE 'SS2'
STA 8+00 TO STA. 10+28.09

BIRKHOFF, HENDRICKS & CONWAY, L.L.P.
 CONSULTING ENGINEERS
 Dallas, Texas

DESIGNED BY: <u>P.A.C.</u>	PROJECT: <u>2002-104</u>	SHEET NO. <u>10</u>
DRAWN BY: <u>R.J.L.</u>	DATE: <u>SEPTEMBER, 2004</u>	OF <u>19</u> SHEETS

DAVID HARR SURVEY
ABST. NO. 102

AIRPORT ACRES ADDITION

JOHNNY, JR. & NICOLE BENNETT
LOT 20
VOL. 1494, PG. 118

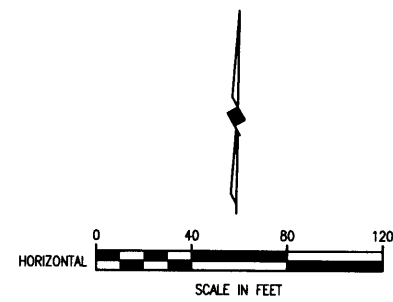
MICHAEL TAYLOR, ET UX
LOT 21
VOL. 128, PG. 827

GREENLEE ADDITION

E.M. ELLIOTT SURVEY
ABST. NO. 77

SANITARY SEWER SERVICES	
LOCATION	PROP. 4" SERVICES (L.F.)
STA. 0+80 (SS4)	15' SOUTH
STA. 3+85 (SS4)	15' SOUTH

FURNISH & INSTALL:
1-8"x4" WYE
4" P.V.C. WASTEWATER LATERAL CONNECTION



REMOVE EXISTING 3-30" CMP CULVERTS
FURNISH & INSTALL
3-36" RCP CULVERTS
2-TXDOT TYPE CH-PW-O HEADWALLS
W/ CONCRETE RIP-RAP

N 7026921.6482
E 2804312.6961
FURNISH & INSTALL 8" PLUG
END PROP. SAN. SEW.
LINE 'SS7'

DOUGLAS & LEAH VOTH
LOT 9
VOL. 2187, PG. 253

MARIO VELASQUEZ
LOT 19
VOL. 1801, PG. 312

REMOVE EXISTING
36" CULVERTS
FURNISH & INSTALL
3-36" RCP CULVERTS
2-TXDOT TYPE CH-PW-O
HEADWALLS W/ CONCRETE
RIP-RAP

N 7026922.2292
E 2804853.2090
STA. 5+09.33 'SS4' =
STA. 0+00 'SS5'
STA. 0+00 'SS6'
CONST. 4 FT. STD. MANHOLE

N 7026923.1114
E 2605039.7438
STA. 6+95.87
CONST. 4 FT. DIA. MANHOLE
CONST. 5 L.F. 8" STUBOUT (NORTH)
ON +1.00% GRADE
END PROP. SAN. SEW. LINE 'SS4'

R.G. STEPHENS, JOSEPH FUNK
AND J.E. OVERALL, JR.
TRACT 26
VOL. 97, PG. 420

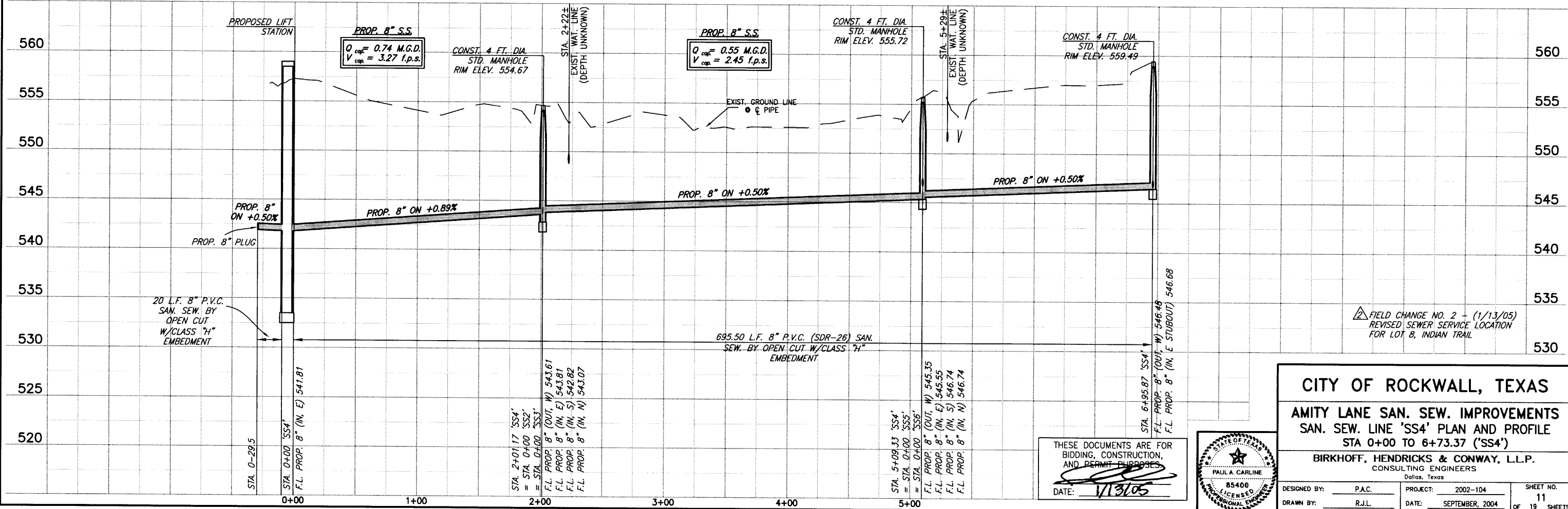
- CITY OF ROCKWALL BENCHMARK
R016
ELEV. 558.719
- T.B.M. 346
SANITARY SEWER MANHOLE RIM AT
SAN. SEW. LINE 'SS1' STA. 0+00
N 7024055.4568, E 2601761.3699
ELEV. 559.52
- T.B.M. 101
60d NAIL ON NORTH SIDE OF AIRPORT ROAD,
SAN. SEW. LINE 'SS1' STA. 39+24.9, 38.30' LT.
N 7025851.5998, E 2604704.5991
ELEV. 589.49
- T.B.M. 100
S.W.B. MANHOLE RIM NORTH SIDE OF AIRPORT ROAD,
SAN. SEW. LINE 'SS1' STA. 64+33.53, 47.06' LT.
N 7025889.4352, E 2607135.3028
ELEV. 607.63

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BY PAC DATE 1/19/07

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01/13/05 KAB H:\ROCKWALL\2002\04\SS10-54.DWG SCALE: 1"=40' XREF: ROCKWALL\2002\04\BASE\TOPO-BASE_MASTER SURVEY_SanSewS1 Rev(2)



THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.
DATE: 1/13/05



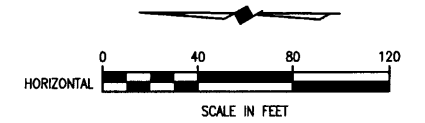
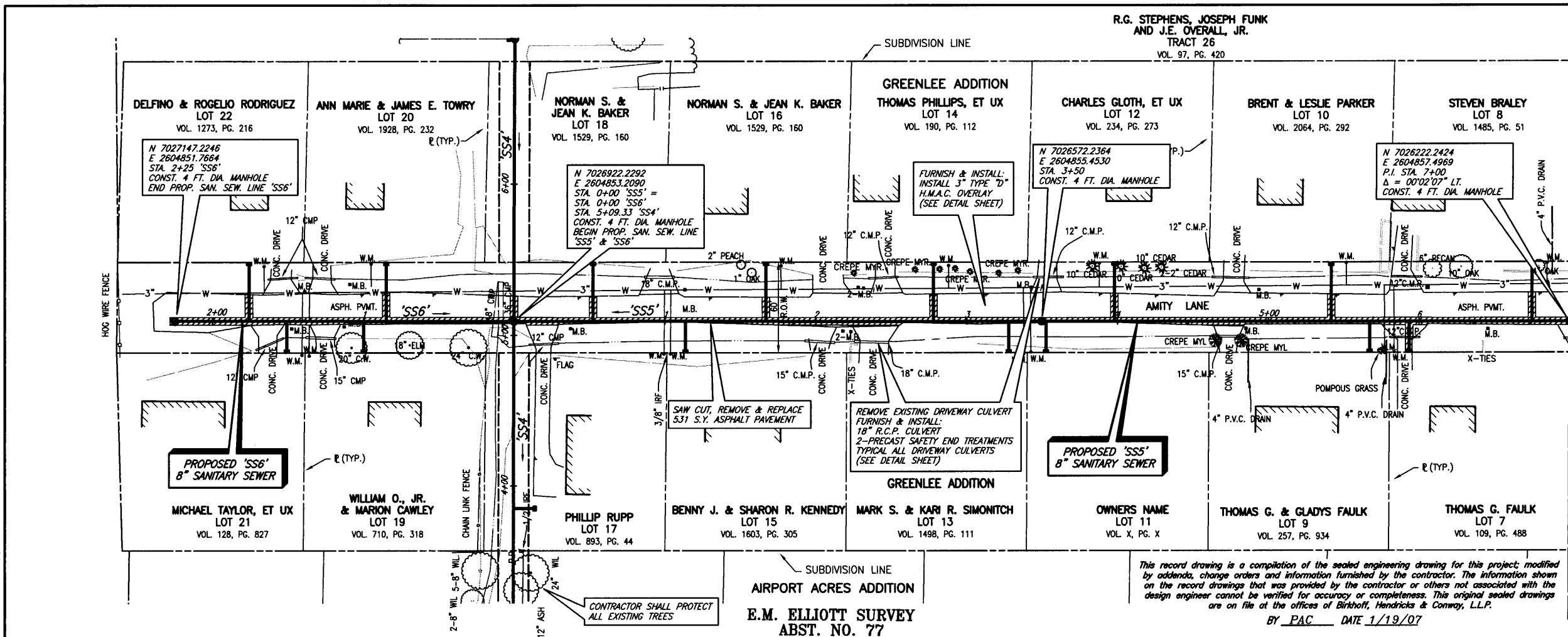
CITY OF ROCKWALL, TEXAS

AMITY LANE SAN. SEW. IMPROVEMENTS
SAN. SEW. LINE 'SS4' PLAN AND PROFILE
STA 0+00 TO 6+73.37 ('SS4')

BIRKHOFF, HENDRICKS & CONWAY, L.L.P.
CONSULTING ENGINEERS
Dallas, Texas

DESIGNED BY: P.A.C. PROJECT: 2002-104 SHEET NO. 11
DRAWN BY: R.J.L. DATE: SEPTEMBER, 2004 OF 19 SHEETS

09/14/04 KAB H:\ROCKWALL\2002\104\BASE\TOPO-BASE, MASTER SURVEY, SANSEW.SS1 Rev(4)2



SANITARY SEWER SERVICES	
LOCATION	PROP. 4" SERVICES (L.F.)
STA. 0+85.07 (SS6)	39.5' EAST
STA. 1+00 (SS6)	21' WEST
STA. 1+50.73 (SS6)	21' WEST
STA. 1+75.78 (SS6)	39.5' EAST
STA. 0+52.28 (SS5)	39.5' EAST
STA. 1+13.58 (SS5)	21' WEST
STA. 1+66.69 (SS5)	39.5' EAST
STA. 2+77.82 (SS5)	39.5' EAST
STA. 3+28.09 (SS5)	21' WEST
STA. 3+52.83 (SS5)	21' WEST
STA. 3+97.92 (SS5)	39.5' EAST
STA. 5+41.67 (SS5)	39.5' EAST
STA. 5+67.29 (SS5)	21' WEST
STA. 5+93.47 (SS5)	21' WEST
STA. 6+74.78 (SS5)	39.5' EAST

FURNISH & INSTALL:
 1-8" x 4" WYE
 4" P.V.C. WASTEWATER LATERAL CONNECTION

CITY OF ROCKWALL BENCHMARK
 R016
 ELEV. 558.719

T.B.M. 346
 SANITARY SEWER MANHOLE RIM AT
 SAN. SEW. LINE 'SS1' STA. 0+00
 N 7024055.4568, E 2601761.3699
 ELEV. 559.52

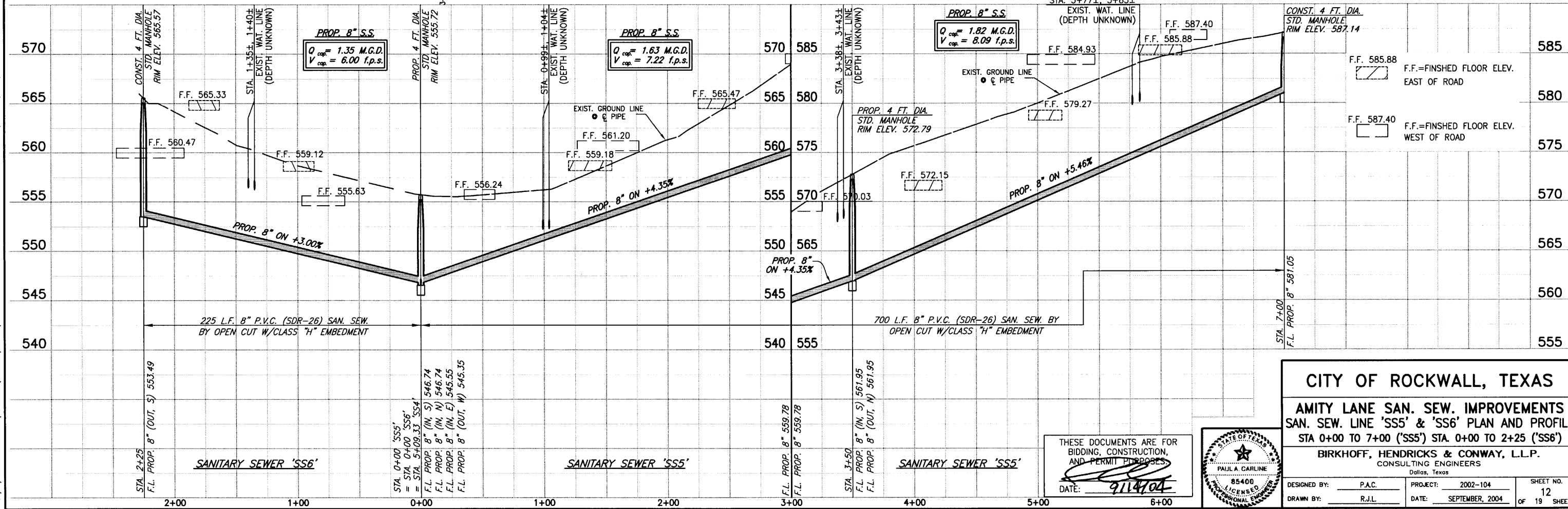
T.B.M. 101
 600 MAIL ON NORTH SIDE OF AIRPORT ROAD,
 SAN. SEW. LINE 'SS1' STA. 39+24.9, 38.30' LT.
 N 7025851.5998, E 2604704.5991
 ELEV. 589.49

T.B.M. 100
 S.W.B. MANHOLE RIM NORTH SIDE OF AIRPORT ROAD,
 SAN. SEW. LINE 'SS1' STA. 6+33.53, 47.06' LT.
 N 7025889.4352, E 2607135.3028
 ELEV. 607.63

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BY PAC DATE 1/19/07



CITY OF ROCKWALL, TEXAS

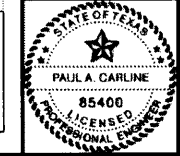
AMITY LANE SAN. SEW. IMPROVEMENTS
 SAN. SEW. LINE 'SS5' & 'SS6' PLAN AND PROFILE
 STA 0+00 TO 7+00 ('SS5') STA. 0+00 TO 2+25 ('SS6')

BIRKHOFF, HENDRICKS & CONWAY, L.L.P.
 CONSULTING ENGINEERS
 Dallas, Texas

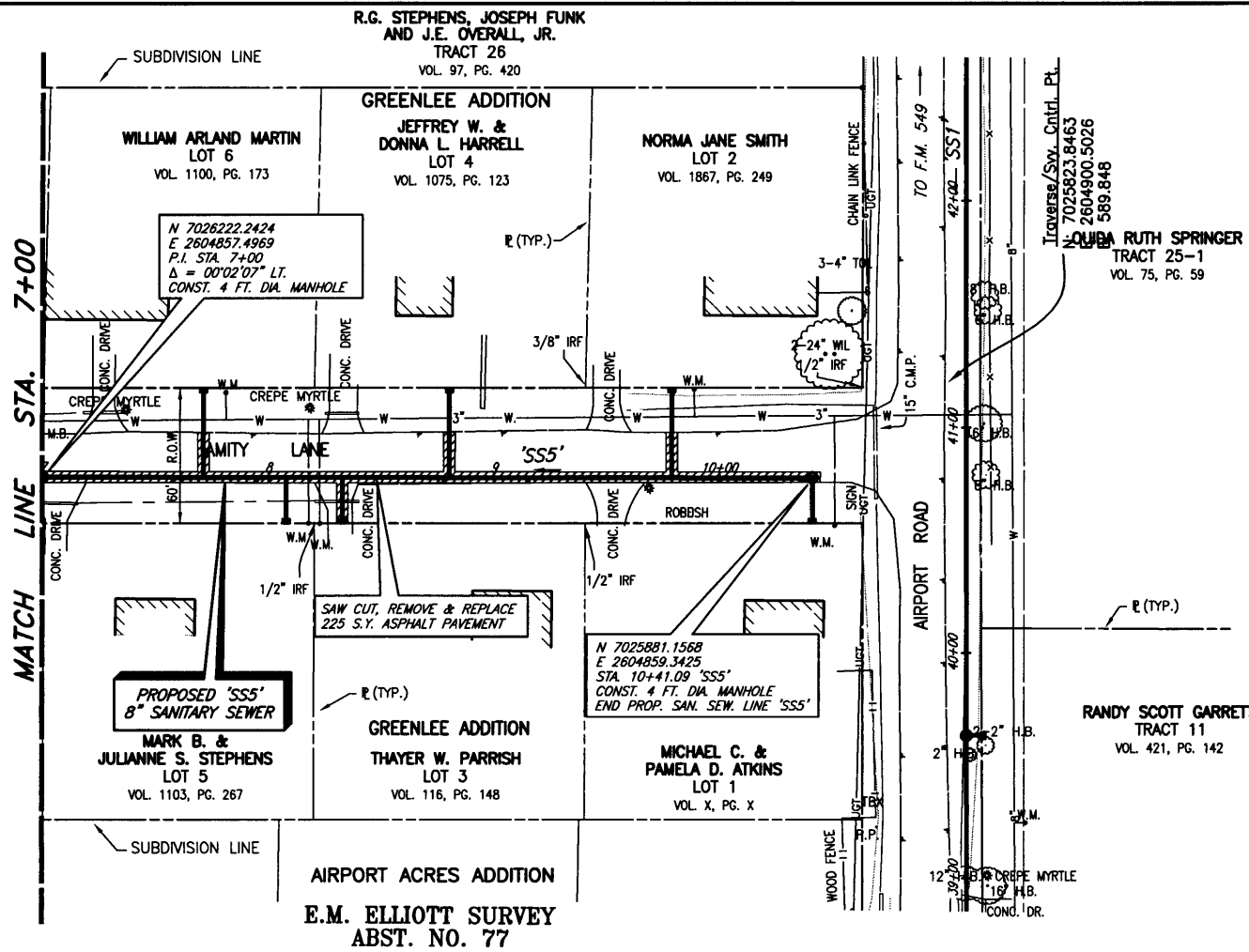
DESIGNED BY: P.A.C. PROJECT: 2002-104 SHEET NO. 12
 DRAWN BY: R.J.L. DATE: SEPTEMBER, 2004 OF 19 SHEETS

THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.

