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AFTER RECORDING, RETURN TO:

City Secretary
City of McKinney
P.O. Box 517
222 N. Tennessee Street
McKinney, Texas 75069

City of McKinney, Texas
DEVELOPMENT AGREEMENT (ETJ)
For
The Estates of Willow Wood

Approximately 306.591 Acres of Land Situated Abner Smalley Survey, Abstract 864, the Polly A. Boone Survey, Abstract 1048, the John Hart Survey, Abstract 423 and the Manning Clemments Survey, Abstract 224 and Generally East of SH 5, North of Bloomdale Road and South of County Road 278

This DEVELOPMENT AGREEMENT (this "Agreement") is entered into pursuant to Sections 43.035 and 212.172 of the Texas Local Government Code effective the 7th day of May, 2013 (the "Effective Date"), by and between the ***CITY of McKINNEY, TEXAS*** a Texas municipal corporation and home-rule city, hereinafter referred to as the "CITY", and ***PCB PROPERTIES, LLC,*** a TEXAS limited liability corporation, hereinafter referred to as the "OWNER," (the CITY and the OWNER may be referred to collectively as the "PARTIES"), concerning the development of the "Property" described herein-below and by metes and bounds in Exhibit A hereto, witnesseth that:

WHEREAS, the OWNER owns the Property located within the extraterritorial jurisdiction of the CITY; and

WHEREAS, the OWNER and the CITY desire to have the Property remain in the CITY'S extraterritorial jurisdiction for a certain period of time, as described herein below, after which time or upon the occurrence of certain acts, also described herein below, the OWNER shall file a petition/application with the CITY for the voluntary annexation and zoning of the Property; and

WHEREAS, this Agreement is entered into pursuant to Sections 43.035 and 212.172 of the Texas Local Government Code, in order to address the desires of the OWNER and the CITY and the procedures of the CITY; and

WHEREAS, the OWNER and the CITY acknowledge that this Agreement is binding upon the CITY and the OWNER and their respective successors and assigns for the term of this Agreement, as defined herein below; and

WHEREAS, the physical location of the Property and the lack of adequate roadway and utility facilities to serve the Property demonstrate that infrastructure improvements will be required as a condition to development in the future; and

WHEREAS, the OWNER understands that the CITY'S development standards and ordinances will require the OWNER and/or any developer to fund and construct certain roadway and utility improvements, as set forth in the CITY'S subdivision and other development ordinances, that are necessitated by the development of the Property and a general statement of such required public improvements (based on existing conditions) is outlined herein; and

WHEREAS, a Construction Facilities Agreement, as required by the Subdivision Regulations defined hereinafter, specific to the then proposed use of the Property may be required at such time as development of the Property begins which may supersede or amend this Agreement by setting forth in detail the public improvements that will be required for the Property, and until such occurrence the hereinafter stated ordinances and the terms of this Agreement shall govern the Property's development and provide notice to the OWNER of the CITY'S development requirements; and

WHEREAS, this Agreement is to be recorded in the Real Property Records of Collin County, Texas; and

WHEREAS, the OWNER, together with the OWNER'S grantees, assigns, successors, trustees and all others holding any interest now or in the future, agree and enter into this Agreement which shall operate as a covenant running with the land and be binding upon the OWNER, its grantees, assigns, successors, and all others holding any interest now or in the future.

NOW THEREFORE, in consideration of the mutual covenants and agreements contained herein the OWNER and the CITY agree as follows:

A. INCORPORATION OF RECITALS

The Recitals, and specifically including the WHEREAS defining "OWNER", set forth above, are hereby approved and incorporated into the body of this Agreement as if copied in their entirety.

B. PROPERTY

This Agreement shall govern approximately 306.591 acres of land located in the extraterritorial jurisdiction of the City of McKinney, generally East of SH 5, North of Bloomdale Road and South of County Road 278, and is more fully described in Exhibit A attached to this Agreement which is fully incorporated herein by reference (the "Property").

C. CONTINUING EXTRATERRITORIAL STATUS

The OWNER has requested and the CITY guarantees the continuation of the extraterritorial status of the Property, its immunity from annexation by the CITY, and its immunity from CITY property taxes, subject to the provisions of this Agreement. Except as provided in this Agreement (including the condition precedent to annexation set forth in Section J.13 (e) of this Agreement), the CITY agrees not to annex the Property until the OWNER commences development of the Property. "Commence(s) Development" shall mean the OWNER'S submittal of an application for any building or development permit involving any construction or land disturbance on the Property. "Commence(s) Development" does not include revising the Record Plat (hereinafter defined) to reflect multiple phases of development or any activities conducted on the Property related to surveying, staking, testing, or inspecting the Property.

The OWNER agrees that no land disturbance shall occur without first obtaining a permit under the Governing Regulations. However, if the Property is annexed pursuant to the terms of this Agreement, then the CITY shall provide services to the Property pursuant to Chapter 43 of Texas Local Government Code as modified by the provisions of this Agreement pursuant to Section 212.172(b)(7) of the Texas Local Government Code and agreed to herein below.

D. RESTRICTIONS REGARDING USE OF PROPERTY DURING CONTINUING EXTRATERRITORIAL JURISDICTION STATUS

The OWNER covenants and agrees not to use the Property for any use other than for agriculture, wildlife management, and/or timber land consistent with Chapter 23 of the Texas Tax Code, except for single-family residential uses of the property consistent with the GDP, as hereinafter defined, and Section H of this Agreement, without the prior written consent of the CITY. Save and except the Record Plat (including revisions to reflect multiple phases of development), and subsequent preliminary-final and record plats approved by City Staff, the Planning and Zoning Commission and/or CITY Council and conforming to Exhibit B, the Site Plan, as hereinafter defined, the OWNER also covenants and agrees that the OWNER will not file any type of subdivision plat or related development document for the Property with Collin County or the CITY until the Property has been annexed into,

and zoned by, the CITY. The OWNER further covenants and agrees not to construct, or allow to be constructed, any buildings on the Property that would require a building permit if the Property were in the CITY'S corporate limits, until the Property has been annexed into, and zoned by, the CITY. Additionally, the OWNER also covenants and agrees that the CITY'S AG - Agricultural District and RS 72 – Single Family Residence District (with 7,440 square foot minimum lots) zoning requirements shall apply to the portion of the Property located north of the un-named east/west arterial roadway shown on the GDP and Site Plan (both as hereinafter defined) and that such portion of the Property shall be used only for such uses unless otherwise provided in this Agreement. The portion of the Property located south of the un-named east/west arterial roadway shown on the GDP and Site Plan shall be used only for the uses described in Section H.

