

CITY OF ROCKWALL, TEXAS

CONSTRUCTION PLANS FOR:

AMITY LANE SANITARY SEWER IMPROVEMENTS

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

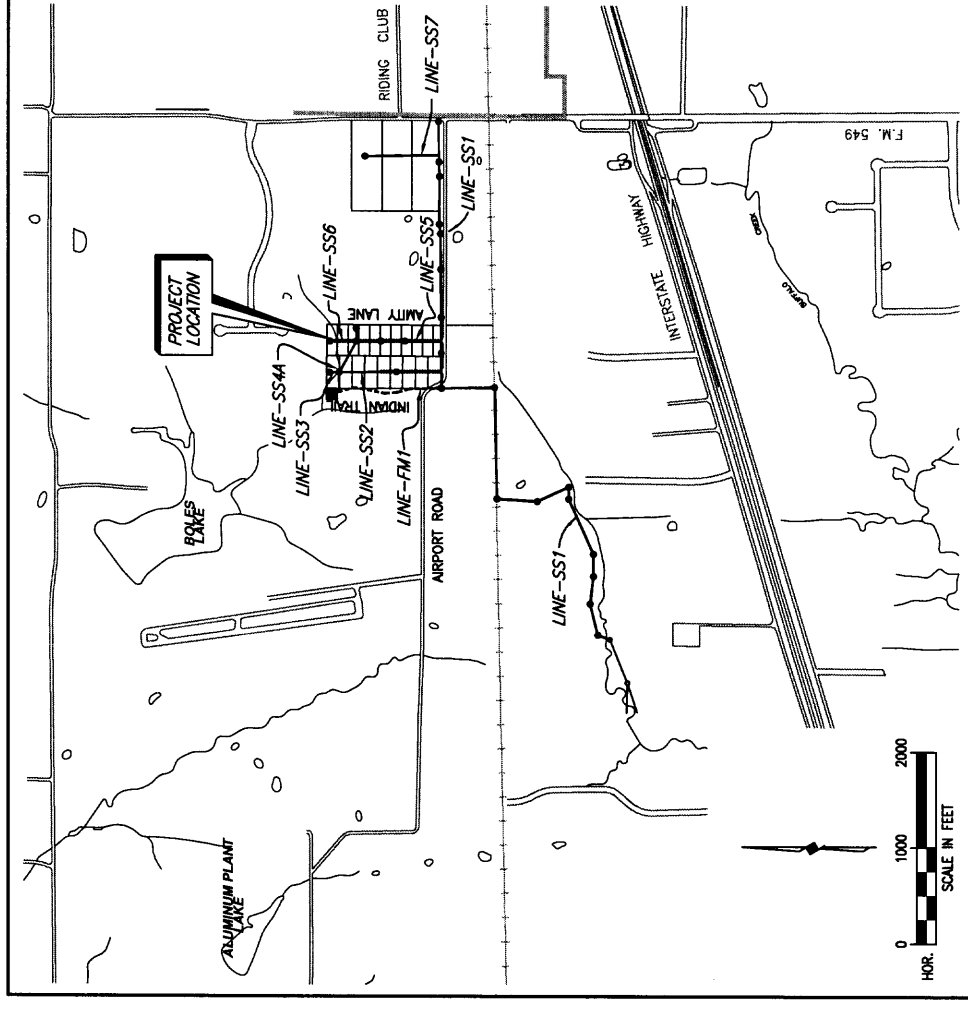
This record drawing is a completion of the sealed engineering drawing for this project; modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot 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

SEPTEMBER, 2004

THESE DOCUMENTS ARE FOR
BIDDING, CONSTRUCTION
AND PERMIT PURPOSES.

DATE: 9/14/04



LOCATION MAP

SHEET INDEX

<u>SHEET NO.</u>	<u>SHEET DESCRIPTION</u>
-	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

**E.M. ELLIOTT SURVEY
ABST. NO. 77**

GREENLEE ADDITION

ROBERT A. BAUDENSTEL
LOT 12
VOL. 1408, PG. 115
VOL. 1802, PG. 143

MICHAEL G. ALDRIDGE
LOT 11
VOL. 1388, PG. 216
N 7025892.7100
E 2604652.2538
STA. 10+28.09
CONST. 7" DIA. MANHOLE
END PROP. SAN. SEW. LINE 'SS2'

RUBY MARINE ASHLEY
LOT 2
VOL. 999, PG. 193

**PROPOSED 'SS2'
8" SANITARY SEWER**

SUSAN KAYE WARD
LOT 1
VOL. 1141, PG. 312

**BLACKLAND WATER
SUPPLY CORPORATION**
TRACT 31
VOL. 602, PG. 121

DAVID HARR SURVEY
ABST. NO. 102

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:
 1-9"4" W/ESTWATER
 1-4" P.V.C. MANHOLE
 LATERAL CONNECTION

CITY OF ROCKWALL BENCHMARK
 8016
 ELEV. 558.719

T.B.M. 346
 SANITARY SEWER MANHOLE RM AT
 SAN. SEW. LINE 'SS1' STA. 0+00
 N 7024055.4586, E 2607761.3699
 ELEV. 559.52

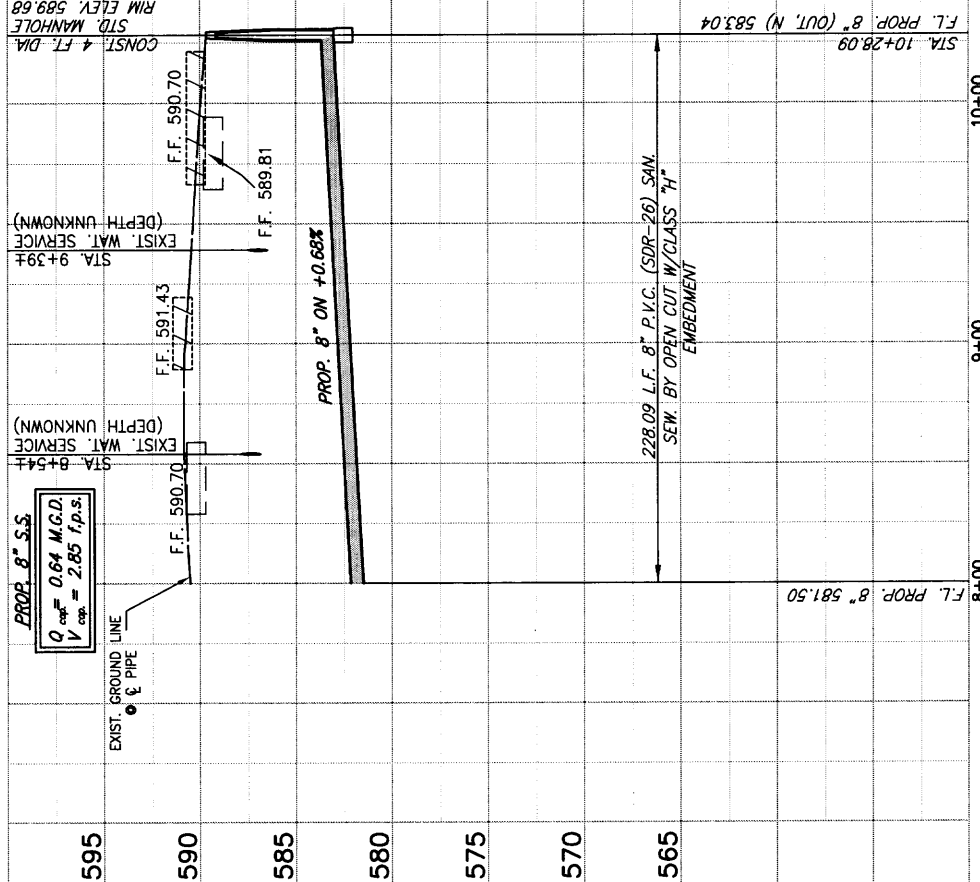
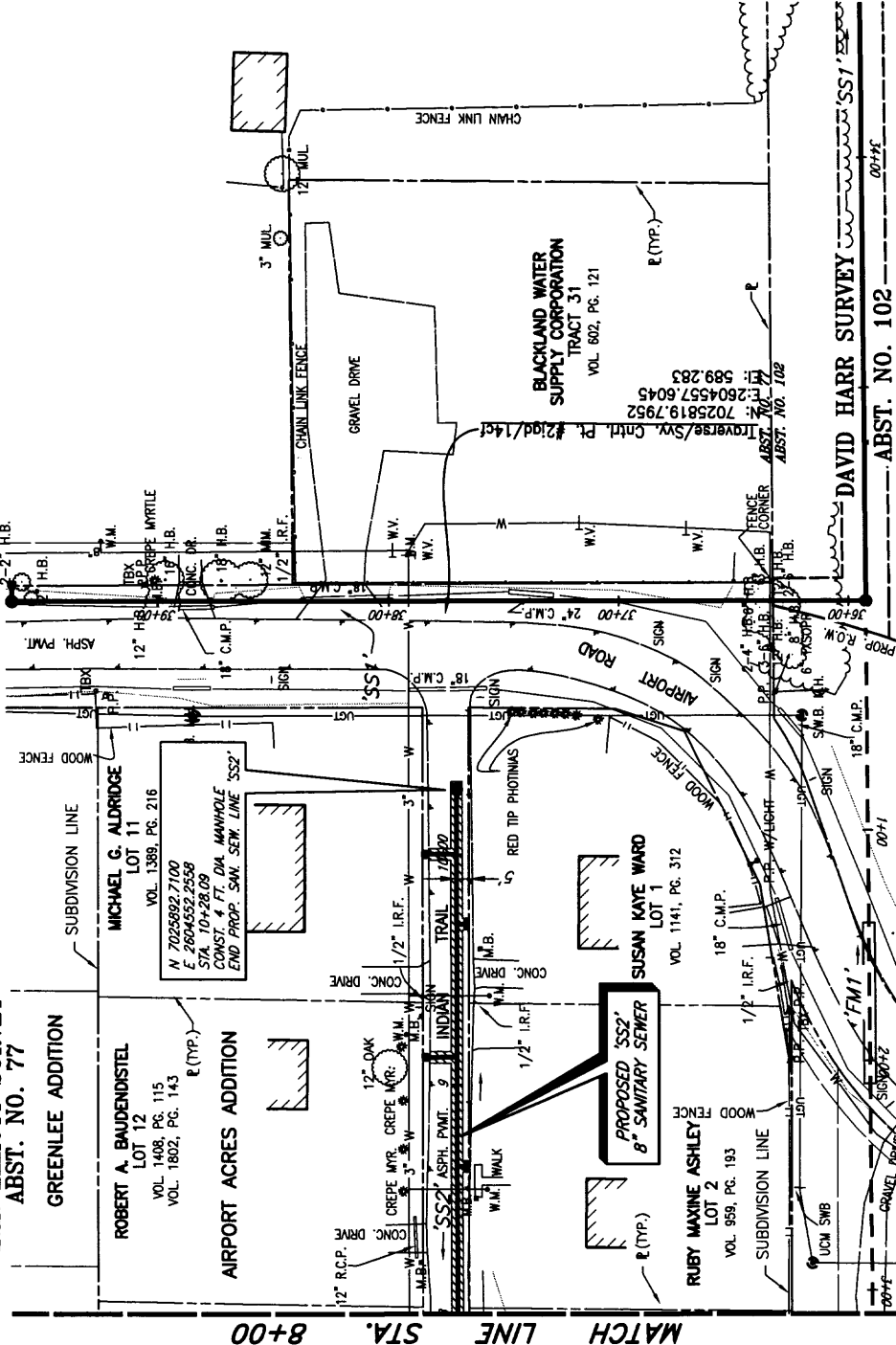
T.B.M. 101
 600' NAIL ON NORTH SIDE OF AIRPORT ROAD,
 SAN. SEW. LINE 'SS1' STA. 39+24.9, 38.30' LT.
 N 7025851.5998, E 2604704.5981
 ELEV. 589.49

