

LEILA LOUISE STAPPER PENSORN - 117.676 ACRES TRACT

THENCE with fence along the south line of this tract and also being the south line of said 157.18 acres tract, South 60°-00' West, 3,070.56 feet to the Place of BEGINNING.

SCHEDULE 33

RAWE PROPERTY

BEING 101.396 acres of land, more or less, out of the Eligio Gortari Survey No. 2, Abstract 5, County Block 5193, Bexar County, Texas and also being described as a 101.23 acre tract in Volume 7729, Page 109 of the Deed Records of Bexar County, Texas; the said 101.396 acres of land being more particularly described in Exhibit "A" attached hereto and incorporated herein for all purposes; TOGETHER WITH A 30 FOOT INGRESS-EGRESS EASEMENT (2.527 acres) out of the Eligio Gortair Survey No. 2, Abstract No. 5, County Block 5193, Bexar County, Texas and alos being out of a 100.00 acre tract; the said 30 FOOT INGRESS-EGRESS EASEMENT (2.527 acres) being more particularly described in Exhibit "B" attached hereto and incorporated herein for all purposes.

*[ Continued on the following page ]*

BEING 101.396 acres of land, more or less, out of the Bligo Cortari Survey No. 2, Abstract 5, County Block 5193, Bexar County, Texas and also being described as a 101.23 acre tract in Volume 7729, Page 109 of the Deed Records of Bexar County, Texas and being more particularly described as follows:

BEGINNING at an iron pin found in the existing west R.O.W. line of Trainer-Hale Road for the northeast corner of this tract and the northeast corner of the above referenced 101.23 acre tract, said point also being the southeast corner of a 100.00 acre tract described in Volume 1427, Page 76 of the Real Property Records of Bexar County, Texas;

THENCE, S 29°55'46" E, 685.57 feet along said west R.O.W. to an iron pin found in same for the southeast corner of this tract;

THENCE, S 60°05'46" W, 1005.01 feet along the common line with a 10.00 acre tract described in Volume 2537, Page 1617 of the Real Property Records of Bexar County, Texas to an iron pin found in same for an angle point of this tract;

THENCE, S 59°53'55" W, along the common line of a 10.00 acre tract described in Volume 2469, Page 921 of the Real Property Records of Bexar County, Texas passing the computed corner of same at 1066.16 feet and continuing along the common line of the remaining portion of a 14.829 acre tract described in Volume 5183, Page 997 of the Real Property Records of Bexar County, Texas a total distance of 2157.79 feet to an iron pin found in same for an angle point of this tract;

THENCE, S 61°03'04" W, 304.98 feet along the common line with a 3.018 acre tract described in Volume 5295, Page 1214 of the Real Property Records of Bexar County, Texas to an iron pin found for an angle point of this tract;

THENCE, S 59°37'01" W, 901.48 feet along the common fence line with a 19.554 acre tract described in Volume 2815, Page 1443 of the Real Property Records of Bexar County, Texas to an iron pin found for an angle point of this tract;

THENCE, S 60°01'52" W, along the common fence line with a 14.309 acre tract described in Volume 4764, Page 5 of the Real Property Records of Bexar County, Texas passing the approximately center line of Woman Hollering Creek at 316.15 feet and continuing along the common fence line with said 14.309 acre tract passing the computed corner of same at 337.31 feet and continuing along the common fence line with a 10.635 acre tract described in Volume 4764, Page 21 of the Real Property Records of Bexar County, Texas to an iron pin found for an angle point of this tract;

THENCE, S 60°03'09" W, 1014.76 feet along the common fence line with a 35.00 acre tract described in Volume 4764, Page 17 of the Real Property Records of Bexar County, Texas to an iron pin found for an angle point of this tract;

THENCE, S 60°01'21" W, 450.27 feet along the common fence line with a 32.542 acre tract described in Volume 4764, Page 25 of the Real Property Records of Bexar County, Texas to an iron pipe found in same for the southwest corner of this tract;

THENCE, N 28°36'06" W, 720.59 feet along the common fence line with a 57.00 acre tract described in Volume 7970, Page 941 of the Real Property Records of Bexar County, Texas to an iron pipe found in same for the northwest corner of this tract;

THENCE, N 60°18'24" E, (Ref. Brg.) 6276.28 feet along the common line with said 100.00 acre tract to the POINT OF BEGINNING and containing 101.396 acres of land, more or less.

**30' INGRESS-EGRESS EASEMENT**

BEING a 30' Ingress-Egress Easement (2.527 acres) out of the Bliglo Gortari Survey No. 2, Abstract 5, County Block 5193, Bexar County, Texas and also being out of a 100.00 acre tract described in Volume 1427, Page 76 of the Real Property Records of Bexar County, Texas and being more particularly described as follows:

**BEGINNING** at an iron pipe found in the existing west R.O.W. line of Trainer-Hale Road for the southeast corner of this easement and the southeast corner of the above referenced 100.00 acre tract, said point also being the northeast corner of a 101.25 acre tract described in Volume 7729, Page 109 of the Deed Records of Bexar County, Texas;

**THENCE**, S 60°18'24" W, (Ref. Brg.) 3670.00 feet along the common line with said 101.25 acre tract to a point in same for the southwest corner of this easement;

**THENCE**, N 29°41'36" W, 30.00 feet into said 100.00 acre tract to a point for the northwest corner of this easement;

**THENCE**, N 60°18'24" E, 3669.30 feet parallel to the south line of said 100.00 acre tract to a point in the existing west R.O.W. line of Trainer-Hale Road for the northeast corner of this easement;

**THENCE**, S 31°02'13" E, 30.01 feet along said west R.O.W. line to the **POINT OF BEGINNING**.

SCHEDULE 34  
REAL PROPERTY

Being a tract of land containing 3.5 acres, more or less, improved with a dwelling (our homestead) and related outbuildings and including a strip of land 30' wide by 3,000 feet, more or less, in length for access over and across the existing farm road to and from the dwelling, out of a 68.035 acre tract of land out of the Eljio Gortari Survey No. 2, Abstract No. 5, County Block 5193, Bexar County, Texas, being the same property conveyed to Frances B. Radloff by Deed

*[ Continued on the following page ]*

recorded in Volume 7455, Page 154, Bexar County Deed Records, save and except 0.139 acre conveyed to Bexar County by Deed recorded in Volume 1748, Page 202, Bexar County, Texas; and being more particularly described as follows:

**BEGINNING** at an iron pin set on the southwest curvilinear right of way line of Trainer Hale Road at a radial bearing S 27 deg. 16' 00" W for the most northerly corner of this tract; said corner being southeasterly, along said right of way line, a distance of 541.01 feet from the southeast right of way line of Trainer Hale Road;

**THENCE** southeasterly, along the southwest right of way line of Trainer Hale Road, the following courses; along a curve to the left, having a radius of 449.48 feet, a central angle of 09 deg. 48' 44" and a tangent length of 38.58 feet, an arc distance of 76.98 feet to an iron pin set; S 72 deg. 32' 44" E, a distance of 223.48 feet to an iron pin set at an angle point; S 76 deg. 14' 40" E a distance of 232.29 feet to an iron pin set at an angle point; and S 72 deg. 32' 43" E a distance of 147.76 feet to an iron pin set for the most easterly corner of this tract;

**THENCE** S 59 deg. 59' 00" W along the common dividing line between this tract and a tract conveyed to Clarence Schmoekel and Adeline Schmoekel, by Deed recorded in Volume 3813, Page 72, Bexar County, Deed Records, a distance of 6302.58 feet to an iron pin set at the most southerly corner of this tract;

**THENCE** N 10 deg. 30' 00" W along a barbed wire fence (laying on the ground) a distance of 527.11 feet to a iron pin set at a fence corner for the most westerly corner of this tract; said corner being the original northwest corner of that property conveyed to Rudolf Radeleff and Fritz Radeleff by Deed recorded in Volume 414, Page 426, Bexar County Deed Records;

**THENCE** N 60 deg. 00' 00" E along the common line between this tract and a tract conveyed to Henry W. Luensmann and wife, Helen Luensmann, by Deed recorded in Volume 3084, Page 243 Bexar County Deed Records, a distance of 5660.86 feet to the POINT OF BEGINNING, and containing 68.035 acres of land, more or less;

And being the same property conveyed by Deed of Exchange dated November 15, 1983 from Walkem Development Co., Inc. to Harold O. Real, et ux, recorded in Volume 2966, Pages 1408-1411 of the Official Public Records of Real Property of Bexar County, Texas, reference to which is here made for all purposes.

SCHEDULE 35

RITTIMAN PROPERTY

BEING all that certain tract or parcel of land situated in Bexar County, Texas surveyed for W. H. Rittiman and being a part of the Julian Diaz Survey No. 66, Abstract No. 187, Bexar County Block 8059 and also being a part of an eighty acre Paul Gleitz tract and being more particularly described by metes and bounds as follows:

BEGINNING at an iron rod set in the south line of said Gleitz property which is located N. 60° 00' E. 1094.2' from the west corner of a 194.101 acre tract conveyed to Eleanora Richardson on July 5, 1950, as recorded in Vol. 3357, page 341 of the Bexar County Deed Records;

THENCE N. 30° 08' W. 1255.0' to an iron rod in the south line of Lower Seguin Road;

THENCE N. 59° 44' E. 693.3' along with the south line of Lower Seguin Road to an iron rod;

THENCE S. 30° 08' E. 1258.2' to an iron rod in the south line of said Gleitz property;

THENCE S. 60° 00' W. 693.3' along with the south line to the BEGINNING, and containing 19.999 acres of land, more or less.

**SCHEDULE 36**

**RUMPT I PROPERTY**

*[ See legal description on the following two pages ]*



All the within tract or parcel containing 14.48 acres of land in Texas County, Texas, comprised of 7.66 acres out of the Willow Wacker Survey No. 74, Abstract 13, County Block 3054, and 6.82 acres out of the W. H. Marshall Survey No. 75, Abstract No. 63, County Block 3057, being a portion of that certain 76.39 acre tract described in conveyance in Warranty Deed with Ventura Leon Brito Alvin, Schuler to Russell M. Rumpf, Jr. and wife, Vera N. Rumpf dated July 27, 1964, of record in Volume 5207, Page 332, Deed Records of Texas County, Texas.

Said 14.48 acre tract, being more particularly described by metes and bounds as follows:

- BEARING: at a 1/2" iron pin set on the Southeast line of Schaeffer Road same being the Northwest boundary line of said 76.39 acre tract at the most Westerly corner of a 19.71 acre tract, surveyed this same day, for the most Northerly corner of this herein described tract; BEARING: South 39 deg. 50 min. 17 sec. West, 401.21 feet from a 1/2" iron pin found at the North corner of said 76.39 acre tract;
- THENCE: South 29 deg. 43 min. 43 sec. East, a distance of 2319.46 feet along with the Southeast boundary line of said 19.71 acre tract to a 1/2" iron pin set on the Northwest boundary line of Nelson Presidential 10.00 acre tract and same being the Southeast boundary line of said 76.39 acre tract at the most Southerly corner of said 19.71 acre tract, for the most Southerly corner of this herein described tract;
- THENCE: South 50 deg. 24 min. 23 sec. West, a distance of 549.15 feet along with the Southeast boundary line of said 76.39 acre tract to a 1/2" iron pin set on the Northwest boundary line of John H and Helen Schuler 116.13 acre tract at the most Easterly corner of Ernest H. Marshall 10.00 acre tract, for the most Southerly corner of this herein described tract;
- THENCE: North 29 deg. 40 min. 50 sec. West, a distance of 793.86 feet along with the Northeast line of said Marshall 5.00 acre tract to a 3/4" iron pipe found at the most Southerly corner of Ernest H. Marshall 10.00 acre tract, for the most Westerly corner of this herein described tract;
- THENCE: North 59 deg. 46 min. 37 sec. East, a distance of 302.10 feet along with the Northeast boundary line of said Marshall 10.00 acre tract to a 3/4" iron pipe found at the most Easterly corner of said Marshall 10.00 acre tract, for a corner of this herein described tract;
- THENCE: North 29 deg. 20 min. 33 sec. West, a distance of 3614.68 feet along with the Northeast boundary line of said Marshall 10.00 acre tract to a 3/4" iron pipe found on the Northwest line of Schaeffer Road and same being the Northwest boundary line of said 76.39 acre tract at the most Northerly corner of said Marshall 10.00 acre tract, at the most Westerly corner of a 30 foot ingress and egress road easement, for the most Westwesterly corner of this herein described tract;
- THENCE: North 59 deg. 50 min. 17 sec. East, a distance of 133.26 feet along with the Southeast line of Schaeffer Road and same being the Northeast boundary line of said 76.39 acre tract to the POINT OF BEGINNING.

THESE WITH A 20 foot ingress and egress road easement being more particularly described by metes and bounds as follows:

- BEARING: at a 1/2" iron pin set found on the Southeast line of Schaeffer Road at the most Westerly corner of above described 19.71 acre tract and same being the most Northerly corner of above described 14.48 acre tract, surveyed this same day, for the most Westerly corner of this herein described easement; BEARING: South 39 deg. 50 min. 17 sec. West, 401.21 feet from a 1/2" iron pin found at the North corner of said 76.39 acre tract;
- THENCE: North 59 deg. 50 min. 17 sec. East, a distance of 20.00 feet along with the Southeast line of said Schaeffer Road and same being the Northwest boundary line of said 76.39 acre tract to a point, for the most Northerly corner of this herein described easement;
- THENCE: South 29 deg. 43 min. 43 sec. East, a distance of 1216.40 feet to a point, for the most Easterly corner of this herein described easement;
- THENCE: South 60 deg. 16 min. 17 sec. West, a distance of 20.00 feet to a point on the Northeast boundary line of above described 14.48 acre tract, for the most Southerly corner of this herein described easement;
- THENCE: North 29 deg. 43 min. 43 sec. West, a distance of 1216.31 feet along with the Northeast boundary line of said above described 14.48 acre tract to the POINT OF BEGINNING.

LESS AND DEDUCT a 0.56 acre tract being more particularly described by metes and bounds as follows:

- CHARACTER: at a 3/4" iron pipe found on the Northeast line of Schaeffer Road at the most Northerly corner of Ernest H. Marshall 10.00 acre tract, same being the most Northwesterly corner of above described 14.48 acre tract and also being the most Westerly corner of a 30 foot ingress and egress road easement; BEARING: South 39 deg. 50 min. 17 sec. West, 334.47 feet from a 1/2" iron pin found at the North corner of said 76.39 acre tract;
- THENCE: South 29 deg. 20 min. 33 sec. East, a distance of 980.35 feet along with the Southwest boundary line of above described 14.48 acre tract, same being the Northeast boundary line of said Marshall 10.00 acre tract, and also being the Southeast boundary line of said 30 foot ingress and egress road easement to a 1/2" iron pin set at the Southerly corner of said 30 foot ingress and egress road easement, for the most Westerly corner of this herein described tract and Point of Beginning;
- THENCE: North 60 deg. 16 min. 17 sec. East, a distance of 132.86 feet to a 1/2" iron pin set on the Southwest boundary line of a 19.71 acre tract and same being the Northeast boundary line of above described 14.48 acre tract, for the most Northerly corner of this herein described tract;

**TURN 70:** North 29 deg. 20 min. 33 sec. West, a distance of 171.88 feet along with the Northeast line of said Ernest R. Harshoff, 10.00 acre tract and same being the Southwest boundary line of above described 14.48 acre tract to the POINT UP DISCONTINUITY.

**TOGETHER WITH** a 30 degree and 1/2 degree easement for said 0.36 acre tract, being more particularly described by notes and records as follows:

**DISCONTINUITY:** at a 1/2° iron pin found on the Southeast line of Schaeffer Road at the exact Northeast corner of Ernest R. Harshoff, 10.00 acre tract, for the most Westerly corner of this herein described easement, THENCE: North 59 deg. 30 min. 17 sec. East, 534.47 feet from the North corner of said 76.39 acre tract;

**TURN 71:** North 59 deg. 30 min. 17 sec. East, a distance of 30.00 feet along with the Southeast line of said Schaeffer Road and same being the Northwest boundary line of said 76.39 acre tract to a point, for the most Northerly corner of this herein described easement;

**TURN 72:** South 29 deg. 20 min. 33 sec. East, a distance of 280.68 feet to a point on the Northwest boundary line of above described 0.36 acre tract, surveyed this same day, for the Easterly corner of this herein described easement;

**TURN 73:** South 60 deg. 16 min. 17 sec. West, a distance of 30.00 feet along with the Northwest boundary line of said 0.36 acre tract to a 1/2° iron pin set on the Northeast boundary line of said Harshoff 10.00 acre tract and same being the Southwest boundary line of above described 14.48 acre tract, for the most Southerly corner of this herein described easement;

**TURN 74:** North 29 deg. 20 min. 33 sec. West, a distance of 280.45 feet along with the Northwest boundary line of said 14.48 acre tract and same being the Ernest R. Harshoff, 10.00 acre tract to the POINT UP DISCONTINUITY.

SCHEDULE 37

RUMPF II PROPERTY

A certain tract of land containing Seventy-Six and Thirty-Nine (76.39) Hundredths acres comprising part of a tract of 80.56 acres conveyed from Wm. Schulz and wife, Anna Schulz to Alvin Schulz by Deed recorded February 28, 1921, in Volume 633, Pages 21 and 22, Deed Records Bexar County, Texas, and corrected by Deed recorded in Volume 882, Page 87, Deed Records of Bexar County, Texas. The said 76.39 acres comprise 59.19 acres out of Wm. Bracken Survey 74, Abstract 43, County Block 5056; and 17.2 acres out of W. B. Bennett Survey 75, Abstract 61, County Block 5057, Bexar County. The said 76.39 acres fronts on south side of Schaeffer Road, about 16 miles in a northeasterly direction from the Court House in Bexar County, Texas, and being more particularly described as follows:

BEGINNING at an iron pipe on the south line of Schaeffer Road, being the northwest corner of said Alvin Schulz 80.56 acres tract;  
THENCE with old fence line, along the south line of Schaeffer Road, north 59° 49' east, 939.0 feet to an iron pipe, being the northwest corner of the Alvin A. Schulz one acre tract;  
THENCE south 30° 11' east, 310.0 feet to an iron pipe, being the southwest corner of a tract of 2.0 acres;  
THENCE north 59° 49' east, 573.90 feet to an iron pipe on the east line of 80.56 acres tract, being the northeast corner of said 76.39 acres;  
THENCE with fence along the east line of Alvin Schulz Tract, south 29° 31' east, 1868.86 feet to an iron pipe, the southeast corner of this tract;  
THENCE with fence south 50° 02' west, 1545.09 feet to an iron pipe, the southwest corner of this tract;  
THENCE with fence north 29° 42' west, 2461.46 feet to the PLACE OF BEGINNING.

SAVE AND EXCEPT THE FOLLOWING SEVEN TRACTS OF LAND:

Tract One:

Being 0.060 of an acre (2,609 Sq. Ft.) of land, out of the remainder of a 76.39 acre tract of land, recorded in Volume 5207, Page 332 of the Deed Records of Bexar County, Texas and being out of the W. Bracken Survey No. 74, Abstract 43, County Block 5056, Bexar County, Texas and being more particularly described on Exhibit "A" attached hereto and by this reference incorporated herein

**BEING 0.060 OF AN ACRE (2,609 Sq. Ft.) OF LAND, OUT OF THE REMAINDER OF A 76.39 ACRE TRACT OF LAND, RECORDED IN VOLUME 5207, PAGE 332 OF THE DEED RECORDS OF BEXAR COUNTY, TEXAS AND BEING OUT OF THE W. BRACKEN SURVEY NO. 74, ABSTRACT 43, COUNTY BLOCK 5056, BEXAR COUNTY, TEXAS AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS;**

Beginning at a found 1/2" iron rod in the existing southeast Right of Way line of Schaefer Road, for the north corner of said remainder tract and the west corner of a 13.180 acre tract, recorded in Volume 11645, Page 289 of the Official Public Records of Real Property of Bexar County, Texas for the north corner of the herein described tract;

- (1) Thence S. 30°28'35" E., 7.10 feet, leaving the existing southeast Right of Way line of Schaefer Road, with the common line of said 13.180 acre tract and said remainder, to a set 1/2" iron rod with an orange plastic cap stamped "BAIN MEDINA BAIN INC.", in the proposed southeast Right of Way line of Schaefer Road, for the east corner of the herein described tract;
- (2) Thence S. 59°33'29" W., 361.24 feet, leaving the southwest line of said 13.180 acre tract and crossing said remainder, with the proposed southeast Right of Way line of Schaefer Road, to a set 1/2" iron rod with an orange plastic cap stamped "BAIN MEDINA BAIN INC.", in the northeast line of a 14.48 acre tract recorded in Volume 6622, Page 358 of the Official Public Records of Real Property of Bexar County, Texas and the southwest line of said remainder, for the south corner of the herein described tract;
- (3) Thence N. 29°57'48" W., 7.34 feet, leaving the proposed southeast Right of Way line of Schaefer Road, with the common line of said 14.48 acre tract and said remainder, to a set 1/2" iron rod with an orange plastic cap stamped "BAIN MEDINA BAIN INC.", for the north corner of said 14.48 acre tract and the west corner of said remainder and the west corner of the herein described tract;
- (4) Thence N. 59°35'48" E., 361.18 feet, with the existing southeast Right of Way line of Schaefer Road and the northwest line of said remainder, to the place of beginning and containing 0.060 of an acre (2,609 Sq. Ft.) of land, more or less.

Tract Two:

14.48 acres of land in Bexar County, Texas, comprised of 7.66 acres out of the William Bracken Survey No. 74, Abstract 43, County Block 5056, and 6.82 acres out of the W. S. Bennett Survey No. 75, Abstract No. 61, County Block 5057, being a portion of that certain 76.39 acre tract described in Exhibit "A" attached hereto and made a part hereof for all purposes.

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All that certain tract or parcel containing 14.48 acres of land in Bexar County, Texas, comprised of 7.66 acres out of the Wilcox Tract Survey No. 73, Abstract 43, County Block 5056, and 6.82 acres out of the W. S. Schaeffer Survey No. 75, Abstract No. 61, County Block 5057, being a portion of that certain 76.39 acre tract described in conveyance to Warrant Deed with Venture Loop from Alvin Scheidt to Harriet H. Kempf Jr. and wife, Vera N. Kempf dated July 27, 1964, of record in Volume 5207, Page 332, Deed Records of Bexar County, Texas.

Said 14.48 acre tract, being more particularly described by meter and bounds as follows:

**WARRANT DEED:** at a 1/2" iron pin set on the Southeast line of Schaeffer Road same being the Northwest boundary line of said 76.39 acre tract at the most Westerly corner of a 19.71 acre tract, surveyed this same day, for the most Northerly corner of this herein described tract; BEING: South 29 deg. 30 min. 17 sec. West, 401.21 feet from a 1/2" iron pin found at the North corner of said 76.39 acre tract.

**TRINITY:** South 29 deg. 43 min. 43 sec. East, a distance of 2,119.46 feet along with the Southeast boundary line of said 19.71 acre tract to a 1/2" iron pin set on the Northwest boundary line of Harriet H. Kempf Jr. and wife's 60.68 acre tract and same being the Southeast boundary line of said 76.39 acre tract at the most Northerly corner of said 19.71 acre tract, for the most Northerly corner of this herein described tract.

**TRINITY:** South 50 deg. 24 min. 23 sec. West, a distance of 545.15 feet along with the Southeast boundary line of said 76.39 acre tract to a 1/2" iron pin set on the Northwest boundary line of Harriet H. Kempf Jr. and wife's 60.68 acre tract at the most Westerly corner of Harriet H. Kempf's 5.00 acre tract, for the most Northerly corner of this herein described tract.

**TRINITY:** North 29 deg. 40 min. 50 sec. West, a distance of 793.80 feet along with the Northeast line of said Marshall 5.00 acre tract to a 3/4" iron pin found at the most Northerly corner of Harriet H. Kempf's 5.00 acre tract, for the most Westerly corner of this herein described tract.

**TRINITY:** North 39 deg. 46 min. 37 sec. East, a distance of 392.10 feet along with the Northeast boundary line of said Marshall 10.00 acre tract to a 3/4" iron pin found at the most Easterly corner of said Marshall 10.00 acre tract, for a corner of this herein described tract.

**TRINITY:** North 29 deg. 30 min. 33 sec. West, a distance of 1614.68 feet along with the Northeast boundary line of said Marshall 10.00 acre tract to a 3/4" iron pin found on the Northeast line of Schaeffer Road and same being the Northwest boundary line of said 76.39 acre tract at the most Northerly corner of said Marshall 10.00 acre tract, at the most Westerly corner of a .30 lot ingress and egress road easement, for the most Northwesterly corner of this herein described tract.

**TRINITY:** North 39 deg. 30 min. 17 sec. East, a distance of 1,33.26 feet along with the Southeast line of Schaeffer Road and same being the Northwest boundary line of said 76.39 acre tract to the POINT OF BEGINNING.

**TRINITY WITH A 20 INGRESS AND EGRESS ROAD EASEMENT** being more particularly described by meter and bounds as follows:

**BEGINNING:** at a 1/2" iron pin set found on the Southeast line of Schaeffer Road at the most Westerly corner of above described 19.71 acre tract and same being the most Northerly corner of above described 14.48 acre tract, surveyed this same day, for the most Westerly corner of this herein described easement; BEING: South 59 deg. 50 min. 17 sec. West, 401.21 feet from a 1/2" iron pin found at the North corner of said 76.39 acre tract.

**TRINITY:** North 39 deg. 50 min. 17 sec. East, a distance of 20.00 feet along with the Southeast line of said Schaeffer Road and same being the Northeast boundary line of said 76.39 acre tract to a point, for the most Northerly corner of this herein described easement.