DATE: 9/14/04

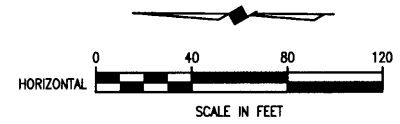


09/14/04 KKB H: ROCKWALL\2002104\SHEETS\2002104-SS12-SSB.DWG SCALE: 1"=40' XREF: ROCKWALL\2002104\BASE\TOPO-BASE_MASTER SURVEY_SanSewSS1 Rev(2)



SANITARY SEWER SERVICES	
LOCATION	PROP. 4" SERVICES (L.F.)
STA 7+71.03 (SS5)	39.5' EAST
STA 8+07.96 (SS5)	21' WEST
STA 8+32.99 (SS5)	21' WEST
STA 8+80.47 (SS5)	39.5' EAST
STA 9+78.77 (SS5)	39.5' EAST
STA 10+41.09 (SS5)	21' WEST

FURNISH & INSTALL:
 1-3/4" WYE
 4" P.V.C. WASTEWATER LATERAL CONNECTION



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BY PAC DATE 1/19/07

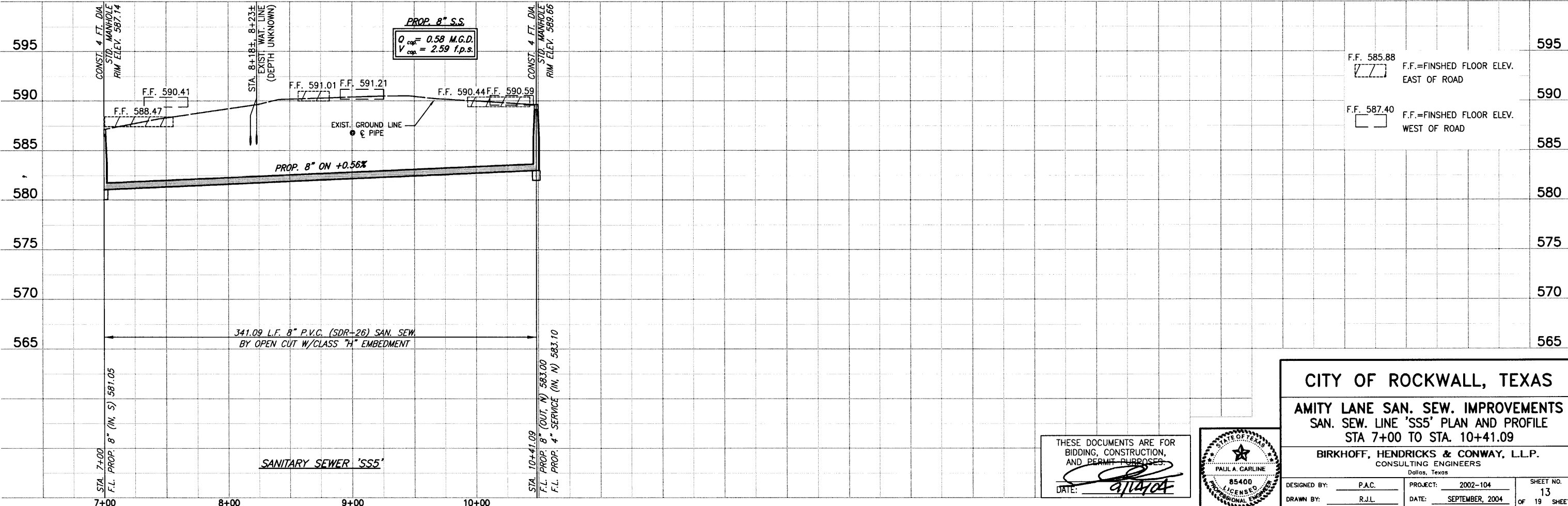
CITY OF ROCKWALL BENCHMARK
 R016
 ELEV. 558.719

T.B.M. 346
 SANITARY SEWER MANHOLE RIM AT
 SAN. SEW. LINE 'SS1' STA. 0+00
 N 7024055.4568, E 2601761.3699
 ELEV. 559.52

T.B.M. 101
 600 NAIL ON NORTH SIDE OF AIRPORT ROAD,
 SAN. SEW. LINE 'SS1' STA. 39+24.9, 38.30' LT.
 N 7025851.5998, E 2604704.5991
 ELEV. 589.49

T.B.M. 100
 S.W.B. MANHOLE RIM NORTH SIDE OF AIRPORT ROAD,
 SAN. SEW. LINE 'SS1' STA. 64+33.53, 47.06' LT.
 N 7025889.4352, E 2607135.3028
 ELEV. 607.63

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CITY OF ROCKWALL, TEXAS

AMITY LANE SAN. SEW. IMPROVEMENTS
 SAN. SEW. LINE 'SS5' PLAN AND PROFILE
 STA 7+00 TO STA. 10+41.09

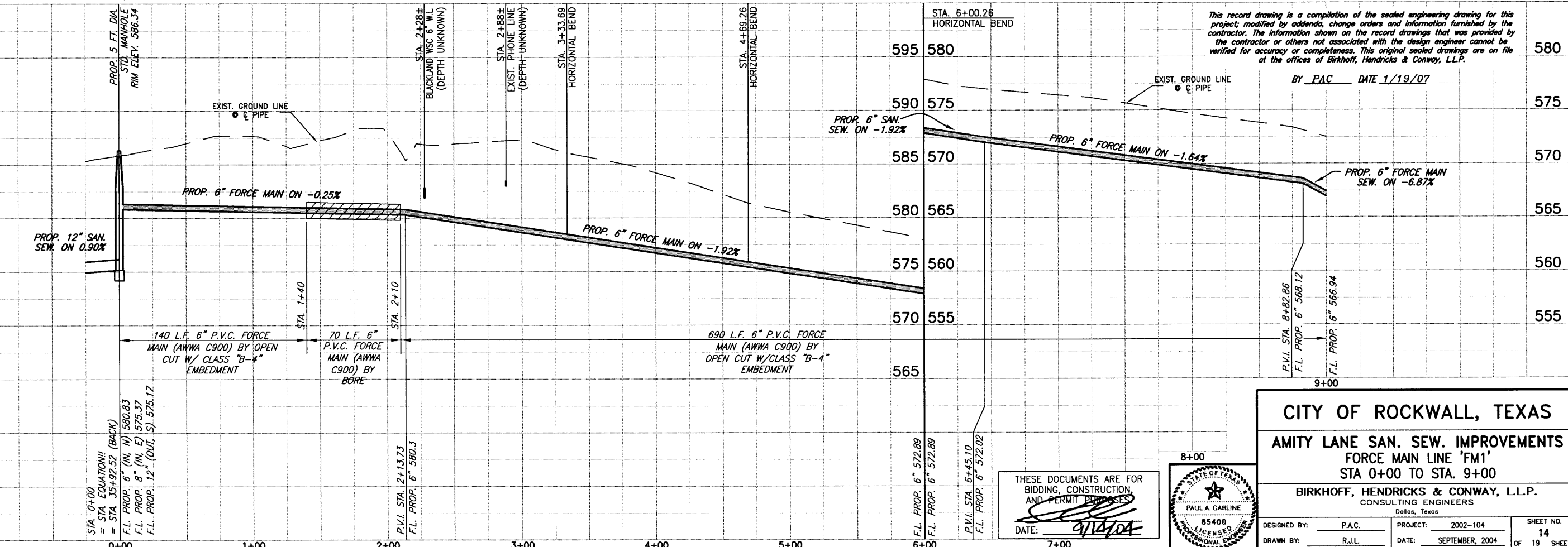
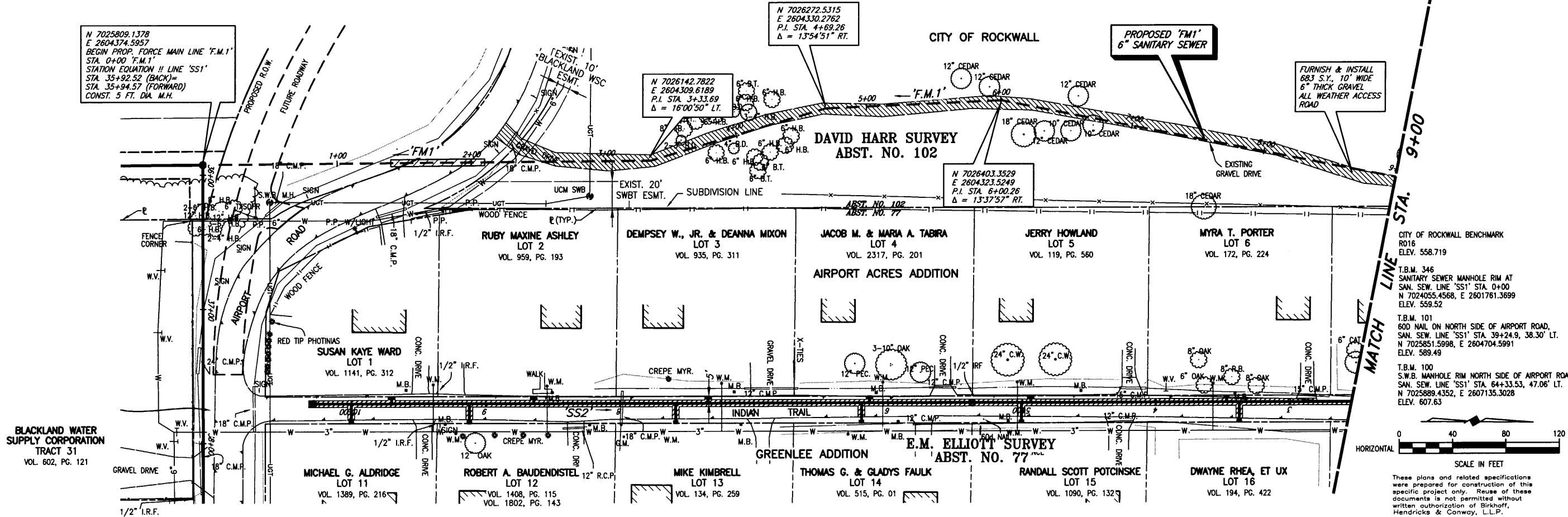
BIRKHOFF, HENDRICKS & CONWAY, L.L.P.
 CONSULTING ENGINEERS
 Dallas, Texas

DESIGNED BY: P.A.C.	PROJECT: 2002-104	SHEET NO. 13
DRAWN BY: R.J.L.	DATE: SEPTEMBER, 2004	OF 19 SHEETS

THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.
 DATE: 9/14/04



09/14/04 KAB H:\ROCKWALL\2002\04\SS13-FM1A.DWG SCALE: 1"=40' XREF: ROCKWALL\2002\04\BASE\TOPC-BASE_MASTER SURVEY_SanSewSS1 Rev(2)



CITY OF ROCKWALL BENCHMARK
 R016
 ELEV. 558.719
 T.B.M. 345
 SANITARY SEWER MANHOLE RIM AT
 SAN. SEW. LINE 'SS1' STA. 0+00
 N 7024055.4568, E 2601761.3699
 ELEV. 559.52
 T.B.M. 101
 600 NAIL ON NORTH SIDE OF AIRPORT ROAD.
 SAN. SEW. LINE 'SS1' STA. 39+24.9, 38.30' LT.
 N 7025851.5998, E 2604704.5991
 ELEV. 589.49
 T.B.M. 100
 S.W.B. MANHOLE RIM NORTH SIDE OF AIRPORT ROAD.
 SAN. SEW. LINE 'SS1' STA. 64+33.53, 47.06' LT.
 N 7025889.4352, E 2607135.3028
 ELEV. 607.63

SCALE IN FEET
 0 40 80 120
 HORIZONTAL
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BY PAC DATE 1/19/07

CITY OF ROCKWALL, TEXAS
AMITY LANE SAN. SEW. IMPROVEMENTS
FORCE MAIN LINE 'FM1'
STA 0+00 TO STA. 9+00

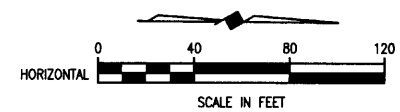
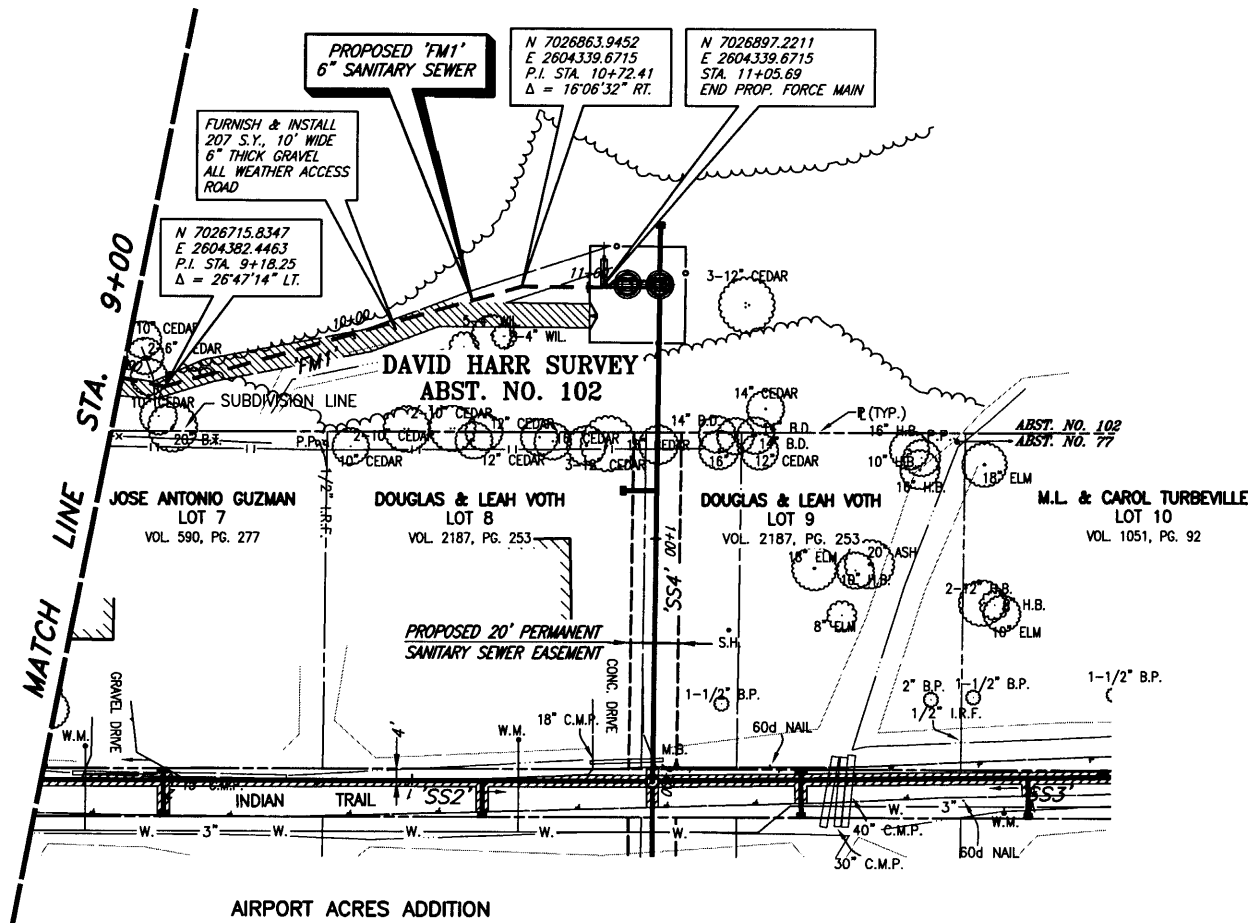
BIRKHOFF, HENDRICKS & CONWAY, L.L.P.
 CONSULTING ENGINEERS
 Dallas, Texas