The OWNER covenants and agrees to indemnify, hold harmless, and defend the CITY from and against any and all claims, by any person claiming an ownership interest in the Property who has not signed this Agreement as of the effective date of this Agreement, and which claims arise in any way from the CITY'S reliance on this Agreement.

E. GOVERNING REGULATIONS

Development of the Property shall be governed solely by the following regulations (collectively, the "Governing Regulations"):

1. the Master General Development Plan (the "GDP") consisting of Exhibit A-1; and

2. the CITY'S "Subdivision Ordinance" (i.e., currently Chapter 142 of the CITY of McKinney Code of Ordinances), as may be amended from time to time, (the "Subdivision Regulations"); and

3. the CITY Utility and Land Development Ordinances (i.e. currently Chapters 110 and 130, respectively, of the CITY of McKinney Code of Ordinances), as may be amended from time to time; (the "CITY Ordinances"); and

4. the CITY'S storm water ordinance No. 2006-12-45, as may be amended from time to time; and

5. the CITY'S building codes (the "Building Codes"), as may be amended from time to time; and

6. the residential unit architectural design requirements set forth in Section H (the "Residential Architectural Standards"); and

7. the tree preservation standards contained in former ordinance No. 06-10-115;

however specifically limited to the Southern 655 Lots, hereinafter defined;

8. the tree preservation standards contained in McKinney Code Section 146-136, as may be amended from time to time; however specifically limited to the lots north of the un-named east/west arterial shown on the GDP; and

9. the median landscaping standards contained in McKinney Code Section 142-105, as may be amended from time to time; and

10. the land uses regulations contained in McKinney Code Section 146-84, as of the effective date; and

11. the landscaping standards contained in McKinney Code Section 146-135, as may be amended from time to time; and

12. the screening and buffering standards contained in Ordinance 12-11-56, as may be amended from time to time; and

13. the impact fees and ordinances as may be amended from time to time, subject to any credits granted under Section J; and

14. the record plat for 655 lots lying south of an unnamed east-west arterial (hereinafter referred to as the "Southern 655 Lots") and including certain rights-of-way throughout the Property, conditionally approved on November 17, 2009 (the "Record Plat") attached hereto as Exhibit A-3;

15. the Site Plan attached hereto as Exhibit B; and

16. the letter dated November 17, 2009, from Michael Quint, Senior Planner, City of McKinney to Peter J. Petsche, PLS regarding "08-144RP – Approval of a Record Plat for the Willow Wood Estates Addition, Approximately 306.60 Acres, Located Along the East Side of State Highway 5, Approximately 4,000 feet North of F.M. 543, and South of F.M. 278," a copy of which letter is attached hereto as Exhibit D.

Subject to the CITY'S rights to amendment stated above and those contained in any zoning ordinance enacted pursuant to Section H, the Governing Regulations are exclusive, and no other future ordinances, rules, regulations, standards, policies, orders, guidelines, or other CITY-adopted or CITY-enforced requirements of any kind shall apply to the development of the Property until the Property is annexed at which time all CITY-adopted and CITY-enforced ordinances that are authorized by this Agreement (and specifically any zoning ordinance enacted pursuant to Section H) shall apply. OWNER acknowledges and agrees, however, that other ordinances of the CITY that do not regulate the development of the Property may be applied and enforced by the CITY to non-development activities within the Property. OWNER further

acknowledges and agrees that any modifications to the Governing Regulations allowed by this Agreement constitute the OWNER'S limited waiver of its vested rights under Chapter 245, Texas Local Government Code, as amended. Pursuant to Section 43.035(b)(1)(B) of the Texas Local Government Code, the CITY is authorized to enforce the Governing Regulations in the same manner the regulations are enforced within the CITY'S boundaries specifically including, but not limited to, the CITY'S environmental regulations. The CITY specifically reserves its authority pursuant to Chapter 251 of the Texas Local Government Code to exercise eminent domain over the Property.

F. TERM OF AGREEMENT

The term of this Agreement (the "Term") is forty-five (45) years from the Effective Date of this Agreement. The OWNER and all of the OWNER'S successors and assigns shall be deemed to have filed a petition for voluntary annexation before the end of the Term, for annexation of the Property to be completed during or after the end of the Term as provided in this Agreement. Prior to the end of the Term, the CITY may commence the voluntary annexation of the Property only as provided in this Agreement. In connection with annexation pursuant to this section, the OWNER hereby waives any vested rights they may otherwise have under Section 43.002(a) (2), Section 212.172(g), and Chapter 245 of the Texas Local Government Code that would exist by virtue of this Agreement, any plat, or any construction initiated by the OWNER during the time between the expiration of this Agreement and the institution of annexation proceedings by the CITY.

G. VIOLATION OF THIS AGREEMENT DEEMED A PETITION FOR VOLUNTARY ANNEXATION

The OWNER acknowledges that if any plat or related development document is filed in violation of this Agreement, or if the OWNER Commences Development of the Property in violation of this Agreement, then in addition to the CITY'S other remedies, such act will constitute a petition for voluntary annexation by the OWNER, and the Property will be subject to annexation at the discretion of the CITY Council. The OWNER agrees that such annexation shall be voluntary and the OWNER hereby consents to such annexation as though a petition for such annexation had been tendered by the OWNER. If annexation proceedings begin pursuant to this Section, the OWNER acknowledges that this Agreement serves as an exception to Texas Local Government Code Section 43.052, requiring a municipality to use certain statutory procedures under an annexation plan. Furthermore, the OWNER hereby waives any and all vested rights and claims that they may have under Section 43.002(a) (2), Section 212.172(g), and Chapter 245 of the Texas Local Government Code that would otherwise exist by virtue of this Agreement, any plat, or any construction initiated by the OWNER, and any other actions the OWNER has taken in violation of Section C herein.