**TRINITY:** South 29 deg. 43 min. 43 sec. East, a distance of 1,216.46 feet to a point, for the most Easterly corner of this herein described easement.

**TRINITY:** South 60 deg. 16 min. 17 sec. West, a distance of 2000 feet to a point on the Northeast boundary line of above described 14.48 acre tract, for the most Southerly corner of this herein described easement.

**TRINITY:** North 29 deg. 43 min. 43 sec. West, a distance of 1,216.31 feet along with the Northeast boundary line of said above described 14.48 acre tract to the POINT OF BEGINNING.

**LESS AND EXCEPT** a 0.56 acre tract being more particularly described by meter and bounds as follows:

**EXCEPTED:** at a 3/4" iron pin found on the Southeast line of Schaeffer Road at the most Northerly corner of Harriet H. Kempf's 10.00 acre tract, same being the most Northwesterly corner of above described 14.48 acre tract and also being the most Westerly corner of a .30 lot ingress and egress road easement; BEING: South 39 deg. 50 min. 17 sec. West, 534.47 feet from a 1/2" iron pin found at the North corner of said 76.39 acre tract.

**TRINITY:** South 29 deg. 20 min. 33 sec. East, a distance of 2981.45 feet along with the Southeast boundary line of above described 14.48 acre tract, same being the Northeast boundary line of said Marshall 10.00 acre tract, and also being the Southeast boundary line of said .30 lot ingress and egress road easement to a 1/2" iron pin set at the Southerly corner of said .30 lot ingress and egress road easement, for the most Westerly corner of this herein described tract and Point of Beginning.

**TRINITY:** North 60 deg. 16 min. 17 sec. East, a distance of 1,32.86 feet to a 1/2" iron pin set on the Northwest boundary line of a 19.71 acre tract and same being the Northeast boundary line of above described 14.48 acre tract, for the most Northerly corner of this herein described tract.

**TIERNAN 71:** North 29 deg. 20 min. 31 sec. West, a distance of 174.88 feet along with the Northeast line of said James H. Marshall, 10.00 acre tract and same being the Southwest boundary line of above described 14.48 acre tract to the POINT OF BEGINNING.

**TOGETHER WITH** a 30 degree and approved easement for said 0.56 acre tract, being more particularly described by a plan and bounds as follows:

**BEGINNING:** at a 1/2" iron pipe found on the Southeast line of Scheffer Road at the west Northern corner of James H. Marshall, 10.00 acre tract, for the most Westerly corner of this herein described easement; **THENCE** South 39 deg. 40 min. 37 sec. East, 534.47 feet from the North corner of said 76.39 acre tract;

**TIERNAN 74:** North 37 deg. 50 min. 17 sec. East, a distance of 30.00 feet along with the Northeast line of said Scheffer Road and same being the Northwest boundary line of said 76.39 acre tract to a point, for the most Northern corner of this herein described easement;

**TIERNAN 75:** South 20 deg. 20 min. 33 sec. East, a distance of 280.68 feet to a point on the Northwest boundary line of above described 0.56 acre tract, surveyed this same day, for the Westerly corner of this herein described easement;

**TIERNAN 76:** South 60 deg. 16 min. 17 sec. West, a distance of 30.00 feet along with the Northwest boundary line of said 0.56 acre tract to a 1/2" iron pipe set on the Northern boundary line of said Marshall 10.00 acre tract and same being the Southwest boundary line of above described 14.48 acre tract, for the most Southerly corner of this herein described easement;

**TIERNAN 78:** North 29 deg. 20 min. 31 sec. West, a distance of 174.88 feet along with the Southeast boundary line of said 14.48 acre tract and same being the James H. Marshall, 10.00 acre tract to the POINT OF BEGINNING.

Tract Three:

TRACT A: 13.180 acres of land situated in a tract called 76.39 acres in a conveyance to Emertt M. Rumpf, Jr., et ux, from Alvin Schulz dated July 27, 1964, County Block 5056, Wm. Bracken Survey No. 74, Bexar County, Texas, and described by metes and bounds as follows:

BEGINNING at a pipe found marking the north corner of the Emertt M. Rumpf, Jr., called 76.39 acre tract and also the west corner of Alvin A. Schulz 1.0 acre tract;

THENCE with a fence, S 30° 11' E, 310.2 feet to an iron pin set at a fence corner marking a re-entrant corner of the called 76.39 acre tract;

THENCE with a fence, N 59° 45' 22" E, 574.25 feet to a pipe found marking the northeast corner of the called 76.39 acre tract;

THENCE with a fence along the northeast line of the called 76.39 acre tract, S 29° 52' 29" E, 918.32 feet to an iron pin set for the east corner of this 13.180 acre tract;

THENCE into the called 76.39 acre tract, S 59° 49' W, at 569.4 feet an iron pin set in the northeast right-of-way of a forty foot road easement and in all 609.40 feet to an iron pin set for the south corner of this 13.180 acre tract;

THENCE with the southwest right-of-way of a forty foot road easement; the southwest line of this 13.180 acre tract, N 30° 11' W, 1227.90 feet to an iron pin set in the fenced southeast R.O.W. of Schaefer Road;

THENCE with the fenced southeast R.O.W. of Schaefer Road, N 59° 49' E, 40.0 feet to the PLACE OF BEGINNING and containing 13.180 acres of land.

Together with the uninterrupted use of a non-exclusive 40 foot road easement more particularly described as follows:

A forty foot road easement situated in a tract called 76.39 acres in a conveyance to Emertt M. Rumpf, Jr., et ux, from Alvin Schulz dated July 27, 1964, County Block 5056, Wm. Bracken Survey No. 74, Bexar County, Texas, and described by metes and bounds as follows:

BEGINNING at an iron pipe found at the north corner of the called 76.39 acre tract situated in the southeast R.O.W. of Schaefer Road;

THENCE S 30° 11' E, at 310.2 feet a re-entrant corner of the called 76.39 acre tract, at 1227.9 feet an iron pin set in the common line between a 13.180 acre tract and a 7.00 acre tract, at 1729.37 feet an iron pin set for the east corner of this forty foot road easement situated in the common line between two 7.00 acre tracts;

THENCE S 59° 49' W, 40.0 feet to an iron pin marking a south corner of a 7.00 acre tract and the west corner of another 7.00 acre tract;

THENCE N 30° 11' W, at 501.47 feet an iron pin marking the west corner of a 7.00 acre tract, the south corner of a 13.180 acre tract and at 1729.37 feet an iron pin in the southeast R.O.W. of Schaefer Road;

THENCE with the fenced southeast R.O.W. of Schaefer Road, N 59° 49' E, 40.0 feet to the PLACE OF BEGINNING and containing 1.500 acres of land.



Tract Four:

TRACT B: 7.00 acres of land situated in a tract called 76.39 acres in a conveyance to Ewert M. Rumpf, Jr., et ux, from Alvin Schulz dated July 27, 1964, County Block 5056, Wm. Bracken Survey No. 74, Bexar County, Texas, and described by metes and bounds as follows:

BEGINNING at a pipe found marking the east corner of the called 76.39 acre tract; thence with the fenced northeast line N 29° 52' 29" W, 449.80 feet to an iron pin set for the east corner of the herein described 7.00 acres and also being the PLACE OF BEGINNING;

THENCE into the called 76.39 acre tract, S 59° 49' W, at 566.7 feet to an iron pin set in the northeast right-of-way of a forty foot road easement and in all 606.7 feet to an iron pin set for the south corner of this 7.00 acre tract;

THENCE with the southwest right-of-way of the forty foot road easement, the southwest line of this 7.00 acre tract, N 30° 11' W, 501.47 feet to an iron pin set for the west corner of this 7.00 acre tract;

THENCE N 59° 49' E, at 40.0 feet the northeast right-of-way of the forty foot road easement and in all 609.40 feet to an iron pin set in the fenced northeast line of the called 76.39 acre tract and marking the north corner of this 7.00 acre tract;

THENCE with the fenced northeast line of the called 76.39 acre tract, S 29° 52' 29" E, 501.47 feet to the PLACE OF BEGINNING and containing 7.00 acres.

Together with the winterinterrupted use of a non-exclusive 40 foot road easement more particularly described as follows:

A forty foot road easement situated in a tract called 76.39 acres in a conveyance to Ewert M. Rumpf, Jr., et ux, from Alvin Schulz dated July 27, 1964, County Block 5056, Wm. Bracken Survey No. 74, Bexar County, Texas, and described by metes and bounds as follows:

BEGINNING at an iron pipe found at the north corner of the called 76.39 acre tract situated in the southeast R.O.W. of Schaefer Road;

THENCE S 30° 11' E, at 310.2 feet a re-entrant corner of the called 76.39 acre tract, at 1227.9 feet an iron pin set in the common line between a 13.180 acre tract and a 7.00 acre tract, at 1729.37 feet an iron pin set for the east corner of this forty foot road easement situated in the common line between two 7.00 acre tracts;

THENCE S 59° 49' W, 40.0 feet to an iron pin marking a south corner of a 7.00 acre tract and the west corner of another 7.00 acre tract;

THENCE N 30° 11' W, at 501.47 feet an iron pin marking the west corner of a 7.00 acre tract, the south corner of a 13.180 acre tract and at 1729.37 feet an iron pin in the southeast R.O.W. of Schaefer Road;

THENCE with the fenced southeast R.O.W. of Schaefer Road, N 59° 49' E, 40.0 feet to the PLACE OF BEGINNING and containing 1.688 acres of land.

Tract Five:

TRACT C: 7.00 acres of land situated in a tract called 76.39 acres in a conveyance to Ewert M. Rumpf, Jr., et ux, from Alvin Schulz dated July 27, 1964, County Block 5056, Wm. Bracken Survey No. 74, Bexar County, Texas, and described by metes and bounds as follows:

BEGINNING at a pipe found at a fence corner marking the east corner of the called 76.39 acre tract;

THENCE with the fenced southeast line of the called 76.39 acre tract, S 49° 41' 58" W, 613.02 feet to an iron pin set for the south corner of this 7.00 acre tract;

THENCE into the called 76.39 acre tract, N 30° 11' W, 557.61 feet to an iron pin set for the west corner of this 7.00 acre tract;

THENCE N 59° 49' E, at 40.0 feet an iron pin set marking the east corner of a forty foot road easement and in all 606.70 feet to an iron pin set in the fenced northeast line of the called 76.39 acre tract;

THENCE with the fenced northeast line of the called 76.39 acre tract, S 29° 52' 29" E, 449.80 feet to the PLACE OF BEGINNING and containing 7.00 acres.

Together with the uninterrupted use of a non-exclusive 40 foot road easement more particularly described as follows:

A forty foot road easement situated in a tract called 76.39 acres in a conveyance to Ewert M. Rumpf, Jr., et ux, from Alvin Schulz dated July 27, 1964, County Block 5056, Wm. Bracken Survey No. 74, Bexar County, Texas, and described by metes and bounds as follows:

BEGINNING at an iron pipe found at the north corner of the called 76.39 acre tract situated in the southeast R.O.W. of Schaefer Road;

THENCE S 30° 11' E, at 310.2 feet a re-entrant corner of the called 76.39 acre tract, at 1227.9 feet an iron pin set in the common line between a 13.180 acre tract and a 7.00 acre tract, at 1729.37 feet an iron pin set for the east corner of this forty foot road easement situated in the common line between two 7.00 acre tracts;

THENCE S 59° 49' W, 40.0 feet to an iron pin marking a south corner of a 7.00 acre tract and the west corner of another 7.00 acre tract;

THENCE N 30° 11' W, at 501.47 feet an iron pin marking the west corner of a 7.00 acre tract, the south corner of a 13.180 acre tract and at 1729.37 feet an iron pin in the southeast R.O.W. of Schaefer Road;

THENCE with the fenced southeast R.O.W. of Schaefer Road, N 59° 49' E, 40.0 feet to the PLACE OF BEGINNING and containing 1.500 acres of land.

Tract Six:

A certain tract of land containing FIVE (5.00) ACRES out of the West part of E. M. Rumpf, Jr. tract of 76.39 acres. The said 5.00 acres is out of Miles S. Bennett Survey 75, Abstract 61, County Block 5057, and fronts on the South side of Schnofter Road, being about 15 miles in an Easterly direction from the Courthouse in Bexar County, Texas, and being more particularly described as follows: BEGINNING at an iron pipe on the South line of Schnofter Road for the Northwest corner of this tract, being also the Northwest corner of said E. M. Rumpf, Jr. 76.39 acres tract; THENCE with South line of Schnofter Road, North 59°49' East, 132.52 feet to an iron pipe, the Northeast corner of this tract, being the Northwest corner of a tract of 10.00 acres; THENCE with line of stakes along the East line of this tract, being the West line of said 10.00 acres, South 29°42' East, 1643.87 feet to an iron pipe, the Southeast corner of this tract; THENCE South 59°49' West, 132.52 feet to an iron pipe, the Southwest corner of this tract; THENCE with fence along the West line of this tract, being also the West line of 76.39 acres tract, North 29°42' West, 1643.87 feet to the place of BEGINNING.

Tract Seven:

A certain tract of land containing Ten (10.00) acres out of the West part of E. M. Rumpf, Jr. tract of 76.39 acres. The said 10.00 acres comprise 6.73 acres out of Miles S. Bennett Survey 75, Abstract 61, County Block 5057, and 3.27 acres out of William Brackett Survey 74, Abstract 43, County Block 5056. The said 10.00 acres fronts on the South side of Schnofter Road, about 15 miles in an Easterly direction from the Courthouse in Bexar County, Texas, and being more particularly described as follows: BEGINNING at an iron pipe on the South line of the Schnofter Road for the Northwest corner of said 10.00 acres, and being the Northeast corner of a tract of 5.00 acres owned by E. M. Rumpf, Jr. and the said corner of this tract being 132.52 feet North 59°49' East from the Northwest corner of said E. M. Rumpf, Jr. 76.39 acres tract; THENCE with South line of Schnofter Road, North 59°49' East, 270.81 feet to an iron pipe, the Northeast corner of this tract; THENCE with fence along the East line of said 10.00 acres tract, South 29°18' East, 1644.00 feet to an iron pipe, the Southeast corner of this tract; THENCE South 59°49' West, 259.33 feet to an iron pipe, the Southwest corner of this tract; THENCE with line of stakes along the West line of this tract, being the East line of a tract of 5.00 acres, North 29°42' West, 1643.87 feet to the place of BEGINNING.

SCHEDULE 38

SCHMIDT PROPERTY

A certain tract of land containing Thirty Three and Twenty Five Hundredths (33.25) acres out of the South Part of the Felix Jonietz Eighty Acres described in Deed from Herman Kopplin to Felix Jonietz, et ux, dated February 7, 1933, out of E. Gortari Survey 2, Abstract 5, County Block 5193, and fronts on the east side of Trainer Hale Road, about eighteen miles in an easterly direction from the Court House in Bexar County, Texas. The said 33.25 acres being more particularly described as follows:

BEGINNING at an iron pipe on the east line of Trainer Hale Road, being the southwest corner of said Felix Jonietz 80.00 acres tract and the northwest corner of Arno W. Fritz Tract;

THENCE with fence along the east line of Trainer Hale Road, North 31 deg 20' West, 665.29 feet to an iron pipe, the northwest corner of this tract, being the southwest corner of a tract of 35.00 acres;

THENCE North 59 deg. 51' East 1682.49 feet to an iron pipe, the northeast corner of this tract, being the southeast corner of said 35.00 acres;

THENCE with fence along the east line of Felix Jonietz Tract, being the west line of Joe W. Craft Tract, South 28 deg 41' east, 1021.14 feet to an iron pipe, the southeast corner of this tract, being the southwest corner of said Craft tract;

THENCE with fence along the south line of Jonietz Tract, being the north line of Arno W. Fritz Tract, as follows:

South 61 deg. 00' West, 933.06 feet to an iron pipe at a corner  
North 44 deg. 53' West, 348.39 feet to an iron pipe at a corner  
South 59 deg 51' West, 621.15 feet to the place of Beginning.

A certain tract of land containing THIRTY-FIVE (35.00) ACRES out of the North Part of the Felix Jonietz Eighty Acres described in Deed from Herman Kopplin to Felix Jonietz et ux, dated February 7, 1933, out of E. Gortari Survey 2, Abstract 5, County Block 5193, and fronts on the east side of Trainer Hale Road, about eighteen miles in an easterly direction from the Court House in Bexar County, Texas. The said 35.00 Acres being more particularly described as follows:

BEGINNING at an iron pipe on the east line of Trainer-Hale Road for the Southwest Corner of said 35.00 Acres and being the Northwest Corner of a tract of 33.25 Acres, being 665.29 Feet North  $31^{\circ} 20'$  West, from the Southwest Corner of said 80.0 Acres Tract;

THENCE with fence along the east line of Trainer Hale Road, North  $31^{\circ} 20'$  West, 983.71 Feet to an iron pipe, the Northwest Corner of this Tract, being the Southwest Corner of Felix Jonietz Home Tract;

THENCE with south line of Felix Jonietz Home Tract, North  $60^{\circ} 13'$  East, 1260.0 Feet to an iron pipe, the Northeast Corner of this Tract;

THENCE South  $31^{\circ} - 48'$  East, 200.05 Feet to an iron pipe at the West Corner of Stapper Cemetery;

THENCE with fence along the south line of said Stapper Cemetery, North  $76^{\circ} - 00'$  East, 339.12 Feet to an iron pipe at an angle;

THENCE with fence along the southwest line of said Cemetery, South  $48^{\circ} - 01'$  East, 341.61 Feet to an iron pipe, the Southwest Corner of said Cemetery;

THENCE with Stapper Cemetery Fence, North  $41^{\circ} - 59'$  East, 14.15 Feet to an iron pipe for a corner;

THENCE with fence along the east line of Jonietz Tract, being the west line of Joe W. Craft tract, South  $28^{\circ} - 41'$  East, 353.81 Feet to an iron pipe, the Southeast Corner of this Tract;

THENCE with south line of said 35.00 Acres, being the north line of 33.25 Acres, South  $59^{\circ} - 51'$  West, 1682.49 Feet to the Place of BEGINNING.

W 051 / 442

EXHIBIT "A"

All that certain tract of parcel of land situated in Bexar County, Texas, and being on the waters of Cibolo Creek, about 10 miles East of the City of San Antonio, and being a portion of the E. Gortari Survey No. 2, and being described by metes and bounds as follows:

Beginning at a corner of fence on the N. E. side of the Trainer Halla Road, the N. W. corner of the Paul Wallrath Tract, for the South corner of the tract herein described; Thence with the N. E. side of said road, North 32 deg. West 675.9 vrs. and North 75 deg. and 5' West 27.2 vrs. to a corner of fence, being a corner of the Schoeninger tract, for the West corner of this tract; Thence North 59° and 45' East with the S. E. line of the Gertrude Schoeninger Tract 626.9 vrs. to the center line of Cibolo Creek, for North corner; Thence with the meanders of the center line of Cibolo Creek, South 38 degrees East 36 vrs. and South 72 degrees and 30 minutes East 19.7 vrs. to a point for corner; Thence South 29 deg. and 15' East 142.4 vrs. to a stake on the North line of the cemetery reservation; Thence North 81 deg. West with the North line of said reservation 203.2 vrs. to its N. W. corner; Thence South 27 deg. and 14 min. East 105.4 vrs. to the S. W. corner of the said reservation; Thence North 76 deg. East with the South line of said reservation 121.5 vrs. to the West corner of cemetery; Thence South 48 deg. and 25 min. East 125.5 vrs. to the South corner of cemetery; Thence North 41 deg. and 52 min. East with the S. E. line of cemetery, 5.2 vrs. to a stake for corner; Thence South 29 deg. and 15 min. East 497.5 vrs. to a stake on the Southeast line of the Edwin Beck Tract; Thence South 60 deg. and 45 min. West with the South line of the Edwin Beck Tract 335.1 vrs. to a corner of fence; Thence North 45 deg. and 30 min. West with fence 126 vrs. to another corner of fence; Thence South 58 deg. and 45 min. West with fence 223.6 vrs. to the place of beginning, containing 80 acres of land.

SCHEDULE 39  
SCOTT PROPERTY

Field Notes For A 11.087 Acre Tract

K 6170 REC 340

Being 11.007 acres of land out of the Eligio Cortazi Survey No. 2, and also being out of a 76.83 acre tract as described in Volume 1899, Pages 236-237 of the Bond Records of Bexar County, Texas, and being more particularly described as follows:

Beginning at a fence corner in the West fence line of above referenced tract, said point being N 88° 54' 21" W 653.59 feet from the S.W. corner of above referenced tract, for the S.W. corner of this tract;

Thence N 29° 33' 42" W 721.37 feet along said West fence line to an iron pipe found in the E.E. fence line of the Stepper Cemetery tract, for a corner of this tract;

Thence N 41° 27' 57" W 150.55 feet along said cemetery tract to an iron pipe found for a corner of this tract;

Thence N 40° 35' 07" W 274.14 feet along said cemetery tract to an iron pipe found for a corner of this tract;

Thence N 81° 30' 07" W 70.61 feet along said cemetery tract to an iron pin set in same for a corner of this tract;

Thence N 88° 44' 53" E 97.0 feet to the centerline of the Cibola Creek, for the N.W. corner of this tract;

Thence S 89° 04' 30" E 905.01 feet, N 79° 20' 18" E 119.70 feet, N 74° 27' 22" E 43.93 feet and N 72° 21' 22" E 40.0 feet along said centerline, to a point in same for the N.E. corner of this tract;

Thence S 29° 16' 16" E 941.54 feet to an iron pin set in an existing fence line for the S.E. corner of this tract;

Thence N 60° 45' 23" W 535.0 feet along said fence line to the place of beginning and containing 11.087 acres of land above or here.

I HEREBY CERTIFY THE ABOVE TO BE TRUE AND CORRECT FROM AN AERIAL SURVEY MADE ON THE GROUND UNDER MY SUPERVISION OF JULY THE 20<sup>th</sup> DAY OF August, 1977

*Lowell H. Cook*  
LOWELL H. COOK S.P.S. 1916

EXHIBIT "A"

SCHEDULE 40

SMIDT I PROPERTY



114 North Austin Street  
Seguin, Texas 78155  
Phone: (830) 372-1001 Fax: (830) 378-1165

Field notes describing a 11.89 acre tract of land situated in the Ellgio Gorfari Survey No. 2; Abstract 6, Bexar County, Texas, being that tract of land called 11.887 acres, conveyed to Joe and Lavelle "Lana Trust", by deed recorded in Volume 7142, Page 854, Official Public Records, Bexar County, Texas, and being more particularly described as follows: Note: All set pins are 1/2" diameter rebar with an orange plastic cap stamped "Tri-County".

Beginning at an iron pin set in the northwest line of a tract of land called 69.106 acres, described in Volume 8160, Page 1686, Official Public Records, Bexar County, Texas and the southeast line of a tract of land called 78.49 acres, described in Volume 4119, Page 222, Deed Records, Bexar County, Texas, for the south corner of the herein described tract. Said pin bears N 60° 53' 16" E, 1279.81 feet from a 1" diameter pipe found for the south corner of the 78.49 acre tract.

Thence, N 22° 27' 40" W, 414.00 feet crossing a portion of the 78.49 acre tract, generally along an existing fence, to an iron pin set for the west corner of the herein described tract.

Thence, N 38° 41' 22" E, 707.13 feet crossing a portion of the 78.49 acre tract, to an iron pin set for an angle point.

Thence, N 23° 08' 27" E, crossing a portion of the 78.49 acre tract, at 39.95 feet an iron pin set, continuing for a total distance of 178.92 feet to a point in the center of the Cibolo Creek, the southwest line of a tract of land called 11.8 acres, described in Volume 315, Page 476, Deed Records, Guadalupe County, Texas, for the north corner of the herein described tract.

Thence, in a southerly direction with the meanders of the Cibolo Creek as follows:

- S 58° 28' 21" E, 206.41 feet to a point for an angle point.
- S 47° 58' 05" E, 186.78 feet to a point for an angle point.
- S 03° 44' 46" E, 149.60 feet to a point for an angle point.
- S 00° 03' 18" E, 104.76 feet to a point for an angle point.
- S 18° 18' 35" W, 82.48 feet to a point for an angle point.
- S 10° 03' 32" W, 117.85 feet to a point for an angle point.
- S 12° 23' 59" E, 29.48 feet to a point for an angle point.

S 17° 16' 05" E, 27.71 feet to a point for the north corner of the 69.106 acre tract, the east corner of the 78.49 acre tract and the herein described tract.

Thence, S 60° 53' 16" W, with the northwest line of the 69.106 acre tract and the southeast line of the 78.49 acre tract, at 122.96 feet, an iron pin set, continuing for a total distance of 743.33 feet to the Place of Beginning and containing 11.89 acre of land according to a survey made on the ground on April 5, 2010, by Tri-County Surveying Inc.

Corresponding plat prepared.  
Project No. 1002116



*Aubrey O. Holland*  
Aubrey O. Holland  
Registered Professional  
Land Surveyor No. 4493 Z





114 North Austin Street  
Seguin, Texas 78165  
Phone: (830) 372-1001 Fax: (830) 379-1155

Field notes describing a 30.00 foot wide access easement over a tract of land situated in the Eligio Gortari Survey No. 2, Abstract 5, Bexar County, Texas, called 78.49 acres, conveyed to Joe W. Craft, by deed recorded in Volume 4119, Page 222, Deed Records, Bexar County, Texas and being more particularly described as follows: Note: All set pins are 1/2" diameter rebar with an orange plastic cap stamped "Tri-County".

**Beginning** at a point in the north line of an existing 30.00 foot wide Road Easement, described in Volume 9924, Page 2405, Official Records, Bexar County, Texas, for the south corner of the herein described easement. Said point bears N 84° 51' 31" E, 1120.31 feet from a 1" diameter pipe found in the northeast line of a Cemetery Reservation, set out in Volume 505, Page 293, Deed Records, Bexar County, Texas, for an interior corner of the 78.49 acre tract.