DESIGNED BY: P.A.C. PROJECT: 2002-104 SHEET NO. 14
 DRAWN BY: R.J.L. DATE: SEPTEMBER, 2004 OF 19 SHEETS

THESE DOCUMENTS ARE FOR
 BIDDING, CONSTRUCTION
 AND PERMIT PURPOSES
 DATE: 9/14/04



H:\ROCKWALL\2002104\2002104\BASE\TOP-BASE_MASTER SURVEY_SanSewSS1 Rev(2)
 SCALE: 1"=40'
 H:\ROCKWALL\2002104\2002104\BASE\TOP-BASE_MASTER SURVEY_SanSewSS1 Rev(2)
 SCALE: 1"=40'
 H:\ROCKWALL\2002104\2002104\BASE\TOP-BASE_MASTER SURVEY_SanSewSS1 Rev(2)
 SCALE: 1"=40'



CITY OF ROCKWALL BENCHMARK
 R016
 ELEV. 558.719

T.B.M. 346
 SANITARY SEWER MANHOLE RIM AT
 SAN. SEW. LINE 'SS1' STA. 0+00
 N 7024055.4568, E 2601761.3699
 ELEV. 559.52

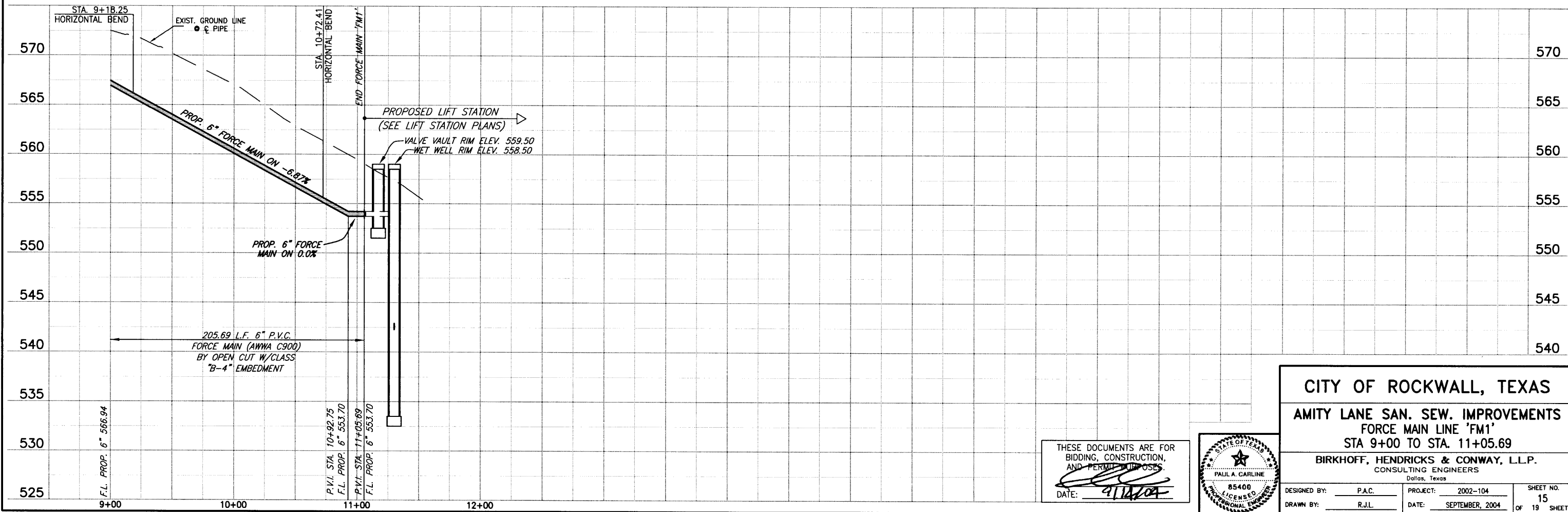
T.B.M. 101
 600 NAIL ON NORTH SIDE OF AIRPORT ROAD,
 SAN. SEW. LINE 'SS1' STA. 39+24.9, 38.30' LT.
 N 7025851.5998, E 2604704.5991
 ELEV. 589.49

T.B.M. 100
 S.W.B. MANHOLE RIM NORTH SIDE OF AIRPORT ROAD,
 SAN. SEW. LINE 'SS1' STA. 64+33.53, 47.06' LT.
 N 7025889.4352, E 2607135.3028
 ELEV. 607.63

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BY PAC DATE 1/19/07

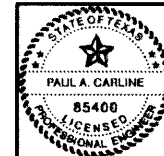
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CITY OF ROCKWALL, TEXAS
 AMITY LANE SAN. SEW. IMPROVEMENTS
 FORCE MAIN LINE 'FM1'
 STA 9+00 TO STA. 11+05.69

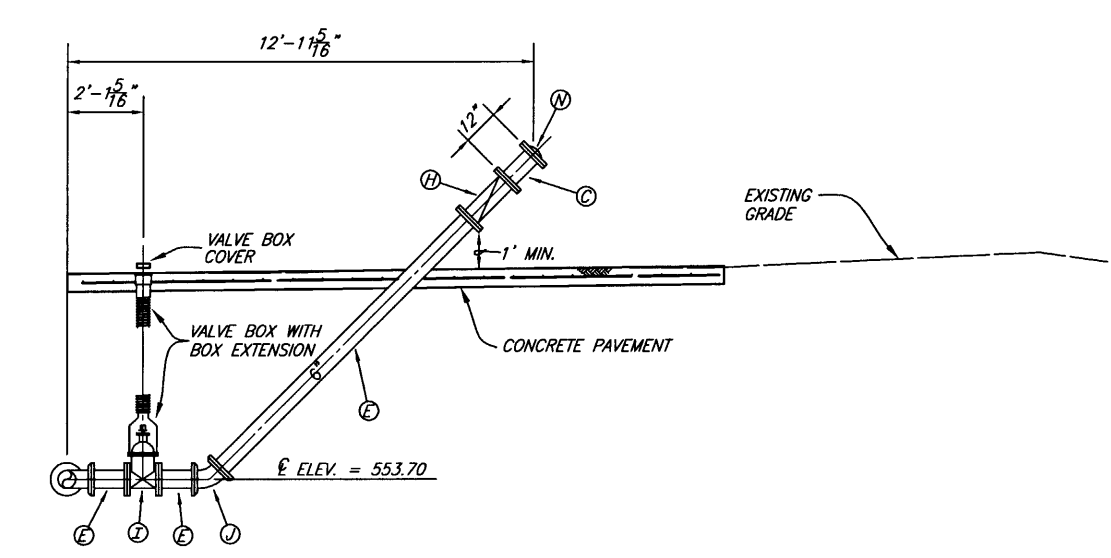
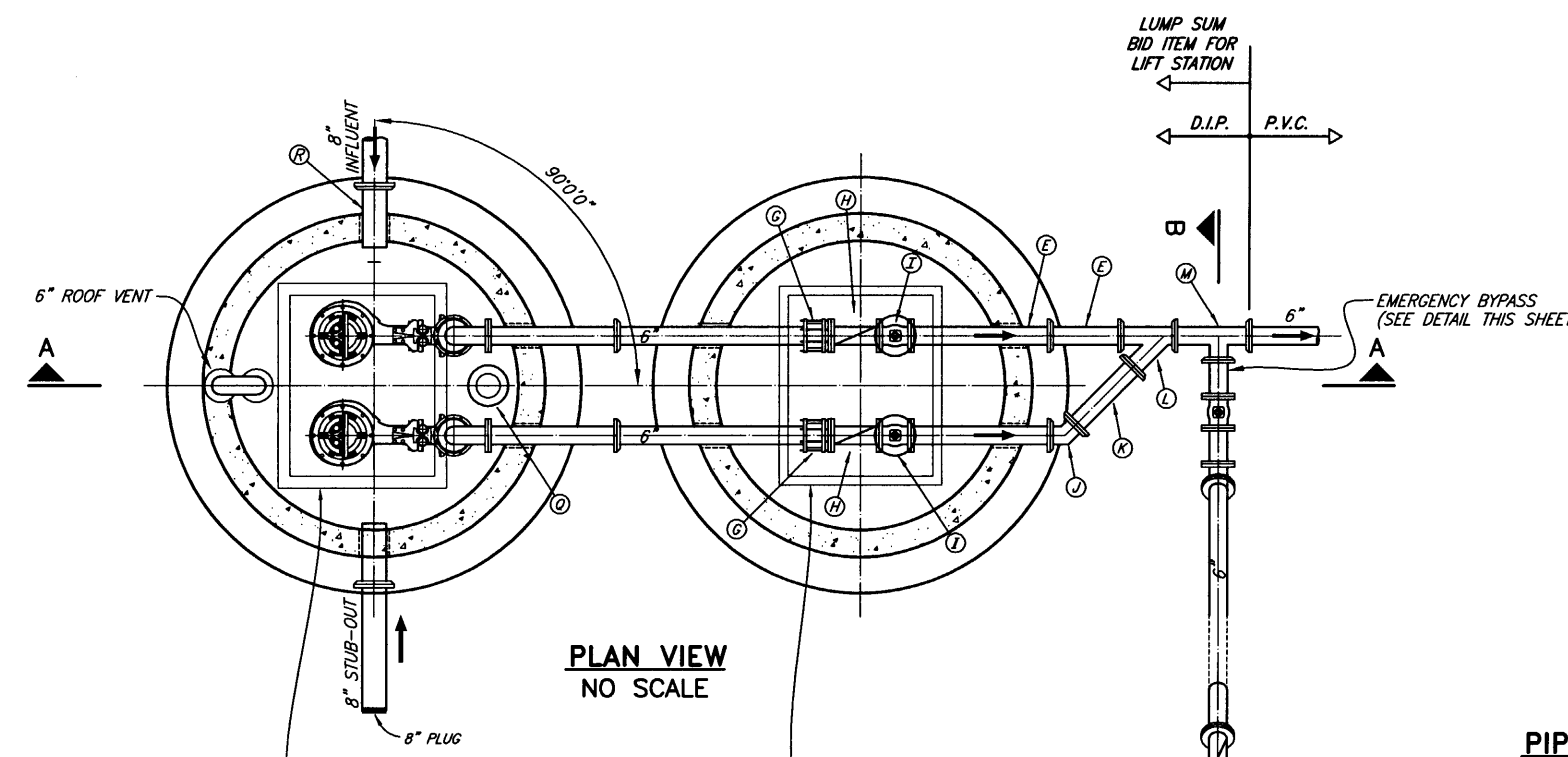
BIRKHOFF, HENDRICKS & CONWAY, L.L.P.
 CONSULTING ENGINEERS
 Dallas, Texas

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 DATE: 9/14/04

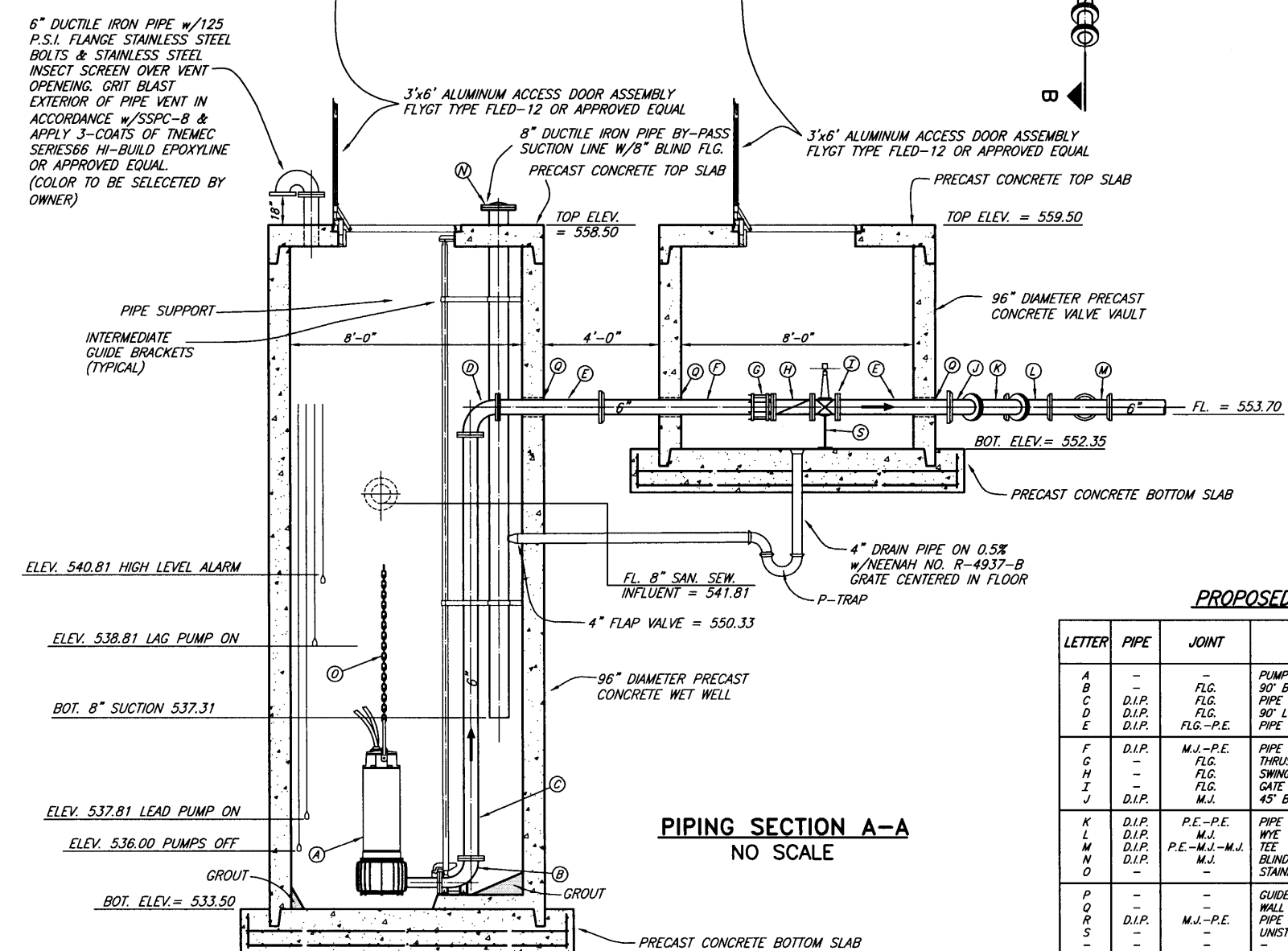


DESIGNED BY: P.A.C. PROJECT: 2002-104 SHEET NO. 15
 DRAWN BY: R.J.L. DATE: SEPTEMBER, 2004 OF 19 SHEETS

XREF: ROCKWALL_2002104\PROFILES
 XREF: ROCKWALL_2002104\BASE\TOPO-BASE
 H: ROCKWALL_2002104\SHEETS\2002104-SS15-LS1.DWG
 09/14/04 KAB



PIPING SECTION B-B EMERGENCY BYPASS DETAIL



PIPING SECTION A-A NO SCALE

6" DUCTILE IRON PIPE w/125 P.S.I. FLANGE STAINLESS STEEL BOLTS & STAINLESS STEEL INSECT SCREEN OVER VENT OPENING. GRIT BLAST EXTERIOR OF PIPE VENT IN ACCORDANCE w/SSPC-B & APPLY 3-COATS OF TNEPEC SERIES66 HI-BUILD EPOXYLINE OR APPROVED EQUAL. (COLOR TO BE SELECTED BY OWNER)
 3'x6" ALUMINUM ACCESS DOOR ASSEMBLY FLYGT TYPE FLED-12 OR APPROVED EQUAL
 8" DUCTILE IRON PIPE BY-PASS SUCTION LINE w/8" BLIND FLG. PRECAST CONCRETE TOP SLAB
 3'x6" ALUMINUM ACCESS DOOR ASSEMBLY FLYGT TYPE FLED-12 OR APPROVED EQUAL
 PRECAST CONCRETE TOP SLAB
 PRECAST CONCRETE BOTTOM SLAB

PIPE SUPPORT
 INTERMEDIATE GUIDE BRACKETS (TYPICAL)
 TOP ELEV. = 558.50
 TOP ELEV. = 559.50
 96" DIAMETER PRECAST CONCRETE VALVE VAULT
 8'-0"
 4'-0"
 8'-0"
 FL. = 553.70
 BOT. ELEV. = 552.35
 PRECAST CONCRETE BOTTOM SLAB
 4" DRAIN PIPE ON 0.5% w/NEENAH NO. R-4937-B GRATE CENTERED IN FLOOR
 P-TRAP
 FL. 8" SAN. SEW. INFLUENT = 541.81
 4" FLAP VALVE = 550.33
 96" DIAMETER PRECAST CONCRETE WET WELL
 ELEV. 540.81 HIGH LEVEL ALARM
 ELEV. 538.81 LAG PUMP ON
 BOT. 8" SUCTION 537.31
 ELEV. 537.81 LEAD PUMP ON
 ELEV. 536.00 PUMPS OFF
 GROUT
 BOT. ELEV. = 533.50
 PRECAST CONCRETE BOTTOM SLAB

PROPOSED LEGEND

LETTER	PIPE	JOINT	DESCRIPTION
A	-	-	PUMP W/ MOTOR
B	-	FLG.	90° BEND (BY PUMP MFG.)
C	D.I.P.	FLG.	PIPE SPOOL
D	D.I.P.	FLG.	90° LONG RADIUS BEND
E	D.I.P.	FLG.-P.E.	PIPE SPOOL
F	D.I.P.	M.J.-P.E.	PIPE SPOOL
G	-	FLG.	THRUST HARNESS
H	-	FLG.	SWING CHECK VALVE W/ LEVER & WEIGHT
J	-	FLG.	GATE VALVE (WHEEL OPERATED)
N	D.I.P.	M.J.	45° BEND
K	D.I.P.	P.E.-P.E.	PIPE SPOOL
L	D.I.P.	M.J.	WYE
M	D.I.P.	P.E.-M.J.-M.J.	TEE
N	D.I.P.	M.J.	BLIND FLANGE
O	-	-	STAINLESS STEEL LIFTING CHAIN
P	-	-	GUIDE BAR
R	-	-	WALL PIPE
S	D.I.P.	M.J.-P.E.	PIPE SPOOL
-	-	-	UNISTRUT PIPE SUPPORT

