

Exhibit CC
to Development Agreement
Utility Agreement

UTILITY CONSTRUCTION COST SHARING AGREEMENT FOR THE VERAMENDI DEVELOPMENT

This *Utility Construction Cost Sharing Agreement for the Veramendi Development* (the "Agreement") is made and entered into as of February 25, 2013, by and between NEW BRAUNFELS UTILITIES ("NBU"), a municipally owned utility charged with exclusive management and control of the water and sewer systems of the CITY OF NEW BRAUNFELS ("City") as authorized under Section 11.09 of the charter of the City; WORD-BORCHERS RANCH JOINT VENTURE, a Texas general partnership ("Developer"); and COMAL COUNTY WATER IMPROVEMENT DISTRICT NO. 1, a political subdivision of the State of Texas (the "District"). NBU, Developer, and the District are sometimes collectively referred to herein as the "Parties".

RECITALS

- A. Developer owns the rights to acquire approximately 2,400 acres of land (the "Property") located in Comal County, Texas and within the extraterritorial jurisdiction of the City and within the geographical boundaries of the District. The Property is more particularly described in the attached **Exhibit No. 4**. In order for NBU to provide long-term, adequate water and sewer service to the Property, major potable water and sanitary sewer infrastructure facility improvements will need to be constructed;
- B. The Word-Borchers Ranch Real Estate Limited Partnership, a Texas limited Partnership, (the "Landowner") is the currently the owner of the Property. By the signature below of its authorized representatives the Landowner affirms it has an agreement with Developer as described in A above and accepts and consents to the terms of this Agreement;
- C. Developer also is or will be party to the February 25, 2013 *Development Agreement Between City of New Braunfels and Word-Borchers Ranch Joint Venture for Proposed Mixed Use Development* (the "Development Agreement") authorizing development of the Property in accordance with the Master Framework Plan attached as **Exhibit No. 5**, as it will be amended from time to time under the Development Agreement. The Property may also be referred to in this Agreement as the Veramendi Development;
- D. Developer has filed a service extension application for potable water and sanitary sewer service for the Property, which application requests cost participation by NBU for oversizing the elevated storage tank within the Property and a rebate of capital recovery fees for the elevated storage tank and booster station pursuant to the NBU's Water Systems Connection and Construction Policy dated May 2003 (the "NBU Policy");
- E. As provided in the NBU Policy, a written contract is required between the Developer, the District and NBU, as well as a study determining the amount of cost reimbursement which may be appropriate;
- F. The Chief Executive Officer of NBU ("CEO") has determined that (i) the elevated water storage tank and booster station that Developer proposes to construct are designated in the NBU's current impact fee capital improvements plan for that category of capital improvement; (ii) the size, of the proposed elevated water storage tank and booster

station complies with generally accepted engineering practices, and other planning criteria of NBU, and the final design will comply with the NBU Policy; (iii) the proposed elevated water storage tank and booster station are a reasonable addition to the NBU's water system; (iv) funds for participating in the cost of oversizing will be available to meet the proposed payment schedule; and (v) the study prepared by the Developer proposing the rebate of capital recovery fees fairly apportions the improvement costs among prospective users of the facilities to be installed;

- G. NBU desires to increase the size of the elevated water storage tank from 1.5 million gallons to 2.5 million gallons, and to request oversizing of various water and wastewater lines depicted in the Developer's proposed utility infrastructure facilities and as described in Exhibit No. 1, subject to final review and approval by NBU prior to the beginning of design of the proposed improvements;
- H. Developer has agreed to construct its proposed water and wastewater facilities as generally shown in **Exhibit No. 2**, Master Water Plan, and **Exhibit No. 3**, Master Sewer Plan, and as further described and recommended in the Utility Engineering Report of August 2011, and included in this Agreement as **Exhibit No. 6**;
- I. Developer understands and agrees that the current available uncommitted service capacity in the NBU water and wastewater infrastructure is limited to 400 living unit equivalents ("LUEs") of water and 400 LUEs of wastewater service and that additional service capacity may be available to Developer if Developer assists NBU with the installation of additional offsite utility infrastructure as Developer and NBU may agree in accordance with Section 5.01 below;
- J. Developer agrees to construct the elevated water tank and booster stations at sites within the Property acceptable to NBU to service the needs of the development on the Property, as well as the surrounding area, and that Developer will pay for the design and construction of the elevated tank and other improvements in accordance with this Agreement;
- K. After considering the factors set forth in the NBU Policy, the CEO finds that it is appropriate to enter into this Agreement to reimburse Developer for utility facility oversizing identified in this Agreement, and to pay Developer a rebate of capital recovery fees in accordance with the terms of this Agreement and the NBU Policy;
- L. NBU and Developer are entering into this Agreement to set forth more particularly the rights and obligations of NBU and Developer with respect to the site, design, construction and payment for the proposed water and wastewater facilities, including the elevated water storage tank and booster station;
- M. This Agreement is necessary to protect the health, safety and general welfare of the community and to limit the harmful effects of substandard subdivisions; to facilitate Developer's construction of the desired facilities; and to protect the City of New Braunfels and NBU from bearing any unnecessary expense of constructing or completing subdivision improvements; and

- N. This Agreement is authorized by and consistent with state law, the ordinances, regulations, and policies of the City of New Braunfels and NBU, as well as other requirements governing development of subdivisions, and provision of utility services to customers of NBU.

NOW THEREFORE, IN CONSIDERATION of the foregoing recitals and the mutual covenants, promises and obligations by the parties set forth in this Agreement, the Parties agree as follows:

ARTICLE I.

For purposes of this Agreement, the District may act on behalf of the Developer in accordance with the terms and conditions of this Agreement.

ARTICLE II. Definitions

Section 2.01 For purposes of this Agreement, the terms set forth below shall have the meanings set forth below.

- (a) **Agreement:** This *Utility Construction Cost Sharing Agreement for the Veramendi Development*.
- (b) **City:** The City of New Braunfels, Texas, a Texas home rule city.
- (c) **Consent Resolution:** The February 25, 2013 "Consent Resolution" of the City of New Braunfels consenting to the creation of the Comal County Water Improvement District No. 1.
- (d) **Developer:** The Word-Borchers Ranch Joint Venture, a Texas general partnership, whose principal place of business is New Braunfels, Texas.
- (e) **Development Agreement:** The February 25, 2013 *Development Agreement Between City of New Braunfels and Word-Borchers Ranch Joint Venture for Proposed Mixed Use Development* by and between the City of New Braunfels and Word-Borchers Ranch Joint Venture.
- (f) **District:** The Comal County Water Improvement District No. 1, a water control and improvement district created under Section 59, Article XVI of the Texas Constitution and authorized and operating pursuant to Chapter 9038 of the Texas Special Districts and Local Laws and Chapters 49 and 51 of the Texas Water Code.
- (g) **Fire Flow:** Water required for firefighting purposes as defined in the City of New Braunfels Code of Ordinances.
- (h) **GWWTTP:** The Gruene wastewater treatment plant owned and operated by New Braunfels Utilities and commonly referred to as the Gruene Plant.
- (i) **Impact Fee:** The water and wastewater capital recovery fees, defined in Chapter 130,

Article VI, Section 130-336 of the City of New Braunfels Code of Ordinances.

- (j) Internal Water Facilities: Those water facilities necessary to provide water service within the Property.
- (k) Internal Sewer Facilities: Those sewer facilities necessary to provide sewer service within the Property.
- (l) Intensity of Utility Service and Phasing Exhibit: The exhibit attached as Exhibit 1 to the Utility Engineering Report.
- (m) LUE: The standardized unit of measure for water and wastewater service as defined in Section 130-336 of the City of New Braunfels Code of Ordinances.
- (n) Master Framework Plan: The land use plan attached hereto as Exhibit 5 and as amended from time to time in accordance with the Development Agreement.
- (o) NBU: New Braunfels Utilities, a municipally owned utility charged with exclusive management and control of the water and sewer systems of the City of New Braunfels, as authorized under Section 11.09 of the charter of the City.
- (p) NBU Facilities: Those water and sewer facilities owned by NBU.
- (q) Parties: ~~The parties to this *Utility Construction Cost Sharing Agreement for the Veramendi Development*~~, specifically New Braunfels Utilities, Word-Borchers Ranch Joint Venture, and the Comal County Water Improvement District No. 1.
- (r) Policy: The Water Systems Connection and Construction Policy of New Braunfels Utilities, as amended from time to time.
- (s) Potable Water: All water distributed by NBU which meets the applicable state, local and federal standards for human consumption or which may be used in the preparation of foods or beverages, specifically including, by way of example and not in limitation, the rules of the Texas Commission on Environmental Quality (TECQ) set out in 31 TAC Section 290.
- (t) Drinking water standards: The TCEQ rules setting drinking water standards set out in 31 TAC Section 290.
- (u) Project: The master-planned, mixed use development on the Property as more fully described in the Development Agreement, and commonly known as the Word-Borchers Ranch or the Veramendi Development.
- (v) Property: Approximately 2,462 acres of real property in Comal County, Texas, within the Extraterritorial Jurisdiction of the City of New Braunfels, and as more particularly described in Exhibit No. 4.

- (w) Utility Engineering Report: The August 2011 "Word-Borchers Tract Utility Engineering Report—Water and Sewer Infrastructure" by Pape-Dawson Engineers.

ARTICLE III.

Section 3.01 Water Service.

- (a) The Property is within the area covered by Certificate of Convenience and Necessity Number 10677 issued to New Braunfels Utilities by the Texas Commission on Environmental Quality or its predecessor agency. NBU projects the Property will require a total of 7,686 LUEs of water service for the ultimate build-out of the Property. Subject to Developer's satisfaction of its obligations under this Agreement, NBU agrees to provide water service in such capacity to customers within the Property. NBU shall provide such service at such time or times as the Property, or a specific phase of it, is completed by Developer according to the terms of this Agreement and NBU policy in effect at that time, and accepted by NBU. The number and location of the points of connection between NBU's Facilities and the Internal Water Facilities shall be agreed upon by NBU and the Developer. All references in this Agreement to "water" shall be deemed to refer to "Potable Water" unless the water is expressly referred to as non-potable water.
- (b) NBU projects that sufficient water capacity exists or will be available to provide the projected LUEs of water to serve the Property. In addition, NBU acknowledges the Property is included in the current NBU Water Availability Report submitted to Comal County.
- (c) Subject to Developer completing its obligations under this Agreement and NBU Policy, NBU shall manage its water supply, treatment and distribution facilities so that the projected capacity to serve development within the Property is available at the time(s) that the water facilities within the Property are approved and accepted by NBU. NBU has within its water supply capacity to provide the Property with up to 400 LUEs of water provided that Developer constructs Internal Water Facilities that meet NBU standards and policies.
- (d) As required by law to serve the Property, NBU agrees to expand, enlarge, and modify its water supply, treatment and distribution facilities, and to secure all necessary approvals of applicable local, state and federal regulatory authorities.
- (e) To enable NBU to manage effectively its water system capacities so as to meet the future water needs outlined in this Agreement and NBU Policy, the Developer shall provide to NBU by December 31 of each year during the term of this Agreement, a written projection of the new development within the Property expected to be connected to the Internal Facilities within the year following that projection and to provide any other related information NBU may reasonably require.
- (f) NBU agrees to construct, at its cost and expense, improvements and new facilities outside the Property that NBU determines are needed to provide the water capacity to serve the expected needs of the Property.

Section 3.02 Construction of Internal Facilities.

- (a) As more fully described in Section 3.03, below, Developer shall be responsible for the construction of those Internal Facilities necessary to provide adequate potable water service and Fire Flow pressure within the boundaries of the Property. Unless provided otherwise in this Agreement, “**Internal Facilities**” means water and wastewater lines, water storage tanks, booster stations, and other physical structures or improvements related to or necessary for water and wastewater utility service within the Property.
- (b) NBU reserves the right to request oversizing of water facilities needed to serve the system beyond those required by the Property. NBU agrees to provide Developer with appropriate advance written notice of such oversizing requests prior to the Developer’s design of the related facilities and to pay Developer the cost of oversizing as permitted by NBU policy.

Section 3.03 Internal Facilities.

The development of the Property will include areas within NBU Pressure Zones 4 and 5. Of the 7,686 LUEs of water service projected for the ultimate build out of the Property, approximately 5,578 LUEs will be located within Pressure Zone 5 and approximately 2,102 LUEs will be located within Pressure Zone 4. In this regard, Developer may allocate said LUEs of water service within its Property without restriction provided that NBU first verifies that sufficient capacity exists for such usage at the pertinent location. Possible Internal Facilities necessary for potable water service for the development of the Property include the following, all of which Developer will be obligated to construct at its sole cost and expense:

- (a) An estimated 1,500-foot extension of the existing 12-inch water main in Oak Run Parkway;
- (b) A series of 120 to 150-foot extensions from the property to connect to the existing 12-inch water main along Loop 337 within the two pressure zones;
- (c) Multiple 8-inch and 12-inch mains in accordance with NBU’s policies and the proposed Word-Borchers Master Water Plan for the development (depicted in Exhibit 2);
- (d) A series of 12-inch to 24-inch mains along major roads to provide appropriate interconnections within the Property;
- (e) New elevated water storage tank as follows:
 - An elevated storage tank of 1.5 million gallons on a site within the Property determined by NBU with the shape and materials to be determined by NBU. The real property for the tank lot must be adequate to accommodate up to a 2.5 million gallon tank.
 - Utilization of 500,000 gallons of the new elevated tank as ground storage for Pressure Zone 4 and a new high service pump for Pressure Zone 4.

- (f) A new 16-inch main from the new water storage facility to service Pressure Zone 4;
- (g) A new 12-inch and a new 24-inch main from the proposed elevated storage facility along Loop 337 to serve Pressure Zone 5;
- (h) The proposed elevated water storage tank may be oversized by NBU;
- (i) A high service pump station at the proposed elevated tank site location to provide adequate service to the portions of the Property within Service Level 4. This high service pump station shall be designed to operate within similar parameters to existing pump stations operating within the Pressure Zone 4 (Kerlick Zone). This high service pump station shall provide appropriate flows for peak day demands and provide appropriate fire flows to the Property in accordance with NBU guidelines and City requirements.

Section 3.04 Fire Flow.

NBU shall deliver water service to the points of connection agreed upon by the Parties with sufficient quantity to meet Fire Flow requirements of applicable law and consistent with standards for NBU service in effect at the time of connection.

Section 3.05 Capacity Requirement for Potable Water Main System.

NBU will require the potable water main system within the Property located within Pressure Zone 5 to provide an additional pass through flow capacity of 5,000 gallons per minute, or the equivalent capacity of a 36-inch water main, from the northern property line at Hueco Springs Road to Loop 337. The final alignment and water main sizes to convey the additional flow capacity will be coordinated with the Developer. Selected main(s) to be oversized for the benefit of NBU will be coordinated with the Developer.

Section 3.06 Joint Efforts and Obligations.

- (a) NBU and Developer agree to coordinate the sizing of the new water mains (two [2] estimated) required to provide this additional pass through capacity. This additional capacity requirement will require the oversizing of proposed 12-inch and 16-inch distribution water mains to a 24-inch and a 36-inch water transmission main to eliminate the need for construction of parallel border mains.
- (b) NBU and Developer agree that Developer will be allowed to make 12-inch service taps at intervals of a minimum of 500-feet along the oversized transmission mains to provide service to developments adjacent to the larger transmission mains. Developer shall be subject to the fees for each tap in effect at that time if the tap is installed by NBU.

ARTICLE IV.

Section 4.01 Sewer Service. NBU projects s the Property will require a total of 6,427 LUEs of sewer collection, treatment and disposal service for the ultimate build-out of the Property. Subject to Developer's satisfaction of its obligations under this Agreement, NBU represents it has or will have facilities to provide the needed wastewater service. NBU shall provide such

service at such time or times as the Property, or a specific phase of it, is completed by Developer according to the terms of this Agreement and NBU policy in effect at that time, and accepted by NBU. The number and location of the points of connection between NBU's Facilities and the Internal Facilities shall be agreed upon by NBU and the Developer.

- (a) NBU has current wastewater treatment and collection capacity within its existing system to provide the Property with up to 400 LUEs of interim, initial sewer capacity, provided that Developer constructs the necessary Internal Facilities according to the terms of this Agreement. However, this capacity is not intended to offset or reduce the total projected LUEs specified above and will not be used to reduce the sewer collection and treatment infrastructure capacity required for the Property development. NBU agrees it may add new wastewater capacity to meet the needs of its system in accordance with the time frames required under law.
- (b) As more fully described in Section 4.02, below, Developer shall be responsible for the construction of those Internal Facilities necessary to provide wastewater service meeting the requirements mandated by state and federal law.
- (c) In order to have sufficient wastewater treatment capacity to serve the Property in excess of its present capacity, NBU agrees to construct at its own cost and expense, as and when required by 30 TAC § 305.12.6, as amended, and by any report submitted to the TCEQ pursuant to such administrative rule, a new wastewater treatment plant with sufficient capacity to serve the projected needs of the Property when combined with NBU's existing wastewater treatment plant capacity. NBU agrees that it will file a completed permit application with the TCEQ, and then commence and complete on-ground construction on such treatment plant within the time frames required by law.

Section 4.02 Internal Sewer Infrastructure.

- (a) The Property will include development within three sewersheds, with all generated sanitary sewer flows transferred through the NBU wastewater collection and treatment systems. Exhibit No. 3, Master Sewer Plan, reflects the preliminary alignments and locations of the proposed gravity mains, lift stations, and force mains required to provide sanitary sewer service to the Property.
- (b) The preliminary sizing of the facilities reflected in the Master Sewer Plan was defined to provide service to the proposed development only. NBU reserves the right to request extension of proposed gravity sewer mains within the Property in accordance with the NBU Policy in effect to support future developments north of this tract.

Section 4.03 Off Site Sewer Improvements.

- (a) NBU has developed a program for the expansion and/or replacement of the Blieders Creek Lift Station and Force Main and the GWWTP (collectively, the "**Offsite Improvements**"). The actual development rates of the Property will have a direct impact on these facilities. Developer will provide support and participation in the improvement or expansions of the Offsite Improvements according to the specific terms and conditions that will be outlined in a separate agreement with NBU and any reimbursement of

Developer will be governed by that separate agreement, and as allowed by the NBU impact fee policy in effect at that time. Developer and NBU agree that NBU's existing sanitary sewer facilities, including but not limited to the existing gravity mains located within the Property to the Blieders Creek Lift Station, the Blieders Creek Lift Station and Force Main, the GWWTP, and the existing easements, do not have adequate capacities or space to support and accommodate anticipated generated sewer flows and additional gravity sewer mains from the fully developed Property.

- (b) If NBU determines that the Blieders Creek Lift Station and Force Main are to remain in operation under the conditions defined in this Section 4.03, Developer agrees to provide, as part of its development of the Property, designs, surveys, and easement descriptions for the gravity outfall segments designated as S1 through S5.
- (c) NBU agrees to secure and purchase all additional easements required for construction of the proposed outfall main segments S1 through S5 to the Blieders Creek Lift Station.
- (d) NBU agrees to pay the cost for oversizing of wastewater lines that may be required to serve the Property based on the difference between the cost of the competitive bids received for the proposed lines and the cost of the competitive bids received for the oversized lines. NBU will reimburse Developer for the cost of oversizing such wastewater lines as provided in Article X.
- (e) Should NBU determine that a new and differently aligned gravity outfall sewer main, lift station, and force main to transfer generated sanitary sewer flows to the existing or relocated GWWTP are required to accommodate anticipated sewer flows, Developer agrees to coordinate the design and construction with NBU on the new facilities and participate in its share of these costs as described above.

ARTICLE V.

Non-Potable Water

Section 5.01 Re-Use Water. To the extent NBU has treated wastewater effluent ("Re-Use Water") not contracted for or reserved by NBU, Developer may request such unreserved Re-Use Water at NBU's customary rates provided that Developer pays the costs of the required permit, the construction of any new or additional infrastructure needed for the treatment of Re-Use water, and the new or additional infrastructure needed for transportation of the Re-Use Water from NBU treatment facilities to the boundary of the Property. The Re-Use Water shall meet all applicable state and federal standards for its intended re-use at the time of the request. Developer may use such water for the development and irrigation of the various parks and open spaces to be developed on the Property if such use is permitted by TCEQ rules and regulations. NBU shall assist and cooperate with Developer in seeking any permits necessary to allow the use of Re-Use Water on the Property.

Section 5.02 Re-Use Water Infrastructure and Rates. NBU and Developer will enter into a separate contract concerning Re-Use Water, including the costs for construction of infrastructure, the terms and conditions for use and the rates. Developer shall be responsible for obtaining any

permits required by TCEQ and the Edward Aquifer Authority (EAA) concerning Re-Use Water use and transportation within the Property.

Section 5.03 Developer Water. Subject to local and state regulations and requirements concerning Developer's use of non-potable water, NBU shall not preclude Developer from constructing, developing, operating, and maintaining groundwater wells within the Property for non-potable water service to the Project, provided that Developer is responsible for ensuring its facilities to transport and store such non-potable water (i) do not allow the non-potable water to enter the facilities or pipes of NBU and (ii) comply with all TCEQ and EAA rules and requirements. By way of example and not in limitation, Developer may develop and use such groundwater sources for the development and irrigation of the various parks and open spaces to be developed on the Property. NBU must be notified if Developer intends to construct, develop, operate, and maintain groundwater wells within the Property and will have the right to inspect Developer's facilities to assure compliance with this subsection.

ARTICLE VI.

Easements

Section 6.01 Costs. Except as required by Section 6.04 below, NBU shall pay for the costs and expenses to acquire all easements or rights-of-way necessary for the construction, installations and ongoing maintenance of the NBU Facilities outside the limits of this Property, including the extension of the Developer's gravity sewer main from the boundary of the Property at Loop 337 to the Blieders Creek Lift Station. Developer shall provide at no cost to NBU all necessary easements for the water and wastewater Internal Facilities at locations consistent with the Master Framework Plan, as amended, and as approved by NBU.

Section 6.02 Securing Rights Outside Property. NBU agrees to coordinate and secure all necessary rights of entry for design surveys and necessary easements for construction outside the Property.

Section 6.03 NBU Rights. The District acknowledges that assignment of rights or conveyance of rights-of-way for streets within the Property from Developer to the District will not limit or restrict the right of NBU to use such easements and rights-of-way. The District specifically understands and agrees that pursuant to this Agreement NBU will have the same right to use and access the streets, rights-of-way, and easements within the Property as NBU has within the City of New Braunfels.

Section 6.04 Determination of Easements. The Parties agree that NBU will have the right to determine the size and dimensions needed for the easements for the water and wastewater systems within the Property. No fencing or improvements will be installed on easements by the Developer or any third party. The easements established under this Agreement will be conveyed in the form required by NBU and may include sanitary control easements as buffer zones adjacent to the water tank lot and other real property conveyed by deed to NBU.

Section 6.05 Costs of Re-Location. Developer and the District agree that they will pay the costs for re-locating existing NBU facilities and will provide new easements within the Property for NBU facilities that the Texas Department of Transportation requires NBU to move due to the

expansion of Loop 337 adjacent to the Property. The costs include engineering and design fees, construction costs, and acquisition expenses for new easements needed to relocate NBU facilities out of the new State right of way along Loop 337. To the extent a third party may agree to accept responsibility for all or part of such costs, the District and NBU shall cooperate with efforts of the Developer to have such third party pay for all or part of such costs.

ARTICLE VII.

Design and Construction of the Internal Facilities

Section 7.01 Design.

- (a) Developer agrees to coordinate the locations and related alignments of the Internal Water and Wastewater Facilities within the Property that are acceptable to NBU. The site(s) and alignments of the potable water and primary sanitary sewer infrastructure improvements must have free access to a public road for water improvements or public easements for wastewater facilities and provide adequate areas at NBU's discretion to place, maintain, and operate the utility infrastructure improvements. Where appropriate, Developer must identify the proposed alignments and facility sites and obtain NBU's consent to such sites prior to preparation of the design drawings and bid documents for the water and wastewater Internal Facilities. Developer may locate its water and sewer mains on one side of the street only and will not be required to locate them on both sides of the street. Developer agrees to arrange for a professional engineer registered in the State of Texas to prepare design drawings and bid documents for the construction and installation of the Internal Facilities.
- (b) Except as otherwise provided herein, or agreed upon in writing by NBU and Developer, the water and wastewater Internal Facilities must be designed in conformance with NBU's design criteria, construction standards, and specifications for utility construction, including, without limitation, environmental protection requirements.
- (c) NBU is authorized to review and approve the design drawings and its approval will not be unreasonably conditioned, withheld or delayed. Nevertheless, approval by NBU shall not waive or relieve Developer, its employees, agents, and representatives from compliance with the standards, regulations, rules, and directives of the Texas Commission on Environmental Quality (TCEQ) and any other regulatory agency or body.

Section 7.02 Project Bidding for NBU Participation Projects.

- (a) Developer must solicit and publish invitations for competitive bids and in conformance with NBU's standard bidding and procurement procedures for all projects that will be oversized by NBU or that will receive rebates towards Capital Recovery Fees, also referred to as Impact Fees.
- (b) Developer must bid the work out in a manner that allows the incremental cost of the oversized utility infrastructure facilities described in Articles III, IV and X to be clearly ascertained inasmuch as NBU's oversizing reimbursement obligations will extend only to the incremental cost increase attributable solely to the increased size of such facilities.

NBU reserves the right to request additional bids for oversizing mains, for alternate configurations of the elevated water storage tank and high service pump station components. Final size and configurations of the elevated water storage tank and high service pump station configuration and capacities will be selected at NBU's sole discretion.

Section 7.03 Construction.

- (a) Developer must enter into a contract for the construction of the Internal Water and Wastewater Facilities in accordance with the terms and conditions of this Agreement and with the approved construction plans.
- (b) Developer must exercise reasonable diligence and assure the final completion of the incrementally required water and wastewater Internal Facilities. NBU must accept the water and wastewater facilities serving the Property, or any segment of it, prior to the connection of individual water or wastewater services for either new residential or commercial customers within the development.
- (c) Any change orders must be jointly agreed to in writing by NBU and Developer in advance of authorization for or request for payment to the contractor. NBU agrees that its approval of a submitted change order shall not be unreasonably withheld.
- (d) NBU has the right to inspect the construction of the water and wastewater Internal Facilities and to enforce compliance with NBU requirements and all applicable City state and federal standards. Acceptance of water and wastewater Internal Facilities by NBU will not be official until a Letter of Acceptance is issued by the NBU Chief Water Engineer.
- (e) If Developer contracts with one or more contractors for the construction of the water and wastewater Internal Facilities in which NBU participates in the funding, Developer must require the contractor to post bid, payment, and performance bonds. NBU shall be included on any bonds obtained by a utility contractor as an additional insured. Any jointly funded construction must conform to State law for contract procurement, bidding and bonds.

ARTICLE VIII.

Financing of the Facilities

Section 8.01 Each Party Responsible for its own Costs. NBU shall be solely responsible for funding the acquisition and construction of the NBU Facilities and Developer shall be solely responsible for funding the acquisition and construction of the Internal Facilities. Any bonds of the District, as to both principal and interest, shall be and remain obligations solely of the District and shall never be deemed or construed to be obligations or indebtedness of NBU.

ARTICLE IX.

Fiscal Security

Section 9.01 Fiscal Security. Developer must post fiscal security in the form of an irrevocable Letter of Credit or Bond or bank set-aside letter ("Fiscal Security") in the amount of 100% of the contract cost for the construction of the Developer's share of any costs associated with the Offsite Improvements or any other improvements in which NBU participates or agrees to reimburse Developer for oversizing (collectively, the "Jointly Funded Improvements"), to secure the actual completion of such facilities in accordance with the terms of this Agreement. Developer agrees to post such Fiscal Security after design of the pertinent Jointly Funded Improvement is completed and approved by NBU and within ten (10) business days of the date that the bids are accepted for the pertinent Jointly Funded Improvement. The form and substance of the Fiscal Security must be approved by NBU in advance and its approval shall not be unreasonably conditioned, denied, withheld or delayed. If the construction of the Jointly Funded Improvements proceeds in discrete phases, as defined in the approved plans and specifications and the construction contract, the Fiscal Security may be reduced by an amount equal to the cost of the completed work for each defined phase of construction at the written request of the Developer. Such requests shall be made no more frequently than once every quarter, provided Developer is not in default under this Agreement, the Fiscal Security or other obligations relating to the project. At such time as the Improvements are accepted by NBU the Fiscal Security shall be released by NBU. If at any time during the course of the work on the Improvements the cost estimate for the remaining work exceeds, or is expected to exceed, the amount of the Fiscal Security, NBU will advise Developer in writing and Developer must remit, within thirty (30) calendar days of the receipt of the notice, a new or replacement Fiscal Security for the required amount.

ARTICLE X.

Payment of Construction Costs for Oversizing and Impact Fees

Section 10.01 Construction Costs.

- (a) Developer will pay all costs associated with the water and wastewater facilities within the Property, including the construction costs of the elevated water storage tank and the booster station, subject to the reimbursements provided in this Agreement and the NBU policy. In the event of any conflict, the provisions of the NBU policy shall control.
- (b) NBU will pay Developer costs for oversizing water and wastewater facilities as outlined in this Agreement and authorized by the NBU Policy. No interest shall be due on any amount owed by NBU. Reimbursement for oversizing will be paid when NBU accepts the improvement.
- (c) Upon completion and acceptance of the Improvements and delivery of acceptable deeds, easements, and other dedicatory instruments conveying real property or rights in real property to NBU, NBU will reimburse Developer for an amount not exceeding the actual eligible construction costs (the Eligible Costs) in accordance with the NBU Policy and this Section 10. "Eligible Costs" as used in this Agreement means the actual construction

cost of the water and wastewater Internal Facilities and excludes the soft cost items. "Soft Cost Items" include, but are not limited to, the Developer's cost of engineering, design, site acquisition, permits, inspections, Developer's consultants, Developer's studies, regulatory related fees, fiscal security, Developer's accounting fees and services, Developer's project management costs, Developer's attorney fees, and Developer's financial costs such as construction period interest and loan fees.

Section 10.02 Eligible Differential Cost.

- (a) NBU and Developer agree that, as used herein, the term "Eligible Differential Cost" means only the actual increased cost attributable solely to construction of oversized water and wastewater facilities that are larger than necessary to serve the Property as determined by NBU. The term does not include the actual costs to build or install the minimum-sized tank, booster station or other facilities necessary to provide water and wastewater service to the Property only or to meet minimum requirements of the NBU Policy, nor does it include Developer's costs for engineering, design, financing, interest, project management, site acquisition, accounting, legal services, fiscal security, or for other soft costs expended by Developer.
- (b) NBU's oversizing reimbursement obligations pursuant to this Agreement extend only to the Eligible Differential Cost related to the water and wastewater Internal Facilities.
- (c) In accordance with current NBU policies, Developer shall submit a formal written request to NBU for the reimbursement of the Eligible Differential Costs of the oversized Internal Facilities in cash, with such reimbursement to occur as specified in Section 2.07 of NBU's Water-Wastewater Extension Policy.

Section 10.03 Impact Fees. Pursuant to Chapter 395 of the Texas Local Government Code, the City has enacted an Impact Fee Ordinance to impose water and wastewater capital recovery fees against new development in the NBU service area to generate revenue for funding or recouping costs of capital improvements or facility expansion necessitated by or attributable to new development. The City ordinance authorizes the NBU Board of Trustees to adopt a Capital Recovery Policy for assessment of Impact Fees and to amend that Policy from time to time.

Section 10.04 Assessment of Impact Fees. Developer agrees that capital recovery fees will be assessed against the Property pursuant to the provisions of Section 2.05 of the NBU Capital Recovery Policy. NBU and the Developer agree that the assessment of the capital recovery fee related to the Property shall be assessed at the time of the final plat recordation and shall be collected on a lot by lot basis at the time a meter is requested.

- (a) NBU will pay as a rebate of capital recovery fees pursuant to this Agreement an amount equal to the Eligible Costs less the Eligible Differential Cost multiplied by the ratio of effective impact fee. The maximum total allowable reimbursement shall be in accordance with the NBU policy (Total Rebate Payment). NBU and Developer acknowledge that such calculation will be made in accordance with the amounts allowed under the NBU Policy in effect on the date the final plat for the Property, or any section of it, is recorded. No rebate shall be given for capital improvements which are not

identified within the applicable capital recover fee capital improvements plan.

Section 10.05 Rebate of Impact Fees.

- (a) Provided that the Developer has complied with the terms and conditions of this Agreement, and provided further that NBU has accepted the eligible Internal Facilities described in this Agreement, the Total Rebate Payment shall be paid by NBU to the Developer in annual payments for no more than thirty (30) years on October 1, beginning on October 1 of the year following completion and acceptance of the Internal Facilities. Nothing herein shall be construed to require NBU to make rebates of Impact Fees except as required under NBU's Policy applied equally to all other customers.
- (b) The amount of each annual rebate payment will be the amount of the impact fees collected for meters set during the prior fiscal year in accordance with the NBU Policy for the prior fiscal year period (Total Annual Rebate). NBU will not be obligated to pay interest on the rebate. In no event will the Total Annual Rebate paid to Developer exceed that Total Rebate Payment authorized by NBU policy. Developer agrees to provide all information and documents reasonably required by NBU for proper processing and for accurate accounting and documentation of actual project costs.

Section 10.06 If Developer allows work to commence on a change order before receiving NBU approval as required under Section 7.03(c) any costs incurred on that change order that are not approved by NBU are not eligible for rebate or reimbursement.

Section 10.07 Within thirty (30) days after final acceptance by NBU of the Internal Facilities, Developer must submit a report to NBU of the total costs of the Internal Facilities that includes the supporting information. Developer must submit an Owner's Affidavit that all suppliers and subcontractors have been paid and there are no outstanding liens or claims on the Internal Facilities.

Section 10.08 The obligations of NBU under this Agreement to make rebate payments in any fiscal year constitute a current expense for that fiscal year payable solely from the revenues from the Property deposited into a capital recovery fee account pursuant to the Policy for that fiscal year. The obligation of NBU to make payments does not constitute a general obligation or indebtedness of the City or NBU for which the City is obligated to levy or pledge any form of taxation. If no water impact fees are collected from the Property for any fiscal year, no rebate payments are due for that year.

ARTICLE XI.

Ownership, Operation and Maintenance of Facilities

Section 11.01 Delivery and Ownership of Utility Infrastructure Internal Facilities.

- (a) From and after the time of final completion and acceptance by NBU of the Internal Facilities, either Developer funded or jointly funded with NBU, NBU will own, operate and maintain the same.

- (b) Developer agrees to execute and deliver to NBU before the date of the final acceptance by NBU of the Internal Facilities, such bills of sale, easements, assignments or other instruments of transfer as may be deemed reasonably necessary by NBU. Developer must also execute and deliver to NBU before the date of final acceptance of the Internal Facilities special warranty deeds for the water tank lot, lift station site(s), and sites for utility infrastructure components and related facilities to be operated by NBU. All real property transferred to NBU must be free and clear of all liens and encumbrances, including without limitation, any reservations, exceptions, and conveyances or leases of water and mineral rights prior to final acceptance by NBU. Provided, however, that the real property conveyed to NBU under this Agreement will be subject to the encumbrances listed as Items 10.a, 10.b, 10.d, 10.e, 10.g and 10.h in Schedule B of the title commitment for the Property issued by Chicago Title Insurance and dated October 10, 2012, a copy of which is attached as **Exhibit 7**.
- (c) Developer will also deliver all warranties secured by construction of the Internal Facilities and affidavits that all suppliers of labor and materials for Internal Facilities have been paid, together with releases of any mechanic's liens related to the Project, before NBU accepts the Internal Facilities. Upon execution and delivery of such instruments, Developer will have no further obligations or responsibility for the Internal Facilities, except as provided by paragraph (d) below. Prior to acceptance of the Internal Facilities Developer must also deliver to NBU all bonds, warranties, guarantees and other assurances of performance, record drawings, easements, project manuals and all other documentation related to the Internal Facilities.
- (d) Developer acknowledges that NBU will not accept any Internal Facilities or real property burdened by any lien, reservation of rights, or any other encumbrance. In the event that the Developer, the District, or the Landowner creates, retains, or conveys any lien, reservation of rights, or any other encumbrance related to the real property to be conveyed to NBU under this Article XI without first obtaining the express written consent of NBU, NBU will have no obligations under this Agreement.
- (e) Prior to final acceptance Developer must provide to NBU an affidavit certifying that all suppliers of labor and materials for the Internal Facilities have been paid and that mechanic's or materialmans' liens related to the Internal Facilities or the Property, if any, have been satisfied and fully released.
- (f) Developer shall provide NBU with a two (2) year warranty on the construction and materials used for the water and wastewater Internal Facilities, including the elevated water storage tank and the booster station. The warranty shall begin on the date NBU issues its letter of final acceptance for the Internal Facilities.
- (g) The parties agree and understand that upon acceptance of the Internal Facilities by NBU the Property shall be subject to enforcement of all utility ordinances of the City of New Braunfels and policies of NBU, including water conservation ordinances and the NBU Drought Management Plan.

ARTICLE XII.

Provision of Utility Services

Section 12.01 The parties agree and acknowledge that from and after the time of final acceptance by NBU of the water and wastewater facilities and Improvements, NBU will operate and maintain the water and wastewater systems and will provide water and wastewater service to customers within the Property subject to the conditions stated in this Agreement and according to the applicable ordinances and NBU policies, as amended from time to time. Nothing in this Agreement will be construed to limit, restrict, modify or abrogate the City's or NBU's governmental authority or ordinances respecting the operation and maintenance of its water systems nor its duty to provide for the public health, safety and welfare in the operation and maintenance of the same.

Section 12.02 Notwithstanding final acceptance by NBU of the water and wastewater facilities and Improvements.

- (a) This Agreement does not exempt Developer, or its successors and assigns, from the requirements of any ordinance or Development Agreement applicable to development within the Property;
- (b) This Agreement does not guarantee approval of any final plat or the approval of any other applications or permits related to the project;
- (c) This Agreement will not be construed to create or confer upon Developer, the District, the Landowner, or their successors or assigns, any ownership rights in or monopoly regarding capacity in the water facilities and Improvements, whether total or partial, after final acceptance of the project by NBU;
- (d) This Agreement will not be construed to create or confer upon Developer, the District, the Landowner, or their successors or assigns, any manner of right of use, legal title to, equitable interest in, or other claim of joint ownership with respect to property, whether real, personal or mixed, comprising the water facilities and Improvements, after final acceptance of the project by NBU; and
- (e) Nothing in this Agreement shall be construed to grant Developer, the District, the Landowner, or their successors or assigns any preferential rights to water and wastewater service.

ARTICLE XIII.

Default and Termination

Section 13.01 Default by Developer.

- (a) Developer will be in default under this Agreement upon the occurrence of one or more of the following events (an "Event of Default"):

- (1) Developer fails to timely commence or complete design or construction of the Improvements as provided in this Agreement; or
 - (2) Developer fails to post the required Fiscal Security or to increase the amount of Fiscal Security required by this Agreement when requested to do so by NBU; or
 - (3) Developer transfers or conveys the Property or a portion of the Property through foreclosure or an assignment or conveyance in lieu of foreclosure.
- (b) Developer shall have thirty (30) calendar days from the date Developer receives written notice from NBU of the failure to cure a failure described in Subsection (a).

Section 13.02 Default by NBU.

- (a) NBU will be in default under this Agreement if NBU fails to reimburse Developer or credit Developer as required by this Agreement.
- (b) NBU shall have thirty (30) calendar days from the date NBU received written notice from the Developer of the failure to cure a failure described in Subsection (a).

Section 13.03 Cure Provisions and Remedies.

- (a) Failure or unreasonable delay by either party to perform or otherwise act in accordance with any term or provision of this Agreement for a period of thirty (30) calendar days (the "Cure Period") after written notice thereof from the other party, shall constitute a default under this Agreement. However, that if the failure or delay is such that more than thirty (30) calendar days would reasonably be required to perform such action or comply with any term or provision hereof, then such party shall have such additional time as may be necessary to perform or comply so long as such party commences performance or compliance within said 30-day period and diligently proceeds to complete such performance or fulfill such obligation. Such notice shall specify the nature of the alleged default and the manner in which said default may be satisfactorily cured, if possible. In the event such default is not cured within the Cure Period, the non-defaulting party shall have all rights and remedies which may be available under law or equity, including without limitation the right to specifically enforce any term or provision hereof and/or the right to institute an action for damage or mandamus. There shall be no event of default under this Agreement until and unless the Cure Period described in this Section has expired.
- (b) Either Developer or NBU may at any time initiate the Conflict Resolution provisions set forth in Section 13.04 below. If the Conflict Resolution provisions are initiated, but fail to result in a mutually acceptable resolution, the Parties shall have those rights set forth below.
- (c) If after notice and an opportunity to cure as provided for in Section 13.03 (a), Developer does not commence work on the jointly funded utility infrastructure improvements, or commences but does not complete such work as required by the terms of this Agreement, the Developer will be in default of this Agreement and NBU shall have the right, but not the obligation, to draw on the fiscal security posted by the Developer and complete some,

none, or all of the jointly funded utility infrastructure improvements. NBU may draw on the Letter of Credit following an Event of Default to pay for the costs and expenses incurred by NBU in the completion of the jointly funded utility infrastructure improvements or to correct defects in the Improvements. NBU may perform such construction and repairs itself, or engage a third party to complete such construction and repairs on behalf of NBU.

- (d) If NBU elects to complete the jointly funded utility infrastructure improvements, Developer shall provide all plans, designs, easements, and other documents related to the design and construction of the Improvements to NBU within five (5) business days of the date that NBU requests same. If NBU elects to complete the jointly funded utility infrastructure improvements as allowed by this Agreement, Developer will not be entitled to reimbursement for any costs or expenses incurred with regard to the jointly funded utility infrastructure improvements.
- (e) If Developer does not commence or complete construction of the jointly funded utility infrastructure improvements as required by this Agreement, and if NBU elects not to draw on the fiscal security in order to complete the jointly funded utility infrastructure improvements, NBU will have the right, in its sole discretion, to terminate this Agreement following notice to Developer and an opportunity to cure.
- (f) Notwithstanding any provision to the contrary in this Agreement, the exclusive remedy for NBU's failure to provide water or wastewater service required by this Agreement is to seek de-certification of the area not adequately served. NBU will not be liable for consequential or exemplary damages.

Section 13.04 Conflict Resolution. At any time after a party notifies the other party of a default, either party may initiate the following conflict resolution procedures. The Parties shall designate a qualified mediator with sufficient knowledge and skills to evaluate the dispute and relevant issues. If the Parties cannot agree upon the designation of a qualified mediator within thirty (30) calendar days of the date that this Conflict Resolution provision is initiated, the parties shall each designate three proposed mediators and select a mediator from among them within thirty (30) calendar days. In the event no mediator from the proposed names is agreed upon within sixty (60) calendar days of the date that this Conflict Resolution provision is initiated, the parties may file a petition in Comal County District Court for such designation and the Court may award attorney's fees and costs related to use of this procedure. After designation the mediator shall have sixty (60) calendar days to gather information on the issues and to render a proposed resolution. Each party may also submit written reports in support of its position to the mediator within the same said sixty (60) days. If the mediator is unable to resolve the dispute the Parties may use any rights available under this Agreement and as permitted by law.