**Thence**, in an easterly direction, crossing a portion of the 78.49 acre tract, generally along and parallel to and north of an existing asphalt drive as follows:

- N 07° 30' 56" E, 89.68 feet to a point for an angle point.
- N 43° 08' 16" E, 91.57 feet to a point for an angle point.
- N 69° 45' 00" E, 96.15 feet to a point for an angle point.
- S 84° 28' 28" E, 149.50 feet to a point for an angle point.
- N 68° 45' 10" E, 93.78 feet to a point for an angle point.
- N 80° 52' 50" E, 57.18 feet to a point for an angle point.
- S 77° 34' 56" E, 55.58 feet to a point for an angle point.
- S 73° 25' 35" E, 307.66 feet to a point for an angle point.
- S 65° 49' 44" E, 207.28 feet to a point for an angle point.
- S 58° 47' 49" E, 75.49 feet to a point in the northwest line of a tract of land called 11.89 acres,

conveyed to Joe and Lavelle "Lanna Trust", by deed recorded in Volume 7142, Page 854, Official Records, Bexar County, Texas, (this day surveyed), for the east corner of the herein described easement.

**Thence**, S 23° 06' 27" W, 25.01 feet, a mag nail set in a wood fence post, and S 38° 41' 22" W, 5.29 feet with the northwest line of the 11.89 acre tract, to a point for the westernmost south corner of the herein described easement. Said point bears N 38° 41' 22" E, 701.84 feet from an iron pin set for the west corner of the 11.89 acre tract.

**Thence**, in a westerly direction crossing a portion of the 78.49 acre tract, generally along and parallel to and south of an existing asphalt drive as follows:

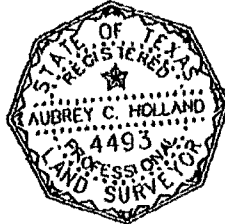
- N 58° 47' 49" W, 76.48 feet to a point for an angle point.
- N 65° 49' 44" W, 203.45 feet to a point for an angle point.
- N 73° 25' 35" W, 304.58 feet to a point for an angle point.
- N 77° 34' 56" W, 48.76 feet to a point for an angle point.
- S 80° 52' 50" W, 48.29 feet to a point for an angle point.
- S 68° 45' 10" W, 97.73 feet to a point for an angle point.

Page 2 of 2  
30.00 foot wide  
Access Easement.

N 84° 29' 29" W, 149.78 feet to a point for an angle point.  
S 69° 45' 00" W, 82.19 feet to a point for an angle point.  
S 43° 06' 16" W, 74.84 feet to a point for an angle point.  
S 07° 30' 56" W, 21.08 feet to a point in a northwest line of the existing 30.00 foot wide Road Easement for the westernmost south corner of the herein described easement.

Thence, S 45° 06' 31" W, 49.18 feet crossing a portion of the 78.49 acre tract, with a northwest line of the 30.00 foot wide Road Easement to the Place of Beginning and covering 0.80 of an acre of land according to a survey made on the ground on April 5, 2010, by Tri-County Surveying Inc.

Corresponding plat prepared.  
Project No.1002116E



*Aubrey C. Holland*  
**Aubrey C. Holland**  
Registered Professional  
Land Surveyor No. 4493

SCHEDULE 41

SMIDT II PROPERTY

All that certain tract or parcel of land lying and being situated in Bexar County, Texas, on the waters of the Cibolo Creek, about 18 miles East of the City of San Antonio, Texas, and being a portion of the E. Gortari Survey No. Two (2), the land hereby conveyed being described by metes and bounds as follows:

BEGINNING at a stake on the Northwest line of the Paul Wallrath tract, being also the Southeast corner of an 80 acre tract conveyed by Edwin Beck to Hermann Kopplin, for Southwest corner of the tract herein described;  
THENCE North 29 degrees and 15 minutes West with the East line of Hermann Kopplin's 80 acre tract, 495.5 varas to a stake on the South line of a Cemetery;  
THENCE North 41 degrees and 52 minutes East with the

*[ Continued on the following page ]*

South line of Cemetery, 56.9 varas to a corner of fence, the Southeast corner of said Cemetery;  
 THENCE North 48 degrees and 8 minutes West with the East line of said Cemetery, 97.7 varas to a stake, the Northeast corner of the Cemetery Reservation;  
 THENCE North 81 degrees West with the North line of the said Cemetery Reservation, 28.3 varas to a stake on the East line of the Hermann Kopplin tract;  
 THENCE North 29 degrees and 15 minutes East with the East line of the said Kopplin tract 72 varas to a point in the middle of the Cibolo Creek, for Northwest corner of this conveyance;  
 THENCE down with the meanders of the center line of the Cibolo Creek as follows: East 42.5 varas South 73 degrees and 35 minutes East 46.1 varas; North 84 degrees and 10 minutes East 59.8 varas; North 81 degrees and 15 minutes East 64.4 varas; North 71 degrees East 84.4 varas; North 52 degrees East 68.4 varas; North 29 degrees and 15 minutes East 18.7 varas; North 17 degrees and 45 minutes East 41.8 varas; North 35 degrees East 64.8 varas; North 82 degrees East 38.2 varas; South 62 degrees and 48 minutes East 49.3 varas; North 83 degrees and 45 minutes East 57.6 varas; South 34 degrees and 45 minutes East 36 varas; South 44 degrees and 30 minutes East 72 varas; South 47 degrees and 45 minutes East 51.1 varas; South 85 degrees and 7 minutes East 139.7 varas; South 77 degrees and 30 minutes East 116.3 varas; South 72 degrees and 42 minutes East 110.5 varas; South 57 degrees and 45 minutes East 31 varas; South 5 degrees and 15 minutes West 72.7 varas; South 28 degrees West 96.1 varas; South 14 degrees and 15 minutes West 46.8 varas; South 8 degrees West 16.2 varas; to a point, the Northeast corner of the Paul Wallrath tract, for Southeast corner of this conveyance;  
 THENCE South 60 degrees and 36 minutes West with North line of said Wallrath tract 720 varas to the place of beginning, heretofore stated to contain 76.83 acres, but being found on recalculation to contain 78.49 acres of land, and

There is also hereby conveyed that easement of right of way for passage of vehicles from said property and along the West side of the Cemetery road and thence to the Trainer-Haile Road through the Jonitz property adjoining the above described property, said right of way being referred to in deed from Robert Stapper, Receiver, recorded in Volume 505 on pages 293-296, and in the deed from Edwin and Thekla Beck recorded in Volume 752 on pages 107-9 Deed Records of Bexar County, Texas, and being the same property which is described in a deed from Edwin Beck and wife, Thekla Beck, to Edmund Pfell, dated September 12, 1935 and recorded in Bexar County Deed Record Volume 1499 on pages 236-37, and - -

Each and all of the hereinabove or hereinafter mentioned or referred to instruments or plats and their records where and when recorded, are hereby expressly incorporated herein and made a part hereof for descriptive purposes.

SCHEDULE 42

LANOUE PROPERTY



114 North Austin Street  
Seguin, Texas 78165  
Phone: (830) 372-1001 Fax: (830) 379-1166

Field notes describing a 0.731 of an acre tract of land situated in the Eligio Gortari Survey No. 2, Abstract 5, Bexar County, Texas, being a portion of a tract of land called 0.731 of an acre conveyed to Andrea D. McKenney, by deed recorded in Doc. # 20040258761, Official Records, Bexar County, Texas, also a portion of that tract of land conveyed to James Lanoue and Andrea Lanoue, by deed recorded in Doc. # 20080093861 and a portion of a tract of land called 78.49 acres, conveyed to Joe W. Craft, by deed recorded in Volume 4119, Page 222, Deed Records, Bexar County, Texas and being more particularly described as follows: Note: All set pins are 1/2" diameter rebar with an orange plastic cap stamped "Tri-County".

**Beginning** at an iron pin set in the southwest line of McKenney/Lanoue tract for the west corner of the herein described tract. Said pin bears S 81° 11' 36" E, 78.61 feet and S 87° 37' 51" E, 1035.80 feet from an iron pin set for the westernmost west corner of the 78.49 acre tract.

**Thence**, N 45° 08' 36" E, 212.45 feet, crossing a portion of the McKenney/Lanoue tract, to an iron pin set for an angle point.

**Thence**, N 86° 13' 00" E, 124.56 feet, crossing a portion of the McKenney/Lanoue tract, to an iron pin set in the northeast line of the McKenney/Lanoue tract, for the north corner of the herein described tract.

**Thence**, S 28° 13' 28" E, 108.98 feet, with the northeast line of the McKenney/Lanoue tract and crossing a portion of the 78.49 acre tract, to an iron pin set for the east corner of the herein described tract.

**Thence**, S 61° 36' 52" W, 319.15 feet, crossing a portion of the 78.49 acre tract, to an iron pin set for the south corner of the herein described tract.

**Thence**, N 32° 52' 12" W, 58.72 feet crossing a portion of the 78.49 acre tract and with the southwest line of the McKenney/Lanoue tract, to the **Place of Beginning** and containing 0.731 of an acre of land according to a survey made on the ground on April 5, 2010, by Tri-County Surveying Inc.

Corresponding plat prepared.  
Project No. 1002116A  
Revised: August 26, 2010



*Aubrey C. Holland*  
**Aubrey C. Holland**  
Registered Professional  
Land Surveyor No. 4493

SCHEDULE 43

SMITH PROPERTY

All that certain 34.34 ACRE TRACT SITUATED in the E. Gortari Survey, A-5, Bexar County, Texas. Said 34.34 acre tract is off the southeast side of a tract called residue of 75 acres in conveyance from Emma Weir to John G. Weir, Jr., et al recorded in volume 3622, page 1957 of the deed records of said county, said 34.34 acres of land is described by metes and bounds on Exhibit "A" attached hereto and incorporated herein by reference.

*[ Continued on the following page ]*

All that certain 34.34 acre tract situated in the E. Cortari Survey, A-5, Bexar County, Texas. Said 34.34 acre tract is off the southeast side of a tract called residue of 75 acres in conveyance from Emma Weir to John G. Weir, Jr., et al recorded in volume 3627, page 1957, of the deed records of said county and being described by metes and bounds as follows:

BEGINNING AT A 3/8 INCH DIAMETER iron stake found marking the south corner of the tract herein described, same being the south corner of said Weir tract, same being the east corner of a tract called Tract No. 2 (0.61 acre) in conveyance from Richard Hoops, et ux, to Bexar County recorded in volume 1687 at page 346 and lying in the northeast line of Weir Road and marking the approximate location of the common line of the E. Cortari Survey, A-5, and the Julian Diaz Survey A-187;

THENCE with the southwest line of the tract herein described, same being a segment of the common line of said Weir tract and said 0.61 acre tract along the northeast line of Weir Road and along said common survey line north 30 deg. 26' 27" west at 1.30 feet a two-way fence corner and at 441.59 feet a 1/2 inch diameter iron stake set marking the west corner of the tract herein described;

THENCE with the northwest line of the tract herein described, into and across said Weir tract north 60 deg. 18' 19" east at 3107.89 feet a 1/2 inch diameter iron stake set in a trace of fence, at 3774.46 feet a 1/2 inch diameter iron stake set and at 3841.16 feet the north corner of the tract herein described and lying in the common line of said Weir tract in the low bank of the Cibola Creek;

THENCE with said low bank along the northeast line of the tract herein described, same being a segment of the northeast line of said Weir tract as follows:

- south 09 deg. 57' 30" east 110.04 feet;
- south 08 deg. 16' 52" west 41.70 feet;
- south 60 deg. 17' 33" west 120.87 feet;
- south 58 deg. 10' 34" west 154.67 feet;
- south 17 deg. 44' 46" west 112.17 feet;
- south 37 deg. 16' 22" west 133.81 feet;
- south 76 deg. 21' 13" west 67.20 feet;
- south 34 deg. 27' 07" west 76.54 feet;
- south 11 deg. 00' 00" east 57.14 feet;
- south 69 deg. 07' 36" east 47.93 feet;
- south 45 deg. 07' 24" east 51.30 feet; and
- south 40 deg. 26' 20" east 50.78 feet to the east corner of

the tract herein described, same being the east corner of said Weir tract;

THENCE with the southeast line of the tract herein described, same being the southeast line of said Weir tract south 60 deg. 18' 04" west at 83.14 feet a 1 inch diameter iron pipe found in a trace of fence and at 3195.18 feet the place of beginning and containing 34.34 acres of land.

VOLS 527 BASED 909

SCHEDULE 44

VINCENT PROPERTY

A certain tract of land containing TWENTY-THREE AND SIXTY-FOUR HUNDREDTHS ACRES, situated on the west side of the Cibolo River, about twenty miles east from San Antonio, in Bexar County, Texas, being the east portion of the Oscar M. Stapper 40 acres tract, described in deed dated January 30, 1934, and recorded in Vol. 759, pages 92 and 93, Deed Records, of Bexar County, the said 23.64 Acres being a part of Division No. 1, surveyed for the William Tho. Stapper estate by Alex Walton, Surveyor, on Feb. 5, 1911, the said 23.64 Acres being a part of the Original Survey of E. Cortari Survey No. 8; and is more particularly described as follows:

Beginning at a point in the center of the Cibolo River, for the Northeast Corner of said Oscar M. Stapper's forty acres tract, and for the Northwest Corner of the said 23.64 Acres;

THENCE down the center of the Cibolo River, with its meanders as follows: South 4 deg. 15 min. West, 111.7 Varas; South 19 deg. 15 min. West, 157.5 Varas; South 21 deg. East, 98 Varas; South 38 deg. East, 37.5 Varas to the Southeast Corner of this tract, being the S.E. Corner of the said Oscar M. Stapper 40 acres tract;

THENCE with the fence along the south line of this tract, South 60 deg. 35 min. West, 175 Varas to an angle in said fence; at the end of the contrary land;

THENCE with said fence, South 61 deg. 21 min. West, 10 Varas to a post, at another angle in said fence;

THENCE with the fence along the north line of said land, being ten feet from, and parallel with the said south line of said Oscar M. Stapper tract, South 60 deg. 35 min. West, 135 Varas to the center of a mesquite fence post, 24 in. diameter, the Southwest Corner of the said 23.64 Acres;

THENCE, in a straight line across the east end of a field, North 46 deg. 17 min. West, 203.5 Varas to a stake and pile of rocks on Yonon, the S.E. Corner of the Robt. A. Stapper Estate 4.68 Acres tract;

THENCE North 40 deg. 50 min. West, 120.9 Varas to a stake on fence on the south line of the Waldo Stapper land, the Northwest Corner of said 23.64 Acres, and being the N.E. Corner of the said Robt. A. Stapper Estate 4.68 Acres;

THENCE with the fence, being the south line of the said Waldo Stapper land and the north line of the said Oscar M. Stapper 40 Acres tract, North 60 deg. East, 594.6 Varas to the place of beginning.



All that certain tract or parcel of land situated in Bexar County, Texas out of the Eljio Cortari Survey No. 2, Abstract No. 5, County Block 5193 being a part of a 11.31 acre tract of land conveyed to Leila S. Panshorn, wife of Max a Panshorn as her sole and separate property and estate by Deed dated 25 February 1979 and recorded in Volume 6317, page 792 of the Deed Records of Bexar County, Texas and being more particularly described by metes and bounds as follows:

Beginning At a point in the north east right of way line of Trainer Hale Road at the west corner of the 11.31 acre tract, said point being N 59° 07' E. 12.97 feet from Engineers Survey Line Station 91 + 27.17 as staked on the ground.

Thence N 59° 07' E. 29.69 feet with the north west line of the 11.31 acre tract to a point in the proposed north east right of way line of Trainer Hale Road.

Thence with the proposed north east right of way line of Trainer Hale Road as follows:

S 74° 19' 17" E. 482.79 feet to the beginning of a curve to the right. Southeastly along the arc of said curve to the right having a radius of 519.99 feet an a central angle of 13° 08' 40", a distance of 115.29 feet to a point in the north west line of a 0.29 acre tract conveyed to Stepper Cemetery Association by Deed dated February 5, 1943 and recorded in Volume 1957, page 29 of the Deed Records of Bexar County, Texas.

Thence S 61° 40' 26" W. 19.51 feet with the north west line of the 0.29 acre tract to a point in the existing north east right of way line of Trainer Hale Road.

Thence N 73° 47' 27" W. 607.44 feet with the existing south east right of way line of Trainer Hale Road to the place of beginning and containing 0.329 of an acre of land, more or less.

A certain tract of land containing ELEVEN and THIRTY-ONE (11.31) HUNDRETHS ACRES out of a tract of 40.00 Acres formerly owned by Oscar M. Stapper described in Deed dated January 8, 1924, recorded in Volume 759, Page 92 and 93, Deed Records Bexar County. The said 11.31 Acres is out of E. Cortari Survey No. 2, Abstract 5, County Block 5193, Bexar County, Texas, and fronts on the north side of Trainer-Halle Road, about twenty miles in an easterly direction from the Court House in Bexar County, Texas, being more particularly described as follows:

BEGINNING at an iron pipe on the north line of Stapper Road at its intersection with the north line of a thirty foot Cemetery Road, being the most southerly corner of said 11.31 Acres;

THENCE with north line of Trainer-Halle Road, North 72° - 42' West, 605.35 Feet to an iron pipe, the Southwest Corner of this Tract;

THENCE with line of stakes along the southeast line of a tract of 1.16 Acres formerly owned by Margaret Schmitz Estate, North 60° - 16' East, 655.71 Feet to an iron pipe, the East Corner of said 1.16 Acres;

THENCE North 73° - 00' West, 116.1 Feet to an iron pipe for a corner;

THENCE along the south line of a tract of 4.68 Acres formerly owned by Robert A. Stapper Estate, North 59° - 15' East, 540.55 Feet to an iron pipe, the most northerly corner of said 1.31 Acres;

THENCE with fence South 46° - 17' East, 565.28 Feet to an iron pipe on the north line of said thirty foot Road, the East Corner of this Tract;

THENCE with line of stakes along the north line of Cemetery Road, South 60° - 35' West, 865.04 Feet to the Place of BEGINNING.

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of Bexar County, Texas, all that certain property situated in Bexar

County, Texas, described as follows, to-wit: All those certain tracts or parcels of land containing a total of 7.4 acres, owned by the Robert A. Scappé-Rescáta, being parts of a tract formerly owned by W. T. Stappé, deceased out of subdivision #1, of the El Cortari Survey #2, situated about 20 miles east of San Antonio, in Bexar County, Texas; the said 7.4 acres consisting of a tract of 1.8 acres heretofore known as the Berg 2-acre tract out of the Margaret Schmitz 5 acres, also a tract of 0.92 acres surveyed for Gertrude Schöninger out of the Schmitz tract in 1912, and also a tract of 4.68 acres out of the Oscar M. Scappé 40 acre tract as described in deed from Oscar M. Scappé to Robert A. Scappé, recorded in Vol. 817, pages 132-33, of the Bexar County Deed Records, the said 7.4 being described in one tract of land as follows: BEGINNING at a stake at the intersection of the north line of the Trainer-Halle Road, with the north line of the W. T. Scappé tract, being also the south line of the Weir tract for the west corner of the said 7.4 acres; Thence with the fence, north 60° east to 186.4 varas, a stake at the northeast corner of the said Berg 1.8 acres, to 236 varas, a stake, for the northeast corner of the original Margaret Schmitz 5-acre tract, to a total distance with said fence of 498.4 varas to a stake for the northeast corner of this tract, being also the northeast corner of the said 4.68-acre tract conveyed by Oscar M. Scappé to Robt. A. Scappé; Thence south 49° 50' east 120.9 varas to a stake and pile of rocks, for the southeast corner of this tract; Thence with the south line of said 4.68-acre tract south 59° 15' west 194.6 varas to a stake, for a corner; Thence north 73° west 71.9 varas to a stake, at the northeast corner of the Margaret Schmitz 2.31-acre tract; Thence with the south line of this tract, and being the north line of said Schmitz 2.31-acre tract, south 59° 30' west 109.7 varas to a stake at fence corner; Thence with the old fence line, south 60° west 125.6 varas to a stake on the north line of the Trainer-Halle Road, for a corner of this tract; Thence with the north line of the Trainer-Halle Road, north 73° west, 89.2 varas to the place of beginning.

SCHEDULE 45  
VRANA PROPERTY

**Being 9.966 acres of land out of the Julian Diaz Survey No. 66, in Bexar County, Texas, and being more particularly described by metes and bounds on Exhibit "A" attached hereto and made a part hereof.**

*[ Continued on the following page ]*

H. A. KUEHLEN SURVEY COMPANY

Boundary \* Subdivisions \* Oil Wells \* Construction



FIELD NOTES

Field notes of a 9.966 acre tract of land situated in Bexar County, Texas and being out of the Julian Diaz Survey No. 66, Abstract 187, County Block 5059 and the J.P. Hector Survey No. 1, Abstract 1147, County Block 5061 and comprising all of Lot 2, Herbert Busch, Jr. Subdivision according to plat recorded in Volume 8500, Page 152, Plat Records, and all of that 5.000 acre tract conveyed to Herbert Busch, Jr., et ux, by deed recorded in Volume 4063, Page 449, Real Property Records of Bexar County, Texas and being more particularly described by metes and bounds as follows:

Beginning at a 1/2" iron pin found in the northwest line of Trainer Hale Road at the east corner of Lot 2 and this tract.

Thence along the northwest line of Trainer Hale Road, as follows:

S 59 deg. 15' 00" W. 212.42 feet to a 1/2" iron pin set in the northeast line of said 5.000 acre tract, being the south corner of Lot 2.

S 30 deg. 46' 00" E. 9.98 feet along the northeast line of said 5.000 acre tract to a 1/2" iron pin set at the east corner of said 5.000 acre tract.

S 59 deg. 15' 00" W. 212.43 feet to a 1/2" iron pin set at fence corner at the south corner of said 5.000 acre tract and this tract, being the east corner of a 52.710 acre tract described in deed recorded in Volume 6707, Page 112, Real Property Records.

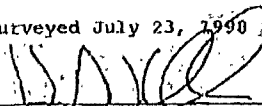
Thence N 30 deg. 46' 00" W. 1026.81 feet with fence along the southwest line of said 5.000 acre tract, being the northeast line of said 52.710 acre tract, to a 1/2" iron pin found at fence corner at the north corner of said 52.710 acre tract, being the west corner of said 5.000 acre tract and this tract.

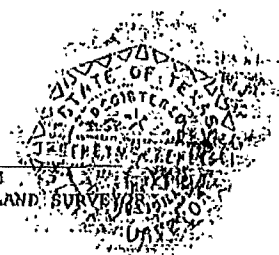
Thence N 59 deg. 15' 05" E. 424.85 feet with fence along the southeast line of a 114 acre tract described in deed recorded in Volume 7077, Page 467, Deed Records, being the northwest line of said 5.000 acre tract and Lot 2, to a 1/2" iron pin found at fence corner at the north corner of Lot 2 and this tract, being the west corner of said Lot 1.

Thence S 30 deg. 46' 00" E. 1016.83 feet with fence along the northeast line of Lot 2, being the southwest line of Lot 1, to the place of beginning and containing 9.966 acres of land according to a survey made on the ground.

Job No. 217-98  
RE: Plat

Surveyed July 23, 1990

  
HENRY A. KUEHLEN  
REGISTERED PROFESSIONAL LAND SURVEYOR  
NO. 4020



10615 Perrin Beltel

San Antonio, Texas 78217

Phone: (210) 650-4001



SCHEDULE 46  
WALES PROPERTY

A 14.25 acre, or 620,730 square feet more or less, tract of land out of that called 132.26 acre tract conveyed to David A. Young and Lenore M. Young in Warranty Deed with vendor's lien recorded in Volume 14086, Pages 1488-1493 of the Official Public Records of Bexar County, Texas, said 14.25 acres being out of the William Bracken Survey No. 65, County Block 5055 of Bexar County, Texas, said 14.25 acres being more fully described in Exhibit "A" attached hereto and incorporated herein.

*[ Continued on the following page ]*



LAND DEVELOPMENT ENVIRONMENTAL TRANSPORTATION WATER RESOURCES SURVEYING

FIELD NOTES

FOR

A 14.25 acre, or 620,730 square feet more or less, tract of land out of that called 132.26 acre tract conveyed to David A. Young and Lenore M. Young in Warranty Deed with vendors lien recorded in Volume 14086, Pages 1488-1493 of the Official Public Records of Bexar County, Texas, said 14.25 acres being out of the William Broken Survey No. 65, County Block 3055 of Bexar County, Texas. Said 14.25 acres being more fully described as follows, with bearings based on the Texas Coordinate System established for the South Central Zone:

BEGINNING: at a found 1" iron rod, said point being a northwest corner of said 132.26 acre tract, an angle in the south line of that 33.749 acre tract recorded in Volume 5533, Pages 456-455 of the Official Public Records of Bexar County, Texas, said 1" iron rod being at North 13,745,842.4 and East 2,212,013.6 of said coordinate system, 3 feet south of that 1.497 acre tract also described with and as part of said 33.749 acre tract, said 1.497 acre tract therein described as a strip of land containing an asphalt road, said asphalt road being Raf Burnette, no dedication found;

THENCE: N 58°33'45"E, along and with the north line of said 132.26 acre tract, the apparent south line of said 33.749 acre tract, a distance of 600.84 feet to a set nail and cap in pavement, from which a found 1/2" iron rod at a resurtrant corner of said 132.26 acre tract bears N 58°33'45"E, 635.52 feet to the southeast corner of said 33,749 acre tract, the southwest corner of a 10.00 acre tract also conveyed to David A. Young and Lenore M. Young in Warranty Deed with vendors lien recorded in Volume 14086, Pages 1488-1493 of the Official Public Records of Bexar County, Texas, and continuing N 59°33'45" a distance of 163.38 feet to said 1/2" iron rod;

THENCE: Departing said line and over and across said 132.26 acre tract the following calls and distances:

S 31°26'15"E, a distance of 600.00 feet to a set 1/2" iron rod with yellow cap marked "Pape-Dawson";

S 02°01'25"W, a distance of 366.93 feet to a set 1/2" iron rod with yellow cap marked "Pape-Dawson";

S 58°33'45"W, a distance of 635.29 feet to a set 1/2" iron rod with yellow cap marked "Pape-Dawson" in the west line of said 132.26 acre tract, the east line of a 34.64 acre tract recorded in Volume 9772, Pages 2070-2071 of the Official Public Records of Bexar County, Texas from which a found 1/2" iron rod at the south corner of said 132.26 acre tract bears S 16°47'36"E, a distance of 1028.00 feet;

Young Tracts  
Job 9140-09  
14.25 Acres

THENCE: N 16°47'36"W, a distance of 936.54 feet to the POINT OF BEGINNING and containing 14.25 acres in Bexar County, Texas. Said tract being described in accordance with a survey made on the ground and a survey exhibit prepared by Pepe-Dawson Engineers.