T.B.M. 100
 S.W.B. MANHOLE RM NORTH SIDE OF AIRPORT ROAD,
 SAN. SEW. LINE 'SS1' STA. 64+33.53, 47.05' 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 drawings are on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.

BY PAC DATE 1/19/07

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



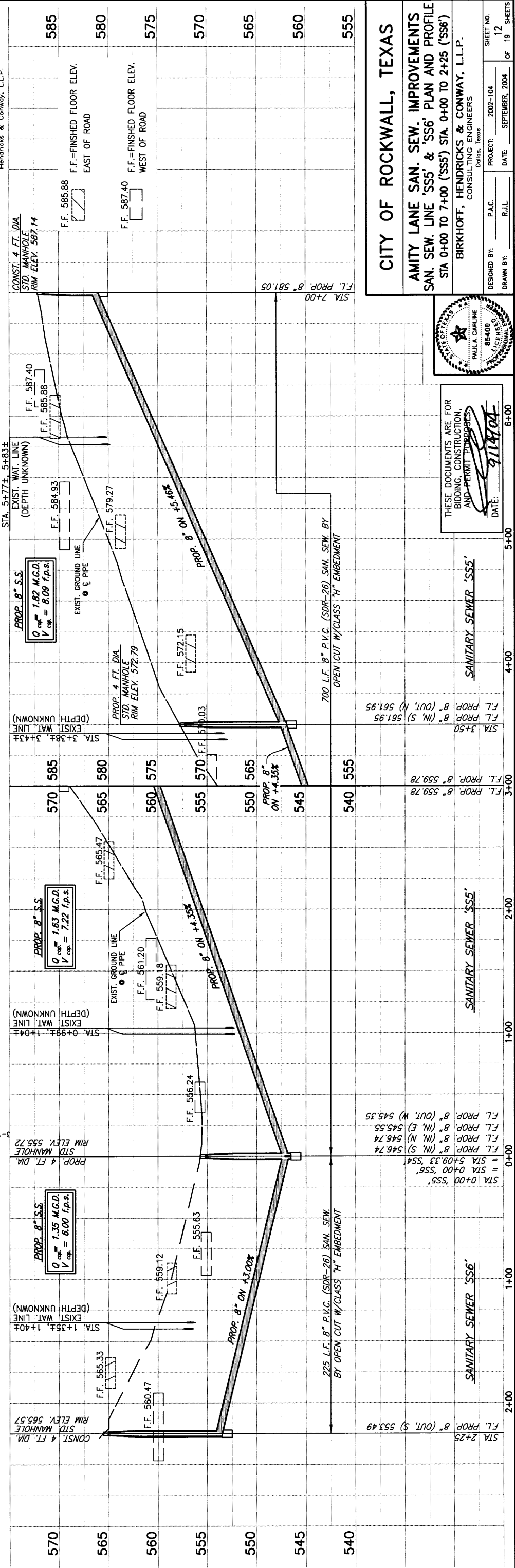
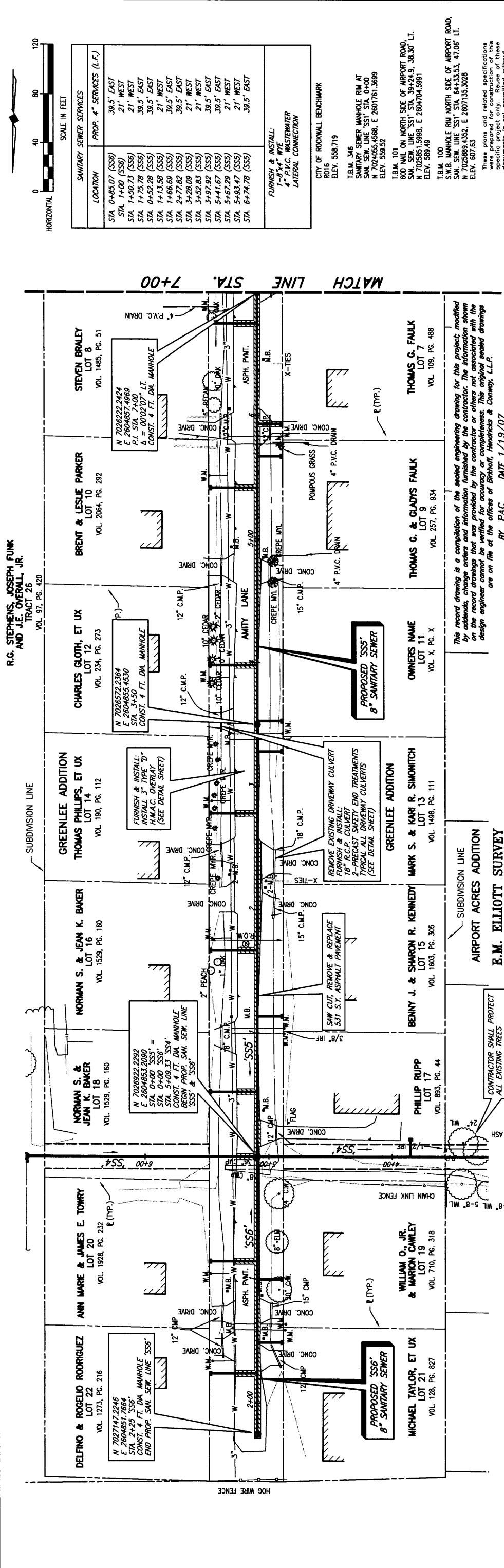
THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMITS PURPOSES.
 DATE: 9/14/04



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: PAC PROJECT: 2002-104
 DRAWN BY: R.J.L. DATE: SEPTEMBER, 2004 OF 19 SHEETS



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

CITY OF ROCKWALL BENCHMARK
 R016 ELEV. 588.719
 T.B.M. 346
 SANITARY SEWER MANHOLE RIM AT
 SAN. SEW. LINE 'SS1' STA. 0+00
 N 7024655.4586, E 2601761.3699
 ELEV. 589.52
 T.B.M. 101
 600 NAIL ON NORTH SIDE OF AIRPORT ROAD,
 SAN. SEW. LINE 'SS1' STA. 39+24.9, 38.30' LT.
 N 7025851.5986, E 2604704.5991
 ELEV. 589.49
 T.B.M. 100
 MANHOLE RIM NORTH SIDE OF AIRPORT ROAD,
 SAN. SEW. LINE 'SS1' STA. 54+33.53, 47.06' LT.
 N 7025889.4352, E 2607135.3028
 ELEV. 607.63

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

This record drawing is a compilation of the needed engineering drawing for this project, modified by adding, changing, or deleting 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

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

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
 PAULA CARLINE
 85400
 10/10/04

SANITARY SEWER 'SS5'

SANITARY SEWER 'SS5'

SANITARY SEWER 'SS5'

SANITARY SEWER 'SS6'

SANITARY SEWER 'SS6'

SANITARY SEWER 'SS6'

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

GREENLEE ADDITION
JEFFREY W. &
DONNA L. HARRELL
LOT 4
VOL. 1075, PG. 123

WILLIAM ARLAND MARTIN
LOT 6
VOL. 1100, PG. 173

N 7026222.2424
E 2604857.4959
A.P. STA. 10+00
CONST. & FT. DIA. MANHOLE

MARK B. &
JULIANNE S. STEPHENS
LOT 5
VOL. 1103, PG. 267

PROPOSED 'SSS'
'B' SANITARY SEWER

THAYER W. PARRISH
LOT 3
VOL. 116, PG. 148

GREENLEE ADDITION

MICHAEL C. &
PAMELA D. ATKINS
LOT 1
VOL. X, PG. X

N 7025881.1568
E 2604659.3425
STA. 10+41.09 'SSS'
CONST. & FT. DIA. MANHOLE
END PROP. SAN. SEW. LINE 'SSS'

SAW CUT, REMOVE & REPLACE
225 S.Y. ASPHALT PAVEMENT

ROBBISH

CONC. DRIVE

1/2" IRF

W.M.

CONC. DRIVE

3/8" IRF

W.M.