Section 13.05 Damages. The measure of damages for breach of this Agreement by a party for failure to timely complete construction of infrastructure that is the subject of this Agreement is the reasonable cost of completing the jointly funded utility infrastructure and improvements in conformance with NBU's requirements, procedures, and specifications and the terms and conditions of this Agreement, including without limitation, any and all associated administrative expenses. For work on the jointly funded utility infrastructure improvements upon which

construction has not begun, the estimated cost of the jointly funded utility infrastructure improvements shown in the bid documents will be prima facie evidence of the minimum cost of completion; however, that amount does not establish the maximum amount of a party's liability. Nothing in this section is intended to limit the amount of damages NBU may recover for breach of this Agreement.

ARTICLE XIV.

General Provisions

Section 14.01 Other Infrastructure Improvements. Developer agrees that it must construct all other infrastructure improvements required for the project and/or the Property at its sole expense and in conformance with the Policy and all other applicable City and NBU standards and requirements.

Section 14.02 Remedies and Venue. The remedies available under this Agreement and the laws of Texas are cumulative in nature. Venue for enforcement of any right or obligation under this Agreement shall be in Comal County, Texas.

Section 14.03 Third Party Rights. No person or entity who or which is not a party to this Agreement will have any right of action under this Agreement or shall be considered a third party beneficiary of this Agreement.

Section 14.04 Release and Indemnity.

- (a) By submitting plans or specifications for NBU for review, the Developer Parties (as that term is defined below) each agree to waive all claims, fully release, indemnify, defend and hold harmless NBU and all of its respective officials, officers, agents, consultants, employees, attorneys, and invitees in both their public and private capacities (collectively, the "NBU Parties") from any and all liability, claims, lawsuits, demands or causes of action, including all expenses of litigation and/or settlement which may arise for injury to property or person occasioned by error, omission, intentional or negligent act of the Developer, its officers, agents, engineers, consultants, employees or invitees (collectively, the "Developer Parties") arising out of or in connection with submission of construction plans or any other plans or specifications submitted to NBU. The Developer Parties further agree that they each will, at their own cost and at their own expense, indemnify, defend and protect NBU Parties from any and all such claims, losses, damages, causes of action, suits, and liability of any kind, including all expenses of litigation, court costs and attorneys' fees for injury to or death of any person, or for any damage to any property arising out of or in connection with the negligence, error, omission, intentional or grossly negligent acts of any of the Developer Parties.
- (b) Approvals by NBU staff or other NBU representative of any plans, designs or specifications submitted pursuant to the requirements of this Agreement, the Policy, any other provision of the Code of Ordinances of the City, or applicable technical manuals will not constitute or be deemed to be a release of the responsibility and liability of the Developer Parties, or acceptance by NBU of the accuracy and competency of the designs or specifications. Such approval shall not be deemed to be an assumption of

responsibility or liability by NBU for any defect in the design or specifications prepared by the Developer Parties.

- (c) Approval of plans, designs and specifications by NBU staff or the City staff signifies only the general approval of the general design concept by NBU. In this connection, Developer must indemnify and hold harmless NBU and the City from any loss, damage, liability, or expense on account of damage to property, injuries, and death suffered by any persons which may arise out of any defect, deficiency, or negligence of Developer's designs, plans, and specifications to the extent prepared or caused to be prepared by the Developer Parties that are incorporated into any Internal Facilities constructed according to such designs, plans, and specifications. Developer must defend at its own expense any claims, suits, or proceedings brought against NBU on account of Developer's designs, plans, or specifications, pay all related expenses and satisfy any judgment which may be incurred by or rendered against the Developer, its employees, agents, and representatives.
- (d) Further Release of Claims. In addition to the foregoing Release and Indemnity, in further consideration for NBU's agreement to reimburse Developer in accordance with the terms of this Agreement and NBU policy, and for other promises herein, the receipt and sufficiency of which is hereby acknowledged, Developer agrees to fully and completely release and forever discharge NBU and its respective employees, attorneys and officers, in both their individual and official capacities, and their successors, agents, representatives, servants, and any other related or affiliated persons, natural or corporate, in privity with them, from any and all possible claims, demands, actions, causes of action, costs, expenses, obligations, liabilities, suits and damages of every kind and character whatsoever, now existing or that may arise hereafter, whether known or unknown, at law or equity, however, whenever, and by whomever caused, whether solely, jointly, or otherwise, including, without limitation, any and all causes of action directly or indirectly arising out of, resulting from, or attributable to the Internal Facilities that the Developer is required to construct by the terms of the Policy and this Agreement Effective Time Period. The provisions of Section 14.04 concerning releases, indemnities, and duty to defend and hold harmless shall survive for a period of two years following the date NBU accepts the Internal Facilities, or any section of the Internal Facilities. Further, any release, indemnification, and duty to defend and hold harmless shall only apply to liabilities, claims, lawsuits, demands, and causes of action arising from acts or omissions prior to the date NBU accepts the Internal Facilities.
- (e) No waiver of any provision of this Agreement will be deemed or constitute a waiver of any other provision, nor will it be deemed or constitute a continuing waiver unless expressly provided for by a written amendment to this Agreement; nor will the waiver of any default under this Agreement be deemed a waiver of any subsequent defaults of the same type. The failure at any time to enforce this Agreement or covenant by NBU, Developer, or their respective heirs, successors or assigns, whether any violations thereof are known or not, will not constitute a waiver or estoppel of the right to do so.

Section 14.05 Attorney's Fees.

- (a) Should litigation against any party be required to enforce the terms of this Agreement, the prevailing party, plaintiff or defendant, will be entitled to recover from the opposing party its costs and reasonable and necessary attorney's fees that are necessary and just and costs subject to the limitations imposed by Section 271 of the Texas Local Government Code.
- (b) Developer will be obligated to pay NBU's attorneys fees in connection with the preparation of this Agreement within 30 days of the date NBU submits an invoice therefor, but not to exceed \$10,000.00.

Section 14.06 Term. This Agreement shall be in effect for a term of fifteen (15) years from the Effective Date ("Original Term"), provided that the Original Term may be amended by written agreement of the Parties for an additional term of fifteen (15) years. If the build-out of the Project has not occurred within the Original Term, Developer may, upon written request to NBU prior to the expiration of the Original Term, seek an extension of the Term for up to one (1) additional fifteen (15) year period. For purposes of this Agreement, "build-out" is defined as the permanent completion of substantially all sales and development activities relating to the Project by Developer.

Section 14.07 Assignment. This Agreement is binding upon Developer, the District, the Landowner, and NBU and their successors or assigns. Developer may assign its rights and obligations under this Agreement in connection with a sale of some or all of the Property, provided, however, that any assignment shall not relieve Developer of its obligations to NBU under this Agreement, unless NBU approves the assignment in writing and executes a written release of Developer from the obligations imposed by this Agreement. In any event Developer, its successors, and assigns will give NBU notice of any assignment of its rights or obligations under this Agreement. NBU may assign its rights and obligations under this Agreement and shall give written notice of any assignment to Developer or its successors and assigns.

Section 14.08 Amendment. Any agreement to modify this Agreement must be signed by all Parties in writing. The Development Agreement solely controls any future amendment to the Master Framework Plan and no amendment to this Agreement is necessary to amend the Master Framework Plan so long as the amendment is approved by the City of New Braunfels in accordance with the Development Agreement and provided any amendment or modification of the Master Framework Plan does not conflict with, modify, or waive any term, condition, or obligation contained in this Agreement.

Section 14.09 Notice. Any notice required or permitted by this Agreement is effective when personally delivered in writing or three (3) days after notice is deposited with the U.S. Postal Service, postage prepaid, certified with return receipt requested, and addressed as follows:

If to Developer: ASA Properties, L.L.C.
 177 W. Mill Street, Suite 200
 P.O. Box 310699
 New Braunfels, Texas 78131
 Attention: Peter James

with copies to: Phillip H. Schmandt
McGinnis, Lochridge & Kilgore, L.L.P.
600 Congress Avenue
Suite 2100
Austin, Texas 78701

If to NBU: New Braunfels Utilities
263 E. Main Plaza
New Braunfels, Texas 78130
Attention: Chief Executive Officer

If to the District : Comal County Water Improvement District No.1
c/o Coats Rose Yale Ryman & Lee
Attention: Timothy Green
3 East Greenway Plaza, Suite 2000
Houston, Texas 77046
Phone: 855.291.0282
Fax: 713.651.0220

with copies to: Coats Rose Yale Ryman & Lee
Attention: Timothy Green
1020 Northeast Loop 410, Suite 800
San Antonio, Texas 78209
Phone: 855.739.7515
Fax: 210.212.5698

If to the Landowner: Word-Borchers Ranch Real Estate Limited Partnership
c/o Dean Word III
220 Lakeview Blvd.
New Braunfels, Texas 78130

If to the City of New Braunfels: City of New Braunfels
4424 South Castel
New Braunfels, Texas 78130
Attention: City Manager

Section 14.10 Change of Address for Notice. The parties may, from time to time, change their respective addresses listed above to any other location in the United States for the purpose of notice under this Agreement. A party's change of address is effective when notice of the change is provided to the other party in accordance with the provisions of Section 14.09 above.

Section 14.11 Severability. If any part, term or provision of this Agreement is held by the courts to be illegal, invalid, or otherwise unenforceable, such illegality, invalidity or unenforceability will not affect the validity of any other part, term or provision, and the rights of the parties will be construed as if the part, term or provision was never part of this Agreement.

Section 14.12 Personal Jurisdiction and Venue. Personal jurisdiction and venue for any civil action commenced by any party to this Agreement, whether arising out of or relating to the Agreement or the security, will be deemed to be proper only if such action is commenced in District Court for Comal County, Texas, or the United States District Court for the Western District of Texas, San Antonio Division.

Section 14.13 Captions Immaterial. The numbering, order, and captions or headings of the paragraphs of this Agreement are for convenience only and may not be considered in construing this Agreement.

Section 14.14 Entire Agreement; Multiple Counterparts.

- (a) This Agreement contains the entire agreement between the parties and correctly sets forth the rights, duties and obligations of each to the other as of the Effective Date. Any oral representations or modifications concerning this Agreement will be of no force or effect excepting a subsequent written modification executed by the parties.
- (b) This Agreement may be executed in multiple counterparts.

Section 14.15 Binding Agreement. The execution and delivery of this Agreement and the performance of the transactions contemplated thereby have been duly authorized by all necessary corporate or governmental action of each party. This Agreement, when duly executed and delivered by each party, constitutes a legal, valid and binding obligation of each party enforceable in accordance with the terms as of the Effective Date.

Section 14.16 Recording. The parties agree that this Agreement may be recorded in the Official Public Records of Real Property of Comal County, Texas, at the expense of Developer.

Section 14.17 Further Assurances. The Parties agree to take such actions and to execute and deliver related documents as may be reasonably necessary or appropriate to effect the provisions of this Agreement.

Section 14.18 Effective Date and Recording. This Agreement shall be executed by the Landowner, Developer, the District, and NBU promptly following approval of the Agreement by NBU Board of Trustees and shall become effective on the effective date of the Development Agreement.

Section 14.19 Conflicts. In the event of any conflict between this Agreement and any other agreement related to the Property, including without limitation the Development Agreement referred to herein, the terms and conditions of this Agreement and applicable NBU policy will control.

Section 14.20 Authorized Representatives. Each person signing this Agreement for an organization or entity represents that he or she is acting as a representative of the named entity and is authorized to bind that entity to the terms and conditions of this Agreement.

EXECUTED by the parties on the dates indicated below:

NEW BRAUNFELS UTILITIES

By: 

Name: Paula J. DiFonzo
Title: Chief Executive Officer

Date: April 26, 2013

WORD-BORCHERS RANCH JOINT VENTURE

By: ASA Properties, LLC
Its: Manager

By: 

Name: Mitch Nielsen

Title: Manager

Date: February 25, 2013

By: 

Name: Peter James

Title: Manager

Date: February 25, 2013

**COMAL COUNTY WATER IMPROVEMENT
DISTRICT NO. 1**

By: 

Name: Bonnie Shaw

Title: President

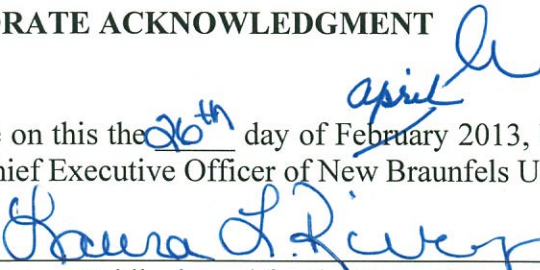
Date: February , 2013

STATE OF TEXAS §
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COUNTY OF COMAL §

CORPORATE ACKNOWLEDGMENT

This instrument was acknowledged before me on this the 26th day of April, 2013, by Paula J. DiFonzo, known to me in her capacity as Chief Executive Officer of New Braunfels Utilities.




Notary Public, in and for the State of Texas

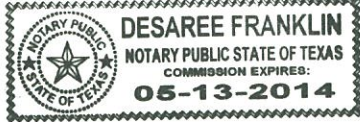
STATE OF TEXAS

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CORPORATE ACKNOWLEDGMENT

COUNTY OF COMAL

This instrument was acknowledged before me on this the 25 day of February 2013, by Mitchell Nielsen and Peter James, persons known to me in their capacities as managers of ASA Properties Holding Co. LLC, the sole manager of ASA PROPERTIES, L.L.C., on behalf of Word-Borchers Ranch Joint Venture.



Desaree Franklin
Notary Public, in and for the State of Texas

STATE OF TEXAS

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CORPORATE ACKNOWLEDGMENT

COUNTY OF COMAL

This instrument was acknowledged before me on this the 12th day of April 2013, by Grady Rangle, a person known to me in his capacity as President of Comal County Water Improvement the District No. 1, on behalf of Comal County Water Improvement the District No. 1.



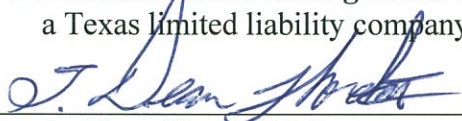
Melinda L. Koehne
Notary Public, in and for the State of Texas

**LIMITED JOINDER OF WORD-BORCHERS RANCH
REAL ESTATE LIMITED PARTNERHSIP**

WORD-BORCHERS RANCH REAL ESTATE LIMITED PARTNERSHIP, A TEXAS LIMITED PARTNERSHIP, IS THE OWNER OF THE REAL PROPERTY THAT IS REFERRED TO IN THIS AGREEMENT AS THE PROPERTY,, THE WORD-BORCHERS RANCH, OR THE VERAMENDI PROJECT. ACTING THROUGH ITS GENERAL PARTNER WORD – BORCHERS RANCH MANAGEMENT COMPANY, L.L.C., A TEXAS LIMITED LIABILITY COMPANY, WORD BORCHERS RANCH REAL ESTATE LIMITED PARTNERSHIP, EXECUTES THIS AGREEMENT FOR THE PURPOSE OF ACKNOWLEDGING THAT IT IS INFORMED ABOUT AND ACCEPTS THE TERMS AND CONDITIONS OF THIS AGREEMENT AND CONSENTS TO THE RECORDING OF THE AGREEMENT IN THE REAL PROPERTY RECORDS.

WORD-BORCHERS RANCH REAL ESTATE LIMITED PARTNERSHIP,
a Texas limited partnership

By: **Word-Borchers Ranch Management Company, L.L.C.,**
a Texas limited liability company, its General Partner

By: 
Timothy Dean Word III, Manager

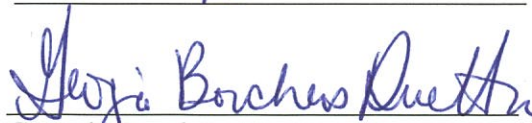
Date: 2/25/2013

By: 
Amber Word Heisner, Manager

Date: 2/25/2013

By: 
Marcia Borchers McGlothlin, Manager

Date: 2-25-13

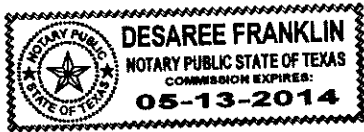
By: 
Georgia Borchers Duettra, Manager

Date: 2/25/13

STATE OF TEXAS §
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COUNTY OF COMAL §

CORPORATE ACKNOWLEDGMENT

This instrument was acknowledged before me on this the 25 day of February 2013, by Timothy Dean Word III, Amber Word Heisner, Marcia Borchers McGlothlin, and Georgia Borchers Duettra, persons known to me in their capacities as managers of Word-Borchers Ranch Management Company, L.L.C., the sole manager of WORD-BORCHERS RANCH REAL ESTATE LIMITED PARTNERSHIP, on behalf of Word-Borchers Ranch Joint Venture.



Desaree Franklin
Notary Public, in and for the State of Texas

LIMITED JOINDER OF CITY OF NEW BRAUNFELS

THE CITY OF NEW BRAUNFELS, A TEXAS HOME RULE MUNICIPAL CORPORATION, EXECUTES THIS AGREEMENT FOR THE SOLE PURPOSE OF EVIDENCING ITS CONSENT TO THE AGREEMENT AND TO AGREE THAT THIS AGREEMENT, TOGETHER WITH THE DEVELOPMENT AGREEMENT, SATISFIES THE REQUIREMENTS OF SECTION 9038.004 (2) OF THE TEXAS LOCAL GOVERNMENT CODE.

CITY OF NEW BRAUNFELS

By: _____

Name: _____

Title: _____

Date: _____

STATE OF TEXAS

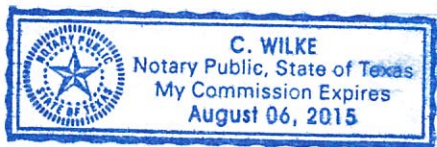
§

COUNTY OF COMAL

§

CORPORATE ACKNOWLEDGMENT

This instrument was acknowledged before me on this the 26th day of April 2013, by Robert Camarena, a person known to me in his capacity as Interim City Manager of the City of New Braunfels, on behalf of the City of New Braunfels.



C. Wilke

Notary Public, in and for the State of Texas

List of Exhibits

EXHIBIT NO. 1:	List of Proposed Infrastructure Improvements Subject to Oversizing by NBU
EXHIBIT NO. 2:	Master Water Plan
EXHIBIT NO. 3:	Master Sewer Plan
EXHIBIT NO. 4:	Metes and Bounds Description of the Land
EXHIBIT NO. 5:	Master Framework Plan
EXHIBIT NO. 6:	Utility Engineering Report of August 2011
EXHIBIT NO. 7:	Title Commitment

EXHIBIT NO. 1
LIST OF PROPOSED INFRASTRUCTURE IMPROVEMENTS SUBJECT
TO OVERSIZING BY NBU

Potable Water System

- 1.5m gallon elevated storage tank to 2.5m gallon elevated storage tank
- Proposed 12-inch and 16-inch Pressure Zone 5 water mains to a proposed 24-inch and a 36-inch water main (equivalent capacity of a 36-inch water main) to accommodate an additional flow of 5,000 gallons per minute through the Property to NBU's water main(s) along Loop 337
- Other 12-inch and 16-inch water mains as may be defined by NBU for future oversizing to support surrounding areas.
- Potential oversizing of pumps and controls at the high service pump station proposed for serving areas of the Property within Pressure Zone 4.

Sanitary Sewer System

- Potential oversizing of internal gravity sewer mains and lift stations to serve adjacent undeveloped areas north and west of the Property.
- Potential oversizing of sewer segments S1 through S6 should NBU elect to remove and replace the existing 18-inch gravity sewer main extending through the Property to the existing Bleiders Creek Lift Station.
- Potential oversizing of alternative alignments of an gravity outfall sewer main from the Property to a relocated GWWTP, a new Bleiders Creek Lift Station and Force Main.

EXHIBIT NO. 2
to Utility Agreement
Master Water Plan

DATE: Nov 15, 2010, 3:49pm User: D. T. Alexander
File: P:\15120\Drawings\Exhibits\Utilities\2100115-MASTER WATER PLAN-JTB.dwg



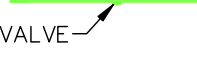


DRAFT

ASA PROPERTIES LLC ("APPLICANT") RESERVES THE RIGHT TO CHANGE ALL OR ANY PORTION OF THIS PRELIMINARY EXHIBIT OR ITS NOTES AT ANY TIME UNTIL FINAL APPROVAL BY APPLICABLE GOVERNMENTAL ENTITIES. THIS DOCUMENT REMAINS PRELIMINARY AND UNTIL AUTHORIZED BY APPLICANT IS CONFIDENTIAL AND NOT FOR PUBLIC DISTRIBUTION.

NOTES:

- PROPERTY IS WITHIN COMAL COUNTY WCID#1.
- THIS EXHIBIT REFLECTS PRELIMINARY LAND USE CONCEPTS. APPLICANT RESERVES THE RIGHT TO REALLOCATE INTENSITY OF SERVICE DEMANDS AND CHARACTER OF LAND USES BETWEEN TRACTS AT DISCRETION OF APPLICANT, WITH THE INTENTION TO MAINTAIN THE MAXIMUM SERVICE DEMAND LIMITS SPECIFIED IN THE NOTES ARE NOT EXCEEDED.
- APPLICANT RESERVES THE RIGHT WITHIN THIS PRELIMINARY EXHIBIT TO INCREASE OR DECREASE THE NUMBER OF PERMITTED RESIDENTIAL UNITS OR NON-RESIDENTIAL COMMERCIAL SQUARE FEET, SO LONG AS THERE IS A CORRESPONDING ADJUSTMENT IN THE OTHER NUMBER OF CATEGORY OF USE WHICH CAUSES OVERALL DEMAND TO BE EQUAL TO OR LOWER THAN THE DEMAND ATTRIBUTABLE TO THE NUMBER OF PERMITTED RESIDENTIAL UNITS OR NON-RESIDENTIAL COMMERCIAL SQUARE FEET SPECIFIED ABOVE.

DESCRIPTION

	ZONE 5 (HGL = 895')
	ZONE 4 (HGL = 1000')
	ZONE 5 WATER MAIN ALIGNMENT
	ZONE 4 WATER MAIN ALIGNMENT
	PROPOSED ELEVATED WATER STORAGE TANK & HIGH SERVICE PUMP STATION

12" CAP FOR FUTURE
EXPANSION BY NBU

CONNECT TO EXISTING
ZONE 4 12" WATER MAIN
ON OAK RUN PKWY.

DIVISION VALVE

PROPOSED NEW ELEVATED
STORAGE TANK ZONE 5
WITH NEW HIGH SERVICE
PUMP STATION ZONE 4

CONNECT TO
EXISTING ZONE 5
12" WATER MAIN

CONNECT TO
EXISTING ZONE 5
12" WATER MAIN

EXISTING ZONE 4
12" WATER MAIN

EXISTING ZONE 5
12" WATER MAIN

EXISTING LOOP 33
ELEVATED TANK
HGL = 895'

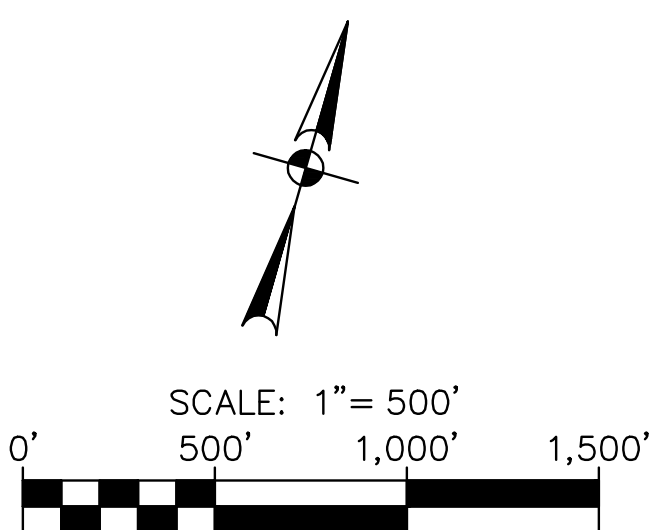
EXISTING ZONE 5
12" WATER MAIN

LOOP 337 HWY 46

EDWARDS BLVD.

RIVER ROAD

WHITE WATER RD
GUADALUPE RIVER



WORD BORCHERS TRACT
MASTER WATER PLAN
NOVEMBER 15, 2010
NEW BRAUNFELS, TEXAS

JOB NO. 782000
DATE NOVEMBER 2010
DESIGNER LN
CHECKED - DRAWN TA
SHEET 1 of 1

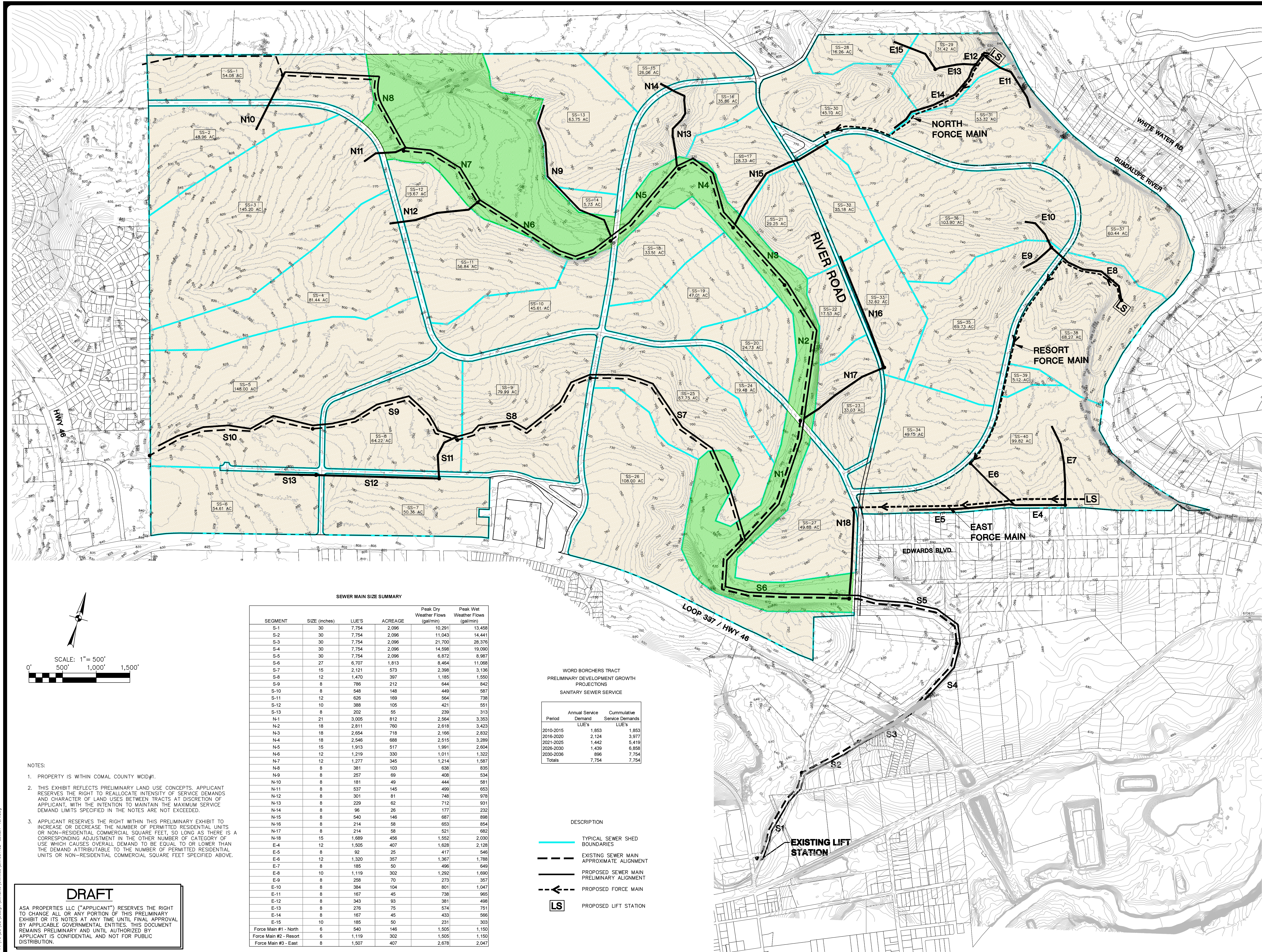
REVISIONS:

PAPE-DAWSON
ENGINEERS

PHONE: 210.370.9000 FAX: 210.370.9070
555 EAST FARMLEY | SAN ANTONIO, TEXAS 78216
TEXAS BOARD OF PROFESSIONAL ENGINEERS: FPM REGISTRATION # 492

EXHIBIT NO. 3
to Utility Agreement
Master Sewer Plan

Draft: Nov 15, 2010, 2:49pm User: D. Tillerwender
File: P:\15120\Design\Exhibits\Units\151010102-SEWER-TSA.dwg



SEWER MAIN SIZE SUMMARY

SEGMENT	SIZE (inches)	LUE'S	ACREAGE	Peak Dry Weather Flows (gal/min)	Peak Wet Weather Flows (gal/min)
S-1	30	7,754	2,096	10,291	13,458
S-2	30	7,754	2,096	11,043	14,441
S-3	30	7,754	2,096	21,700	28,378
S-4	30	7,754	2,096	14,598	19,090
S-5	30	7,754	2,096	6,872	8,987
S-6	27	6,707	1,813	8,464	11,068
S-7	15	2,121	573	2,398	3,136
S-8	12	1,470	397	1,185	1,550
S-9	8	786	212	644	842
S-10	8	548	148	449	587
S-11	12	626	169	564	738
S-12	10	388	105	421	551
S-13	8	202	56	239	313
N-1	21	3,005	812	2,564	3,353
N-2	18	2,811	760	2,618	3,423
N-3	18	2,654	718	2,166	2,832
N-4	18	2,546	688	2,515	3,289
N-5	15	1,913	517	1,991	2,604
N-6	12	1,219	330	1,011	1,322
N-7	12	1,277	345	1,214	1,587
N-8	8	381	103	638	835
N-9	8	257	69	408	534
N-10	8	181	49	444	581
N-11	8	537	145	499	653
N-12	8	301	81	748	978
N-13	8	229	62	712	931
N-14	8	96	26	177	232
N-15	8	540	146	687	898
N-16	8	214	58	653	854
N-17	8	214	58	521	682
N-18	15	1,689	456	1,552	2,030
E-4	12	1,505	407	1,628	2,128
E-5	8	92	25	417	546
E-6	12	1,320	357	1,367	1,788
E-7	8	185	50	496	649
E-8	10	1,119	302	1,292	1,690
E-9	8	258	70	273	367
E-10	8	384	104	801	1,047
E-11	8	167	45	738	965
E-12	8	343	93	381	498
E-13	8	276	75	574	751
E-14	8	167	45	433	566
E-15	10	185	50	231	303
Force Main #1 - North	6	540	146	1,505	1,150
Force Main #2 - Resort	6	1,119	302	1,505	1,150
Force Main #3 - East	8	1,507	407	2,678	2,047

WORD BORCHERS TRACT
PRELIMINARY DEVELOPMENT GROWTH
PROJECTIONS
SANITARY SEWER SERVICE

Period	Annual Service Demand LUE's	Cumulative Service Demands LUE's
2010-2015	1,853	1,853
2016-2020	2,124	3,977
2021-2025	1,442	5,419
2026-2030	1,439	6,858
2030-2036	896	7,754
Totals	7,754	7,754

DESCRIPTION

- TYPICAL SEWER SHED BOUNDARIES
- EXISTING SEWER MAIN APPROXIMATE ALIGNMENT
- PROPOSED SEWER MAIN PRELIMINARY ALIGNMENT
- PROPOSED FORCE MAIN
- PROPOSED LIFT STATION

NOTES:

- PROPERTY IS WITHIN COMAL COUNTY WCD#1.
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DRAFT

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WORD BORCHERS TRACT
MASTER SEWER PLAN
NOVEMBER 15, 2010
NEW BRAUNFELS, TEXAS

JOB NO. 782000
DATE NOVEMBER 2010
DESIGNER LN
CHECKED - DRAWN TA
SHEET 1 of 1

PAPE-DAWSON
ENGINEERS

PHONE: 210.375.9000
FAX: 210.375.9070
555 EAST FARMLEY | SAN ANTONIO, TEXAS 78216
TEXAS BOARD OF PROFESSIONAL ENGINEERS: P.E. REGISTRATION # 495

REVISIONS:

EXHIBIT NO. 4

to Utility Agreement

Metes and Bounds Description of the Land

The approximately 2,404 acres comprised of the 1746.9 acres described on the attached metes and bounds description as Tract "A" and the 657.1 acres described on the attached metes and bounds description as Tract "B" and depicted on the attached illustration.

FIELD NOTES
FOR A
POLITICAL SUBDIVISION

Being 1746.9 acres, more or less, out of the J.M. Veramendi Survey No. 2, Abstract 3, Comal County, Texas. Said 1746.9 acres also being a portion of a 2086 acre tract of land described as First Tract in Deed recorded in Volume 167, Pages 80-92 of the Deed Records of Comal County, Texas. Said 1746.9 acre tract being more fully described as follows;

BEGINNING: At a found ½" iron rod on the southwest right-of-way line of River Road, for an eastern corner of this tract and the north corner of a 9.839 acre tract described in Document Number 200406026508 of the Official Records of Comal County, Texas;

THENCE: Departing said southwest right-of-way line of River Road and along the northwest line of said 9.839 acre tract, South 50°21'26" West a distance of 600.17 feet to the western corner of said 9.839 acre tract;

THENCE: Along the southwest line of said 9.839 acre tract, South 36°27'37" East a distance of 646.39 feet to a point on the northwest right-of-way line of State Highway Loop 337;

THENCE: along said northwest right-of-way line of State Highway Loop 337, the following bearings and distances:

South 79°25'02" West a distance of 43.50 feet to a point,

South 73°42'02" West a distance of 201.00 feet to a point,

South 79°25'02" West a distance of 700.00 feet to a point,

South 76°33'02" West a distance of 200.30 feet to a point,

South 79°25'02" West a distance of 1258.30 feet to a point,

along a tangent curve to the left, said curve having a radius of 5839.60 feet, a central angle of 11°49'01", a chord bearing and distance of South 73°30'33" West, 1202.27 feet, for an arc length of 1204.40 feet to a point, and

South 67°36'02" West a distance of 518.39 feet to a point being the southeast corner of the called 17.089 acre tract of land conveyed to Oakwood Baptist Church of New Braunfels, Texas, by Deed Recorded in Document No. 200706020677, of the Official Records of Comal County, Texas;

THENCE: departing the northwest right-of-way line of State Highway Loop 337 and along the common line between said 17.089 acres and the herein described tract, the following bearings and distances:

along a non-tangent curve to the left, said curve having a radial bearing of North 22°28'30" West, a radius of 50.00 feet, a central angle of 90°15'34", a chord bearing and distance of North 22°23'43" East, 70.87 feet, for an arc length of 78.77 feet to a point,

North 22°44'04" West a distance of 149.65 feet to a point,

North 32°57'24" West a distance of 61.98 feet to a point,

North 16°39'22" West a distance of 43.27 feet to a point,

along a tangent curve to the right, said curve having a radius of 616.00 feet, a central angle of 03°30'57", a chord bearing and distance of North 14°53'53" West, 37.79 feet, for an arc length of 37.80 feet to a point,

North 13°08'25" West a distance of 65.66 feet to a point,

Along a tangent curve to the right, said curve having a radius of 605.00 feet, a central angle of 10°21'40", a chord bearing and distance of North 07°57'35" West, 109.26 feet, for an arc length of 109.41 feet to a point,

North 02°46'45" West a distance of 107.03 feet to a point,

along a tangent curve to the left, said curve having a radius of 25.00 feet, a central angle of 90°00'00", a chord bearing and distance of North 47°46'45" West, 35.36 feet, for an arc length of 39.27 feet to a point,

South 87°13'15" West a distance of 667.49 feet to a point,

along a tangent curve to the left, said curve having a radius of 926.14 feet, a central angle of 47°34'06", a chord bearing and distance of South 63°26'12" West, 747.01 feet, for an arc length of 768.90 feet to a point,

South 35°47'46" East a distance of 479.08 feet to a point

South 54°12'14" West a distance of 150.00 feet to a point;

South 35°47'46" East a distance of 115.00 feet to a point;

North 54°12'14" East a distance of 150.00 feet to a point;

South 35°47'46" East a distance of 311.31 feet to a point on the northwest right-of-way line of State Highway Loop 337, the south corner of said 17.089 acres;

THENCE: along the northwest right-of-way line of State Highway Loop 337, the following bearings and distances:

South 60°43'02" West a distance of 101.06 feet to a point;

South 54°19'02" West a distance of 391.10 feet to a point;

South 53°26'02" West a distance of 4077.20 feet to a point;

along a non-tangent curve to the left, said curve having a radial bearing of South 36°30'07" East, a radius of 2412.00 feet, a central angle of 10°41'17", a chord bearing and distance of South 48°09'15" West, 449.29 feet, for an arc length of 449.94 feet to a point for the south corner of the herein described tract;

THENCE: departing the northwest right-of-way line of State Highway Loop 337 and along the south line of said 2086 acre tract, North 37°35'41" West a distance of 6349.56 feet to a point;

THENCE: North 39°08'41" West a distance of 787.92 feet to a the southwest corner of said 2086 acre tract;

THENCE: along the west line of said 2086 acre tract, North 52°30'17" East a distance of 8742.44 feet to a point on the southwest right-of-way line of Hueco Springs Loop Road;

THENCE: along the southwest right-of-way line of said Hueco Springs Loop Road, the following bearings and distances:

South 85°40'41" East a distance of 308.21 feet to a point;

South 76°17'58" East a distance of 54.07 feet to a point;

South 54°55'14" East a distance of 119.87 feet to a point;

South 46°52'45" East a distance of 55.24 feet to a point;

South 37°19'35" East a distance of 197.53 feet to a point of curvature on the southern right-of-way line of River Road;

THENCE: along the southern right-of-way line of said River Road, the following bearings and distances:

along a tangent curve to the left, said curve having a radius of 450.00 feet, a central angle of 32°18'28", a chord bearing and distance of South 53°28'49" East, 250.40 feet, for an arc length of 253.74 feet to a point;

South 69°38'03" East a distance of 794.06 feet to a point;

along a tangent curve to the right, said curve having a radius of 3795.00 feet, a central angle of 10°11'42", a chord bearing and distance of South 64°32'12" East, 674.37 feet, for an arc length of 675.26 feet to a point;

South 59°26'22" East a distance of 2543.48 feet to a point;
along a tangent curve to the right, said curve having a radius of 1408.00 feet, a
central angle of 35°39'13", a chord bearing and distance of South 41°36'45"
East, 862.09 feet, for an arc length of 876.16 feet to a point;
South 23°47'08" East a distance of 1000.15 feet to a point;
along a tangent curve to the left, said curve having a radius of 2890.00 feet, a
central angle of 11°10'04", a chord bearing and distance of South 29°22'10"
East, 562.42 feet, for an arc length of 563.31 feet to a point;
South 34°57'13" East a distance of 1491.54 feet to the POINT OF
BEGINNING, and containing 1746.9 acres.

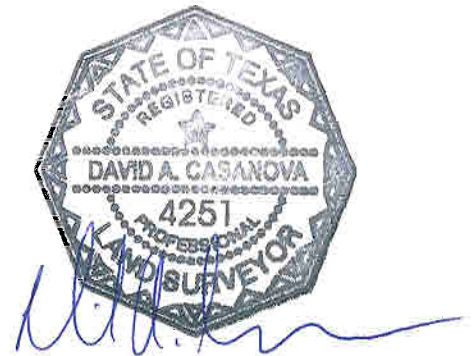
This document was prepared under 22 TAC 663.21, does not reflect the results of an on the
ground survey, and is not to be used to convey or establish interests in real property except those
rights and interests implied or established by the creation or reconfiguration of the boundary of
the political subdivision for which it was prepared.

PREPARED BY: PAPE DAWSON ENGINEERS, INC.