H. USE AND ZONING OF PROPERTY PRIOR TO AND UPON ANNEXATION

When the OWNER Commences Development, the OWNER agrees to submit a zoning application consistent with the Governing Regulations and this Agreement including, but not limited to, the uses depicted on the GDP, Exhibit A-1, including any retail uses conforming to Section 146-84 of the Code of Ordinances (BN – Neighborhood Business District), pending the CITY'S adoption of the property's permanent zoning in accordance with the provisions of applicable law and the CITY'S Code of Ordinances. The CITY reserves the right to process the zoning on the Property contemporaneously with the annexation of the Property.

The OWNER agrees that no more than 204 single family lots shall be platted to the north of the un-named east/west arterial roadway and no more than 655 single family lots shall be platted south of the un-named east/west arterial roadway.

The lot locations and sizes shall be as follows:

a. North: 204 single family lots to a minimum lot area of 7,440 square feet.

b. South: 655 single family lots in conformance to the following minimum lot area:

   i. 365 lots at a minimum lot area of 5,650 square feet (50' x 115')
   ii. 250 lots at a minimum lot area of 6,900 square feet (60' x 115')
   iii. 40 lots at a minimum lot area of 7,400 square feet (65' x 115')

Development of residential structures shall conform to all of the following standards: Single family residential structures shall be approved if all the following requirements are satisfied.

1. RESIDENTIAL UNIT ARCHITECTURAL DESIGN REQUIREMENTS

   i. Front elevation: 100 percent of this elevation shall be finished with masonry materials to include brick, stone, or synthetic stone.

   ii. Side elevation: 75 percent of this elevation shall be shall be finished with masonry materials to include brick, stone, or synthetic stone. The remaining 25 percent may be finished with wood lap siding, vinyl siding, cast concrete modular siding (including cementitious fiber siding; i.e., Hardie Board or Hardiplank), stucco, or EIFS. Sheet siding fabricated to look like wood lap siding is prohibited.

   iii. Rear elevation: 50 percent of this elevation shall be shall be finished with masonry materials to include brick, stone, or synthetic stone. The

remaining 50 percent may be finished with wood lap siding, vinyl siding, cast concrete modular siding (including cementitious fiber siding; i.e., Hardie Board or Hardiplank), stucco or EIFS. Sheet siding fabricated to look like wood lap siding is prohibited.

iv. Walls provided in conjunction with an architectural element which is located above the roof line (example: walls for dormers or chimneys) may only be finished with brick, stone, synthetic stone, stucco, wood lap siding, vinyl siding, cast concrete modular siding (including cementitious fiber siding; i.e., Hardie Board or Hardiplank), or EIFS. Sheet siding fabricated to look like wood lap siding is prohibited.

v. The percentages contained herein are to be calculated exclusive of doors and windows.

vi. All single family residential units shall be required to provide at least three of the following architectural elements:

a. 100 percent of each elevation is finished with a masonry finishing material;

b. The front facade contains two types of complementary masonry finishing materials with each of the materials being used on at least 25 percent of the front facade;

c. A minimum of 10 percent of the unit's front facade features patterned brick work, excluding soldier or sailor brickwork provided in association with a door or window;

d. No pitched roof plane with a horizontal length of longer than 20 feet exists;

e. The unit only features one-car garage doors that have a carriage style design. These doors typically feature vertical slats, high windows, antiqued hardware, and additional detailing to give the appearance of swinging or sliding doors;

f. The unit's chimney is finished on all sides with 100 percent masonry finishing materials (brick, stone, or synthetic stone only);

g. A minimum of three offsets in the front façade measuring at least two feet deep are provided or a minimum of one offset in the front façade measuring at least five feet is provided;

h. The unit features an articulated front entrance through the use of lintels, pediments, keystones, pilasters, arches, columns, or other similar architectural elements;

i. A covered front porch which is at least 100 square feet in area is provided;

j. A covered back porch which is at least 200 square feet in area is provided;

k. At least one dormer is provided for each roof plane over 500 square feet in area that faces a public street. The dormer must be appropriately scaled for the roof plane and shall not be wider than the windows on the building elevation below;

l. All windows facing a street feature shutters. The shutters provided must be operational or appear operational and must be in scale with the corresponding window; or

m. All ground-level mechanical, heating, ventilation, and air conditioning equipment shall be completely screened by an opaque screening device that is at least six feet tall.

I. NOTICE OF AGREEMENT AND SALE OR CONVEYANCE

Any OWNER (excluding end buyers of recorded, platted lots) who sells or conveys all or any portion of the Property shall give to the purchaser or grantee notice of this Agreement prior to the closing (including notice of the release and indemnification provisions of Section 10 of this Agreement that run with the land and that are binding on the purchaser/grantee) and notice to the CITY of such sale or conveyance within 14 days after the closing. Any OWNER (other than end buyers of recorded, platted lots) who intends to change the use of any portion of the Property to a permitted use under this Agreement shall give notice of the change to the CITY within 14 days prior to the change in use.

J. DEVELOPMENT REQUIREMENTS

It is hereby specifically agreed and understood by and between the OWNER and the CITY that the Property shall be developed and annexed pursuant to and in strict conformity to the following terms and conditions:

1. ANNEXATION

It is specifically understood and agreed that the Property is outside the CITY'S corporate limits and that the CITY has not identified the Property in its Annexation Plan. It is also specifically understood and agreed that but for this Agreement and the OWNER'S request that the Property be voluntarily annexed at the time provided in this Agreement, the Property would remain outside the CITY'S corporate limits and within the CITY'S extraterritorial jurisdiction. It is further understood and agreed that the CITY does not currently have public improvements in place to adequately serve the Property. It is also understood and agreed that the CITY does not have any plans to improve or construct the roadways, extend the water, sanitary sewer and storm sewer lines, and construct the parks necessary to serve the Property. Neither does the CITY have the funds budgeted or otherwise available or projects and bonds approved by the voters to provide the public improvements necessary to serve the Property. **Save and except for the specific obligations of CITY in this Agreement, the OWNER specifically understands and agrees that the CITY shall have no obligation to design, extend, construct and provide the public improvements necessary to serve the Property and that should the OWNER desire to develop the Property prior to the time that adequate public improvements are on or adjacent to the Property, it shall be the OWNER'S responsibility and obligation to design, extend and construct such public improvements.**