CONC. DRIVE

WOOD FENCE

CHAIN LINK FENCE

TO F.M. 549

15' C.M.P.

AIRPORT ROAD

TRVERSE/SW. CONTR. PT.

7025823.8463

2604900.5026

589.848

ZOLUBA RUTH SPRINGER
TRACT 25-1
VOL. 75, PG. 59

RANDY SCOTT GARRETT
TRACT 11
VOL. 421, PG. 142

CREPE MYRTLE

1/2" IRF

W.M.

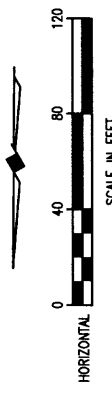
CONC. DRIVE

1/2" IRF

W.M.

CONC. DRIVE

12' CREPE MYRTLE



SANITARY SEWER SERVICES	
LOCATION	PROP. 4" SERVICES (L.F.)
STA 7+71.03 (SSS)	39.5' EAST
STA 8+07.96 (SSS)	21' WEST
STA 8+32.99 (SSS)	21' WEST
STA 8+60.47 (SSS)	39.5' EAST
STA 9+78.77 (SSS)	39.5' EAST
STA 10+41.09 (SSS)	21' WEST

FURNISH & INSTALL:
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 'SSS' STA. 0+00
N 7024055.4588, E 2601761.3899
ELEV. 559.52

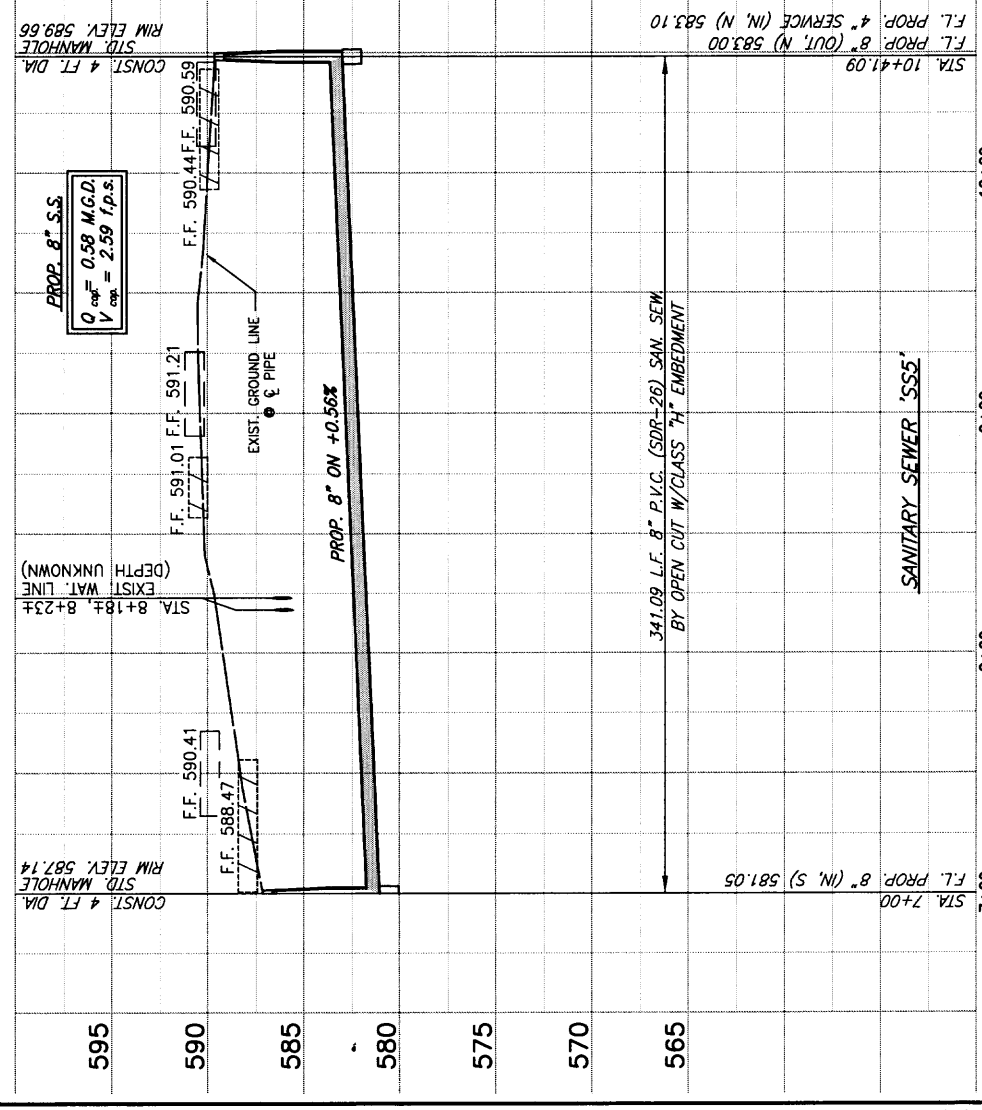
T.B.M. 101
600' NAIL ON NORTH SIDE OF AIRPORT ROAD,
SAN. SEW. LINE 'SSS' STA. 39+24.9, 38.30' LT.
N 7025851.5986, E 2604704.5991
ELEV. 589.49

T.B.M. 100
S.W.B. MANHOLE RIM NORTH SIDE OF AIRPORT ROAD,
SAN. SEW. LINE 'SSS' 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

These plans and related specifications were prepared for the contractor. The contractor is responsible for the accuracy of these documents. No liability is assumed by the engineer for any errors or omissions in these documents. No liability is assumed by the engineer for any errors or omissions in these documents. No liability is assumed by the engineer for any errors or omissions in these documents.



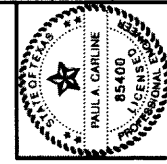
CITY OF ROCKWALL, TEXAS

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

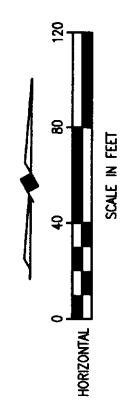
BIRKHOFF, HENDRICKS & CONWAY, L.L.P.
CONSULTING ENGINEERS
Dallas, Texas

DESIGNED BY: P.A.C. PROJECT: 2002-104
DRAWN BY: R.J.L. DATE: SEPTEMBER, 2004

SHEET NO. 13
OF 19 SHEETS



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



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 7024055.4588, E 2601761.3899
 ELEV. 559.52

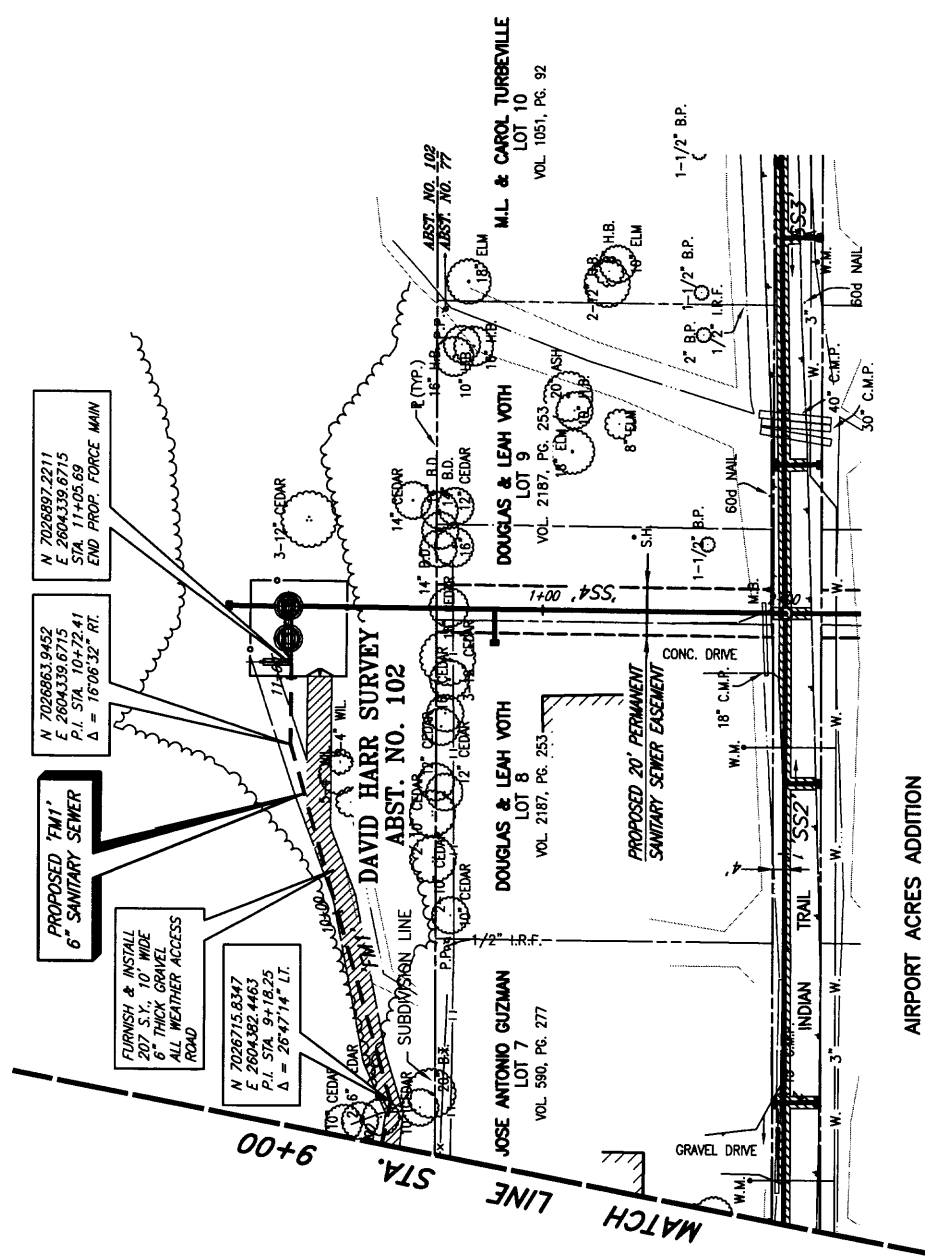
T.B.M. 101
 600' NAIL ON NORTH SIDE OF AIRPORT ROAD,
 SAN. SEW. LINE 'SS1' STA. 39+24.9, 38.30' LT.
 N 7025851.5988, E 2604704.5891
 ELEV. 569.49

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
 are prepared by the engineer and
 are not to be construed as a
 specific project or as a
 guarantee of performance. No
 documents are not permitted without
 written authorization of Birkhoff,
 Hendricks & Conway, L.L.P.