DATE: March 23, 2012

JOB No.: 9127-10

FILE: N:\Survey10\10-9100\9127-10\WORD\1746.9 Ac MBs.doc



**FIELD NOTES
FOR A
POLITICAL SUBDIVISION**

Being 657.1 acres, more or less, out of the J.M. Veramendi Survey No. 2, Abstract 3, Comal County, Texas. Said 657.1 acres also being a portion of a 694 acre tract of land described as Fourth Tract in Deed recorded in Volume 167, Pages 80-92 of the Deed Records of Comal County, Texas. Said 657.1 acre tract being more fully described as follows;

BEGINNING: at a found ½" iron rod on the northeast right-of-way line of River Road, for the south corner of this tract and the south corner of said 694 acre tract;

THENCE: along said northeast right-of-way line of River Road, the following bearings and distances:

Along a curve to the right, said curve having a radial bearing of North 55°28'38" East, a radius of 2840.00 feet, a central angle of 10°44'14", a chord bearing and distance of North 29°09'15" West, 531.43 feet, for an arc length of 532.21 feet to a point;

North 23°47'08" West a distance of 1000.15 feet to a point;

Along a tangent curve to the left, said curve having a radius of 1458.00 feet, a central angle of 35°39'13", a chord bearing and distance of North 41°36'45" West, 892.71 feet, for an arc length of 907.28 feet to a point;

North 59°26'22" West a distance of 2543.48 feet to a point;

along a tangent curve to the left, said curve having a radius of 3845.00 feet, a central angle of 10°11'42", a chord bearing and distance of North 64°32'12" West, 683.26 feet, for an arc length of 684.16 feet to a point;

North 69°38'03" West a distance of 794.06 feet to a point;

along a tangent curve to the right, said curve having a radius of 400.00 feet, a central angle of 32°18'28", a chord bearing and distance of North 53°28'49" West, 222.57 feet, for an arc length of 225.55 feet to a point;

North 37°19'35" West a distance of 74.92 feet to a point;

North 24°39'43" West a distance of 84.03 feet to a point;

North 03°54'02" West a distance of 73.10 feet to a point;

North 32°15'55" East a distance of 337.26 feet to a point;

North 27°47'36" East a distance of 106.84 feet to a point;

North 23°29'03" East a distance of 58.43 feet to a point;

North 18°42'36" East a distance of 166.96 feet to a point;

North 00°50'37" West a distance of 58.28 feet to a point;

North 08°13'11" West a distance of 191.91 feet to a point;

North 08°36'56" West a distance of 186.83 feet to a point;

THENCE: departing the northeast right-of-way line of River Road and along the northwest line of said 694 acre tract, North 52°07'56" East a distance of 1441.70 feet to a point;

THENCE: departing the northwest line of said 694 acre tract, over and across said 694. acre tract the following bearings and distances:

South 37°52'04" East a distance of 360.00 feet to a point,

South 88°30'00" East a distance of 932.68 feet to a point,

North 24°30'01" East a distance of 910.13 feet to a point on the Guadalupe River;

THENCE: along the meanders of the Guadalupe River, the following bearings and distances:

South 66°20'58" East a distance of 253.10 feet to a point;

South 72°43'51" East a distance of 223.08 feet to a point;

South 79°52'21" East a distance of 524.56 feet to a point;

South 81°07'29" East a distance of 278.44 feet to a point;

South 88°15'17" East a distance of 278.53 feet to a point;

South 87°39'50" East a distance of 212.64 feet to a point;

North 81°43'30" East a distance of 282.13 feet to a point;

North 86°35'39" East a distance of 414.94 feet to a point;

North 87°24'18" East a distance of 341.41 feet to a point;

South 83°38'12" East a distance of 482.30 feet to a point;

South 58°14'14" East a distance of 405.29 feet to a point;

South 59°04'08" East a distance of 162.27 feet to a point;

South 27°19'15" East a distance of 277.64 feet to a point;

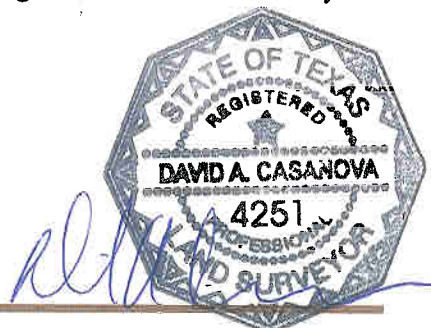
South 01°19'17" East a distance of 431.31 feet to a point;
South 11°28'18" West a distance of 438.24 feet to a point;
South 01°16'05" East a distance of 728.38 feet to a point;
South 08°53'25" East a distance of 554.01 feet to a point;
South 29°52'02" East a distance of 672.19 feet to a point;
South 66°26'35" East a distance of 387.33 feet to a point;
South 86°37'11" East a distance of 582.83 feet to a point;
North 84°48'17" East a distance of 651.28 feet to a point;
North 67°16'02" East a distance of 474.64 feet to a point;

THENCE: departing the Guadalupe River and along the southeast line of said 694 acre tract the following bearings and distances:

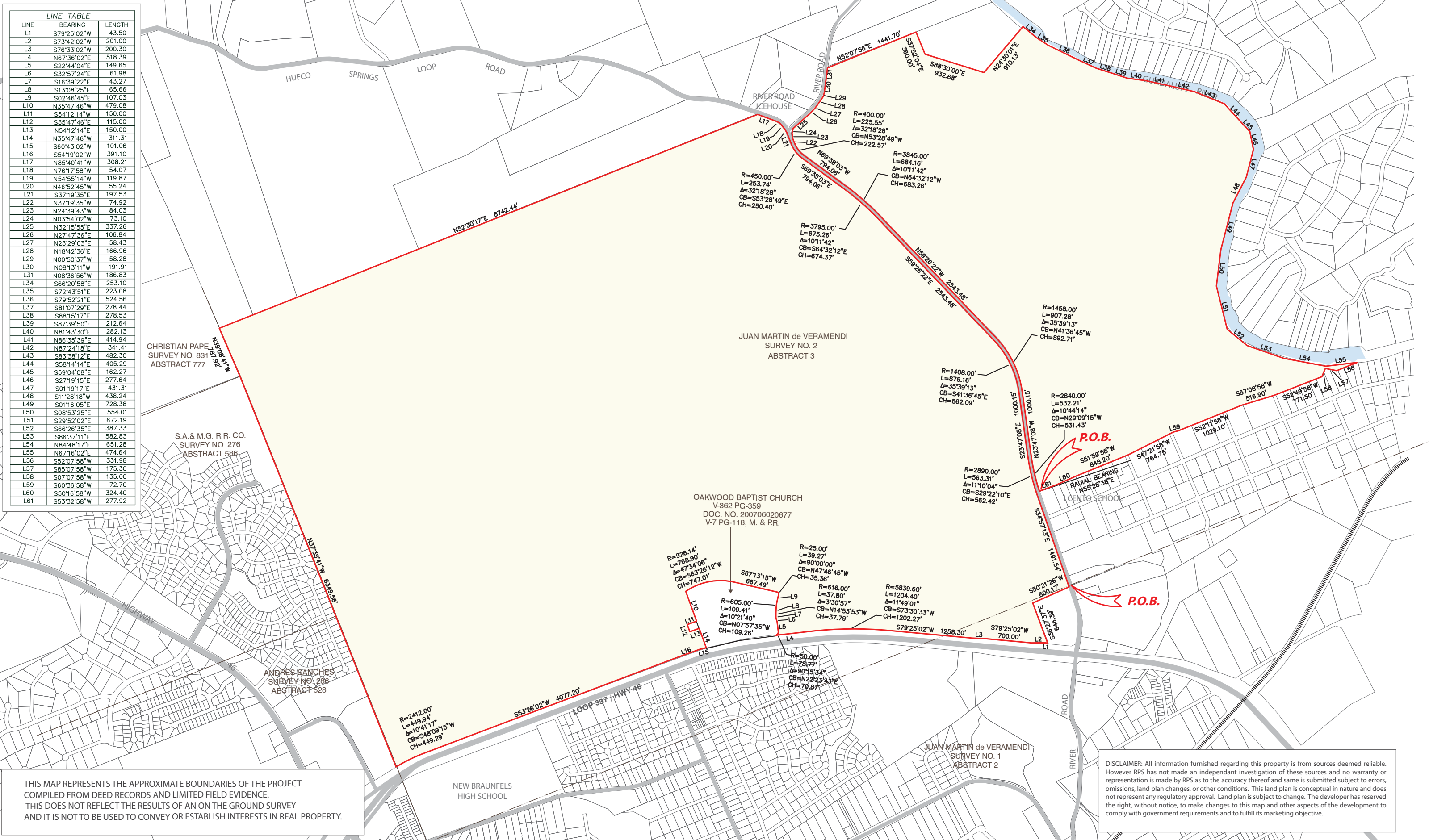
South 52°07'58" West a distance of 331.98 feet to a point;
South 85°07'58" West a distance of 175.30 feet to a point;
South 07°07'58" West a distance of 135.00 feet to a point;
South 52°49'58" West a distance of 771.50 feet to a point;
South 57°08'58" West a distance of 516.90 feet to a point;
South 52°11'58" West a distance of 1029.10 feet to a point;
South 60°36'58" West a distance of 72.70 feet to a point;
South 47°21'58" West a distance of 764.75 feet to a point;
South 51°59'58" West a distance of 848.20 feet to a point;
South 50°16'58" West a distance of 324.40 feet to a point;
South 53°32'58" West a distance of 277.92 feet to the POINT OF BEGINNING, and containing 657.1 acres.

This document was prepared under 22 TAC 663.21, does not reflect the results of an on the ground survey, and is not to be used to convey or establish interests in real property except those rights and interests implied or established by the creation or reconfiguration of the boundary of the political subdivision for which it was prepared.

PREPARED BY: PAPE DAWSON ENGINEERS, INC.
DATE: March 23, 2012
JOB No.: 9127-10
FILE: N:\Survey10\10-9100\9127-10\WORD\657.1 Ac MBs.doc



LINE TABLE		
LINE	BEARING	LENGTH
L1	S79°25'02"W	43.50
L2	S73°42'02"W	201.00
L3	S76°33'02"W	200.30
L4	N67°36'02"E	518.39
L5	S22°44'04"E	149.65
L6	S32°57'24"E	61.98
L7	S16°39'22"E	43.27
L8	S13°08'25"E	65.66
L9	S02°46'45"E	107.03
L10	N35°47'46"W	479.08
L11	S54°12'14"W	150.00
L12	S35°47'46"E	115.00
L13	N54°12'14"E	150.00
L14	N35°47'46"W	311.31
L15	S60°43'02"W	101.06
L16	S54°19'02"W	391.10
L17	N85°40'41"W	308.21
L18	N76°17'58"W	54.07
L19	N54°55'14"W	119.87
L20	N46°52'45"W	55.24
L21	S37°19'35"E	197.53
L22	N37°19'35"W	74.92
L23	N24°39'43"W	84.03
L24	N03°54'02"W	73.10
L25	N32°15'55"E	337.26
L26	N27°47'36"E	106.84
L27	N23°29'03"E	58.43
L28	N18°42'36"E	166.96
L29	N00°50'37"W	58.28
L30	N08°13'11"W	191.91
L31	N08°36'56"W	186.83
L34	S66°20'58"E	253.10
L35	S72°43'51"E	223.08
L36	S79°52'21"E	524.56
L37	S81°07'29"E	278.44
L38	S88°15'17"E	278.53
L39	S87°39'50"E	212.64
L40	N81°43'30"E	282.13
L41	N86°35'39"E	414.94
L42	N87°24'18"E	341.41
L43	S83°38'12"E	482.30
L44	S58°14'14"E	405.29
L45	S59°04'08"E	162.27
L46	S27°19'15"E	277.64
L47	S01°19'17"E	431.31
L48	S11°28'18"W	438.24
L49	S01°16'05"E	728.38
L50	S08°53'25"E	554.01
L51	S29°52'02"E	672.19
L52	S66°26'35"E	387.33
L53	S86°37'11"E	582.83
L54	N84°48'17"E	651.28
L55	N67°16'02"E	474.64
L56	S52°07'58"W	331.98
L57	S85°07'58"W	175.30
L58	S07°07'58"W	135.00
L59	S60°36'58"W	72.70
L60	S50°16'58"W	324.40
L61	S53°32'58"W	277.92



THIS MAP REPRESENTS THE APPROXIMATE BOUNDARIES OF THE PROJECT COMPILED FROM DEED RECORDS AND LIMITED FIELD EVIDENCE. THIS DOES NOT REFLECT THE RESULTS OF AN ON THE GROUND SURVEY AND IT IS NOT TO BE USED TO CONVEY OR ESTABLISH INTERESTS IN REAL PROPERTY.

DISCLAIMER: All information furnished regarding this property is from sources deemed reliable. However RPS has not made an independent investigation of these sources and no warranty or representation is made by RPS as to the accuracy thereof and same is submitted subject to errors, omissions, land plan changes, or other conditions. This land plan is conceptual in nature and does not represent any regulatory approval. Land plan is subject to change. The developer has reserved the right, without notice, to make changes to this map and other aspects of the development to comply with government requirements and to fulfill its marketing objective.

EXHIBIT NO. 5
to Utility Agreement
Master Framework Plan





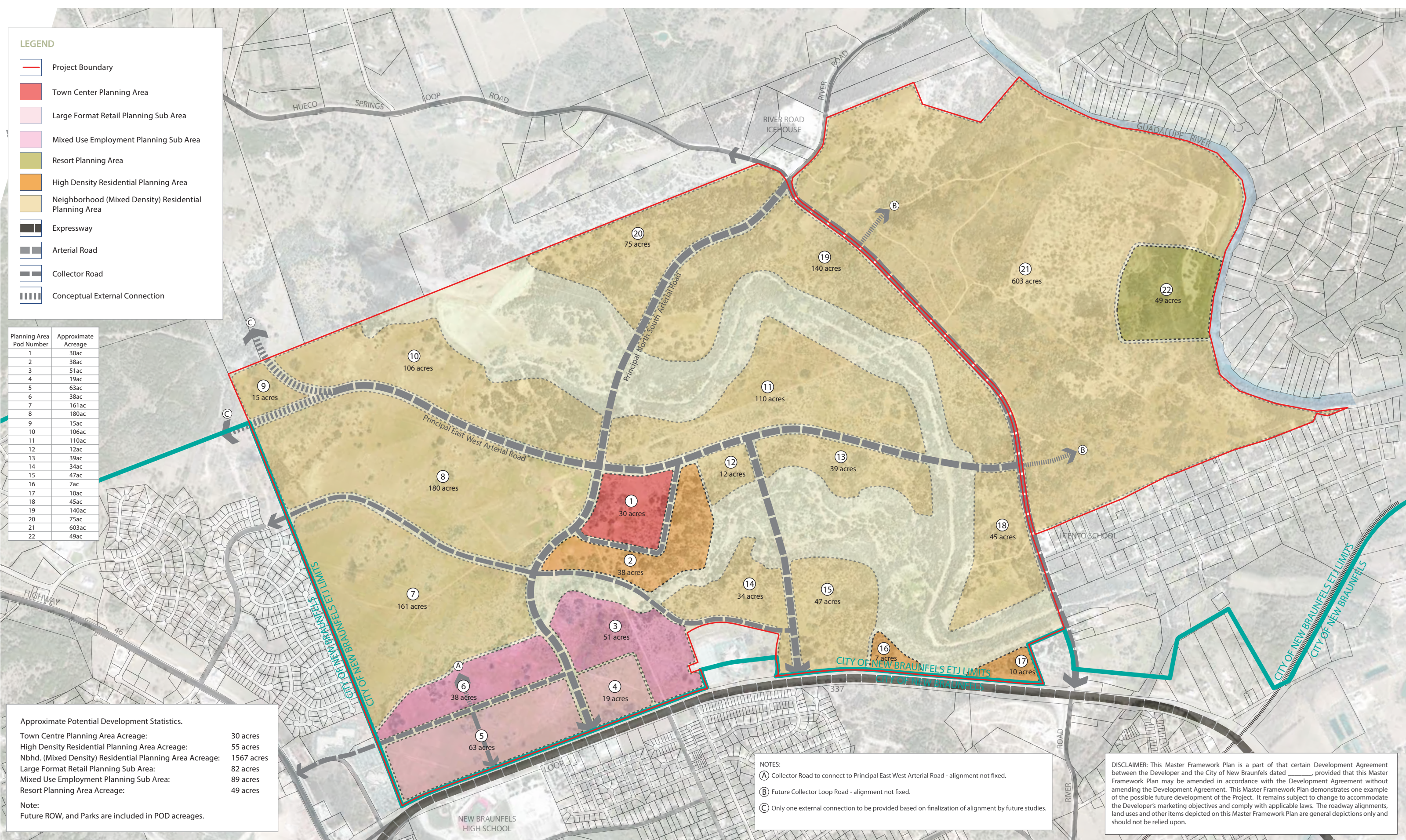




EXHIBIT NO. 6

to Utility Agreement

Utility Engineering Report of August 2011

WORD BORCHERS TRACT

Utility Engineering Report – Water and Sewer Infrastructure

November 2010

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EXHIBITS

- Exhibit 1 – Master Framework Plan
- Exhibit 2 – Intensity of Utility Service and Phasing Exhibit
- Exhibit 3 – Master Water Plan
- Exhibit 4 – Master Sewer Plan
- Exhibit 5 – Sewer System Hydraulic Calculations

I. EXECUTIVE SUMMARY

The Word Borchers Tract, a 2,400± acre multi-use development is located in northern New Braunfels, outside of Loop 337. This tract is located within the limits of the Comal County Water Control and Improvements District No. 1 established by legislative action during 2009. This property is located over the Edwards Aquifer Recharge Zone and all development activities will be in accordance with rules and regulations established for the Edwards Aquifer Recharge Zone.

Development of this property will include a mix of residential and commercial land uses and is expected to occur over a 25-30 year period. The land use plan for the Word Borchers Tract that will be incorporated into a Development Agreement with the City of New Braunfels is included as Exhibit 1, Master Framework Plan, and as attached as Exhibit 5 to the Utility Construction Cost Sharing Agreement. Information from the Master Framework Plan was used to prepare Exhibit 2 (Intensity of Utility Service and Phasing Exhibit) that identifies the distribution of utility service requirements and reflects the preliminary phasing plan for the development. The development is requesting extension of water and sanitary sewer service from New Braunfels Utilities (NBU). The full build-out of the property is projected to require an estimated 6,724 Living Unit Equivalents (LUE's) of sanitary sewer service and an estimated 7,680 LUE's of potable water service.

The local contact for the developer of the Word Borchers Tract is Ms. Tiffany Lacey. Her local contact information is provided below:

Ms. Tiffany Lacey
ASA Properties LLC
396 North Seguin Avenue
New Braunfels, TX 78131
Phone: (512) 761-0061

Ms. Lacey will be the primary contact for this project.

Sanitary sewer proposed to serve this tract will require extension of a 27-inch gravity sewer main from this property to the existing Blieders Creek Lift Station. Sewer flows from the Word Borchers Tract will be transferred to the Gruene WWTP for treatment. New on-site gravity mains, 8-inch to 27-inches diameter, three (3) new lift stations and force mains, and connections to two (2) existing gravity sewer mains will provide the sewer infrastructure required to support development of this property. Discussions with NBU staff reflect that the two (2) existing sewer mains each have 200 of available capacity that can be utilized to support the first 2-4 years of development. The developer is requesting that NBU provide an additional 300 LUEs of temporary sewer service capacity within the each of the two existing sewer mains for five years. This will enable the development to generate adequate activity to support the financial burden of the off-site sewer main construction.

The proposed development of the Word Borchers Tract will occur across water system Pressure Zones 4 and 5. Development of the property will require construction of new elevated storage capacity of 1.5 million gallons in the two pressure zones to meet the needs of the residential and commercial properties. A potable piping network incorporating primary trunk water mains sized 12 to 36-inches within the two Pressure Zones will be required to provide adequate flows and pressures to the proposed development, and to provide adequate capacity for additional flows to support the new water treatment plant proposed by NBU north of this property.. Preliminary discussions with NBU staff suggest that adequate capacity exists to support initial growth within the property for approximately 400 LUEs, or 3-4 years. This will enable development to begin prior to expenditures for significant infrastructure components are required.

NBU has requested that this development oversize a few segments of its water mains to accommodate future flows (5,000 gallons/minute) from a new water treatment plant to be

located north of this development. This will require oversizing of some 12 and 16-inch water mains to 24 and 36 inch mains to accommodate the additional capacity requested by NBU. Also, NBU has requested that the elevated storage tank be oversized from 1.5 mgallons to a 2.5 mgallons to accommodate future growth and provide supplemental capacity and support to its existing water system infrastructure. All oversizing costs will be funded by NBU in accordance with its standard policies.

II. GENERAL DEVELOPMENT

The Word-Borchers Tract encompasses approximately 2,400-acres in northern New Braunfels and Comal County. The property is generally bounded on the east by the Guadalupe River, the south by Loop 337 and existing subdivisions on the west by SH 46, and by several large, undeveloped acreage tracts to the north.

This property is located entirely within the limits of the proposed Comal County Water Control and Improvements District No. 1 established by legislative action in 2009. This property overlays the Edwards Aquifer Recharge Zone. All development will be completed in accordance with rules applicable to development over the Edwards Aquifer Recharge Zone, as established in the Texas Commission on Environmental Quality (TCEQ) Chapter 213.

Development of this property will include a mixture of residential, commercial and retail use. Exhibit No. 2 illustrates the anticipated residential and commercial development areas within the property. The rate of development will follow local demands supported by economic conditions. Development of this property is expected to extend over a twenty-five to thirty year period. Initially, the development will incorporate primarily single-family residential subdivision units with some limited commercial or retail developments. Both types of development areas will utilize existing roads and utility infrastructure. These existing roads and water and sewer lines will establish the initial growth patterns.

As noted in Exhibit 2, the revised roadway network has been established to define potential development areas and to reflect anticipated initial alignments of interior streets within the property. These road alignments indicate the general traffic patterns through the property and are used to conceptually establish water service pressure zones and sanitary sewersheds for the property.

Anticipated land uses include a mixture of residential and commercial developments. These broad classifications will include a variety of subcategories within both the residential and commercial classifications. A listing of some anticipated project types are provided below.

Residential Developments

- Single-family residential developments, home sizes ranging from 1,500-4,500 square feet
- Small, localized recreational facilities commonly found in residential developments, such as swimming pools, tennis courts, soccer fields, mixed-use parks, etc.
- Elementary and/or middle schools
- Churches and related facilities

Commercial Developments

- Large retail developments incorporating small shopping outlets, grocery outlets, and multi-purpose retail outlets
- Small to medium office buildings
- Medical offices, doctor offices
- Service stations
- Multi-family developments including apartments and town-homes
- Restaurants

- Major utility infrastructure facilities (storage tanks, pump stations)
- Town centers incorporating a mixture of all of the above types of retail and restaurant establishments
- Secondary schools, including community schools and specialized educational facilities
- Community athletic park facilities including parks, soccer and softball complexes
- Hotels with specific river/water related activities

Multiple land use concepts have been developed to define the utility service requirements for the Word-Borchers Tract. Based on the current conceptual land use concepts, it is estimated that the utility service requirements (Living Unit Equivalents – LUE's) will be as noted below.

- Residential use 5,520 LUEs (estimated)
- Commercial/Retail/non-residential 1,204 LUEs (estimated)
6,724 LUEs – sewer
7,680 LUEs – water*

**includes approximately 8% for irrigation use, roadway medians and parkways, greenbelt and selected parks*

This conceptual development plan anticipates an average wastewater service demand of approximately 4.3 LUE's per acre of developable land (estimated 1,567 acres, exclusive of roads, local parks, schools, greenbelts, exclusive of floodplain or detention pond areas). Actual service requirements may vary depending on several factors such as residential lot sizes, density of multi-family areas, number of offices and restaurants, and types of retail and shopping areas. It is anticipated that development and its service

requirements will average 75-125 LUE's in the first 2-3 years, gradually increasing to an annual average of 150-300 LUE's per year over the following 25-30 years.

III. PROPOSED FACILITIES – WATER

A. Water Service Demand Requirements

The development of the Word-Borchers Tract will require potable water service connections in NBU's Pressure Zones 4 and 5 (ref. Exhibit 2). As noted previously, the development of the Word-Bochers Tract is estimated to require 7,680 LUE's of potable water service as build-out. Based on conceptual layouts, these demands will be split among the two Pressure Zones approximately as noted below.

Pressure Zone 5 5,578* LUE's (72.6%)

Pressure Zone 4 2,102* LUE's (27.4%)

**Includes approximately 8% for landscape irrigation use, road medians, parkways, greenbelts, parks*

These LUE requirements are preliminary and may be modified in future years as development patterns are more clearly defined. For purposes of this utility service request, the proposed water infrastructure required to support the Word-Borchers tract will be based on a total service requirement of 7,680 LUE's for potable water. NBU has indicated that they have adequate water supply to support this development without the developer providing or securing additional water rights, or access to available surface water sources.

B. Mains and Infrastructure

Development of the Word-Borchers tract will incorporate new water mains and storage facilities in Pressure Zone 5. The first residential development units within Phase 1 are expected to occur in Pressure Zone No. 5. These initial residential pods would to be located in the eastern portion of the property. These

units would be served by an extension of the existing 12-inch water main from along Loop 337. This main would be adequate to support the first 400 residential connections. The first commercial/non-residential developments are anticipated to be located along Loop 337. Similarly, these development units would connect to the existing 12-inch mains along Loop 337 for water service.

These initial development areas would incorporate multiple internal 8-inch and 12-inch mains in accordance with NBU's policies and in conformance with the Master Water Plan provided as Exhibit 3. In addition to these internal lines, as illustrated in the Master Water Plan, a series of 12-to 36-inch mains, some that will be oversized by NBU, are proposed along the major roads to provide appropriate interconnections within the property. These proposed trunk mains will be extended as development progresses. Where appropriate, interconnections within smaller development areas will be made to maintain adequate fire flow capabilities and to minimize water quality concerns.

These service requirements will require additional off-site mains and water storage facilities to support long-term growth.

Table 1. Pressure Zone Requirements

Infrastructure	Pressure Zone 5	Pressure Zone 4	Totals
LUE's (ea)	5,578	2,102	7,680
Total Storage (gal)	1.116 MG	0.420 MG	1.536 MG
Average Day Demand *	3.90 MGD*	1.47 MG*	5.37 MGD*

**Assumes 3.5 persons/LUE – NBU requirements, for full build out.*

Discussions with NBU staff indicate that the existing water system infrastructure has adequate capacity to support some initial development. A confirmation of

available infrastructure capacity (water supply, water mains, storage and pump capacity) will be required to formalize a Utility Agreement for this development. The size of this proposed development and its 25-30 year development schedule will require NBU and the developer to closely coordinate growth including its future water supply capacities.

As development continues, the demand from this development will outstrip the existing available capacity from NBU's system. NBU's regulations require this development to provide and construct adequate facilities (mains, storage, etc.) to support its needs. Based on projected demands, it is recommended that water storage facilities be provided for the NBU system as noted below.

Pressure Zone 5 (5,578 LUE's)	1,115,600 gallons
<u>Pressure Zone 4 (2,102 LUE's)</u>	<u>420,400 gallons</u>
Totals	1,536,000 gallons

A 1.5 million gallon tank size is considered a standard size for elevated storage tanks. It is recommended that this development provide a 1.5 million gallon elevated storage tank for Pressure Zone 5. The required additional 36,000 gallons of additional storage capacity, if necessary, could be provided from existing NBU facilities, or could be included in future elevated storage tanks to be constructed within NBU's future Capital Improvements Program over the next 20-25 years. This elevated tank would provide appropriate ground storage capacity to support a proposed high service pump station for areas within Pressure Zone 4.

NBU has requested that the proposed 1.5 mgallon elevated storage tank be oversized to a 2.5 mgallon elevated storage tank to provide additional capacity for future growth and provide additional support to its current infrastructure system. NBU will participate in the oversizing of this elevated storage tank in accordance

with its standard policies and the Utility Cost Sharing Agreement. This oversized tank would enable NBU to remove the existing 250,000 gallon elevated storage along Loop 337 tank from service.

The new elevated storage tank and high service pump station improvements would require the developer to dedicate a 2-3 acre parcel to NBU for the proposed new elevated storage tank and pump station. Final size of the facility site dedication would be confirmed as preliminary designs for each of these facilities are begun. It is recommended that this dedicated parcel be located adjacent to the existing elevated storage tank to facilitate interconnections and minimize future piping and related electrical utility extensions for the high service pump station.

A series of 12 to 24-inch water trunk mains will be required to provide proper service and pressures to all areas of the Word-Borchers tract. These mains will generally be located along the proposed roadways throughout the development. As illustrated in the Master Water Plan (Exhibit 2), some internal 12-inch mains are recommended to maintain appropriate service levels within the development. These mains will also follow internal roads, with final alignments to be determined as development units are further defined and platting begins.

The required water main sizes as defined in NBU's current regulations (Article 2 2.9.2.A) for each of the Pressure Zones are noted below in Table 4.

Table 2. Water Main Capacity Requirements

Pressure Zone 5	5,578 LUEs*	@ 3.5 persons/LUE
Avg. Daily Flows	200 gal/persons/day	2,711 gal/min
Peak Daily Flows	530 gal/persons/day	7,185 gal/min
Peak Hour Flows	900 gal/persons/day	12,202 gal/min
Pressure Zone 4	2,102 LUEs*	@ 3.5 person/LUE
Ave. Daily Flows	200 gal/persons/day	1,022 gal/min
Peak Daily Flows	530 gal/persons/day	2,708 gal/min
Peak Hourly Flows	900 gal/persons/day	4,600 gal/min

**Reflects full build out of development.*

Under NBU's current regulations (Article 2.9.2A), allowable velocities for domestic use and fire flow conditions are 5 ft/sec. and 10 ft/sec respectively.

Table 3. Water Main Capacities

Main Size	5 ft/sec*	10 ft/sec**
8"	783 gpm	1,567 gpm
12"	1,762 gpm	3,525 gpm
16"	3,133 gpm	6,266 gpm
24"	7,050 gpm	14,100 gpm
30"	11,015 gpm	22,030 gpm
36"	15,862 gpm	31,724 gpm

**Domestic use conditions*

***Fire Flow conditions*

Fire flows will be defined by the type of development (residential, commercial, etc.) and if internal fire sprinkler systems are provided as part of the building construction. The 2009 International Fire Code provides recommendations for minimum fire flow rates of 1,500 – 2,000 gallons per minute which have been

used in development of this Master Water Plan. The required water main flow capacities for each Pressure Zone are summarized in Table 4 below.

Table 4. Required Water Main Equivalents Sizes (2.6.2A)

	Pressure Zone 5	Pressure Zone 4
LUE's (3.5 persons/LUE)	5,578*	2,102*
Ave. Daily Flow	2,711 gpm	1,022 gpm
Peak Day Flow	7,185 gpm	2,708 gpm
Peak Day & Fire Flow (residential)	8,685 gpm	4,208 gpm
Peak Day & Fire Flow (commercial)	9,185 gpm	4,708 gpm
Peak Hour Flow	12,202 gpm	4,600 gpm
Peak Day & Fire Flow (residential)	1-12", 1-24"	1-16"
Peak Day & Fire Flow (commercial)	1-12", 1-24"	1-16"
Peak Hour Flow	1-24", 2-16"	1-12", 1-16"

**3.5 persons/LUE, reflecting full build out of the development.*

The sizes identified in the tables above are based on flow in one direction only. Connections to existing mains within NBU's water system will enable this development to reduce the sizes of water mains needed to serve development within each Pressure Zone. The recommended connections to NBU's existing infrastructure are provided below.

Pressure Zone 4

- Connect to existing 12-inch mains on Oak Run Parkway and Loop 337
- Provide a new 16-inch main from the new water storage facility to provide service to areas within Pressure Zone 4.

Pressure Zone 5

- Provide new 16-inch and a 24-inch main from proposed elevated storage facility along Loop 337
- Provide two 12-inch main connections to the existing 12-inch mains along Loop 337
- Connect a 16-inch main along a future north-south arterial road expansion of River Road to a future water main extending from NBU's proposed water production facility north of this development

These recommended connections to existing and future water mains will provide adequate circulation of flows within the Word-Borchers tract and surrounding developments, minimizing concerns over water quality within the water mains.

Previous review meeting discussions with NBU has requested that this development's potable water system infrastructure be designed and constructed to provide an additional 5,000 gallons per minute of flow capacity through the development within its piping infrastructure from north to south. This additional capacity would be carried through oversized mains along the two North-South arterial roads within the Word Tract. The additional capacity will require the proposed 12 and 16-inch mains to be oversized to 24 and 36-inch sizes to provide the requested flow capacity. The oversizing of these mains will be funded by NBU under its standard policies.

C. Hydraulic Analyses

The proposed water mains identified in the Master Water Plan were determined through preliminary calculations and initial hydraulic analysis. NBU staff has indicated that adequate available capacity to meet currently anticipated demands in the first 2-3 years of 400-500 LUEs exist in its current water system

infrastructure. The proposed water main size determinations also included a review of potential connections internal to the Word Borchers Tract.

Information provided in Tables 1 to 4 was used to establish main sizes for internal loops within the property. Based on this data, the Master Water Plan provides that the majority of the primary water mains would typically be 12-inch mains. It is not recommended that water mains be provided on both sides of the internal major roads within the same pressure zone. Use of parallel mains would not reduce main sizes from 12-inch due to fire flow requirements within the development. The use of parallel mains along on both sides of all internal roads would yield lower average flows throughout the water mains within the development, potentially resulting in lower water quality in the larger mains, and increasing the amount of system flushing by NBU to maintain desired water quality.

It is recommended that NBU and the developer coordinate the location and alignments of future potable water service mains along the larger arterial roads within proposed commercial pods to provide appropriate service connections and access. This will minimize the installation of short, dead-end mains that would require constant flushing by NBU to maintain water quality to its customers.

D. Oversizing

The water mains and storage facilities identified in this report and on the Master Water Plan are sized to provide appropriate capacities to serve this development. The adjacent undeveloped areas and their potential service needs have not been included in any calculations or water main alignments.

There are limited water infrastructure facilities associated with the Word Borchers Tract that could be oversized by NBU to benefit surrounding areas including

existing developments. Infrastructure facilities that could be oversized by NBU as part of its long-term infrastructure network are identified below.

- 12 and 16-inch main along the primary north-south arterial roads to support the requested flows of 5,000 gallons/minute from NBU's future water treatment plans
- 12-inch main (Pressure Zone 5) along Loop 337

IV. PROPOSED FACILITIES – SEWER

A. Sewer Service Demand Requirements

Flows from the Word-Borchers tract, located north of Loop 337, will be treated at NBU's existing Gruene WWTP. The property has three primary sewersheds, two of which have an existing sewer main crossing through the sewersheds. Each of these mains provides service to existing developments. Discussions with NBU staff reflect that these two existing sewer mains have available un-allocated capacity of approximately 200 LUEs that would be reserved for use by the Word Borchers Tract's developments to support initial phases of the development.

Under NBU's current guidelines, the proposed sanitary sewer service requirements of 6,724 LUEs at full build-out will generate an average daily dry weather flow of 3,269 gallons per minute (gpm), or 4.50 MGD.

$$ADF = (6,724 \text{ LUE's}) (3.5 \text{ persons/LUE}) (200 \text{ gal/day/LUE}) = 4,706,800 \text{ gal/day}$$

The three primary sewersheds illustrated in Exhibit 3 – Preliminary Sewersheds are generally described below.

- East – Approximately 34% of the property, encompassing an estimated 536 acres of developable land with an estimated 2,168 LUE's of service, generally extending from east of River Road to the Guadalupe River.
- North – Approximately 40% of the property, encompassing an estimated 619 acres of developable land, with an estimated 2,312 LUE's of sewer service demands. This sewershed includes an existing 15-18-inch main generally paralleling Blieders Creek, extending to the northwest corner of the Word Borchers Tract.
- South – Approximately 26% of the property, encompassing an estimated 411 acres of developable land, with an estimated 2,244 LUE's of sewer service demands. This sewershed includes an existing 12 to 18-inch gravity main generally paralleling a tributary of Blieders Creek, extending to an existing subdivision at the southwest corner of the Word Borchers Tract.

Table 5. Sewershed Requirements

Sewershed	Acres	LUEs*	Average Daily Flows*
North	619	2,312	1.62 MGD*
South	411	2,244	1.57 MGD*
East	536	2,168	1.52 MGD*
Totals	1,566	6,724	4.71 MGD*

**reflects full build out of development.*

These primary sewersheds have been broken into smaller sub-sewerheds for an analysis of the development's sewer service demands, and for use in the sizing of sewer mains and lift stations required to serve this property. The Master Sewer Plan is provided as Exhibit 4. Preliminary sewer main sizing calculations are provided in Exhibit 5. A summary of the estimated sewer flows by primary sewersheds is provided in Table 5 above.

B. NBU Service Capabilities

As noted previously, all sewer flows generated from the Word Borchers Tract will be treated by the Gruene WWTP. The two existing gravity sewer outfalls were constructed to serve developments west of the Word Borchers Tract. Discussions with NBU's staff indicate that each of these gravity mains have an estimated 200 LUE's of un-assigned and available capacity that can be reserved for the Word Borchers Tract.

Also, discussions with NBU staff indicated that the Blieders Creek Lift Station and force main and the Gruene WWTP each have approximately 45-50% of their design capacity available and uncommitted at the time of this report. Full build-out of this property is expected to require expansions and/or upgrades to both facilities to support the anticipated development through its completion.

Development of the Word Borchers Tract is projected to take 25-30 years to complete. The rate of internal development will vary with economic conditions. A preliminary projection of the internal growth of service requirements is provided in Table 6.

Table 6. Preliminary Development Growth Projections
Sanitary Sewer Service

Period	Sewer Service Demands (LUE's)	Cumulative Sewer Service Demands
2012-2016	750	750
2017-2021	1,250	2,000
2021-2026	1,475	3,475
2026-2036	1,575	5,050
2031-2036	1,674	6,724
Totals	6,724	6,724

These preliminary growth projections indicate that within the next five to ten years, NBU will need to begin planning and design of the expansion of its Gruene WWTP and the Blieders Creek Lift Station and Force Main system. These expansions will fit within NBU's planning period for the next Capital Improvements Plan and can be considered in the calculation of its impact fees. This planning process will enable NBU to recoup its costs for the expansion of the treatment plant, the Blieders Creek lift station and force main and related outfall mains from new development within the Word Brochers tract and surrounding developments.

C. Proposed Mains and Infrastructure

The Preliminary Development Growth Projections provided in Table 6 are used to determine gravity main, lift station and force main sizes necessary to serve the Word Borchers Tract. The Master Sewer Plan provided as Exhibit 4 illustrates the proposed alignments and sizes of the gravity sewer mains and the recommended location of the three new lift stations and force mains for this development.

The north and south sewersheds will utilize gravity sewer mains generally paralleling the existing sewer mains crossing the property that are providing sewer service to areas west of this property. As noted in the Master Sewer Plan, the onsite mains will vary in sizes from 8 to 27-inches. A 27-inch outfall is proposed to transfer flows from this property to the existing Bleiders Creek Lift Station for eventual treatment by the Gruene WWTP. The sewer main sizes reflected in the Master Sewer Plan are sized to meet the needs of the Word Borchers Tract only, and do not include capacity for undeveloped parcels north or west of the property.

Preliminary sizing calculations for the Master Sewer Plan are provided in Exhibit 5. These calculations are based on NBU's current design standards and design criteria.

The anticipated sanitary sewer flows generated within the East Sewershed will be transferred by three lift stations and force mains to the proposed gravity mains along Bleiders Creek. These three lift stations will have design capacities as noted below.

- North Lift Station 356 LUE's (94 acres)
- Resort Lift Station 1,311 LUE's (309 acres)
- East Lift Station 421 LUE's (112 acres)

The preliminary sizes and alignments of the gravity sewer mains, lift stations and force mains will be confirmed during final designs and platting of the various units of the property. Any revisions to the preliminary sizes will be coordinated with NBU and, if appropriate, revisions to the Master Sewer Plan for the Word Borchers Tract will be completed in accordance with NBU's governing regulations.

The design slopes used in the sewer design calculations are based on available aerial topography and assumed an average depth of 12 feet for downstream and upstream invert elevations. The calculated slopes were reduced by 10% to provide a safety factor for design and master planning of infrastructure. Final designs of all gravity mains will include field surveys to confirm grades and elevations, and to identify potential conflicts with other utilities and drainage structures.

Construction of the first subdivision units for Phase I will include construction of a large detention pond required by the City of New Braunfels on the southern tributary of Blieders Creek. This detention pond will aid in reducing downstream flows in the Blieders Creek during larger rainfall events within the City of New Braunfels. As illustrated on Exhibit 4, the detention pond depending on storm event size and intensity is anticipated to store accumulated stormwater approximately 1,100 feet upstream of the dam, potentially inundating a portion of the existing southern 12-inch sewer main and the proposed new sewer main Segment S-7.

Construction of this detention pond will require a retrofit of the existing manholes to preclude direct inflow from ponded water behind the dam. The existing sewer main trench will have to be reconstructed and backfilled with appropriate materials, constructed keyways, and other features to prevent water seepage along the existing piping that could potentially undermine the proposed dam structure. Similar construction techniques and materials will be required for the proposed Segment S-7 for similar reasons.

The size and width of the proposed detention pond dam has not been preliminarily defined at this time. It is estimated that 100-120 feet of the existing 12-inch sewer main and the proposed Segment S-7 will be located under this new detention dam structure. It is proposed that the new sewer main be installed in steel sleeving to provide NBU with the ability to remove the portions of the new sewer main under the dam for service. It is recommended that NBU consider a similar sleeve for its existing 12-inch main that would be located under the new detention dam structure.

If NBU is concerned about multiple mains located under the detention dam structure, an alternate construction scenario could be considered. The proposed

Segment S-7 would be installed generally as shown in Exhibit 4. The sewer flows from the existing southern 12-inch sewer main would be diverted into Segment S-7 at its intersection with Segment S-13 at the upper or western end of the detention pond, and carried through the detention pond limits. A new flow diversion structure would be constructed near the eastern end of Segment S-7 to re-divert appropriate flows back into the exiting 12-inch main. The Segment S7 sewer main would require an overizing to accommodate the flows of the existing 12-inch main (726 LUEs per NBU) of its ultimate flows would be increased from an 18-inch to a 21-inch main. The costs associated with this oversizing would be shared by the developer and NBU in accordance with NBUs current regulations. The limits of this possible sewer main alternate are shown on Exhibit 4 (Segment 7A).

D. Hydraulic Analyses

The preliminary sewer main designs are based on NBU's current design criteria, Section 2.9.3 Wastewater Systems. The calculations provided in Exhibit 5, utilize standard PVC Pipe (8"-18") and Reinforced Plastic Mortar Pipe (ASTM D3262, "Hobas Pipe" - 21" and larger) for gravity sewer mains, and either PVC or HDPE for the force mains.

The sewer calculations reflect that all generated sewer flows for this property will be transferred to the Blieders' Creek Lift station by a single new, 27-inch outfall main (S-1 to S-5). Three lift stations within the East Sewershed will transfer flows to other on-site gravity mains connecting to the outfall segments. An alternate solution to these on-site transfers would require a separate outfall from the eastern portion of this property through developed areas, extending a new 15-18-inch sewer main to the existing gravity main at the Gruene WWTP. This alternate outfall option would only eliminate one (East Lift Station) of the three lift stations proposed for the eastern portion of this development. For purposes of

securing a formal utility agreement with NBU, the Master Sewer Plan reflects only a single, 27-inch gravity sewer outfall to the Blieders Creek Lift Station.

The hydraulic calculations reflect the sanitary sewer infrastructure required to support an estimated 1,567 acres of developable land. These calculations assume that areas within the 100-year floodplain and Greenbelts along Blieders Creek are not developed, and all roadways are not included in the infiltration and inflow calculations.

The property's three sewersheds were further subdivided into smaller sub-sewersheds for use in sizing calculations for the proposed sewer infrastructure. Flow capacity requirements for each of the gravity mains and lift stations/force mains are provided in Exhibit 5. The calculations reflect that the proposed mains and force mains shown on the Master Sewer Plan will provide adequate capacity to serve the proposed development. For most of the proposed on-site sewer mains and force mains, there is little surplus capacity available to support additional sewer flows from surrounding developments under current NBU design guidelines.

The NBU staff has confirmed that the two existing sewer mains have 200 LUEs of un-assigned capacity that can be reserved for the Word Borchers Tract. The information on the existing two sewer mains provided by the NBU staff also reflects these two mains are currently serving from approximately 20% (Southern 12-inch main) to 50% (northern 15-18-inch main) of their available, reserved capacities.

It is requested that NBU allow the Word Borchers Tract to temporarily borrow an additional 300 LUEs from each existing sewer mains for five years. This additional capacity will enable the existing infrastructure to support new

development within the Word Borchers Tract and to generate sufficient revenues for the construction of the proposed outfall segments S1 to S7.

E. Offsite Improvements

As illustrated in the Master Sewer Plan, the Word Borchers Tract will require the capacity of 27-inch gravity main to support its anticipated development. The Master Sewer Plan reflects this requirement, and identifies a proposed off-site gravity sewer outfall extending approximately 6,600 feet to the Blieders' Creek Lift Station.

The Blieders' Creek Lift Station, its force main, and the Gruene WWTP have approximately 40% to 50% of unused or non-committed capacity. These facilities will require expansions and/or upgrades to provide adequate sewer service for the entire Word Borchers Tract. Improvements to these facilities will not be required for several years, giving NBU an opportunity to incorporate them into its next Capital Improvements Plan, and subsequently its next set of impact fee calculations.

Construction of the proposed 27-inch outfall sewer main regardless of options will require the developer and NBU to closely coordinate to complete designs and to identify new easements for acquisition by NBU. The Master Sewer Plan reflects the 27-inch outfall alignment would be constructed generally parallel to the existing 18-inch gravity main. This is expected to require a new 15 to 20-foot permanent sewer easement, and a temporary 20 to 30-foot construction easement to build the new sewer main. The requirement for securing these easements will need to be defined in the final utility agreement for this property. It is recommended that the securing of these easements be provided by NBU (and City of New Braunfels) as these entities have eminent domain authority to support the acquisition of the necessary easements.

An alternate option to providing a parallel outfall main to the Bleiders Creek Lift Station would be for NBU and the developer share in the costs of removing the existing 18-inch outfall sewer main and replacing it with a single 36-inch sewer main. Both NBU and the developer would share in these costs. It is recommended that the cost sharing be distributed on an LUE basis to more accurately reflect the required capacity assignments of the two parties. This remove and replace option could utilize the existing sewer easements, possibly only requiring the need for NBU and the City of New Braunfels to secure temporary construction easements to complete the construction.