PREPARED BY: PEPE-DAWSON ENGINEERS INC.  
DATE: September 3, 2009  
JOB No.: 9140-09  
FILE: N:\Survey\09\9-0200\9140-09\Word\9140-09-FN.doc





SCHEDULE 47

WEIR PROPERTY

26.467 acres, being the Northwest half of Tract B referred to in the deed from Emma Weir, a Widow to John G. Weir, Jr. et al, recorded in the deed records of Bexar County, Texas, in Vol. 6225, pages 852-855, out of the E. Gortari Survey No. 2, Abst. No. 5, Bexar County, Texas.

BEGINNING at an iron pin for the most Southerly corner, being the most Westerly corner of the 26.467 acre Tract No. 2 on the Northeastery line of the Weir Road;

THENCE N 30° 15' W 328.5 ft. with the Northeastery line of the Weir Road to an iron pin for most Westerly corner, being the most Southerly corner of the Krueger tract;

THENCE N 61° 00' E with the division line between Tract B referred to above and the Krueger tract, at 3300.0 ft. passing an iron pin and continuing on a total distance of 3450.0 ft. to the Cibolo Creek for the most Northerly corner of this tract and the most Easterly corner of the Krueger tract;

THENCE S 50° 24' E 352.8 ft. with the Cibolo Creek to a point for the most Easterly corner of this tract and the most Northerly corner of the 26.467 acre Tract No. 2, from which an iron pin bears S. 61° 00' W 150.0 ft.;

THENCE S 61° 00' W with the division line between this tract and the 26.467 acre Tract No. 2, at 150.0 ft. passing an iron pin and continuing on a total distance of 3571.6 ft. to the place of Beginning containing 26.467 acres.

Tract No. 2

26.467 acres, being the Southeast half of Tract B referred to in the deed from Emma Weir, a Widow to John G. Weir, Jr. et al, recorded in the deed records of Bexar County, Texas, in Vol. 6225, pages 852-855, out of the E. Gortari Survey No. 2, Abst. No. 5, Bexar County, Texas.

BEGINNING at an iron pin for the most Westerly corner, being the most Southerly corner of the 26.467 acre Tract No. 1 on the Northeastery line of the Weir Road;

THENCE N 61° 00' E with the division line between this tract and the 26.467 acre Tract No. 1, at 3421.6 ft. passing an iron pin and continuing on a total distance of 3571.6 to the Cibolo Creek for the most Northerly corner of this tract and the most Easterly corner of the 26.467 acre Tract No. 1;

THENCE S 50° 24' E 341.1 ft. with the Cibolo Creek to a point for the most Easterly corner of this tract and the most Northerly corner of the 75 acre Tract A referred to in Vol. 6225 pages 852-855, from which an iron pin bears S 61° 00' W 150.0 ft.;

THENCE S 61° 00' W with the division line between this tract and the 75 acre Tract A referred to in Vol. 6225 pages 852-855, at 150.0 ft. passing an iron pin and continuing on a total distance of 3689.0 ft. to an iron pin for most Southerly corner and being the most Westerly corner of the 75 acre Tract A referred to above, on the Northeasterly line of the Weir Road;

THENCE N 30° 15' W 317.7 ft. with the Northeasterly line of the Weir Road to the place of Beginning containing 26.467 acres,

*[ Continued on the following page ]*

34.34 ACRE TRACT

Being a 34.34 ACRE TRACT situated in the E. Gortari Survey, A-5, Bexar County, Texas. Said 34.34 ACRE TRACT is off the southeast side of a tract called residue of 75 acres in conveyance from Emma Weir to John G. Weir, Jr., et al, recorded in volume 3622 at page 1957 of the Deed Records of said county and being described by metes and bounds, as follows:

BEGINNING at a 3/8 inch diameter iron stake found marking the south corner of the tract herein described, same being the south corner of said Weir tract, same being the east corner of a tract called Tract No. 2 (0.61 acre) in conveyance from Richard Hoese, et ux, to Bexar County recorded in volume 1657 at page 346 and lying in the northeast line of Weir Road and marking the approximate location of the common line of the E. Gortari Survey, A-5 and the Julian Diaz Survey, A-187;

THENCE with the southwest line of the tract herein described, same being a segment of the common line of said Weir tract and said 0.61 acre tract, along the northeast line of Weir Road and along said common survey line, N 30°26'27" W at 1.30 feet a two-way fence corner and at 441.59 feet a 1/2 inch diameter iron stake set marking the west corner of the tract herein described;

THENCE with the northwest line of the tract herein described, into and across said Weir tract, N 60°18'19" E at 3107.89 feet a 1/2 inch diameter iron stake set in a trace of fence, at 3774.46 feet a 1/2 inch diameter iron stake set and at 3841.16 feet the north corner of the tract herein described and lying in the common line of said Weir tract in the low bank of Cibolo Creek;

THENCE with said low bank along the northeast line of the tract herein described, same being a segment of the northeast line of said Weir tract, as follows:

S 05°57'30" E 110.04 feet;  
S 08°16'52" W 41.70 feet;  
S 80°17'33" W 120.87 feet;  
S 58°10'34" W 154.67 feet;  
S 17°44'46" W 112.17 feet;  
S 37°16'22" W 133.81 feet;  
S 76°21'13" W 67.20 feet;  
S 34°27'07" W 76.54 feet;  
S 11°00'08" E 57.14 feet;  
S 69°07'36" E 47.93 feet;

S 45°07'24" E 51.30 feet; and  
S 40°26'20" E 60.75 feet to the east corner of the tract  
herein described, same being the east corner of said Weir  
tract;

THENCE with the southeast line of the tract herein described,  
same being the southeast line of said Weir tract, S 60°18'04"  
W at 93.14 feet a 1 inch diameter iron pipe found in a trace  
of fence and at 3195.18 feet the PLACE OF BEGINNING and  
containing 34.34 ACRES OF LAND.

*[ Continued on the following page ]*

40.00 ACRE TRACT

Being a 40.00 ACRE TRACT situated in the E. Gortari Survey, A-5, Bexar County, Texas. Said 40.00 ACRE TRACT is part of a tract called residue of 75 acres in conveyance from Emma Weir to John G. Weir, Jr., et al, recorded in volume 3622 at page 1957 of the Deed Records of said county and being described by metes and bounds, as follows:

BEGINNING at a  $\frac{1}{2}$  inch diameter iron stake found marking the west corner of the tract herein described, same being the west corner of said Weir tract, the north corner of a tract called Tract No. 2 (0.61 acre) in conveyance from Richard Hoese, et ux, to Bexar County recorded in volume 1657 at page 346 and lying in the northeast line of Weir Road and marking the approximate location of the common line of the E. Gortari Survey, A-5 and the Julian Diaz Survey, A-187;

THENCE with a trace of fence and an extension of said fence along the northwest line of the tract herein described, same being the northwest line of said Weir tract, N 60°18'19" E 3148.75 feet a fence post, at 3668.26 feet a  $\frac{1}{2}$  inch diameter iron stake set and at 3688.26 feet the north corner of the tract herein described, same being the north corner of said Weir tract and lying in the low bank on the west side of Cibolo Creek;

THENCE with the northeast line of the tract herein described, same being a segment of the common line of said Weir tract and said low bank of Cibolo Creek, as follows:

S 35°51'48" E 38.57 feet;  
S 25°18'40" E 20.80 feet;  
S 58°08'38" E 144.41 feet;  
S 60°28'17" E 206.45 feet;  
S 25°05'09" E 32.83 feet; and  
S 16°18'03" E 66.66 feet to the east corner of the tract herein described;

THENCE with the southeast line of the tract herein described, into and across said Weir tract, S 60°18'19" W at 66.70 feet a  $\frac{1}{2}$  inch diameter iron stake set, at 233.95 feet a  $\frac{1}{2}$  inch diameter iron stake set and at 3841.16 feet a  $\frac{1}{2}$  inch diameter iron stake set marking the south corner of the tract herein described and lying in the southwest line of said Weir tract, same being the northeast line of said 0.61 acre tract and lying

in the northeast line of Weir Road and marking the approximate location of the common line of the E. Gortari Survey, A-5 and the Julian Diaz Survey, A-187;

THENCE with the southwest line of the tract herein described, same being a segment of the common line of said Weir tract and the northeast line of said Weir Road and along said common survey line, N 30°26'27" W 461.05 feet to the PLACE OF BEGINNING and containing 40.00 ACRES OF LAND.

*[ Continued on the following page ]*

TRACT A: All that certain tract or parcel of land, lying and being in the County of Bexar, State of Texas, on the West Bank of the Cibolo Creek, about 17 miles Northeast of the City of San Antonio, Texas, and being a part of Survey No. 1, originally granted to E. Gortari, and being a part of a certain 100 acre tract of said survey, said 100 acre tract being fully described in deed from Emilie Kopplin et al to Louisa Kopplin, dated November 2, 1915, and recorded in Volume 471, pages 225-227, of the Deed Records of Bexar County, Texas, and the land herein conveyed being the Northern portion of said 100 acre tract, and being more fully described as follows:

BEGINNING at a stake in the Cibolo Creek where the north line of said 100 acre tract intersects same, said point being the Southeast corner of a 50 acre tract of J. Weir;

THENCE south 60° W. 1333 varas along fence on North line of 100 acre tract to its corner in the East line of a public road;

THENCE S. 30° 15" E. 324-5/10 varas along fence on East side of said Road to a stake;

THENCE N. 60° E. 1176 varas to a stake in the Cibolo Creek;

THENCE up said creek with its meanders to the place of BEGINNING, and containing 76 acres of land, and being the same land described in deed executed by Richard Hoose and wife, Alwine Hoose, to John G. Weir and wife, Emma Weir, dated February 16, 1944, recorded in Volume 2033, pages 112-113, Deed Records of Bexar County, Texas, SAVE AND EXCEPT that part sold to Bexar County, by deed recorded in Volume 1657, page 346, of the Deed Records of Bexar County, Texas.

TRACT B:

50 Acres of land out of the E. Gortari Survey No. 2, Abstract No. 5, lying and being situated in Bexar County, Texas, lying immediately northwest of and adjoining the First Tract above described, said 50 acres being a part of the Weir Farm conveyed to Thomas L. Weir, by deed dated September 5, 1883, and described as follows:

BEGINNING at the northeast corner of said Farm;

THENCE south 61° west 1150 varas to the northwest corner of said Farm;

THENCE southeast 231 varas for corner;

THENCE north 61° east 1199 varas to Cibolo Creek;

THENCE up said Creek 236 varas to place of BEGINNING, containing 50 acres of land, SAVE AND EXCEPT that part conveyed to Bexar County, by deed recorded in Volume 1649, page 475, of the Deed Records of Bexar County, Texas, and being the same land conveyed by Mrs. J. B. Weir et al to John G. Weir, Sr., and wife, Emma Weir, by deed recorded in Volume 2157, pages 171-75, of the Deed Records of Bexar County, Texas.

SCHEDULE 48

WIEDERSTEIN I PROPERTY

Tract One:

**100.939 acres of land, more or less, out of the Eligio Gortari Survey No. 2, Abstract 5, County Block 5193, Bexar County, Texas and being more particularly described on Exhibit "A" attached hereto and made a part hereof for all purposes**

BEING 100.939 acres of land, more or less, out of the Eligio Gortari Survey No. 2, Abstract 5, County Block 5193, Bexar County, Texas and being comprised of approximately 98 acres out of a 100.00 acre tract and approximately 2.939 acres originally being a 20' Ingress-Egress Easement, both described in Volume 1427, Page 76 of the Real Property Records of Bexar County, Texas and being more particularly described as follows:

BEGINNING at an iron pipe found in the existing west R.O.W. line of Trainer-Hale Road for the southeast corner of this tract and the southeast corner of the above referenced 100.00 acre tract, said point also being the northeast corner of a 101.23 acre tract described in Volume 7729, Page 109 of the Deed Records of Bexar County, Texas;

THENCE, S 60°18'24" W, (Ref. Brg.) 6276.28 feet along the common line with said 101.23 acre tract to an iron pipe found in an existing fence line for the southwest corner of this tract and the southwest corner of said 100.00 acre tract;

THENCE, N 30°19'16" W, along the common line with a 57.00 acre tract described in Volume 7370, Page 941 of the Real Property Records of Bexar County, Texas crossing the approximate center line of Woman Hollering Creek at 105.70 feet and continuing a total distance of 236.29 feet to an iron pipe found for the a corner of this tract and the northeast corner of said 57.00 acre tract;

THENCE, S 60°01'21" W, 17.56 feet along the common line with said 57.00 acre tract to an iron pin set in same for a corner of this tract and the southeast corner of a 20 acre tract described in Volume 6795, Page 1895 of the Real Property Records of Bexar County, Texas;

THENCE, N 30°19'16" W, 475.38 feet along the common line with said 20 acre tract and the west line of said 20' Ingress-Egress Easement to an iron pin set at a fence corner post for the northwest corner of this tract;

THENCE, N 60°16'12" E, 5867.44 feet along the common line with the north line of said 20' Ingress-Egress Easement and the south line of a 62.970 acre tract described in Volume 3003, Page 575 of the Real Property Records of Bexar County, Texas to an iron pin set in same for a corner of this tract;

THENCE, S 31°02'13" E, 207.79 feet along the common line with a 2.00 acre tract described in Volume 1179, Page 932 of the Real Property Records of Bexar County, Texas to an iron pin set for an interior corner of this tract;

THENCE, N 60°16'12" E, 417.42 feet along the common line with said 2.00 acre tract to an iron pin set in the existing west R.O.W. line of Trainer-Hale Road for northeast corner of this tract;

THENCE, S 31°02'13" E, 507.96 feet along said west R.O.W. line to the POINT OF BEGINNING and containing 100.939 acres of land, more or less.



**30' INGRESS-EGRESS EASEMENT**

August 13, 1998

BEING a 30' Ingress-Egress Basement (2.527 acres) out of the Bligio Gortari Survey No. 2, Abstract 5, County Block 5193, Bexar County, Texas and also being out of a 100.00 acre tract described in Volume 1427, Page 76 of the Real Property Records of Bexar County, Texas and being more particularly described as follows:

BEGINNING at an iron pipe found in the existing west R.O.W. line of Trainer-Hale Road for the southeast corner of this easement and the southeast corner of the above referenced 100.00 acre tract, said point also being the northeast corner of a 101.23 acre tract described in Volume 7729, Page 109 of the Deed Records of Bexar County, Texas;

THENCE, S 60°18'24" W, (Ref. Brg.) 3670.00 feet along the common line with said 101.23 acre tract to a point in same for the southwest corner of this easement;

THENCE, N 29°41'36" W, 30.00 feet into said 100.00 acre tract to a point for the northwest corner of this easement;

THENCE, N 60°18'24" E, 3659.30 feet parallel to the south line of said 100.00 acre tract to a point in the existing west R.O.W. line of Trainer-Hale Road for the northeast corner of this easement;

THENCE, S 31°02'13" E, 30.01 feet along said west R.O.W. line to the POINT OF BEGINNING.

Tract Two:

FOLLOWING DESCRIPTION FOR TRACT TWO:

A 2.00 acre tract of land out of the E. Gertari Survey No. 2, Block 5193, Abstract No. 5, Patent dated February 23, 1834, being the northeast portion of 100 acres, more or less, conveyed by Henry Uhr and wife to Albert Wiederstein by deed dated December 28, 1920, recorded in Volume 622, Pages 455-456, Deed Records of Bexar County, Texas, and later conveyed to Allen Wiederstein and wife, and Reagan Rawe and wife by deed dated May 24, 1976, more particularly described by metes and bounds as follows:

BEGINNING at an iron pin set in the southwest line of Trainer Hale Road 1187.86 feet N 31°15' W of the southeast corner of Lot No. 3 and the northeast corner of Paul Wallrath's land, and also about 35,070 feet from the intersection of Trainer Hale Road with Interstate Highway 10;

THENCE S 60° W a distance of 417.42 feet to a stake;

THENCE N 31°15' W a distance of 208.79 feet to an iron pin set in the north boundary of a former 20 foot road;

THENCE N 60° E a distance of 417.42 feet along the former boundary the north side of said 20 foot road to an iron pin set in the southwest boundary of Trainer Hale Road;

THENCE along the southwest line of Trainer Hale Road, S 31°15' E at 20 feet passing the south boundary of the old 20 foot road, and continuing for a total distance of 417.42 feet to the point of BEGINNING, containing 2.00 acres of land.

**SCHEDULE 49**

**WIEDERSTEIN II PROPERTY**

That certain 188.68 acre tract of land conveyed by Louis Kopplin and others to Richard H. Wiederstein by deed recorded in Volume 2043, Pages 460-63, Bexar County Deed Records, SAVE AND EXCEPT that certain 5.767 acre tract described in that certain deed recorded in Volume 5261, Page 231, Bexar County Deed Records; for a total of 182.913 acres, more or less.

SCHEDULE 50  
YOUNG PROPERTY

**Tract I:**

A 10.00 acre parcel of land out of the William Bracken Survey No. 65, County Block 5055, Bexar County, Texas; being out of an original 75 acre tract conveyed to Arno George Brotze and wife, Virginia Brotze by deed recorded in Volume 5477, Pages 219 and 220, Bexar County Deed Records; and said 10.00-acre parcel being more particularly described as follows:

Beginning for point of reference at a point in the southeast line of the G. Malpaz Survey No. 67 and in the northeasterly right-of-way line of Schaeffer Road at its turn from northeast to northwest; and thence along the southeasterly line of a private gravel road and along the southeasterly line of said Brotze tract the following courses: N. 60°49'26" E, a distance of 1742.11 feet and N. 58°37'16" E, a distance of 1,235.62 feet to an iron pin set for the most southerly corner of this parcel and the POINT OF BEGINNING.

THENCE N. 33°27'00" W, across said Brotze tract a distance of 100.28 feet to an iron pin set for the southeasterly right-of-way line of Schaeffer Road, for the most westerly corner of this parcel.

THENCE N. 56°33'00" E, along the southeasterly right-of-way line of Schaeffer Road a distance of 528.02 feet to an iron pin found.

THENCE N. 02°57'20" W, along the easterly right-of-way line of Schaeffer Road a distance of 14.20 feet to an iron pin found.

THENCE N. 56°33'00" E, a distance of 46.41 feet to an iron pin found on the high bank of Cibolo Creek, for the most northerly corner of this parcel.

THENCE in a southerly direction along the high bank of Cibolo Creek and its meanders the following courses to iron pins found: S. 21°13'59" E, a distance of 37.81 feet; S. 15°38'04" W, a distance of 24.84 feet; S. 10°21'31" E, a distance of 72.78 feet; S. 28°29'37" W, a distance of 23.22 feet; S. 14°29'31" W, a distance of 34.76 feet; S. 15°29'33" E, a distance of 58.35 feet; S. 49°17'37" E, a distance of 30.60 feet; S. 04°47'04" E, a distance of 40.46 feet; S. 57°36'53" E, a distance of 14.96 feet; S. 34°36'57" E, a distance of 102.03 feet; S. 40°57'36" E, a distance of 154.34 feet; S. 63°05'34" E, a distance of 25.44 feet; S. 42°14'06" E, a distance of 47.70 feet; and S. 47°42'52" E, a distance of 38.92 feet to a barbed wire fence corner for an easterly corner of this parcel.

THENCE S. 09°27'49" W, along a barbed-wire fence line on an easterly line of said Brotze tract a distance of 507.68 feet to an iron pin found at a fence corner.

THENCE S. 59°37'16" W, along a barbed-wire fence line on the southeasterly line of private gravel road and on the southeasterly line of said Brotze tract a distance of 163.38 feet to the point of beginning.

**Tract II:**

**BEING** all that certain tract of land lying and being situated in the Counties of Bexar and Guadalupe, State of Texas, on the waters of the Cibolo Creek, about 18 miles East of the City of San Antonio 80 acres of which are in Bexar County and being 78.75 acres out of the Wm. Bracken Survey No. 65, and 1.25 acres out of the Wm. Bracken Survey No. 74, and 82.26 acres in Guadalupe County out of the Wm. Bracken Survey No. 65, described as follows:

**BEGINNING** at a corner of fence on the S.E. Side of Road know as Schaefer Road, North 60 deg. East 104 yrs. from the N.E. corner of the Wm. Bracken Survey No. 84, for the N.W. corner of the tract herein described.

**THENCE** North 59 deg. and 50' East with fence on the S.E. side of Schaefer Road, 506.5 yrs. to a corner of fence;

**THENCE** North 7 deg. 30' East with fence, 184.7 yrs. to a stake on bluff of Cibolo Creek for most northerly corner;

**THENCE** down with the meanders of the South bank of Cibolo Creek South 69 deg. 28' East 90.6 yrs. South 86 deg. 9' East 47.2 yrs. North 71 deg. 11' East 84.6 yrs.; North 52 deg. 13' East 38.2 yrs., North 71 deg. 30' East 108 yrs., North 32 deg. 13' East 38.2 yrs. to a point on fence, the West line of the Taylor tract for N.E. corner;

**THENCE** South 30 deg. 39' East with fence on the West line of Taylor tract, 617 yrs. to a stake on the South bank of Cibolo Creek being at corner of fence on the West line of the Wm. Doerr tract;

**THENCE** South 9 deg. 13' West with fence on the West line of the Doerr tract, 362.8 yrs. to a stake near middle of Cibolo Creek for the S.E. corner;

**THENCE** North 76 deg. 37' West 400.4 yrs. to a point near middle of Cibolo Creek for corner;

**THENCE** South 50 deg. 3' West with fence on the N.W. line of the Adolph Weyel tract, 638.1 yrs. to a corner of fence, the S.E. corner of the Edgar Schulz tract for S.W. corner;

**THENCE** North 16 deg. 33' West with fence on the East line of the Edgar Schulz tract, 717.1 yrs. to the place of beginning, containing 132.26 acres of land.

**SAVE AND EXCEPT**, a tract of land consisting of one acre conveyed by Bruno Schulz and wife, Lilla Lampman Schulz to Refugio Del Toro, Jr., by Warranty Deed dated February 21, 1949, which Deed appears of Record in Volume 2649, Page 274, Deed Records of Bexar County, Texas, to which Deed and the Records thereof reference is here made for a complete metes and bounds description of the land therein conveyed.

Tract III:

R28832, a certain tract of land containing Sixty five and twenty-one hundredths (65.21) acres being the same tract known as 116.46 Acres described in Deed of Trust from Sterling C. Evans, Trustee to Herman Wiedner and wife, Rosie Wiedner, dated August 28, 1944, and recorded in Volume 22, pages 139-140, Deed of Trust records in Guadalupe County, Texas. The said 65.21 acres is out of the William Bracken Survey 63, Abstract 57, Patent No. 335, Volume 3, and is situated about two miles south of the Town of Cibolo, about twenty miles East of the City of San Antonio, less the 3.337 Acres out of Bexar County, now consisting of 61.837 acres out of Guadalupe County, Texas, and being more particularly described as follows:

BEGINNING at an iron pipe on fence line, being the north line of said Herman Wiedner 115.21 Acres Tract for the Northeast corner of said 65.21 Acres, and the Northwest corner of a tract of 50.00 Acres;

THENCE with line of stakes South 30 Deg. 00' East, 1618.78 feet to an iron pipe on fence line on the south line of said 115.21 Acres Tract, the Southeast corner of this Tract and the Southwest corner of a tract of 50.00 acres;

THENCE with fence along the south line of said 65.21 Acres, as follows:

South 60 degrees, 03' West, 1682.51 feet to a steel rod at an angle;

THENCE South 60 degrees, 31' West, 390.80 feet to a steel rod on the east line of a small Cemetery;

THENCE with fence North 29 degrees., 57" West, 25.00 feet to a steel rod, the Northeast Corner of said Cemetery;

THENCE with fence line South 60 degrees, 43' West, 354.19 feet to a steel rod in the center line of Cibolo Creek, the Southwest Corner of said 65.21 acres from which an iron pipe on east bank bears North 60 degrees, 43' east 13.00 feet;

THENCE up the center of said Cibolo Creek with its meanders, as follows:

North 24 degrees, 36' West, 130.89 feet,

North 49 degrees, 55' West, 139.76 feet,

North 73 degrees, 40' West, 43.15 feet to a steel rod in center of Cibolo Creek from which an iron pipe on east bank bears North 10 degrees, 21' East 14.00 feet;

THENCE with fence on the east side of Creek, North 10 degrees 21' East, 1018.10 feet to a steel rod for a corner;

THENCE crossing said Cibolo Creek, North 60 degrees, 33' East, 1091.07 feet to a point in the center of said Creek, being the south corner of a triangular shaped parcel of land in Bexar County, Texas, containing 2.504 acres;

THENCE with old fence line, North 30 degrees, 10' West, 530.00 feet to an iron pipe, the Northwest corner of said Parcel of land;

THENCE with old fence line along the north line of said Wiedner Tract, as follows:

North 59 degrees, 30' East, at 327.00 feet the center of Cibolo Creek, to a total distance of 440.60 feet to a steel rod at an angle;

THENCE North 60 degrees, 57' East, 303.43 feet to the place of beginning, COMPRISING of 65.21 acres of land, less and save except for 41.0 acres of land, more particularly described in a Warranty Deed dated October 11, 2002, recorded in Guadalupe County, Texas and filed under Volume No. 1762, pages 0474-0477 of the County Deed Records; and

Less 10.719 acres of land, more particularly described in a Warranty Deed, dated October 11, 2002, recorded in Guadalupe County, Texas, and filed under Volume 1761, pages 0597 - 0600 of the County Deed Records.