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BY PAC DATE 1/19/07

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CITY OF ROCKWALL, TEXAS
AMITY LANE SAN. SEW. IMPROVEMENTS
INDIAN TRAIL LIFT STATION

BIRKHOFF, HENDRICKS & CONWAY, L.L.P.
 CONSULTING ENGINEERS
 Dallas, Texas

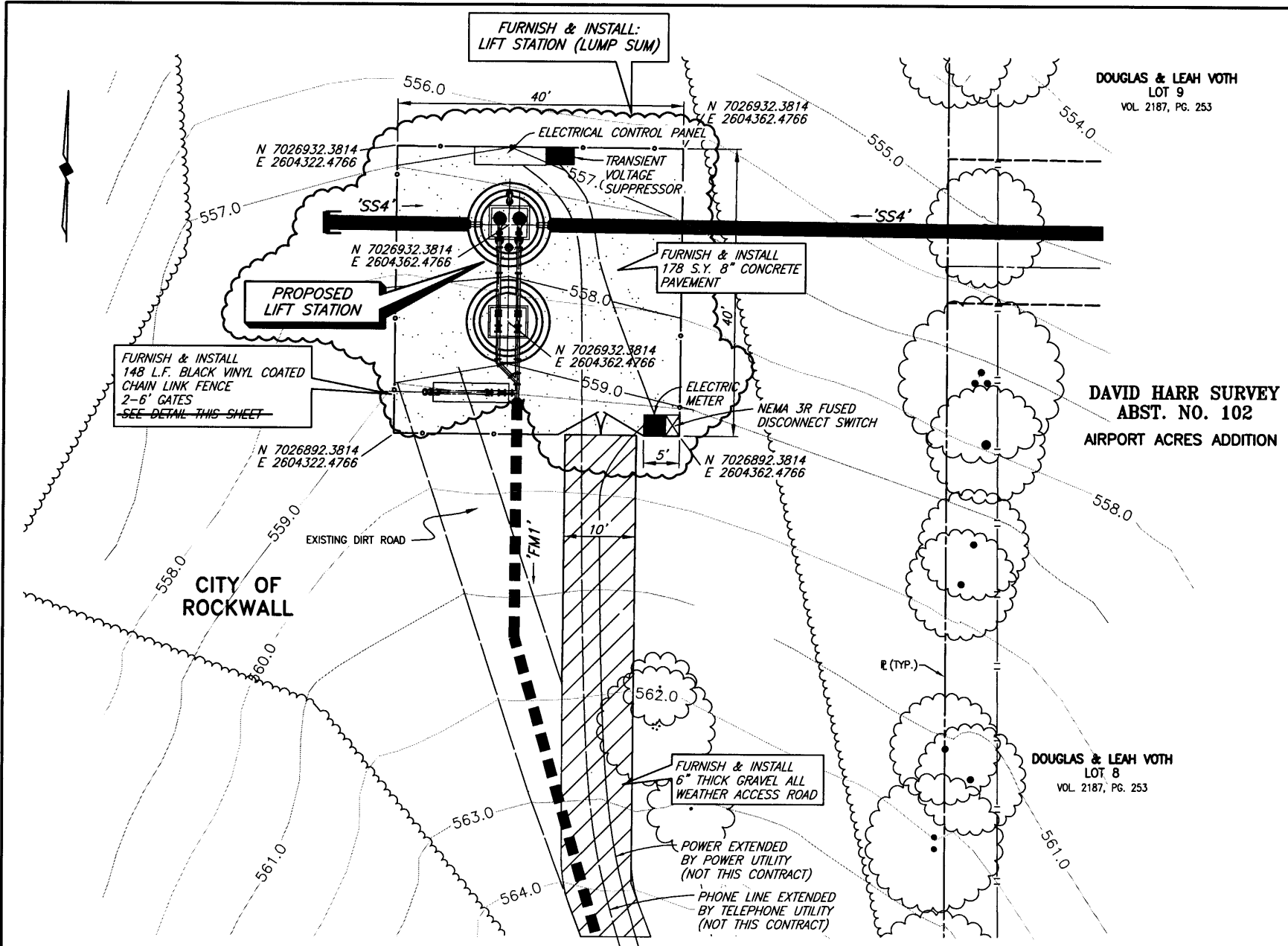
THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.
 DATE: 9/14/04



DESIGNED BY: P.A.C. PROJECT: 2002-104 SHEET NO. 16
 DRAWN BY: R.J.L. DATE: SEPTEMBER, 2004 OF 19 SHEETS

GENERAL NOTES

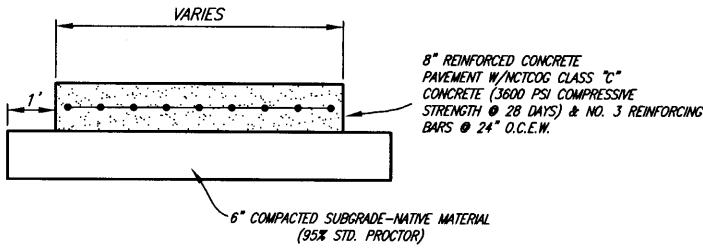
1. IN ORDER TO PREVENT SHEARING WITHIN THE BACKFILL AREAS, THE DISCHARGE PIPING SHALL BE DUCTILE IRON FROM THE LIFT STATION, THROUGH THE VALVE VAULT.
2. ALL DUCTILE IRON PIPING SHALL BE ANSI/AWWA C115. FITTINGS SHALL BE ANSI/AWWA C110 DUCTILE IRON, FLANGED, STANDARD THICKNESS. JOINTS SHALL BE ANSI/AWWA C111, MECHANICAL JOINT. PIPE AND FITTINGS SHALL HAVE INTERNAL AND EXTERNAL EPOXY COATINGS. ALL BURIED DUCTILE IRON PIPING SHALL ALSO BE POLYETHYLENE ENCASED IN ACCORDANCE WITH AWWA C105.
3. ALL DUCTILE IRON PIPING SHALL BE LINED WITH TWO 8.0 MIL COATS (16 MIL TOTAL DFT) OF TNEPEC SERIES 164 COLOR EPOXOLINE 80 OR APPROVED EQUAL.
4. ALL EXPOSED METALLIC PIPE (NON-GALVANIZED, NON-STAINLESS STEEL OR NON-ALUMINUM) AND FITTINGS WITHIN THE WET WELL AND VALVE VAULT SHALL BE COATED WITH A MINIMUM OF TWO 6.0 MIL COATS (12 MILS TOTAL DFT) OF DEVOE BAR-RUST 233H HIGH PERFORMANCE EPOXY COATING OR APPROVED EQUAL.
5. ALL ELECTRICAL JUNCTION BOXES SHALL BE LOCATED OUTSIDE OF THE WET WELL BETWEEN THE CONTROL PANEL AND THE WET WELL. A SEAL COUPLING MAY BE USED IN LIEU OF A JUNCTION BOX, HOWEVER IT MUST BE LOCATED BETWEEN THE CONTROL PANEL AND WET WELL. ALL COMPONENTS WITHIN THE WET WELL SHALL BE EXPLOSION-PROOF.
6. WHERE PIPES OR CONDUIT PASS THROUGH THE WALL OF THE WET WELL, THE SPACE BETWEEN THE WET WELL AND THE PIPE SHALL BE SEALED WITH LINK SEALS.
7. THE FOUNDATION OF THE WET WELL SHALL REST ON UNDISTURBED SOIL. OVER EXCAVATION OF THE WET WELL FOUNDATION SHALL BE FILLED WITH 2,500 PSI CONCRETE TO THE ELEVATION SHOWN ON THE PLANS FOR THE BOTTOM OF THE WET WELL FOUNDATION.
8. CONTRACTOR SHALL GROUT OPENINGS FOR ACCESS FRAMES AND WET WELL BOTTOM AS SHOWN. ALL GROUT SHALL BE NON-SHRINK AND BE COMPATIBLE WITH SPECIFIED COATINGS. CONFIGURE GROUT IN WET WELL BOTTOM PER PUMP MANUFACTURERS RECOMMENDATION.
9. COMPLETELY RESTRAIN ALL JOINTS FOR PIPE, BENDS, TEES AND FITTINGS ON THE FORCE MAIN PIPING WITHIN THE LIFT STATION SITE AND WITHIN 100 FEET OUTSIDE OF THE LIFT STATION FENCE.
10. NEMA 4X DUPLEX PUMP CONTROL PANEL SHALL ALTERNATE PUMP STARTING SEQUENCE, INTERFACE WITH LIQUID LEVEL SENSORS, CONTAIN MAIN DISCONNECT SWITCH, PILOT LIGHTS, RUN TIME METERS, HIGH LEVEL/PUMP FAIL ALARM HORN, BATTERY BACK-UP, AUTO DIALER AND UNDERWRITERS LABORATORY APPROVAL LABEL. PUMP CONTROLLER SHALL BE MANUFACTURED BY ITT FLYGT.
11. PRECAST WET-WELL AND VALVE VAULT SHALL BE A MINIMUM OF 4,000 PSI CONCRETE. WALL THICKNESS SHALL MEET OR EXCEED THE MINIMUMS SHOWN. MANUFACTURER SHALL VERIFY WALL THICKNESSES AND PROVIDE ADEQUATE REINFORCING FOR PROPOSED DEPTHS. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS OF THE PROPOSED STRUCTURES SEALED AND SIGNED BY A TEXAS LICENSED PROFESSIONAL ENGINEER TO BIRKHOFF, HENDRICKS & CONWAY, L.L.P. FOR REVIEW.
12. BACKFILL AROUND THE WET WELL AND VALVE VAULT SHALL BE COMPACTED TO 95% STANDARD PROCTOR AT +/- 3% OF OPTIMUM MOISTURE.
13. ALL CONCRETE AND GROUT SURFACES INSIDE THE WET WELL SHALL BE COATED WITH A 6.0 MIL DFT PRIME COAT OF TNEPEC SERIES 201 EPOXOPRIME, 125 MIL DFT COAT OF TNEPEC SERIES 434 CHEMBLOCK H2S, AND A 16 MIL DFT TOP COAT OF TNEPEC 435 CHEMCEL. ALL CONCRETE AND GROUT SHALL HAVE A MINIMUM OF 28 DAYS CURE TIME PRIOR TO COATING APPLICATION. ABRASIVE BLAST ALL SURFACES TO SSPC-SP13/NACE 6 PRIOR TO COATING APPLICATION. FOLLOW MANUFACTURERS PUBLISHED APPLICATION INSTRUCTIONS INCLUDING THOSE FOR SURFACE REPAIR PRIOR TO COATING.
14. WET WELL AND VALVE SHALL HAVE WATER TIGHT JOINTS (O-RING OR APPROVED EQUAL). INTERIOR AND EXTERIOR SIDES OF JOINTS SHALL BE SEALED WITH NON-SHRINK GROUT.
15. LUMP SUM BID ITEM FOR LIFT STATION IN BID SCHEDULE SHALL INCLUDE ALL LIFT STATION EQUIPMENT, MATERIALS, LABOR, ELECTRICAL WORK, ETC. IN FENCED AREA SHOWN ON LIFT STATION SITE PLAN. THIS INCLUDED THE FENCE, GATES, CONCRETE PAVEMENT, ETC. LUMP SUM BID ITEM INCLUDES A COMPLETE OPERATIONAL LIFT STATION AS SPECIFIED IN THESE PLANS AND SPECIFICATIONS.
16. CONTRACTOR SHALL COORDINATE LOCATION OF PUMPS, HATCHES AND ALL APPURTENANCES WITH ITT FLYGT.
17. ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH NEC, LOCAL AND NATIONAL CODES.
18. PUMP CONTROL PANEL SHALL BE "CITY OF ROCKWALL STANDARD" MANUFACTURED BY ITT FLYGT.



LIFT STATION SITE PLAN

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BY PAC DATE 1/19/07



PUMP SCHEDULE								
PUMP NO.	MANUFACTURER, MODEL, IMPELLER	PUMP EFFICIENCY (%)	G.P.M. (EA.)	PRESSURE (FT. HD.)	DISCHARGE SIZE (IN.)	VOLTS	PHASE	HP (EA.)
1	FLYGT CP3127.180, HT, 217mm IMPELLER	83.59%	289	54.4	4"	480	3	10
2	FLYGT CP3127.180, HT, 217mm IMPELLER	83.59%	289	54.4	4"	480	3	10

1. SUBMERSIBLE SEWAGE TYPE w/RAIL RETRIEVAL SYSTEM AND FLOAT CONTROL.
2. SCHEDULED NUMBERS FOR PUMP EFFICIENCY, G.P.M. AND PRESSURE REFLECT ONE PUMP IN OPERATION.
3. PUMPS AND MOTORS SHALL BE EXPLOSION PROOF.

CITY OF ROCKWALL BENCHMARK
R016
ELEV. 558.719

T.B.M. 346
SANITARY SEWER MANHOLE RIM AT
SAN. SEW. LINE "SS1" STA. 0+00
N 7024055.4568, E 2601761.3699
ELEV. 559.52

T.B.M. 101
600 NAIL ON NORTH SIDE OF AIRPORT ROAD,
SAN. SEW. LINE "SS1" STA. 39+24.9, 38.30' LT.
N 7025851.5998, E 2604704.5991
ELEV. 589.49

T.B.M. 100
S.W.B. MANHOLE RIM NORTH SIDE OF AIRPORT ROAD,
SAN. SEW. LINE "SS1" STA. 64+33.53, 47.06' LT.
N 7025889.4352, E 2607135.3028
ELEV. 607.63



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CITY OF ROCKWALL, TEXAS
AMITY LANE SAN. SEW. IMPROVEMENTS
INDIAN TRAIL LIFT STATION SITE PLAN
MISCELLANEOUS DETAILS

BIRKHOFF, HENDRICKS & CONWAY, L.L.P.
CONSULTING ENGINEERS
Dallas, Texas

DESIGNED BY: PAC PROJECT: 2002-104 SHEET NO. 17
DRAWN BY: R.J.L. DATE: SEPTEMBER, 2004 OF 19 SHEETS

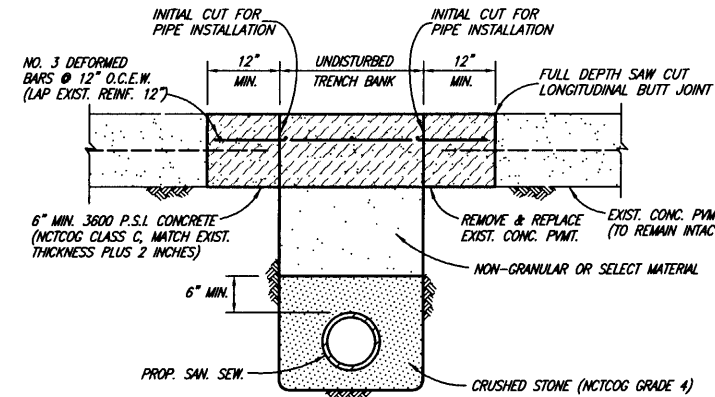
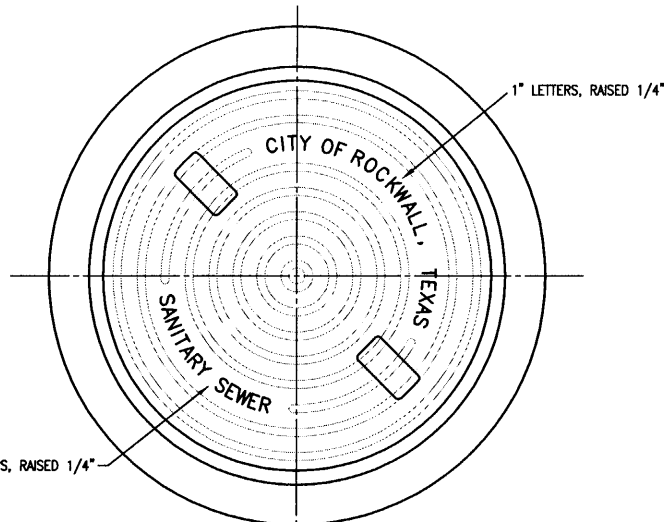
THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.
DATE: 9/19/04



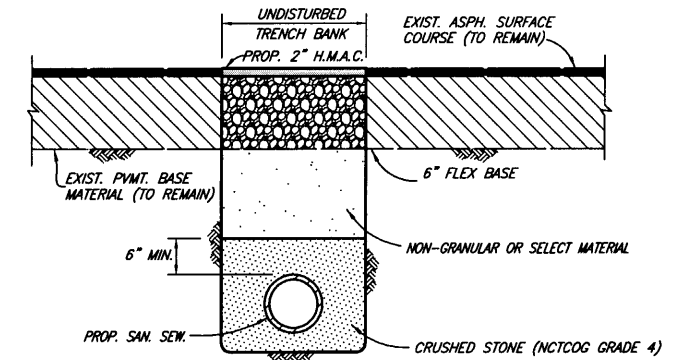
XREF: ROCKWALL_V2002104(BASE)_TOP0-BASE SCALE: 1"=40' H:\ROCKWALL_V2002104\SHEETS\2002104-SS16-LS2.DWG 09/14/04 KAB

STANDARD SEWER NOTES

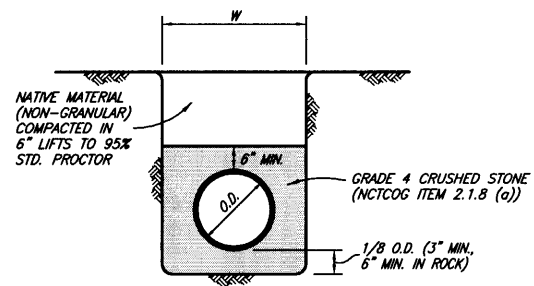
- SEWER LINES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT CITY OF ROCKWALL, SPECIFICATIONS AND CODES.
- FOR OPEN CUT SEWER REPLACEMENT, DETECTABLE TRACER (TERRA TAPE OR APPROVED EQUIVALENT) SHALL BE LAID WITH PVC PIPE AND CONNECTED TO ALL FITTINGS. TAPE SHALL BE LAID 6" ABOVE THE TOP OF PIPE, THE BACKFILL MATERIAL, OR ON TOP OF SAND BACKFILL.
- SANITARY SEWER PIPE SHALL BE SDR-35 PVC UNLESS OTHERWISE SHOWN ON THE PLANS OR APPROVED BY THE CITY ENGINEER. IN SIZES OVER 15" IN DIAMETER, THE TYPE OF MATERIAL SHALL BE AS SPECIFIED IN THE PLANS.
- MANHOLE FRAMES AND 24" DIAMETER COVER WITH THE "CITY OF ROCKWALL" AS MANUFACTURED BY THE VULCAN FOUNDRY, INC.-CATALOG NO. V-1342, BASS AND HAYS FOUNDRY-CATALOG NO. 300-24, OR APPROVED EQUAL SHALL BE FURNISHED FOR ALL SANITARY SEWER MANHOLES. THIS FRAME AND COVER IS STOCKED BY SEVERAL SUPPLIERS IN THIS AREA.
- CLASS "C" CONC. (3600 PSI AT 28 DAYS) OR PRECAST REINF. CONC. SHALL BE USED FOR ALL MANHOLES.
- USE ONLY A NON-SHEAR COUPLING FOR PIPE CONNECTIONS.
- WHEN THE TRENCH SAFETY EXCEEDS 5 FEET IN DEPTH, THE CONTRACTOR SHALL MEET OR EXCEED THE O.S.H.A. STANDARDS FOR TRENCH SAFETY.