Construction of the parallel outfall sewer main will require coordination and construction permits from Texas Department of Transportation (TxDOT, Loop 337 crossing), NBU and the City of New Braunfels (street/road crossings, floodplain permits.) Securing these permits would be the responsibility of the developer, with coordination by NBU.

F. Oversizing

The proposed sewer infrastructure shown in the Master Sewer Plan is projected to have very little surplus capacity that would be available for surrounding developments.

Should NBU be interested in oversizing mains for future surrounding developments, the following sewer mains are suggested for oversizing.

S-1 through S-6

N-1 through N-9, N-13, N-14

E-11 and E-13, North Lift Station

These mains could be extended through the Word Borchers Tract to provide service to the undeveloped tracts to the north. Any oversizing requested by NBU would be reimbursed to the developer under NBU's current regulations.

V. RECOMMENDATIONS

Development of the Word Borchers Tract will require new water and sewer infrastructure facilities over the next 25-30 years. Initially, NBU's existing water and sewer mains and facilities appear to have adequate and available capacities to support 400-750 LUEs of development. The use of these available capacities will enable both the NBU and the development to begin construction without extensive and significant capital investments. Use of the available capacities will enable NBU to update its Capital Improvements Program to include this development, providing for its ability to provide proper and adequate service to its new customers. Also, use of existing capacity will provide adequate time to secure additional off-site easements and sites for water storage and pumping facilities in advance of proposed construction.

The Master Water and Sewer Plans identify the required improvements for this development. Facilities that could be easily oversized to support surrounding areas have been identified in this report. It is suggested that NBU evaluate its long range plans to identify which of these Word Borchers Tract infrastructure projects should be oversized to provide optimal solutions for water and sanitary sewer service to the area.

EXHIBITS

EXHIBIT 1

Master Framework Plan

REVISED LAND USE PLAN 5C



Precinct	Dwelling Yield Estimate	Commercial Floorspace Estimate	Other Non Res Floorspace	
	(dw)	(square feet)	(other use, square feet, total rooms/students)	
1	59	330000	-	-
2	191	-	University/Institution	80,000
3	205	130000	-	-
4	343	-	-	-
5	153	-	-	-
6	225	-	-	-
7	37	130000	-	-
8	55	235000	-	-
9	-	428000	Hotel	180 room
10	-	400000	-	-
11	-	732000	-	-
12	149	-	-	-
13	399	-	-	-
14	242	-	School	900 students
15	289	35000	Community Fac.	20,000
16	273	-	-	-
17	99	-	-	-
18	211	-	-	-
19	158	-	-	-
20	170	-	-	-
21	-	280000	-	-
22	35	-	School	900 students
23	90	75000	-	-
24	217	-	Community Fac.	20,000
25	308	-	-	-
26	59	-	Resort	300 room
27	465	-	-	-
28	116	-	-	-
29	427	-	-	-
30	274	-	-	-
31	168	-	-	-
32	247	-	-	-
TOTAL:	5665	2775000		

Land Use Area	Low Density		High Density		Town Centre		Total Residential	
Total Acreage	1192.1		55.1		5.0		1252.2	
Average Density	3.8		20.3		11.8		4.5	
Product Types	dwelling	% Mix	dwelling	% Mix	dwelling	% Mix	dwelling	% Mix
3 St. MU Apt/Unit - Base.	-	-	-	-	59	100%	59	1%
3 St. Apt/Unit - No Base.	-	-	324	29%	-	-	324	6%
3 St. Apt/Unit - Base.	195	4%	795	71%	-	-	989	17%
Townhome	250	6%	-	-	-	-	250	4%
Row House	421	9%	-	-	-	-	421	7%
Duplex	51	1%	-	-	-	-	51	1%
Live/Work	287	6%	-	-	-	-	287	5%
Low SFD 1	1047	23%	-	-	-	-	1047	18%
Low SFD 2	779	17%	-	-	-	-	779	14%
Mid SFD 1	688	15%	-	-	-	-	688	12%
Mid SFD 2	422	9%	-	-	-	-	422	7%
High SFD 1	167	4%	-	-	-	-	167	3%
High SFD 2	182	4%	-	-	-	-	182	3%
	4488	100%	1119	100%	59	100%	5666	100%

Legend

General Details

- Site Boundary

Open Space

- Regional Park
- Community Park
- Linear Park & Open Space
- Indicative Neighborhood Park
- River Interface Overlay
- Private Conservation

Development Area

- Town Center
- Neighborhood Center
- Commercial & Business
- Large Format Retail Core
- Mixed Use Business Frame
- High Density Residential
- Medium Density Residential
- Neighborhood Residential
- Higher Education / Medical / Other Institutional
- School
- Community Facility
- Resort Commercial

Road

- ROW
- Buffer Loop 337
- Indicative Divided Primary Arterial
- Indicative Divided Secondary Arterial
- Indicative Undivided Collector



Yield & Population Projection:
The projections are based on a development footprint derived from preliminary studies and advice.
The projections and other outputs derived from them are mathematically generated.

The projection is preliminary and is subject to an approximate tolerance of +/- 5%.

The projection is based on the below assumptions which should be considered when reviewing the preliminary land use plan:
Subject to detail design and ongoing studies to verify development extents, infrastructure and traffic studies.
Subject to relevant State and Local Government approvals.
Preliminary flora & fauna, stormwater, infrastructure and geotechnical studies were provided.
No traffic modelling or economic demand studies were provided.
Floorspace estimates have not been referenced to an economic demand study and are based on predominately surface parking as a design assumption.
Land areas indicated do not incorporate potential setbacks and buffers to Karst Features.

Roads:
25-27% of Net Residential Land is identified for local road network, subject to concept design verification.
Trunk Roads identified are subject to confirmation by a traffic study and are not included in the local road network percentages identified above.

Park:
Allocated Sport & Recreation Parks are based on prelimi, subject to confirmation with City of New Braunfels.

Stormwater:
3% of Net Residential Areas & Employment Land are utilised for stormwater quantity and quality, subject to engineering and stormwater management plan.
Balance Stormwater requirements are facilitated in Water Course, Recreation & Sports Open Space.
Water bodies indicated are preliminary, subject to engineering and hydraulic studies.

Education:
Education campuses shown are preliminary, location, size and feasibility subject to ongoing studies.

EXHIBIT 2

Intensity of Utility Service and Phasing Exhibit

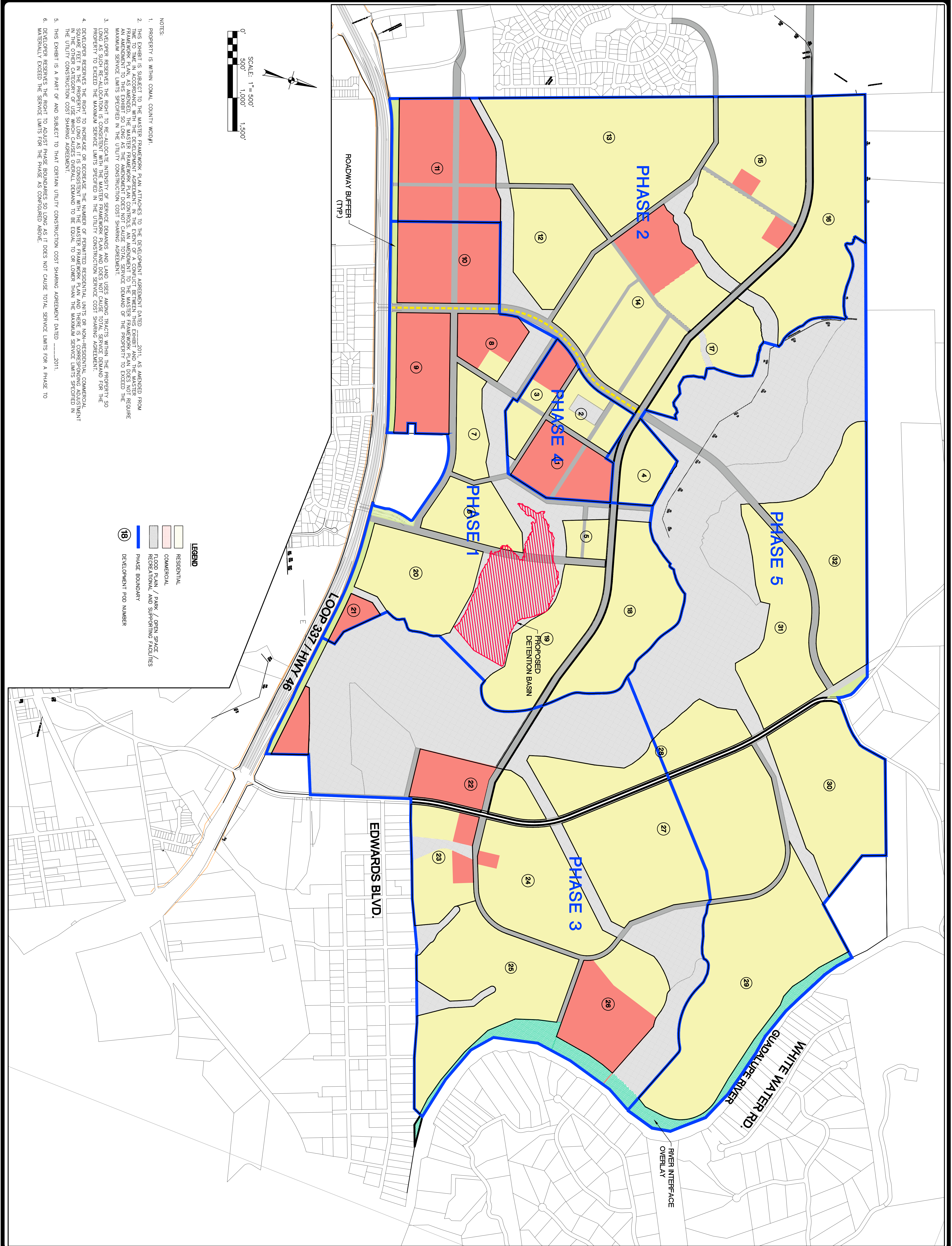


EXHIBIT 3

Master Water Plan



EXHIBIT 4

Master Sewer Plan

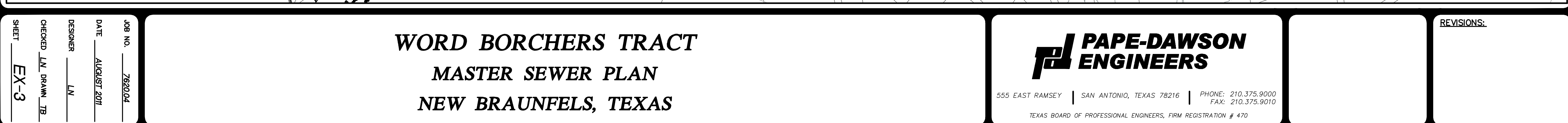


EXHIBIT 5

Sewer System Hydraulic Calculations

WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011

SERVICE REQUIREMENTS BY DEVELOPMENT POD						
Item No.	Sewer Shed Designation	Size	LUE's	Participation	LUE's	Participation
		(acres)	Sewer	Amount	Water (+8% For Irrigation)	Amount
			(LUE's)		(LUE's)	
1	POD-1	25.60	262	3.90%	283	3.68%
2	POD-2	13.65	194	2.89%	210	2.73%
3	POD-3	9.99	208	3.09%	225	2.93%
4	POD-4	16.90	304	4.52%	328	4.27%
5	POD-5	7.53	136	2.02%	147	1.91%
6	POD-6	24.33	219	3.26%	237	3.09%
7	POD-7	16.13	62	0.92%	67	0.87%
8	POD-8	17.74	106	1.58%	114	1.48%
9	POD-9	33.16	114	1.70%	123	1.60%
10	POD-10	40.04	121	1.80%	131	1.71%
11	POD-11	52.82	210	3.12%	227	2.96%
12	POD-12	40.32	153	2.28%	165	2.15%
13	POD-13	108.56	380	5.65%	410	5.34%
14	POD-14	86.44	232	3.45%	251	3.27%
15	POD-15	81.63	258	3.84%	279	3.63%
16	POD-16	74.60	283	4.21%	306	3.98%
17	POD-17	26.21	100	1.49%	108	1.41%
18	POD-18	56.02	213	3.17%	230	2.99%
19	POD-19	41.93	159	2.36%	172	2.24%
20	POD-20	47.98	168	2.50%	181	2.36%
21	POD-21	12.83	52	0.77%	56	0.73%
22	POD-22	26.95	80	1.19%	86	1.12%
23	POD-23	29.79	107	1.59%	116	1.51%
24	POD-24	59.20	229	3.41%	247	3.22%
25	POD-25	82.60	314	4.67%	339	4.41%
26	POD-26	51.95	329	4.89%	355	4.62%
27	POD-27	125.48	477	7.09%	515	6.71%
28	POD-28	45.14	135	2.01%	146	1.90%
29	POD-29	114.49	435	6.47%	470	6.12%
30	POD-30	72.77	277	4.12%	299	3.89%
31	POD-31	53.62	161	2.39%	174	2.27%
32	POD-32	70.29	246	3.66%	266	3.46%
33	POD-33 Greenbelt		0	0.00%	10	0.13%
34	POD-34 Greenbelt		0	0.00%	10	0.13%
35	POD-35 Greenbelt		0	0.00%	7	0.09%
36	POD-36 Greenbelt		0	0.00%	70	0.91%
37	POD-37 Greenbelt		0	0.00%	70	0.91%
38	POD-38 Greenbelt		0	0.00%	50	0.65%
39	POD-39 N-S Arterial Road Medians, Parkways		0	0.00%	100	1.30%
40	POD-40 E-W Arterial Road Medians, Parkways		0	0.00%	100	1.30%
		1,566.69	6,724	100.00%	7,680	100.00%

- Notes:
1. Calculated areas do not include roads or greenbelt areas along floodplain or proposed major roads

2. Service capacity levels assume average service requirements of 4.29 LUE/ac

3. Main slopes assume average depth of 12' below natural ground unless otherwise noted. Minimum slopes per NBU regulations will dictate final main line slopes.

4. Assumes 30' sewer easements will require 30' temporary construction easements.

5. Assumes no East Outfall to Gruene WWTP.

☒

NO DESIGN COMPLETED. PREL. MASTER PLANNING ONLY

☐

PRELIMINARY DESIGN

☐

FINAL DESIGN

☐

OTHER

WORD-BORCHERS PROPERTY

PRELIMINARY SEWER OUTFALL DESIGNS

Revised August 2011

Do not alter values

Required Main Size

Size	Min	Area	Hyd Rad	R ^{2/3}	S ^{1/2}	Q - full	Vel - full	Qmax - Pipe Full at Min. Flow	Qmax - Peak Dry Weather Flow - 65% of Qmax	Qmax - Peak West Weather Flow - 80% or 85% of Qmax	Max Capacity - Peak Dry Weather Flows	Max Capacity - Peak Wet Weather Flows
(in)	Slope (%)	(ft ²)	(A/P)			pipe (cfs)	pipe (ft/s)	(gal/min)	(gal/min)	(gal/min)	(LUE's)	(LUE's)
8	0.33	0.3491	0.1667	0.3029	0.0574	0.70	1.99	312.4	203.1	265.5	368.3	367.9
10	0.25	0.5454	0.2083	0.3514	0.0500	1.10	2.01	493.0	320.5	419.1	581.2	580.8
12	0.20	0.7854	0.2500	0.3969	0.0447	1.60	2.03	717.0	466.1	609.5	845.2	844.7
15	0.15	1.2272	0.3125	0.4605	0.0387	2.51	2.04	1,125.9	731.8	957.0	1327	1,326.2
18	0.11	1.7671	0.3750	0.5200	0.0332	3.49	1.98	1,567.8	1,019.1	1,254.2	1848	1,738.1
21	0.09	2.4053	0.4375	0.5763	0.0300	4.77	1.98	2,139.1	1,390.4	1,711.3	2521.3	2,371.5
24	0.08	3.1416	0.5000	0.6300	0.0283	6.42	2.04	2,879.4	1,871.6	2,303.5	3393.9	3,192.2
27	0.06	3.9761	0.5625	0.6814	0.0245	7.61	1.91	3,413.8	2,219.0	2,731.0	4023.9	3,784.6
30	0.55	4.9087	0.6250	0.7310	0.0742	30.50	6.21	13,688.8	8,897.7	10,951.0	16134.8	15,176.0
33	0.50	5.9396	0.6875	0.7790	0.0707	37.50	6.31	16,828.7	10,938.7	13,463.0	19835.9	18,657.2
36	0.45	7.0686	0.7500	0.8255	0.0671	44.86	6.35	20,134.5	13,087.4	16,107.6	23732.3	22,322.1
42	0.40	9.6211	0.8750	0.9148	0.0632	63.80	6.63	28,634.6	18,612.5	22,907.7	33751.3	31,745.7
48	0.40	12.5664	1.0000	1.0000	0.0632	91.09	7.25	40,882.3	26,573.5	32,705.8	48187.5	45,324.0
54	0.40	15.9043	1.1250	1.0817	0.0632	124.71	7.84	55,968.3	36,379.4	44,774.6	65969.2	62,049.1

1	LUE =	70 Gal/per/day * 3.5 per/LUE	245.0 gal/day/LUE	=	0.17014	gal/min	
	I / I =	750 gal/day/acre	174.7 gal/day/LUE	=	0.12132	gal/min	
	Typical Density =		4.29 LUE's/acre	=	0.00298	gal/min	
	Average Dry Weather Flow per LUE		245.0 gal/day	=	0.17014	gal/min	
	Peak Dry Weather Flow per LUE		794.1 gal/day	=	0.55146	gal/min	65% of Full Pipe
	Peak Wet Weather Flow per LUE		1,039.1 gal/day	=	0.72160	gal/min	80% or 85% of Full Pipe

$Q \text{ (cfs)} = (1.49 A R^{2/3} S^{1/2}) / n$ (n=0.013)

Q-90/95% = 90% pipe capacity for <18", 95% capacity for pipes > or = 18".

V=2.25 ft/sec

WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011

ELEVATIONS (ft)									
SEGMENT	BEGIN	END	SEGMENT LENGTH (ft)	AVERAGE SLOPE (%)	ESTIMATED RESTRICTING SLOPE (%)	SEGMENT PIPE DIA. BASED ON ESTIMATED SLOPES FROM TOPOGRAPHIC INFORMATION (IN.)	Estimated Construction Costs (\$)	Estimated Construction contingency and Engineering Costs (20%)	Total Estimated Segment Costs (\$)
S-1	614	626	1,460	0.822%	0.740%	27	\$256,230.00	\$64,057.50	\$320,287.50
S-2	626	635	950	0.947%	0.852%	27	\$166,725.00	\$41,681.25	\$208,406.25
S-3	635	649	930	1.505%	1.355%	27	\$163,215.00	\$40,803.75	\$204,018.75
S-4	649	660	1,270	0.866%	0.779%	27	\$222,885.00	\$55,721.25	\$278,606.25
S-5	660	670	2,000	0.500%	0.450%	27	\$351,000.00	\$87,750.00	\$438,750.00
S-6	670	680	2,450	0.408%	0.367%	27	\$429,975.00	\$107,493.75	\$537,468.75
S-7	680	700	3,780	0.529%	0.476%	18	\$442,260.00	\$110,565.00	\$552,825.00
S-8	700	723	2,360	0.975%	0.878%	15	\$230,100.00	\$57,525.00	\$287,625.00
S-9	723	768	2,500	1.800%	1.620%	10	\$162,500.00	\$40,625.00	\$203,125.00
S-10	768	803	2,420	1.448%	1.301%	8	\$125,840.00	\$31,460.00	\$157,300.00
S-11	723	752	780	3.718%	3.346%	8	\$40,560.00	\$10,140.00	\$50,700.00
S-12	752	785	1,830	1.803%	1.623%	8	\$95,160.00	\$23,790.00	\$118,950.00
S-13	785	787	610	0.328%	0.330%	8	\$31,720.00	\$7,930.00	\$39,650.00
N-1	658	668	2,070	0.483%	0.435%	21	\$282,555.00	\$70,638.75	\$353,193.75
N-2	668	679	2,150	0.512%	0.461%	18	\$251,550.00	\$62,887.50	\$314,437.50
N-3	679	683	1,170	0.342%	0.308%	18	\$136,890.00	\$34,222.50	\$171,112.50
N-4	683	695	1,480	0.811%	0.730%	15	\$144,300.00	\$36,075.00	\$180,375.00
N-5	695	703	1,440	0.556%	0.500%	15	\$140,400.00	\$35,100.00	\$175,500.00
N-6	703	720	2,270	0.749%	0.674%	15	\$221,325.00	\$55,331.25	\$276,656.25
N-7	720	738	1,450	1.241%	1.117%	12	\$113,100.00	\$28,275.00	\$141,375.00
N-8	738	765	2,570	1.051%	0.946%	8	\$133,640.00	\$33,410.00	\$167,050.00
N-9	703	740	2,440	1.516%	1.364%	8	\$126,880.00	\$31,720.00	\$158,600.00
N-10	765	800	960	3.646%	3.281%	8	\$49,920.00	\$12,480.00	\$62,400.00
N-11	738	748	670	1.493%	1.381%	8	\$34,840.00	\$8,710.00	\$43,550.00
N-12	720	745	1,420	1.761%	1.585%	8	\$73,840.00	\$18,460.00	\$92,300.00
N-13	695	720	1,120	2.232%	2.009%	8	\$58,240.00	\$14,560.00	\$72,800.00
N-14	720	740	400	5.000%	4.500%	8	\$20,800.00	\$5,200.00	\$26,000.00
N-15	683	770	1,920	4.531%	4.078%	8	\$99,840.00	\$24,960.00	\$124,800.00
N-17	668	728	1,420	4.225%	3.803%	10	\$92,300.00	\$23,075.00	\$115,375.00
N-18	648	698	1,310	3.817%	3.435%	8	\$68,120.00	\$17,030.00	\$85,150.00
E-4	690	695	750	0.667%	0.600%	8	\$39,000.00	\$9,750.00	\$48,750.00
E-5	695	696	1,560	0.064%	0.330%	8	\$81,120.00	\$20,280.00	\$101,400.00
E-6	695	723	900	3.111%	2.800%	8	\$46,800.00	\$11,700.00	\$58,500.00
E-7	690	723	1,210	2.727%	2.454%	8	\$62,920.00	\$15,730.00	\$78,650.00
E-8	648	670	1,410	1.560%	1.404%	12	\$109,980.00	\$27,495.00	\$137,475.00
E-9	670	680	520	1.923%	1.731%	8	\$27,040.00	\$6,760.00	\$33,800.00
E-10	670	683	590	2.203%	1.983%	8	\$30,680.00	\$7,670.00	\$38,350.00
E-11	673	723	1,100	4.545%	4.091%	8	\$57,200.00	\$14,300.00	\$71,500.00
E-13	673	708	610	5.738%	5.164%	8	\$31,720.00	\$7,930.00	\$39,650.00
Force Main #1 - North	770	678	3,120	2.949%	2.654%	6	\$121,680.00	\$30,420.00	\$152,100.00
Force Main #2 - Resort	723	648	4,470	1.678%	1.510%	12	\$348,660.00	\$87,165.00	\$435,825.00
Force Main #3 - East	698	703	3,460	0.145%	0.131%	6	\$134,940.00	\$33,735.00	\$168,675.00
North Lift Station							\$225,000.00	\$56,250.00	\$281,250.00
Resort Lift Station							\$385,000.00	\$96,250.00	\$481,250.00
East Lift Station							\$225,000.00	\$56,250.00	\$281,250.00
Totals			77,200				\$6,693,450.00	\$1,673,362.50	\$8,366,812.50

Notes and Assumptions

1. Minimum restricting slope values are the lesser of NBU minimum slope or 90% of estimated Topographic slopes.

2. Design Fees 10%

3. Contingency 15%

TOTALS 25%

☒ REVENUE/COSTS/PROFIT/LOSS/ESTIMATE/CONSTRUCTION ONLY

☐ PRELIMINARY DESIGN

☐ FINAL DESIGN

☐ OTHER

NBU MINIMUM SIZES	NBU MINIMUM SLOPES	PEAK DRY WEATHER FLOW	PEAK WET WEATHER FLOW
8	0.330	65%	85%
10	0.250	65%	85%
12	0.200	65%	85%
15	0.150	65%	85%
18	0.110	65%	80%
21	0.090	65%	80%
24	0.080	65%	80%
27	0.060	65%	80%
30	0.055	65%	80%
33	0.050	65%	80%
36	0.045	65%	80%
39	0.040	65%	80%
42	CALCULATE	65%	80%

Cost per in-ft	\$ 6.50 per in-ft
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WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011

GRAVITY SEWER MAIN AND FORCE MAIN SIZING CALCULATIONS - PRELIMINARY - UTILIZING ESTIMATED SLOPES BASED ON TOPOGRAPHIC
MAPPING INFORMATION.

Line Segment	Proposed Base Design Size	Proposed Oversize	Segment Length	Minimum Controlling Slope Design Slope	Estimated Demand - LUE's	J & I Contribution (NBU)	Estimated Pipe Capacity at min. controlling slope	Estimated Wastewater Flows Average Dry Weather Flow	Estimated Wastewater Flows Peak Dry Weather Flow	Estimated Wastewater Flows - Infiltration and Inflow	Estimated Wastewater Flows - Peak Wet Weather Flows	Estimated Wastewater Flows - Minimum Flows	Estimated Pipe Capacity - Peak Dry Weather Flows	Estimated Pipe Capacity - Peak Dry Weather Flows	Estimated Surplus Capacity in Main Segment	Estimated Pipe Capacity - Peak Wet Weather Flows (80% or 85% Full Pipe)	Estimated Pipe Capacity - Peak Wet Weather Flows (80% or 85% Full Pipe)	Estimated Surplus Capacity in Main Segment (80% or 85% Full Pipe)
			(ft)	(%)	(LUE's)	Acres	(gal/min)	Q _{dry} (gal/min)	Q _{pdry} (gal/min)	II (gal/min)	Q _{pwet} = Q _{dry} + I/I (gal/min)	Q _{min} (gal/min)	(65% Full Pipe) (gal/min)	(65% Full Pipe) (LUE's)	(65% Full Pipe) (LUE's)	(gal/min)	(LUE's)	(LUE's)
S-1	27	N/A	1,460	0.74%	6,724	1,567	11,955	1,144.0	2,415.6	816.0	3,231.6	975.6	7,771	14,091	7,367	9,564	13,816	2,840
S-2	27	N/A	950	0.85%	6,724	1,567	12,828	1,144.0	2,415.6	816.0	3,231.6	975.6	8,338	15,120	8,396	10,262	14,825	3,538
S-3	27	N/A	930	1.36%	6,724	1,567	16,177	1,144.0	2,415.6	816.0	3,231.6	975.6	10,515	19,068	12,344	12,942	18,696	6,218
S-4	27	N/A	1,270	0.78%	6,724	1,567	12,266	1,144.0	2,415.6	816.0	3,231.6	975.6	7,973	14,458	7,734	9,813	14,176	3,089
S-5	27	N/A	2,000	0.45%	6,724	1,567	9,322	1,144.0	2,415.6	816.0	3,231.6	975.6	6,059	10,988	4,264	7,458	10,773	734
S-6	27	N/A	2,450	0.37%	6,724	1,567	8,419	1,144.0	2,415.6	816.0	3,231.6	975.6	5,472	9,923	3,199	6,735	9,730	11
S-7	18	N/A	3,780	0.48%	2,175	407	3,252	370.1	1,007.0	212.0	1,219.0	342.0	2,114	3,833	1,658	2,602	3,758	427
S-8	15	N/A	2,360	0.88%	1,859	321	2,716	316.3	886.6	167.0	1,053.6	293.6	1,765	3,201	1,342	2,309	3,335	450
S-9	10	N/A	2,500	1.62%	932	168	1,251	141.6	462.6	87.9	539.9	131.2	813	1,475	643	1,063	1,536	231
S-10	8	N/A	2,420	1.30%	200	54	618	34.0	127.4	27.9	155.3	28.7	402	728	528	525	759	325
S-11	8	N/A	780	3.35%	280	80	891	47.6	173.1	41.5	214.6	41.5	644	1,168	888	842	1,217	562
S-12	8	N/A	1,830	1.62%	280	80	891	47.6	173.1	41.5	214.6	41.5	449	814	534	587	849	307
S-13	8	N/A	610	0.33%	219	24	311	37.3	138.6	12.7	151.3	31.8	202	367	148	284	382	45
N-1	21	N/A	2,070	0.44%	3,674	912	4,669	625.1	1,525.2	474.9	2,000.1	562.4	3,048	5,527	1,853	3,751	5,419	77
N-2	18	N/A	2,150	0.46%	2,414	614	3,199	410.7	1,094.9	320.0	1,414.9	378.1	2,079	3,771	1,357	2,559	3,697	145
N-3	18	N/A	1,170	0.31%	2,027	502	2,616	344.9	951.2	261.4	1,212.6	319.4	1,700	3,083	1,056	2,093	3,023	66
N-4	15	N/A	1,480	0.73%	1,596	394	2,476	271.5	782.3	205.2	987.5	252.7	1,609	2,918	1,322	2,105	3,040	509
N-5	15	N/A	1,440	0.50%	1,365	322	2,049	232.2	687.3	167.9	855.2	216.4	1,332	2,415	1,050	1,742	2,516	377
N-6	15	N/A	2,270	0.67%	1,365	322	2,379	232.2	687.3	167.9	855.2	216.4	1,546	2,804	1,439	2,022	2,921	657
N-7	12	N/A	1,450	1.12%	961	277	1,689	163.5	511.7	144.2	655.9	152.0	1,098	1,991	1,030	1,436	2,074	475
N-8	9	N/A	2,570	0.95%	438	124	527	74.5	258.5	64.4	322.9	67.1	343	621	183	448	647	10
N-9	9	N/A	2,440	1.36%	114	30	633	19.4	75.8	15.7	91.5	15.4	411	746	632	538	777	424
N-10	8	N/A	960	3.28%	155	49	982	26.4	100.9	25.5	126.4	21.7	638	1,157	1,002	835	1,206	680
N-11	8	N/A	670	1.38%	459	138	637	78.1	269.5	71.7	341.2	70.5	414	751	292	541	782	82
N-12	8	N/A	1,420	1.59%	214	71	683	36.4	135.6	37.2	172.8	31.0	444	805	591	581	839	367
N-13	8	N/A	1,120	2.01%	366	110	768	62.3	220.4	57.4	277.8	55.4	499	905	539	653	943	287
N-14	9	N/A	400	4.50%	246	70	1,150	41.9	154.1	36.6	190.7	36.1	748	1,355	1,109	978	1,412	732
N-15	8	N/A	1,920	4.08%	498	141	1,095	84.7	289.5	73.4	362.9	76.8	712	1,291	793	931	1,345	433
N-17	10	N/A	1,420	3.80%	1,097	280	1,916	186.6	572.3	146.0	718.3	173.8	1,245	2,258	1,161	1,629	2,353	532
N-18	8	N/A	1,310	3.44%	138	38	1,005	23.5	90.6	19.8	110.4	19.1	653	1,185	1,047	854	1,234	716
E-4	8	N/A	750	0.60%	183	50	420	31.1	117.4	25.9	143.3	26.1	273	495	312	357	516	174
E-5	8	N/A	1,560	0.33%	107	30	311	18.2	71.4	15.5	86.9	14.4	202	367	260	264	382	157
E-6	8	N/A	900	2.80%	76	20	907	12.9	51.6	10.4	62.0	9.7	590	1,069	993	771	1,114	695
E-7	8	N/A	1,210	2.45%	238	63	849	40.5	149.5	32.6	182.1	34.8	552	1,001	763	722	1,043	484
E-8	12	N/A	1,410	1.40%	1,311	309	1,894	223.1	664.8	161.1	825.9	208.0	1,231	2,232	921	1,610	2,326	299
E-9	8	N/A	520	1.73%	390	95	713	66.4	233.4	49.3	282.7	59.3	463	840	450	606	876	216
E-10	8	N/A	590	1.98%	369	97	763	62.8	222.0	50.6	272.6	55.9	496	899	530	649	937	280
E-11	8	N/A	1,100	4.09%	355	93	1,096	60.4	214.4	48.6	263.0	53.6	712	1,292	937	932	1,346	577
E-13	8	N/A	610	5.16%	277	73	1,232	47.1	171.4	37.9	209.3	41.0	801	1,452	1,175	1,047	1,513	770
Force Main #1 - North	6	N/A	Min Vel.	3.00	356	94	264	60.6	215.1	48.7	263.8	53.8	479		123	381		25
	6	N/A	Max Vel.	6.00			529	60.6	215.1	48.7	263.8	53.8	959		959	764		764
Force Main #2 - Resort	12	N/A	Min Vel.	3.00	1,311	309	1,057	223.1	664.8	161.1	825.9	208.0	1,917		606	1,527		216
	12	N/A	Max Vel.	6.00			2,115	223.1	664.8	161.1	825.9	208.0	3,835		3,835	3,055		3,055
Force Main #3 - East	5	N/A	Min Vel.	3.00	421	112	264	71.6	249.6	58.5	308.1	64.3	479		58	381		(40)
	6	N/A	Max Vel.	6.00			529	71.6	249.6	58.5	308.1	64.3	959		959	764		764

WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
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GRAVITY SEWER MAIN AND FORCE MAIN SIZING CALCULATIONS - PRELIMINARY - UTILIZING ESTIMATED SLOPES BASED ON TOPOGRAPHIC MAPPING INFORMATION.

Segment	Diameter	Area Full	Hydraulic	Estimated Minimum Restricting Slope	Pipe Flowing Full Flow Capacity	Pipe Flowing Full Flow Capacity	NBU Peak Dry Weather Capacity - 65% Full	NBU Peak Wet Weather Capacity - 80% or 85% Full		
	(Inches)	(sq-ft)	Radius	(%)	(cfs/sec)	(gal/min)	(gal/min)	(gal/min)		
S-1	27	3.9761	0.563	0.74%	26.637	11,955	7,771	9,564	Average Density of Service Requirements	
S-2	27	3.9761	0.563	0.85%	28.582	12,828	8,338	10,262	3.70 LUE/ac	
S-3	27	3.9761	0.563	1.36%	36.044	16,177	10,515	12,942	1 LUE = 70 Gal/per/day * 3.5 per/LUE	
S-4	27	3.9761	0.563	0.78%	27.330	12,266	7,973	9,813	245.0 gal/day/LUE	
S-5	27	3.9761	0.563	0.45%	20.772	9,322	6,059	7,458	0.17014 gal/min/LUE	
S-6	27	3.9761	0.563	0.37%	18.759	8,419	5,472	6,735	Typical Density = 3.70 LUE's/acre	
S-7	18	1.7671	0.375	0.48%	7.245	3,252	2,114	2,602	Average Dry Weather Flow per LUE	
S-8	15	1.2272	0.313	0.88%	6.051	2,716	1,765	2,309	245.0 gal/day	
S-9	10	0.5454	0.208	1.62%	2.787	1,251	813	1,083	0.17014 gal/min/LUE	
S-10	8	0.3491	0.167	1.30%	1.378	618	402	525	0.55146 gal/min/LUE	
S-11	8	0.3491	0.167	3.35%	2.209	991	644	842	0.69222 gal/min/LUE	
S-12	8	0.3491	0.167	1.62%	1.539	691	449	587	Peak Dry Weather Flow per LUE (65% Full Pipe)	
S-13	8	0.3491	0.167	0.33%	0.694	311	202	264	Peak Wet Weather Flow per LUE (85% Full Pipe)	
N-1	21	2.4053	0.438	0.44%	10.448	4,689	3,048	3,751	Wastewater Flow Calculations	
N-2	18	1.7671	0.375	0.46%	7.129	3,199	2,079	2,589	1. Wastewater - Average Dry Weather Flow	
N-3	18	1.7671	0.375	0.31%	5.828	2,616	1,700	2,093	Qdry = (LUE's) x (3.5 People/LUE) x (70 gal/person/day)	
N-4	15	1.2272	0.313	0.73%	5.517	2,476	1,609	2,105	1440 min/day	
N-5	15	1.2272	0.313	0.50%	4.566	2,049	1,332	1,742	= (LUE's) x (0.17014 gal/day)	
N-6	15	1.2272	0.313	0.67%	5.301	2,379	1,546	2,022	= 0.17014 gal/day/LUE	
N-7	12	0.7854	0.250	1.12%	3.764	1,689	1,098	1,436	2. Wastewater - Peak Dry Weather Flow	
N-8	8	0.3491	0.167	0.95%	1.175	527	343	448	Qpdry = ((18*(0.0206 x Qdry)^0.5))	
N-9	8	0.3491	0.167	1.36%	1.411	633	411	538	[4+(0.0206xQdry)^0.5] x Qdry	
N-10	8	0.3491	0.167	3.28%	2.188	982	638	835	3. Wastewater - Inflow/Infiltration	
N-11	8	0.3491	0.167	1.38%	1.419	637	414	541	Q IN = (acreage)x(750 gal/acre/day)	
N-12	8	0.3491	0.167	1.59%	1.521	683	444	581	(1440 min/day)	
N-13	8	0.3491	0.167	2.01%	1.712	768	499	653	= (acreage)x(0.52 gal/min/acre)	
N-14	8	0.3491	0.167	4.50%	2.562	1,150	748	978	4. Wastewater - Peak Wet Weather Flow	
N-15	8	0.3491	0.167	4.08%	2.439	1,095	712	931	Qpwt = (Qpd) + (I/I)	
N-17	10	0.5454	0.208	3.80%	4.270	1,916	1,245	1,629	5. Wastewater - Minimum Flow	
N-18	8	0.3491	0.167	3.44%	2.239	1,005	653	854	Qmin = (0.2*(0.0144 x Qdry)^0.198) x Qdry	
E-1 Optional Outfall	18	1.7671	0.375	2.19%	15.636	6,973	4,532	5,578	6. The minimum Controlling Slope = 90% of Average Slope to accommodate variations in site conditions and topography.	
E-2 Optional Outfall	18	1.7671	0.375	0.68%	8.653	3,883	2,524	3,106	<div><input checked="" type="checkbox"/> NO DESIGN COMPLETED, PREL. MASTER PLANNING ONLY</div> <div><input type="checkbox"/> PRELIMINARY DESIGN</div> <div><input type="checkbox"/> FINAL DESIGN</div> <div><input type="checkbox"/> OTHER</div>	
E-3 Optional Outfall	18	1.7671	0.375	0.36%	6.293	2,820	1,833	2,256		
E-4	8	0.3491	0.167	0.60%	0.936	420	273	357		
E-5	8	0.3491	0.167	0.33%	0.694	311	202	264		
E-6	8	0.3491	0.167	2.80%	2.021	907	590	771		
E-7	8	0.3491	0.167	2.45%	1.892	849	552	722		
E-8	12	0.7854	0.250	1.40%	4.220	1,894	1,231	1,610		
E-9	8	0.3491	0.167	1.73%	1.589	713	463	606		
E-10	8	0.3491	0.167	1.98%	1.701	763	496	649		
E-11	8	0.3491	0.167	4.09%	2.443	1,096	712	932		
E-13	8	0.3491	0.167	5.16%	2.745	1,232	801	1,047		
Pipe Size (Inches)		Pipe Area (sqft)	Hydraulic Radius	Velocity (ft/sec)	Full Pipe Flow (CFS)	Full Pipe Flow (gal/min)				
Force Main #1 - North		0.1963	N/A	3.00	0.589	264	N/A	N/A		
		0.1963	N/A	6.00	1.178	529	N/A	N/A		
Force Main #2 - Resort		0.7854	N/A	3.00	2.356	1,057	N/A	N/A		
		0.7854	N/A	6.00	4.712	2,115	N/A	N/A		
Force Main #3 - East		0.1963	N/A	3.00	0.589	264	N/A	N/A		
		0.1963	N/A	6.00	1.178	529	N/A	N/A		

WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
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Segment S-1
Size 27 Inch
Length 1,460 Feet
Total LUE 6,724 In Segment

Parcel Identifier	Developer Name	Size Acres	Requested Capacity LUE	Total Acres in Watershed Acres	LUE's in Segment Watershed LUE	Percentage of Total Capacity in Watershed %
1	POD-1	25.60	262	26	262	3.90%
2	POD-2	13.65	194	14	194	2.89%
3	POD-3	9.99	208	10	208	3.09%
4	POD-4	16.90	304	17	304	4.52%
5	POD-5	7.53	136	8	136	2.02%
6	POD-6	24.33	219	24	219	3.26%
7	POD-7	16.13	62	16	62	0.92%
8	POD-8	17.74	106	18	106	1.58%
9	POD-9	33.16	114	33	114	1.70%
10	POD-10	40.04	121	40	121	1.80%
11	POD-11	52.82	210	53	210	3.12%
12	POD-12	40.32	153	40	153	2.28%
13	POD-13	108.56	380	109	380	5.65%
14	POD-14	86.44	232	86	232	3.45%
15	POD-15	81.63	258	82	258	3.84%
16	POD-16	74.60	283	75	283	4.21%
17	POD-17	26.21	100	26	100	1.49%
18	POD-18	56.02	213	56	213	3.17%
19	POD-19	41.93	159	42	159	2.36%
20	POD-20	47.98	168	48	168	2.50%
21	POD-21	12.83	52	13	52	0.77%
22	POD-22	26.95	80	27	80	1.19%
23	POD-23	29.79	107	30	107	1.59%
24	POD-24	59.20	229	59	229	3.41%
25	POD-25	82.60	314	83	314	4.67%
26	POD-26	51.95	329	52	329	4.89%
27	POD-27	125.48	477	125	477	7.09%
28	POD-28	45.14	135	45	135	2.01%
29	POD-29	114.49	435	114	435	6.47%
30	POD-30	72.77	277	73	277	4.12%
31	POD-31	53.62	161	54	161	2.39%
32	POD-32	70.29	246	70	246	3.66%
33	POD-33 Greenbelt	0.00	0	0	0	0.00%
34	POD-34 Greenbelt	0.00	0	0	0	0.00%
35	POD-35 Greenbelt	0.00	0	0	0	0.00%
36	POD-36 Greenbelt	0.00	0	0	0	0.00%
37	POD-37 Greenbelt	0.00	0	0	0	0.00%
38	POD-38 Greenbelt	0.00	0	0	0	0.00%
39	POD-39 N-S Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
40	POD-40 E-W Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
Totals		1,567	6,724	1,567	6,724	100.00%

- Notes:
- 1. Calculated areas do not include roads or greenbelt areas along floodplain or proposed major roads
 - 2. Service capacity levels assume average service requirements of 4.29 LUE's/acre
 - 3. Main slopes assume average depth of 12' below natural ground unless otherwise noted. Minimum slopes per NBU regulations will dictate final main line slopes.
 - 4. Assumes 30' sewer easements will require 30' temporary construction easements.
 - 5. Assumes no East Outfall to Gruene WWTP included.