SCHEDULE 51

GOEHRING PROPERTY

10,000 acres of land out of the Julian Diaz Survey No. 66, Bexar County, Texas, and being 10,000 acres of land out of that certain 112.59 acre tract of land conveyed by A. Motte to W. H. Muenchow by deed dated Sept. 28, 1945 and recorded in Volume 2162 on pages 119-123 of the Deed Records of Bexar County, Texas and described more particularly by metes and bounds as follows:

FROM A concrete monument in the point of intersection of the East line of F. M. Road 1518 with the North line of the Halo-Trainer Road, at a flare corner; THENCE with the East line of F. M. Road 1518, N. 30° 49' W. 656.80 feet to an iron pin set for the Southwest corner and POINT OF BEGINNING of the herein conveyed 10.00 acre tract;

THENCE with the East line of F.M. Road 1518, N. 30° 49' W. 315.7 feet to an iron pin and corner post in the original North line of the above described 112.59 acre tract, set for the Northwest corner of this 10.000 acre tract;

THENCE with the original North line of the said 112.59 acre tract as fenced, N. 59° 06' E. 1,379.8 feet to an iron pin set for the Northeast corner of this 10.00 acre tract;

THENCE S. 50° 49' W. 315.7 feet to an iron pin set for the Southeast corner of this 10,000 acre tract;

THENCE S. 59° 06' W. 1,379.8 feet to the place of beginning.

However, above described 10<sup>acres</sup> are subject to easement to the City of San Antonio, Texas, of record in Volume 3361, page 475, Deed Records of Bexar County, Texas.

**EXHIBIT B**  
**ANNEXATION SERVICE PLAN**

**See attached**



# CITY OF SCHERTZ, TEXAS

## ANNEXATION SERVICE PLAN

### AREA ANNEXED

Approximately 3,315± acres, less certain properties subject to Development Agreements, located east of FM 1518, south of FM 78, and north of I-10, all in Bexar County, Texas, as shown on the map on file with the City Secretary.

### INTRODUCTION

This service plan has been prepared in accordance with Local Government Code Section 43.056. Municipal facilities and services to the annexed area described above will be provided or made available on behalf of the City at the following levels and in accordance with the following schedule.

### POLICE PROTECTION

Patrolling, responses to calls, and other police services will be provided on the effective date of the annexation at the same level as provided throughout the City.

### FIRE PROTECTION AND FIRE PREVENTION

Fire protection and fire prevention services will be provided on the effective date of the annexation at the same level as provided throughout the City.

### EMERGENCY MEDICAL SERVICES

Emergency medical services will be provided on the effective date of the annexation on the same basis and at the same level as provided throughout the City.

### SOLID WASTE COLLECTION AND DISPOSAL

Solid waste collection and disposal services will be provided on the effective date of the annexation on the same basis and at the same level as provided throughout the City. However, no obligation exists for the City to provide solid waste collection services to a person who continues to use the services of a privately owned solid waste management service provider.

### OPERATION AND MAINTENANCE OF WATER AND WASTEWATER FACILITIES THAT ARE NOT WITHIN THE SERVICE AREA OF ANOTHER WATER OR WASTEWATER UTILITY

Operation and maintenance of water and wastewater facilities that are not within the service area of another water or wastewater utility will be provided on the effective date of the annexation on the same basis and at the same level as provided throughout the City.

## OPERATION AND MAINTENANCE OF ROADS AND STREETS

Operation and maintenance of roads and streets will be provided on the effective date of the annexation on the same basis and at the same level as provided throughout the City.

## STREET LIGHTING

Street lighting will be made available on the effective date of the annexation on the same basis and at the same level in comparable areas as provided throughout the City.

## OPERATION AND MAINTENANCE OF PUBLIC PARKS AND OTHER PUBLICLY OWNED FACILITIES

If any public park, playground, swimming pool, or any other publicly owned facility, building or service is located within the annexed area, it will be maintained on the effective date of the annexation on the same basis and at the same level as similar facilities are maintained throughout the City.

## OTHER SERVICES

Other services that may be provided by the City such as planning, code enforcement, animal control, library, park and recreation, court, and general administration will be made available on the effective date of the annexation on the same basis and at the same level as provided throughout the City.

## CAPITAL IMPROVEMENTS

The City will make available to the annexed area any necessary water, sewer, street, and drainage facilities within four and one-half (4-1/2) years of the effective date of the annexation unless the construction of the necessary facilities is interrupted by circumstances beyond the control of the city, or unless this period is extended by an arbitration decision. No impact fees will be charged to any developer or landowner within the annexed area except in conformity with Local Government Code Ch. 395. Construction of other capital improvements shall be considered by the City in the future as the needs dictate on the same basis as such capital improvements are considered throughout the City.

## UNIFORM LEVEL OF SERVICES MAY NOT BE REQUIRED

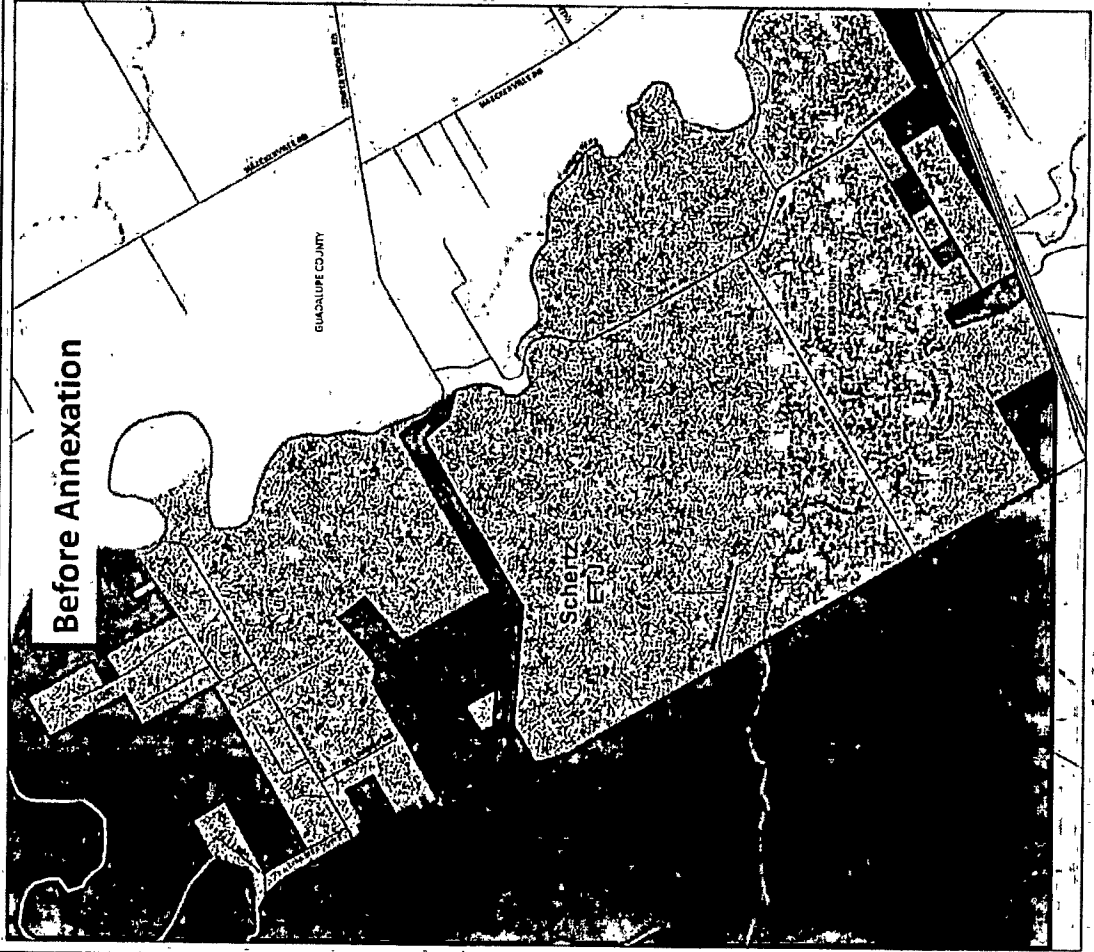
Nothing in this plan shall require the City to provide a uniform level of full municipal services in any of the above service categories to each area of the City, including the annexed area, if different characteristics of topography, land use, and population density are considered a sufficient basis for providing different levels of service.

## TERM

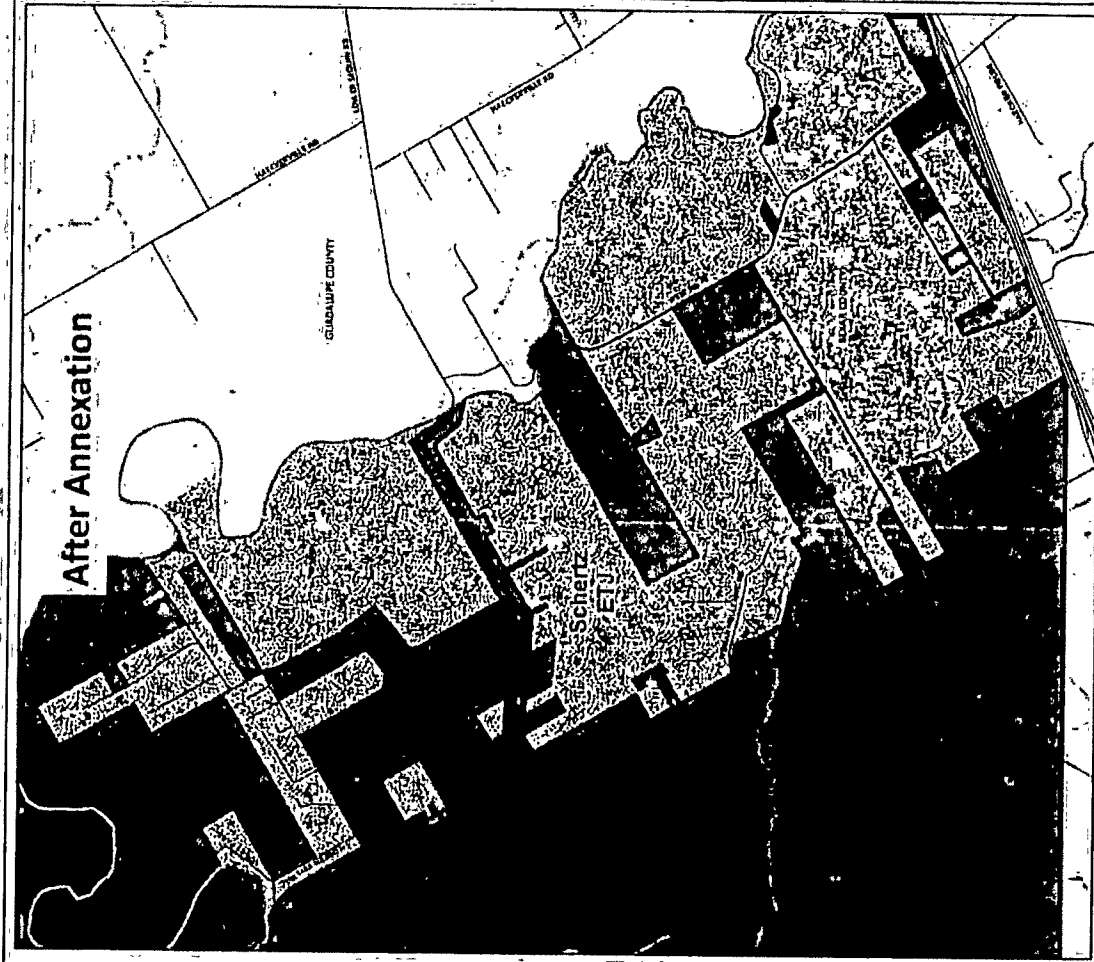
This service plan shall be valid for a term of ten (10) years.

## AMENDMENTS

The plan shall not be amended unless public hearings are held in accordance with Local Government Code Section 43.0561.



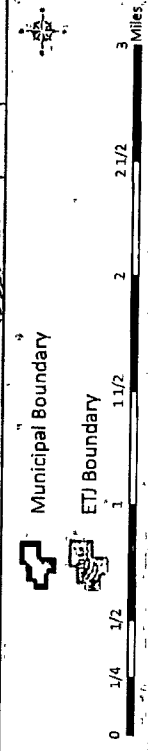
Before Annexation



After Annexation

**SCHERTZ**  
 COMMUNITY - SERVICE - OPPORTUNITY

Annexation  
 Ordinance 11-A-22



**AG-APPRAISED PROPERTY OWNERS**

	<u>Property Owner Name(s):</u>	<u>Accepted Development Agreement?</u>
1	Asher, Doris & Rudolph	Yes
2	Barr, James W., Jr. & Sharon	Yes
3	Baumann, Larry W. & Yvonne Z.	Yes
4	Baumann, Larry W.	Yes
5	Beutnagel, Delvin & Verna L.	Yes
6	Brycap Farm Properties LLC	No
7	Bryson Kneupper Properties	No
8	Burnette, Isaac E. & Veo P.	No
9	Dahle, Karen L. & Michael	No
10	Declcy, Gail	Yes
11	Fairley, Gary R.	Yes
12	Fairly, Lloyd R.	Yes
13	Fernandez, Rosendo Zambrano	Yes
14	Fey, Glenn Ray	Yes
15	Fey, Gordon	Yes
16	Fey, Gordon R. & Leanne	Yes
17	Fey, Heather & Courtney	Yes
18	Fey, Vernell H. & Gilbert	Yes
19	Fischer, Karen Marx	Yes
20	Fluitt, Sue N.	Yes
21	Friesenhahn, Milton & Billie	Yes
22	Haecker, Ralph	Yes
23	Hart, Guy J. & Dawn I. Velligan	Yes
24	Herrera, Andrew & Joylene	Yes
25	Holtz, Rosabell	No
26	Holtz, Scanna Fraser	Yes
27	Hooper, Billy W. & Denise L	No
28	Hulett, Ronald R., Jr. & Deanne R.	Yes
29	Jacobson, Philip E., Jr. & Susan R.	Yes
30	Krickhahn etc. Enterprises LLC	No
31	Krueger, Evelyn E et al. Trust (Ruth Martin)	Yes
32	Lindorfer, Janice S. & Robert C., Jr.	Yes
33	Ludwig, Edgar C. & Vera M.	Yes

	<u>Property Owner Name(s):</u>	<u>Accepted Development Agreement?</u>
34	Ludwig, Vernell S. et al. (David Ludwig)	Yes
35	Luensmann, Helen S. & Henry W. Luensmann Family Trust	Yes
36	Luensmann, Charles O.	Yes
37	Lundquist, John E. & Alberta Trust	Yes
38	Marshall, Ernest E. & Regina E.	Yes
39	Martin, Lorraine & Stapper, Marcella S.	No
40	Obearle, Gary Richard	Yes
41	Penshorn, Mark A. & Catherine K.	Yes
42	Petoskey, Delbert J. & Bernardine	No
43	Rawe, Jeanne & Reagan	Yes
44	Real, Enomie M.	Yes
45	Reyes, Mark M.	No
46	Rittiman, Joy Lee	Yes
47	Rumpf, E. M., Jr.	Yes
48	Rumpf, Wesley H.	Yes
49	Schmidt, Betty	Yes
50	Scott, Roger E. Living Trust	Yes
51	Smidt, Lana (Scott)	Yes
52	Smidt, Lana & Scott, Brenda (Craft, Scott)	Yes
53	Lanoué, James & Andres (Scott)	Yes
54	Smith, Christy V. & Bourland, William	Yes
55	Sowell, Tony C. & Faye	No
56	Vincent, Kay Penshorn	Yes
57	Vrana, Gerald Wayne	Yes
58	Wales, Bruce J.	Yes
59	Weir, Nell Rose	Yes
60	Wiederstein, Allen & Kathy	Yes
61	Wiederstein, Trust Fund	Yes
62	Young, David A. & Lenore M.	Yes
63	Goehring, Milton	Yes

**FULBRIGHT**  
*& Jaworski L.L.P.*  
*Attorneys at Law*

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ktapley@fulbright.com • Direct: 210 270 7191 • Main: 210 224 5575 • Facsimile: 210 270 7205

September 13, 2011

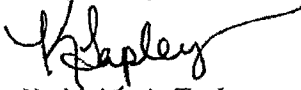
Re: Schertz Development Agreement

Dear Property Owner:

One original of your Development Agreement with the City of Schertz is enclosed. In addition, a copy of the file-stamped Development Agreement, that was recorded in the Bexar County Property Records, is also enclosed.

Please do not hesitate to contact me if you have any questions. .

Very truly yours,



Katherine A. Tapley

KAT  
Enclosures

cc: Brenda Dennis (City Secretary, City of Schertz) (w/o enclosures) (by email)  
Michael L. Spain (Firm) (w/o enclosures) (by email)

50441910.1

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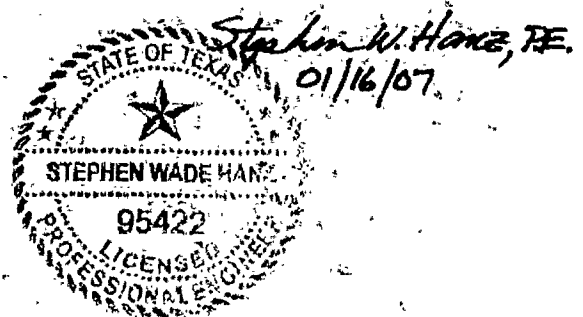
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# Green Valley SUD Wastewater Master Plan 2006

Green Valley Special Utility District



P.O. Box 99  
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(830) 914-2330  
[www.greenvalleysud.com](http://www.greenvalleysud.com)



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## Attachments

**Attachment 1 – Exhibit Drawings**

- Exhibit 1 GVSUD Existing Wastewater CCN No. 20973 Boundary
- Exhibit 2 GVSUD Drainage Basins
- Exhibit 3 GVSUD Area Calculations and Collection Points
- Exhibit 4 GVSUD Proposed Wastewater Main Collection System
- Exhibit 5 GVSUD Theoretical Locations of Wastewater Treatment Capacity and Costs vs. Downstream Locations
- Exhibit 6 GVSUD Proposed Growth and Development

**Attachment 2 – Calculation Tables**

- Exhibit 1 Calculation Table, Total EDU Calculations
- Exhibit 2 Calculation Table, Wastewater Collection System Design Calculations
- Exhibit 3 Calculation Table, Wastewater Collection System Costs
- Exhibit 4 Calculation Table, Wastewater Treatment Plant Capacity and Costs

**Attachment 3 – Existing Wastewater Permits**

- |             |                    |  |
|-------------|--------------------|--|
| • Exhibit 1 | CCMA               | Expired Permit No. 11269-001<br><b>Current Permit No. WQ0011269001</b> |
| • Exhibit 2 | GBRA (Lake Dunlap) | Expired Permit No. 11378-001<br><b>Current Permit No. WQ0011378001</b> |
| • Exhibit 3 | City of Marion     | Expired Permit No. 10048-001<br><b>Current Permit No. WQ0010048001</b> |
| • Exhibit 4 | Harvest Hills      | <b>Current Permit No. WQ0014037001</b>                                 |
| • Exhibit 5 | GBRA (Northcliff)  | Expired Permit No. 11751-001,002                                       |
| • Exhibit 6 | Meadow View park   | Expired Permit No. 14153-001   |

**Attachment 4 – Adopted Wastewater Design Criteria**

- Exhibit 1 Texas Commission on Environmental Quality (TCEQ)
- Exhibit 2 San Antonio Water System (SAWS)
- Exhibit 3 City of Austin (COA)

**Attachment 5 – GVSUD By-Laws**

## **1.0 Introduction**

### **1.1 General**

Since the conception of the Green Valley Special Utility District (GVSUD), GVSUD has earned a respected reputation for excellent water quality and friendly customer service. GVSUD started as a rural water supply corporation back in 1963. Over the past 40-years, GVSUD service area has experienced a great deal of residential growth and commercial development. Through the years, GVSUD has gained a great deal of experience managing and servicing this extensive growth. To further serve its customers, GVSUD obtained a Wastewater Certificate of Convenience and Necessity (CCN) from the Texas Commission on Environmental Quality (TCEQ) in 2004. To insure GVSUD provides its customers the best wastewater service possible, GVSUD organized a wastewater development team to initiate the required steps for GVSUD to enter into this wastewater business. The GVSUD wastewater team consists of GVSUD Board and Staff, Engineers, Attorneys, Financial Advisers, and the Development Community. One of the major steps for GVSUD to enter into the wastewater business is to have River City Engineering, LTD. (RCE) develop this wastewater master plan document.

This document represents the Engineer's wastewater master plan. The objective of this document is to analyze GVSUD's existing conditions, estimate future wastewater demands, evaluate opportunities to utilize existing area wastewater service providers, estimate proposed infrastructure costs, and recognize long-term wastewater opportunities. This document shall serve as a long-term adaptable guide to be used as needed to manage future service area development and projected wastewater needs.

### **1.2 Authorization and Purpose**

River City Engineering, Ltd. (RCE) received authorization from GVSUD to prepare this wastewater master plan document on February 21, 2006. The document is part of a General Engineering Services Agreement between GVSUD and RCE. This study investigates the feasibility of immediate and long-term development of a wastewater collection system and wastewater treatment facilities for the GVSUD service area.

### **1.3 Project Planning Area**

GVSUD wastewater CCN extends from IH-35 to the North and the Cibolo Creek to the South, the City of Cibolo to the West and the Guadalupe River to the East. The wastewater CCN includes portions of Comal, Guadalupe, Bexar, and Wilson Counties. Portions of the wastewater CCN extraterritorial jurisdictions of the City of New Braunfels, Cibolo, Marion, and Santa Clara. The total CCN area is 76,000 acres or 120 square miles.

(see **Attachment 1**, Exhibit 1 - GVSUD Existing Wastewater CCN 20973 Boundary).

## 1.4 Need for Project

GVSUD understands its responsibility for long-term planning of wastewater services within its wastewater CCN service area. GVSUD wants to insure quality wastewater infrastructure, excellent customer service, and insure proper health and safety for its residents and surrounding communities.

GVSUD wastewater goals include:

- Provide quality wastewater service to protect public health
- Establish wastewater management team
- Develop well organized operating policies and rate tariffs
- Reduce the extensive use of existing septic systems especially in the Treasure Island area to protect water quality of surface water
- Prepare for any State mandates directing GVSUD to bear wastewater responsibilities or prevent other wastewater providers requesting to take GVSUD wastewater CCN area
- Control the quality of wastewater service
- Provide wastewater services superior to competing area wastewater providers
- Develop engineering wastewater master plan
- Explore funding options
- Work with development community

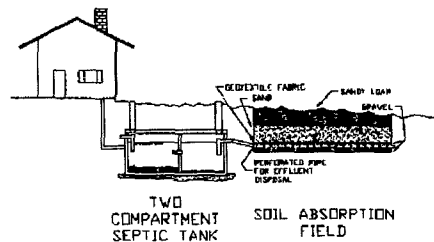
## 2.0 GVSUD CCN Service Area Existing Wastewater Conditions

### 2.1 Existing Individual On-Site Septic Systems

GVSUD does not currently provide wastewater service within its wastewater CCN service area. Because the GVSUD service area was originally rural farm-type land, existing wastewater has been treated on an individual basis with on-site septic systems.

A conventional septic system is the most common system installed and consists of a buried septic tank and a number of gravel-filled trenches or a soil drain field. While the septic tank retains solids, the soil drain field provides for absorption and treatment of the septic tank effluent. The bacteria in the septic tank effluent are removed in the soil treatment zone by filtering and soil micro-organisms before reaching the groundwater. However, some chemicals such as nitrates are not typically removed in the soil treatment zone. Additionally, not all soils are capable of absorbing and purifying septic tank effluent.

## Conventional System



Below Grade Septic System

There are many types of septic systems used for on-site wastewater treatment. These include aerobic treatment units, sand filters, low pressure dose systems and spray irrigation systems. However, currently for the GVSUD CCN service area, the conventional septic system (anaerobic) is the preferred installed system because of its relatively low cost and low required maintenance compared to other systems.

A critical factor in determining the optimum type of septic system to be installed is the soil's ability to absorb water. The soil percolation rate (typically measured in minutes per inch) indicates how quickly water moves through soil and helps evaluate the ability of the soil to absorb and treat effluent. The clay-type soils prevalent in the GVSUD CCN service area have slow percolation rates thus making the use of conventional septic systems using lateral trenches inadmissible. In such areas the installation of a pressure dose system, aerobic system, or other alternative system should be required.

Based on information provided by local on-site sewage facility installers, the cost of installing a typical conventional septic system ranges from \$4,000 to \$6,000. Low pressure dosing systems cost approximately \$6,000 to \$8,000 installed, while aerobic systems cost upwards of \$8,000.

Additional costs associated with on-site sewage facilities include county permits and inspection fees. These fees vary between counties. Guadalupe County charges a fee of \$200 per lot. Comal County charges a fee of \$150 for on-site facilities less than 500 gallons per day and \$180 for facilities greater than 500 gallons per day.