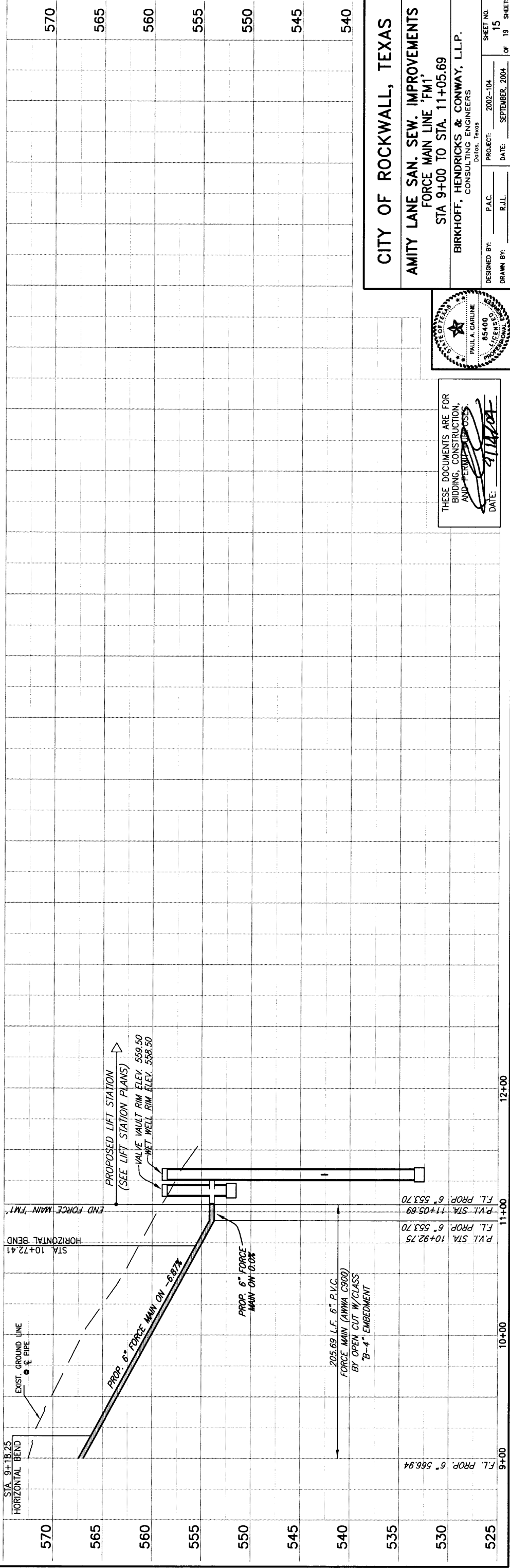
This record drawing is a compilation of the sealed engineering drawing for this
 project, modified by addenda, change orders and information furnished by the
 contractor. The information shown on the record drawings that was provided by
 the contractor or others not associated with the design engineer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

BY: PAC DMZ 11/19/07

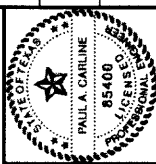


ABST. NO. 77

AIRPORT ACRES ADDITION



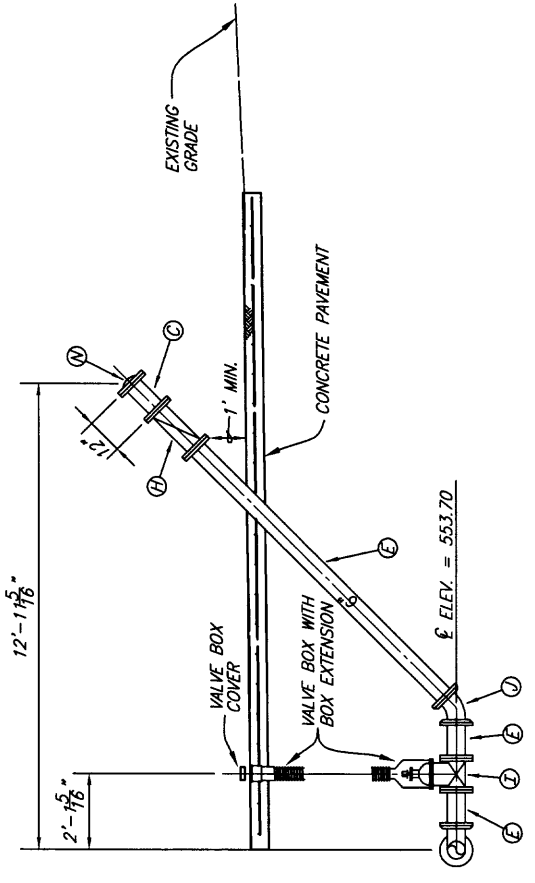
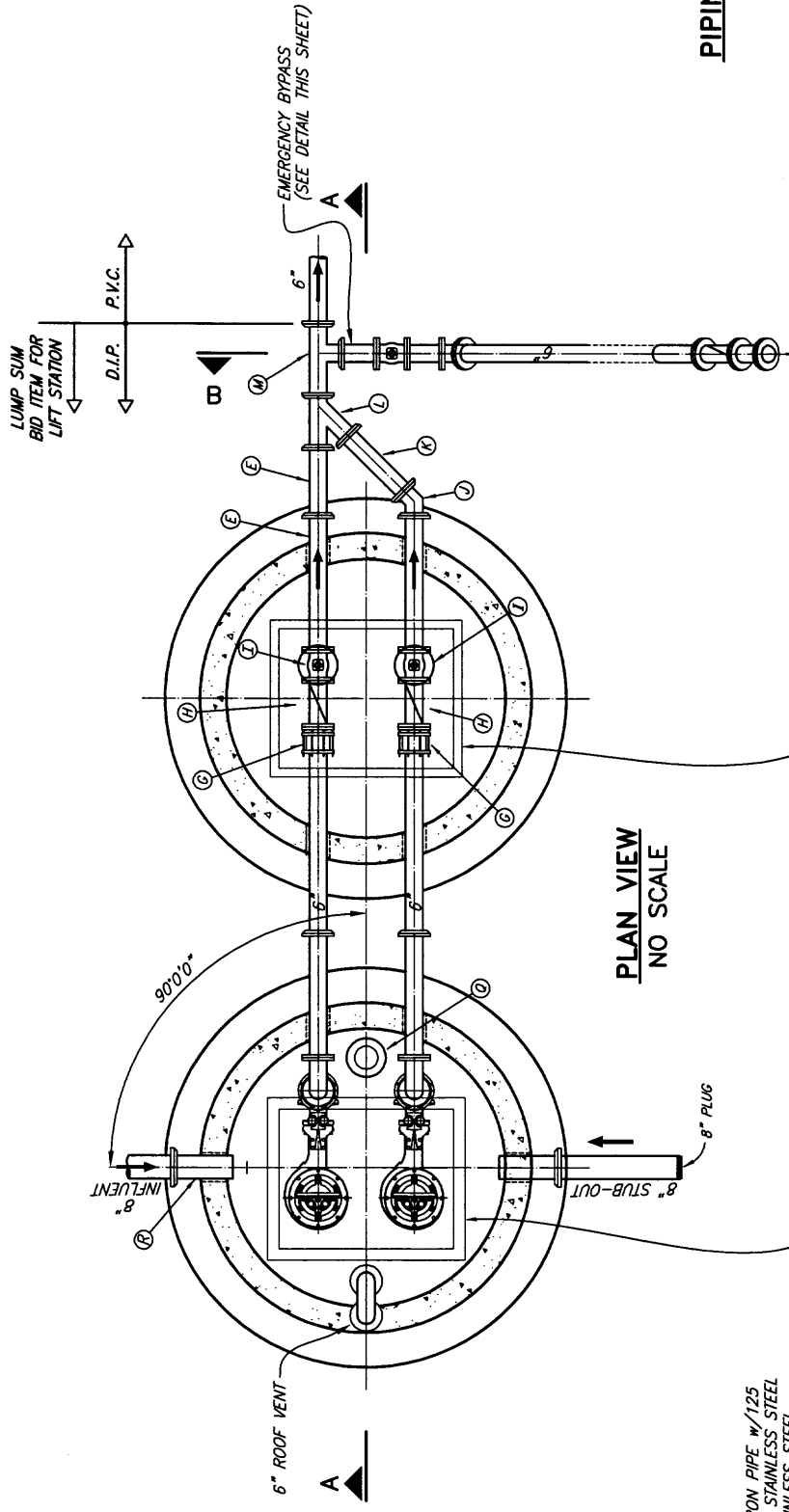
CITY OF ROCKWALL, TEXAS
 AMITY LANE SAN. SEW. IMPROVEMENTS
 FORCE MAIN LINE 'FM1'
 STA 9+00 TO STA. 11+05.69
 BIRKHOFF, HENDRICKS & CONWAY, L.L.P.
 CONSULTING ENGINEERS