☒ NO DESIGN COMPLETED, PREL. MASTER PLANNING ONLY

☐ PRELIMINARY DESIGN

☐ FINAL DESIGN

☐ OTHER

WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011

Segment S-2
Size 27 Inch
Length 950 Feet
Total LUE 6,724 In Segment

Parcel Identifier	Developer Name	Size Acres	Requested Capacity LUE	Total Acres in Watershed Acres	LUE's in Segment Watershed LUE	Percentage of Total Capacity in Watershed %
1	POD-1	25.60	262	26	262	3.90%
2	POD-2	13.65	194	14	194	2.89%
3	POD-3	9.99	208	10	208	3.09%
4	POD-4	16.90	304	17	304	4.52%
5	POD-5	7.53	136	8	136	2.02%
6	POD-6	24.33	219	24	219	3.26%
7	POD-7	16.13	62	16	62	0.92%
8	POD-8	17.74	106	18	106	1.58%
9	POD-9	33.16	114	33	114	1.70%
10	POD-10	40.04	121	40	121	1.80%
11	POD-11	52.82	210	53	210	3.12%
12	POD-12	40.32	153	40	153	2.28%
13	POD-13	108.56	380	109	380	5.65%
14	POD-14	86.44	232	86	232	3.45%
15	POD-15	81.63	258	82	258	3.84%
16	POD-16	74.60	283	75	283	4.21%
17	POD-17	26.21	100	26	100	1.49%
18	POD-18	56.02	213	56	213	3.17%
19	POD-19	41.93	159	42	159	2.36%
20	POD-20	47.98	168	48	168	2.50%
21	POD-21	12.83	52	13	52	0.77%
22	POD-22	26.95	80	27	80	1.19%
23	POD-23	29.79	107	30	107	1.59%
24	POD-24	59.20	229	59	229	3.41%
25	POD-25	82.60	314	83	314	4.67%
26	POD-26	51.95	329	52	329	4.89%
27	POD-27	125.48	477	125	477	7.09%
28	POD-28	45.14	135	45	135	2.01%
29	POD-29	114.49	435	114	435	6.47%
30	POD-30	72.77	277	73	277	4.12%
31	POD-31	53.62	161	54	161	2.39%
32	POD-32	70.29	246	70	246	3.66%
33	POD-33 Greenbelt	0.00	0	0	0	0.00%
34	POD-34 Greenbelt	0.00	0	0	0	0.00%
35	POD-35 Greenbelt	0.00	0	0	0	0.00%
36	POD-36 Greenbelt	0.00	0	0	0	0.00%
37	POD-37 Greenbelt	0.00	0	0	0	0.00%
38	POD-38 Greenbelt	0.00	0	0	0	0.00%
39	POD-39 N-S Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
40	POD-40 E-W Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
Totals		1,567	6,724	1,567	6,724	100.00%

- Notes:
- 1. Calculated areas do not include roads or greenbelt areas along floodplain or proposed major roads
 - 2. Service capacity levels assume average service requirements of 4.29 LUE's/acre
 - 3. Main slopes assume average depth of 12' below natural ground unless otherwise noted. Minimum slopes per NBU regulations will dictate final main line slopes.
 - 4. Assumes 30' sewer easements will require 30' temporary construction easements.
 - 5. Assumes no East Outfall to Gruene WWTP included.

- ☒ NO DESIGN COMPLETED, PREL. MASTER PLANNING ONLY
- ☐ PRELIMINARY DESIGN
- ☐ FINAL DESIGN
- ☐ OTHER

WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011

Segment S-3
Size 27 Inch
Length 930 Feet
Total LUE 6,724 In Segment

Parcel Identifier	Developer Name	Size Acres	Requested Capacity LUE	Total Acres in Watershed Acres	LUE's in Segment Watershed LUE	Percentage of Total Capacity in Watershed %
1	POD-1	25.60	262	26	262	3.90%
2	POD-2	13.65	194	14	194	2.89%
3	POD-3	9.99	208	10	208	3.09%
4	POD-4	16.90	304	17	304	4.52%
5	POD-5	7.53	136	8	136	2.02%
6	POD-6	24.33	219	24	219	3.26%
7	POD-7	16.13	62	16	62	0.92%
8	POD-8	17.74	106	18	106	1.58%
9	POD-9	33.16	114	33	114	1.70%
10	POD-10	40.04	121	40	121	1.80%
11	POD-11	52.82	210	53	210	3.12%
12	POD-12	40.32	153	40	153	2.28%
13	POD-13	108.56	380	109	380	5.65%
14	POD-14	86.44	232	86	232	3.45%
15	POD-15	81.63	258	82	258	3.84%
16	POD-16	74.60	283	75	283	4.21%
17	POD-17	26.21	100	26	100	1.49%
18	POD-18	56.02	213	56	213	3.17%
19	POD-19	41.93	159	42	159	2.36%
20	POD-20	47.98	168	48	168	2.50%
21	POD-21	12.83	52	13	52	0.77%
22	POD-22	26.95	80	27	80	1.19%
23	POD-23	29.79	107	30	107	1.59%
24	POD-24	59.20	229	59	229	3.41%
25	POD-25	82.60	314	83	314	4.67%
26	POD-26	51.95	329	52	329	4.89%
27	POD-27	125.48	477	125	477	7.09%
28	POD-28	45.14	135	45	135	2.01%
29	POD-29	114.49	435	114	435	6.47%
30	POD-30	72.77	277	73	277	4.12%
31	POD-31	53.62	161	54	161	2.39%
32	POD-32	70.29	246	70	246	3.66%
33	POD-33 Greenbelt	0.00	0	0	0	0.00%
34	POD-34 Greenbelt	0.00	0	0	0	0.00%
35	POD-35 Greenbelt	0.00	0	0	0	0.00%
36	POD-36 Greenbelt	0.00	0	0	0	0.00%
37	POD-37 Greenbelt	0.00	0	0	0	0.00%
38	POD-38 Greenbelt	0.00	0	0	0	0.00%
39	POD-39 N-S Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
40	POD-40 E-W Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
Totals		1,567	6,724	1,567	6,724	100.00%

- Notes:
1. Calculated areas do not include roads or greenbelt areas along floodplain or proposed major roads

2. Service capacity levels assume average service requirements of4.29 LUE's/acre0.60%

3. Main slopes assume average depth of 12' below natural ground unless otherwise noted. Minimum slopes per NBU regulations will dictate final main line slopes.

4. Assumes 30' sewer easements will require 30' temporary construction easements.

5. Assumes no East Outfall to Gruene WWTP included.

- ☒

NO DESIGN COMPLETED, PREL. MASTER PLANNING ONLY
- ☐

PRELIMINARY DESIGN
- ☐

FINAL DESIGN
- ☐

OTHER

WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011

Segment S-4
Size 27 Inch
Length 1,270 Feet
Total LUE 6,724 In Segment

Parcel Identifier	Developer Name	Size Acres	Requested Capacity LUE	Total Acres in Watershed Acres	LUE's in Segment Watershed LUE	Percentage of Total Capacity in Watershed %
1	POD-1	25.60	262	26	262	3.90%
2	POD-2	13.65	194	14	194	2.89%
3	POD-3	9.99	208	10	208	3.09%
4	POD-4	16.90	304	17	304	4.52%
5	POD-5	7.53	136	8	136	2.02%
6	POD-6	24.33	219	24	219	3.26%
7	POD-7	16.13	62	16	62	0.92%
8	POD-8	17.74	106	18	106	1.58%
9	POD-9	33.16	114	33	114	1.70%
10	POD-10	40.04	121	40	121	1.80%
11	POD-11	52.82	210	53	210	3.12%
12	POD-12	40.32	153	40	153	2.28%
13	POD-13	108.56	380	109	380	5.65%
14	POD-14	86.44	232	86	232	3.45%
15	POD-15	81.63	258	82	258	3.84%
16	POD-16	74.60	283	75	283	4.21%
17	POD-17	26.21	100	26	100	1.49%
18	POD-18	56.02	213	56	213	3.17%
19	POD-19	41.93	159	42	159	2.36%
20	POD-20	47.98	168	48	168	2.50%
21	POD-21	12.83	52	13	52	0.77%
22	POD-22	26.95	80	27	80	1.19%
23	POD-23	29.79	107	30	107	1.59%
24	POD-24	59.20	229	59	229	3.41%
25	POD-25	82.60	314	83	314	4.67%
26	POD-26	51.95	329	52	329	4.89%
27	POD-27	125.48	477	125	477	7.09%
28	POD-28	45.14	135	45	135	2.01%
29	POD-29	114.49	435	114	435	6.47%
30	POD-30	72.77	277	73	277	4.12%
31	POD-31	53.62	161	54	161	2.39%
32	POD-32	70.29	246	70	246	3.66%
33	POD-33 Greenbelt	0.00	0	0	0	0.00%
34	POD-34 Greenbelt	0.00	0	0	0	0.00%
35	POD-35 Greenbelt	0.00	0	0	0	0.00%
36	POD-36 Greenbelt	0.00	0	0	0	0.00%
37	POD-37 Greenbelt	0.00	0	0	0	0.00%
38	POD-38 Greenbelt	0.00	0	0	0	0.00%
39	POD-39 N-S Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
40	POD-40 E-W Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
Totals		1,567	6,724	1,567	6,724	100.00%

- Notes:
1. Calculated areas do not include roads or greenbelt areas along floodplain or proposed major roads

2. Service capacity levels assume average service requirements of 4.29 LUE's/acre

3. Main slopes assume average depth of 12' below natural ground unless otherwise noted. Minimum slopes per NBU regulations will dictate final main line slopes.

4. Assumes 30' sewer easements will require 30' temporary construction easements.

5. Assumes no East Outfall to Gruene WWTP included.

- ☒

NO DESIGN COMPLETED, PREL. MASTER PLANNING ONLY
- ☐

PRELIMINARY DESIGN
- ☐

FINAL DESIGN
- ☐

OTHER

WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011

Segment S-5
Size 27 Inch
Length 2,000 Feet
Total LUE 6,724 In Segment

Parcel Identifier	Developer Name	Size Acres	Requested Capacity LUE	Total Acres in Watershed Acres	LUE's in Segment Watershed LUE	Percentage of Total Capacity in Watershed %
1	POD-1	25.60	262	26	262	3.90%
2	POD-2	13.65	194	14	194	2.89%
3	POD-3	9.99	208	10	208	3.09%
4	POD-4	16.90	304	17	304	4.52%
5	POD-5	7.53	136	8	136	2.02%
6	POD-6	24.33	219	24	219	3.26%
7	POD-7	16.13	62	16	62	0.92%
8	POD-8	17.74	106	18	106	1.58%
9	POD-9	33.16	114	33	114	1.70%
10	POD-10	40.04	121	40	121	1.80%
11	POD-11	52.82	210	53	210	3.12%
12	POD-12	40.32	153	40	153	2.28%
13	POD-13	108.56	380	109	380	5.65%
14	POD-14	86.44	232	86	232	3.45%
15	POD-15	81.63	258	82	258	3.84%
16	POD-16	74.60	283	75	283	4.21%
17	POD-17	26.21	100	26	100	1.49%
18	POD-18	56.02	213	56	213	3.17%
19	POD-19	41.93	159	42	159	2.36%
20	POD-20	47.98	168	48	168	2.50%
21	POD-21	12.83	52	13	52	0.77%
22	POD-22	26.95	80	27	80	1.19%
23	POD-23	29.79	107	30	107	1.59%
24	POD-24	59.20	229	59	229	3.41%
25	POD-25	82.60	314	83	314	4.67%
26	POD-26	51.95	329	52	329	4.89%
27	POD-27	125.48	477	125	477	7.09%
28	POD-28	45.14	135	45	135	2.01%
29	POD-29	114.49	435	114	435	6.47%
30	POD-30	72.77	277	73	277	4.12%
31	POD-31	53.62	161	54	161	2.39%
32	POD-32	70.29	246	70	246	3.66%
33	POD-33 Greenbelt	0.00	0	0	0	0.00%
34	POD-34 Greenbelt	0.00	0	0	0	0.00%
35	POD-35 Greenbelt	0.00	0	0	0	0.00%
36	POD-36 Greenbelt	0.00	0	0	0	0.00%
37	POD-37 Greenbelt	0.00	0	0	0	0.00%
38	POD-38 Greenbelt	0.00	0	0	0	0.00%
39	POD-39 N-S Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
40	POD-40 E-W Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
Totals		1,567	6,724	1,567	6,724	100.00%

Notes:

1. Calculated areas do not include roads or greenbelt areas along floodplain or proposed major roads
2. Service capacity levels assume average service requirements of 4.29 LUE's/acre
3. Main slopes assume average depth of 12' below natural ground unless otherwise noted. Minimum slopes per NBU regulations will dictate final main line slopes.
4. Assumes 30' sewer easements will require 30' temporary construction easements.
5. Assumes no East Outfall to Gruene WWTP included.

- ☒ NO DESIGN COMPLETED, PREL. MASTER PLANNING ONLY
- ☐ PRELIMINARY DESIGN
- ☐ FINAL DESIGN
- ☐ OTHER

WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011

Segment S-6
Size 27 Inch
Length 2,450 Feet
Total LUE 6,724 In Segment

Parcel Identifier	Developer Name	Size Acres	Requested Capacity LUE	Total Acres in Watershed Acres	LUE's in Segment Watershed LUE	Percentage of Total Capacity in Watershed %
1	POD-1	25.60	262	26	262	3.90%
2	POD-2	13.65	194	14	194	2.89%
3	POD-3	9.99	208	10	208	3.09%
4	POD-4	16.90	304	17	304	4.52%
5	POD-5	7.53	136	8	136	2.02%
6	POD-6	24.33	219	24	219	3.26%
7	POD-7	16.13	62	16	62	0.92%
8	POD-8	17.74	106	18	106	1.58%
9	POD-9	33.16	114	33	114	1.70%
10	POD-10	40.04	121	40	121	1.80%
11	POD-11	52.82	210	53	210	3.12%
12	POD-12	40.32	153	40	153	2.28%
13	POD-13	108.56	380	109	380	5.65%
14	POD-14	86.44	232	86	232	3.45%
15	POD-15	81.63	258	82	258	3.84%
16	POD-16	74.60	283	75	283	4.21%
17	POD-17	26.21	100	26	100	1.49%
18	POD-18	56.02	213	56	213	3.17%
19	POD-19	41.93	159	42	159	2.36%
20	POD-20	47.98	168	48	168	2.50%
21	POD-21	12.83	52	13	52	0.77%
22	POD-22	26.95	80	27	80	1.19%
23	POD-23	29.79	107	30	107	1.59%
24	POD-24	59.20	229	59	229	3.41%
25	POD-25	82.60	314	83	314	4.67%
26	POD-26	51.95	329	52	329	4.89%
27	POD-27	125.48	477	125	477	7.09%
28	POD-28	45.14	135	45	135	2.01%
29	POD-29	114.49	435	114	435	6.47%
30	POD-30	72.77	277	73	277	4.12%
31	POD-31	53.62	161	54	161	2.39%
32	POD-32	70.29	246	70	246	3.66%
33	POD-33 Greenbelt	0.00	0	0	0	0.00%
34	POD-34 Greenbelt	0.00	0	0	0	0.00%
35	POD-35 Greenbelt	0.00	0	0	0	0.00%
36	POD-36 Greenbelt	0.00	0	0	0	0.00%
37	POD-37 Greenbelt	0.00	0	0	0	0.00%
38	POD-38 Greenbelt	0.00	0	0	0	0.00%
39	POD-39 N-S Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
40	POD-40 E-W Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
Totals		1,567	6,724	1,567	6,724	100.00%

- Notes:
- 1. Calculated areas do not include roads or greenbelt areas along floodplain or proposed major roads
 - 2. Service capacity levels assume average service requirements of 4.29 LUE's/acre
 - 3. Main slopes assume average depth of 12' below natural ground unless otherwise noted. Minimum slopes per NBU regulations will dictate final main line slopes.
 - 4. Assumes 30' sewer easements will require 30' temporary construction easements.
 - 5. Assumes no East Outfall to Gruene WWTP included.

- ☒ NO DESIGN COMPLETED, PREL. MASTER PLANNING ONLY
- ☐ PRELIMINARY DESIGN
- ☐ FINAL DESIGN
- ☐ OTHER

WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011

Segment S-7
Size 18 Inch
Length 3,780 Feet
Total LUE 2,175 In Segment

Parcel Identifier	Developer Name	Size Acres	Requested Capacity LUE	Total Acres in Watershed Acres	LUE's in Segment Watershed LUE	Percentage of Total Capacity in Watershed %
1	POD-1	25.60	262	26	262	12.05%
2	POD-2	13.65	194	14	194	8.92%
3	POD-3	9.99	208	10	208	9.56%
4	POD-4	16.90	304	0	0	0.00%
5	POD-5	7.53	136	8	136	6.25%
6	POD-6	24.33	219	16	140	6.44%
7	POD-7	16.13	62	16	62	2.85%
8	POD-8	17.74	106	18	106	4.87%
9	POD-9	33.16	114	33	114	5.24%
10	POD-10	40.04	121	40	121	5.56%
11	POD-11	52.82	210	53	210	9.66%
12	POD-12	40.32	153	40	153	7.03%
13	POD-13	108.56	380	27	96	4.41%
14	POD-14	86.44	232	17	46	2.11%
15	POD-15	81.63	258	0	0	0.00%
16	POD-16	74.60	283	0	0	0.00%
17	POD-17	26.21	100	0	0	0.00%
18	POD-18	56.02	213	0	0	0.00%
19	POD-19	41.93	159	42	159	7.31%
20	POD-20	47.98	168	48	168	7.72%
21	POD-21	12.83	52	0	0	0.00%
22	POD-22	26.95	80	0	0	0.00%
23	POD-23	29.79	107	0	0	0.00%
24	POD-24	59.20	229	0	0	0.00%
25	POD-25	82.60	314	0	0	0.00%
26	POD-26	51.95	329	0	0	0.00%
27	POD-27	125.48	477	0	0	0.00%
28	POD-28	45.14	135	0	0	0.00%
29	POD-29	114.49	435	0	0	0.00%
30	POD-30	72.77	277	0	0	0.00%
31	POD-31	53.62	161	0	0	0.00%
32	POD-32	70.29	246	0	0	0.00%
33	POD-33 Greenbelt	0.00	0	0	0	0.00%
34	POD-34 Greenbelt	0.00	0	0	0	0.00%
35	POD-35 Greenbelt	0.00	0	0	0	0.00%
36	POD-36 Greenbelt	0.00	0	0	0	0.00%
37	POD-37 Greenbelt	0.00	0	0	0	0.00%
38	POD-38 Greenbelt	0.00	0	0	0	0.00%
39	POD-39 N-S Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
40	POD-40 E-W Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
Totals		1,567	6,724	407	2,175	100.00%

- Notes:
- 1. Calculated areas do not include roads or greenbelt areas along floodplain or proposed major roads
 - 2. Service capacity levels assume average service requirements of 4.29 LUE's/acre
 - 3. Main slopes assume average depth of 12' below natural ground unless otherwise noted. Minimum slopes per NBU regulations will dictate final main line slopes.
 - 4. Assumes 30' sewer easements will require 30' temporary construction easements.
 - 5. Assumes no East Outfall to Gruene WWTP included.

- ☒ NO DESIGN COMPLETED, PREL. MASTER PLANNING ONLY
- ☐ PRELIMINARY DESIGN
- ☐ FINAL DESIGN
- ☐ OTHER

WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011

Segment S-8
Size 15 Inch
Length 2,360 Feet
Total LUE 1,859 In Segment

Parcel Identifier	Developer Name	Size Acres	Requested Capacity LUE	Total Acres in Watershed Acres	LUE's in Segment Watershed LUE	Percentage of Total Capacity in Watershed %
1	POD-1	25.60	262	26	262	14.09%
2	POD-2	13.65	194	14	194	10.44%
3	POD-3	9.99	208	10	208	11.19%
4	POD-4	16.90	304	0	0	0.00%
5	POD-5	7.53	136	8	136	7.32%
6	POD-6	24.33	219	16	140	7.53%
7	POD-7	16.13	62	16	62	3.34%
8	POD-8	17.74	106	18	106	5.70%
9	POD-9	33.16	114	33	114	6.13%
10	POD-10	40.04	121	40	121	6.51%
11	POD-11	52.82	210	53	210	11.30%
12	POD-12	40.32	153	40	153	8.23%
13	POD-13	108.56	380	26	92	4.95%
14	POD-14	86.44	232	17	46	2.47%
15	POD-15	81.63	258	5	15	0.81%
16	POD-16	74.60	283	0	0	0.00%
17	POD-17	26.21	100	0	0	0.00%
18	POD-18	56.02	213	0	0	0.00%
19	POD-19	41.93	159	0	0	0.00%
20	POD-20	47.98	168	0	0	0.00%
21	POD-21	12.83	52	0	0	0.00%
22	POD-22	26.95	80	0	0	0.00%
23	POD-23	29.79	107	0	0	0.00%
24	POD-24	59.20	229	0	0	0.00%
25	POD-25	82.60	314	0	0	0.00%
26	POD-26	51.95	329	0	0	0.00%
27	POD-27	125.48	477	0	0	0.00%
28	POD-28	45.14	135	0	0	0.00%
29	POD-29	114.49	435	0	0	0.00%
30	POD-30	72.77	277	0	0	0.00%
31	POD-31	53.62	161	0	0	0.00%
32	POD-32	70.29	246	0	0	0.00%
33	POD-33 Greenbelt	0.00	0	0	0	0.00%
34	POD-34 Greenbelt	0.00	0	0	0	0.00%
35	POD-35 Greenbelt	0.00	0	0	0	0.00%
36	POD-36 Greenbelt	0.00	0	0	0	0.00%
37	POD-37 Greenbelt	0.00	0	0	0	0.00%
38	POD-38 Greenbelt	0.00	0	0	0	0.00%
39	POD-39 N-S Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
40	POD-40 E-W Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
Totals		1,567	6,724	321	1,859	100.00%

- Notes:
- 1. Calculated areas do not include roads or greenbelt areas along floodplain or proposed major roads
 - 2. Service capacity levels assume average service requirements of 4.29 LUE's/acre
 - 3. Main slopes assume average depth of 12' below natural ground unless otherwise noted. Minimum slopes per NBU regulations will dictate final main line slopes.
 - 4. Assumes 30' sewer easements will require 30' temporary construction easements.
 - 5. Assumes no East Outfall to Gruene WWTP included.

- ☒ NO DESIGN COMPLETED, PREL. MASTER PLANNING ONLY
- ☐ PRELIMINARY DESIGN
- ☐ FINAL DESIGN
- ☐ OTHER

WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011

Segment S-9
Size 10 Inch
Length 2,500 Feet
Total LUE 832 In Segment

Parcel Identifier	Developer Name	Size Acres	Requested Capacity LUE	Total Acres in Watershed Acres	LUE's in Segment Watershed LUE	Percentage of Total Capacity in Watershed %
1	POD-1	25.60	262	0	0	0.00%
2	POD-2	13.65	194	10	139	16.71%
3	POD-3	9.99	208	5	104	12.50%
4	POD-4	16.90	304	0	0	0.00%
5	POD-5	7.53	136	0	0	0.00%
6	POD-6	24.33	219	0	0	0.00%
7	POD-7	16.13	62	0	0	0.00%
8	POD-8	17.74	106	22	129	15.50%
9	POD-9	33.16	114	0	0	0.00%
10	POD-10	40.04	121	20	61	7.33%
11	POD-11	52.82	210	26	105	12.62%
12	POD-12	40.32	153	40	153	18.39%
13	POD-13	108.56	380	27	95	11.42%
14	POD-14	86.44	232	17	46	5.53%
15	POD-15	81.63	258	0	0	0.00%
16	POD-16	74.60	283	0	0	0.00%
17	POD-17	26.21	100	0	0	0.00%
18	POD-18	56.02	213	0	0	0.00%
19	POD-19	41.93	159	0	0	0.00%
20	POD-20	47.98	168	0	0	0.00%
21	POD-21	12.83	52	0	0	0.00%
22	POD-22	26.95	80	0	0	0.00%
23	POD-23	29.79	107	0	0	0.00%
24	POD-24	59.20	229	0	0	0.00%
25	POD-25	82.60	314	0	0	0.00%
26	POD-26	51.95	329	0	0	0.00%
27	POD-27	125.48	477	0	0	0.00%
28	POD-28	45.14	135	0	0	0.00%
29	POD-29	114.49	435	0	0	0.00%
30	POD-30	72.77	277	0	0	0.00%
31	POD-31	53.62	161	0	0	0.00%
32	POD-32	70.29	246	0	0	0.00%
33	POD-33 Greenbelt	0.00	0	0	0	0.00%
34	POD-34 Greenbelt	0.00	0	0	0	0.00%
35	POD-35 Greenbelt	0.00	0	0	0	0.00%
36	POD-36 Greenbelt	0.00	0	0	0	0.00%
37	POD-37 Greenbelt	0.00	0	0	0	0.00%
38	POD-38 Greenbelt	0.00	0	0	0	0.00%
39	POD-39 N-S Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
40	POD-40 E-W Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
Totals		1,567	6,724	168	832	100.00%

Notes:

1. Calculated areas do not include roads or greenbelt areas along floodplain or proposed major roads
2. Service capacity levels assume average service requirements of 4.29 LUE's/acre
3. Main slopes assume average depth of 12' below natural ground unless otherwise noted. Minimum slopes per NBU regulations will dictate final main line slopes.
4. Assumes 30' sewer easements will require 30' temporary construction easements.
5. Assumes no East Outfall to Gruene WWTP included.

- ☒ NO DESIGN COMPLETED, PREL. MASTER PLANNING ONLY
- ☐ PRELIMINARY DESIGN
- ☐ FINAL DESIGN
- ☐ OTHER

WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011

Segment S-10
Size 8 Inch
Length 2,420 Feet
Total LUE 200 In Segment

Parcel Identifier	Developer Name	Size Acres	Requested Capacity LUE	Total Acres in Watershed Acres	LUE's in Segment Watershed LUE	Percentage of Total Capacity in Watershed %
1	POD-1	25.60	262	0	0	0.00%
2	POD-2	13.65	194	0	0	0.00%
3	POD-3	9.99	208	0	0	0.00%
4	POD-4	16.90	304	0	0	0.00%
5	POD-5	7.53	136	0	0	0.00%
6	POD-6	24.33	219	0	0	0.00%
7	POD-7	16.13	62	0	0	0.00%
8	POD-8	17.74	106	0	0	0.00%
9	POD-9	33.16	114	0	0	0.00%
10	POD-10	40.04	121	0	0	0.00%
11	POD-11	52.82	210	26	105	52.50%
12	POD-12	40.32	153	0	0	0.00%
13	POD-13	108.56	380	27	95	47.50%
14	POD-14	86.44	232	0	0	0.00%
15	POD-15	81.63	258	0	0	0.00%
16	POD-16	74.60	283	0	0	0.00%
17	POD-17	26.21	100	0	0	0.00%
18	POD-18	56.02	213	0	0	0.00%
19	POD-19	41.93	159	0	0	0.00%
20	POD-20	47.98	168	0	0	0.00%
21	POD-21	12.83	52	0	0	0.00%
22	POD-22	26.95	80	0	0	0.00%
23	POD-23	29.79	107	0	0	0.00%
24	POD-24	59.20	229	0	0	0.00%
25	POD-25	82.60	314	0	0	0.00%
26	POD-26	51.95	329	0	0	0.00%
27	POD-27	125.48	477	0	0	0.00%
28	POD-28	45.14	135	0	0	0.00%
29	POD-29	114.49	435	0	0	0.00%
30	POD-30	72.77	277	0	0	0.00%
31	POD-31	53.62	161	0	0	0.00%
32	POD-32	70.29	246	0	0	0.00%
33	POD-33 Greenbelt	0.00	0	0	0	0.00%
34	POD-34 Greenbelt	0.00	0	0	0	0.00%
35	POD-35 Greenbelt	0.00	0	0	0	0.00%
36	POD-36 Greenbelt	0.00	0	0	0	0.00%
37	POD-37 Greenbelt	0.00	0	0	0	0.00%
38	POD-38 Greenbelt	0.00	0	0	0	0.00%
39	POD-39 N-S Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
40	POD-40 E-W Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
Totals		1,567	6,724	54	200	100.00%

- Notes:
1. Calculated areas do not include roads or greenbelt areas along floodplain or proposed major roads

2. Service capacity levels assume average service requirements of 4.29 LUE's/acre

3. Main slopes assume average depth of 12' below natural ground unless otherwise noted. Minimum slopes per NBU regulations will dictate final main line slopes.

4. Assumes 30' sewer easements will require 30' temporary construction easements.

5. Assumes no East Outfall to Gruene WWTP included.

☒

NO DESIGN COMPLETED, PREL. MASTER PLANNING ONLY

☐

PRELIMINARY DESIGN

☐

FINAL DESIGN

☐

OTHER

WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011

Segment S-11
Size 8 Inch
Length 780 Feet
Total LUE 280 In Segment

Parcel Identifier	Developer Name	Size Acres	Requested Capacity LUE	Total Acres in Watershed Acres	LUE's in Segment Watershed LUE	Percentage of Total Capacity in Watershed %
1	POD-1	25.60	262	0	0	0.00%
2	POD-2	13.65	194	0	0	0.00%
3	POD-3	9.99	208	0	0	0.00%
4	POD-4	16.90	304	0	0	0.00%
5	POD-5	7.53	136	0	0	0.00%
6	POD-6	24.33	219	0	0	0.00%
7	POD-7	16.13	62	0	0	0.00%
8	POD-8	17.74	106	0	0	0.00%
9	POD-9	33.16	114	33	114	40.71%
10	POD-10	40.04	121	20	61	21.79%
11	POD-11	52.82	210	26	105	37.50%
12	POD-12	40.32	153	0	0	0.00%
13	POD-13	108.56	380	0	0	0.00%
14	POD-14	86.44	232	0	0	0.00%
15	POD-15	81.63	258	0	0	0.00%
16	POD-16	74.60	283	0	0	0.00%
17	POD-17	26.21	100	0	0	0.00%
18	POD-18	56.02	213	0	0	0.00%
19	POD-19	41.93	159	0	0	0.00%
20	POD-20	47.98	168	0	0	0.00%
21	POD-21	12.83	52	0	0	0.00%
22	POD-22	26.95	80	0	0	0.00%
23	POD-23	29.79	107	0	0	0.00%
24	POD-24	59.20	229	0	0	0.00%
25	POD-25	82.60	314	0	0	0.00%
26	POD-26	51.95	329	0	0	0.00%
27	POD-27	125.48	477	0	0	0.00%
28	POD-28	45.14	135	0	0	0.00%
29	POD-29	114.49	435	0	0	0.00%
30	POD-30	72.77	277	0	0	0.00%
31	POD-31	53.62	161	0	0	0.00%
32	POD-32	70.29	246	0	0	0.00%
33	POD-33 Greenbelt	0.00	0	0	0	0.00%
34	POD-34 Greenbelt	0.00	0	0	0	0.00%
35	POD-35 Greenbelt	0.00	0	0	0	0.00%
36	POD-36 Greenbelt	0.00	0	0	0	0.00%
37	POD-37 Greenbelt	0.00	0	0	0	0.00%
38	POD-38 Greenbelt	0.00	0	0	0	0.00%
39	POD-39 N-S Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
40	POD-40 E-W Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
Totals		1,567	6,724	80	280	100.00%

- Notes:
- 1. Calculated areas do not include roads or greenbelt areas along floodplain or proposed major roads
 - 2. Service capacity levels assume average service requirements of 4.29 LUE's/acre
 - 3. Main slopes assume average depth of 12' below natural ground unless otherwise noted. Minimum slopes per NBU regulations will dictate final main line slopes.
 - 4. Assumes 30' sewer easements will require 30' temporary construction easements.
 - 5. Assumes no East Outfall to Gruene WWTP included.

☒ NO DESIGN COMPLETED, PREL. MASTER PLANNING ONLY

☐ PRELIMINARY DESIGN

☐ FINAL DESIGN

☐ OTHER

WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011

Segment S-12
Size 8 Inch
Length 1,830 Feet
Total LUE 280 In Segment

Parcel Identifier	Developer Name	Size Acres	Requested Capacity LUE	Total Acres in Watershed Acres	LUE's in Segment Watershed LUE	Percentage of Total Capacity in Watershed %
1	POD-1	25.60	262	0	0	0.00%
2	POD-2	13.65	194	0	0	0.00%
3	POD-3	9.99	208	0	0	0.00%
4	POD-4	16.90	304	0	0	0.00%
5	POD-5	7.53	136	0	0	0.00%
6	POD-6	24.33	219	0	0	0.00%
7	POD-7	16.13	62	0	0	0.00%
8	POD-8	17.74	106	0	0	0.00%
9	POD-9	33.16	114	33	114	40.71%
10	POD-10	40.04	121	20	61	21.79%
11	POD-11	52.82	210	26	105	37.50%
12	POD-12	40.32	153	0	0	0.00%
13	POD-13	108.56	380	0	0	0.00%
14	POD-14	86.44	232	0	0	0.00%
15	POD-15	81.63	258	0	0	0.00%
16	POD-16	74.60	283	0	0	0.00%
17	POD-17	26.21	100	0	0	0.00%
18	POD-18	56.02	213	0	0	0.00%
19	POD-19	41.93	159	0	0	0.00%
20	POD-20	47.98	168	0	0	0.00%
21	POD-21	12.83	52	0	0	0.00%
22	POD-22	26.95	80	0	0	0.00%
23	POD-23	29.79	107	0	0	0.00%
24	POD-24	59.20	229	0	0	0.00%
25	POD-25	82.60	314	0	0	0.00%
26	POD-26	51.95	329	0	0	0.00%
27	POD-27	125.48	477	0	0	0.00%
28	POD-28	45.14	135	0	0	0.00%
29	POD-29	114.49	435	0	0	0.00%
30	POD-30	72.77	277	0	0	0.00%
31	POD-31	53.62	161	0	0	0.00%
32	POD-32	70.29	246	0	0	0.00%
33	POD-33 Greenbelt	0.00	0	0	0	0.00%
34	POD-34 Greenbelt	0.00	0	0	0	0.00%
35	POD-35 Greenbelt	0.00	0	0	0	0.00%
36	POD-36 Greenbelt	0.00	0	0	0	0.00%
37	POD-37 Greenbelt	0.00	0	0	0	0.00%
38	POD-38 Greenbelt	0.00	0	0	0	0.00%
39	POD-39 N-S Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
40	POD-40 E-W Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
Totals		1,567	6,724	80	280	100.00%

- Notes:
- 1. Calculated areas do not include roads or greenbelt areas along floodplain or proposed major roads
 - 2. Service capacity levels assume average service requirements of 4.29 LUE's/acre
 - 3. Main slopes assume average depth of 12' below natural ground unless otherwise noted. Minimum slopes per NBU regulations will dictate final main line slopes.
 - 4. Assumes 30' sewer easements will require 30' temporary construction easements.
 - 5. Assumes no East Outfall to Gruene WWTP included.

- ☒ NO DESIGN COMPLETED, PREL. MASTER PLANNING ONLY
- ☐ PRELIMINARY DESIGN
- ☐ FINAL DESIGN
- ☐ OTHER

WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011

Segment S-13
Size 8 Inch
Length 610 Feet
Total LUE 219 In Segment

Parcel Identifier	Developer Name	Size Acres	Requested Capacity LUE	Total Acres in Watershed Acres	LUE's in Segment Watershed LUE	Percentage of Total Capacity in Watershed %
1	POD-1	25.60	262	0	0	0.00%
2	POD-2	13.65	194	0	0	0.00%
3	POD-3	9.99	208	0	0	0.00%
4	POD-4	16.90	304	0	0	0.00%
5	POD-5	7.53	136	0	0	0.00%
6	POD-6	24.33	219	24	219	100.00%
7	POD-7	16.13	62	0	0	0.00%
8	POD-8	17.74	106	0	0	0.00%
9	POD-9	33.16	114	0	0	0.00%
10	POD-10	40.04	121	0	0	0.00%
11	POD-11	52.82	210	0	0	0.00%
12	POD-12	40.32	153	0	0	0.00%
13	POD-13	108.56	380	0	0	0.00%
14	POD-14	86.44	232	0	0	0.00%
15	POD-15	81.63	258	0	0	0.00%
16	POD-16	74.60	283	0	0	0.00%
17	POD-17	26.21	100	0	0	0.00%
18	POD-18	56.02	213	0	0	0.00%
19	POD-19	41.93	159	0	0	0.00%
20	POD-20	47.98	168	0	0	0.00%
21	POD-21	12.83	52	0	0	0.00%
22	POD-22	26.95	80	0	0	0.00%
23	POD-23	29.79	107	0	0	0.00%
24	POD-24	59.20	229	0	0	0.00%
25	POD-25	82.60	314	0	0	0.00%
26	POD-26	51.95	329	0	0	0.00%
27	POD-27	125.48	477	0	0	0.00%
28	POD-28	45.14	135	0	0	0.00%
29	POD-29	114.49	435	0	0	0.00%
30	POD-30	72.77	277	0	0	0.00%
31	POD-31	53.62	161	0	0	0.00%
32	POD-32	70.29	246	0	0	0.00%
33	POD-33 Greenbelt	0.00	0	0	0	0.00%
34	POD-34 Greenbelt	0.00	0	0	0	0.00%
35	POD-35 Greenbelt	0.00	0	0	0	0.00%
36	POD-36 Greenbelt	0.00	0	0	0	0.00%
37	POD-37 Greenbelt	0.00	0	0	0	0.00%
38	POD-38 Greenbelt	0.00	0	0	0	0.00%
39	POD-39 N-S Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
40	POD-40 E-W Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
Totals		1,567	6,724	24	219	100.00%

- Notes:
- 1. Calculated areas do not include roads or greenbelt areas along floodplain or proposed major roads
 - 2. Service capacity levels assume average service requirements of 4.29 LUE's/acre
 - 3. Main slopes assume average depth of 12' below natural ground unless otherwise noted. Minimum slopes per NBU regulations will dictate final main line slopes.
 - 4. Assumes 30' sewer easements will require 30' temporary construction easements.
 - 5. Assumes no East Outfall to Gruene WWTP included.

☒ NO DESIGN COMPLETED, PREL. MASTER PLANNING ONLY

☐ PRELIMINARY DESIGN

☐ FINAL DESIGN

☐ OTHER

WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011

Segment N-1
Size 21 Inch
Length 2,070 Feet
Total LUE 3,674 In Segment

Parcel Identifier	Developer Name	Size Acres	Requested Capacity LUE	Total Acres in Watershed Acres	LUE's in Segment Watershed LUE	Percentage of Total Capacity in Watershed %
1	POD-1	25.60	262	0	0	0.00%
2	POD-2	13.65	194	0	0	0.00%
3	POD-3	9.99	208	0	0	0.00%
4	POD-4	16.90	304	17	304	8.27%
5	POD-5	7.53	136	0	0	0.00%
6	POD-6	24.33	219	0	0	0.00%
7	POD-7	16.13	62	0	0	0.00%
8	POD-8	17.74	106	0	0	0.00%
9	POD-9	33.16	114	0	0	0.00%
10	POD-10	40.04	121	0	0	0.00%
11	POD-11	52.82	210	0	0	0.00%
12	POD-12	40.32	153	0	0	0.00%
13	POD-13	108.56	380	81	285	7.76%
14	POD-14	86.44	232	13	35	0.95%
15	POD-15	81.63	258	82	258	7.02%
16	POD-16	74.60	283	75	283	7.70%
17	POD-17	26.21	100	26	100	2.72%
18	POD-18	56.02	213	56	213	5.80%
19	POD-19	41.93	159	0	0	0.00%
20	POD-20	47.98	168	0	0	0.00%
21	POD-21	12.83	52	0	0	0.00%
22	POD-22	26.95	80	9	27	0.73%
23	POD-23	29.79	107	0	0	0.00%
24	POD-24	59.20	229	59	229	6.23%
25	POD-25	82.60	314	0	0	0.00%
26	POD-26	51.95	329	52	329	8.95%
27	POD-27	125.48	477	125	477	12.98%
28	POD-28	45.14	135	45	135	3.67%
29	POD-29	114.49	435	114	435	11.84%
30	POD-30	72.77	277	73	277	7.54%
31	POD-31	53.62	161	14	41	1.12%
32	POD-32	70.29	246	70	246	6.70%
33	POD-33 Greenbelt	0.00	0	0	0	0.00%
34	POD-34 Greenbelt	0.00	0	0	0	0.00%
35	POD-35 Greenbelt	0.00	0	0	0	0.00%
36	POD-36 Greenbelt	0.00	0	0	0	0.00%
37	POD-37 Greenbelt	0.00	0	0	0	0.00%
38	POD-38 Greenbelt	0.00	0	0	0	0.00%
39	POD-39 N-S Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
40	POD-40 E-W Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
Totals		1,567	6,724	912	3,674	100.00%

- Notes:
- 1. Calculated areas do not include roads or greenbelt areas along floodplain or proposed major roads
 - 2. Service capacity levels assume average service requirements of 4.29 LUE's/acre
 - 3. Main slopes assume average depth of 12' below natural ground unless otherwise noted. Minimum slopes per NBU regulations will dictate final main line slopes.
 - 4. Assumes 30' sewer easements will require 30' temporary construction easements.
 - 5. Assumes no East Outfall to Gruene WWTP included.

- ☒ NO DESIGN COMPLETED, PREL. MASTER PLANNING ONLY
- ☐ PRELIMINARY DESIGN
- ☐ FINAL DESIGN
- ☐ OTHER

WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011

Segment N-2
Size 18 Inch
Length 2,150 Feet
Total LUE 2,414 In Segment

Parcel Identifier	Developer Name	Size Acres	Requested Capacity LUE	Total Acres in Watershed Acres	LUE's in Segment Watershed LUE	Percentage of Total Capacity in Watershed %
1	POD-1	25.60	262	0	0	0.00%
2	POD-2	13.65	194	0	0	0.00%
3	POD-3	9.99	208	0	0	0.00%
4	POD-4	16.90	304	17	304	12.59%
5	POD-5	7.53	136	0	0	0.00%
6	POD-6	24.33	219	0	0	0.00%
7	POD-7	16.13	62	0	0	0.00%
8	POD-8	17.74	106	0	0	0.00%
9	POD-9	33.16	114	0	0	0.00%
10	POD-10	40.04	121	0	0	0.00%
11	POD-11	52.82	210	0	0	0.00%
12	POD-12	40.32	153	0	0	0.00%
13	POD-13	108.56	380	81	285	11.81%
14	POD-14	86.44	232	15	39	1.62%
15	POD-15	81.63	258	82	258	10.69%
16	POD-16	74.60	283	75	283	11.72%
17	POD-17	26.21	100	26	100	4.14%
18	POD-18	56.02	213	56	213	8.82%
19	POD-19	41.93	159	0	0	0.00%
20	POD-20	47.98	168	0	0	0.00%
21	POD-21	12.83	52	0	0	0.00%
22	POD-22	26.95	80	0	0	0.00%
23	POD-23	29.79	107	0	0	0.00%
24	POD-24	59.20	229	0	0	0.00%
25	POD-25	82.60	314	0	0	0.00%
26	POD-26	51.95	329	0	0	0.00%
27	POD-27	125.48	477	41	154	6.38%
28	POD-28	45.14	135	45	135	5.59%
29	POD-29	114.49	435	21	79	3.27%
30	POD-30	72.77	277	73	277	11.47%
31	POD-31	53.62	161	14	41	1.70%
32	POD-32	70.29	246	70	246	10.19%
33	POD-33 Greenbelt	0.00	0	0	0	0.00%
34	POD-34 Greenbelt	0.00	0	0	0	0.00%
35	POD-35 Greenbelt	0.00	0	0	0	0.00%
36	POD-36 Greenbelt	0.00	0	0	0	0.00%
37	POD-37 Greenbelt	0.00	0	0	0	0.00%
38	POD-38 Greenbelt	0.00	0	0	0	0.00%
39	POD-39 N-S Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
40	POD-40 E-W Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
Totals		1,567	6,724	614	2,414	100.00%

Notes:

1. Calculated areas do not include roads or greenbelt areas along floodplain or proposed major roads
2. Service capacity levels assume average service requirements of 4.29 LUE's/acre
3. Main slopes assume average depth of 12' below natural ground unless otherwise noted. Minimum slopes per NBU regulations will dictate final main line slopes.
4. Assumes 30' sewer easements will require 30' temporary construction easements.
5. Assumes no East Outfall to Gruene WWTP included.