2. PUBLIC IMPROVEMENTS

All public improvements, including utilities, drainage structures and easements, roadways, sidewalks, hike and bike trails, street lighting, street signage, rights-of–ways, medians, parkland dedication and all other required improvements and dedications shown on the GDP, the Preliminary Engineer's Cost Estimate (hereinafter Exhibit A-2), the Site Plan and the Record Plat shall be constructed and provided to the CITY by the OWNER, at no cost to the CITY, in accordance with the Governing Regulations. The public improvements required for each particular portion or phase of the Property then being developed, whether installed by the OWNER or a third party on behalf of the OWNER, must be completed and accepted by the CITY prior to the issuance of a Final Acceptance letter for the Required Improvements within such portion or phase of the Property. No Certificate of Occupancy shall be issued for any building on a portion or phase of the Property until Final Acceptance of the public improvements necessary to serve the portion or phase of the Property then being record platted.

a. Off-site Roadway Improvements

(1) The OWNER (or the CITY through the exercise of its eminent domain authority as provided in Section J.13 (e) of this Agreement) shall obtain and dedicate to TXDOT, at no cost to the CITY, all rights-of-way and easements adjacent to the Property as may be necessary to construct, to TXDOT standards, the turn lanes within State Highway 5 as described on the Record Plat or shown on the Offsite ROW graphic attached hereto as Exhibit C-2. The OWNER shall construct, at no cost to the CITY, such turn lanes to TXDOT standards (including TXDOT final acceptance) prior to or concurrently with the construction of structures within "Phase I" anywhere within the Property (which Phase I may include up to 212 lots). No building permit shall issue for any structure in Phase II, subsequent residential phases, or for any retail structure on the Property prior to the acquisition of all rights-of-way and easements required to construct the improvements described in this Section J.2 (a)(1).

(2) The OWNER (or the CITY through the exercise of its eminent domain authority as provided in Section J.13 (e) of this Agreement) shall obtain and dedicate to TXDOT, at no cost to the CITY, all rights-of-way and easements as necessary to construct, to TXDOT standards, the improvements described below in this Section J.2 (a)(2) and shown on Exhibits C-2, C-3 and C-4. The OWNER shall construct, at no cost to the CITY, the improvements described below to TXDOT standards (including TXDOT final acceptance) prior to the commencement of construction of any phase of development or structure beyond the maximum number of lots allowed for Phase I (212 lots). No building permit shall issue for any structure in Phase II, subsequent residential phases, or for any retail structure on the Property prior to the acquisition of all rights-of-way and easements required to construct the improvements in this Section J.2(a)(2). The improvements are generally described as follows:

a. Turn lanes within State Highway 5, whether current or future right-of-way (as TXDOT determines), adjacent to the Trinity Heights residential neighborhood and Creekpoint Apartments as shown on Exhibit C-4; AND

b. Improve (add additional lane capacity, including turn lanes) either:

i. the Wilmeth/SH 5 intersection as shown on Exhibit C-4; OR

ii. the Bloomdale/FM 543/SH 5 intersection as shown on Exhibit C-3.

(3) The OWNER shall have the right, for a period of 120 days after this Agreement is approved by the CITY, to give notice to the CITY of the OWNER'S election to construct the improvements described in either Section J.2 (a)(2)(b)(i) or Section J.2 (a)(2)(b)(ii) above. If the OWNER fails to make an election within such 120-day period, the CITY may, in its sole discretion upon the expiration of such 120-day period, enter into a separate agreement with TXDOT that will allow the CITY or TXDOT to complete the improvements described in either Section J.2(a)(2)(b)(i) or Section J.2(a)(2)(b)(ii) above provided the CITY'S construction schedule will not delay the OWNER'S schedule for development of the Property. If the CITY enters into such an agreement with TXDOT, the OWNER agrees to construct the alternative improvement not constructed by the CITY or TXDOT.

(4) The OWNER shall provide all appropriate documentation regarding the necessary rights-of-way and off-site roadway construction to the CITY Engineer for approval.

b. Right-of Way Dedication and Easement Acquisition

The OWNER shall dedicate to the CITY, at no cost to the CITY, the right-of-way shown on Exhibit B, including but not limited to a ±3,100', 4-lane, east-west arterial. The OWNER shall dedicate all right-of-way for the interior streets serving the Property at the time of development. The OWNER shall also dedicate all easements necessary for construction and safety purposes for roadways shown on Exhibit B. The final alignment of right-of-way dedications shall be consistent with Exhibit B. In the event of any conflict between the CITY'S Master Utility and Transportation Plans and Exhibit A-1 relative to size or width of offsite easements whereby such size or width is reduced, the CITY'S Master Plans shall control.

c. Roadway Construction

The OWNER shall construct, at no cost to the CITY, all required roadway improvements in accordance with the Governing Regulations. In addition to complying with the CITY'S ordinance and standards, the OWNER shall also comply with TxDOT's standards and specifications when the roadway improvements are being made on, along, about, or to TxDOT roadways. In the event of a conflict between the CITY'S requirements and TxDOT's requirements the OWNER shall comply with the more

stringent of those requirements. Median landscaping shall be provided at CITY'S request in accordance with plans approved by the CITY; however if CITY does not request installation during roadway construction, the OWNER shall pay median landscaping fees in accordance with the then existing fee schedule. If median landscaping is provided to an above-CITY standard, maintenance costs shall be paid by a homeowners association (to the extent permitted by law) or otherwise by the OWNER; and if paid by a homeowners association, the provisions of the association documents that provide for such payment shall be approved by the CITY, which approval shall not be unreasonably withheld or delayed. Any obligation of OWNER or a homeowners association for maintenance costs under this Section shall continue beyond the Term of this Agreement unless otherwise terminated by mutual written agreement of CITY and the obligated party.

d. Utility Easement Dedication

The OWNER shall dedicate to the CITY, at no cost to the CITY, that amount of easement across the Property as deemed necessary by the CITY Engineer to facilitate the construction of water and wastewater utilities as shown on the GDP and as approved by the CITY Engineer. The final locations and alignment of easement dedications shall be consistent with the CITY'S Master Plans and as approved by the CITY Engineer. In addition and at the time of platting, OWNER shall dedicate to the CITY a 15' waterline easement across School Site at a location generally along the northern boundary of said School Site.