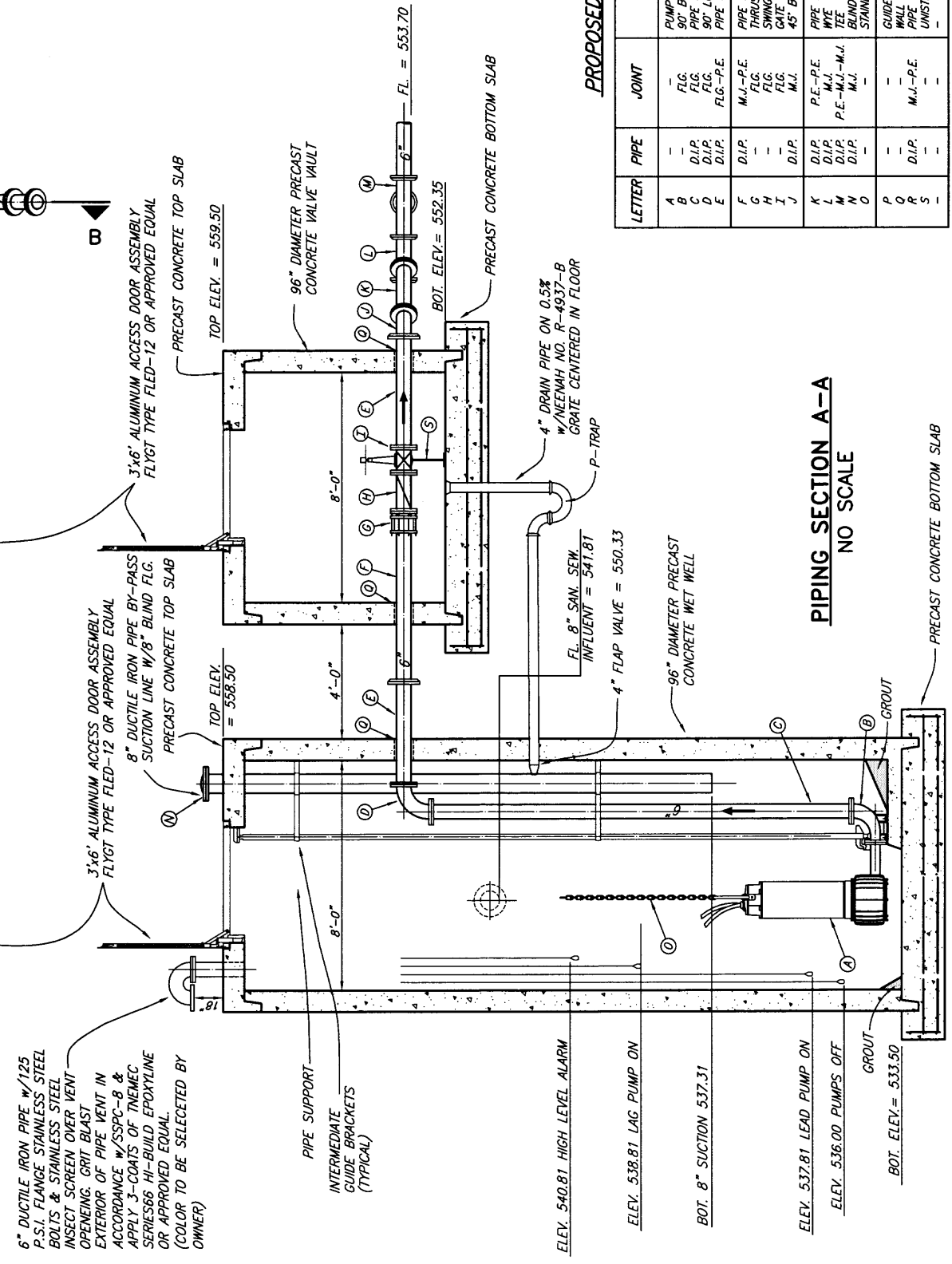
THESE DOCUMENTS ARE FOR
 BIDDING, CONSTRUCTION,
 AND PERMIT PURPOSES
 DATE: 11/19/07

DESIGNED BY: P.A.C. PROJECT: 2002-104
 DRAWN BY: R.J.L. DATE: SEPTEMBER, 2004

SHEET NO. 15
 OF 19 SHEETS



PIPING SECTION B-B EMERGENCY BYPASS DETAIL



PROPOSED LEGEND

LETTER	PIPE	JOINT	DESCRIPTION
A	—	FLG.	PUMP W/ MOTOR
B	D.I.P.	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.	THRU-HOLE
I	—	FLG.	PIPE VALVE (WHEEL OPERATED)
J	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.	M.J.	TEE
N	D.I.P.	P.E.-M.J.-M.J.	BLIND FLANGE
O	D.I.P.	M.J.	STAINLESS STEEL LIFTING CHAIN
P	—	—	GUIDE BAR
Q	D.I.P.	—	WALL PIPE
R	—	—	PIPE SPOOL
S	—	M.J.-P.E.	UNISTRUT PIPE SUPPORT

**PIPING SECTION A-A
NO SCALE**

This record drawing is a completion 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

These plans and related specifications were prepared for the construction of the project shown hereon. No other use 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
INDIAN TRAIL LIFT STATION

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

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



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

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 1/2" 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 1/2" ALUMINUM ACCESS DOOR ASSEMBLY FLYGT TYPE FLED-12 OR APPROVED EQUAL

PRECAST CONCRETE TOP SLAB

TOP ELEV. = 559.50

PIPE SUPPORT INTERMEDIATE GUIDE BRACKETS (TYPICAL)

ELEV. 540.81 HIGH LEVEL ALARM

ELEV. 538.81 LAG PUMP ON

BOT. 8" SUCTION 537.31

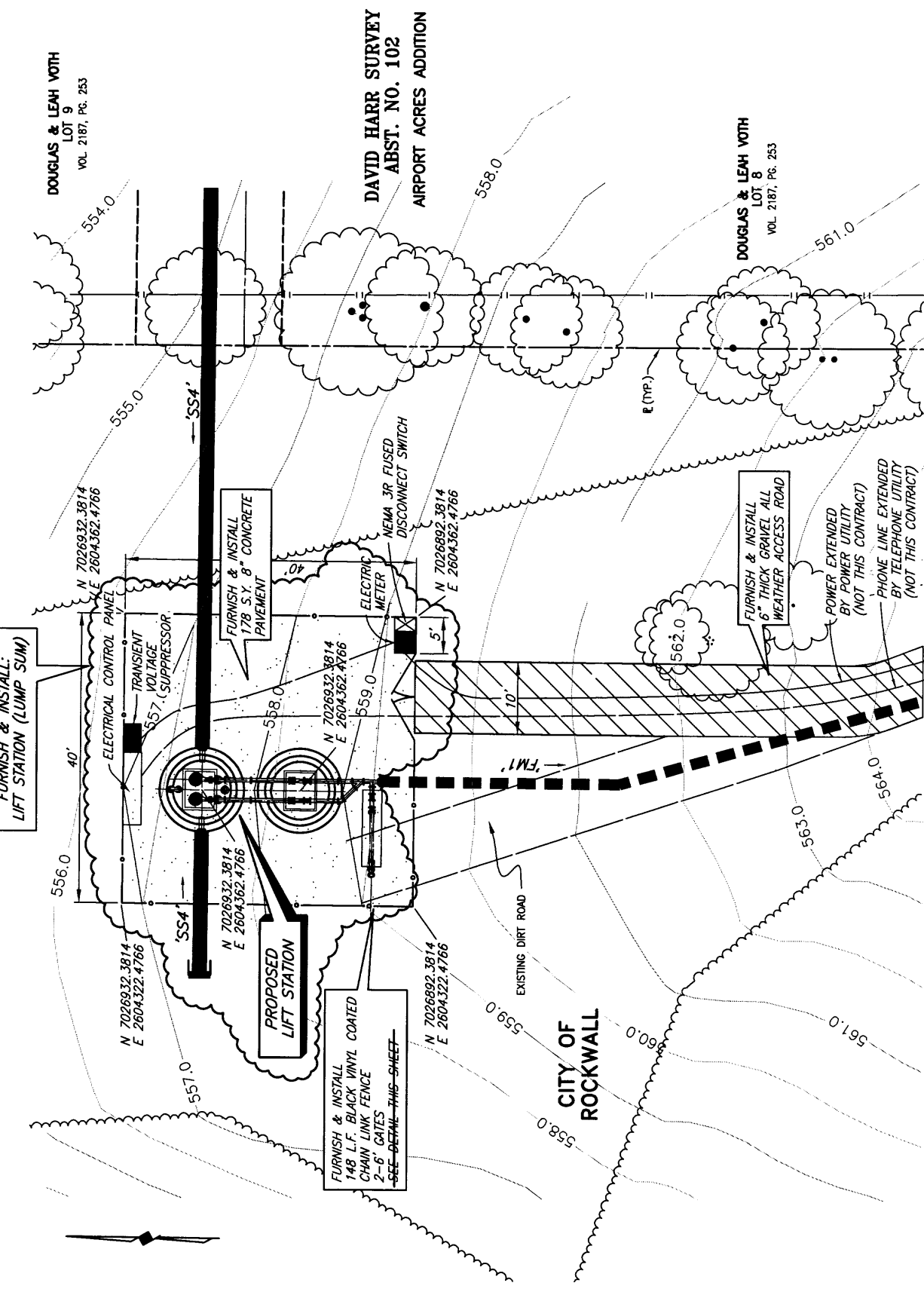
ELEV. 537.81 LEAD PUMP ON

ELEV. 536.00 PUMPS OFF

GROUT

BOT. ELEV. = 533.50

PRECAST CONCRETE BOTTOM SLAB



LIFT STATION SITE PLAN

This record drawing is a compilation of the sealed engineering drawings 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

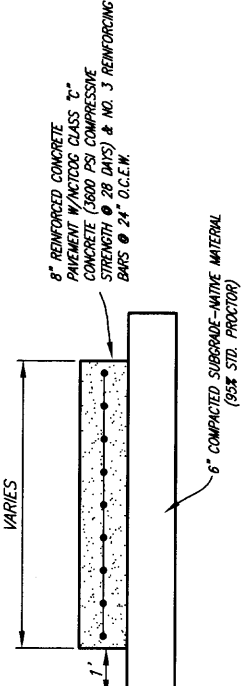
GENERAL NOTES

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 EPOXYLINE 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 IIT FLYGT.
11. PRECAST WET-CELL 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 EPOXYPRIME, 125 MIL DFT COAT OF TNEPEC SERIES 434 CHEMLOCK 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/ANCF 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 IIT 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 IIT FLYGT.