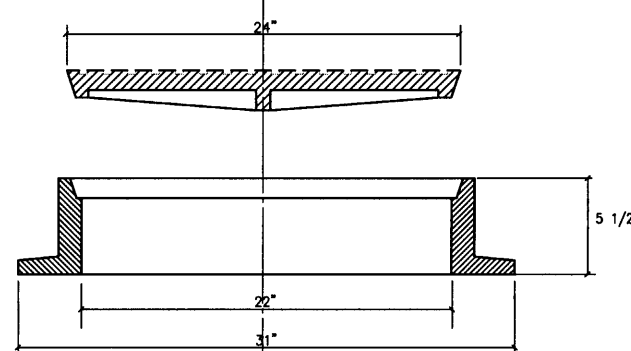
CONCRETE STREET OR DRIVEWAY REPAIR



ASPHALT STREET OR DRIVEWAY REPAIR

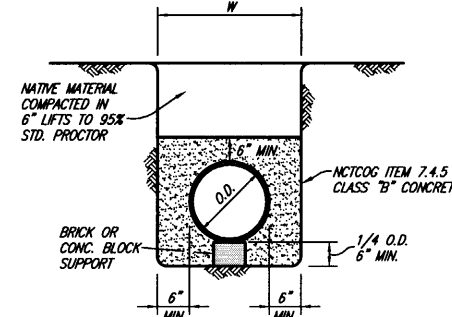


CLASS H EMBEDMENT
(GRAVITY SEWER)

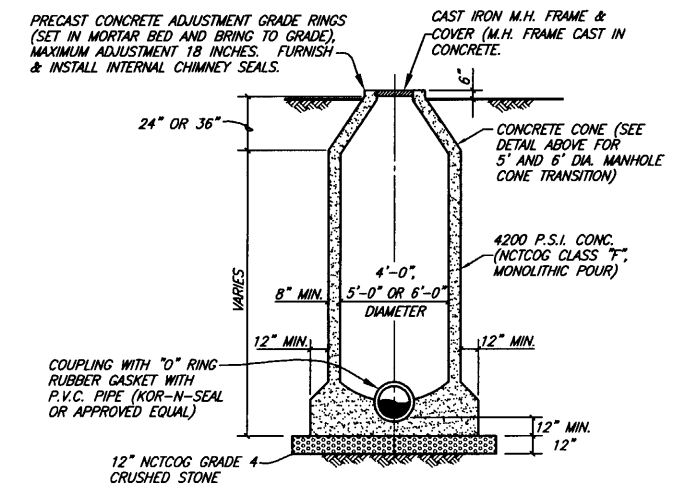


MANHOLE RING AND COVER
WITH LOCKING DEVICE & PICK SLOTS

BASS AND HAYES FOUNDRY, INC.
TRAFFIC BEARING MANHOLE: 400-24
NON TRAFFIC BEARING MANHOLES: 300-24

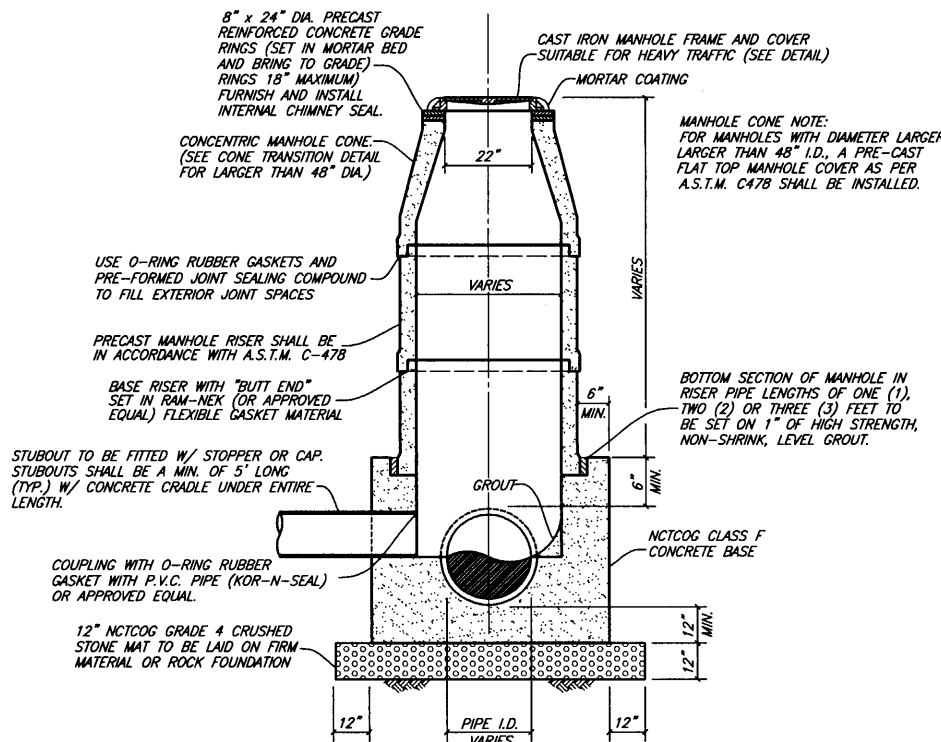


CLASS G EMBEDMENT
CONCRETE ENCASEMENT



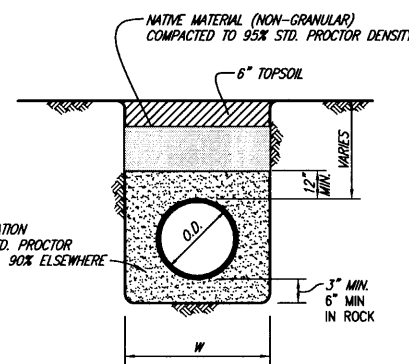
STANDARD MANHOLE ELEVATION
4', 5' & 6' DIAMETER MANHOLES

SANITARY SEWER MANHOLE (CAST IN PLACE)

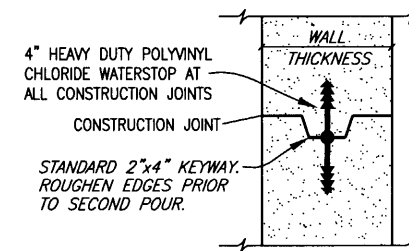


PRECAST CONCRETE MANHOLE

NOTE:
ALL JOINTS IN PRECAST MANHOLE SHALL
BE SEALED ON OUTSIDE OF MANHOLE WITH
AQUAGARD SHRINK SEAL.



CLASS B-3 EMBEDMENT
(PRESSURE PIPE)



MANHOLE CONSTRUCTION JOINT
KEYWAY WITH WATERSTOP

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BY PAC DATE 1/19/07

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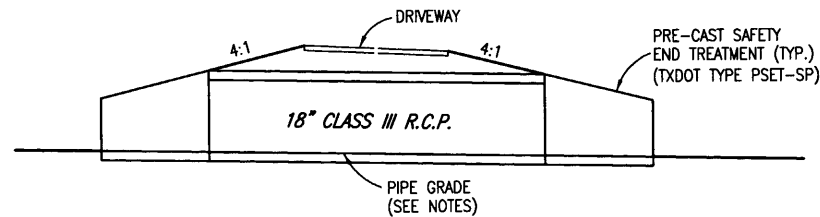
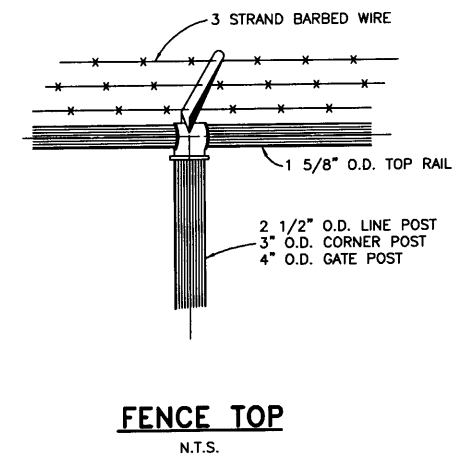
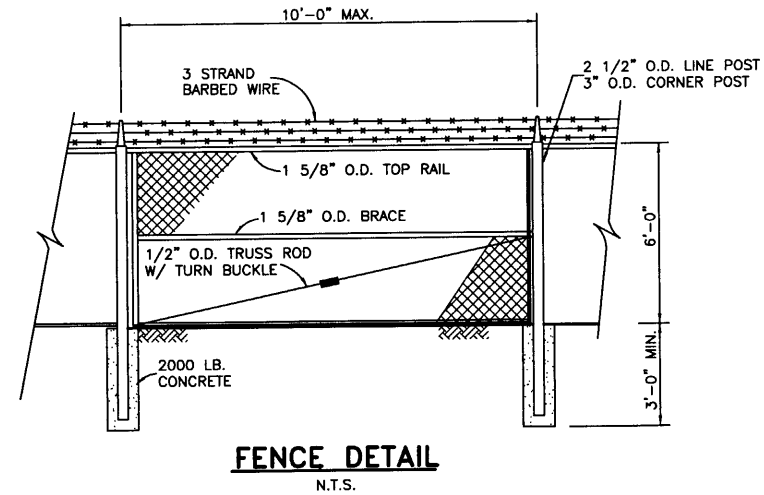
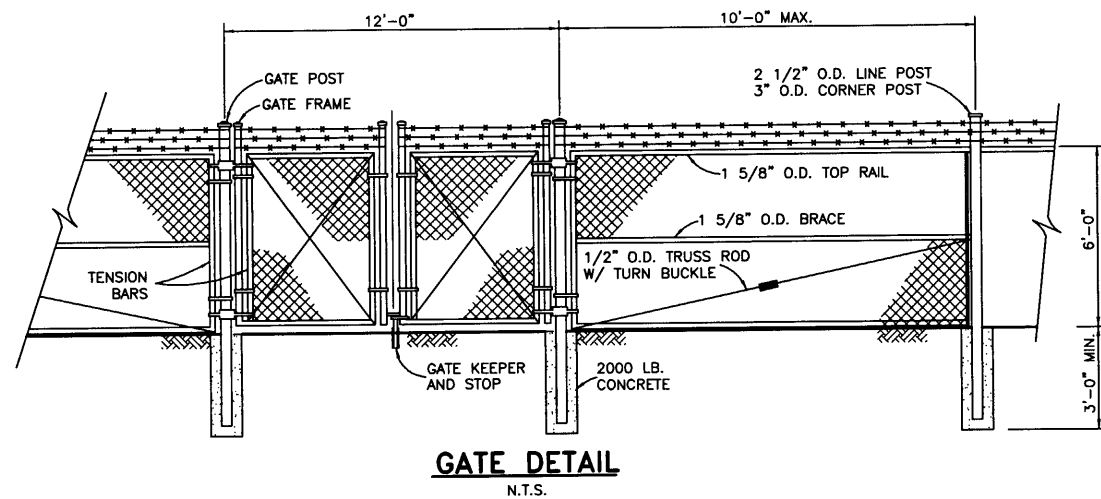
CITY OF ROCKWALL, TEXAS
AMITY LANE SAN. SEW. IMPROVEMENTS
DETAILS

BIRKHOFF, HENDRICKS & CONWAY, L.L.P.
CONSULTING ENGINEERS
Dallas, Texas

DESIGNED BY: P.A.C. PROJECT: 2002-104 SHEET NO. 18
DRAWN BY: R.J.L. DATE: SEPTEMBER, 2004 OF 19 SHEETS

THESE DOCUMENTS ARE FOR
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AND PERMIT PURPOSES
DATE: 9/14/04

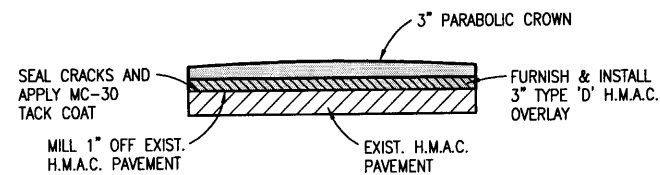




DRIVEWAY CULVERT DETAIL
(INDIAN TRAIL & AMITY LANE ONLY)

NOTES:

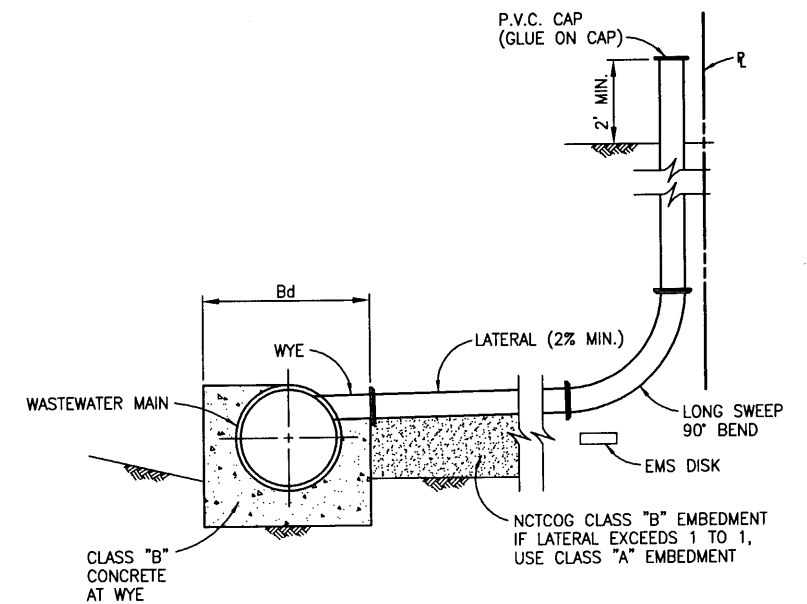
1. ALL EXISTING DRIVEWAY CULVERTS LOCATED ALONG AMITY LANE AND INDIAN TRAIL SHALL BE REPLACED WITH 18" CLASS III R.C.P. CULVERTS w/ PRECAST SAFETY END TREATMENT.
2. NEW CULVERTS SHALL MATCH EXISTING CULVERT GRADES. IF EXISTING CULVERT GRADE PREVENTS DRAINAGE THE NEW CULVERT SHALL BE INTALLED TO PROVIDE POSITIVE DRAINAGE.



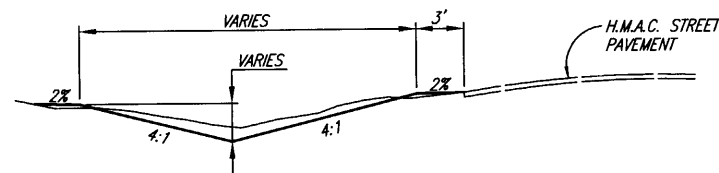
PAVEMENT OVERLAY DETAIL
(INDIAN TRAIL & AMITY LANE ONLY)

NOTES:

1. INDIAN TRAIL AND AMITY LANE SHALL BE OVERLAID FROM AIRPORT ROAD, NORTH TO THE END OF EACH RESPECTIVE STREET.
2. PAVEMENT OVERLAY SHALL COMMENCE ONLY AFTER INSTALLATION AND TESTING OF ALL UNDERGROUND UTILITIES.
3. PAVEMENT OVERLAY SHALL INCLUDE ALL PAVEMENT WITHIN CITY RIGHT-OF-WAY, THIS INCLUDES ALL DRIVEWAY ENTRANCES. OVERLAY SHALL BE TRANSITIONED TO MEET ALL EXISTING DRIVEWAY ENTRANCES.
4. MC-30 TACK COAT SHALL BE APPLIED AFTER CRACKS ARE SEALED. TACK COAT SHALL BE APPLIED AT A RATE OF 0.20 GALLONS PER SQUARE YARD. NO SEPARATE PAYMENT SHALL BE MADE FOR CRACK SEALING OR TACK COAT.