☒ NO DESIGN COMPLETED, PREL. MASTER PLANNING ONLY

☐ PRELIMINARY DESIGN

☐ FINAL DESIGN

☐ OTHER

WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011

Segment N-3
Size 18 Inch
Length 1,170 Feet
Total LUE 2,027 In Segment

Parcel Identifier	Developer Name	Size Acres	Requested Capacity LUE	Total Acres in Watershed Acres	LUE's in Segment Watershed LUE	Percentage of Total Capacity in Watershed %
1	POD-1	25.60	262	0	0	0.00%
2	POD-2	13.65	194	0	0	0.00%
3	POD-3	9.99	208	0	0	0.00%
4	POD-4	16.90	304	17	304	15.00%
5	POD-5	7.53	136	0	0	0.00%
6	POD-6	24.33	219	0	0	0.00%
7	POD-7	16.13	62	0	0	0.00%
8	POD-8	17.74	106	0	0	0.00%
9	POD-9	33.16	114	0	0	0.00%
10	POD-10	40.04	121	0	0	0.00%
11	POD-11	52.82	210	0	0	0.00%
12	POD-12	40.32	153	0	0	0.00%
13	POD-13	108.56	380	81	285	14.06%
14	POD-14	86.44	232	13	35	1.73%
15	POD-15	81.63	258	82	258	12.73%
16	POD-16	74.60	283	75	283	13.96%
17	POD-17	26.21	100	26	100	4.93%
18	POD-18	56.02	213	0	0	0.00%
19	POD-19	41.93	159	0	0	0.00%
20	POD-20	47.98	168	0	0	0.00%
21	POD-21	12.83	52	0	0	0.00%
22	POD-22	26.95	80	0	0	0.00%
23	POD-23	29.79	107	0	0	0.00%
24	POD-24	59.20	229	0	0	0.00%
25	POD-25	82.60	314	0	0	0.00%
26	POD-26	51.95	329	0	0	0.00%
27	POD-27	125.48	477	41	154	7.60%
28	POD-28	45.14	135	0	0	0.00%
29	POD-29	114.49	435	21	79	3.90%
30	POD-30	72.77	277	73	277	13.67%
31	POD-31	53.62	161	14	41	2.02%
32	POD-32	70.29	246	60	211	10.41%
33	POD-33 Greenbelt	0.00	0	0	0	0.00%
34	POD-34 Greenbelt	0.00	0	0	0	0.00%
35	POD-35 Greenbelt	0.00	0	0	0	0.00%
36	POD-36 Greenbelt	0.00	0	0	0	0.00%
37	POD-37 Greenbelt	0.00	0	0	0	0.00%
38	POD-38 Greenbelt	0.00	0	0	0	0.00%
39	POD-39 N-S Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
40	POD-40 E-W Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
Totals		1,567	6,724	502	2,027	100.00%

- Notes:
- 1. Calculated areas do not include roads or greenbelt areas along floodplain or proposed major roads
 - 2. Service capacity levels assume average service requirements of 4.29 LUE's/acre
 - 3. Main slopes assume average depth of 12' below natural ground unless otherwise noted. Minimum slopes per NBU regulations will dictate final main line slopes.
 - 4. Assumes 30' sewer easements will require 30' temporary construction easements.
 - 5. Assumes no East Outfall to Gruene WWTP included.

<input checked="" type="checkbox"/>	NO DESIGN COMPLETED, PREL. MASTER PLANNING ONLY
<input type="checkbox"/>	PRELIMINARY DESIGN
<input type="checkbox"/>	FINAL DESIGN
<input type="checkbox"/>	OTHER

WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011

Segment N-4
Size 15 Inch
Length 1,480 Feet
Total LUE 1,596 In Segment

Parcel Identifier	Developer Name	Size Acres	Requested Capacity LUE	Total Acres in Watershed Acres	LUE's in Segment Watershed LUE	Percentage of Total Capacity in Watershed %
1	POD-1	25.60	262	0	0	0.00%
2	POD-2	13.65	194	0	0	0.00%
3	POD-3	9.99	208	0	0	0.00%
4	POD-4	16.90	304	17	304	19.05%
5	POD-5	7.53	136	0	0	0.00%
6	POD-6	24.33	219	0	0	0.00%
7	POD-7	16.13	62	0	0	0.00%
8	POD-8	17.74	106	0	0	0.00%
9	POD-9	33.16	114	0	0	0.00%
10	POD-10	40.04	121	0	0	0.00%
11	POD-11	52.82	210	0	0	0.00%
12	POD-12	40.32	153	0	0	0.00%
13	POD-13	108.56	380	81	285	17.86%
14	POD-14	86.44	232	13	35	2.19%
15	POD-15	81.63	258	82	258	16.17%
16	POD-16	74.60	283	75	283	17.73%
17	POD-17	26.21	100	26	100	6.27%
18	POD-18	56.02	213	0	0	0.00%
19	POD-19	41.93	159	0	0	0.00%
20	POD-20	47.98	168	0	0	0.00%
21	POD-21	12.83	52	0	0	0.00%
22	POD-22	26.95	80	0	0	0.00%
23	POD-23	29.79	107	0	0	0.00%
24	POD-24	59.20	229	0	0	0.00%
25	POD-25	82.60	314	0	0	0.00%
26	POD-26	51.95	329	0	0	0.00%
27	POD-27	125.48	477	0	0	0.00%
28	POD-28	45.14	135	0	0	0.00%
29	POD-29	114.49	435	0	0	0.00%
30	POD-30	72.77	277	0	0	0.00%
31	POD-31	53.62	161	40	120	7.52%
32	POD-32	70.29	246	60	211	13.22%
33	POD-33 Greenbelt	0.00	0	0	0	0.00%
34	POD-34 Greenbelt	0.00	0	0	0	0.00%
35	POD-35 Greenbelt	0.00	0	0	0	0.00%
36	POD-36 Greenbelt	0.00	0	0	0	0.00%
37	POD-37 Greenbelt	0.00	0	0	0	0.00%
38	POD-38 Greenbelt	0.00	0	0	0	0.00%
39	POD-39 N-S Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
40	POD-40 E-W Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
Totals		1,567	6,724	394	1,596	100.00%

- Notes:
- 1. Calculated areas do not include roads or greenbelt areas along floodplain or proposed major roads
 - 2. Service capacity levels assume average service requirements of 4.29 LUE's/acre
 - 3. Main slopes assume average depth of 12' below natural ground unless otherwise noted. Minimum slopes per NBU regulations will dictate final main line slopes.
 - 4. Assumes 30' sewer easements will require 30' temporary construction easements.
 - 5. Assumes no East Outfall to Gruene WWTP included.

<input checked="" type="checkbox"/>	NO DESIGN COMPLETED, PREL. MASTER PLANNING ONLY
<input type="checkbox"/>	PRELIMINARY DESIGN
<input type="checkbox"/>	FINAL DESIGN
<input type="checkbox"/>	OTHER

WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011

Segment N-5
Size 15 Inch
Length 1,440 Feet
Total LUE 1,365 In Segment

Parcel Identifier	Developer Name	Size Acres	Requested Capacity LUE	Total Acres in Watershed Acres	LUE's in Segment Watershed LUE	Percentage of Total Capacity in Watershed %
		0				
1	POD-1	25.60	262	0	0	0.00%
2	POD-2	13.65	194	0	0	0.00%
3	POD-3	9.99	208	0	0	0.00%
4	POD-4	16.90	304	17	304	22.27%
5	POD-5	7.53	136	0	0	0.00%
6	POD-6	24.33	219	0	0	0.00%
7	POD-7	16.13	62	0	0	0.00%
8	POD-8	17.74	106	0	0	0.00%
9	POD-9	33.16	114	0	0	0.00%
10	POD-10	40.04	121	0	0	0.00%
11	POD-11	52.82	210	0	0	0.00%
12	POD-12	40.32	153	0	0	0.00%
13	POD-13	108.56	380	110	385	28.21%
14	POD-14	86.44	232	13	35	2.56%
15	POD-15	81.63	258	82	258	18.90%
16	POD-16	74.60	283	75	283	20.73%
17	POD-17	26.21	100	26	100	7.33%
18	POD-18	56.02	213	0	0	0.00%
19	POD-19	41.93	159	0	0	0.00%
20	POD-20	47.98	168	0	0	0.00%
21	POD-21	12.83	52	0	0	0.00%
22	POD-22	26.95	80	0	0	0.00%
23	POD-23	29.79	107	0	0	0.00%
24	POD-24	59.20	229	0	0	0.00%
25	POD-25	82.60	314	0	0	0.00%
26	POD-26	51.95	329	0	0	0.00%
27	POD-27	125.48	477	0	0	0.00%
28	POD-28	45.14	135	0	0	0.00%
29	POD-29	114.49	435	0	0	0.00%
30	POD-30	72.77	277	0	0	0.00%
31	POD-31	53.62	161	0	0	0.00%
32	POD-32	70.29	246	0	0	0.00%
33	POD-33 Greenbelt	0.00	0	0	0	0.00%
34	POD-34 Greenbelt	0.00	0	0	0	0.00%
35	POD-35 Greenbelt	0.00	0	0	0	0.00%
36	POD-36 Greenbelt	0.00	0	0	0	0.00%
37	POD-37 Greenbelt	0.00	0	0	0	0.00%
38	POD-38 Greenbelt	0.00	0	0	0	0.00%
39	POD-39 N-S Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
40	POD-40 E-W Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
Totals		1,567	6,724	322	1,365	100.00%

- Notes:
- 1. Calculated areas do not include roads or greenbelt areas along floodplain or proposed major roads
 - 2. Service capacity levels assume average service requirements of 4.29 LUE's/acre
 - 3. Main slopes assume average depth of 12' below natural ground unless otherwise noted. Minimum slopes per NBU regulations will dictate final main line slopes.
 - 4. Assumes 30' sewer easements will require 30' temporary construction easements.
 - 5. Assumes no East Outfall to Gruene WWTP included.

<input checked="" type="checkbox"/>	NO DESIGN COMPLETED, PREL. MASTER PLANNING ONLY
<input type="checkbox"/>	PRELIMINARY DESIGN
<input type="checkbox"/>	FINAL DESIGN
<input type="checkbox"/>	OTHER

WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011

Segment N-6
Size 15 Inch
Length 2,270 Feet
Total LUE 1,365 In Segment

Parcel Identifier	Developer Name	Size Acres	Requested Capacity LUE	Total Acres in Watershed Acres	LUE's in Segment Watershed LUE	Percentage of Total Capacity in Watershed %
1	POD-1	25.60	262	0	0	0.00%
2	POD-2	13.65	194	0	0	0.00%
3	POD-3	9.99	208	0	0	0.00%
4	POD-4	16.90	304	17	304	22.27%
5	POD-5	7.53	136	0	0	0.00%
6	POD-6	24.33	219	0	0	0.00%
7	POD-7	16.13	62	0	0	0.00%
8	POD-8	17.74	106	0	0	0.00%
9	POD-9	33.16	114	0	0	0.00%
10	POD-10	40.04	121	0	0	0.00%
11	POD-11	52.82	210	0	0	0.00%
12	POD-12	40.32	153	0	0	0.00%
13	POD-13	108.56	380	110	385	28.21%
14	POD-14	86.44	232	13	35	2.56%
15	POD-15	81.63	258	82	258	18.90%
16	POD-16	74.60	283	75	283	20.73%
17	POD-17	26.21	100	26	100	7.33%
18	POD-18	56.02	213	0	0	0.00%
19	POD-19	41.93	159	0	0	0.00%
20	POD-20	47.98	168	0	0	0.00%
21	POD-21	12.83	52	0	0	0.00%
22	POD-22	26.95	80	0	0	0.00%
23	POD-23	29.79	107	0	0	0.00%
24	POD-24	59.20	229	0	0	0.00%
25	POD-25	82.60	314	0	0	0.00%
26	POD-26	51.95	329	0	0	0.00%
27	POD-27	125.48	477	0	0	0.00%
28	POD-28	45.14	135	0	0	0.00%
29	POD-29	114.49	435	0	0	0.00%
30	POD-30	72.77	277	0	0	0.00%
31	POD-31	53.62	161	0	0	0.00%
32	POD-32	70.29	246	0	0	0.00%
33	POD-33 Greenbelt	0.00	0	0	0	0.00%
34	POD-34 Greenbelt	0.00	0	0	0	0.00%
35	POD-35 Greenbelt	0.00	0	0	0	0.00%
36	POD-36 Greenbelt	0.00	0	0	0	0.00%
37	POD-37 Greenbelt	0.00	0	0	0	0.00%
38	POD-38 Greenbelt	0.00	0	0	0	0.00%
39	POD-39 N-S Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
40	POD-40 E-W Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
Totals		1,567	6,724	322	1,365	100.00%

- Notes:
- 1. Calculated areas do not include roads or greenbelt areas along floodplain or proposed major roads
 - 2. Service capacity levels assume average service requirements of 4.29 LUE's/acre
 - 3. Main slopes assume average depth of 12' below natural ground unless otherwise noted. Minimum slopes per NBU regulations will dictate final main line slopes.
 - 4. Assumes 30' sewer easements will require 30' temporary construction easements.
 - 5. Assumes no East Outfall to Gruene WWTP included.

☒ NO DESIGN COMPLETED, PREL. MASTER PLANNING ONLY

☐ PRELIMINARY DESIGN

☐ FINAL DESIGN

☐ OTHER

WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011

Segment N-7
Size 12 Inch
Length 1,450 Feet
Total LUE 961 In Segment

Parcel Identifier	Developer Name	Size Acres	Requested Capacity LUE	Total Acres in Watershed Acres	LUE's in Segment Watershed LUE	Percentage of Total Capacity in Watershed %
1	POD-1	25.60	262	0	0	0.00%
2	POD-2	13.65	194	0	0	0.00%
3	POD-3	9.99	208	0	0	0.00%
4	POD-4	16.90	304	0	0	0.00%
5	POD-5	7.53	136	0	0	0.00%
6	POD-6	24.33	219	0	0	0.00%
7	POD-7	16.13	62	0	0	0.00%
8	POD-8	17.74	106	0	0	0.00%
9	POD-9	33.16	114	0	0	0.00%
10	POD-10	40.04	121	0	0	0.00%
11	POD-11	52.82	210	0	0	0.00%
12	POD-12	40.32	153	0	0	0.00%
13	POD-13	108.56	380	81	285	29.66%
14	POD-14	86.44	232	13	35	3.64%
15	POD-15	81.63	258	82	258	26.85%
16	POD-16	74.60	283	75	283	29.45%
17	POD-17	26.21	100	26	100	10.41%
18	POD-18	56.02	213	0	0	0.00%
19	POD-19	41.93	159	0	0	0.00%
20	POD-20	47.98	168	0	0	0.00%
21	POD-21	12.83	52	0	0	0.00%
22	POD-22	26.95	80	0	0	0.00%
23	POD-23	29.79	107	0	0	0.00%
24	POD-24	59.20	229	0	0	0.00%
25	POD-25	82.60	314	0	0	0.00%
26	POD-26	51.95	329	0	0	0.00%
27	POD-27	125.48	477	0	0	0.00%
28	POD-28	45.14	135	0	0	0.00%
29	POD-29	114.49	435	0	0	0.00%
30	POD-30	72.77	277	0	0	0.00%
31	POD-31	53.62	161	0	0	0.00%
32	POD-32	70.29	246	0	0	0.00%
33	POD-33 Greenbelt	0.00	0	0	0	0.00%
34	POD-34 Greenbelt	0.00	0	0	0	0.00%
35	POD-35 Greenbelt	0.00	0	0	0	0.00%
36	POD-36 Greenbelt	0.00	0	0	0	0.00%
37	POD-37 Greenbelt	0.00	0	0	0	0.00%
38	POD-38 Greenbelt	0.00	0	0	0	0.00%
39	POD-39 N-S Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
40	POD-40 E-W Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
Totals		1,567	6,724	277	961	100.00%

- Notes:
- 1. Calculated areas do not include roads or greenbelt areas along floodplain or proposed major roads
 - 2. Service capacity levels assume average service requirements of 4.29 LUE's/acre
 - 3. Main slopes assume average depth of 12' below natural ground unless otherwise noted. Minimum slopes per NBU regulations will dictate final main line slopes.
 - 4. Assumes 30' sewer easements will require 30' temporary construction easements.
 - 5. Assumes no East Outfall to Gruene WWTP included.

☒ NO DESIGN COMPLETED, PREL. MASTER PLANNING ONLY

☐ PRELIMINARY DESIGN

☐ FINAL DESIGN

☐ OTHER

WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011

Segment N-8
Size 8 Inch
Length 2,570 Feet
Total LUE 438 In Segment

Parcel Identifier	Developer Name	Size Acres	Requested Capacity LUE	Total Acres in Watershed Acres	LUE's in Segment Watershed LUE	Percentage of Total Capacity in Watershed %
1	POD-1	25.60	262	0	0	0.00%
2	POD-2	13.65	194	0	0	0.00%
3	POD-3	9.99	208	0	0	0.00%
4	POD-4	16.90	304	0	0	0.00%
5	POD-5	7.53	136	0	0	0.00%
6	POD-6	24.33	219	0	0	0.00%
7	POD-7	16.13	62	0	0	0.00%
8	POD-8	17.74	106	0	0	0.00%
9	POD-9	33.16	114	0	0	0.00%
10	POD-10	40.04	121	0	0	0.00%
11	POD-11	52.82	210	0	0	0.00%
12	POD-12	40.32	153	0	0	0.00%
13	POD-13	108.56	380	0	0	0.00%
14	POD-14	86.44	232	0	0	0.00%
15	POD-15	81.63	258	49	155	35.39%
16	POD-16	74.60	283	75	283	64.61%
17	POD-17	26.21	100	0	0	0.00%
18	POD-18	56.02	213	0	0	0.00%
19	POD-19	41.93	159	0	0	0.00%
20	POD-20	47.98	168	0	0	0.00%
21	POD-21	12.83	52	0	0	0.00%
22	POD-22	26.95	80	0	0	0.00%
23	POD-23	29.79	107	0	0	0.00%
24	POD-24	59.20	229	0	0	0.00%
25	POD-25	82.60	314	0	0	0.00%
26	POD-26	51.95	329	0	0	0.00%
27	POD-27	125.48	477	0	0	0.00%
28	POD-28	45.14	135	0	0	0.00%
29	POD-29	114.49	435	0	0	0.00%
30	POD-30	72.77	277	0	0	0.00%
31	POD-31	53.62	161	0	0	0.00%
32	POD-32	70.29	246	0	0	0.00%
33	POD-33 Greenbelt	0.00	0	0	0	0.00%
34	POD-34 Greenbelt	0.00	0	0	0	0.00%
35	POD-35 Greenbelt	0.00	0	0	0	0.00%
36	POD-36 Greenbelt	0.00	0	0	0	0.00%
37	POD-37 Greenbelt	0.00	0	0	0	0.00%
38	POD-38 Greenbelt	0.00	0	0	0	0.00%
39	POD-39 N-S Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
40	POD-40 E-W Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
Totals		1,567	6,724	124	438	100.00%

- Notes:
1. Calculated areas do not include roads or greenbelt areas along floodplain or proposed major roads

2. Service capacity levels assume average service requirements of 4.29 LUE's/acre

3. Main slopes assume average depth of 12' below natural ground unless otherwise noted. Minimum slopes per NBU regulations will dictate final main line slopes.

4. Assumes 30' sewer easements will require 30' temporary construction easements.

5. Assumes no East Outfall to Gruene WWTP included.

☒ NO DESIGN COMPLETED, PREL. MASTER PLANNING ONLY

☐ PRELIMINARY DESIGN

☐ FINAL DESIGN

☐ OTHER

WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011

Segment N-9
Size 8 Inch
Length 2,440 Feet
Total LUE 114 In Segment

Parcel Identifier	Developer Name	Size Acres	Requested Capacity LUE	Total Acres in Watershed Acres	LUE's in Segment Watershed LUE	Percentage of Total Capacity in Watershed %
1	POD-1	25.60	262	0	0	0.00%
2	POD-2	13.65	194	0	0	0.00%
3	POD-3	9.99	208	0	0	0.00%
4	POD-4	16.90	304	0	0	0.00%
5	POD-5	7.53	136	0	0	0.00%
6	POD-6	24.33	219	0	0	0.00%
7	POD-7	16.13	62	0	0	0.00%
8	POD-8	17.74	106	0	0	0.00%
9	POD-9	33.16	114	0	0	0.00%
10	POD-10	40.04	121	0	0	0.00%
11	POD-11	52.82	210	0	0	0.00%
12	POD-12	40.32	153	0	0	0.00%
13	POD-13	108.56	380	0	0	0.00%
14	POD-14	86.44	232	0	0	0.00%
15	POD-15	81.63	258	0	0	0.00%
16	POD-16	74.60	283	30	114	100.00%
17	POD-17	26.21	100	0	0	0.00%
18	POD-18	56.02	213	0	0	0.00%
19	POD-19	41.93	159	0	0	0.00%
20	POD-20	47.98	168	0	0	0.00%
21	POD-21	12.83	52	0	0	0.00%
22	POD-22	26.95	80	0	0	0.00%
23	POD-23	29.79	107	0	0	0.00%
24	POD-24	59.20	229	0	0	0.00%
25	POD-25	82.60	314	0	0	0.00%
26	POD-26	51.95	329	0	0	0.00%
27	POD-27	125.48	477	0	0	0.00%
28	POD-28	45.14	135	0	0	0.00%
29	POD-29	114.49	435	0	0	0.00%
30	POD-30	72.77	277	0	0	0.00%
31	POD-31	53.62	161	0	0	0.00%
32	POD-32	70.29	246	0	0	0.00%
33	POD-33 Greenbelt	0.00	0	0	0	0.00%
34	POD-34 Greenbelt	0.00	0	0	0	0.00%
35	POD-35 Greenbelt	0.00	0	0	0	0.00%
36	POD-36 Greenbelt	0.00	0	0	0	0.00%
37	POD-37 Greenbelt	0.00	0	0	0	0.00%
38	POD-38 Greenbelt	0.00	0	0	0	0.00%
39	POD-39 N-S Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
40	POD-40 E-W Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
Totals		1,567	6,724	30	114	100.00%

- Notes:
- 1. Calculated areas do not include roads or greenbelt areas along floodplain or proposed major roads
 - 2. Service capacity levels assume average service requirements of 4.29 LUE's/acre
 - 3. Main slopes assume average depth of 12' below natural ground unless otherwise noted. Minimum slopes per NBU regulations will dictate final main line slopes.
 - 4. Assumes 30' sewer easements will require 30' temporary construction easements.
 - 5. Assumes no East Outfall to Gruene WWTP included.

☒ NO DESIGN COMPLETED, PREL. MASTER PLANNING ONLY

☐ PRELIMINARY DESIGN

☐ FINAL DESIGN

☐ OTHER

WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011

Segment N-10
Size 8 Inch
Length 960 Feet
Total LUE 155 In Segment

Parcel Identifier	Developer Name	Size Acres	Requested Capacity LUE	Total Acres in Watershed Acres	LUE's in Segment Watershed LUE	Percentage of Total Capacity in Watershed %
1	POD-1	25.60	262	0	0	0.00%
2	POD-2	13.65	194	0	0	0.00%
3	POD-3	9.99	208	0	0	0.00%
4	POD-4	16.90	304	0	0	0.00%
5	POD-5	7.53	136	0	0	0.00%
6	POD-6	24.33	219	0	0	0.00%
7	POD-7	16.13	62	0	0	0.00%
8	POD-8	17.74	106	0	0	0.00%
9	POD-9	33.16	114	0	0	0.00%
10	POD-10	40.04	121	0	0	0.00%
11	POD-11	52.82	210	0	0	0.00%
12	POD-12	40.32	153	0	0	0.00%
13	POD-13	108.56	380	0	0	0.00%
14	POD-14	86.44	232	0	0	0.00%
15	POD-15	81.63	258	49	155	100.00%
16	POD-16	74.60	283	0	0	0.00%
17	POD-17	26.21	100	0	0	0.00%
18	POD-18	56.02	213	0	0	0.00%
19	POD-19	41.93	159	0	0	0.00%
20	POD-20	47.98	168	0	0	0.00%
21	POD-21	12.83	52	0	0	0.00%
22	POD-22	26.95	80	0	0	0.00%
23	POD-23	29.79	107	0	0	0.00%
24	POD-24	59.20	229	0	0	0.00%
25	POD-25	82.60	314	0	0	0.00%
26	POD-26	51.95	329	0	0	0.00%
27	POD-27	125.48	477	0	0	0.00%
28	POD-28	45.14	135	0	0	0.00%
29	POD-29	114.49	435	0	0	0.00%
30	POD-30	72.77	277	0	0	0.00%
31	POD-31	53.62	161	0	0	0.00%
32	POD-32	70.29	246	0	0	0.00%
33	POD-33 Greenbelt	0.00	0	0	0	0.00%
34	POD-34 Greenbelt	0.00	0	0	0	0.00%
35	POD-35 Greenbelt	0.00	0	0	0	0.00%
36	POD-36 Greenbelt	0.00	0	0	0	0.00%
37	POD-37 Greenbelt	0.00	0	0	0	0.00%
38	POD-38 Greenbelt	0.00	0	0	0	0.00%
39	POD-39 N-S Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
40	POD-40 E-W Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
Totals		1,567	6,724	49	155	100.00%

- Notes:
1. Calculated areas do not include roads or greenbelt areas along floodplain or proposed major roads

2. Service capacity levels assume average service requirements of 4.29 LUE's/acre

3. Main slopes assume average depth of 12' below natural ground unless otherwise noted. Minimum slopes per NBU regulations will dictate final main line slopes.

4. Assumes 30' sewer easements will require 30' temporary construction easements.

5. Assumes no East Outfall to Gruene WWTP included.

☒

NO DESIGN COMPLETED, PREL. MASTER PLANNING ONLY

☐

PRELIMINARY DESIGN

☐

FINAL DESIGN

☐

OTHER

WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011

Segment N-11
Size 8 Inch
Length 670 Feet
Total LUE 459 In Segment

Parcel Identifier	Developer Name	Size Acres	Requested Capacity LUE	Total Acres in Watershed Acres	LUE's in Segment Watershed LUE	Percentage of Total Capacity in Watershed %
1	POD-1	25.60	262	0	0	0.00%
2	POD-2	13.65	194	0	0	0.00%
3	POD-3	9.99	208	0	0	0.00%
4	POD-4	16.90	304	0	0	0.00%
5	POD-5	7.53	136	0	0	0.00%
6	POD-6	24.33	219	0	0	0.00%
7	POD-7	16.13	62	0	0	0.00%
8	POD-8	17.74	106	0	0	0.00%
9	POD-9	33.16	114	0	0	0.00%
10	POD-10	40.04	121	0	0	0.00%
11	POD-11	52.82	210	0	0	0.00%
12	POD-12	40.32	153	0	0	0.00%
13	POD-13	108.56	380	81	285	62.09%
14	POD-14	86.44	232	17	46	10.02%
15	POD-15	81.63	258	33	103	22.44%
16	POD-16	74.60	283	0	0	0.00%
17	POD-17	26.21	100	7	25	5.45%
18	POD-18	56.02	213	0	0	0.00%
19	POD-19	41.93	159	0	0	0.00%
20	POD-20	47.98	168	0	0	0.00%
21	POD-21	12.83	52	0	0	0.00%
22	POD-22	26.95	80	0	0	0.00%
23	POD-23	29.79	107	0	0	0.00%
24	POD-24	59.20	229	0	0	0.00%
25	POD-25	82.60	314	0	0	0.00%
26	POD-26	51.95	329	0	0	0.00%
27	POD-27	125.48	477	0	0	0.00%
28	POD-28	45.14	135	0	0	0.00%
29	POD-29	114.49	435	0	0	0.00%
30	POD-30	72.77	277	0	0	0.00%
31	POD-31	53.62	161	0	0	0.00%
32	POD-32	70.29	246	0	0	0.00%
33	POD-33 Greenbelt	0.00	0	0	0	0.00%
34	POD-34 Greenbelt	0.00	0	0	0	0.00%
35	POD-35 Greenbelt	0.00	0	0	0	0.00%
36	POD-36 Greenbelt	0.00	0	0	0	0.00%
37	POD-37 Greenbelt	0.00	0	0	0	0.00%
38	POD-38 Greenbelt	0.00	0	0	0	0.00%
39	POD-39 N-S Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
40	POD-40 E-W Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
Totals		1,567	6,724	138	459	100.00%

- Notes:
- 1. Calculated areas do not include roads or greenbelt areas along floodplain or proposed major roads
 - 2. Service capacity levels assume average service requirements of 4.29 LUE's/acre
 - 3. Main slopes assume average depth of 12' below natural ground unless otherwise noted. Minimum slopes per NBU regulations will dictate final main line slopes.
 - 4. Assumes 30' sewer easements will require 30' temporary construction easements.
 - 5. Assumes no East Outfall to Gruene WWTP included.

- ☒ NO DESIGN COMPLETED, PREL. MASTER PLANNING ONLY
- ☐ PRELIMINARY DESIGN
- ☐ FINAL DESIGN
- ☐ OTHER

WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011

Segment N-12
Size 8 Inch
Length 1,420 Feet
Total LUE 214 In Segment

Parcel Identifier	Developer Name	Size Acres	Requested Capacity LUE	Total Acres in Watershed Acres	LUE's in Segment Watershed LUE	Percentage of Total Capacity in Watershed %
1	POD-1	25.60	262	0	0	0.00%
2	POD-2	13.65	194	0	0	0.00%
3	POD-3	9.99	208	0	0	0.00%
4	POD-4	16.90	304	0	0	0.00%
5	POD-5	7.53	136	0	0	0.00%
6	POD-6	24.33	219	0	0	0.00%
7	POD-7	16.13	62	0	0	0.00%
8	POD-8	17.74	106	0	0	0.00%
9	POD-9	33.16	114	0	0	0.00%
10	POD-10	40.04	121	0	0	0.00%
11	POD-11	52.82	210	0	0	0.00%
12	POD-12	40.32	153	0	0	0.00%
13	POD-13	108.56	380	0	0	0.00%
14	POD-14	86.44	232	52	139	64.95%
15	POD-15	81.63	258	0	0	0.00%
16	POD-16	74.60	283	0	0	0.00%
17	POD-17	26.21	100	20	75	35.05%
18	POD-18	56.02	213	0	0	0.00%
19	POD-19	41.93	159	0	0	0.00%
20	POD-20	47.98	168	0	0	0.00%
21	POD-21	12.83	52	0	0	0.00%
22	POD-22	26.95	80	0	0	0.00%
23	POD-23	29.79	107	0	0	0.00%
24	POD-24	59.20	229	0	0	0.00%
25	POD-25	82.60	314	0	0	0.00%
26	POD-26	51.95	329	0	0	0.00%
27	POD-27	125.48	477	0	0	0.00%
28	POD-28	45.14	135	0	0	0.00%
29	POD-29	114.49	435	0	0	0.00%
30	POD-30	72.77	277	0	0	0.00%
31	POD-31	53.62	161	0	0	0.00%
32	POD-32	70.29	246	0	0	0.00%
33	POD-33 Greenbelt	0.00	0	0	0	0.00%
34	POD-34 Greenbelt	0.00	0	0	0	0.00%
35	POD-35 Greenbelt	0.00	0	0	0	0.00%
36	POD-36 Greenbelt	0.00	0	0	0	0.00%
37	POD-37 Greenbelt	0.00	0	0	0	0.00%
38	POD-38 Greenbelt	0.00	0	0	0	0.00%
39	POD-39 N-S Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
40	POD-40 E-W Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
Totals		1,567	6,724	71	214	100.00%

Notes:

1. Calculated areas do not include roads or greenbelt areas along floodplain or proposed major roads
2. Service capacity levels assume average service requirements of 4.29 LUE's/acre
3. Main slopes assume average depth of 12' below natural ground unless otherwise noted. Minimum slopes per NBU regulations will dictate final main line slopes.
4. Assumes 30' sewer easements will require 30' temporary construction easements.
5. Assumes no East Outfall to Gruene WWTP included.

- ☒ NO DESIGN COMPLETED, PREL. MASTER PLANNING ONLY
- ☐ PRELIMINARY DESIGN
- ☐ FINAL DESIGN
- ☐ OTHER

WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011

Segment N-13
Size 8 Inch
Length 1,120 Feet
Total LUE 366 In Segment

Parcel Identifier	Developer Name	Size Acres	Requested Capacity LUE	Total Acres in Watershed Acres	LUE's in Segment Watershed LUE	Percentage of Total Capacity in Watershed %
1	POD-1	25.60	262	0	0	0.00%
2	POD-2	13.65	194	0	0	0.00%
3	POD-3	9.99	208	0	0	0.00%
4	POD-4	16.90	304	0	0	0.00%
5	POD-5	7.53	136	0	0	0.00%
6	POD-6	24.33	219	0	0	0.00%
7	POD-7	16.13	62	0	0	0.00%
8	POD-8	17.74	106	0	0	0.00%
9	POD-9	33.16	114	0	0	0.00%
10	POD-10	40.04	121	0	0	0.00%
11	POD-11	52.82	210	0	0	0.00%
12	POD-12	40.32	153	0	0	0.00%
13	POD-13	108.56	380	0	0	0.00%
14	POD-14	86.44	232	0	0	0.00%
15	POD-15	81.63	258	0	0	0.00%
16	POD-16	74.60	283	0	0	0.00%
17	POD-17	26.21	100	0	0	0.00%
18	POD-18	56.02	213	0	0	0.00%
19	POD-19	41.93	159	0	0	0.00%
20	POD-20	47.98	168	0	0	0.00%
21	POD-21	12.83	52	0	0	0.00%
22	POD-22	26.95	80	0	0	0.00%
23	POD-23	29.79	107	0	0	0.00%
24	POD-24	59.20	229	0	0	0.00%
25	POD-25	82.60	314	0	0	0.00%
26	POD-26	51.95	329	0	0	0.00%
27	POD-27	125.48	477	0	0	0.00%
28	POD-28	45.14	135	0	0	0.00%
29	POD-29	114.49	435	0	0	0.00%
30	POD-30	72.77	277	0	0	0.00%
31	POD-31	53.62	161	40	120	32.79%
32	POD-32	70.29	246	70	246	67.21%
33	POD-33 Greenbelt	0.00	0	0	0	0.00%
34	POD-34 Greenbelt	0.00	0	0	0	0.00%
35	POD-35 Greenbelt	0.00	0	0	0	0.00%
36	POD-36 Greenbelt	0.00	0	0	0	0.00%
37	POD-37 Greenbelt	0.00	0	0	0	0.00%
38	POD-38 Greenbelt	0.00	0	0	0	0.00%
39	POD-39 N-S Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
40	POD-40 E-W Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
Totals		1,567	6,724	110	366	100.00%

Notes:

1. Calculated areas do not include roads or greenbelt areas along floodplain or proposed major roads
2. Service capacity levels assume average service requirements of 4.29 LUE's/acre
3. Main slopes assume average depth of 12' below natural ground unless otherwise noted. Minimum slopes per NBU regulations will dictate final main line slopes.
4. Assumes 30' sewer easements will require 30' temporary construction easements.
5. Assumes no East Outfall to Gruene WWTP included.

- ☒ NO DESIGN COMPLETED, PREL. MASTER PLANNING ONLY
- ☐ PRELIMINARY DESIGN
- ☐ FINAL DESIGN
- ☐ OTHER

WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011

Segment N-14
Size 8 Inch
Length 400 Feet
Total LUE 246 In Segment

Parcel Identifier	Developer Name	Size Acres	Requested Capacity LUE	Total Acres in Watershed Acres	LUE's in Segment Watershed LUE	Percentage of Total Capacity in Watershed %
1	POD-1	25.60	262	0	0	0.00%
2	POD-2	13.65	194	0	0	0.00%
3	POD-3	9.99	208	0	0	0.00%
4	POD-4	16.90	304	0	0	0.00%
5	POD-5	7.53	136	0	0	0.00%
6	POD-6	24.33	219	0	0	0.00%
7	POD-7	16.13	62	0	0	0.00%
8	POD-8	17.74	106	0	0	0.00%
9	POD-9	33.16	114	0	0	0.00%
10	POD-10	40.04	121	0	0	0.00%
11	POD-11	52.82	210	0	0	0.00%
12	POD-12	40.32	153	0	0	0.00%
13	POD-13	108.56	380	0	0	0.00%
14	POD-14	86.44	232	0	0	0.00%
15	POD-15	81.63	258	0	0	0.00%
16	POD-16	74.60	283	0	0	0.00%
17	POD-17	26.21	100	0	0	0.00%
18	POD-18	56.02	213	0	0	0.00%
19	POD-19	41.93	159	0	0	0.00%
20	POD-20	47.98	168	0	0	0.00%
21	POD-21	12.83	52	0	0	0.00%
22	POD-22	26.95	80	0	0	0.00%
23	POD-23	29.79	107	0	0	0.00%
24	POD-24	59.20	229	0	0	0.00%
25	POD-25	82.60	314	0	0	0.00%
26	POD-26	51.95	329	0	0	0.00%
27	POD-27	125.48	477	0	0	0.00%
28	POD-28	45.14	135	0	0	0.00%
29	POD-29	114.49	435	0	0	0.00%
30	POD-30	72.77	277	0	0	0.00%
31	POD-31	53.62	161	0	0	0.00%
32	POD-32	70.29	246	70	246	100.00%
33	POD-33 Greenbelt	0.00	0	0	0	0.00%
34	POD-34 Greenbelt	0.00	0	0	0	0.00%
35	POD-35 Greenbelt	0.00	0	0	0	0.00%
36	POD-36 Greenbelt	0.00	0	0	0	0.00%
37	POD-37 Greenbelt	0.00	0	0	0	0.00%
38	POD-38 Greenbelt	0.00	0	0	0	0.00%
39	POD-39 N-S Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
40	POD-40 E-W Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
Totals		1,567	6,724	70	246	100.00%

- Notes:
- 1. Calculated areas do not include roads or greenbelt areas along floodplain or proposed major roads
 - 2. Service capacity levels assume average service requirements of 4.29 LUE's/acre
 - 3. Main slopes assume average depth of 12' below natural ground unless otherwise noted. Minimum slopes per NBU regulations will dictate final main line slopes.
 - 4. Assumes 30' sewer easements will require 30' temporary construction easements.
 - 5. Assumes no East Outfall to Gruene WWTP included.

- ☒ NO DESIGN COMPLETED, PREL. MASTER PLANNING ONLY
- ☐ PRELIMINARY DESIGN
- ☐ FINAL DESIGN
- ☐ OTHER

WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011

Segment N-15
Size 8 Inch
Length 1,920 Feet
Total LUE 498 In Segment

Parcel Identifier	Developer Name	Size Acres	Requested Capacity LUE	Total Acres in Watershed Acres	LUE's in Segment Watershed LUE	Percentage of Total Capacity in Watershed %
1	POD-1	25.60	262	0	0	0.00%
2	POD-2	13.65	194	0	0	0.00%
3	POD-3	9.99	208	0	0	0.00%
4	POD-4	16.90	304	0	0	0.00%
5	POD-5	7.53	136	0	0	0.00%
6	POD-6	24.33	219	0	0	0.00%
7	POD-7	16.13	62	0	0	0.00%
8	POD-8	17.74	106	0	0	0.00%
9	POD-9	33.16	114	0	0	0.00%
10	POD-10	40.04	121	0	0	0.00%
11	POD-11	52.82	210	0	0	0.00%
12	POD-12	40.32	153	0	0	0.00%
13	POD-13	108.56	380	0	0	0.00%
14	POD-14	86.44	232	0	0	0.00%
15	POD-15	81.63	258	0	0	0.00%
16	POD-16	74.60	283	0	0	0.00%
17	POD-17	26.21	100	0	0	0.00%
18	POD-18	56.02	213	0	0	0.00%
19	POD-19	41.93	159	0	0	0.00%
20	POD-20	47.98	168	0	0	0.00%
21	POD-21	12.83	52	0	0	0.00%
22	POD-22	26.95	80	0	0	0.00%
23	POD-23	29.79	107	0	0	0.00%
24	POD-24	59.20	229	0	0	0.00%
25	POD-25	82.60	314	0	0	0.00%
26	POD-26	51.95	329	0	0	0.00%
27	POD-27	125.48	477	0	0	0.00%
28	POD-28	45.14	135	34	101	20.28%
29	POD-29	114.49	435	21	79	15.86%
30	POD-30	72.77	277	73	277	55.62%
31	POD-31	53.62	161	14	41	8.23%
32	POD-32	70.29	246	0	0	0.00%
33	POD-33 Greenbelt	0.00	0	0	0	0.00%
34	POD-34 Greenbelt	0.00	0	0	0	0.00%
35	POD-35 Greenbelt	0.00	0	0	0	0.00%
36	POD-36 Greenbelt	0.00	0	0	0	0.00%
37	POD-37 Greenbelt	0.00	0	0	0	0.00%
38	POD-38 Greenbelt	0.00	0	0	0	0.00%
39	POD-39 N-S Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
40	POD-40 E-W Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
Totals		1,567	6,724	141	498	100.00%

Notes:

1. Calculated areas do not include roads or greenbelt areas along floodplain or proposed major roads
2. Service capacity levels assume average service requirements of 4.29 LUE's/acre
3. Main slopes assume average depth of 12' below natural ground unless otherwise noted. Minimum slopes per NBU regulations will dictate final main line slopes.
4. Assumes 30' sewer easements will require 30' temporary construction easements.
5. Assumes no East Outfall to Gruene WWTP included.