PUMP SCHEDULE

PUMP NO.	MANUFACTURER, MODEL, IMPELLER	PUMP EFFICIENCY (%)	G.P.M. (EA)	PRESSURE (FT. HD.)	DISCHARGE SIZE (IN.)	VOLTS	PHASE	RPM	HP (EA)
1	FLYGT CP3127.180, HT. 217mm IMPELLER	83.56%	289	54.4	4"	480	3	1735	10
2	FLYGT CP3127.180, HT. 217mm IMPELLER	83.56%	289	54.4	4"	480	3	1735	10

1. SUBMERSIBLE SEWAGE TYPE #/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.



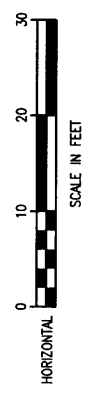
CONCRETE PAVEMENT DETAIL

CITY OF ROCKWALL BENCHMARK
 ROTIS
 ELEV. 558.719

T.B.M. 346
 SANITARY SEWER MANHOLE RIM AT
 SAN. SEW. LINE 551' STA. 0+00
 N 7024055.4586, E 2607761.3699
 ELEV. 559.52

T.B.M. 101
 600' W/4 ON NORTH SIDE OF AIRPORT ROAD,
 SAN. SEW. LINE 551' STA. 39+24.9, 38.30' LT.
 N 7025851.5986, E 2604704.5991
 ELEV. 569.49

T.B.M. 100
 S.W.B. MANHOLE RIM NORTH SIDE OF AIRPORT ROAD,
 SAN. SEW. LINE 551' STA. 64+33.53, 47.06' LT.
 N 7025889.4352, E 2607135.3028
 ELEV. 607.63



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

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

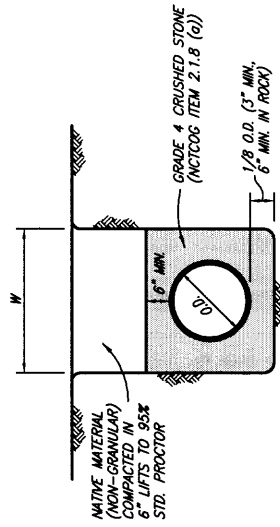
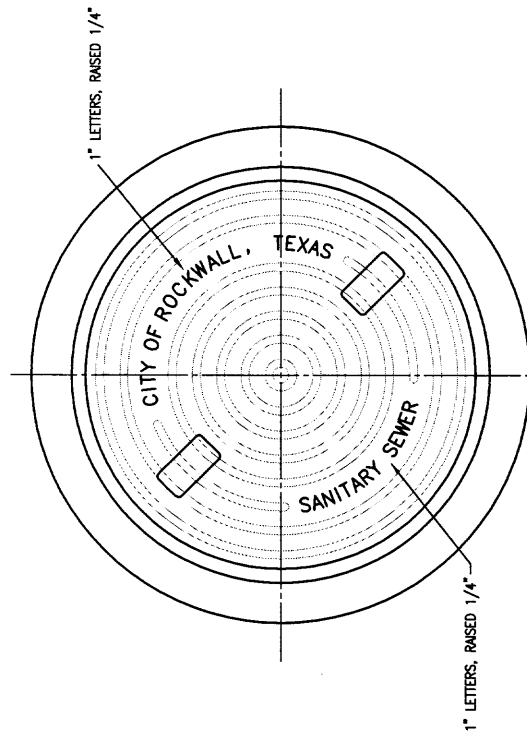
DESIGNED BY: PAC PROJECT: 2002-104 SHEET NO. 17
 DRAWN BY: R.J.L. DATE: SEPTEMBER, 2004 OF 19 SHEETS

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

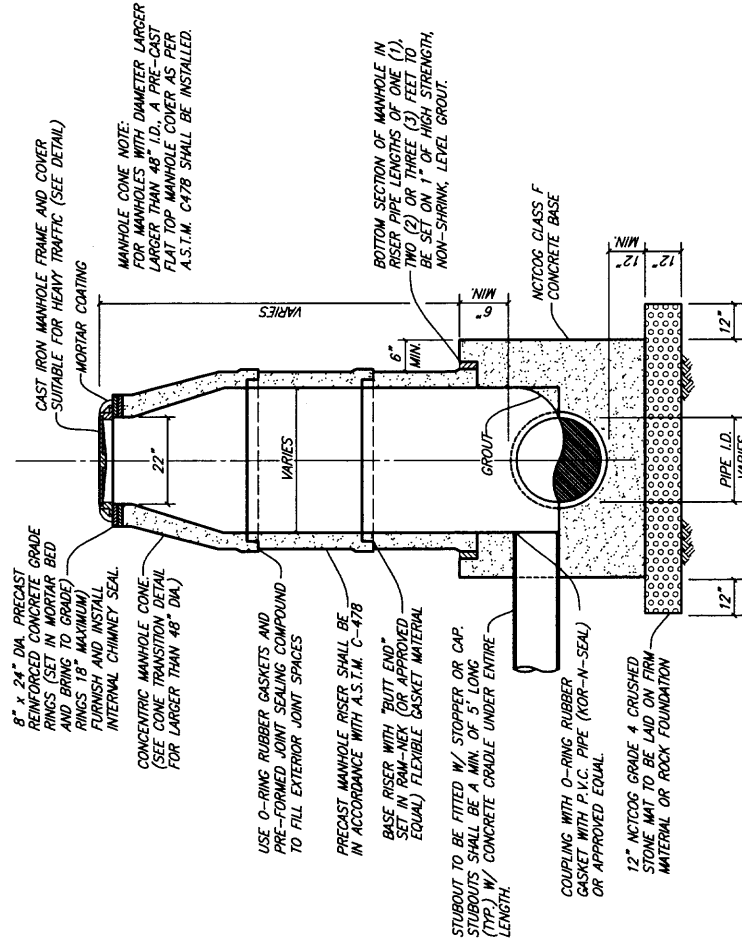
DATE: 9/19/07

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 COVERS WITH THE "CITY OF ROCKWALL" AS MANUFACTURED BY THE FULLAN ENDOUR, INC. CATALOG NO. 154-BLSS AND HAYS FOUNDRY, CO. OR APPROVED EQUIVALENT 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.

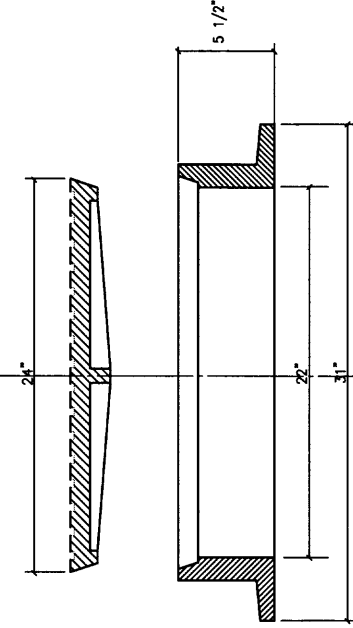


CLASS H EMBEDMENT
(GRAVITY SEWER)



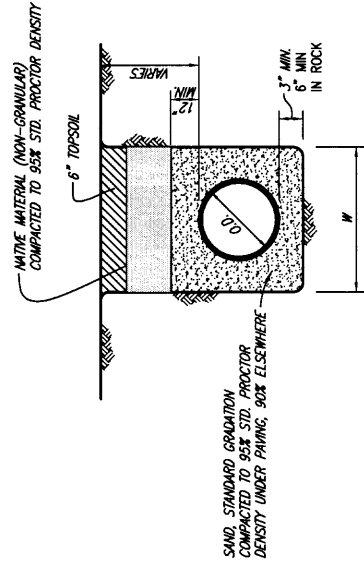
PRECAST CONCRETE MANHOLE

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

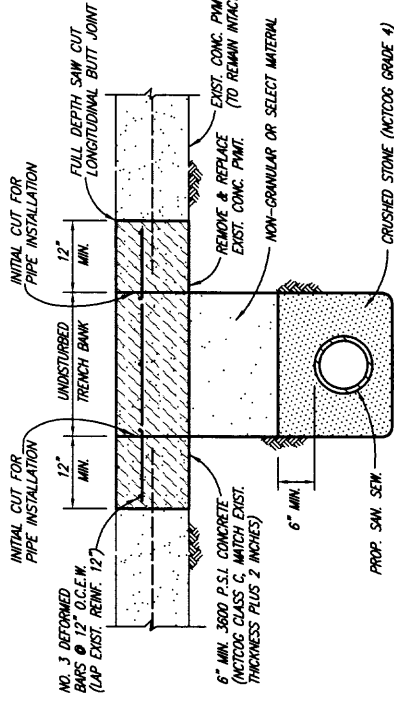


MANHOLE RING AND COVER
WITH LOCKING DEVICE & PICK SLOTS

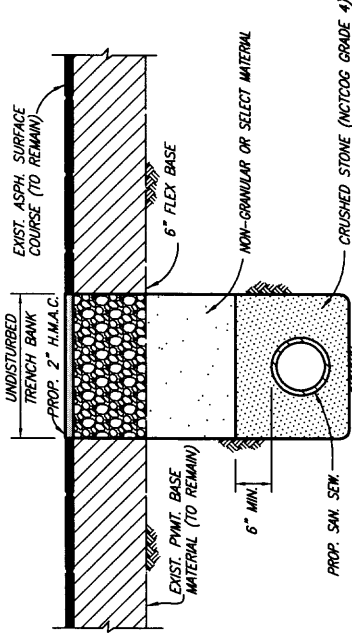
BASS AND HAYS FOUNDRY, INC.
TRAFFIC BEARING MANHOLE: 400-24
NON TRAFFIC BEARING MANHOLES: 300-24



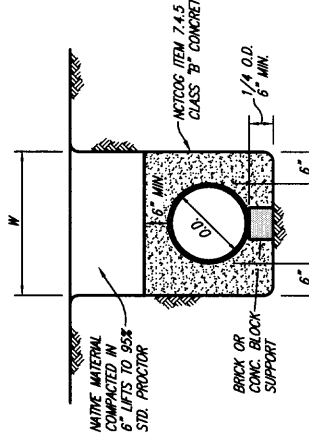
CLASS B-3 EMBEDMENT
(PRESSURE PIPE)