WASTEWATER LATERAL CONNECTION
NO SCALE



ROADWAY DITCH-TYPICAL SECTION
(INDIAN TRAIL & AMITY LANE ONLY)

NOTES:

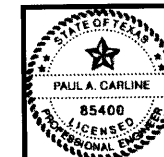
1. ALL EXISTING ROADSIDE DITCHES ALONG INDIAN TRAIL AND AMITY LANE SHALL BE RE-GRADED IN ACCORDANCE WITH THE TYPICAL ROADWAY DITCH SECTION, UNLESS OTHERWISE SPECIFIED BY ENGINEER OR CITY OF ROCKWALL.
2. GRADES OF ROADSIDE DITCHES SHALL PROVIDE POSITIVE DRAINAGE.
3. AFTER DITCHES ARE RE-GRADED THEY SHALL BE SOLID BLOCK SODDED. SOD SHALL MATCH EXISTING GRASS TYPE.

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DATE: 9/14/04



CITY OF ROCKWALL, TEXAS
AMITY LANE SAN. SEW. IMPROVEMENTS
DETAILS

BIRKHOFF, HENDRICKS & CONWAY, L.L.P.
CONSULTING ENGINEERS
Dallas, Texas

DESIGNED BY: <u>P.A.C.</u>	PROJECT: <u>2002-104</u>	SHEET NO. <u>19</u>
DRAWN BY: <u>R.J.L.</u>	DATE: <u>SEPTEMBER, 2004</u>	OF <u>19</u> SHEETS

DAVID HARR SURVEY
ABST. NO. 102

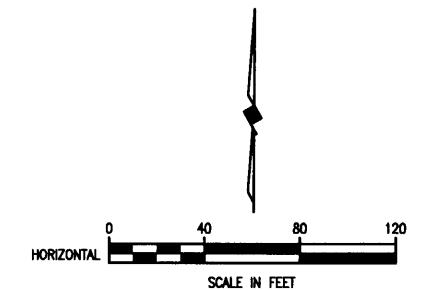
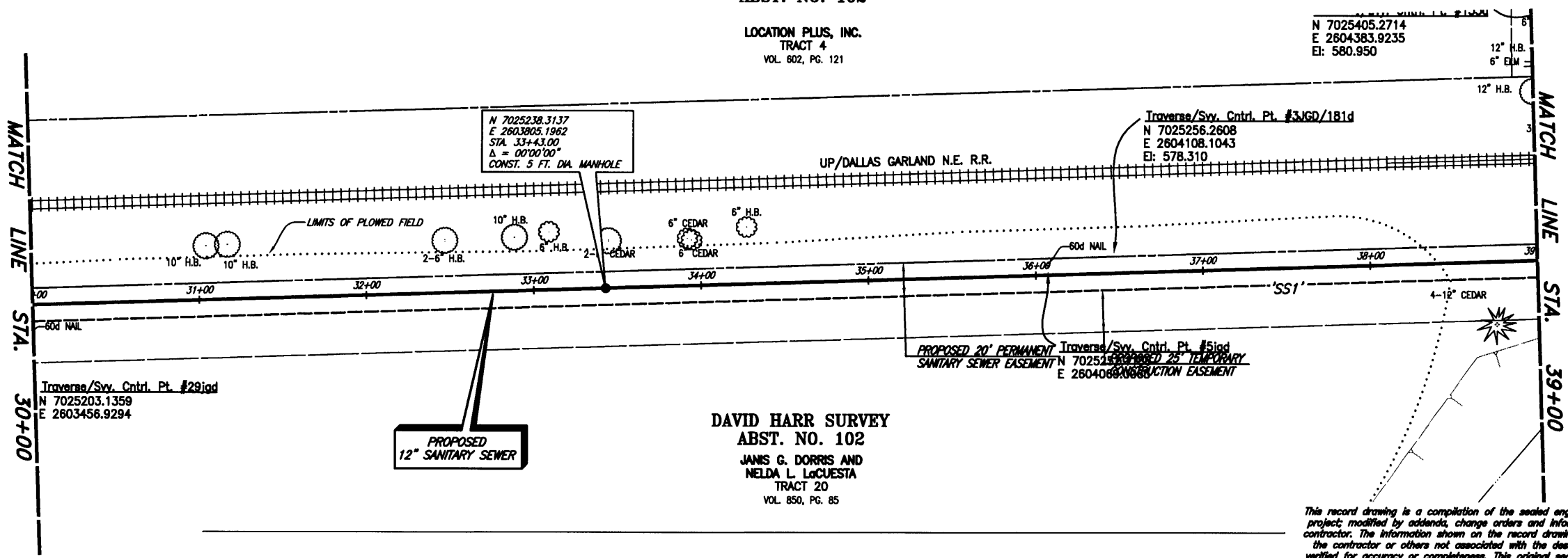
LOCATION PLUS, INC.
TRACT 4
VOL. 602, PG. 121

DAVID HARR SURVEY
ABST. NO. 102

JANIS G. DORRIS AND
NELDA L. LOCUESTA
TRACT 20
VOL. 850, PG. 85

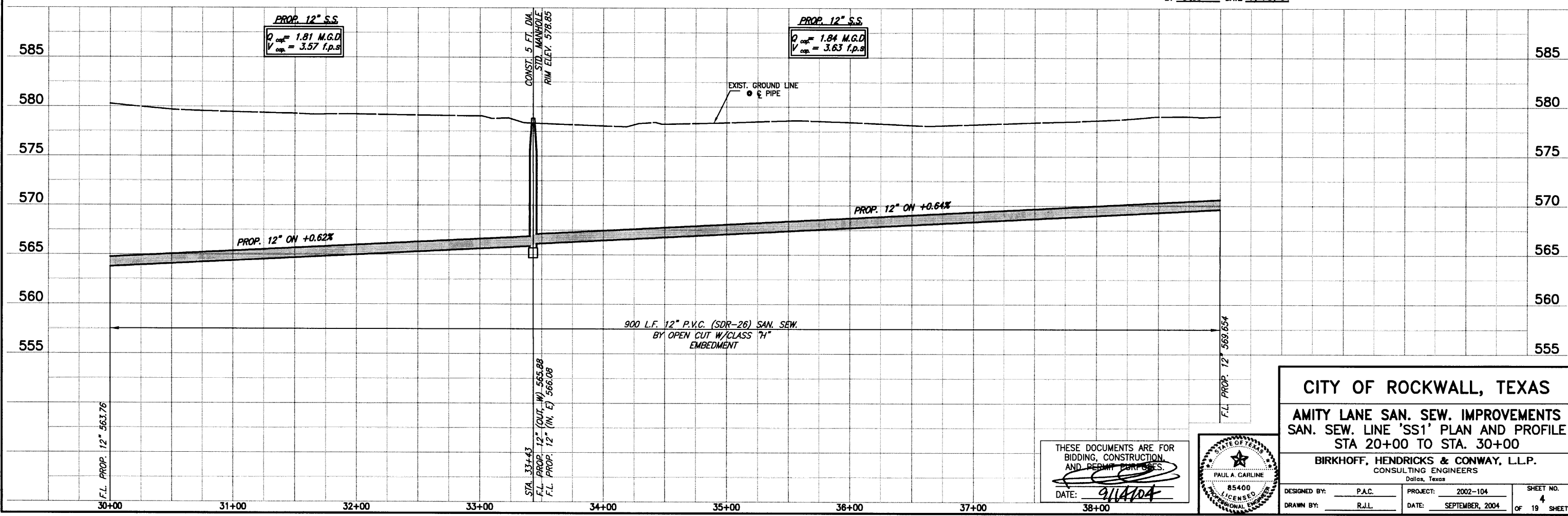
N 7025405.2714
E 2604383.9235
E: 580.950

Traverse/Svy. Cntrl. Pt. #3JGD/181d
N 7025256.2608
E 2604108.1043
E: 578.310



- CITY OF ROCKWALL BENCHMARK
R016
ELEV. 558.719
- T.B.M. 346
SANITARY SEWER MANHOLE RIM AT
SAN. SEW. LINE 'SS1' STA. 0+00
N 7024055.4568, E 2601761.3699
ELEV. 559.52
- T.B.M. 101
600 NAIL ON NORTH SIDE OF AIRPORT ROAD,
SAN. SEW. LINE 'SS1' STA. 39+24.9, 38.30' LT.
N 7025851.5998, E 2604704.5991
ELEV. 589.49
- T.B.M. 100
S.W.B. MANHOLE RIM NORTH SIDE OF AIRPORT ROAD,
SAN. SEW. LINE 'SS1' STA. 64+33.53, 47.06' LT.
N 7025889.4352, E 2607135.3028
ELEV. 607.63

This record drawing is a compilation of the sealed engineering drawing for this project, modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawing is on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.
BY PAC DATE 1/19/07



CITY OF ROCKWALL, TEXAS
AMITY LANE SAN. SEW. IMPROVEMENTS
SAN. SEW. LINE 'SS1' PLAN AND PROFILE
STA 20+00 TO STA. 30+00
BIRKHOFF, HENDRICKS & CONWAY, L.L.P.
CONSULTING ENGINEERS
Dallas, Texas

DESIGNED BY: P.A.C. PROJECT: 2002-104 SHEET NO. 4
DRAWN BY: R.J.L. DATE: SEPTEMBER, 2004 OF 19 SHEETS

THESE DOCUMENTS ARE FOR
BIDDING, CONSTRUCTION
AND PERMIT PURPOSES.
DATE: 9/14/04



09/14/04 KAB H:\ROCKWALL\2002\04\SS1\SS1.DWG SCALE: 1"=40' XREF: ROCKWALL\2002\04\BASE\TOPO-BASE_MASTER_SURVEY_SanSewSS1 Rev(2)

09/14/04 KAB H:\ROCKWALL\2002\04\SS14.DWG SHEETS\2002\04-SS14.DWG SCALE: 1"=40' XREF: ROCKWALL\2002\04\BASE\MASTER SURVEY_SanSewSSI Rev(2)

This record drawing is a compilation of the sealed engineering drawing for this project, modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawings are on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.

BY PAC DATE 1/19/07

SANITARY SEWER SERVICES	
LOCATION	PROP. 4" SERVICES (L.F.)
STA. 32+28.00 (SS1)	10' WEST
STA. 35+24.00 (SS1)	10' WEST
STA. 39+63.25 (SS1)	7.5' SOUTH

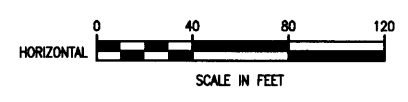
FURNISH & INSTALL:
 1'-8" x 4" WTE
 4" P.V.C. WASTEWATER LATERAL CONNECTION

CITY OF ROCKWALL BENCHMARK
 R016
 ELEV. 558.719

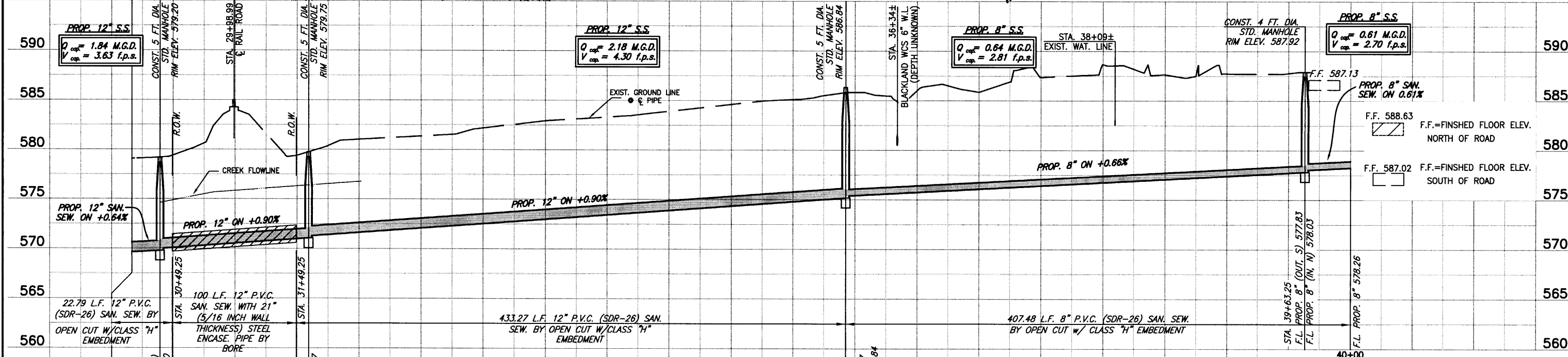
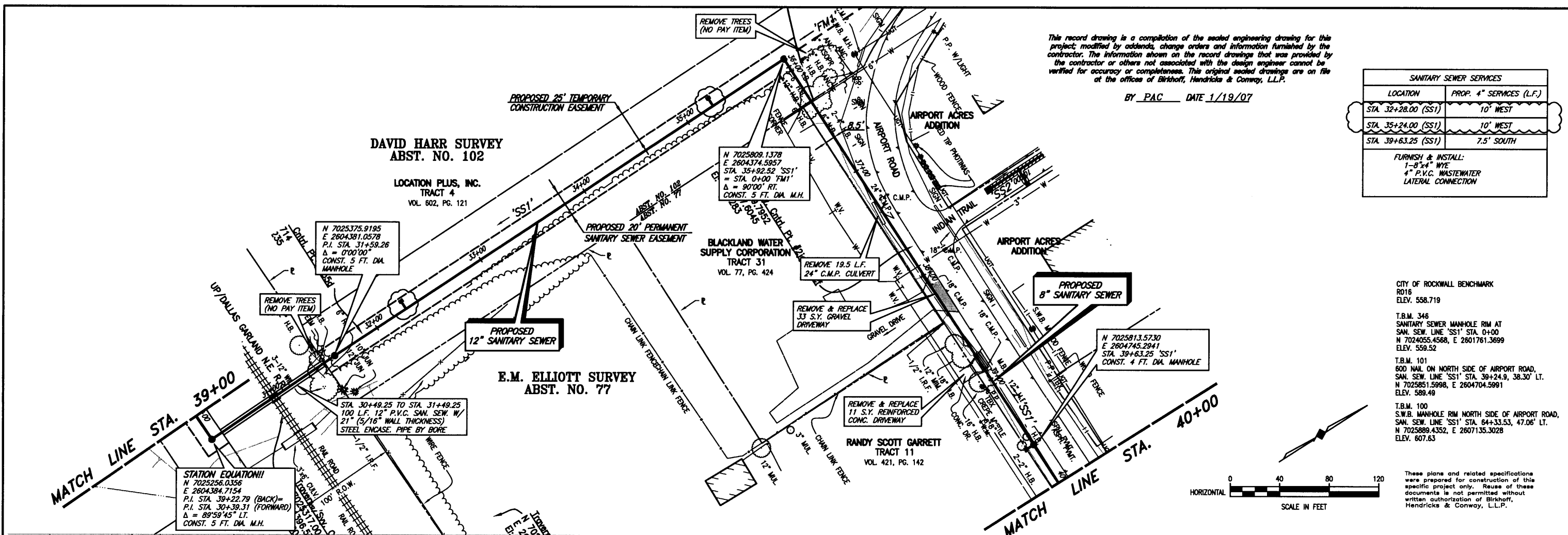
T.B.M. 346
 SANITARY SEWER MANHOLE RIM AT
 SAN. SEW. LINE 'SS1' STA. 0+00
 N 7024055.4568, E 2601761.3699
 ELEV. 559.52

T.B.M. 101
 600' MAIL ON NORTH SIDE OF AIRPORT ROAD,
 SAN. SEW. LINE 'SS1' STA. 39+24.9, 38.30' LT.
 N 7025851.5998, E 2604704.5991
 ELEV. 588.49

T.B.M. 100
 S.W.B. MANHOLE RIM NORTH SIDE OF AIRPORT ROAD,
 SAN. SEW. LINE 'SS1' STA. 64+33.53, 47.06' LT.
 N 7025889.4352, E 2607135.3028
 ELEV. 607.63



These plans and related specifications were prepared for construction of this specific project only. Reuse of these documents is not permitted without written authorization of Birkhoff, Hendricks & Conway, L.L.P.

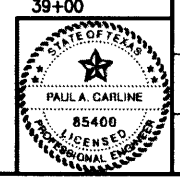


CITY OF ROCKWALL, TEXAS
AMITY LANE SAN. SEW. IMPROVEMENTS
SAN. SEW. LINE 'SS1' PLAN AND PROFILE
STA 30+00 TO STA. 40+00

BIRKHOFF, HENDRICKS & CONWAY, L.L.P.
 CONSULTING ENGINEERS
 Dallas, Texas

DESIGNED BY: P.A.C. PROJECT: 2002-104 SHEET NO. 5
 DRAWN BY: R.J.L. DATE: SEPTEMBER, 2004 OF 19 SHEETS

THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.
 DATE: 9/14/04



STATION EQUATION !!
 N 7025256.0355
 E 2604384.7154
 P.I. STA. 39+22.79 (BACK)=
 P.I. STA. 30+39.31 (FORWARD)
 Δ = 89°59'45" LT.
 CONST. 5 FT. DIA. M.H.

STATION EQUATION !!
 N 7025375.9195
 E 2604381.0578
 P.I. STA. 31+59.26
 Δ = 0°00'00"
 CONST. 5 FT. DIA. MANHOLE

STATION EQUATION !!
 N 7025809.1378
 E 2604374.5957
 STA. 35+92.52 'SS1'
 = STA. 0+00 'FM1'
 Δ = 90°00' RT.
 CONST. 5 FT. DIA. M.H.

STATION EQUATION !!
 N 7025813.5730
 E 2604745.2941
 STA. 39+63.25 'SS1'
 CONST. 4 FT. DIA. MANHOLE

STATION EQUATION !!
 N 7025256.0355
 E 2604384.7154
 P.I. STA. 39+22.79 (BACK)=
 P.I. STA. 30+39.31 (FORWARD)
 Δ = 89°59'45" LT.
 CONST. 5 FT. DIA. M.H.

STATION EQUATION !!
 N 7025375.9195
 E 2604381.0578
 P.I. STA. 31+59.26
 Δ = 0°00'00"
 CONST. 5 FT. DIA. MANHOLE

STATION EQUATION !!
 N 7025809.1378
 E 2604374.5957
 STA. 35+92.52 'SS1'
 = STA. 0+00 'FM1'
 Δ = 90°00' RT.
 CONST. 5 FT. DIA. M.H.