e. Utility Plan Approval

All final utility plans and improvements are subject to the approval of the CITY Engineer, and all utility lines shall be constructed of materials of a quality and grade meeting at least the minimum standards specified by the Governing Regulations. Upon approval of all utility construction plans for the Property by the CITY Engineer, or his designee, the OWNER may develop in accordance with such approved plans.

f. Utility Construction

The OWNER shall construct, at his sole cost, all necessary utility lines in accordance with the Governing Regulations. No septic systems shall be permitted. **All water and sewer lines shown on Exhibit A-1 and identified on Exhibit A-2 shall be constructed before or simultaneous with the horizontal construction of Phase I of the Southern 655 Lots. Phase I of the Southern 655 Lots shall not**

exceed 212 residential lots. No building permit shall issue for any structure in Phase I or for any retail structure on the Property prior to (1) the acquisition of all easements required to construct all utility lines shown on Exhibit A-1 and identified on Exhibit A-2, and (2) the construction and activation, to online status, of a Pressure Relief Valve ("PRV"), to CITY'S specifications, as described in that certain Engineering Services Agreement dated March 28, 2013, between Birkhoff, Hendricks & Conway, L.L.P. and Petsche & Associates, Inc. (the "Birkhoff Study") attached hereto as Exhibit E. The OWNER further agrees that not more than 655 single family residential permits, located anywhere within the Property, shall be issued until the Bloomdale pump station is constructed and on-line (which the PARTIES agree will not be before 2018). The CITY agrees to complete construction of the PRV (at its cost and expense; however only if the PRV is funded in the CITY'S 2013-14 annual budget) no later than September 30, 2014. If the PRV is not funded in the CITY'S 2013-14 annual budget, the OWNER shall have the right to advance the funds to the CITY for such construction, whereupon the CITY will complete construction of the PRV no later than September 30, 2014, and will reimburse the OWNER for such advance no later than five (5) years from the date of CITY'S receipt of such advanced funds.

g. Hike and Bike Trail.

The OWNER shall, at no cost to the CITY, dedicate the easement or right-of-way for and construct all required concrete hike and bike trail improvements (with a concrete surface of at least ten (10') feet in width) shown on the GDP, including connectivity to school sites and the Park Site (hereinafter defined) within the Property. Hike and bike trail construction plans must be approved by the CITY'S Parks Director or his agent prior to approval of a Development Permit for any portion of the Property being developed. In addition, OWNER shall acquire and dedicate an off-site easement for the connection of the hike and bike trail, shown on the GDP, to the City's Master hike and bike trail, located generally along the railroad right-of-way and shown on Exhibit A-1. The easement shall be either parallel to or included within the off-site water line easement shown on Exhibit A-1. OWNER shall fund the construction of the off-site hike and bike trail by payment to the City of the estimated cost of the hike and bike trail at the earlier of a) the first payment of eminent domain costs as described in Section J.13 (e), or b) the acquisition of all easements identified on Exhibit A-2. CITY shall construct the offsite hike and bike trail in conjunction with its construction of the Master hike and bike trail.

h. School Site Turn Lane. Concurrently with the construction of improvements to CR 278 (and in addition to the two drive lanes totaling 24.5 feet in width), the OWNER shall construct a third asphalt lane twelve (12') feet wide along the frontage adjacent to the north side of the school site to provide a left turn lane into the school site and/or into the north/south collector adjacent to the west side of the school site, in conformance with the graphic attached hereto as Exhibit C-1.

3. PARKLAND DEDICATION

Upon the CITY'S request in writing (but not before construction of structures begins within that portion of the Property located north of the un-named east/west arterial roadway shown on the GDP and Site Plan), the OWNER shall dedicate a park site of not less than 9 acres suitable for park development and generally in the location shown on Exhibit A-1 (the "Park Site"). OWNER may construct a privately-owned and maintained amenity center adjacent to the Park Site so long as the Park Site retains not less than 300' of roadway frontage and the driveway spacing of the drives into the Park Site, amenity center and the School Site conform to the spacing requirements of Section 5.3 of the CITY'S street design manual. The use of the Park Site in connection with the amenity center shall be subject to the CITY approval. Conveyance of the Park Site shall satisfy any existing or future parkland dedication requirement or payment in lieu requirements that might otherwise be applicable to the development of the Property. If the dedication is requested by the CITY, the OWNER shall provide any necessary roadway, utility, and other public improvements to the Park Site within six (6) months after the request, but in no event shall the OWNER deliver the deed prior to the completion of such roadway, utility, and other public improvements. Upon request to and consent by the CITY, the OWNER may elect to fund park improvements the design and layout of which have been approved by the CITY, in which case the CITY and the OWNER shall enter into a funding/reimbursement agreement governing the construction of such improvements. The CITY will cooperate with the OWNER to take advantage of the rollback tax exemption that is applicable to the transfer of the Park Site to the CITY to be used for public purposes as provided by Section 23.55 of the Tax Code, as amended.

a. The Park Site shall be shown on the plat of the Property as a fee simple conveyance to the CITY and shall be conveyed to the CITY, at no cost to the CITY, by Special Warranty Deed free of all liens and encumbrances, save and except the encumbrances affecting the Property at the time the OWNER acquired the Property. The OWNER shall also provide the CITY with an owner's title policy of insurance in an amount equal to the value of the land according to the Collin County Central Appraisal District for the applicable tax year.

b. The OWNER shall also be responsible for, and shall pay the costs of, providing access by improved streets and sidewalks, and providing adequate drainage improvements so that the Park Site is suitable for the purpose intended, and shall provide water, sewer and electrical utilities to the Park Site in accordance with the procedures applicable to other public improvements as specified in the Governing Regulations.

c. The Park Site shall be left in its natural state (including agricultural uses such as farming and grazing) unless previously agreed otherwise in writing by the CITY'S Director of Parks and Recreation. In addition, the Park Site shall not be used to provide topsoil for the development of the Property. Further, the Park Site shall not be used for construction staging and/or storage or the operation and parking of vehicles. The Park Site shall not be used for the relocation of dirt from the Property or for fill unless the Park Site must be altered for health and safety concerns and the placement of fill on the Park Site is previously agreed to in writing by the CITY'S Director of Parks and Recreation.