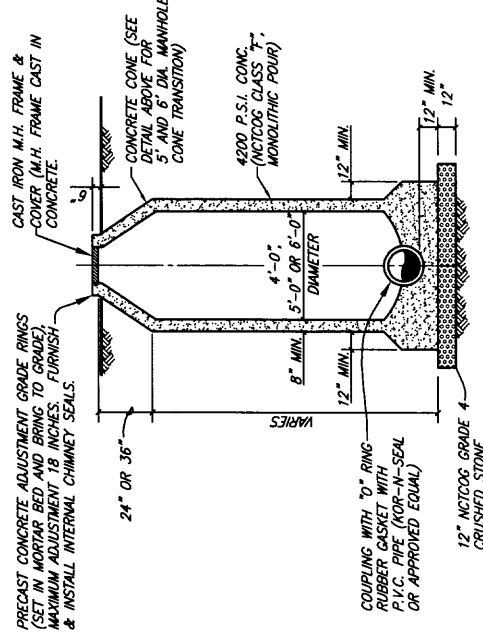
CONCRETE STREET OR DRIVEWAY REPAIR



ASPHALT STREET OR DRIVEWAY REPAIR

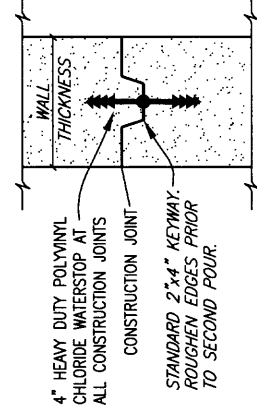


CLASS G EMBEDMENT
CONCRETE ENCASEMENT



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

SANITARY SEWER MANHOLE (CAST IN PLACE)



MANHOLE CONSTRUCTION JOINT
KEYWAY WITH WATERSTOP

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 compliance. The original sealed drawings are on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.

BY PAC DATE 1/19/07

These plans and related specifications were prepared for construction of this specific project only. Reuse of these drawings without the written consent of Birkhoff, Hendricks & Conway, L.L.P.

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

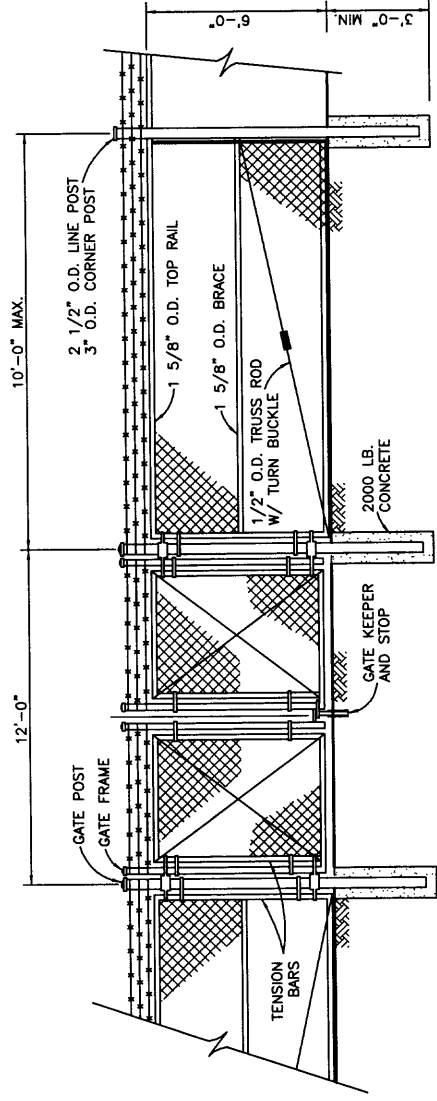
DETAILS

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

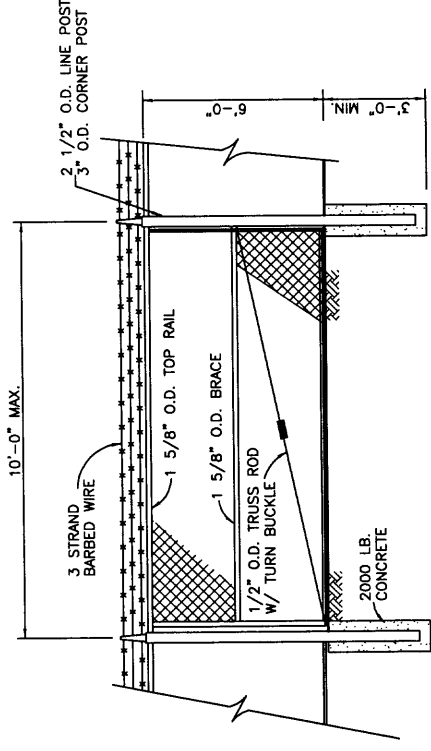
DESIGNED BY: PAC PROJECT: 2002-104
DRAWN BY: R.J.L. DATE: SEPTEMBER, 2004 OF 19 SHEETS



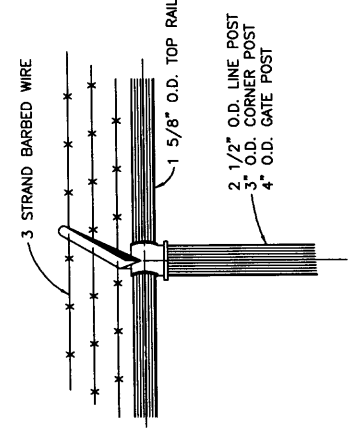
THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES.
DATE: 9/14/07



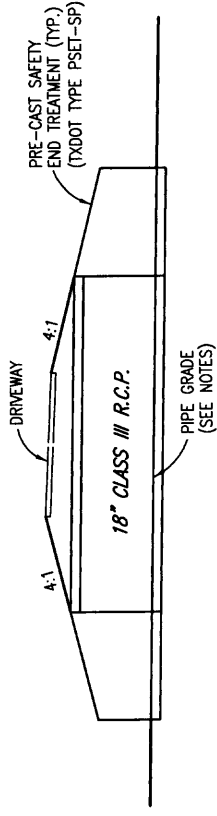
GATE DETAIL
N.T.S.



FENCE DETAIL
N.T.S.

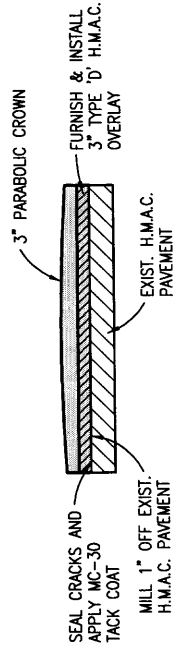


FENCE TOP
N.T.S.



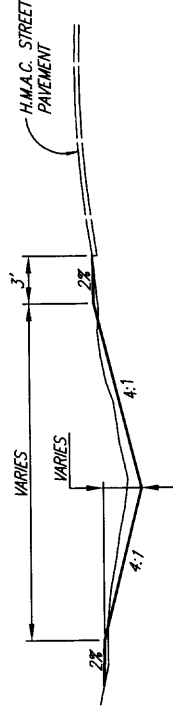
DRIVEWAY CULVERT DETAIL
(INDIAN TRAIL & AMITY LANE ONLY)

- 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 INSTALLED TO PROVIDE POSITIVE DRAINAGE.



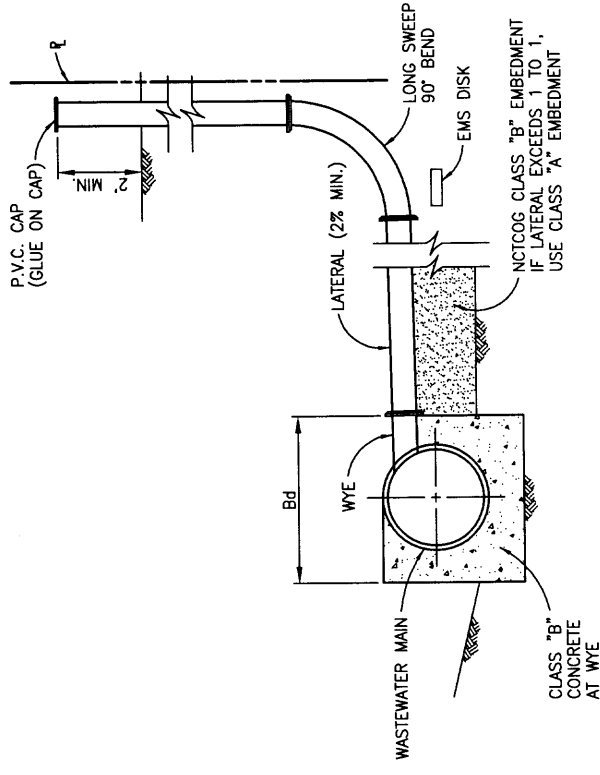
PAVEMENT OVERLAY DETAIL
(INDIAN TRAIL & AMITY LANE ONLY)

- 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 PAVEMENT SHALL BE MADE FOR CRACK SEALING OR TACK COAT.



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.



WASTEWATER LATERAL CONNECTION
NO SCALE

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

THESE DOCUMENTS ARE FOR BIDDING, CONSTRUCTION, AND PERMIT PURPOSES. 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: PAC PROJECT: 2002-104 SHEET NO. 19
DRAWN BY: R.J.L. DATE: SEPTEMBER, 2004 OF 19 SHEETS

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

RUBY L. ATHEY
TRACT C
VOL. 254, PG. 915

ABST. NO. 102
ABST. NO. 154

BARBED WIRE FENCE
LIMITS OF PLOWED FIELD

10' CEDAR
1/2" I.R.F.