### 2.2 Threat of On-Site Septic Systems

Several concerns arise when on-site treatment or septic systems are installed in rapidly developing areas. The primary concern is inadequate and improperly treated effluent entering the water supply sources. The Treasure Island area located adjacent to the Guadalupe River on the East side of the GVSUD CCN service area contains high density aging septic systems. As these existing high-density septic systems age and

deteriorate, the probability of improperly treated sewage leaching into water supply sources (Guadalupe River) may pose a public health concern.

Another concern is the limitation placed on developments that require septic systems. Septic systems require large areas of land for effluent discharge. This land used for effluent discharge has limited use. (Septic tank, drain field, sanitary zones, etc.) septic systems increase minimum lot sizes within subdivisions. This limits the number of lots the developer can sell. The GVSUD service area is contained in Bexar County, Guadalupe County and Comal County. Each county has subdivision regulations regarding lot sizes and percolation tests if a central wastewater collection and disposal system is not provided.

Guadalupe County requires single-family residences to provide lots having at least 22,000 square feet (approximately 1/2 acre) of surface area if it is served by a public water supply. If the residences are served by an individual water supply well and on-site sewage facilities, the well is required to have a 150-foot radius sanitary zone and lot sizes must be a minimum of 44,000 square feet (approximately 1 acre).

In 1997, Comal County began requiring home sites with septic tanks to be at least 3.17 acres. The Commissioner's Court then imposed a moratorium on subdivision development. The rules have since been revised and the current subdivision regulations require a 5.1-acre minimum for home sites with water wells and septic tanks.

In the event a county has not sought delegation of authority from the Texas Commission on Environmental Quality (TCEQ) to regulate septic tanks, then the rules and regulations of TCEQ apply. In order to obtain delegation, the standards of the county must be at least as strict as those of the TCEQ. TCEQ requires residential lots in a platted or un-platted subdivision served by a public water supply to be at least 1/2 acre and residential lots not served by a public water supply to be at least one acre (Title 30 Part 1 Chapter 285 Rule §285.4 of Texas Administrative Code).

GVSUD has discussed proposed projects with numerous developers that have indicated they would be interested in high-density subdivisions if wastewater services were available. With the development of wastewater services, GVSUD wastewater CCN service area will likely see an increase in commercial development.

### **3.0 Existing Wastewater Treatment Facilities Adjacent to GVSUD**

#### **3.1 City of Marion**

The City of Marion is located near the center of the GVSUD wastewater CCN service area. The City of Marion has wastewater collection and a treatment facility that provides service for its 1,925 residents. Under TPDES Permit No. 10048-001, the City

of Marion is permitted to discharge 200,000 gallons per day to Santa Clara Creek. They currently discharge an average of 60,000 to 80,000 gallons per day. Thus, the City of Marion Wastewater Treatment Facility has extra capacity available for a potential wholesale partnership. Some Marion treated effluent is used by Marion ISD for beneficial re-use (irrigation).

The City of Marion has indicated an interest in providing wholesale wastewater treatment for GVSUD. Due to the central location of the City of Marion Facility within the GVSUD wastewater CCN service area (Drainage Basin E), the potential for partnership with the City of Marion could be beneficial. Also, GVSUD may have the opportunity to take advantage of existing experienced City of Marion wastewater personnel.

(see **Attachment 1**, Exhibit 1 - GVSUD Existing Wastewater CCN 20973 Boundary)  
(see **Attachment 3**, Exhibit 3 City of Marion Wastewater Treatment Facility Permit)

### **3.2 City of Santa Clara**

The City of Santa Clara has no wastewater collection system or treatment. All wastewater is disposed of with individual on-site septic systems.

### **3.3 Cibolo Creek Municipal Authority (CCMA)**

CCMA wastewater treatment plant located south of the City of Cibolo. The majority wastewater comes from the City of Cibolo, the City of Schertz, and areas west of the GVSUD wastewater CCN service area.

CCMA currently offers wholesale wastewater treatment to areas in the GVSUD western water CCN service area. CCMA is currently permitted by the TCEQ to discharge an average flow of 6.20 million gallons per day of treated effluent into the Cibolo Creek. However, an application to reduce this discharge to an average discharge of 4.50 million gallons per day was filed on May 3, 2002. The 1.7 million gallons not discharged to the Cibolo Creek is used for beneficial re-use. The wastewater treatment facility is located approximately 2.25 miles northeast of the center of Randolph Air Force Base on the south bank of the Cibolo Creek.

The location of the CCMA plant is inconvenient for GVSUD gravity sewer flow. Any potential utilization of the CCMA wastewater treatment facility would require pumping through the existing City of Cibolo collection system. The City of Cibolo has indicated an interest working with GVSUD in providing wastewater services. Even though the CCMA plant has available capacity, the lack of gravity flow makes this option expensive for GVSUD, and a partnership opportunity would be limited.



(see **Attachment 1**, Exhibit 1 - GVSUD Existing Wastewater CCN 20973 Boundary).  
(see **Attachment 3**, Exhibit 1 - CCMA Wastewater Treatment Facility Permit)

### **3.4 Guadalupe Blanco River Authority (GBRA)**

GBRA serves a wastewater CCN service area northeast of the GVSUD CCN wastewater service area. Included in this GBRA CCN service area is a wastewater treatment plant (Dunlap WWTP). Even though the plant has received recent upgrades and modifications, the plant capacity is already expended due to rapid development activity in the GBRA wastewater CCN service area.

(see **Attachment 1**, Exhibit 1 - GVSUD Existing Wastewater CCN 20973 Boundary).

#### **Dunlap WWTP**

The GBRA Dunlap WWTP is located in the Northeast portion of the GVSUD water service area approximately one mile east of FM 725 and 3.1 miles southeast of the intersection of IH-35 and FM 725. The present wastewater permit, TPDES Permit No 11378-001, is for 160,000 gallons per day. The GBRA Dunlap WWTP is currently operating at 90,000 gallons per day or approximately 56% capacity. While wastewater effluent can be discharged to Lake Dunlap, it is presently being pumped to the Guadalupe Partners Power Plant for beneficial re-use. The GBRA has stated that it is possible to expand the Dunlap Wastewater Treatment Facility to 1,000,000 gallons per day.

A partnership relationship with the GBRA Lake Dunlap Plant for wholesale wastewater treatment would probably provide limited benefit for GVSUD. The GVSUD wastewater service area is located downstream of the treatment facility. This would create costs associated with pumping wastewater uphill through existing GBRA collection system. There would not be any opportunities to take advantage of a gravity system. The GVSUD service area is located several miles from the Lake Dunlap Plant. It would be expensive for GVSUD to utilize the GBRA Dunlap Wastewater treatment plant.

(see **Attachment 1**, Exhibit 1-GVSUD existing wastewater CCN 20973 boundary).  
(see **Attachment 3**, Exhibit 2 – GBRA (Lake Dunlap) Wastewater Treatment Facility Permit).

#### **Northcliffe WWTP**

The GBRA is authorized to treat and dispose of effluent from the Northcliffe WWTP. This facility is located near the intersection of FM 1103 and IH-35, approximately five miles northeast of the City of Schertz in southern Comal County. Under TPDES Permit No 11751-001, a non-discharge permit, the facility is authorized to dispose of treated domestic wastewater effluent at a daily average flow not to exceed 300,000 gallons per

day by land application irrigation of 117 acres on the Northcliffe Country Club golf course.

In addition, GBRA was issued a second permit to treat and dispose of effluent from the GBRA-Municipal Utility District No. 2 Wastewater Reclamation Facility also located near the intersection of FM 1103 and IH 35. This permit, TPDES No. 11751-002, allows for the discharge of 350,000 gallons per day to an unnamed tributary of Dry Comal Creek.

This Northcliffe Municipal Utility District No. 2 facilities are located upstream of the GVSUD wastewater CCN service area and would not benefit GVSUD as a beneficial partnership option.

### **Other**

GBRA also has wastewater permits for two other facilities in Guadalupe and Comal Counties. The Springs Hill Wastewater Treatment Facility, located in the City of Seguin, south of the Guadalupe River on State Highway 123, is allowed to discharge 300,000 gallons per day (TPDES Permit No. 11427-001). The Canyon Park Estates Wastewater Treatment Facility (TPDES Permit No 11496-001), is located in northern Comal County. Both facilities are outside of the GVSUD service area and would not pose an available partnership opportunity.

### **3.5 Meadow View Park**

The Meadow View Park Ltd., a private investor owned utility, has obtained a wastewater permit; TPDES permit number 14153-001, which allows their facility to treat and dispose of waste from the Meadow View Park Wastewater Treatment Facility to Town Creek. The facility is located approximately 3 miles west-southwest of the intersection of State Highway 78 and State Highway 465. The permit allows Meadow View Park to discharge a daily average effluent flow of 120,000 gallons per day, with a two-hour average flow peak not to exceed 250 gpm, from the 0.24 MGD facility. No construction has been initiated on this project.

### **3.6 City of New Braunfels**

The New Braunfels Utilities (NBU) wastewater service area is adjacent to the GVSUD northern boundary. At this time no expansion is planned by NBU into the GVSUD wastewater CCN service area. NBU has developed a guideline limiting provision of providing wastewater services only to areas within their water service area.

### **3.7 San Antonio River Authority (SARA)**

SARA operates several wastewater treatment plants South East of the GVSUD service area. Currently these plants are located some distance away from the GVSUD

wastewater CCN service area. If the opportunity arises for wastewater growth to extend to the downstream portion of drainage basin G, there could exist an opportunity for GVSUD to partner with SARA.

### **3.8 Harvest Hills Subdivision**

Harvest Hills is a subdivision located within the GVSUD wastewater CCN service area. The development has already obtained a wastewater facilities permit for an irrigation type discharge facility. The wastewater treatment plant, a package type facility has been installed on the development site. There is additional irrigation equipment that still remains for installation. This facility is located approximately 2.5 miles North of the City of Marion.

This facility is an excellent opportunity for GVSUD to take ownership and enter into the wastewater business. There are a few houses built with total build-out expected to be 412 homes. There are also several developers interested in property surrounding the Harvest Hills Subdivision. There may exist an opportunity for GVSUD to provide wastewater service to adjacent developments utilizing the existing Harvest Hill Wastewater treatment Plant Facility.

(see **Attachment 1**, Exhibit 1-GVSUD existing wastewater CCN 20973 boundary).

(see **Attachment 3**, Exhibit 4 – Harvest Hills Wastewater Treatment Facility Permit).

## **4.0 Proposed Main Sewage Collection System**

### **4.1 Wastewater Collection System Design Approach**

To determine the layout of the future wastewater collection system, the GVSUD wastewater CCN service area was divided into seven (7) primary drainage areas, A through G. The proposed location of the main collection system is based on the concept of aligning along major creek beds. This method insures optimal use of gravity for main trunk lines. It is expected that this concept will present itself as the most cost effective means of providing wastewater collection because it minimizes areas that must be served by lift stations (pumps).

(see **Attachment 1**, Exhibit 2 - GVSUD Drainage Basins)

Areas A through G were further divided into smaller drainage areas. These smaller drainage areas were used to develop future build-out wastewater flows for each collection point. From wastewater flows required at each collection point, the main wastewater collection pipes were sized to accommodate the required flow. Each diameter was selected to accommodate 80% of the design flow.

In locations where the diameter of main collection pipes became so large that one large pipe would be not economical to install, two smaller diameter parallel pipes can be an

option to accommodate the required flowrate. This parallel method is beneficial for GVSUD because it allows each pipe to be installed one at a time in phases. This allows GVSUD to offer adequate wastewater service, and prepare for ultimate future build-out demand. This approach may prove economical for GVSUD. Addition ROW or utility easement will need to be considered to accommodate this parallel pipes instead of one large pipe.

#### **4.2 Wastewater Standard Design Criteria**

Under State Law, the Texas Commission on Environmental Quality (TCEQ) has jurisdictional responsibility for review and monitoring of wastewater facilities for all entities within the State of Texas. With regards to wastewater collection facilities, their design criteria dictate minimum slope requirements for various sizes of pipe as well as alignment and manhole spacing requirements.

Complete design criteria required by TCEQ can be found in Chapter 317 under Title 30 of the Texas Administrative Code, Sections §317.2 and §317.3. The design criteria used in this study meets or exceeds that imposed by the TCEQ.

(see **Attachment 4**, Exhibit 1 – Texas Commission on Environmental Quality (TCEQ))

Presently, GVSUD has not adopted design standards for wastewater collection systems and wastewater treatment facilities. For this reason, the design criteria used for this master plan was modeled after design requirements presented in the City of San Antonio and City Of Austin utilities criteria manuals. Section 2.9.0 of the City of Austin Utilities Criteria Manual provides design criteria for determination of wastewater flows, pipe sizing, lift stations and force mains as well as other design considerations.

(see **Attachment 4**, Exhibit 2 – San Antonio Water System Design Criteria)

(see **Attachment 4**, Exhibit 3 – City of Austin Design Criteria)

This document provides wastewater design criteria standards for both the City of Austin (COA) and the San Antonio Water System (SAWS). The purpose of providing both COA and SAWS design standards is for GVSUD to use as a guide to establish their own preferred set of GVSUD wastewater design criteria standards. TCEQ wastewater design standards should be used as a minimum guide. It is important for GVSUD to adopt a wastewater design criteria standards. This will prepare GVSUD for negotiation with the development community and standardize the GVSUD wastewater system. GVSUD will benefit from reduced operation and maintenance costs by developing a standardized system.

### 4.3 Equivalent Dwelling Unit (EDU) and Wastewater Design Flows

Wastewater design flows were developed using the EDU (Equivalent Dwelling Unit) concept. An Equivalent Dwelling Unit is defined as an amount of capacity or demand on a daily basis that an average single-family residence requires.

$$\text{Residential Single Family Units (EDU)} \approx 3.5 \text{ capita/EDU}$$

<b>Green Valley Special Utility District EDU Calculation Summary</b>					
<b>Total EDU Calculations</b>					
<b>Drainage Basin ID</b>	<b>Total Area (acres)</b>	<b>Development Density (1 EDU/acre)</b>	<b>Total EDU 1</b>	<b>Development Density (3 EDU/acre)</b>	<b>Total EDU 3</b>
A	9,211	1	9,211	3	27,633
B	4,690	1	4,690	3	14,070
C	5,636	1	5,636	3	16,908
D	6,688	1	6,688	3	20,064
E	35,618	1	35,618	3	106,854
F	6,515	1	6,515	3	19,545
G	7,511	1	7,511	3	22,533
	<b>75,869</b>		<b>75,869</b>		<b>227,607</b>

As shown in this above table, the land use assumptions play an important role in determining the total quantity of EDU. The total of 227,607 EDU with 3 EDU/Acre development densities is substantially greater than 75,869 EDU considering 1 EDU/Acre development densities. GVSUD can expect and prepare for actual EDU growth to fit within the above range.

For design purposes, three different wastewater flow rates were estimated to represent sizing of different portions of the wastewater collection and treatment systems.

An average dry weather flow or average daily flow of 245 GPD per EDU was derived from the following formula:

#### Average Dry Weather Flow

$$\text{Residential Single Family Units (EDU)} = 3.5 \frac{\text{capita}}{\text{EDU}} \times 70 \frac{\text{GPD}}{\text{capita}} = 245 \frac{\text{GPD}}{\text{EDU}}$$

$$\text{Population per LUE} = 3.5 \text{ capita/EDU}$$

$$\text{Wastewater Demand} \approx 70 \text{ GPD/capita}$$

Using the average dry weather flow, a maximum dry weather flow was calculated using the following formula:

**Maximum Dry Weather Flow**

$$\text{Maximum Dry Weather Flow} = 245 \frac{\text{GPD}}{\text{EDU}} \times 3\text{PFF} = 735 \frac{\text{GPD}}{\text{EDU}}$$

$$\text{Average Dry Weather Flow} = 245 \frac{\text{GPD}}{\text{EDU}}$$

$$\text{Maximum Flow Peak Factor} = 3\text{PFF}$$

Adding inflow and infiltration of 750 gallons/acres served

**Maximum Wet Weather Flow**

$$\text{Maximum Wet Weather Flow} = 735 \frac{\text{GPD}}{\text{EDU}} + \left( 750 \frac{\text{GPD I/I}}{\text{acre}} \times \frac{\text{acre}}{3\text{EDU}} \right)$$

$$\text{Maximum Wet Weather Flow} = 985 \frac{\text{GPD}}{\text{EDU}} \text{ or } 0.7 \frac{\text{GPM}}{\text{EDU}}$$

A summary of the wastewater design flow parameters considering the development density range of 1 EDU/Acre to 3 EDU/Acre is summarized in the below table:

<b>Green Valley Special Utility District Design Flow Summary</b>		
<b>Design Flow</b>	<b>Development Density</b>	
	<b>1 EDU/Acre</b>	<b>3 EDU/Acre</b>
Average Dry Weather Flow	245 GPD/EDU	245 GPD/EDU
Maximum Dry Weather Flow	735 GPD/EDU	735 GPD/EDU
Maximum Wet Weather Flow	1485 GPD/EDU	985 GPD/EDU

The drainage basins A through G were further divided into smaller drainage areas. The surface area (acres) of these smaller drainage areas were calculated and assumed to contribute wastewater to collection points situated periodically down the main trunk line. The location of collection points for each drainage area and the anticipated flow at each point were calculated to determine the total wastewater flow required for design purposes. By multiplying EDU by the above flows per EDU, the required flow at each collection point was calculated for collection system pipe sizing.

(see **Attachment 1**, Exhibit 3 – GVSUD Area Calculations and Collection Points)

(see **Attachment 2**, Exhibit 1 – Total EDU Calculations)

(see **Attachment 2**, Exhibit 2 – Wastewater Collection System Design Calculations)

<b>Green Valley Special Utility District Wastewater Design Flows Three Design Flow Conditions</b>									
Drainage Basin	Total Area (acres)	Total LUE 1 (EDU/acre)	Total LUE 3 (EDU/acre)	Development Density of 1 EDU/acre			Development Density of 3 EDU/acre		
				Average Dry Weather Flow (GPD)	Maximum Dry Weather Flow (GPD)	Maximum Wet Weather Flow (GPD)	Average Dry Weather Flow (GPD)	Maximum Dry Weather Flow (GPD)	Maximum Wet Weather Flow (GPD)
Drainage Basin A	9,211	9,211	27,633	2,256,695	6,770,085	13,678,335	6,770,085	20,310,255	27,218,505
Drainage Basin B	4,690	4,690	14,070	1,149,050	3,447,150	6,964,650	3,447,150	10,341,450	13,858,950
Drainage Basin C	5,636	5,636	16,908	1,380,820	4,142,460	8,369,460	4,142,460	12,427,380	16,654,380
Drainage Basin D	6,688	6,688	20,064	1,638,560	4,915,680	9,931,680	4,915,680	14,747,040	19,763,040
Drainage Basin E	35,618	35,618	106,854	8,726,410	26,179,230	52,892,730	26,179,230	78,537,690	105,251,190
Drainage Basin F	6,515	6,515	19,545	1,596,175	4,788,525	9,674,775	4,788,525	14,365,575	19,251,825
Drainage Basin G	7,511	7,511	22,533	1,840,195	5,520,585	11,153,835	5,520,585	16,561,755	22,195,005

The above table summarizes the cumulative design flows generated from each drainage basin at the most downstream location. The Average Dry Weather Flow, Maximum Dry Weather Flow, and the Maximum Wet Weather Flow were calculated by multiplying design flows by the total EDU for each drainage basin. There is a substantial flow difference between development densities of 1 EDU/acre versus 3 EDU/acre. GVSUD should prepare for maximum wastewater flows to fall between these two development densities.

#### 4.4 Wastewater Collection System Design

Peak flow (Maximum Wet Weather Flow) was used to size the main gravity wastewater collection system assuming natural ground slope and 80% line capacity to maintain a minimum line velocity of 2 feet per second (Section 2.9.3, City of Austin Utilities Criteria Manual). A minimum diameter of 8 inches was used for all gravity wastewater mains. Additionally, 8-inch, 10-inch, 12-inch, 15-inch, 18-inch, 21-inch, 24-inch, 27-inch, 30-inch, 33-inch, 36-inch, 42-inch, 48-inch, 54-inch, 60-inch, 66-inch, and 72-inch diameter pipes were considered as standard wastewater pipe diameter sizes.

However, pipe diameters greater than 48" may not prove economical for initial trunk line installation. An alternative option is to prepare for installation of two smaller diameter parallel pipes whose combined cross sectional area equals the required future ultimate build-out cross sectional area. This option allows GVSUD to install one pipe to meet the immediate demand and wait until future ultimate build-out to install the second parallel pipe. This approach allows GVSUD to economically phase wastewater infrastructure to match the rate of development growth. Additional foresight must be taken into consideration in obtaining utility easements wide enough to accommodate two parallel pipes.

Lift station design capacity is determined by the Maximum Wet Weather Flow. All lift stations will be designed to handle the Maximum Wet Weather Flow for the designated service area. The wet well volume is sized to provide adequate storage volume at peak design flows and a sufficient pump cycle time. A minimum of two (2) pumps will be required for all lift stations and pumping capacity will be such that the Maximum Wet Weather Flow can be handled with the largest pump out of service (Section 2.9.3, City of Austin Utilities Criteria Manual). Lift Station design shall be refined during actual project considerations.

Force mains will be designed using C-909 PVC (poly-vinyl chloride) pipe. Force mains will be sized so that the flow velocity is between three (3) and six (6) feet per second (Section 2.9.3, City of Austin Utilities Criteria Manual). Any force main designs shall be refined during actual projects.

Green Valley Special Utility District 1 EDU/acre Pipe Diameter Design Summary								
Pipe Diameter (in)	Basin A Pipe Length (ft)	Basin B Pipe Length (ft)	Basin C Pipe Length (ft)	Basin D Pipe Length (ft)	Basin E Pipe Length (ft)	Basin F Pipe Length (ft)	Basin G Pipe Length (ft)	Total Pipe Length (ft)
8								0
10								0
12	5,600							5,600
15	8,200	2,600	2,600				2,700	16,100
18	19,800	5,600	5,600			2,500	2,700	36,200
21	9,000	7,000	5,600	2,500	7,350	2,500	5,000	38,950
24	3,500	5,000	5,200	2,500	17,200	5,000	2,500	40,900
27	2,500		5,000	5,300	22,300	5,000	2,800	42,900
30	2,500			5,600	15,450	12,200	2,900	38,650
33	11,400				21,650		3,000	36,050
36					5,800			5,800
42								0
48					7,000			7,000
54					18,500			18,500
60					9,600			9,600
66								0
72								0
<b>Total</b>	<b>62,500</b>	<b>20,200</b>	<b>24,000</b>	<b>15,900</b>	<b>124,850</b>	<b>27,200</b>	<b>21,600</b>	<b>296,250</b>

56 Miles

The above table is a summary of the required main wastewater collection system pipe diameters to service a development density of 1 EDU/Acre.



Green Valley Special Utility District 3 EDU/acre Pipe Flow Design Summary								
Pipe Diameter (in)	Basin A Pipe Length (ft)	Basin B Pipe Length (ft)	Basin C Pipe Length (ft)	Basin D Pipe Length (ft)	Basin E Pipe Length (ft)	Basin F Pipe Length (ft)	Basin G Pipe Length (ft)	Total Pipe Length (ft)
8								0
10								0
12								0
15	2,600							2,600
18	11,200	2,600	2,600				2,700	19,100
21	13,800	2,800	2,800				2,700	22,100
24	9,500	2,800	2,800		4,600	2,500	2,500	24,700
27	5,500	2,600	2,800	2,500	7,350	2,500	2,500	25,750
30	3,500	9,400	5,400		12,600	5,000	2,500	38,400
33			7,600	2,500	13,000	2,500	2,800	28,400
36	5,000			5,300	14,450	7,700	2,900	35,350
42	11,400			5,600	31,950	7,000	3,000	58,950
48					5,800			5,800
54								0
60					7,000			7,000
66					5,000			5,000
72					23,100			23,100
Total	62,500	20,200	24,000	15,900	124,850	27,200	21,600	296,250

56 Miles

The above table is a summary of the required main wastewater collection system pipe diameters to service a development density of 3 EDU/Acre. There is a greater quantity of larger diameter pipes required for the greater development density of 3 EDU/Acre.

The contrast in development density between 1 and 3 EDU/Acre provides a range on which to anticipate future development. The 1 EDU/Acre represents low development density and 3 EDU/Acre represents high development density. GVSUD can expect future development density to fall in between these two EDU densities.

(see **Attachment 1**, Exhibit 4 – GVSUD Proposed Wastewater Main Collection System)  
(see **Attachment 2**, Exhibit 2 – Wastewater Collection System Design Calculations)

## **5.0 Wastewater Treatment Plant Capacity and Costs**

GVSUD has several options for wastewater treatment. One option is to partner with existing adjacent wastewater providers. GVSUD would provide the trunk lines and provide retail service to the customers. The partnership would provide wholesale treatment services and the existing adjacent wastewater providers would provide wholesale wastewater treatment.

One potential partnership that would be beneficial for GVSUD is the City of Marion. The City of Marion is considering expanding their wastewater CCN to provide service to areas within their water service area. They have expressed a desire to reserve available treatment capacity in their wastewater treatment plant for this expansion and for anticipated growth within their service area. The City of Marion may be willing to contract to provide wholesale wastewater treatment for GVSUD wastewater retail service.

Another opportunity exists at the Harvest Hills Subdivision. This 250,000 GPD facility already exists and soon will be on-line. The owner has expressed an interest for GVSUD to take ownership and operate. If an agreement can be negotiated between GVSUD and the treatment plant private owner, then GVSUD could see a relatively easy entry into the wastewater business.