STATION EQUATION !!
 N 7025813.5730
 E 2604745.2941
 STA. 39+63.25 'SS1'
 CONST. 4 FT. DIA. MANHOLE

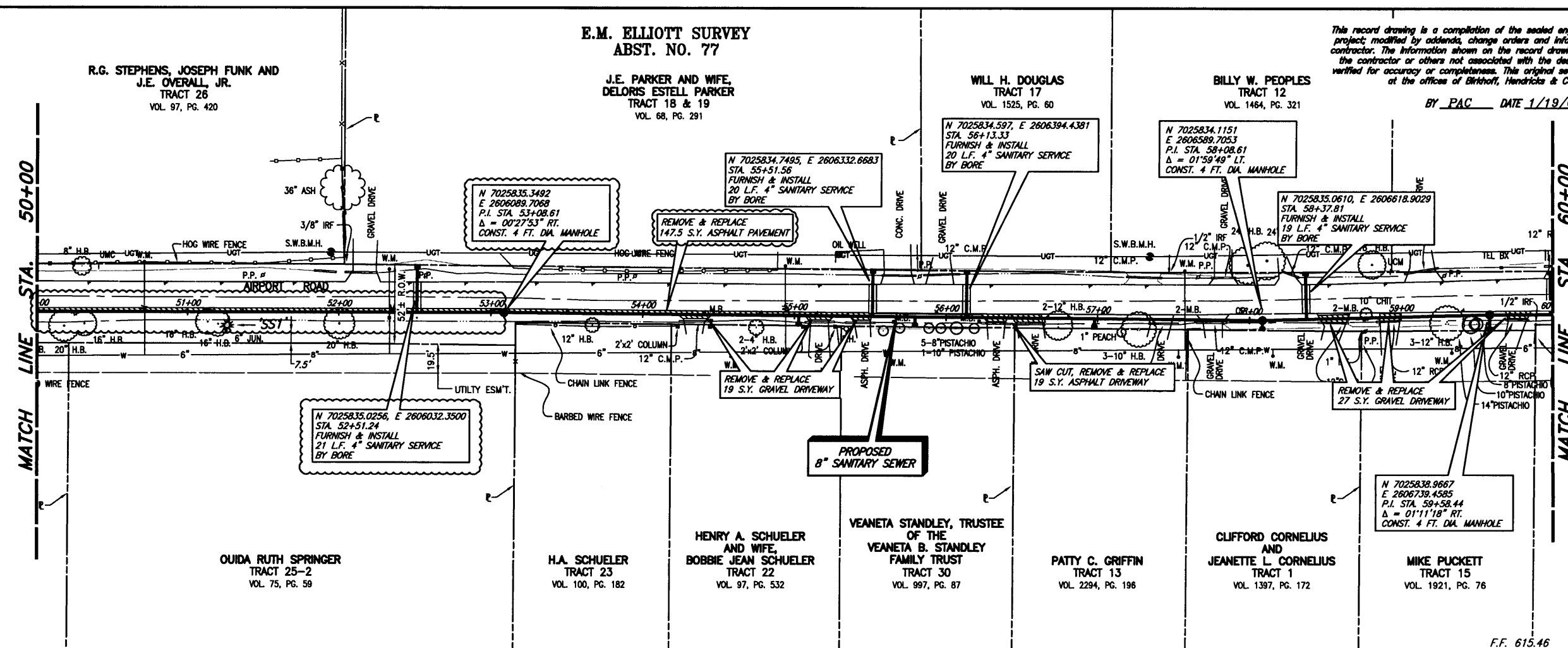
STATION EQUATION !!
 N 7025256.0355
 E 2604384.7154
 P.I. STA. 39+22.79 (BACK)=
 P.I. STA. 30+39.31 (FORWARD)
 Δ = 89°59'45" LT.
 CONST. 5 FT. DIA. M.H.

STATION EQUATION !!
 N 7025375.9195
 E 2604381.0578
 P.I. STA. 31+59.26
 Δ = 0°00'00"
 CONST. 5 FT. DIA. MANHOLE

STATION EQUATION !!
 N 7025809.1378
 E 2604374.5957
 STA. 35+92.52 'SS1'
 = STA. 0+00 'FM1'
 Δ = 90°00' RT.
 CONST. 5 FT. DIA. M.H.

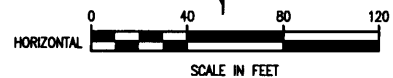
STATION EQUATION !!
 N 7025813.5730
 E 2604745.2941
 STA. 39+63.25 'SS1'
 CONST. 4 FT. DIA. MANHOLE

11/18/04 KAB H:\ROCKWALL\2002104\2002104\2002104\BASE-MASTER SURVEY, SanSewSSI Rev(2) SCALE: 1"=40' XREF: ROCKWALL\2002104\BASE-MASTER SURVEY, SanSewSSI Rev(2)



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BY PAC DATE 1/19/07



SANITARY SEWER SERVICES	
LOCATION	PROP. 4" SERVICES (L.F.)
STA. 52+51.24 (SS1)	21' NORTH
STA. 55+02.81 (SS1)	6.5' SOUTH
STA. 55+51.56 (SS1)	20' NORTH
STA. 55+79.52 (SS1)	6.5' SOUTH
STA. 56+13.33 (SS1)	20' NORTH
STA. 56+97.94 (SS1)	6.5' SOUTH
STA. 58+08.61 (SS1)	6.5' SOUTH
STA. 58+37.81 (SS1)	19' NORTH
STA. 59+58.44 (SS1)	10' SOUTH
STA. 59+98.39 (SS1)	29' NORTH

FURNISH & INSTALL:
 1-8" x 4" WYE
 4" P.V.C. WASTEWATER LATERAL CONNECTION

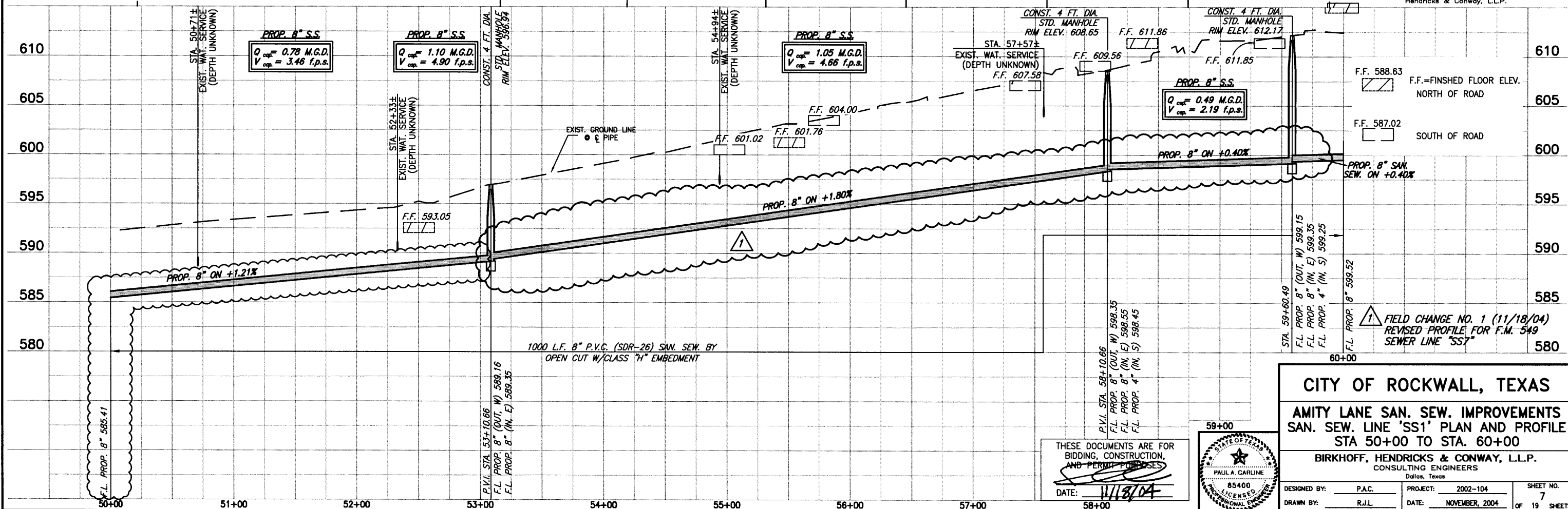
CITY OF ROCKWALL BENCHMARK
 R016
 ELEV. 558.719

T.B.M. 346
 SANITARY SEWER MANHOLE RIM AT SAN. SEW. LINE 'SS1' STA. 0+00
 N 7024055.4568, E 2601781.3699
 ELEV. 559.52

T.B.M. 101
 600 NAIL ON NORTH SIDE OF AIRPORT ROAD,
 SAN. SEW. LINE 'SS1' STA. 39+24.9, 38.30' LT.
 N 7025851.5998, E 2604704.5991
 ELEV. 589.49

T.B.M. 100
 S.W.B. MANHOLE RIM NORTH SIDE OF AIRPORT ROAD,
 SAN. SEW. LINE 'SS1' STA. 64+33.53, 47.06' LT.
 N 7025889.4352, E 2607135.3028
 ELEV. 607.63

These plans and related specifications were prepared for construction of this specific project only. Reuse of these documents is not permitted without written authorization of Birkhoff, Hendricks & Conway, L.L.P.

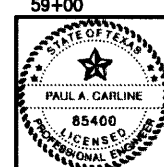


CITY OF ROCKWALL, TEXAS
 AMITY LANE SAN. SEW. IMPROVEMENTS
 SAN. SEW. LINE 'SS1' PLAN AND PROFILE
 STA 50+00 TO STA. 60+00

BIRKHOFF, HENDRICKS & CONWAY, L.L.P.
 CONSULTING ENGINEERS
 Dallas, Texas

DESIGNED BY: P.A.C. PROJECT: 2002-104 SHEET NO. 7
 DRAWN BY: R.J.L. DATE: NOVEMBER, 2004 OF 19 SHEETS

THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.
 DATE: 11/18/04



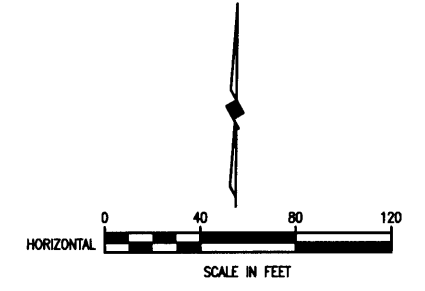
E.M. ELLIOTT SURVEY
ABST. NO. 77

JAMES R. JUNOD
AND WIFE,
HELLEN M. JUNOD
TRACT 6
VOL. 117, PG. 757

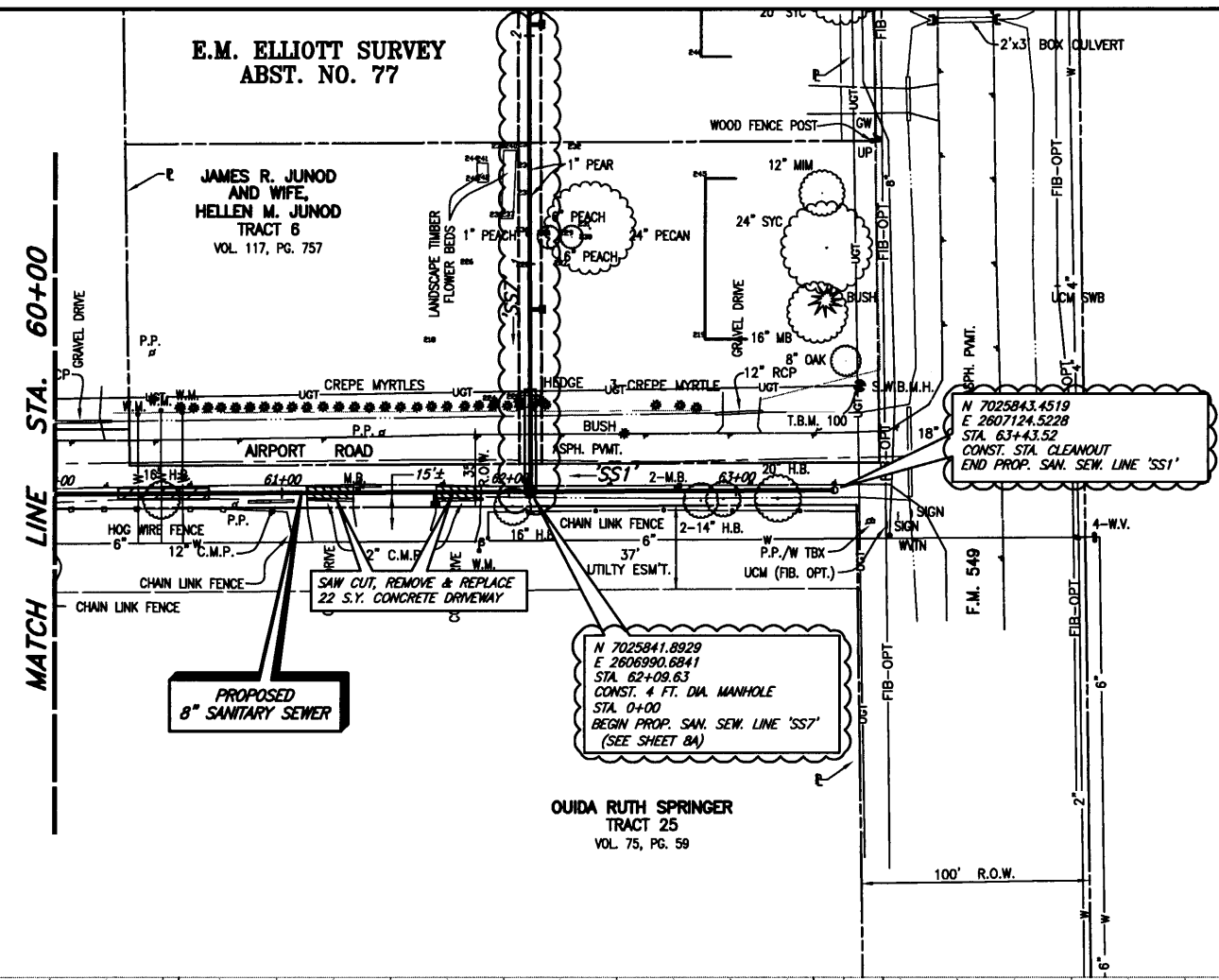
OUIDA RUTH SPRINGER
TRACT 25
VOL. 75, PG. 59

This record drawing is a compilation of the sealed engineering drawing for this project, modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawings are on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.

BY PAC DATE 1/19/07



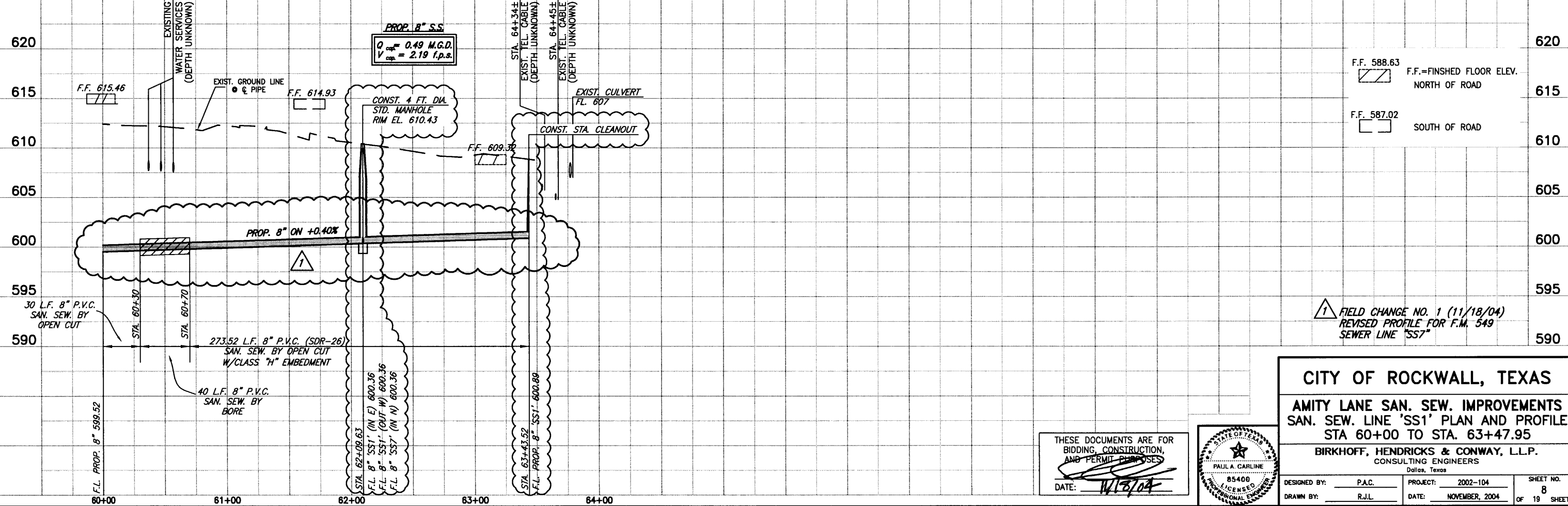
MATCH LINE STA. 60+00



SANITARY SEWER SERVICES	
LOCATION	PROP. 4" SERVICES (L.F.)
STA. 61+68.46 (SS1)	6.5' SOUTH
STA. 63+15.10 (SS1)	28.5' NORTH
FURNISH & INSTALL: 1-8 3/4" WYE 4" P.V.C. WASTEWATER LATERAL CONNECTION	

- CITY OF ROCKWALL BENCHMARK
R016
ELEV. 558.719
- T.B.M. 346
SANITARY SEWER MANHOLE RIM AT
SAN. SEW. LINE 'SS1' STA. 0+00
N 7025455.4568, E 2601761.3699
ELEV. 559.52
- T.B.M. 101
600 NAIL ON NORTH SIDE OF AIRPORT ROAD,
SAN. SEW. LINE 'SS1' STA. 39+24.9, 38.30' LT.
N 7025851.5998, E 2604704.5991
ELEV. 589.49
- T.B.M. 100
S.W.B. MANHOLE RIM NORTH SIDE OF AIRPORT ROAD,
SAN. SEW. LINE 'SS1' STA. 64+33.53, 47.06' LT.
N 7025889.4352, E 2607135.3028
ELEV. 607.63

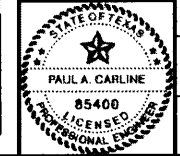
These plans and related specifications were prepared for construction of this specific project only. Reuse of these documents is not permitted without written authorization of Birkhoff, Hendricks & Conway, L.L.P.