4. AVAILABILITY OF WATER AND WASTEWATER SERVICE IN THE FUTURE

The CITY makes no guarantee that water supply or wastewater treatment capacity will be available at any particular time or place, it being fully understood by the PARTIES hereto that the ability of the CITY to supply water and wastewater services is subject to its contract with the North Texas Municipal Water District, a governmental agency and body politic and corporate, hereinafter referred to as "NTMWD", and that this Agreement will only allow utilization of the CITY'S water and wastewater system capacity when and if capacity is present and available from the NTMWD. Notwithstanding the foregoing, the CITY will supply the development on the Property with water supply and wastewater treatment capacity if such capacity is present and available from NTMWD. The CITY shall be the sole judge of the availability of such capacity of water supply and/or wastewater services, provided, however, that the CITY will attempt to insure that said water supply and wastewater treatment capacity is available. In the event water supply and/or wastewater services are not available from NTMWD to serve the needs

of the CITY, including the Property, water supply and/or wastewater services will be made available to the Property, according to the CITY'S Water Master Plan, and otherwise in a manner that fairly allocates the available water supply and/or wastewater services to all similarly-situated customers of the CITY.

5. GOVERNING REGULATIONS CONTROL; CONFLICTS

The OWNER shall develop the Property in accordance with the Governing Regulations. The OWNER expressly acknowledges that by entering into this Agreement, the OWNER, its successors, assigns, vendors, grantees, and/or trustees, shall not construe any language contained herein or in any exhibits attached hereto as waiving any of the requirements of the Governing Regulations, except where expressly set out herein. In the event of a conflict between: (a) any of the GDP, the Residential Architectural Standards, the tree preservation standards in Ordinance 06-10-115 (as applied to the Southern 655 Lots), the land use regulations in Section 146-84, the Record Plat, or the Site Plan; and (b) any of the other Governing Regulations, as amended pursuant to this Agreement, any ordinances that do not regulate the development of the Property, and any ordinances the CITY is otherwise authorized to enforce pursuant to this Agreement (including the CITY'S environmental regulations); the provisions of the Governing Regulations described in Subsection (a) of this Section 5 shall control. Notwithstanding any other provision of this Agreement to the contrary, in the event of a conflict between the Governing Regulations and any zoning ordinance adopted by the CITY zoning the Property upon or after annexation, the Governing Regulations shall control. In the event of a conflict between the provisions of this Agreement and any provision of the Governing Regulations, the provisions of this Agreement shall control.

6. TREE MITIGATION ORDINANCES

The OWNER shall develop the Southern 655 Lots and all property south of the unnamed east-west arterial under McKinney Ordinance No.06-10-115. The OWNER shall develop the remainder of the Property under the McKinney Code Section 146-136, including any amendments thereto from time to time.

7. PRO-RATA FEES

Off-site water and sewer facilities may be subject to either pro rata payments paid to third parties or reimbursements collected from third parties in accordance with CITY Ordinances. For any applicable off-site facilities in place as of the date of the OWNER'S development of the Property, the OWNER shall be responsible to pay applicable pro-rata fees in the amount of one-half (½) of the actual construction and engineering costs of up to a twelve-

inch (12") diameter pipe if off-site facilities have been constructed adjacent to the Property by the CITY or any other party prior to the date hereof and the OWNER utilizes such facilities for the Property. If, however, the water or sewer facilities are bounded on both sides by the Property then the OWNER shall be responsible to pay applicable pro-rata fees in the full amount of the actual construction and engineering costs of up to a twelve-inch (12") diameter pipe if the OWNER utilizes such facilities. **The OWNER shall receive no pro-rata fees from third-parties for its construction of off-site water and sewer facilities under this Agreement, and as such, the OWNER hereby waives any rights to such fees.**

The OWNER shall not be required to pay pro-rata fees for any major transmission line(s) that may be constructed upon, through, under, across or adjacent to the Property that merely transport(s) water or wastewater to or from a treatment facility and to which line(s) the OWNER is not permitted any right to tap or tie into.

8. WAIVER OF ROADWAY AND UTILITY IMPACT FEES

In consideration of the OWNER'S construction of offsite roadway improvements and oversized infrastructure improvements, the CITY grants to the OWNER a credit against all impact fees (whether now existing or hereafter adopted and including, but not limited to, water, wastewater, and roadway impact fees) for 859 single family lots and approximately 7.51 acres of retail uses (developed under the uses allowed in the BN – Neighborhood Business District zoning classification and without limitation as to floor area ratio) within the Property. Any additional lots or other retail uses on more than 7.51 acres shall trigger either a proportionality fee for such additional lots or retail acreage or the imposition of impact fees for such lots and retail acreage in the event the development of such additional lots or retail acreage occurs after annexation. Any payment of impact fees under the foregoing sentence shall be paid at the then current fees. The OWNER waives any rights to reimbursement of impact fee credits or the value of infrastructure constructed in lieu of the payment of impact fees under this Section.

9. REMEDIES; WAIVER OF RIGHT OF TERMINATION

a. If the OWNER fails to comply with any provision of this Agreement and such failure is not cured within 30 days after notice from the CITY to the OWNER (a "Default"), the CITY may initiate an action for specific enforcement of this Agreement and, in addition, may (1) refuse to issue any new development or building permits (whether for structures or public infrastructure) within the portion of the Property affected by the Default, and (2) suspend development permits and building permits (whether for

structures or public infrastructure) already issued within the portion of the Property affected by the Default.