The other option would be to construct new wastewater treatment facilities. Final scope and budget for the construction of new facilities would need to be determined on an individual basis and were only estimated in this report. Initially, these treatment plants would serve individual development projects. As these individual developments start to populate portions of the GVSUD wastewater CCN service area, GVSUD could utilize capital investment for wastewater infrastructure to provide a more regional wastewater collection and treatment opportunities.

These plants would initiate as small plants servicing the local development. As development increases, these small plants would be replaced with connecting infrastructure and larger regional facilities. These larger facilities would be phased to expand as capacity requires, and also be replaced with larger regional facilities which would locate downstream of major drainage basins.

The optimal result would be for GVSUD to own and operate large regional wastewater treatment facilities located at the most downstream locations in each drainage basin. Several drainage basins that flow in a common direction could be combined to share a regional wastewater treatment facility. A potential partnership with other entities could assist with economical means of developing large regional wastewater treatment plant facilities. These large regional facilities would only be justified when the GVSUD wastewater service area reaches ultimate build-out and wastewater demand exists.

<b>Green Valley Special Utility District Wastewater Treatment Capacity Summary Most Downstream Drainage Basin Location</b>		
<b>Design Flow</b>	<b>1 EDU/Acre</b>	<b>3 EDU/Acre</b>
	<b>Capacity (MGD)</b>	<b>Capacity (MGD)</b>
Drainage Basin A	2.3	6.8
Drainage Basin B	1.1	3.4
Drainage Basin C	1.4	4.1
Drainage Basin D	1.6	4.9
Drainage Basin E	8.7	26.2
Drainage Basin F	1.6	4.8
Drainage Basin G	1.8	5.5

The above table shows the wastewater capacity per 1 and 3 EDU/Acre development densities at the most downstream location in each drainage basin.

The exhibits in the attachments show theoretical wastewater treatment plants distributed along major trunk lines in each drainage basin. As the plants locate further downstream, there is a need for larger wastewater treatment plants. This shall be useful as a working guide to quickly estimate wastewater treatment capacity and costs at any pointy in the GVSUD wastewater collection system.

(see **Attachment 1**, Exhibit 5 - GVSUD Proposed Wastewater Treatment Capacity and Cost vs. Downstream Locations)

(see **Attachment 2**, Exhibit 4 – Wastewater Treatment Plant Capacity and Costs)

## **6.0 Capital Improvement Projects (CIP)**

Presently, there are no GVSUD CIP projects to discuss. Each major trunk line along with the associated costs can be considered a preliminary list of CIP. As further communication with the development a community transpires, GVSUD shall develop list of CIP.

The adoption of the Harvest Hills Wastewater Treatment Plant could be considered an initial GVSUD Wastewater CIP.

## **7.0 Discharge Options and Permits**

There are three basic types of effluent discharge permits. There is land application type, or zero discharge, where the effluent is discharged onto the surface of the land for evaporation or further filtration through the soil. This application is the easier permit to obtain from the TCEQ. However, this permit requires a great deal of land space that cannot be used for residential purpose.

The second type of permit is an effluent discharge permit. This type of permit allows wastewater effluent to be discharged into surface waters. This type of permit does not require as much land to support, but takes a great deal of time and is not a simple process to obtain a permit with TCEQ.

The third type of effluent discharge would be an opportunity for reuse or possibly sell the effluent. These options have revenue merit as well as benefit to society merit. There could be a great deal of costs associated with this type of discharge if there is not a reuse facility conveniently located nearby. The opportunity for wastewater effluent reuse would require additional study on a per project basis. As wastewater opportunities begin to surface, GVSUD should always explore wastewater effluent reuse opportunities from both customer service and potential additional revenue stream.

## 8.0 Estimated Costs

### 8.1 Wastewater Main Collection System Costs

For the purpose of determining long range feasibility and probable impact fees, a cost estimate was prepared for the wastewater collection system for Drainage Areas A through G. The estimates include costs associated with construction, basic engineering, easement acquisition, and survey. The cost estimates are shown in the below tables represent estimated cost for the proposed main wastewater collection system. The table identifies the costs of wastewater collection system per 1 and 3 EDU/Acre development densities.

<b>Green Valley Special Utility District Summary Costs Proposed Main Wastewater Collection System Engineer's Opinion of Probable Costs</b>				
<b>Basin</b>	<b>Total Costs 1 (EDU/acre)</b>	<b>Total Costs 3 (EDU/acre)</b>	<b>Variance</b>	
<b>A</b>	\$ 11,212,950.00	\$ 13,229,734.00	\$ 2,016,784.00	
<b>B</b>	\$ 3,379,449.00	\$ 3,848,841.00	\$ 469,392.00	
<b>C</b>	\$ 4,151,280.00	\$ 4,773,440.00	\$ 622,160.00	
<b>D</b>	\$ 3,072,068.00	\$ 4,188,876.00	\$ 1,116,808.00	
<b>E</b>	\$ 34,601,813.00	\$ 43,682,177.00	\$ 9,080,364.00	
<b>F</b>	\$ 5,230,109.00	\$ 6,739,925.00	\$ 1,509,816.00	
<b>G</b>	\$ 3,963,086.00	\$ 4,673,334.00	\$ 710,248.00	
<b>Total</b>	<b>\$ 65,610,755.00</b>	<b>\$ 81,136,327.00</b>	<b>\$ 15,525,572.00</b>	

This cost estimate is based on River City Engineering's experience and qualifications, and represents River City Engineering's best judgment. This cost estimate was prepared for feasibility analysis purposes only. River City Engineering does not guarantee that the actual construction cost will not vary from this estimate. Unit prices were used from SAWS average unit price list revised October 2005. Units prices will not remain constraint and will vary due to market variations such as inflation.

(see **Attachment 2**, Exhibit 3 Wastewater Collection System Costs for unit prices)

## 8.2 Wastewater Treatment Plant Costs

For the purpose of determining long range feasibility and probable impact fees, a cost estimate was prepared for the wastewater treatment plant facilities. The wastewater treatment plant facilities were located at several locations along the downstream path of the main trunk line through each watershed or drainage basin. The estimates include the capacity of the plant if the plant was to be located at the location shown on the trunk line. These plant locations are not intended to represent actual recommended locations for wastewater treatment plants, but do represent what capacity and associated costs would exist periodically down the stream of the trunk line. The costs estimates includes construction, basic engineering, easement acquisition, and survey. The cost estimates shown (Attachment 1 Exhibit 5 GVSUD proposed wastewater treatment capacity and costs vs. downstream locations) represent theoretical wastewater treatment plant locations, required capacity at the assumed location, and costs of proposed wastewater treatment facilities. This method allows GVSUD to estimate wastewater treatment capacity and costs anywhere along the collection system.

The following table represents wastewater treatment costs at the most downstream location within each drainage basin:

Green Valley Special Utility District Wastewater Treatment Costs Summary Most Downstream Drainage Basin Location		
Design Flow	1 EDU/Acre	3 EDU/Acre
	Costs (\$)	Costs (\$)
Drainage Basin A	\$ 7,898,433	\$ 20,310,255
Drainage Basin B	\$ 4,021,675	\$ 12,065,025
Drainage Basin C	\$ 4,832,870	\$ 14,498,610
Drainage Basin D	\$ 5,734,103	\$ 17,202,308
Drainage Basin E	\$ 26,179,965	\$ 39,269,948
Drainage Basin F	\$ 5,586,613	\$ 16,759,838
Drainage Basin G	\$ 6,440,683	\$ 16,561,755

(see **Attachment 2**, Exhibit 4, Wastewater Treatment Plant Capacity and Costs for unit prices (Costs/GPD))

From the above table the required cost to provide wastewater treatment is substantially different between 1 EDU/Acre and 3 EDU/Acre development densities. The actual wastewater capacity and costs will be somewhere between these two EDU densities.

## **9.0 Proposed Financing Opportunities**

GVSUD has several financing options when determining projects. The projects can be funded through equity, debt, or arrangements with the development community. For the debt arrangement, GVSUD could utilize the existing revenue streams from the water service to raise funds for wastewater. However, due to the political disagreement with water users who do not get wastewater services, this would probably not help GVSUD.

Through legislation, GVSUD could also designate portions of the GVSUD wastewater CCN service area as a taxing entity. This could also cause political disagreement with water service customers who do not get wastewater service.

### **9.1 Community Development Block Grant, Rural Development – U. S. Department of Agriculture**

The U. S. Department of Agriculture provides loans and grants for water and sanitary sewer projects through its Rural Development Program. First time water and sanitary sewer service projects usually receive favorable consideration.

The Rural Development Program has a Colonias grant program for which the entire amount of the requested funds is allowed. To be eligible for this program, the community has to be a declared or listed "Colonia". Further study is required to determine if any areas within the GVSUD wastewater CCN service area qualifies.

The typical grant program for this agency requires a match from the applicant. The match amount may vary from between 25 and 40 percent of the amount of the grant. We note that should the District receive funds from other programs, these funds could be used to meet the amount required for local participation. The Rural Development Program also has a low interest loan program for applicants to use to meet their match.

The Rural Development programs require that funds not be released to the applicant until a construction contract is entered into. Although engineering fees are eligible for grant funds, interim payments from the grant funds are not allowed. These fees would include the cost of a preliminary engineering report required for the program as well as the basic design fees. Design drawings and specifications must be accepted by Rural Development prior to bid. The bid package must incorporate standard forms and terminology required by the program. Typically, the process of applying for and receiving a grant from the Department of Agriculture, Rural Development, takes a long time requiring between 24 and 30 months from submittal to approval for bid.

These grants are favorable for improvement of low income area infrastructure. New high density development would not be favored for these types of grants.

## **9.2 Economic Development Administration**

The Economic Development Administration is part of the U. S. Department of Commerce. The purpose of this organization is to promote business growth and thus provide jobs for a service area. Grants for this program require written commitments from potential employers that will move to a service area if services are provided or statements from existing employers that they will move out if the services are not provided. The number of new jobs which can be attributed to the completion of the project is an important consideration for grants from this agency. Grants for this program typically require a 20 to 30 percent match from the applicant.

Processing time for the Economic Development Administration grant is typically between 12 and 18 months from submittal to approval for bid. Interim costs prior to construction will be paid as part of the process.

This approach could be utilized as commercial development increases along the IH-10 corridor.

## **9.3 Impact Fees from Prospective Developers**

Special Utility Districts may develop and institute an impact fee program to share the costs of providing infrastructure improvements to their service area. The operation of such a program is governed by state laws and must be adopted by the Texas Commission on Environmental Quality.

In this approach, a master plan for infrastructure improvements for a projected population at some time in the future and the associated costs for these improvements is developed. These costs are prorated to the total projected number of services, and per service costs assigned to each new service. As construction on lots for new developments begin, the impact fees for that lot are paid. Existing developments are not required to pay these impact fees.

The establishment of an impact fee program allows GVSUD to have the costs of infrastructure improvements to be partially borne by new development. Funds collected from new development are assigned to an audited account and then used to construct the proposed improvements, as they are required. GVSUD shall establish a wastewater impact fee subcommittee to manage the program.

It is extremely important that GVSUD establish a wastewater impact fee for new development. The GVSUD strategy to develop wastewater service through new development requires GVSUD to have Impact Fee policy in-place.

## **9.4 Municipal Bonds**

The District may issue revenue bonds for the financing of the proposed improvements based on the collection of future income from the project. The bonds would be issued based on the estimated costs of the proposed improvements in addition to associated issuance costs. Bonds are typically sold to Government agencies Federal – Rural Development Assistance (RDA), State of Texas Water Development Board (TWDB) and Private Bond Market. Interest rates and terms vary based on associated risk, taxable or tax-exempt issuance and lender. Bonds typically are 20-30 years in duration with a “call” period, minimum finance period of 10 years. Rates are typically 1 to 4 points over-prime lending rates. Presently these rates are 5-7%.

The bonds could be established through three different mechanisms. First, GVSUD could sell bonds based on the income from the water service revenues. This could be a political issue due to some water rate payers would not be benefiting from wastewater services, but are charged the rate of the bonds on their water bill. Second, GVSUD could establish its wastewater service area as a special taxing unit. This approach would require passed legislation for the special taxing entity. Again with this approach, the political turmoil would exist from some tax payers not benefiting from wastewater services.

Third, GVSUD would establish itself in the wastewater business by first taking ownership and operation of the Harvest Hills wastewater treatment plant. This would start revenues flowing into GVSUD. As additional developments come on line, increased revenues could assist GVSUD to sell bonds for the capital required to install wastewater infrastructure to connect the new developed areas. The infrastructure increase would grow at the same pace as development and would slowly lead itself to more desirable regional wastewater collection systems and treatment facilities.

## **9.5 USDA Rural Development, TWDB, or Co Bank**

As GVSUD develops a wastewater customer base, further opportunities for the third-party debt financing option will materialize. A USDA Rural Development loan for wastewater infrastructure under 7 USCA §1926 will provide GVSUD with CCN protection from competing wastewater providers.

## **10.0 Proposed Impact Fees**

Communities as well as utility districts may develop and institute an impact fee program. The impact fee allows developers to share the costs of providing infrastructure improvements to their area. Wastewater impact fees and rates for local wastewater service providers are presented below.



New Braunfels Utilities charges a wastewater impact fee and a sewer tap fee. The wastewater impact fee is \$1,160 per connection and the sewer connection fee is \$655 per tap.

The City of Seguin also charges a sewer impact fee and a sewer tap fee. The sewer impact fee is \$500 and the sewer tap fee is \$470.

Cibolo Creek Municipal Authority (CCMA), who offers wholesale wastewater treatment to areas in the Green Valley SUD, charges a sewer impact fee of \$985 per EDU (equivalent dwelling unit). The cost of treatment is \$1.60 per 1,000 gallons.

GBRA charges a monthly service fee as well as a connection fee for the wastewater service it provides. The connection fee is \$1,000 per EDU and the monthly service fee is \$32.

<b>Green Valley Special Utility District Wastewater Impact Fees and Rates Neighboring Utilities</b>				
<b>Neighboring Utility</b>	<b>Wastewater Impact Fee</b>	<b>Wastewater Connection Fee</b>	<b>Cost of Treatment (\$/1000 gal)</b>	<b>Monthly Service Fee</b>
New Braunfels Utilities	\$1,160	\$655		
City of Seguin	\$500	\$470		
CCMA	\$985		\$1.60	
GBRA		\$1,000		\$32

The surrounding wastewater providers approach impact fees differently. These rates for the surrounding entities are considered normal for area developers. GVSUD should establish an impact fee rate schedule that benefits GVSUD and remains within the range of the surrounding wastewater providers. Further, GVSUD should consult with an accountant to establish the required rate necessary for GVSUD to recover the proper amount of capital.

To evaluate feasibility and determine probable impact fees, the total project cost of each drainage area was divided by the expected number of EDU's in each respective drainage area. It should be noted that these costs do not include any costs associated with operation and maintenance of the wastewater treatment facilities or service lines from customers to the collection system.

<b>Green Valley Special Utility District Wastewater Impact Fees Main Wastewater Collection System (Trunk Lines)</b>						
<b>Drainage Basin</b>	<b>Total LUE 1 (EDU/acre)</b>	<b>Total LUE 3 (EDU/acre)</b>	<b>Dev Density of 1 EDU/acre</b>		<b>Dev Density of 3 EDU/acre</b>	
			<b>Total Costs</b>	<b>Potential Impact Fee</b>	<b>Total Costs</b>	<b>Potential Impact Fee</b>
Drainage Basin A	9,211	27,633	\$11,212,950	\$1,217	\$13,229,734	\$479
Drainage Basin B	4,690	14,070	\$3,379,449	\$721	\$3,848,841	\$274
Drainage Basin C	5,636	16,908	\$4,151,280	\$737	\$4,773,440	\$282
Drainage Basin D	6,688	20,064	\$3,072,068	\$459	\$4,188,876	\$209
Drainage Basin E	35,618	106,854	\$34,601,813	\$971	\$43,682,177	\$409
Drainage Basin F	6,515	19,545	\$5,230,109	\$803	\$6,739,925	\$345
Drainage Basin G	7,511	22,533	\$3,963,086	\$528	\$4,673,334	\$207
<b>Total</b>	<b>75,869</b>	<b>227,607</b>	<b>\$65,610,755</b>	<b>\$865</b>	<b>\$81,136,327</b>	<b>\$356</b>

<b>Green Valley Special Utility District Wastewater Impact Fees Wastewater Treatment Facility</b>						
<b>Drainage Basin</b>	<b>Total LUE 1 (EDU/acre)</b>	<b>Total LUE 3 (EDU/acre)</b>	<b>Dev Density of 1 EDU/acre</b>		<b>Dev Density of 3 EDU/acre</b>	
			<b>Total Costs</b>	<b>Potential Impact Fee</b>	<b>Total Costs</b>	<b>Potential Impact Fee</b>
Drainage Basin A	9,211	27,633	\$7,898,433	\$858	\$20,310,255	\$735
Drainage Basin B	4,690	14,070	\$4,021,675	\$858	\$12,065,025	\$858
Drainage Basin C	5,636	16,908	\$4,832,870	\$858	\$14,498,610	\$858
Drainage Basin D	6,688	20,064	\$5,734,103	\$857	\$17,202,308	\$857
Drainage Basin E	35,618	106,854	\$26,179,965	\$735	\$39,269,948	\$368
Drainage Basin F	6,515	19,545	\$5,586,613	\$858	\$16,759,838	\$858
Drainage Basin G	7,511	22,533	\$6,440,683	\$858	\$16,561,755	\$735
<b>Total</b>	<b>75,869</b>	<b>227,607</b>	<b>\$60,694,342</b>	<b>\$800</b>	<b>\$136,667,739</b>	<b>\$600</b>

The above two tables estimate the impact fee range that GVSUD may need to require for new wastewater development. The top table represents potential impact fees associated with the main wastewater collection system, the bottom table shows potential impact fees associated with construction of wastewater treatment facilities.

The following table is a summary of the above two tables combined.

<b>Green Valley Special Utility District Wastewater Impact Fee Summary Wastewater Collection and Treatment Combined</b>						
<b>Drainage Basin</b>	<b>Dev Density of 1 EDU/acre</b>			<b>Dev Density of 3 EDU/acre</b>		
	<b>Wastewater Collection Impact fee</b>	<b>Wastewater Treatment Impact fee</b>	<b>Total Impact Fee</b>	<b>Wastewater Collection Impact fee</b>	<b>Wastewater Treatment Impact fee</b>	<b>Total Impact Fee</b>
Drainage Basin A	\$1,217	\$858	<b>\$ 2,075</b>	\$479	\$735	<b>\$1,214</b>
Drainage Basin B	\$721	\$858	<b>\$ 1,578</b>	\$274	\$858	<b>\$1,131</b>
Drainage Basin C	\$737	\$858	<b>\$ 1,594</b>	\$282	\$858	<b>\$1,140</b>
Drainage Basin D	\$459	\$857	<b>\$ 1,317</b>	\$209	\$857	<b>\$1,066</b>
Drainage Basin E	\$971	\$735	<b>\$ 1,706</b>	\$409	\$368	<b>\$776</b>
Drainage Basin F	\$803	\$858	<b>\$ 1,660</b>	\$345	\$858	<b>\$1,202</b>
Drainage Basin G	\$528	\$858	<b>\$ 1,385</b>	\$207	\$735	<b>\$942</b>

From the above impact fee summary, GVSUD may need to charge a wastewater impact fee of approximately \$2000 per EDU:

### 11.0 Recommendations

As previously developed, the cost of facilities to provide centralized wastewater service is less than or comparable to that provided by individual private on-site septic disposal systems. The benefits of public health and safety, water quality, both surface and groundwater protections are clearly evident.

The attached list of items are action items for consideration and implementation by the GVSUD Board of Directors.

1. Assume ownership and operation of Harvest Hills Property wastewater treatment plant.
2. Explore partnership opportunities with the City of Marion.
3. Aggressively pursue potential wastewater collection and treatment projects.
4. Limit Independently Owner Utility (IOU) systems.
5. Adopt design criteria standards.
6. Adopt Impact Fees.
7. Identify develop density to stay consistent across entire GVSUD wastewater CCN.
8. GVSUD Attorney Mr. Mark Zeppa has recommended amending GVSUD by-laws to clearly delineate its ability to provide wastewater service to its customers. Mr. Zeppa has suggested draft rules changes for adoption.
9. Establish wastewater management team as shown in the below hierarchy diagram.
10. Establish GVSUD wastewater subcommittee.
11. Establish and adopt official GVSUD wastewater policies, tariffs, and by-laws.

12. Establish contract with Harvest Hills as wastewater owner and operator. GVSUD shall develop a service plan to provide wastewater service to this tract and possibly adjacent tracts.
13. Revise service applications (standard and non-standard) and easement applications forms to reflect not only water but wastewater as well.
14. Establish sales and marketing strategy for wastewater services.
15. GVSUD should meet with City of Santa Clara officials to discuss wastewater service plans. The above No. 5 Harvest Hills tract is in Santa Clara's political limits. To prevent future wastewater utilities from entering GVSUD wastewater CCN service area, a development plan to resolve these issues should be explored.
16. The City of Marion has expressed a desire to provide wastewater service outside its city limits. Discussions should be held to formalize a service plan between GVSUD and the City of Marion to insure infrastructure for wastewater service.
17. Discussion with GBRA on further regional long range wastewater facilities of much larger scale. Future wastewater needs for the GBRA CCN located to the Northeast of GVSUD's CCN will exceed current site capacity and a new larger site will be required.
18. New developments will fund wastewater systems with new construction. GVSUD should look for possible grants and innovative funding options to provide centralized service to existing subdivisions and developments. This would allow retrofitting and abandonment of their onsite systems for conversion to a centralized system. This can occur as service plans are developed.
19. Discuss with the residents of Treasure Island area the necessity to do away with existing individual below grade septic systems that could be potentially contaminating the Guadalupe River (Lake McQueeney). Propose GVSUD options to provide quality wastewater service to this area.
20. Adopt a formal development density to stay consistent throughout the GVSUD wastewater CCN service area.
21. Consider USDA Rural Development Assistance or TWDB type loans for CCN protection from competing wastewater providers who may attempt to take portions of GVSUD wastewater CCN service area.
22. Establish GVSUD wastewater design criteria standards.
23. Further study to implement wastewater impact fees.
24. Promote and advertise public meeting with development community.
25. Hire wastewater operator

River City Engineering, Ltd. is prepared to assist GVSUD with this long-term planning and assessment to implement this much needed utility service. Mutual cooperation with area utility systems and regulator authority will insure proper service and development.

## **12.0 Management Plan**

### GVSUD Board of Directors, General Manager, and Staff

For GVSUD to aggressively enter into the wastewater business there must be a wastewater team established. Due to the start-up nature of GVSUD involvement with wastewater, GVSUD needs internal motivation and aggressive wastewater board of directors, general manager, and staff. Included with duties of GVSUD should be the development of vision and mission statement to clearly define to its customers the long term wastewater goals.

GVSUD wastewater manager should continuously search for wastewater business opportunities to gain the competitive advantage with potential competition in the GVSUD wastewater CCN service area. GVSUD should organize wastewater subcommittee who can spend the time required to properly manage and get wastewater action items completed.

### Engineering Consultant

GVSUD has hired River City Engineering, Ltd. (RCE) to develop this overall wastewater master plan. RCE is prepared to provide GVSUD technical direction beyond the adoption of this master plan and assist GVSUD into the wastewater business.

### Legal Consultant

Mark Zeppa has been hired to represent GVSUD to establish formal policies and tariff rates. Also, Mr. Zeppa provides advice with general legal approach for GVSUD policy, rate structure and tariffs, rules and regulations, by-laws, and the eventual implementation of development impact fees.

### Financial Consultant

GVSUD has several options to consider for funding of wastewater projects. GVSUD needs to establish a capital budgeting procedure. The procedure should at a minimum define the process of project identification, evaluation, selection, and verification.

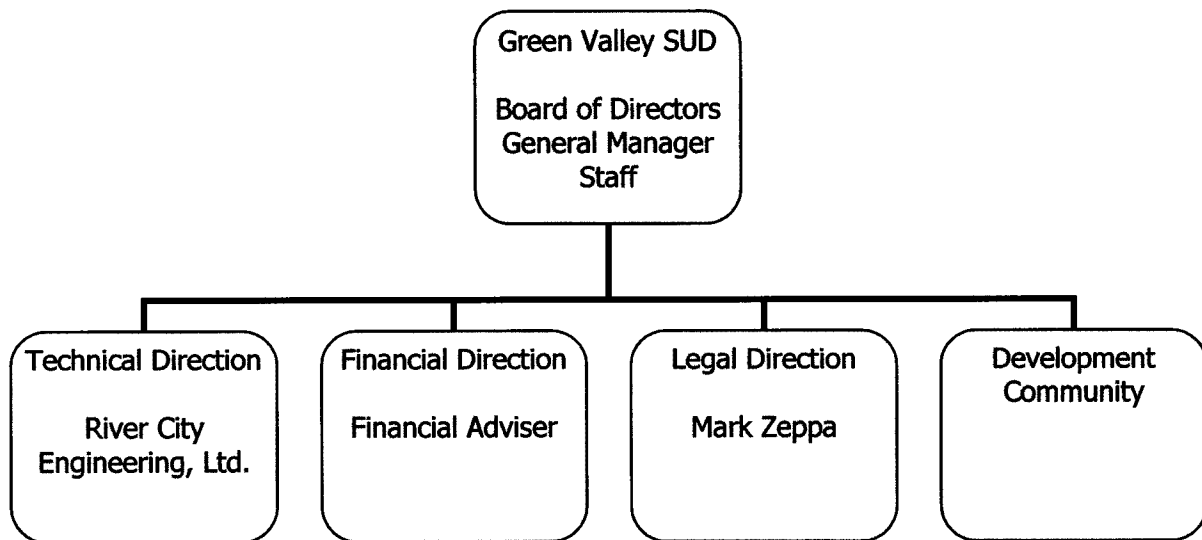
GVSUD should hire a financial adviser to assist with bond opportunities. The financial adviser shall assist GVSUD with capital through equity versus capital through debt, financial consultation and direction, and bond management.