FIELD CHANGE NO. 1 (11/18/04)
REVISED PROFILE FOR F.M. 549
SEWER LINE 'SS7'

CITY OF ROCKWALL, TEXAS
AMITY LANE SAN. SEW. IMPROVEMENTS
SAN. SEW. LINE 'SS1' PLAN AND PROFILE
STA 60+00 TO STA. 63+47.95
BIRKHOFF, HENDRICKS & CONWAY, L.L.P.
CONSULTING ENGINEERS
Dallas, Texas

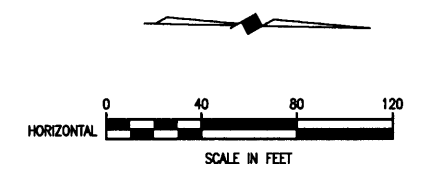
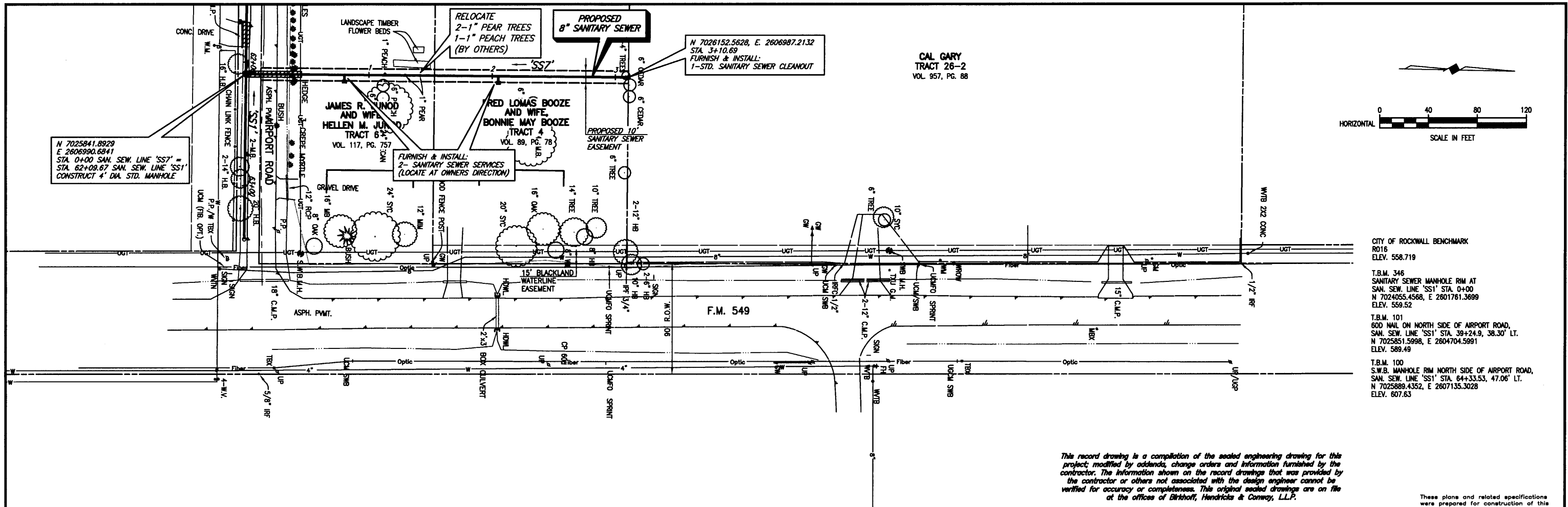
THESE DOCUMENTS ARE FOR
BIDDING, CONSTRUCTION,
AND PERMIT PURPOSES
DATE: 1/19/07



DESIGNED BY: P.A.C. PROJECT: 2002-104 SHEET NO. 8
DRAWN BY: R.J.L. DATE: NOVEMBER, 2004 OF 19 SHEETS

11/17/04 KAB H:\ROCKWALL\2002104\2002104\BASE\TOPO-BASE, MASTER SURVEY, SanSewSS1 Rev(2) SCALE: 1"=40' XREF: ROCKWALL_2002104\BASE\TOPO-BASE, MASTER SURVEY, SanSewSS1 Rev(2)

9/01/05 KAB H:\PROJECTS\ROCKWALL\2002\04\SHEETS\2002104-SSB.dwg



CITY OF ROCKWALL BENCHMARK
 R016
 ELEV. 558.719

T.B.M. 346
 SANITARY SEWER MANHOLE RIM AT
 SAN. SEW. LINE 'SS1' STA. 0+00
 N 7024055.4568, E 2601761.3699
 ELEV. 559.52

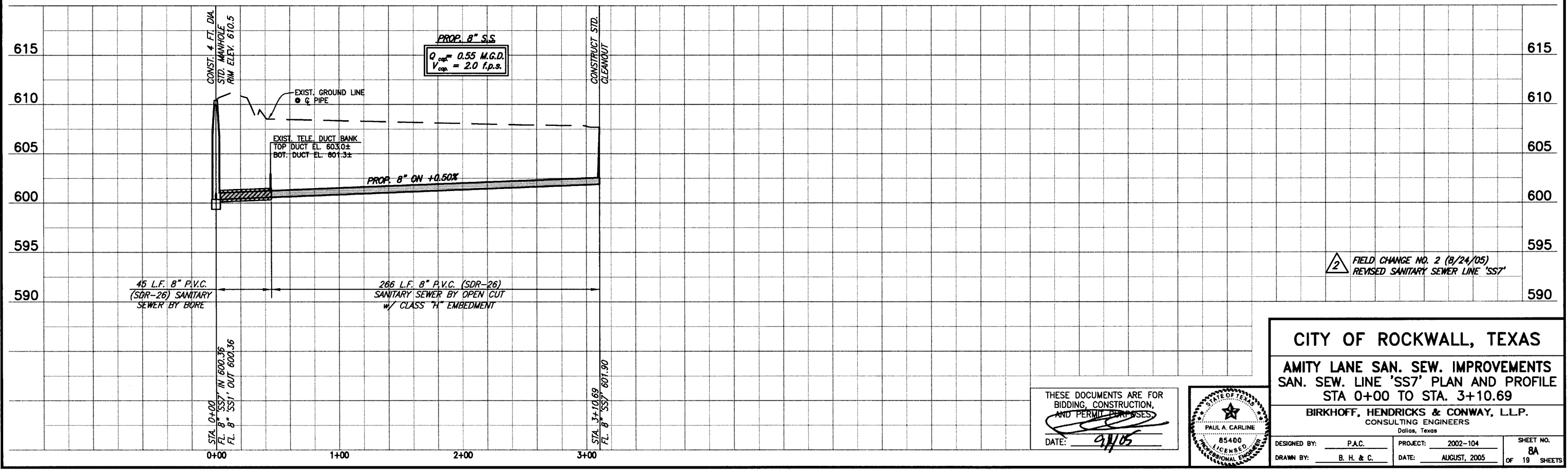
T.B.M. 101
 600 NAIL ON NORTH SIDE OF AIRPORT ROAD,
 SAN. SEW. LINE 'SS1' STA. 39+24.9, 38.30' LT.
 N 7025851.5998, E 2604704.5991
 ELEV. 589.49

T.B.M. 100
 S.W.B. MANHOLE RIM NORTH SIDE OF AIRPORT ROAD,
 SAN. SEW. LINE 'SS1' STA. 64+33.53, 47.06' LT.
 N 7025889.4352, E 2607135.3028
 ELEV. 607.63

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BY PAC DATE 1/19/07

These plans and related specifications were prepared for construction of the specific project only. Reuse of these documents is not permitted without written authorization of Birkhoff, Hendricks & Conway, L.L.P.



2 FIELD CHANGE NO. 2 (8/24/05)
 REVISED SANITARY SEWER LINE 'SS7'

CITY OF ROCKWALL, TEXAS
AMITY LANE SAN. SEW. IMPROVEMENTS
SAN. SEW. LINE 'SS7' PLAN AND PROFILE
STA 0+00 TO STA. 3+10.69

BIRKHOFF, HENDRICKS & CONWAY, L.L.P.
 CONSULTING ENGINEERS
 Dallas, Texas

DESIGNED BY: P.A.C. PROJECT: 2002-104 SHEET NO. 8A
 DRAWN BY: B. H. & C. DATE: AUGUST, 2005 OF 19 SHEETS

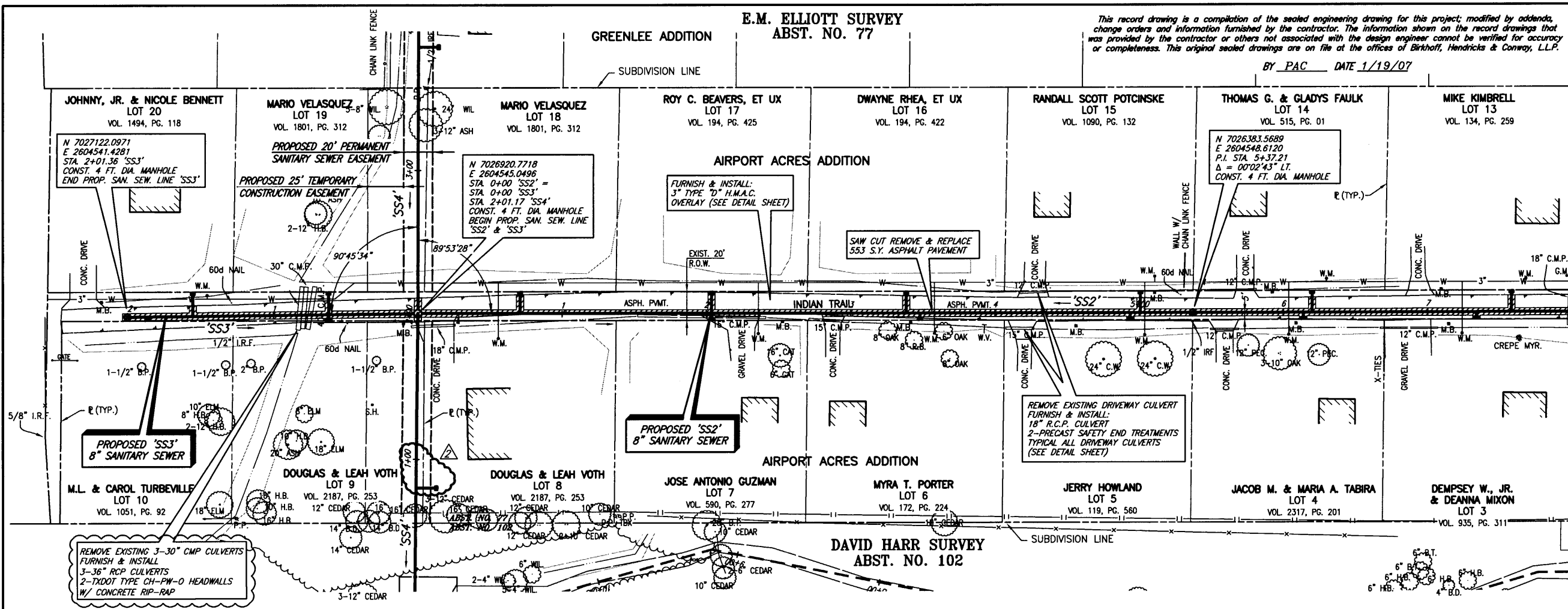
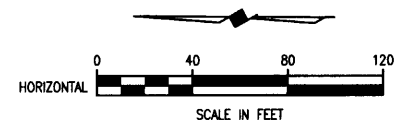
THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.
 DATE: 9/1/05



E.M. ELLIOTT SURVEY
ABST. NO. 77

This record drawing is a compilation of the sealed engineering drawing for this project; modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawing is on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.

BY PAC DATE 1/19/05



SANITARY SEWER SERVICES	
LOCATION	PROP. 4" SERVICES (L.F.)
STA. 0+61.75 (SS3)	16' EAST, 4.5' WEST
STA. 1+56.05 (SS3)	17' EAST
STA. 1+87.69 (SS2)	3' WEST
STA. 0+70.93 (SS2)	15' EAST
STA. 2+03.68 (SS2)	15' EAST, 5' WEST
STA. 3+38.32 (SS2)	15' EAST
STA. 3+38.32 (SS2)	5' WEST
STA. 4+93.88 (SS2)	5' WEST
STA. 5+00.82 (SS2)	15' EAST
STA. 6+13.78 (SS2)	5' WEST
STA. 6+19.84 (SS2)	15' EAST
STA. 7+34.03 (SS2)	5' WEST
STA. 7+58.27 (SS2)	15' EAST

FURNISH & INSTALL:
1-8" x 4" WYE
4" P.V.C. WASTEWATER LATERAL CONNECTION

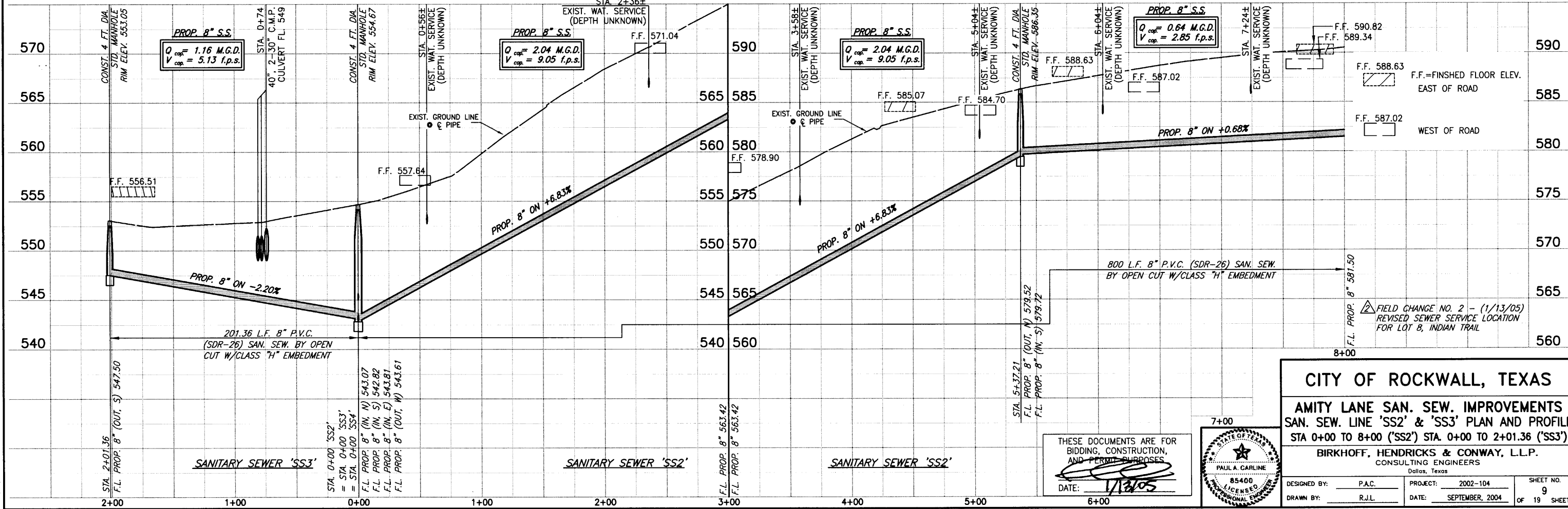
CITY OF ROCKWALL BENCHMARK
R016
ELEV. 558.719

T.B.M. 346
SANITARY SEWER MANHOLE RIM AT
SAN. SEW. LINE 'SS1' STA. 0+00
N 702455.4568, E 2601761.3699
ELEV. 559.52

T.B.M. 101
600 NAIL ON NORTH SIDE OF AIRPORT ROAD,
SAN. SEW. LINE 'SS1' STA. 39+24.9 38.30' LT.
N 7025851.5998, E 2604704.5991
ELEV. 589.49

T.B.M. 100
S.W.B. MANHOLE RIM NORTH SIDE OF AIRPORT ROAD,
SAN. SEW. LINE 'SS1' STA. 64+33.53, 47.06' LT.
N 7025889.4352, E 2607135.3028
ELEV. 607.63

These plans and related specifications were prepared for construction of this specific project only. Reuse of these documents is not permitted without written authorization of Birkhoff, Hendricks & Conway, L.L.P.



CITY OF ROCKWALL, TEXAS

AMITY LANE SAN. SEW. IMPROVEMENTS
SAN. SEW. LINE 'SS2' & 'SS3' PLAN AND PROFILE
STA 0+00 TO 8+00 ('SS2') STA. 0+00 TO 2+01.36 ('SS3')

BIRKHOFF, HENDRICKS & CONWAY, L.L.P.
CONSULTING ENGINEERS
Dallas, Texas

DESIGNED BY: P.A.C. PROJECT: 2002-104 SHEET NO. 9
DRAWN BY: R.J.L. DATE: SEPTEMBER, 2004 OF 19 SHEETS

THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.
DATE: 1/19/05

7+00
PAULA CARLINE
LICENSED PROFESSIONAL ENGINEER
85400

08/14/04 KAB H:\ROCKWALL\2002\04\04\SS2\SS2A.DWG SCALE: 1"=40' XREF: ROCKWALL\2002\04\04\TOP\BASE_MASTER_SURVEY_SonSeWSS1 Rev(2)