b. If the OWNER is in Default of an obligation to construct public infrastructure under this Agreement and the CITY constructs all or any portion of such public infrastructure, then in addition to any other remedies available to the CITY, the CITY shall have the right, upon not less than 30 days' prior notice to the OWNER, to file in the deed records of Collin County, Texas, a contractual lien, which lien is hereby granted by the OWNER to the CITY, against the portion of the Property owned by the OWNER and to which the Default applies to secure payment of the costs and expenses paid or incurred by the CITY in completing such construction. The right of the CITY under this Section J.9 (b) to file a contractual lien does not apply to a lot in a filed record plat owned by a third-party builder unrelated to a defaulting OWNER or owned by an "end buyer". Upon written request of the OWNER, the CITY shall execute partial releases of its lien and assessment rights under this Section J.9 (b) for any lot owned by the OWNER if (1) there is no then existing default under this Agreement and (2) the lot is located in a filed, record plat. Prior to or simultaneously with the filing of this Agreement in the Deed Records of Collin County, Texas, the OWNER shall obtain and file a subordination agreement from any lender holding any lien, mortgage, or encumbrance on the Property, after which this Agreement shall have a first priority over liens and encumbrances on the Property. The subordination agreement shall require the CITY to give such lenders written notice of any Default by the OWNER and a 30-day opportunity to cure the Default.

c. If the OWNER is in Default of an obligation to construct public infrastructure under this Agreement and the CITY constructs all or any portion of such public infrastructure, then in addition to any other remedies available to the CITY, the CITY shall have the right, upon not less than 30 days' prior notice to the OWNER, to levy an assessment against the portion of the Property owned by the OWNER and which the Default affects to recover the costs and expenses paid or incurred by the CITY in completing such construction. The right of the CITY under this Section J.9 (c) to levy an assessment does not apply to a lot in a filed record plat owned by a third-party builder unrelated to the defaulting OWNER or owned by an "end buyer".

d. Waiver of Right of Termination. No default by any PARTY to this Agreement shall entitle any other PARTY to terminate this Agreement; and each PARTY expressly and unconditionally waives its rights to terminate this Agreement for any reason.

10. RELATIONSHIP TO ROADWAY AND SEWER/WATER IMPACT FEES AND WAIVER OF CLAIMS

The OWNER has been represented by legal counsel in the negotiation of this Agreement and been advised, or has had the opportunity to have legal counsel review this Agreement and advise the OWNER, regarding the OWNER'S rights under Texas and federal law. The OWNER hereby waives any requirement that the CITY retain a professional engineer, licensed pursuant to Chapter 1001 of the Texas Occupations Code, to review and determine that the exactions required by the CITY as a condition of approval for the development of the Property are roughly proportional or roughly proportionate to the proposed development's anticipated impact. These exactions may include but are not limited to the making of dedications or reservations of land, the payment of fees, the construction of facilities, and the payment of construction costs for public facilities. The OWNER specifically reserves its right to appeal the apportionment of municipal infrastructure costs in accordance with Tex. Loc. Gov't Code § 212.904. However, notwithstanding the foregoing, the OWNER hereby releases the CITY from any and all liability under Tex. Loc. Gov't Code § 212.904 regarding or related to the cost of those municipal infrastructure improvements required for the development of the Property.

It is the intent of this Agreement that the provision for roadway and utility improvements made herein constitutes a proportional financial allocation of the OWNER'S responsibility for roadway and utility improvements for the Property and that the financial contribution, including the waiver of impact fees and correlative in-kind construction of improvements made by the OWNER pursuant to the Agreement, are necessary and attributable to development of the Property. The financial obligation of the OWNER to construct roadway and utility infrastructure herein set forth shall relieve the OWNER of any obligation for roadway and water/sewer impact fees for the Property unless impact fees are applicable to this Property, or as otherwise provided herein above. The OWNER further waives any statutory or state constitutional takings claims under the Texas Constitution and Chapter 395 of the Tex. Loc. Gov't. Code, any federal constitutional claims, and any claims for reimbursement under any existing or future impact fee ordinances of the CITY of McKinney to the extent such claims are based on the OWNER'S dedication, construction, or payment obligations under this Agreement. The OWNER further releases the CITY from any and all claims based on excessive or illegal exactions; it being agreed that the amount of the OWNER'S infrastructure contribution is roughly proportional to the

demand that is placed on the CITY'S roadway and utility systems by the OWNER'S development. The OWNER further acknowledges that the benefits of annexation, zoning and platting have been accepted with full knowledge of potential claims and causes of action which may be raised now and in the future, and the OWNER acknowledges the receipt of good and valuable consideration for the release and waiver of such claims. THE OWNER, INCLUDING ANY GRANTEE, RELEASES THE CITY FROM ANY CLAIMS AND SUITS BY THE OWNER BROUGHT SOLELY PURSUANT TO THIS AGREEMENT AND/OR ASSERTING THE CLAIMS OR TYPES OF CLAIMS DESCRIBED IN THIS SECTION 10. THE OWNER, INCLUDING ANY GRANTEE, SHALL INDEMNIFY AND HOLD HARMLESS THE CITY FROM AND AGAINST ANY CLAIMS AND SUITS BY ANY AFFILIATES OF THE OWNER BROUGHT SOLELY PURSUANT TO THIS AGREEMENT AND/OR ASSERTING THE CLAIMS OR TYPES OF CLAIMS DESCRIBED IN THIS SECTION 10. IF THE OWNER FAILS TO GIVE THE NOTICE REQUIRED BY SECTION I OF THIS AGREEMENT, THE INDEMNIFICATION PROVIDED BY THE PRECEDING SENTENCE SHALL INCLUDE CLAIMS AGAINST THE CITY THAT ARE BROUGHT BY THIRD-PARTY SUCCESSORS AND GRANTEES OF THE OWNER SOLELY PURSUANT TO THIS AGREEMENT AND/OR ASSERTING THE CLAIMS OR TYPES OF CLAIMS DESCRIBED IN THIS SECTION 10.

11. TERMINATION AND RELEASE

Upon satisfactory completion by the OWNER and final acceptance by the CITY of all requirements of this Agreement, this Agreement shall terminate and the CITY will execute a release of covenant to the OWNER, its successors, assigns, grantees, vendors, trustees, representatives, and all others holding any interest now or in the future. This Agreement shall not terminate until the requirements of all PARTIES have been fulfilled.

12. MAINTENANCE BOND

Prior to final acceptance of the public improvements to the Property, the OWNER shall furnish to the CITY a good and sufficient maintenance bond in the amount of fifteen percent (15%) of the contract price of such public improvements, or in such amount as approved by the CITY Engineer, with a reputable and solvent corporate surety, in favor of the CITY, to indemnify the CITY against any repairs arising from defective workmanship or materials used in any part of the construction of the public improvements to the Property, for a period of at least two (2) years from the date of final acceptance of such public improvements.