☒ NO DESIGN COMPLETED, PREL. MASTER PLANNING ONLY

☐ PRELIMINARY DESIGN

☐ FINAL DESIGN

☐ OTHER

WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011

Segment N-17
Size 10 Inch
Length 1,420 Feet
Total LUE 1,097 In Segment

Parcel Identifier	Developer Name	Size Acres	Requested Capacity LUE	Total Acres in Watershed Acres	LUE's in Segment Watershed LUE	Percentage of Total Capacity in Watershed %
1	POD-1	25.60	262	0	0	0.00%
2	POD-2	13.65	194	0	0	0.00%
3	POD-3	9.99	208	0	0	0.00%
4	POD-4	16.90	304	0	0	0.00%
5	POD-5	7.53	136	0	0	0.00%
6	POD-6	24.33	219	0	0	0.00%
7	POD-7	16.13	62	0	0	0.00%
8	POD-8	17.74	106	0	0	0.00%
9	POD-9	33.16	114	0	0	0.00%
10	POD-10	40.04	121	0	0	0.00%
11	POD-11	52.82	210	0	0	0.00%
12	POD-12	40.32	153	0	0	0.00%
13	POD-13	108.56	380	0	0	0.00%
14	POD-14	86.44	232	0	0	0.00%
15	POD-15	81.63	258	0	0	0.00%
16	POD-16	74.60	283	0	0	0.00%
17	POD-17	26.21	100	0	0	0.00%
18	POD-18	56.02	213	0	0	0.00%
19	POD-19	41.93	159	0	0	0.00%
20	POD-20	47.98	168	0	0	0.00%
21	POD-21	12.83	52	0	0	0.00%
22	POD-22	26.95	80	9	27	2.46%
23	POD-23	29.79	107	0	0	0.00%
24	POD-24	59.20	229	59	229	20.88%
25	POD-25	82.60	314	0	0	0.00%
26	POD-26	51.95	329	14	88	8.02%
27	POD-27	125.48	477	84	318	28.99%
28	POD-28	45.14	135	0	0	0.00%
29	POD-29	114.49	435	114	435	39.65%
30	POD-30	72.77	277	0	0	0.00%
31	POD-31	53.62	161	0	0	0.00%
32	POD-32	70.29	246	0	0	0.00%
33	POD-33 Greenbelt	0.00	0	0	0	0.00%
34	POD-34 Greenbelt	0.00	0	0	0	0.00%
35	POD-35 Greenbelt	0.00	0	0	0	0.00%
36	POD-36 Greenbelt	0.00	0	0	0	0.00%
37	POD-37 Greenbelt	0.00	0	0	0	0.00%
38	POD-38 Greenbelt	0.00	0	0	0	0.00%
39	POD-39 N-S Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
40	POD-40 E-W Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
Totals		1,567	6,724	280	1,097	100.00%

- Notes:
- 1. Calculated areas do not include roads or greenbelt areas along floodplain or proposed major roads
 - 2. Service capacity levels assume average service requirements of 4.29 LUE's/acre
 - 3. Main slopes assume average depth of 12' below natural ground unless otherwise noted. Minimum slopes per NBU regulations will dictate final main line slopes.
 - 4. Assumes 30' sewer easements will require 30' temporary construction easements.
 - 5. Assumes no East Outfall to Gruene WWTP included.

☒ NO DESIGN COMPLETED, PREL. MASTER PLANNING ONLY

☐ PRELIMINARY DESIGN

☐ FINAL DESIGN

☐ OTHER

WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011

Segment N-18
Size 8 Inch
Length 1,310 Feet
Total LUE 138 In Segment

Parcel Identifier	Developer Name	Size Acres	Requested Capacity LUE	Total Acres in Watershed Acres	LUE's in Segment Watershed LUE	Percentage of Total Capacity in Watershed %
1	POD-1	25.60	262	0	0	0.00%
2	POD-2	13.65	194	0	0	0.00%
3	POD-3	9.99	208	0	0	0.00%
4	POD-4	16.90	304	0	0	0.00%
5	POD-5	7.53	136	0	0	0.00%
6	POD-6	24.33	219	0	0	0.00%
7	POD-7	16.13	62	0	0	0.00%
8	POD-8	17.74	106	0	0	0.00%
9	POD-9	33.16	114	0	0	0.00%
10	POD-10	40.04	121	0	0	0.00%
11	POD-11	52.82	210	0	0	0.00%
12	POD-12	40.32	153	0	0	0.00%
13	POD-13	108.56	380	0	0	0.00%
14	POD-14	86.44	232	0	0	0.00%
15	POD-15	81.63	258	0	0	0.00%
16	POD-16	74.60	283	0	0	0.00%
17	POD-17	26.21	100	0	0	0.00%
18	POD-18	56.02	213	0	0	0.00%
19	POD-19	41.93	159	0	0	0.00%
20	POD-20	47.98	168	0	0	0.00%
21	POD-21	12.83	52	0	0	0.00%
22	POD-22	26.95	80	0	0	0.00%
23	POD-23	29.79	107	30	107	77.54%
24	POD-24	59.20	229	0	0	0.00%
25	POD-25	82.60	314	8	31	22.46%
26	POD-26	51.95	329	0	0	0.00%
27	POD-27	125.48	477	0	0	0.00%
28	POD-28	45.14	135	0	0	0.00%
29	POD-29	114.49	435	0	0	0.00%
30	POD-30	72.77	277	0	0	0.00%
31	POD-31	53.62	161	0	0	0.00%
32	POD-32	70.29	246	0	0	0.00%
33	POD-33 Greenbelt	0.00	0	0	0	0.00%
34	POD-34 Greenbelt	0.00	0	0	0	0.00%
35	POD-35 Greenbelt	0.00	0	0	0	0.00%
36	POD-36 Greenbelt	0.00	0	0	0	0.00%
37	POD-37 Greenbelt	0.00	0	0	0	0.00%
38	POD-38 Greenbelt	0.00	0	0	0	0.00%
39	POD-39 N-S Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
40	POD-40 E-W Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
Totals		1,567	6,724	38	138	100.00%

- Notes:
- 1. Calculated areas do not include roads or greenbelt areas along floodplain or proposed major roads
 - 2. Service capacity levels assume average service requirements of 4.29 LUE's/acre
 - 3. Main slopes assume average depth of 12' below natural ground unless otherwise noted. Minimum slopes per NBU regulations will dictate final main line slopes.
 - 4. Assumes 30' sewer easements will require 30' temporary construction easements.
 - 5. Assumes no East Outfall to Gruene WWTP included.

☒ NO DESIGN COMPLETED, PREL. MASTER PLANNING ONLY

☐ PRELIMINARY DESIGN

☐ FINAL DESIGN

☐ OTHER

WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011

Segment E-4
Size 8 Inch
Length 750 Feet
Total LUE 183 In Segment

Parcel Identifier	Developer Name	Size Acres	Requested Capacity LUE	Total Acres in Watershed Acres	LUE's in Segment Watershed LUE	Percentage of Total Capacity in Watershed %
1	POD-1	25.60	262	0	0	0.00%
2	POD-2	13.65	194	0	0	0.00%
3	POD-3	9.99	208	0	0	0.00%
4	POD-4	16.90	304	0	0	0.00%
5	POD-5	7.53	136	0	0	0.00%
6	POD-6	24.33	219	0	0	0.00%
7	POD-7	16.13	62	0	0	0.00%
8	POD-8	17.74	106	0	0	0.00%
9	POD-9	33.16	114	0	0	0.00%
10	POD-10	40.04	121	0	0	0.00%
11	POD-11	52.82	210	0	0	0.00%
12	POD-12	40.32	153	0	0	0.00%
13	POD-13	108.56	380	0	0	0.00%
14	POD-14	86.44	232	0	0	0.00%
15	POD-15	81.63	258	0	0	0.00%
16	POD-16	74.60	283	0	0	0.00%
17	POD-17	26.21	100	0	0	0.00%
18	POD-18	56.02	213	0	0	0.00%
19	POD-19	41.93	159	0	0	0.00%
20	POD-20	47.98	168	0	0	0.00%
21	POD-21	12.83	52	0	0	0.00%
22	POD-22	26.95	80	0	0	0.00%
23	POD-23	29.79	107	30	107	58.47%
24	POD-24	59.20	229	0	0	0.00%
25	POD-25	82.60	314	20	76	41.53%
26	POD-26	51.95	329	0	0	0.00%
27	POD-27	125.48	477	0	0	0.00%
28	POD-28	45.14	135	0	0	0.00%
29	POD-29	114.49	435	0	0	0.00%
30	POD-30	72.77	277	0	0	0.00%
31	POD-31	53.62	161	0	0	0.00%
32	POD-32	70.29	246	0	0	0.00%
33	POD-33 Greenbelt	0.00	0	0	0	0.00%
34	POD-34 Greenbelt	0.00	0	0	0	0.00%
35	POD-35 Greenbelt	0.00	0	0	0	0.00%
36	POD-36 Greenbelt	0.00	0	0	0	0.00%
37	POD-37 Greenbelt	0.00	0	0	0	0.00%
38	POD-38 Greenbelt	0.00	0	0	0	0.00%
39	POD-39 N-S Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
40	POD-40 E-W Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
Totals		1,567	6,724	50	183	100.00%

- Notes:
- 1. Calculated areas do not include roads or greenbelt areas along floodplain or proposed major roads
 - 2. Service capacity levels assume average service requirements of 4.29 LUE's/acre
 - 3. Main slopes assume average depth of 12' below natural ground unless otherwise noted. Minimum slopes per NBU regulations will dictate final main line slopes.
 - 4. Assumes 30' sewer easements will require 30' temporary construction easements.
 - 5. Assumes no East Outfall to Gruene WWTP included.

- ☒ NO DESIGN COMPLETED, PREL. MASTER PLANNING ONLY
- ☐ PRELIMINARY DESIGN
- ☐ FINAL DESIGN
- ☐ OTHER

WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011

Segment E-5
Size 8 Inch
Length 1,560 Feet
Total LUE 107 In Segment

Parcel Identifier	Developer Name	Size Acres	Requested Capacity LUE	Total Acres in Watershed Acres	LUE's in Segment Watershed LUE	Percentage of Total Capacity in Watershed %
1	POD-1	25.60	262	0	0	0.00%
2	POD-2	13.65	194	0	0	0.00%
3	POD-3	9.99	208	0	0	0.00%
4	POD-4	16.90	304	0	0	0.00%
5	POD-5	7.53	136	0	0	0.00%
6	POD-6	24.33	219	0	0	0.00%
7	POD-7	16.13	62	0	0	0.00%
8	POD-8	17.74	106	0	0	0.00%
9	POD-9	33.16	114	0	0	0.00%
10	POD-10	40.04	121	0	0	0.00%
11	POD-11	52.82	210	0	0	0.00%
12	POD-12	40.32	153	0	0	0.00%
13	POD-13	108.56	380	0	0	0.00%
14	POD-14	86.44	232	0	0	0.00%
15	POD-15	81.63	258	0	0	0.00%
16	POD-16	74.60	283	0	0	0.00%
17	POD-17	26.21	100	0	0	0.00%
18	POD-18	56.02	213	0	0	0.00%
19	POD-19	41.93	159	0	0	0.00%
20	POD-20	47.98	168	0	0	0.00%
21	POD-21	12.83	52	0	0	0.00%
22	POD-22	26.95	80	0	0	0.00%
23	POD-23	29.79	107	30	107	100.00%
24	POD-24	59.20	229	0	0	0.00%
25	POD-25	82.60	314	0	0	0.00%
26	POD-26	51.95	329	0	0	0.00%
27	POD-27	125.48	477	0	0	0.00%
28	POD-28	45.14	135	0	0	0.00%
29	POD-29	114.49	435	0	0	0.00%
30	POD-30	72.77	277	0	0	0.00%
31	POD-31	53.62	161	0	0	0.00%
32	POD-32	70.29	246	0	0	0.00%
33	POD-33 Greenbelt	0.00	0	0	0	0.00%
34	POD-34 Greenbelt	0.00	0	0	0	0.00%
35	POD-35 Greenbelt	0.00	0	0	0	0.00%
36	POD-36 Greenbelt	0.00	0	0	0	0.00%
37	POD-37 Greenbelt	0.00	0	0	0	0.00%
38	POD-38 Greenbelt	0.00	0	0	0	0.00%
39	POD-39 N-S Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
40	POD-40 E-W Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
Totals		1,567	6,724	30	107	100.00%

- Notes:
1. Calculated areas do not include roads or greenbelt areas along floodplain or proposed major roads

2. Service capacity levels assume average service requirements of 4.29 LUE's/acre

3. Main slopes assume average depth of 12' below natural ground unless otherwise noted. Minimum slopes per NBU regulations will dictate final main line slopes.

4. Assumes 30' sewer easements will require 30' temporary construction easements.

5. Assumes no East Outfall to Gruene WWTP included.

- ☒

NO DESIGN COMPLETED, PREL. MASTER PLANNING ONLY
- ☐

PRELIMINARY DESIGN
- ☐

FINAL DESIGN
- ☐

OTHER

WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011

Segment
Size
Length
Total LUE

E-6
8 Inch
900 Feet
76 In Segment

Parcel Identifier	Developer Name	Size Acres	Requested Capacity LUE	Total Acres in Watershed Acres	LUE's in Segment Watershed LUE	Percentage of Total Capacity in Watershed %
		0				
1	POD-1	25.60	262	0	0	0.00%
2	POD-2	13.65	194	0	0	0.00%
3	POD-3	9.99	208	0	0	0.00%
4	POD-4	16.90	304	0	0	0.00%
5	POD-5	7.53	136	0	0	0.00%
6	POD-6	24.33	219	0	0	0.00%
7	POD-7	16.13	62	0	0	0.00%
8	POD-8	17.74	106	0	0	0.00%
9	POD-9	33.16	114	0	0	0.00%
10	POD-10	40.04	121	0	0	0.00%
11	POD-11	52.82	210	0	0	0.00%
12	POD-12	40.32	153	0	0	0.00%
13	POD-13	108.56	380	0	0	0.00%
14	POD-14	86.44	232	0	0	0.00%
15	POD-15	81.63	258	0	0	0.00%
16	POD-16	74.60	283	0	0	0.00%
17	POD-17	26.21	100	0	0	0.00%
18	POD-18	56.02	213	0	0	0.00%
19	POD-19	41.93	159	0	0	0.00%
20	POD-20	47.98	168	0	0	0.00%
21	POD-21	12.83	52	0	0	0.00%
22	POD-22	26.95	80	0	0	0.00%
23	POD-23	29.79	107	0	0	0.00%
24	POD-24	59.20	229	0	0	0.00%
25	POD-25	82.60	314	20	76	100.00%
26	POD-26	51.95	329	0	0	0.00%
27	POD-27	125.48	477	0	0	0.00%
28	POD-28	45.14	135	0	0	0.00%
29	POD-29	114.49	435	0	0	0.00%
30	POD-30	72.77	277	0	0	0.00%
31	POD-31	53.62	161	0	0	0.00%
32	POD-32	70.29	246	0	0	0.00%
33	POD-33 Greenbelt	0.00	0	0	0	0.00%
34	POD-34 Greenbelt	0.00	0	0	0	0.00%
35	POD-35 Greenbelt	0.00	0	0	0	0.00%
36	POD-36 Greenbelt	0.00	0	0	0	0.00%
37	POD-37 Greenbelt	0.00	0	0	0	0.00%
38	POD-38 Greenbelt	0.00	0	0	0	0.00%
39	POD-39 N-S Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
40	POD-40 E-W Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
Totals		1,567	6,724	20	76	100.00%

Notes:

1. Calculated areas do not include roads or greenbelt areas along floodplain or proposed major roads
2. Service capacity levels assume average service requirements of4.29 LUE's/acre
3. Main slopes assume average depth of 12' below natural ground unless otherwise noted. Minimum slopes per NBU regulations will dictate final main line slopes.
4. Assumes 30' sewer easements will require 30' temporary construction easements.
5. Assumes no East Outfall to Gruene WWTP included.

- ☒NO DESIGN COMPLETED, PREL. MASTER PLANNING ONLY
- ☐PRELIMINARY DESIGN
- ☐FINAL DESIGN
- ☐OTHER

WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011

Segment
Size
Length
Total LUE

E-7
8 Inch
1,210 Feet
238 In Segment

Parcel Identifier	Developer Name	Size Acres	Requested Capacity LUE	Total Acres in Watershed Acres	LUE's in Segment Watershed LUE	Percentage of Total Capacity in Watershed %
1	POD-1	25.60	262	0	0	0.00%
2	POD-2	13.65	194	0	0	0.00%
3	POD-3	9.99	208	0	0	0.00%
4	POD-4	16.90	304	0	0	0.00%
5	POD-5	7.53	136	0	0	0.00%
6	POD-6	24.33	219	0	0	0.00%
7	POD-7	16.13	62	0	0	0.00%
8	POD-8	17.74	106	0	0	0.00%
9	POD-9	33.16	114	0	0	0.00%
10	POD-10	40.04	121	0	0	0.00%
11	POD-11	52.82	210	0	0	0.00%
12	POD-12	40.32	153	0	0	0.00%
13	POD-13	108.56	380	0	0	0.00%
14	POD-14	86.44	232	0	0	0.00%
15	POD-15	81.63	258	0	0	0.00%
16	POD-16	74.60	283	0	0	0.00%
17	POD-17	26.21	100	0	0	0.00%
18	POD-18	56.02	213	0	0	0.00%
19	POD-19	41.93	159	0	0	0.00%
20	POD-20	47.98	168	0	0	0.00%
21	POD-21	12.83	52	0	0	0.00%
22	POD-22	26.95	80	0	0	0.00%
23	POD-23	29.79	107	0	0	0.00%
24	POD-24	59.20	229	0	0	0.00%
25	POD-25	82.60	314	63	238	100.00%
26	POD-26	51.95	329	0	0	0.00%
27	POD-27	125.48	477	0	0	0.00%
28	POD-28	45.14	135	0	0	0.00%
29	POD-29	114.49	435	0	0	0.00%
30	POD-30	72.77	277	0	0	0.00%
31	POD-31	53.62	161	0	0	0.00%
32	POD-32	70.29	246	0	0	0.00%
33	POD-33 Greenbelt	0.00	0	0	0	0.00%
34	POD-34 Greenbelt	0.00	0	0	0	0.00%
35	POD-35 Greenbelt	0.00	0	0	0	0.00%
36	POD-36 Greenbelt	0.00	0	0	0	0.00%
37	POD-37 Greenbelt	0.00	0	0	0	0.00%
38	POD-38 Greenbelt	0.00	0	0	0	0.00%
39	POD-39 N-S Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
40	POD-40 E-W Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
Totals		1,567	6,724	63	238	100.00%

Notes:

1. Calculated areas do not include roads or greenbelt areas along floodplain or proposed major roads
2. Service capacity levels assume average service requirements of 4.29 LUE's/acre
3. Main slopes assume average depth of 12' below natural ground unless otherwise noted. Minimum slopes per NBU regulations will dictate final main line slopes.
4. Assumes 30' sewer easements will require 30' temporary construction easements.
5. Assumes no East Outfall to Gruene WWTP included.

- ☒ NO DESIGN COMPLETED, PREL. MASTER PLANNING ONLY
- ☐ PRELIMINARY DESIGN
- ☐ FINAL DESIGN
- ☐ OTHER

WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011

Segment E-8
Size 12 Inch
Length 1,410 Feet
Total LUE 1,311 In Segment

Parcel Identifier	Developer Name	Size Acres	Requested Capacity LUE	Total Acres in Watershed Acres	LUE's in Segment Watershed LUE	Percentage of Total Capacity in Watershed %
1	POD-1	25.60	262	0	0	0.00%
2	POD-2	13.65	194	0	0	0.00%
3	POD-3	9.99	208	0	0	0.00%
4	POD-4	16.90	304	0	0	0.00%
5	POD-5	7.53	136	0	0	0.00%
6	POD-6	24.33	219	0	0	0.00%
7	POD-7	16.13	62	0	0	0.00%
8	POD-8	17.74	106	0	0	0.00%
9	POD-9	33.16	114	0	0	0.00%
10	POD-10	40.04	121	0	0	0.00%
11	POD-11	52.82	210	0	0	0.00%
12	POD-12	40.32	153	0	0	0.00%
13	POD-13	108.56	380	0	0	0.00%
14	POD-14	86.44	232	0	0	0.00%
15	POD-15	81.63	258	0	0	0.00%
16	POD-16	74.60	283	0	0	0.00%
17	POD-17	26.21	100	0	0	0.00%
18	POD-18	56.02	213	0	0	0.00%
19	POD-19	41.93	159	0	0	0.00%
20	POD-20	47.98	168	0	0	0.00%
21	POD-21	12.83	52	0	0	0.00%
22	POD-22	26.95	80	0	0	0.00%
23	POD-23	29.79	107	0	0	0.00%
24	POD-24	59.20	229	59	229	17.47%
25	POD-25	82.60	314	0	0	0.00%
26	POD-26	51.95	329	52	329	25.10%
27	POD-27	125.48	477	84	318	24.26%
28	POD-28	45.14	135	0	0	0.00%
29	POD-29	114.49	435	114	435	33.18%
30	POD-30	72.77	277	0	0	0.00%
31	POD-31	53.62	161	0	0	0.00%
32	POD-32	70.29	246	0	0	0.00%
33	POD-33 Greenbelt	0.00	0	0	0	0.00%
34	POD-34 Greenbelt	0.00	0	0	0	0.00%
35	POD-35 Greenbelt	0.00	0	0	0	0.00%
36	POD-36 Greenbelt	0.00	0	0	0	0.00%
37	POD-37 Greenbelt	0.00	0	0	0	0.00%
38	POD-38 Greenbelt	0.00	0	0	0	0.00%
39	POD-39 N-S Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
40	POD-40 E-W Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
Totals		1,567	6,724	309	1,311	100.00%

Notes:

1. Calculated areas do not include roads or greenbelt areas along floodplain or proposed major roads
2. Service capacity levels assume average service requirements of 4.29 LUE's/acre
3. Main slopes assume average depth of 12' below natural ground unless otherwise noted. Minimum slopes per NBU regulations will dictate final main line slopes.
4. Assumes 30' sewer easements will require 30' temporary construction easements.
5. Assumes no East Outfall to Gruene WWTP included.

- ☒ NO DESIGN COMPLETED, PREL. MASTER PLANNING ONLY
- ☐ PRELIMINARY DESIGN
- ☐ FINAL DESIGN
- ☐ OTHER

WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011

Segment E-9
Size 8 Inch
Length 520 Feet
Total LUE 390 In Segment

Parcel Identifier	Developer Name	Size Acres	Requested Capacity LUE	Total Acres in Watershed Acres	LUE's in Segment Watershed LUE	Percentage of Total Capacity in Watershed %
1	POD-1	25.60	262	0	0	0.00%
2	POD-2	13.65	194	0	0	0.00%
3	POD-3	9.99	208	0	0	0.00%
4	POD-4	16.90	304	0	0	0.00%
5	POD-5	7.53	136	0	0	0.00%
6	POD-6	24.33	219	0	0	0.00%
7	POD-7	16.13	62	0	0	0.00%
8	POD-8	17.74	106	0	0	0.00%
9	POD-9	33.16	114	0	0	0.00%
10	POD-10	40.04	121	0	0	0.00%
11	POD-11	52.82	210	0	0	0.00%
12	POD-12	40.32	153	0	0	0.00%
13	POD-13	108.56	380	0	0	0.00%
14	POD-14	86.44	232	0	0	0.00%
15	POD-15	81.63	258	0	0	0.00%
16	POD-16	74.60	283	0	0	0.00%
17	POD-17	26.21	100	0	0	0.00%
18	POD-18	56.02	213	0	0	0.00%
19	POD-19	41.93	159	0	0	0.00%
20	POD-20	47.98	168	0	0	0.00%
21	POD-21	12.83	52	0	0	0.00%
22	POD-22	26.95	80	0	0	0.00%
23	POD-23	29.79	107	0	0	0.00%
24	POD-24	59.20	229	59	229	58.72%
25	POD-25	82.60	314	0	0	0.00%
26	POD-26	51.95	329	10	66	16.92%
27	POD-27	125.48	477	25	95	24.36%
28	POD-28	45.14	135	0	0	0.00%
29	POD-29	114.49	435	0	0	0.00%
30	POD-30	72.77	277	0	0	0.00%
31	POD-31	53.62	161	0	0	0.00%
32	POD-32	70.29	246	0	0	0.00%
33	POD-33 Greenbelt	0.00	0	0	0	0.00%
34	POD-34 Greenbelt	0.00	0	0	0	0.00%
35	POD-35 Greenbelt	0.00	0	0	0	0.00%
36	POD-36 Greenbelt	0.00	0	0	0	0.00%
37	POD-37 Greenbelt	0.00	0	0	0	0.00%
38	POD-38 Greenbelt	0.00	0	0	0	0.00%
39	POD-39 N-S Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
40	POD-40 E-W Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
Totals		1,567	6,724	95	390	100.00%

- Notes:
- 1. Calculated areas do not include roads or greenbelt areas along floodplain or proposed major roads
 - 2. Service capacity levels assume average service requirements of 4.29 LUE's/acre
 - 3. Main slopes assume average depth of 12' below natural ground unless otherwise noted. Minimum slopes per NBU regulations will dictate final main line slopes.
 - 4. Assumes 30' sewer easements will require 30' temporary construction easements.
 - 5. Assumes no East Outfall to Gruene WWTP included.

- ☒ NO DESIGN COMPLETED, PREL. MASTER PLANNING ONLY
- ☐ PRELIMINARY DESIGN
- ☐ FINAL DESIGN
- ☐ OTHER

WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011

Segment E-10
Size 8 Inch
Length 590 Feet
Total LUE 369 In Segment

Parcel Identifier	Developer Name	Size Acres	Requested Capacity LUE	Total Acres in Watershed Acres	LUE's in Segment Watershed LUE	Percentage of Total Capacity in Watershed %
1	POD-1	25.60	262	0	0	0.00%
2	POD-2	13.65	194	0	0	0.00%
3	POD-3	9.99	208	0	0	0.00%
4	POD-4	16.90	304	0	0	0.00%
5	POD-5	7.53	136	0	0	0.00%
6	POD-6	24.33	219	0	0	0.00%
7	POD-7	16.13	62	0	0	0.00%
8	POD-8	17.74	106	0	0	0.00%
9	POD-9	33.16	114	0	0	0.00%
10	POD-10	40.04	121	0	0	0.00%
11	POD-11	52.82	210	0	0	0.00%
12	POD-12	40.32	153	0	0	0.00%
13	POD-13	108.56	380	0	0	0.00%
14	POD-14	86.44	232	0	0	0.00%
15	POD-15	81.63	258	0	0	0.00%
16	POD-16	74.60	283	0	0	0.00%
17	POD-17	26.21	100	0	0	0.00%
18	POD-18	56.02	213	0	0	0.00%
19	POD-19	41.93	159	0	0	0.00%
20	POD-20	47.98	168	0	0	0.00%
21	POD-21	12.83	52	0	0	0.00%
22	POD-22	26.95	80	0	0	0.00%
23	POD-23	29.79	107	0	0	0.00%
24	POD-24	59.20	229	0	0	0.00%
25	POD-25	82.60	314	0	0	0.00%
26	POD-26	51.95	329	0	0	0.00%
27	POD-27	125.48	477	59	223	60.43%
28	POD-28	45.14	135	0	0	0.00%
29	POD-29	114.49	435	38	146	39.57%
30	POD-30	72.77	277	0	0	0.00%
31	POD-31	53.62	161	0	0	0.00%
32	POD-32	70.29	246	0	0	0.00%
33	POD-33 Greenbelt	0.00	0	0	0	0.00%
34	POD-34 Greenbelt	0.00	0	0	0	0.00%
35	POD-35 Greenbelt	0.00	0	0	0	0.00%
36	POD-36 Greenbelt	0.00	0	0	0	0.00%
37	POD-37 Greenbelt	0.00	0	0	0	0.00%
38	POD-38 Greenbelt	0.00	0	0	0	0.00%
39	POD-39 N-S Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
40	POD-40 E-W Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
Totals		1,567	6,724	97	369	100.00%

Notes:

1. Calculated areas do not include roads or greenbelt areas along floodplain or proposed major roads
2. Service capacity levels assume average service requirements of 4.29 LUE's/acre
3. Main slopes assume average depth of 12' below natural ground unless otherwise noted. Minimum slopes per NBU regulations will dictate final main line slopes.
4. Assumes 30' sewer easements will require 30' temporary construction easements.
5. Assumes no East Outfall to Gruene WWTP included.

- ☒ NO DESIGN COMPLETED, PREL. MASTER PLANNING ONLY
- ☐ PRELIMINARY DESIGN
- ☐ FINAL DESIGN
- ☐ OTHER

WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011

Segment E-11
Size 8 Inch
Length 1,100 Feet
Total LUE 355 In Segment

Parcel Identifier	Developer Name	Size Acres	Requested Capacity LUE	Total Acres in Watershed Acres	LUE's in Segment Watershed LUE	Percentage of Total Capacity in Watershed %
1	POD-1	25.60	262	0	0	0.00%
2	POD-2	13.65	194	0	0	0.00%
3	POD-3	9.99	208	0	0	0.00%
4	POD-4	16.90	304	0	0	0.00%
5	POD-5	7.53	136	0	0	0.00%
6	POD-6	24.33	219	0	0	0.00%
7	POD-7	16.13	62	0	0	0.00%
8	POD-8	17.74	106	0	0	0.00%
9	POD-9	33.16	114	0	0	0.00%
10	POD-10	40.04	121	0	0	0.00%
11	POD-11	52.82	210	0	0	0.00%
12	POD-12	40.32	153	0	0	0.00%
13	POD-13	108.56	380	0	0	0.00%
14	POD-14	86.44	232	0	0	0.00%
15	POD-15	81.63	258	0	0	0.00%
16	POD-16	74.60	283	0	0	0.00%
17	POD-17	26.21	100	0	0	0.00%
18	POD-18	56.02	213	0	0	0.00%
19	POD-19	41.93	159	0	0	0.00%
20	POD-20	47.98	168	0	0	0.00%
21	POD-21	12.83	52	0	0	0.00%
22	POD-22	26.95	80	0	0	0.00%
23	POD-23	29.79	107	0	0	0.00%
24	POD-24	59.20	229	0	0	0.00%
25	POD-25	82.60	314	0	0	0.00%
26	POD-26	51.95	329	0	0	0.00%
27	POD-27	125.48	477	0	0	0.00%
28	POD-28	45.14	135	0	0	0.00%
29	POD-29	114.49	435	21	78	21.97%
30	POD-30	72.77	277	73	277	78.03%
31	POD-31	53.62	161	0	0	0.00%
32	POD-32	70.29	246	0	0	0.00%
33	POD-33 Greenbelt	0.00	0	0	0	0.00%
34	POD-34 Greenbelt	0.00	0	0	0	0.00%
35	POD-35 Greenbelt	0.00	0	0	0	0.00%
36	POD-36 Greenbelt	0.00	0	0	0	0.00%
37	POD-37 Greenbelt	0.00	0	0	0	0.00%
38	POD-38 Greenbelt	0.00	0	0	0	0.00%
39	POD-39 N-S Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
40	POD-40 E-W Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
Totals		1,567	6,724	93	355	100.00%

- Notes:
- 1. Calculated areas do not include roads or greenbelt areas along floodplain or proposed major roads
 - 2. Service capacity levels assume average service requirements of 4.29 LUE's/acre
 - 3. Main slopes assume average depth of 12' below natural ground unless otherwise noted. Minimum slopes per NBU regulations will dictate final main line slopes.
 - 4. Assumes 30' sewer easements will require 30' temporary construction easements.
 - 5. Assumes no East Outfall to Gruene WWTP included.

- ☒ NO DESIGN COMPLETED, PREL. MASTER PLANNING ONLY
- ☐ PRELIMINARY DESIGN
- ☐ FINAL DESIGN
- ☐ OTHER

WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011

Segment E-13
Size 8 Inch
Length 610 Feet
Total LUE 277 In Segment

Parcel Identifier	Developer Name	Size Acres	Requested Capacity LUE	Total Acres in Watershed Acres	LUE's in Segment Watershed LUE	Percentage of Total Capacity in Watershed %
1	POD-1	25.60	262	0	0	0.00%
2	POD-2	13.65	194	0	0	0.00%
3	POD-3	9.99	208	0	0	0.00%
4	POD-4	16.90	304	0	0	0.00%
5	POD-5	7.53	136	0	0	0.00%
6	POD-6	24.33	219	0	0	0.00%
7	POD-7	16.13	62	0	0	0.00%
8	POD-8	17.74	106	0	0	0.00%
9	POD-9	33.16	114	0	0	0.00%
10	POD-10	40.04	121	0	0	0.00%
11	POD-11	52.82	210	0	0	0.00%
12	POD-12	40.32	153	0	0	0.00%
13	POD-13	108.56	380	0	0	0.00%
14	POD-14	86.44	232	0	0	0.00%
15	POD-15	81.63	258	0	0	0.00%
16	POD-16	74.60	283	0	0	0.00%
17	POD-17	26.21	100	0	0	0.00%
18	POD-18	56.02	213	0	0	0.00%
19	POD-19	41.93	159	0	0	0.00%
20	POD-20	47.98	168	0	0	0.00%
21	POD-21	12.83	52	0	0	0.00%
22	POD-22	26.95	80	0	0	0.00%
23	POD-23	29.79	107	0	0	0.00%
24	POD-24	59.20	229	0	0	0.00%
25	POD-25	82.60	314	0	0	0.00%
26	POD-26	51.95	329	0	0	0.00%
27	POD-27	125.48	477	0	0	0.00%
28	POD-28	45.14	135	0	0	0.00%
29	POD-29	114.49	435	0	0	0.00%
30	POD-30	72.77	277	73	277	100.00%
31	POD-31	53.62	161	0	0	0.00%
32	POD-32	70.29	246	0	0	0.00%
33	POD-33 Greenbelt	0.00	0	0	0	0.00%
34	POD-34 Greenbelt	0.00	0	0	0	0.00%
35	POD-35 Greenbelt	0.00	0	0	0	0.00%
36	POD-36 Greenbelt	0.00	0	0	0	0.00%
37	POD-37 Greenbelt	0.00	0	0	0	0.00%
38	POD-38 Greenbelt	0.00	0	0	0	0.00%
39	POD-39 N-S Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
40	POD-40 E-W Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
Totals		1,567	6,724	73	277	100.00%

- Notes:
- 1. Calculated areas do not include roads or greenbelt areas along floodplain or proposed major roads
 - 2. Service capacity levels assume average service requirements of 4.29 LUE's/acre
 - 3. Main slopes assume average depth of 12' below natural ground unless otherwise noted. Minimum slopes per NBU regulations will dictate final main line slopes.
 - 4. Assumes 30' sewer easements will require 30' temporary construction easements.
 - 5. Assumes no East Outfall to Gruene WWTP included.

☒ NO DESIGN COMPLETED, PREL. MASTER PLANNING ONLY

☐ PRELIMINARY DESIGN

☐ FINAL DESIGN

☐ OTHER

WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011

Segment
Size N / A Inch
Length N / A Feet
Total LUE 356 In Segment

Parcel Identifier	Developer Name	Size Acres	Requested Capacity LUE	Total Acres in Watershed Acres	LUE's in Segment Watershed LUE	Percentage of Total Capacity in Watershed %
1	POD-1	25.60	262	0	0	0.00%
2	POD-2	13.65	194	0	0	0.00%
3	POD-3	9.99	208	0	0	0.00%
4	POD-4	16.90	304	0	0	0.00%
5	POD-5	7.53	136	0	0	0.00%
6	POD-6	24.33	219	0	0	0.00%
7	POD-7	16.13	62	0	0	0.00%
8	POD-8	17.74	106	0	0	0.00%
9	POD-9	33.16	114	0	0	0.00%
10	POD-10	40.04	121	0	0	0.00%
11	POD-11	52.82	210	0	0	0.00%
12	POD-12	40.32	153	0	0	0.00%
13	POD-13	108.56	380	0	0	0.00%
14	POD-14	86.44	232	0	0	0.00%
15	POD-15	81.63	258	0	0	0.00%
16	POD-16	74.60	283	0	0	0.00%
17	POD-17	26.21	100	0	0	0.00%
18	POD-18	56.02	213	0	0	0.00%
19	POD-19	41.93	159	0	0	0.00%
20	POD-20	47.98	168	0	0	0.00%
21	POD-21	12.83	52	0	0	0.00%
22	POD-22	26.95	80	0	0	0.00%
23	POD-23	29.79	107	0	0	0.00%
24	POD-24	59.20	229	0	0	0.00%
25	POD-25	82.60	314	0	0	0.00%
26	POD-26	51.95	329	0	0	0.00%
27	POD-27	125.48	477	0	0	0.00%
28	POD-28	45.14	135	0	0	0.00%
29	POD-29	114.49	435	21	79	22.19%
30	POD-30	72.77	277	73	277	77.81%
31	POD-31	53.62	161	0	0	0.00%
32	POD-32	70.29	246	0	0	0.00%
33	POD-33 Greenbelt	0.00	0	0	0	0.00%
34	POD-34 Greenbelt	0.00	0	0	0	0.00%
35	POD-35 Greenbelt	0.00	0	0	0	0.00%
36	POD-36 Greenbelt	0.00	0	0	0	0.00%
37	POD-37 Greenbelt	0.00	0	0	0	0.00%
38	POD-38 Greenbelt	0.00	0	0	0	0.00%
39	POD-39 N-S Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
40	POD-40 E-W Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
Totals		1,567	6,724	94	356	100.00%

- Notes:
- 1. Calculated areas do not include roads or greenbelt areas along floodplain or proposed major roads
 - 2. Service capacity levels assume average service requirements of 4.29 LUE's/acre
 - 3. Main slopes assume average depth of 12' below natural ground unless otherwise noted. Minimum slopes per NBU regulations will dictate final main line slopes.
 - 4. Assumes 30' sewer easements will require 30' temporary construction easements.
 - 5. Assumes no East Outfall to Gruene WWTP included.

☒ NO DESIGN COMPLETED, PREL. MASTER PLANNING ONLY

☐ PRELIMINARY DESIGN

☐ FINAL DESIGN

☐ OTHER

**WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011**

Segment	Force Main #1 - North
Size	6 Inch
Length	3,120 Feet
Total LUE	356 In Segment

Parcel Identifier	Developer Name	Size Acres	Requested Capacity LUE	Total Acres in Watershed Acres	LUE's in Segment Watershed LUE	Percentage of Total Capacity in Watershed %
1	POD-1	25.60	262	0	0	0.00%
2	POD-2	13.65	194	0	0	0.00%
3	POD-3	9.99	208	0	0	0.00%
4	POD-4	16.90	304	0	0	0.00%
5	POD-5	7.53	136	0	0	0.00%
6	POD-6	24.33	219	0	0	0.00%
7	POD-7	16.13	62	0	0	0.00%
8	POD-8	17.74	106	0	0	0.00%
9	POD-9	33.16	114	0	0	0.00%
10	POD-10	40.04	121	0	0	0.00%
11	POD-11	52.82	210	0	0	0.00%
12	POD-12	40.32	153	0	0	0.00%
13	POD-13	108.56	380	0	0	0.00%
14	POD-14	86.44	232	0	0	0.00%
15	POD-15	81.63	258	0	0	0.00%
16	POD-16	74.60	283	0	0	0.00%
17	POD-17	26.21	100	0	0	0.00%
18	POD-18	56.02	213	0	0	0.00%
19	POD-19	41.93	159	0	0	0.00%
20	POD-20	47.98	168	0	0	0.00%
21	POD-21	12.83	52	0	0	0.00%
22	POD-22	26.95	80	0	0	0.00%
23	POD-23	29.79	107	0	0	0.00%
24	POD-24	59.20	229	0	0	0.00%
25	POD-25	82.60	314	0	0	0.00%
26	POD-26	51.95	329	0	0	0.00%
27	POD-27	125.48	477	0	0	0.00%
28	POD-28	45.14	135	0	0	0.00%
29	POD-29	114.49	435	21	79	22.19%
30	POD-30	72.77	277	73	277	77.81%
31	POD-31	53.62	161	0	0	0.00%
32	POD-32	70.29	246	0	0	0.00%
33	POD-33 Greenbelt	0.00	0	0	0	0.00%
34	POD-34 Greenbelt	0.00	0	0	0	0.00%
35	POD-35 Greenbelt	0.00	0	0	0	0.00%
36	POD-36 Greenbelt	0.00	0	0	0	0.00%
37	POD-37 Greenbelt	0.00	0	0	0	0.00%
38	POD-38 Greenbelt	0.00	0	0	0	0.00%
39	POD-39 N-S Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
40	POD-40 E-W Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
Totals		1,567	6,724	94	356	100.00%

Notes:

1. Calculated areas do not include roads or greenbelt areas along floodplain or proposed major roads
2. Service capacity levels assume average service requirements of 4.29 LUE's/acre
3. Main slopes assume average depth of 12' below natural ground unless otherwise noted. Minimum slopes per NBU regulations will dictate final main line slopes.
4. Assumes 30' sewer easements will require 30' temporary construction easements.
5. Assumes no East Outfall to Gruene WWTP included.

<input checked="" type="checkbox"/>	NO DESIGN COMPLETED. PREL. MASTER PLANNING ONLY
<input type="checkbox"/>	PRELIMINARY DESIGN
<input type="checkbox"/>	FINAL DESIGN
<input type="checkbox"/>	OTHER

**WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011**

Size
Length
Total LUE

N / A Inch
N / A Feet
1,311 In Segment

Parcel Identifier	Developer Name	Size Acres	Requested Capacity LUE	Total Acres in Watershed Acres	LUE's in Segment Watershed LUE	Percentage of Total Capacity in Watershed %
1	POD-1	25.60	262	0	0	0.00%
2	POD-2	13.65	194	0	0	0.00%
3	POD-3	9.99	208	0	0	0.00%
4	POD-4	16.90	304	0	0	0.00%
5	POD-5	7.53	136	0	0	0.00%
6	POD-6	24.33	219	0	0	0.00%
7	POD-7	16.13	62	0	0	0.00%
8	POD-8	17.74	106	0	0	0.00%
9	POD-9	33.16	114	0	0	0.00%
10	POD-10	40.04	121	0	0	0.00%
11	POD-11	52.82	210	0	0	0.00%
12	POD-12	40.32	153	0	0	0.00%
13	POD-13	108.56	380	0	0	0.00%
14	POD-14	86.44	232	0	0	0.00%
15	POD-15	81.63	258	0	0	0.00%
16	POD-16	74.60	283	0	0	0.00%
17	POD-17	26.21	100	0	0	0.00%
18	POD-18	56.02	213	0	0	0.00%
19	POD-19	41.93	159	0	0	0.00%
20	POD-20	47.98	168	0	0	0.00%
21	POD-21	12.83	52	0	0	0.00%
22	POD-22	26.95	80	0	0	0.00%
23	POD-23	29.79	107	0	0	0.00%
24	POD-24	59.20	229	59	229	17.47%
25	POD-25	82.60	314	0	0	0.00%
26	POD-26	51.95	329	52	329	25.10%
27	POD-27	125.48	477	84	318	24.26%
28	POD-28	45.14	135	0	0	0.00%
29	POD-29	114.49	435	114	435	33.18%
30	POD-30	72.77	277	0	0	0.00%
31	POD-31	53.62	161	0	0	0.00%
32	POD-32	70.29	246	0	0	0.00%
33	POD-33 Greenbelt	0.00	0	0	0	0.00%
34	POD-34 Greenbelt	0.00	0	0	0	0.00%
35	POD-35 Greenbelt	0.00	0	0	0	0.00%
36	POD-36 Greenbelt	0.00	0	0	0	0.00%
37	POD-37 Greenbelt	0.00	0	0	0	0.00%
38	POD-38 Greenbelt	0.00	0	0	0	0.00%
39	POD-39 N-S Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
40	POD-40 E-W Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
Totals		1,567	6,724	309	1,311	100.00%

1. Calculated areas do not include roads or greenbelt areas along floodplain or proposed major roads
2. Service capacity levels assume average service requirements of 4.29 LUE's/acre
3. Main slopes assume average depth of 12' below natural ground unless otherwise noted. Minimum slopes per NBU regulations will dictate final main line slopes.
4. Assumes 30' sewer easements will require 30' temporary construction easements.
5. Assumes no East Outfall to Gruene WWTP included.