PROPOSED 20' PERMANENT
SANITARY SEWER EASEMENT

PROPOSED 25' TEMPORARY
CONSTRUCTION EASEMENT

PROPOSED
12" SANITARY SEWER

12" SANITARY SEWER
I. Inverse/Sw. Contd. Pl. #2784
N 7024259.1245
E 2602461.0871

PEIAR TEMUNOVIC AND OVIETA TEMUNOVIC
TRACT 3
VOL. 930, PG. 188

J. LOCKHART SURVEY
ABST. NO. 134

N 7024298.8957
E 2602963.6910
M.H. STA. 12+80.72
CONST. 5 FT. DIA. MANHOLE

Inverse/Sw. Contd. Pl. #2574
N 7024408.8704
E 2602951.5749
Ei: 567.850

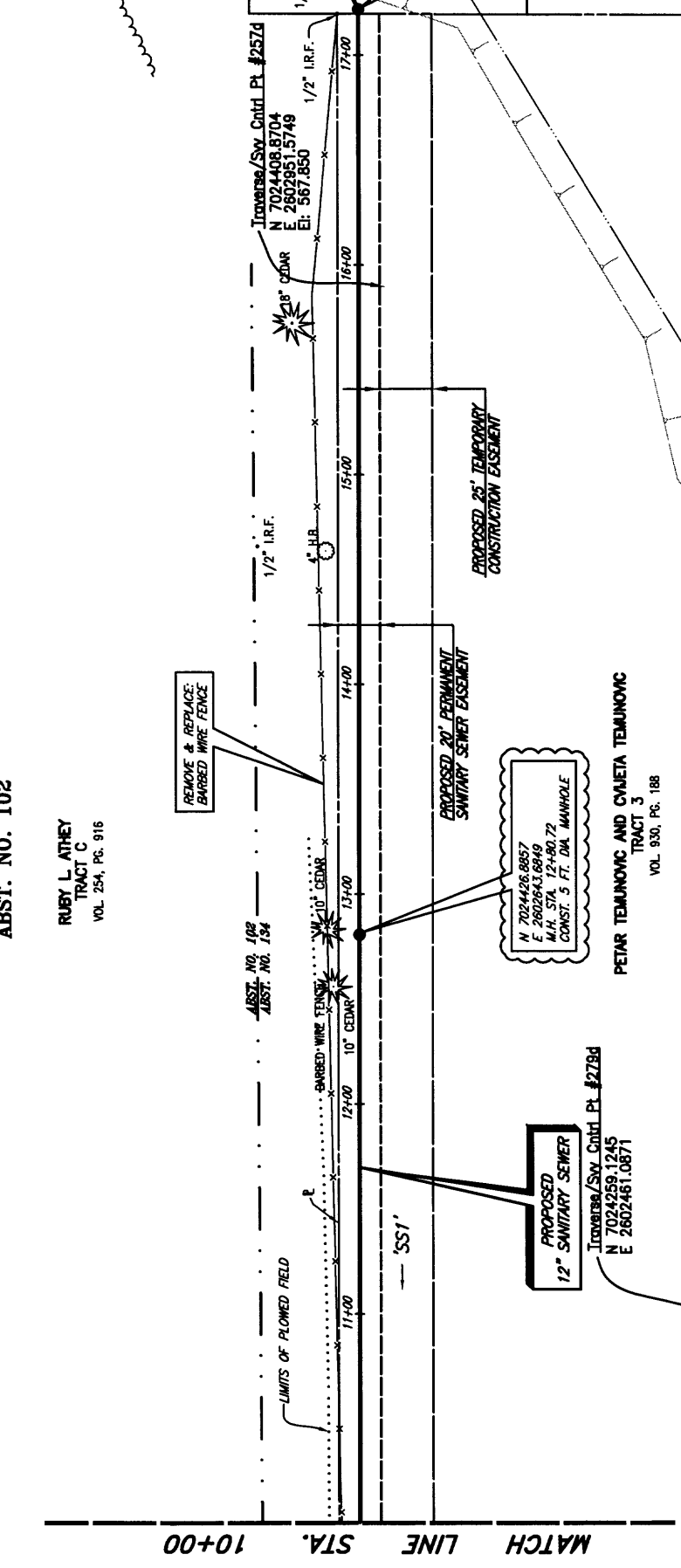
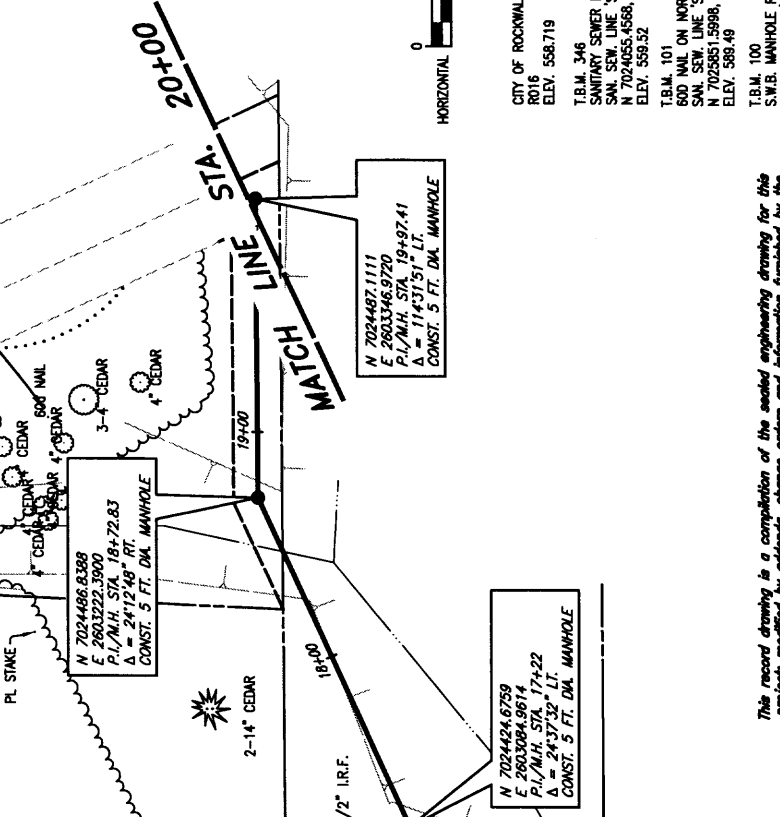
N 7024486.8388
E 2603222.3900
P.I./M.H. STA. 18+72.83
Δ = 24°12'48" RT.
CONST. 5 FT. DIA. MANHOLE

N 7024487.1111
E 2603346.9720
P.I./M.H. STA. 19+97.41
Δ = 114°31'51" LT.
CONST. 5 FT. DIA. MANHOLE

N 7024424.6759
E 2603084.9674
P.I./M.H. STA. 17+22
Δ = 24°37'32" LT.
CONST. 5 FT. DIA. MANHOLE

N 7024486.8388
E 2603222.3900
P.I./M.H. STA. 18+72.83
Δ = 24°12'48" RT.
CONST. 5 FT. DIA. MANHOLE

Ei: 571.120



This record drawing is a completion 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. The original sealed drawings are on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.

BY: PAC DATE 1/19/07

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

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 7024655.4588, E 2601761.3699
ELEV. 559.52

T.B.M. 101
600' W. ON NORTH SIDE OF AIRPORT ROAD,
SAN. SEW. LINE 'SS1' STA. 39+24.9, 38.30' LT.
N 7025851.5986, E 2604704.5991
ELEV. 589.49

T.B.M. 100
S.W. MANHOLE ON NORTH SIDE OF AIRPORT ROAD,
SAN. SEW. LINE 'SS1' STA. 44+33.53, 47.06' LT.
N 7025889.4352, E 2607135.3028
ELEV. 607.63

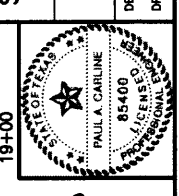


CITY OF ROCKWALL, TEXAS
AMITY LANE SAN. SEW. IMPROVEMENTS
SAN. SEW. LINE 'SS1' PLAN AND PROFILE
STA. 10+00 TO STA. 20+00

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

DESIGNED BY: PAC
DRAWN BY: R.J.L.
PROJECT: 2002-104
DATE: SEPTEMBER, 2004

SHEET NO. 2
OF 19 SHEETS



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

STA 17+22
F.L. PROP. 12" (IN. E) 554.55
F.L. PROP. 12" (OUT. W) 554.35

STA 18+22.83
F.L. PROP. 12" (IN. E) 555.67
F.L. PROP. 12" (OUT. W) 555.42

STA 19+97.41
F.L. PROP. 12" (IN. E) 556.62
F.L. PROP. 12" (OUT. W) 556.42

CONST. 5 FT. DIA.
STD. MANHOLE
RIM ELEV. 567.56

CONST. 5 FT. DIA.
STD. MANHOLE
RIM ELEV. 567.41

CONST. 5 FT. DIA.
STD. MANHOLE
RIM ELEV. 569.20

PROP. 12" S.S.
Q_{cap} = 1.80 M.G.D.
V_{cap} = 3.53 f.p.s.

PROP. 12" S.S.
Q_{cap} = 1.80 M.G.D.
V_{cap} = 3.53 f.p.s.

PROP. 12" S.S.
Q_{cap} = 1.80 M.G.D.
V_{cap} = 3.53 f.p.s.

CONST. 5 FT. DIA.
STD. MANHOLE
RIM ELEV. 567.71

EXIST. GROUND LINE
& PIPE

PROP. 12" S.S.
Q_{cap} = 1.80 M.G.D.
V_{cap} = 3.53 f.p.s.

CONST. 5 FT. DIA.
STD. MANHOLE
RIM ELEV. 567.71

PROP. 12" S.S.
Q_{cap} = 1.80 M.G.D.
V_{cap} = 3.53 f.p.s.

CONST. 5 FT. DIA.
STD. MANHOLE
RIM ELEV. 569.20

1000 L.F. 12" P.V.C. (SDR-26) SAN. SEW.
BY OPEN CUT W/CLASS 7"
EMBEDMENT

STA 12+80.72
F.L. PROP. 12" (IN. E) 551.88
F.L. PROP. 12" (OUT. W) 551.68

STA 10+00
F.L. PROP. 12" (IN. E) 549.97