GVSUD should also be aware of available grants and loans.

Development Community

The development community shall provide direction and assistance with initial wastewater start-ups dealing with new development. The area is prime for growth and the development community can assist bringing wastewater customers to GVSUD. There is a great deal of negotiation and dialog between GVSUD and the development community dealing with subjects like project phasing and cost assistance.

The Green Valley Special Utility District  
Wastewater Business Team

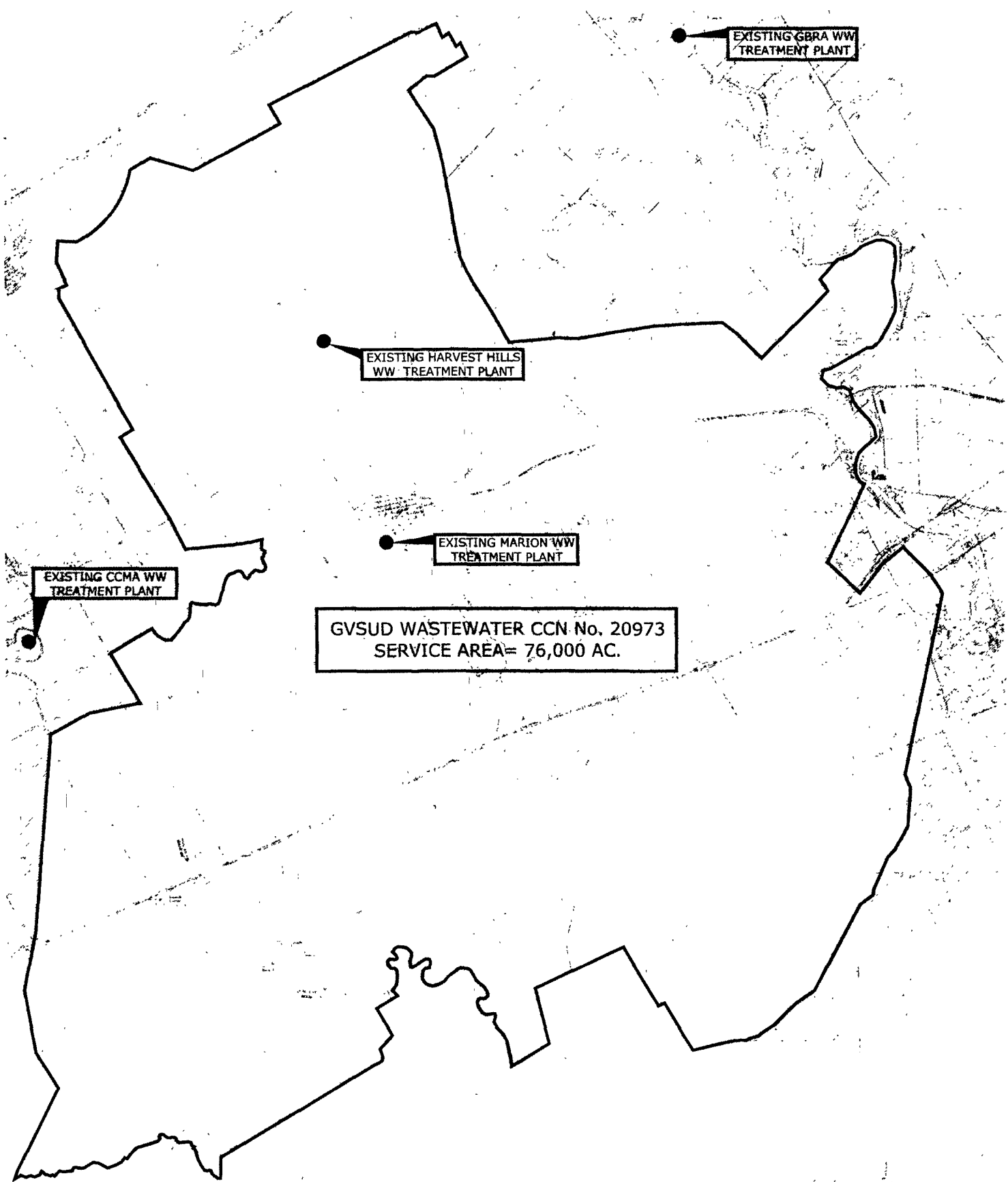
**13.0 Conclusion**

RCE looks forward to working with GVSUD with the wastewater venture in the future. The GVSUD wastewater CCN service area is prime for development and RCE recognizes GVSUD for the leadership and vision required to bring wastewater services to their customers. With continued support from the above wastewater team, GVSUD should prove itself to be the leader for quality wastewater service in the region.

# Attachment 1

## Exhibit Drawings

- Exhibit 1 GVSUD Existing Wastewater CCN No. 20973 Boundary
- Exhibit 2 GVSUD Drainage Basins
- Exhibit 3 GVSUD Area Calculations and Collection Points
- Exhibit 4 GVSUD Proposed Wastewater Main Collection System
- Exhibit 5 GVSUD Theoretical Locations of Wastewater Treatment Capacity and Costs vs. Downstream Locations
- Exhibit 6 GVSUD Proposed Growth and Development



EXISTING GBRA WW  
TREATMENT PLANT

EXISTING HARVEST HILLS  
WW TREATMENT PLANT

EXISTING MARION WW  
TREATMENT PLANT

EXISTING CCMA WW  
TREATMENT PLANT

GVSUD WASTEWATER CCN No. 20973  
SERVICE AREA= 76,000 AC.

**LEGEND**

- MARION WWTW, CCN 2097
- CINCINNATI CITY LIMITS AND STD CCN 2098
- HARVEST HILLS WWTW, CCN 2099
- CCMA WWTW, CCN
- BRAY CENTRAL, CCN 2090
- NEW BRADENBURY, CCN
- ACACIETTE WWTW, CCN 2092
- HEMLOCKE WWTW, CCN 2094
- GREEN VALLEY WATER/SERVE, CCN



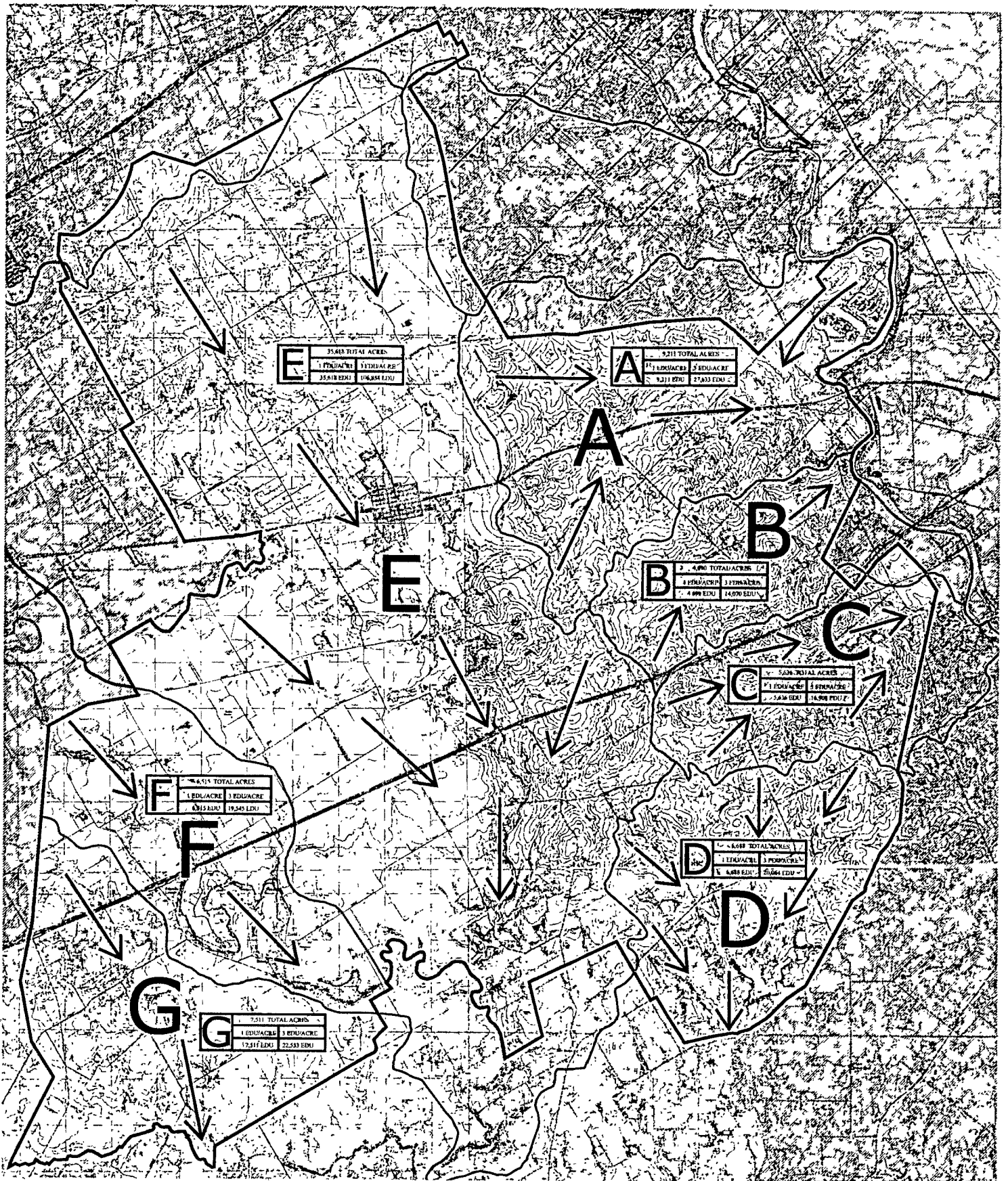
SCALE 1" = 2000'

**EXHIBIT-1  
EXISTING GVSUD WASTEWATER CCN BOUNDARY**

DESIGNED SH PROJECT NO. 6096-07 DATE 11/2006 SHEET NO 1 OF 6

	<b>RIVER CITY ENGINEERING, LTD.</b> CONSULTING CIVIL ENGINEERS		
	3801 SOUTH 7 <sup>th</sup> STREET AUSTIN, TEXAS 78704-7047 PHONE: (512) 442-3008 FAX: (512) 442-8522	1011 W COUNTY LINK ROAD SUITE 1 NEW BRADENBURY, TEXAS 78130 PHONE: (830) 626-3588 FAX: (830) 626-3601	





- LEGEND**
- MENDEN RIVER C&M 200
  - CIRCLE CITY LIMITS AND 8TH C&M 1880
  - SPANISH HILL W&C C&M 1886
  - OCALA RIVER C&M
  - SALT CENTRAL C&M 1886
  - NEW BRAUNFELS C&M
  - SCHMIDT'S RIVER C&M 2007
  - SCHMIDT'S WATER C&M 1846
  - MARKLE WATERS
  - GREEN VALLEY WATER/WATER C&M
  - DRAINAGE FLOW DIRECTIONS



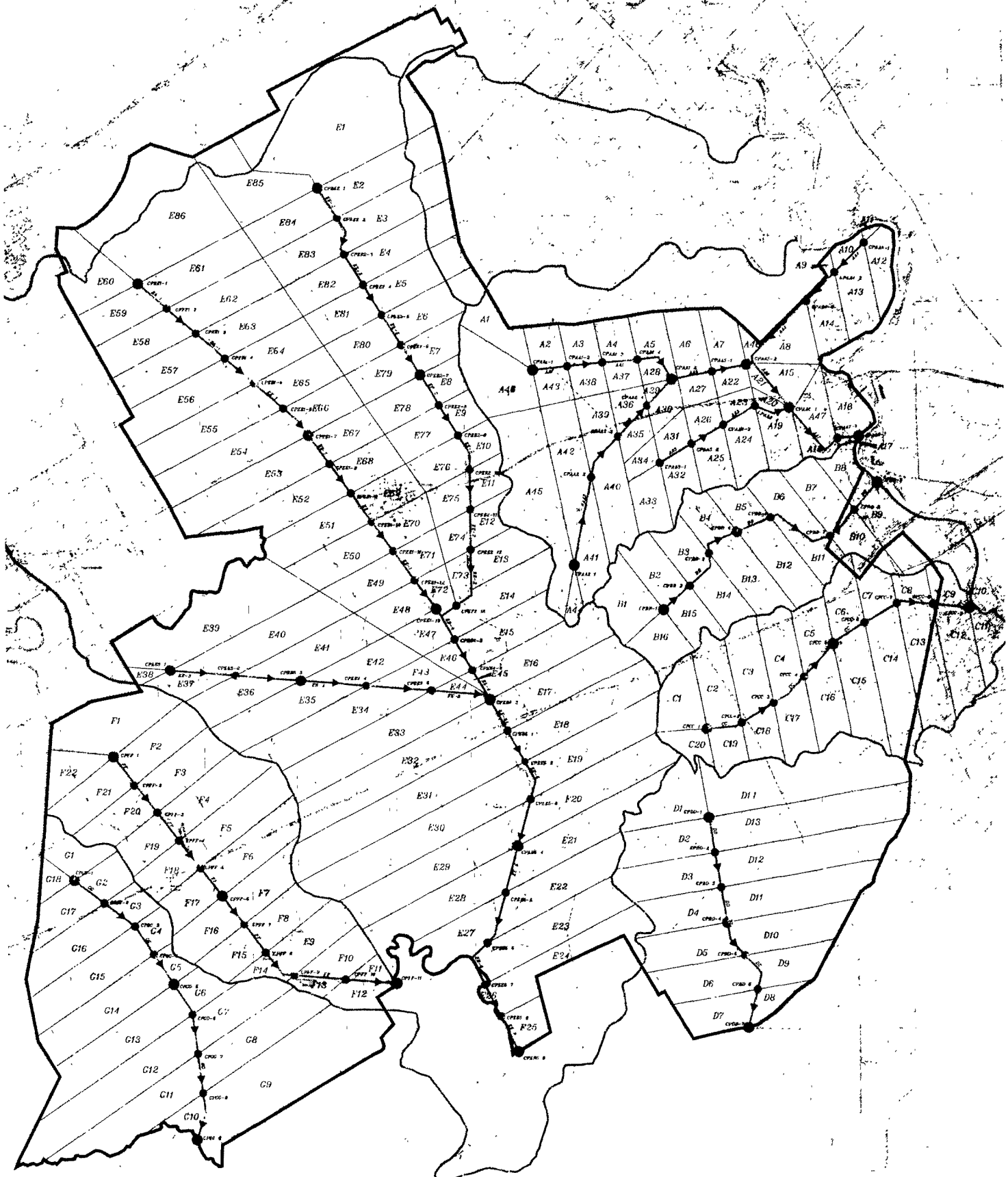
**EXHIBIT-2**  
**GVSUD DRAINAGE BASINS**

DESIGNED BY: SH PROJECT NO. 6096-07 DATE 11/2006 SHEET NO. 2 OF 6

**RIVER CITY ENGINEERING, LTD.**  
CONSULTING CIVIL ENGINEERS

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NEW BRAUNFELS, TEXAS 78130  
PHONE-(830)-828-3288  
FAX-(830)-828-9801



**LEGEND**


- MARSH SPRING COX 2000
- CIRILO CITY LIMITS AND RD COX 2000
- SPRING HILL SEC COX 2000
- ORSA SERVICE COX
- MARY CENTRAL COX 2000
- NEW BRANFORD COX
- SCHREIBER SERVICE COX 2000
- SCHREIBER WATER COX 2000

- GREEN VALLEY WATER/SURFER COX
- MAJOR MAINS
- DRAIN TRUNKS
- SUB MAINS
- COLLECTION POINTS
- AREA IDENTIFICATION
- (1) (2) (3) COLLECTION POINT ID
- PA-5 MAIN TRUNK ID




**EXHIBIT-3  
GVSUD AREA CALCULATIONS AND COLLECTION POINTS**

DESIGNED SH PROJECT NO 6096-07 DATE 11/2006 SHEET NO 3 OF 6

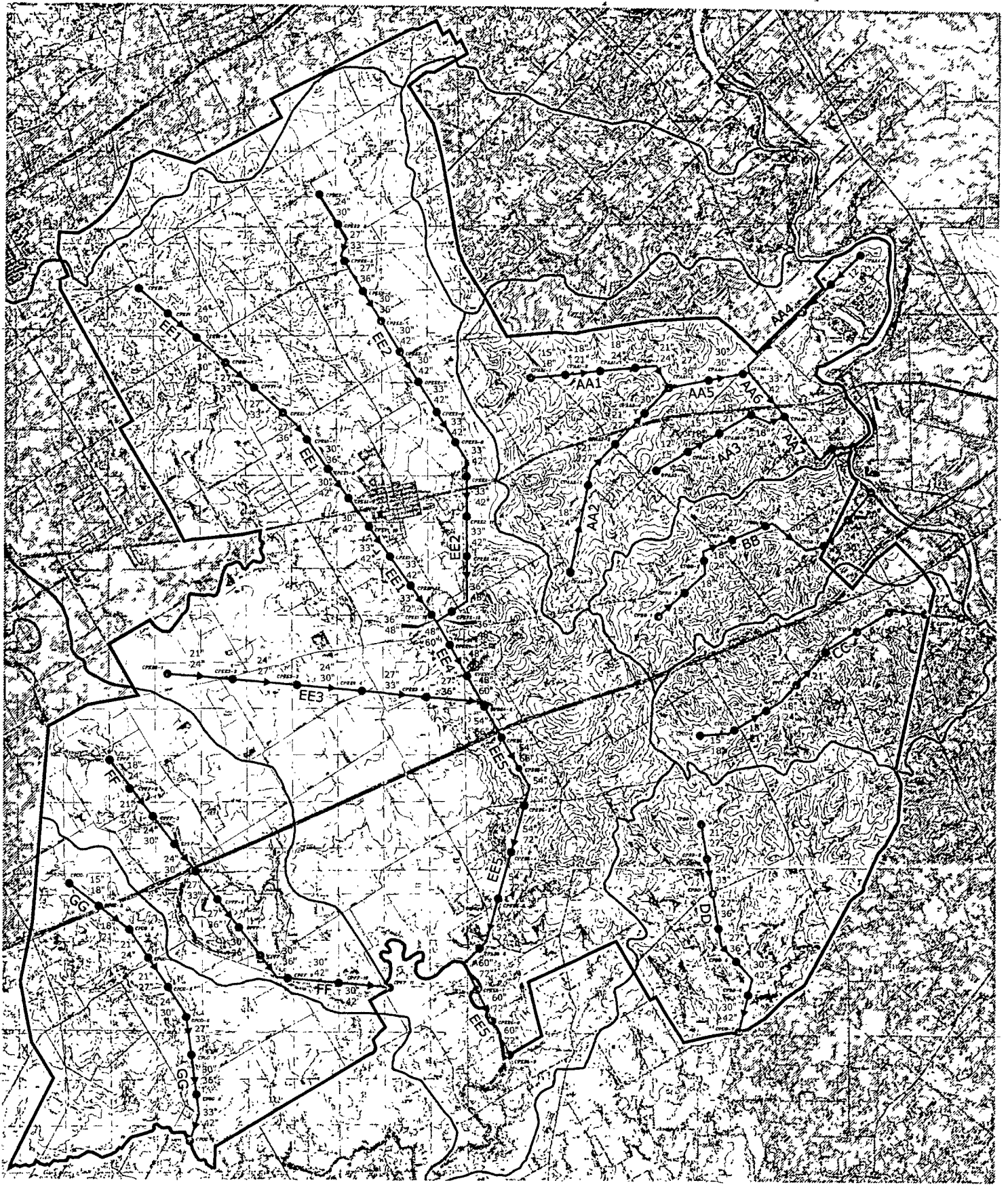


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 PHONE (409) 826-2588  
 FAX (409) 826-1801



- LEGEND
- MADISON RIVER CCN 2000
- ORANGE CITY LIMITS AND RD CCN 1840
- SPRING HILL WCD CCN 1840
- OCALA RIVER CCN
- EAST CENTRAL CCN 1840
- NEW BRAUNFELS CCN
- BONAVILLE RIVER CCN 1840
- BONAVILLE WATER CCN 1840
- ORIGIN VALLEY WATER/WWWR CCN
- MAJOR DRAIN
- DRAIN TRUNK
- 30" PIPE DIAMETER FOR 1 RESIDUAL DEVELOPMENT DENSITY
- 42" PIPE DIAMETER FOR 3 RESIDUAL DEVELOPMENT DENSITY
- COLLECTION POINT
- CP#1-100 COLLECTION POINT ID



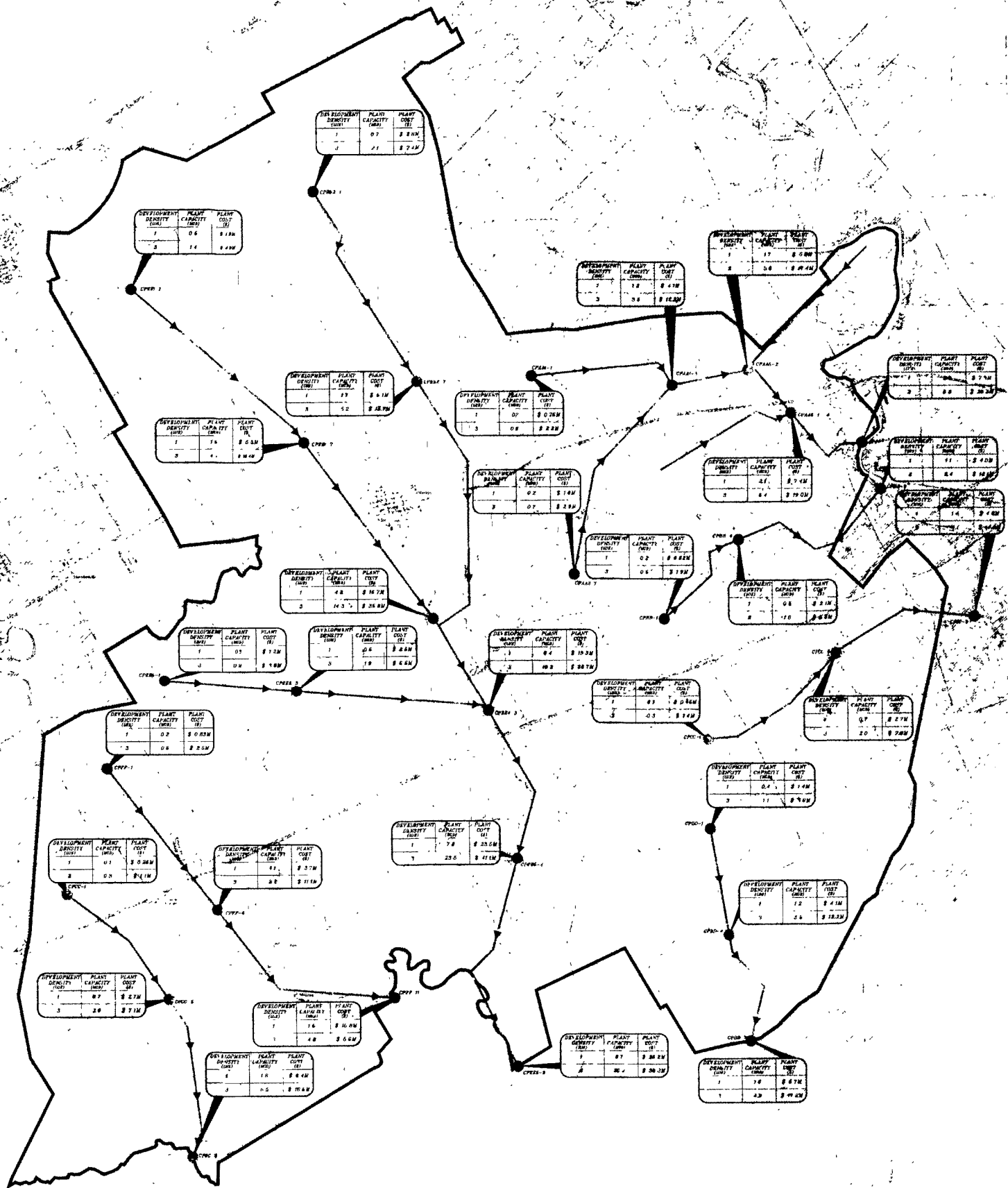
**EXHIBIT-4**  
**GVSUD PROPOSED WASTEWATER MAIN COLLECTION SYSTEM**

DESIGNED: SH      PROJECT NO 6096-07      DATE 11/2006      SHEET NO 4 OF 6

**RIVER CITY ENGINEERING, LTD.**  
 CONSULTING CIVIL ENGINEERS

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1011 W COUNTY LINK ROAD, SUITE C  
 NW BRAINFELS, TEXAS 78130  
 PHONE (830) 826-3588  
 FAX (830) 826-3801



**LEGEND**

- MARION BEVER CEN 2048
- CHOLD CITY LIMITS AND RD CEN 189
- SPRINKER HILL WAC CEN 188
- CHINA BEVER CEN
- BART CENTRAL CEN 186
- NEW BRANFORD CEN
- SCHWITZ BEVER CEN 202
- SCHWITZ WATER CEN 184
- GREEN VALLEY WATERWAY CEN
- > DRAIN TRUNKS
- COLLECTION POINTS
- CP001 / COLLECTION POINT ID



**EXHIBIT-5**  
**GVSUD THEORETICAL LOCATIONS OF WASTEWATER TREATMENT CAPACITY AND COST VS. DOWNSTREAM LOCATIONS**

DESIGNED SH PROJECT NO 6096-07 DATE 11/2006 SHEET NO 6 OF 6

**RIVER CITY ENGINEERING, LTD.**  
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