<input checked="" type="checkbox"/>	NO DESIGN COMPLETED, PREL. MASTER PLANNING ONLY
<input type="checkbox"/>	PRELIMINARY DESIGN
<input type="checkbox"/>	FINAL DESIGN
<input type="checkbox"/>	OTHER

WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011

Segment Force Main #2 - Resort
Size 12 Inch
Length 4,470 Feet
Total LUE 1,311 In Segment

Parcel Identifier	Developer Name	Size Acres	Requested Capacity LUE	Total Acres in Watershed Acres	LUE's in Segment Watershed LUE	Percentage of Total Capacity in Watershed %
1	POD-1	25.60	262	0	0	0.00%
2	POD-2	13.65	194	0	0	0.00%
3	POD-3	9.99	208	0	0	0.00%
4	POD-4	16.90	304	0	0	0.00%
5	POD-5	7.53	136	0	0	0.00%
6	POD-6	24.33	219	0	0	0.00%
7	POD-7	16.13	62	0	0	0.00%
8	POD-8	17.74	106	0	0	0.00%
9	POD-9	33.16	114	0	0	0.00%
10	POD-10	40.04	121	0	0	0.00%
11	POD-11	52.82	210	0	0	0.00%
12	POD-12	40.32	153	0	0	0.00%
13	POD-13	108.56	380	0	0	0.00%
14	POD-14	86.44	232	0	0	0.00%
15	POD-15	81.63	258	0	0	0.00%
16	POD-16	74.60	283	0	0	0.00%
17	POD-17	26.21	100	0	0	0.00%
18	POD-18	56.02	213	0	0	0.00%
19	POD-19	41.93	159	0	0	0.00%
20	POD-20	47.98	168	0	0	0.00%
21	POD-21	12.83	52	0	0	0.00%
22	POD-22	26.95	80	0	0	0.00%
23	POD-23	29.79	107	0	0	0.00%
24	POD-24	59.20	229	59	229	17.47%
25	POD-25	82.60	314	0	0	0.00%
26	POD-26	51.95	329	52	329	25.10%
27	POD-27	125.48	477	84	318	24.26%
28	POD-28	45.14	135	0	0	0.00%
29	POD-29	114.49	435	114	435	33.18%
30	POD-30	72.77	277	0	0	0.00%
31	POD-31	53.62	161	0	0	0.00%
32	POD-32	70.29	246	0	0	0.00%
33	POD-33 Greenbelt	0.00	0	0	0	0.00%
34	POD-34 Greenbelt	0.00	0	0	0	0.00%
35	POD-35 Greenbelt	0.00	0	0	0	0.00%
36	POD-36 Greenbelt	0.00	0	0	0	0.00%
37	POD-37 Greenbelt	0.00	0	0	0	0.00%
38	POD-38 Greenbelt	0.00	0	0	0	0.00%
39	POD-39 N-S Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
40	POD-40 E-W Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
Totals		1,567	6,724	309	1,311	100.00%

- Notes:
- 1. Calculated areas do not include roads or greenbelt areas along floodplain or proposed major roads
 - 2. Service capacity levels assume average service requirements of 4.29 LUE's/acre
 - 3. Main slopes assume average depth of 12' below natural ground unless otherwise noted. Minimum slopes per NBU regulations will dictate final main line slopes.
 - 4. Assumes 30' sewer easements will require 30' temporary construction easements.
 - 5. Assumes no East Outfall to Gruene WWTP included.

- ☒ NO DESIGN COMPLETED. PREL. MASTER PLANNING ONLY
- ☐ PRELIMINARY DESIGN
- ☐ FINAL DESIGN
- ☐ OTHER

WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011

Segment
Size
Length
Total LUE

Lift Station #3 - East
N / A Inch
N / A Feet
421 In Segment

Parcel Identifier	Developer Name	Size Acres	Requested Capacity LUE	Total Acres in Watershed Acres	LUE's in Segment Watershed LUE	Percentage of Total Capacity in Watershed %
1	POD-1	25.60	262	0	0	0.00%
2	POD-2	13.65	194	0	0	0.00%
3	POD-3	9.99	208	0	0	0.00%
4	POD-4	16.90	304	0	0	0.00%
5	POD-5	7.53	136	0	0	0.00%
6	POD-6	24.33	219	0	0	0.00%
7	POD-7	16.13	62	0	0	0.00%
8	POD-8	17.74	106	0	0	0.00%
9	POD-9	33.16	114	0	0	0.00%
10	POD-10	40.04	121	0	0	0.00%
11	POD-11	52.82	210	0	0	0.00%
12	POD-12	40.32	153	0	0	0.00%
13	POD-13	108.56	380	0	0	0.00%
14	POD-14	86.44	232	0	0	0.00%
15	POD-15	81.63	258	0	0	0.00%
16	POD-16	74.60	283	0	0	0.00%
17	POD-17	26.21	100	0	0	0.00%
18	POD-18	56.02	213	0	0	0.00%
19	POD-19	41.93	159	0	0	0.00%
20	POD-20	47.98	168	0	0	0.00%
21	POD-21	12.83	52	0	0	0.00%
22	POD-22	26.95	80	0	0	0.00%
23	POD-23	29.79	107	30	107	25.42%
24	POD-24	59.20	229	0	0	0.00%
25	POD-25	82.60	314	83	314	74.58%
26	POD-26	51.95	329	0	0	0.00%
27	POD-27	125.48	477	0	0	0.00%
28	POD-28	45.14	135	0	0	0.00%
29	POD-29	114.49	435	0	0	0.00%
30	POD-30	72.77	277	0	0	0.00%
31	POD-31	53.62	161	0	0	0.00%
32	POD-32	70.29	246	0	0	0.00%
33	POD-33 Greenbelt	0.00	0	0	0	0.00%
34	POD-34 Greenbelt	0.00	0	0	0	0.00%
35	POD-35 Greenbelt	0.00	0	0	0	0.00%
36	POD-36 Greenbelt	0.00	0	0	0	0.00%
37	POD-37 Greenbelt	0.00	0	0	0	0.00%
38	POD-38 Greenbelt	0.00	0	0	0	0.00%
39	POD-39 N-S Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
40	POD-40 E-W Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
Totals		1,567	6,724	112	421	100.00%

Notes:

1. Calculated areas do not include roads or greenbelt areas along floodplain or proposed major roads
2. Service capacity levels assume average service requirements of4.29 LUE's/acre
3. Main slopes assume average depth of 12' below natural ground unless otherwise noted. Minimum slopes per NBU regulations will dictate final main line slopes.
4. Assumes 30' sewer easements will require 30' temporary construction easements.
5. Assumes no East Outfall to Gruene WWTP included.

- ☒NO DESIGN COMPLETED, PREL. MASTER PLANNING ONLY
- ☐PRELIMINARY DESIGN
- ☐FINAL DESIGN
- ☐OTHER

**WORD-BORCHERS PROPERTY
PRELIMINARY SEWER OUTFALL DESIGNS
Revised August 2011**

Segment	Force Main #3 - East
Size	6 Inch
Length	3,460 Feet
Total LUE	421 In Segment

Parcel Identifier	Developer Name	Size Acres	Requested Capacity LUE	Total Acres in Watershed Acres	LUE's in Segment Watershed LUE	Percentage of Total Capacity in Watershed %
1	POD-1	25.60	262	0	0	0.00%
2	POD-2	13.65	194	0	0	0.00%
3	POD-3	9.99	208	0	0	0.00%
4	POD-4	16.90	304	0	0	0.00%
5	POD-5	7.53	136	0	0	0.00%
6	POD-6	24.33	219	0	0	0.00%
7	POD-7	16.13	62	0	0	0.00%
8	POD-8	17.74	106	0	0	0.00%
9	POD-9	33.16	114	0	0	0.00%
10	POD-10	40.04	121	0	0	0.00%
11	POD-11	52.82	210	0	0	0.00%
12	POD-12	40.32	153	0	0	0.00%
13	POD-13	108.56	380	0	0	0.00%
14	POD-14	86.44	232	0	0	0.00%
15	POD-15	81.63	258	0	0	0.00%
16	POD-16	74.60	283	0	0	0.00%
17	POD-17	26.21	100	0	0	0.00%
18	POD-18	56.02	213	0	0	0.00%
19	POD-19	41.93	159	0	0	0.00%
20	POD-20	47.98	168	0	0	0.00%
21	POD-21	12.83	52	0	0	0.00%
22	POD-22	26.95	80	0	0	0.00%
23	POD-23	29.79	107	30	107	25.42%
24	POD-24	59.20	229	0	0	0.00%
25	POD-25	82.60	314	83	314	74.58%
26	POD-26	51.95	329	0	0	0.00%
27	POD-27	125.48	477	0	0	0.00%
28	POD-28	45.14	135	0	0	0.00%
29	POD-29	114.49	435	0	0	0.00%
30	POD-30	72.77	277	0	0	0.00%
31	POD-31	53.62	161	0	0	0.00%
32	POD-32	70.29	246	0	0	0.00%
33	POD-33 Greenbelt	0.00	0	0	0	0.00%
34	POD-34 Greenbelt	0.00	0	0	0	0.00%
35	POD-35 Greenbelt	0.00	0	0	0	0.00%
36	POD-36 Greenbelt	0.00	0	0	0	0.00%
37	POD-37 Greenbelt	0.00	0	0	0	0.00%
38	POD-38 Greenbelt	0.00	0	0	0	0.00%
39	POD-39 N-S Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
40	POD-40 E-W Arterial Road Medians, Parkways	0.00	0	0	0	0.00%
Totals		1,567	6,724	112	421	100.00%

Notes:

1. Calculated areas do not include roads or greenbelt areas along floodplain or proposed major roads
2. Service capacity levels assume average service requirements of 4.29 LUE's/acre
3. Main slopes assume average depth of 12' below natural ground unless otherwise noted. Minimum slopes per NBU regulations will dictate final main line slopes.
4. Assumes 30' sewer easements will require 30' temporary construction easements.
5. Assumes no East Outfall to Gruene WWTP included.

<input checked="" type="checkbox"/>	NO DESIGN COMPLETED, PREL. MASTER PLANNING ONLY
<input type="checkbox"/>	PRELIMINARY DESIGN
<input type="checkbox"/>	FINAL DESIGN
<input type="checkbox"/>	OTHER

EXHIBIT NO. 7

to Utility Agreement

Title Commitment

THE FOLLOWING COMMITMENT FOR TITLE INSURANCE IS NOT VALID UNLESS YOUR NAME AND THE POLICY AMOUNT ARE SHOWN IN SCHEDULE A, AND OUR AUTHORIZED REPRESENTATIVE HAS COUNTERSIGNED BELOW.

COMMITMENT FOR TITLE INSURANCE

ISSUED BY CHICAGO TITLE INSURANCE COMPANY

We, Chicago Title Insurance Company, will issue our title insurance policy or policies (the Policy) to You (the proposed insured) upon payment of the premium and other charges due, and compliance with the requirements in Schedule B and Schedule C. Our Policy will be in the form approved by the Texas Department of Insurance at the date of issuance, and will insure your interest in the land described in Schedule A. The estimated premium for our Policy and applicable endorsements is shown on Schedule D. There may be additional charges such as recording fees, and expedited delivery expenses.

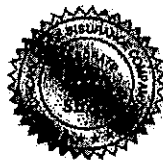
This Commitment ends ninety (90) days from the effective date, unless the Policy is issued sooner, or failure to issue the Policy is our fault. Our liability and obligations to you are under the express terms of this Commitment and end when this Commitment expires.

**Heritage Title Company
of Austin, Inc.**

401 Congress Avenue, Suite 1500
Austin, Texas 78701
512.505.5000 • 512.505.5024 fax
www.heritagetitleofaustin.com

CHICAGO TITLE INSURANCE COMPANY

By:



ATTEST

Agnes M. P. L.

President

[Signature]

Secretary

[Signature]
Authorized Signature

Amy L. Fisher
Vice President

CONDITIONS AND STIPULATIONS

1. If you have actual knowledge of any matter which may affect the title or mortgage covered by this Commitment, that is not shown in Schedule B, you must notify us in writing. If you do not notify us in writing, our liability to you is ended or reduced to the extent that your failure to notify us affects our liability. If you do notify us, or we learn of such matter, we may amend Schedule B, but we will not be relieved of liability already incurred.

2. Our liability is only to you, and others who are included in the definition of Insured in the Policy to be issued. Our liability is only for actual loss incurred in your reliance on this Commitment to comply with its requirements or to acquire the interest in the land. Our liability is limited to the amount shown in Schedule A of this Commitment and will be subject to the following terms of the Policy: Insuring Provisions, Conditions and Stipulations, and Exclusions.

COMMITMENT FOR TITLE INSURANCE

Issued By

Chicago Title Insurance Company

SCHEDULE A

Effective Date: September 28, 2012, 8:00 AM

GF No. 081579

Issued: October 10, 2012, 3:56 PM

1. The policy or policies to be issued are:

(a) OWNER'S POLICY OF TITLE INSURANCE (Form T-1)

(Not applicable for improved one-to-four family residential real estate)

Policy Amount:

PROPOSED INSURED:

(b) TEXAS RESIDENTIAL OWNER'S POLICY OF TITLE INSURANCE

- ONE-TO-FOUR FAMILY RESIDENCES (Form T-1R)

Policy Amount:

PROPOSED INSURED: **TO BE DETERMINED**

(c) LOAN POLICY OF TITLE INSURANCE (Form T-2)

Policy Amount:

PROPOSED INSURED:

Proposed Borrower:

(d) TEXAS SHORT FORM RESIDENTIAL LOAN POLICY OF TITLE INSURANCE (Form T-2R)

Policy Amount:

PROPOSED INSURED:

Proposed Borrower:

(e) LOAN TITLE POLICY BINDER ON INTERIM CONSTRUCTION LOAN (Form T-13)

Binder Amount:

PROPOSED INSURED:

Proposed Borrower:

(f) OTHER

Policy Amount:

PROPOSED INSURED:

Proposed Borrower:

The interest in the land covered by this Commitment is:

Fee Simple

3. Record title to the land on the Effective Date appears to be vested in:

Word-Borchers Ranch Real Estate Limited Partnership, a Texas limited partnership

4. Legal description of the land:

TRACT 1: Being all of that certain tract or parcel of land situated in the Andreas Sanchez Survey No. 286, Abstract No. 528, J. M. Veramendi Survey No. 1, Abstract No. 2 and the J. M. Veramendi Survey No. 2, Abstract No. 3, Comal County, Texas, said tract being more particularly described by metes and bounds shown on Exhibit "A" TO BE furnished in accordance with the requirement under Schedule "C".

TRACT 2: Being all of that certain tract or parcel of land containing 694 acres, more or less, situated in the Juan Veramendi Survey No. 2, Comal County, Texas, said tract being more particularly described by metes and bounds shown on Exhibit "B" attached hereto and made a part hereof.

NOTE: The Company does not represent that the above acreage or square footage calculations are correct.

Exhibit "B"

.494 acres, being all that certain tract, piece of parcel of land situated in Comal County, Texas, and being a part of the Juan Veramendi Survey No. 2, and being more particularly described by notes and bounds as follows, to-wit:

BEGINNING at a cedar in fence at intersection of the New Braunfels-Sattler Road with the Mico Spring Loop Road for most Western corner of this tract.

THENCE with fence along the New Braunfels-Sattler Road N. 20-35' E. 60 feet -- N. 36-15' W. 217 feet -- N. 31-47' E. 106.9 feet -- N. 26-57' E. 92 2/3 feet -- N. 15-41' E. 140.3 feet -- N. 16-30' E. 75.9 feet -- N. 0-38' E. 25.3 feet -- N. 9-58' E. 101.6 feet -- N. 6-22' W. 203 1/4 feet to a post near the Cartor note.

THENCE N. 33-00' E. at 2662 feet a stake at water edge of Guadalupe River being S. 69-00' E. 18 feet from a thirty inch burnt Cypress stump, at 2720 feet to a point in middle bed of Guadalupe River.

THENCE with said river in its middle bed as follows: E. 73-12' E. 140.9 feet -- S. 66-33' E. 262.2 feet -- S. 58-33' E. 195 2/3 feet -- S. 67-13' E. 283.6 feet -- S. 69-15' E. 184 1/4 feet -- S. 79-09' E. 541.4 feet -- S. 81-09' E. 262.4 feet -- N. 87-13' E. 185.3 feet -- S. 88-52' E. 258.7 feet -- N. 82-36' E. 234 3/4 feet -- N. 87-23' E. 210.4 feet -- N. 86-16' E. 248.8 feet -- N. 88-39' E. 397.5 feet -- N. 87-23' E. 293.2 feet -- S. 60-33' E. 316.8 feet -- S. 83-09' E. 546 1/4 feet -- S. 26-42' E. 299.4 feet -- S. 0-06'

THENCE N. 39 deg. 41' W. 1086.8 feet with the deer-proof fence to the N. E. corner of the Dean Word 33.40 acre tract in the J. N. Veramendi Subdivision No. 1;

THENCE S. 51 deg. 21' W. 1067 feet with deer-proof fence line to the S. W. corner of said tract and to the point of beginning being in all 35.40 acres of land.

THIRD TRACT: A 30 foot lane connecting the Dean Word 30.63 acre tract of land located in the J. N. Veramendi Subdivision No. 2, and the Dean Word 33.40 acre tract of land located in the J. N. Veramendi Subdivision No. 1, described as follows:

BEGINNING in the S. E. corner of the Dean Word 30.63 acre tract and the N. E. corner of the Linda Park Highlands Subdivision No. 2;

THENCE S. 38 deg. 05' E. 612.5 feet with the East fence line of the Linda Park Highlands Subdivision No. 2;

THENCE N. 51 deg. 21' E. 30 feet to the S. E. corner of said lane;

THENCE N. 38 deg. 05' W. 612.5 feet with the East line and deer-proof fence to the N. E. corner of said lane;

THENCE N. 53 deg. 32' W. 30 feet with the deer-proof fence to the East line of the 30.63 acres;

THENCE S. 34 deg. 28' E. 12.6 feet to the place of beginning; being in all 0.47 acres of land.

Said lands are a portion of the lands described in two certain deeds executed by HARRY LAMDA and wife to the donors herein, recorded respectively in Volume 74, Pages 512-514, and Volume 74, Pages 510-512 of the Deed Records of Comal County, Texas, here referred to for all purposes.

BEING the same property described in and conveyed by a deed dated August 5, 1932 from DEAN WORD and wife EUNICE WORD to TIMOTHY DEAN WORD, JR. and JOYCE CARL WORD recorded in Volume 99, Pages 205-206 of the Deed Records of Comal County, Texas, reference to said deed and said recording being here made for all purposes.

Recorder's Memorandum

This document was of poor quality at the time of recording and may not reproduce.

COMMITMENT FOR TITLE INSURANCE

Issued By

Chicago Title Insurance Company

SCHEDULE B

EXCEPTIONS FROM COVERAGE

In addition to the Exclusions and Conditions and Stipulations, your Policy will not cover loss, costs, attorneys' fees, and expenses resulting from:

1. The following restrictive covenants of record itemized below (We must either insert specific recording data or delete this exception):

DELETED

(But omitting any covenant or restriction based on race, color, religion, sex, handicap, familial status or national origin unless and only to the extent that said covenant (a) is exempt under Chapter 42, Section 3607 of the United States Code or (b) relates to handicap but does not discriminate against handicapped persons)

2. Any discrepancies, conflicts, or shortages in area or boundary lines, or any encroachments or protrusions, or any overlapping of improvements.
3. Homestead or community property or survivorship rights, if any, of any spouse of any insured. (Applies to the Owner's Policy only.)
4. Any titles or rights asserted by anyone, including, but not limited to, persons, the public, corporations, governments or other entities,
 - a. to tidelands, or lands comprising the shores or beds of navigable or perennial rivers and streams, lakes, bays, gulfs or oceans, or
 - b. to lands beyond the line of harbor or bulkhead lines as established or changed by any government, or
 - c. to filled-in lands, or artificial islands, or
 - d. to statutory water rights, including riparian rights, or
 - e. to the area extending from the line of mean low tide to the line of vegetation, or the rights of access to that area or easement along and across that area.

(Applies to the Owner's Policy only.)

5. Standby fees, taxes and assessments by any taxing authority for the year 2012, and subsequent years; and subsequent taxes and assessments by any taxing authority for prior years due to change in land usage or ownership, but not those taxes or assessments for prior years because of an exemption granted to a previous owner of the property under Section 11.13, *Texas Tax Code*, or because of improvements not assessed for a previous tax year. (If Texas Short Form Residential Loan Policy (T-2R) is issued, that policy will substitute "which become due and payable subsequent to Date of Policy" in lieu of "for the year 2012 and subsequent years.")
6. The terms and conditions of the documents creating your interest in the land.
7. Materials furnished or labor performed in connection with planned construction before signing and delivering the lien document described in Schedule A, if the land is part of the homestead of the owner. (Applies to the Loan Title Policy Binder on Interim Construction Loan only, and may be deleted if satisfactory evidence is furnished to us before a binder is issued.)

- ~~8.~~ Liens and leases that affect the title to the land, but that are subordinate to the lien of the insured mortgage. (Applies to Loan Policy (T-2) only.)
9. The Exceptions from Coverage and Express Insurance in Schedule B of the Texas Short Form Residential Loan Policy (T-2R). (Applies to Texas Short Form Residential Loan Policy (T-2R) only. Separate exceptions 1 through 8 of this Schedule B do not apply to the Texas Short Form Residential Loan Policy (T-2R).
10. The following matters and all terms of the documents creating or offering evidence of the matters (We must insert matters or delete this exception.):
- a. Easement granted to Comal County, by instrument dated June 26, 1970, recorded in Volume 179, Page 689 of the Official Public Records of Comal County, Texas.
 - b. Easement for highway purposes granted to the State of Texas, by instrument dated May 10, 1963, recorded in Volume 133, Page 464 of the Deed Records of Comal County, Texas.
 - c. The terms, conditions and stipulations of that certain Oil, Gas and/or Mineral Lease dated May 21, 1981, recorded in Volume 322, Page 254 of the Official Public Records of Comal County, executed by and between Timothy Dean Word, Jr., et al, as Lessors, and Jack E. Klinger, as Lessee.
 - d. Electric line right of way agreement granted to the City of New Braunfels Utilities, by instrument dated June 10, 1985, recorded in Volume 343, Page 37 and Volume 451, Page 871 of the Official Public Records of Comal County, Texas.
 - e. Sewer line agreement dated August 29, 1986, recorded in Volume 529, Page 566 of the Official Public Records of Comal County, Texas.
 - f. The terms, conditions and stipulations of that certain Lease Agreement dated October 14, 1986, executed by and between Timothy Dean Word, et al, as Lessors, and San Antonio Cellular Telephone Company, as Lessee, evidenced by Memorandum of Assignment of Leasehold Interest recorded in Volume 536, Page 78 of the Official Public Records of Comal County, Texas, and being further assigned to AT&T Technologies, Inc., by instrument recorded in Volume 537, Page 583 of the Official Public Records of Comal County, Texas.
 - g. Sewer line easement granted to the City of New Braunfels (utilities), by instrument filed December 30, 1994 recorded in Volume 1018, Page 730 of the Official Public Records of Comal County, Texas.
 - h. Right of Use granted to Southwestern Bell Telephone Company, by instrument dated August 9, 1996, recorded in County Clerk's File No. 9606018259 of the Official Public Records of Comal County, Texas.
 - i. Any and all liens arising by reason of unpaid bills or claims for work performed or materials furnished in connection with improvements placed, or to be placed, upon the subject land. However, the Company does insure the Insured against loss, if any, sustained by the insured under this policy if such liens have been filed with the County Clerk of Comal County, Texas, prior to the date hereof.
- (EXCEPTION MAY BE DELETED IF PROPOSED TRANSACTION DOES NOT INCLUDE COST OF CONTEMPLATED IMPROVEMENTS, CONSTRUCTION OR REPAIRS AND LOAN PROCEEDS ARE FULLY DISBURSED).**
- j. Liability hereunder at the date hereof is limited to \$_____. Liability shall increase as contemplated improvements are made, so that any loss payable hereunder shall be limited to said sum plus the amount actually expended by the Insured in improvements at the time the loss occurs. Any expenditures made for improvements, subsequent to the date of this policy, will be deemed made as of the date of this policy. In no event shall the liability to the Company hereunder exceed the face amount of this policy. Nothing contained in this paragraph shall be construed as limiting any exception or any printed provisions of this policy. (Owner's Policy Only)

(EXCEPTION MAY BE DELETED IF PROPOSED TRANSACTION DOES NOT INCLUDE COST OF

CONTEMPLATED IMPROVEMENTS, CONSTRUCTION OR REPAIRS AND LOAN PROCEEDS ARE FULLY DISBURSED).

- k. Any and all leases, recorded or unrecorded, with rights of tenants in possession.
- l. Easements, or claims of easements, which are not recorded in the public records.
- m. Rights of parties in possession. (Owner's Policy Only)

COMMITMENT FOR TITLE INSURANCE

Issued By

Chicago Title Insurance Company

SCHEDULE C

Your Policy will not cover loss, costs, attorneys' fees, and expenses resulting from the following requirements that will appear as Exceptions in Schedule B of the Policy, unless you dispose of these matters to our satisfaction, before the date the Policy is issued:

1. Documents creating your title or interest must be approved by us and must be signed, notarized and filed for record.
2. Satisfactory evidence must be provided that:
 - a. no person occupying the land claims any interest in that land against the persons named in paragraph 3 of Schedule A,
 - b. all standby fees, taxes, assessments and charges against the property have been paid,
 - c. all improvements or repairs to the property are completed and accepted by the owner, and that all contractors, subcontractors, laborers and suppliers have been fully paid, and that no mechanic's, laborer's or materialmen's liens have attached to the property,
 - d. there is legal right of access to and from the land,
 - e. (on a Loan Policy only) restrictions have not been and will not be violated that affect the validity and priority of the insured mortgage.

You must pay the seller or borrower the agreed amount for your property or interest.

4. Any defect, lien or other matter that may affect title to the land or interest insured, that arises or is filed after the effective date of this Commitment.
5. This Company must follow Procedure Rule P-27 as set out by the Department of Insurance in disbursing funds provided by the Assured and/or Insured on Schedule "A" of this Commitment. Good Funds shall be in possession of the title company prior to any disbursements. Good Funds shall be as defined in Rule P-27, and include cash or wire transfers, certified, cashier's or teller checks.
6. For each entity that will execute any document in connection with the proposed closing (AND any other entity executing said document on its behalf), this company must be furnished the following authority and existence documentation:
 - (a) Corporation - Certificate of Existence from the Secretary of State, Articles of Incorporation from the Secretary of State, and a properly executed Corporate Resolution (in recordable form) to support the proposed transaction.
 - (b) Limited Liability Company - Certificate of Existence from the Secretary of State, Articles of Organization from the Secretary of State, copy of Regulations (and any Amendments thereto), and Secretary's Certificate (in recordable form).
 - (c) General Partnership - copy of Partnership Agreement (and any Amendments thereto).
 - (d) Limited Partnership - Certificate of Limited Partnership from the Secretary of State, Certificate of Existence from the Secretary of State, copy of Limited Partnership Agreement (and any Amendments), and evidence of consent of limited partners (in recordable form), if required.
 - (e) Joint Venture - copy of Joint Venture Agreement (and any Amendments thereto).

- f) Trust - copy of the Trust Agreement (and any Amendments thereto) for review or, in the alternative, the Trustee must file a Certification of Trust in the real property records meeting all of the provisions of Section 114.086(a) and (c) of the Texas Property Code, and provide excerpts from the Trust Agreement sufficient to evidence authority of the Trustee to enter into this transaction.
7. We are to be furnished with a survey showing a plat and containing the correct metes and bounds description of the subject property made by a licensed public surveyor of the State of Texas, suitable to this title company. When same is submitted, it is to be shown to Examiner for inspection and approval. (if applicable)
8. NOTE: The last recorded deed to convey the subject property (or a portion thereof) is dated December 31, 2009, filed for record on July 29, 2010, recorded under Document No. 201006024825 of the Official Public Records of Comal County, Texas, executed by BMB Ranch Holdings, Ltd., et al, to Word-Borchers Ranch Real Estate Limited Partnership, a Texas limited partnership.
9. Company must be furnished a satisfactory Affidavit of Debts and Liens executed by Seller(s).
10. Company must be furnished a satisfactory Waiver of Inspection executed by Purchaser(s).
11. THIS COMMITMENT MUST BE UPDATED PRIOR TO CLOSING AND FUNDING.

Countersigned
Heritage Title Company of Austin, Inc.

By 

Amy Fisher

COMMITMENT FOR TITLE INSURANCE

SCHEDULE D

GF No. 081579

Pursuant to the requirements of Rule P-21, Basic Manual of Rules, Rates and Forms for the writing of Title Insurance in the State of Texas, the following disclosures are made:

1. The following individuals are directors and/or officers, as indicated, of the Title Insurance Company issuing this Commitment
Disclosure of: **CHICAGO TITLE INSURANCE COMPANY, a Nebraska Corporation**
 - (a) The Shareholders owning or controlling, directly or indirectly, ten (10%), or more of the shares of Chicago Title Insurance Company:
CHICAGO TITLE AND TRUST COMPANY, an Illinois Corporation
 - (b) The names of the Directors of Chicago Title Insurance Company:
Christopher Abbinante, John A. Wunderlich, Erika Meinhardt, Raymond R. Quirk, Roger S. Jewkes, Anthony J. Park, Alan L. Stinson, and Thomas E. Evans, Jr.
 - (c) The president, the executive or senior vice-president, the secretary and the treasurer of Chicago Title Insurance Company:

Chairman of the Board, President and Chief Executive Officer	Raymond R. Quirk
Executive Vice President and Regional Manager	John A. Wunderlich
Vice President and Corporate Secretary	Fernando Velez, Jr.
Vice President and Treasurer	Patrick G. Farenga
2. The issuing Title Insurance Agent, Heritage Title Company of Austin, Inc., is a corporation whose shareholders owning or controlling, directly or indirectly, 1% or more of said corporation (or owning or controlling 10% or more of any entity that owns 1% or more of the Agent), directors, and officers are listed below:

Owners of 10% or more: Gary S. Farmer, Jan Cox Dwyer and Laura A. Beuerlein

Officers: Gary S. Farmer - President, Brenda K. Hindsman - Secretary and Laura A. Beuerlein - Treasurer

Board of Directors: Gary S. Farmer, Jan Cox Dwyer and Laura A. Beuerlein
3. You are entitled to receive advance disclosure of settlement charges in connection with the proposed transaction to which this commitment relates. Upon your request, such disclosure will be made to you. Additionally, the name of any person, firm or corporation receiving a portion of the premium from the settlement of this transaction will be disclosed on the closing or settlement statement.
You are further advised that the estimated title premium* is:

Owner's Policy	<u>\$229.00</u>
Loan Policy	<u>\$100.00</u>
Endorsement Charges	<u>\$0.00</u>
Other	<u>\$0.00</u>
Total	<u>\$329.00</u>

Of this total amount: 15% will be paid to the policy issuing Title Insurance Company; 60% will be retained by the issuing Title Insurance Agent; and the remainder of the estimated premium will be paid to other parties as follows:

<u>Amount</u>	<u>To Whom</u>	<u>For Services</u>
25.00%	Chicago Title Insurance Company	Title Evidence

*The estimated premium is based upon information furnished to us as of the date of this Commitment for Title Insurance. Final determination of the amount of the premium will be made at closing in accordance with the Rules and Regulations adopted by the Commissioner of Insurance.

DELETION OF ARBITRATION PROVISION
(Not applicable to the Texas Residential Owner's Policy)

Arbitration is a common form of alternative dispute resolution. It can be a quicker and cheaper means to settle a dispute with your Title Insurance Company. However, if you agree to arbitrate, you give up your right to take the Title Company to court and your rights to discovery of evidence may be limited in the arbitration process. In addition, you cannot usually appeal an arbitrator's award.

Your policy contains an arbitration provision (shown below). It allows you or the Company to require arbitration if the amount of insurance is \$2,000,000 or less. If you want to retain your right to sue the Company in case of a dispute over a claim, you must request deletion of the arbitration provision before the policy is issued. You can do this by signing this form and returning it to the Company at or before the closing of your real estate transaction or by writing to the Company.

The arbitration provision in the Policy is as follows:

"Either the Company or the Insured may demand that the claim or controversy shall be submitted to arbitration pursuant to the Title Insurance Arbitration Rules of the American Land Title Association ("Rules"). Except as provided in the Rules, there shall be no joinder or consolidation with claims or controversies of other persons. Arbitrable matters may include, but are not limited to, any controversy or claim between the Company and the Insured arising out of or relating to this policy, any service in connection with its issuance or the breach of a policy provision, or to any other controversy or claim arising out of the transaction giving rise to this policy. All arbitrable matters when the Amount of Insurance is \$2,000,000 or less shall be arbitrated at the option of either the Company or the Insured, unless the Insured is an individual person (as distinguished from an Entity). All arbitrable matters when the Amount of Insurance is in excess of \$2,000,000 shall be arbitrated only when agreed to by both the Company and the Insured. Arbitration pursuant to this policy and under the Rules shall be binding upon the parties. Judgment upon the award rendered by the Arbitrator(s) may be entered in any court of competent jurisdiction."

SIGNATURE

DATE



CHICAGO TITLE INSURANCE COMPANY

TEXAS TITLE INSURANCE INFORMATION

Title Insurance insures you against loss resulting from certain risks to your title.

The Commitment for Title Insurance is the Title Insurance Company's promise to issue the Title Insurance Policy. The Commitment is a legal document. You should review it carefully to completely understand it before your closing date.

El seguro de título le asegura en relación a pérdidas resultantes de ciertos riesgos que pueden afectar el título de su propiedad.

El Compromiso para Seguro de Título es la promesa de la compañía aseguradora de títulos de emitir la póliza de seguro de título. El Compromiso es un documento legal. Usted debe leerlo cuidadosamente y entenderlo completamente antes de la fecha para finalizar su transacción.

Your Commitment for Title Insurance is a legal contract between you and us. The Commitment is not an opinion or report of your title. It is a contract to issue you a Policy subject to the Commitment's terms and requirements.

Before issuing a Commitment for Title Insurance (the Commitment) or a Title Insurance Policy (the Policy), the Title Insurance Company (the Company) determines whether the title is insurable. This determination has already been made. Part of that determination involves the Company's decision to insure the title except for certain risks that will not be covered by the Policy. Some of these risks are listed in Schedule B of the attached Commitment as Exceptions. Other risks are stated in the Policy as Exclusions. These risks will not be covered by the Policy. The Policy is not an abstract of title nor does a Company have an obligation to determine the ownership of any mineral interest.

---**MINERALS AND MINERAL RIGHTS** may not be covered by the Policy. The Company may be unwilling to insure title unless there is an exclusion or an exception as to Minerals and Mineral Rights in the Policy. Optional endorsements insuring certain risks involving minerals, and the use of improvements (excluding lawns, shrubbery and trees) and permanent buildings may be available for purchase. Neither this Policy, nor the optional endorsements, insure that the purchaser has title to the mineral rights related to the surface estate.

Another part of the determination involves whether the promise to insure is conditioned upon certain requirements being met. Schedule C of the Commitment lists these requirements that must be satisfied or the Company will refuse to cover them. You may want to discuss any matters shown in Schedules B and C of the Commitment with an attorney. These matters will affect your title and your use of the land.

When your Policy is issued, the coverage will be limited by the Policy's Exception, Exclusions and Conditions, defined below.

---**EXCEPTIONS** are title risks that a Policy generally covers but does not cover in a particular instance. Exceptions are shown on Schedule B or discussed in Schedule C of the Commitment. They can also be added if you do not comply with the Conditions section of the Commitment. When the Policy is issued, all Exceptions will be on Schedule B of the Policy.

---**EXCLUSIONS** are title risks that a Policy generally does not cover. Exclusions are contained in the Policy but not shown or discussed in the Commitment.

---**CONDITIONS** are additional provisions that qualify or limit your coverage. Conditions include your responsibilities and those of the Company. They are contained in the Policy but not shown or discussed in the Commitment. The Policy Conditions are not the same as the Commitment Conditions.

You can get a copy of the policy form approved by the Texas Department of Insurance by calling Chicago Title Insurance Company at 1-800-442-4303 or by calling the title insurance agent that issued the Commitment. The Texas Department of Insurance may revise the policy form from time to time.

You can also get a brochure that explains the Policy from the Texas Department of Insurance by calling 1-800-252-3439.

Before the Policy is issued, you may request changes in the Policy. Some of the changes to consider are:

---Request amendment of the "area and boundary" exception (Schedule B, paragraph 2). To get this amendment, you must furnish a survey and comply with other requirements of the Company. On the Owner's Policy, you must pay an additional premium for the amendment. If the survey is acceptable to the Company and if the Company's other requirements are met, your Policy will insure you against loss because of discrepancies or conflicts in boundary lines, encroachments or protrusions, or overlapping of improvements. The Company may then decide not to insure against specific boundary or survey problems by making special exceptions in the Policy.

Whether or not you request amendment of the "area and boundary" exception, you should determine whether you want to purchase and review a survey if a survey is not being provided to you.

---Allow the Company to add an exception to "rights of parties in possession." If you refuse this exception, the Company or the title insurance agent may inspect the property. The Company may except to and not insure you against the rights of specific persons, such as renters, adverse owners or easement holders who occupy the land. The Company may charge you for the inspection. If you want to make your own inspection, you must sign a Waiver of Inspection form and allow the Company to add this exception to your Policy.

The entire premium for a Policy must be paid when the Policy is issued. You will not owe any additional premiums unless you want to increase your coverage at a later date and the Company agrees to add an Increased Value Endorsement.

Fidelity National Financial, Inc.

Privacy Statement

Fidelity National Financial, Inc. and its subsidiaries ("FNF") respect the privacy and security of your non-public personal information ("Personal Information") and protecting your Personal Information is one of our top priorities. This Privacy Statement explains FNF's privacy practices, including how we use the Personal Information we receive from you and from other specified sources, and to whom it may be disclosed. FNF follows the privacy practices described in this Privacy Statement and, depending on the business performed, FNF companies may share information as described herein.

Personal Information Collected

We may collect Personal Information about you from the following sources:

- Information we receive from you on applications or other forms, such as your name, address, social security number, tax identification number, asset information, and income information;
- Information we receive from you through our Internet websites, such as your name, address, email address, Internet Protocol address, the website links you used to get to our websites, and your activity while using or reviewing our websites;
- Information about your transactions with or services performed by us, our affiliates, or others, such as information concerning your policy, premiums, payment history, information about your home or other real property, information from lenders and other third parties involved in such transaction, account balances, and credit card information; and
- Information we receive from consumer or other reporting agencies and publicly recorded documents.

Disclosure of Personal Information

We may provide your Personal Information (excluding information we receive from consumer or other credit reporting agencies) to various individuals and companies, as permitted by law, without obtaining your prior authorization. Such laws do not allow consumers to restrict these disclosures. Disclosures may include, without limitation, the following:

- To insurance agents, brokers, representatives, support organizations, or others to provide you with services you have requested, and to enable us to detect or prevent criminal activity, fraud, material misrepresentation, or nondisclosure in connection with an insurance transaction;
- To third-party contractors or service providers for the purpose of determining your eligibility for an insurance benefit or payment and/or providing you with services you have requested;
- To an insurance regulatory authority, or a law enforcement or other governmental authority, in a civil action, in connection with a subpoena or a governmental investigation;
- To companies that perform marketing services on our behalf or to other financial institutions with which we have joint marketing agreements; and/or
- To lenders, lien holders, judgment creditors, or other parties claiming an encumbrance or an interest in title whose claim or interest must be determined, settled, paid or released prior to a title or escrow closing.

We may also disclose your Personal Information to others when we believe, in good faith, that such disclosure is reasonably necessary to comply with the law or to protect the safety of our customers, employees, or property and/or to comply with a judicial proceeding, court order or legal process.

Disclosure to Affiliated Companies - We are permitted by law to share your name, address and facts about your transaction with other FNF companies, such as insurance companies, agents, and other real estate service providers to provide you with services you have requested, for marketing or product development research, or to market products or services to you. We do not, however, disclose information we collect from consumer or credit reporting agencies with our affiliates or

others without your consent, in conformity with applicable law, unless such disclosure is otherwise permitted by law.

Disclosure to Nonaffiliated Third Parties - We do not disclose Personal Information about our customers or former customers to nonaffiliated third parties, except as outlined herein or as otherwise permitted by law.

Confidentiality and Security of Personal Information

We restrict access to Personal Information about you to those employees who need to know that information to provide products or services to you. We maintain physical, electronic, and procedural safeguards that comply with federal regulations to guard Personal Information.

Access to Personal Information/

Requests for Correction, Amendment, or Deletion of Personal Information

As required by applicable law, we will afford you the right to access your Personal Information, under certain circumstances to find out to whom your Personal Information has been disclosed, and request correction or deletion of your Personal Information. However, FNF's current policy is to maintain customers' Personal Information for no less than your state's required record retention requirements for the purpose of handling future coverage claims.

For your protection, all requests made under this section must be in writing and must include your notarized signature to establish your identity. Where permitted by law, we may charge a reasonable fee to cover the costs incurred in responding to such requests. Please send requests to:

Chief Privacy Officer
Fidelity National Financial, Inc.
601 Riverside Avenue
Jacksonville, FL 32204

Changes to this Privacy Statement

This Privacy Statement may be amended from time to time consistent with applicable privacy laws. When we amend this Privacy Statement, we will post a notice of such changes on our website. The effective date of this Privacy Statement, as stated above, indicates the last time this Privacy Statement was revised or materially changed.



AUSTIN, TEXAS

PRIVACY POLICY

We Are Committed to Safeguarding Customer Information

In order to better serve your needs now and in the future, we may ask you to provide us with certain information. We understand that you may be concerned about what we will do with such information—particularly any personal or financial information. We agree that you have a right to know how we will utilize the personal information you provide to us. Therefore, we have adopted this Privacy Policy to govern the use and handling of your personal information.

Applicability

This Privacy Policy governs our use of the information which you provide to us. It does not govern the manner in which we may use information we have obtained from any other source, such as information obtained from a public record or from another person or entity.

Types of Information

Depending upon which of our services you are utilizing, the types of nonpublic personal information that we may collect include:

- Information we receive from you on applications, form and in other communications to us, whether in writing, in person, by telephone or any other means;
- Information about your transactions with us, our affiliated companies, or others; and
- Information we receive from a consumer reporting agency.

Use of Information

We request information from you for our own legitimate business purposes and not for the benefit of any nonaffiliated party. Therefore, we will not release your information to nonaffiliated parties except: (1) as necessary for us to provide the product or service you have requested of us; or (2) as permitted by law. We may, however, store such information indefinitely, including the period after which any customer relationship has ceased. Such information may be used for any internal purpose, such as quality control efforts or customer analysis. We may also provide all of the types of nonpublic personal information listed above to one or more of our affiliated companies. Such affiliated companies include financial service providers, such as title insurers, property and casualty insurers, and trust and investment advisory companies, or companies involved in real estate services, such as appraisal companies, home warranty companies, and escrow companies. Furthermore, we may also provide all the information we collect, as described above, to companies that perform marketing services on our behalf, on behalf of our affiliated companies, or to other financial institutions with whom we or our affiliated companies have joint marketing agreements.

Former Customers

Even if you are no longer our customer, our Privacy Policy will continue to apply to you.

Confidentiality and Security

We will use our best efforts to ensure that no unauthorized parties have access to any of your information. We restrict access to nonpublic personal information about you to those individuals and entities who need to know that information to provide products or services to you. We will use our best efforts to train and oversee our employees and agents to ensure that your information will be handled responsibly and in accordance with this Privacy Policy. We currently maintain physical, electronic, and procedural safeguards that comply with federal regulations to guard your nonpublic personal information.