13. GENERAL PROVISIONS

a. The OWNER agrees that construction shall not begin on any proposed improvements to the Property prior to CITY Council approval of this Agreement.

b. The OWNER agrees that all coordination required with public and/or private utility agencies to eliminate conflicts with proposed street grades or underground improvements shall be the responsibility of the OWNER. Likewise, coordination with agencies requiring special conditions (i.e., railroads and the Texas Department of Transportation) shall be the responsibility of the OWNER.

c. Except as provided in this Section J.13 (c), this Agreement does not constitute a "permit" under Section 43.002(a) (2), Section 212.172(g), and Chapter 245 of the Texas Local Government Code, and no "rights" are vested by this Agreement. Notwithstanding the foregoing, this Agreement is a "permit" under Chapter 245, Texas Local Government Code, for the sole purpose of Section 245.006, "Enforcement of Chapter". The PARTIES intend that the OWNER may enforce this Agreement under Chapter 245 as provided in Section 245.006(a) relying on the waiver of immunity provided in Section 245.006(b).

d. Save and except to the extent specifically stated herein to the contrary, the Property shall be developed in accordance with the Governing Regulations.

e. Eminent Domain; Condition to Annexation.

(1) The CITY agrees to use its eminent domain authority, upon written request by the OWNER, to the extent permitted by law to acquire all offsite right-of-way and easements described in this Agreement. The OWNER shall pay all costs and expenses, whether incurred by the CITY or otherwise, in connection with such eminent domain actions and acquisition of such right-of-way and easements including, but not limited to, settlements, court awards, damages, interest, expert witness fees, mediation fees, attorney's fees, staff time/costs, deposition costs, copy charges, courier fees, postage and taxable costs of court. From time to time and upon ten (10) days after written or electronic notice from the CITY, including the CITY Attorney, the OWNER shall advance, by wire transfer, funds to the CITY to pay such costs and expenses. Each such notice to the OWNER shall itemize, in reasonable detail, the purposes (as described above) for which the funds are required, including the estimated, line-item costs. The CITY shall undertake all eminent domain

actions in accordance with SB 18, wherein the CITY shall have the right to make the necessary determinations of which interests are necessary for public use. If it is determined by a Court of competent jurisdiction that an interest to be acquired does not constitute public use, the CITY shall have no obligation to continue acquisition thereof, and Developer shall have the continuing obligation to comply with this Paragraph. The CITY shall provide to the OWNER copies of all appraisal reports, including updates, if any, at least 30 days prior to all offers being made to landowners. The CITY shall also provide to the OWNER prior notice of the attorneys, appraisers, and other consultants that the CITY will engage to assist the CITY in connection with the acquisitions. The CITY shall provide to the OWNER a monthly accounting of all costs and expenses paid or incurred by the CITY in connection with this Section J.13 (e). OWNER'S default in payment of any advance requested under this Section J.13 (e) shall provide CITY the immediate right to cease any actions or efforts to acquire right-of-way or easements until full payment is actually received.

f. Notwithstanding any provision of this Agreement that authorizes the CITY to annex the Property, such annexation by the CITY shall be expressly conditioned upon the acquisition of all offsite right-of-way and easements required for the OWNER to perform its off-site construction obligations under this Agreement. The CITY agrees to use its best efforts to acquire such offsite right-of-way and easements as soon as reasonably possible (in a form that will allow the OWNER to award contracts and begin construction) with a goal of completing acquisition within two (2) years after the OWNER has provided the CITY with all preliminary engineering plans, including drawings and metes and bounds descriptions, that identify the offsite right-of-way and easements.

g. Upon written request of the OWNER (and at the OWNER'S expense), the CITY shall execute an estoppel certificate or like-kind document addressed to the entity identified in the OWNER'S request confirming or qualifying appropriately that, if true, upon reasonable inspection there are no defaults or acts or omissions by the OWNER which with the passage of time or giving of notice will become an event of default under this Agreement, confirming the status of commencement and completion of obligations under this Agreement, and confirming the number of impact fee credits taken and remaining under this Agreement.

K. AGREEMENT TO ACT AS PETITION FOR VOLUNTARY ANNEXATION

THE OWNER AND ALL FUTURE OWNERS OF THE PROPERTY (INCLUDING END-BUYERS) AND DEVELOPERS IRREVOCABLY AND UNCONDITIONALLY CONSENT TO THE FULL PURPOSE ANNEXATION OF THE PROPERTY INTO

THE CORPORATE LIMITS OF THE CITY IN ACCORDANCE WITH THIS AGREEMENT AND WAIVE ALL OBJECTIONS AND PROTESTS TO SUCH ANNEXATION. THIS AGREEMENT SHALL SERVE AS THE PETITION OF THE OWNER AND ALL FUTURE OWNERS AND DEVELOPERS TO FULL PURPOSE ANNEXATION OF THE PROPERTY IN ACCORDANCE WITH THIS AGREEMENT.

L. CONTINUITY

This Agreement shall be a covenant running with the land, be recorded in the real property records of Collin County, Texas, and be binding upon the OWNER, its successors, heirs, assigns, grantees, vendors, trustees, representatives, and all others holding any interest in the Property now or in the future.

M. NOTICES

All Notices shall be in writing, shall be signed by or on behalf of the PARTY giving the Notice, and shall be effective as follows: (a) on or after the 3rd business day after being deposited with the United States mail service, Certified Mail, Return Receipt Requested with a confirming copy sent by FAX; (b) on the day delivered by a private delivery or private messenger service (such as FedEx or UPS) as evidenced by a receipt signed by any person at the delivery address (whether or not such person is the person to whom the Notice is addressed); or (c) otherwise on the day actually received by the person to whom the Notice is addressed, including, but not limited to, delivery in person and delivery by regular mail or by E-mail (with a confirming copy sent by FAX). All Notices given pursuant to this section shall be addressed as follows:

To the OWNER:
PCB Properties, LLC
5307 E. Mockingbird, Suite 200
Dallas, Texas 75206
Fax: (214) 584 2416

To the CITY:
City of McKinney
Attn: City Manager
P.O. Box 517
222 N. Tennessee Street
McKinney, Texas 75069
Fax: (___) ___-____

The PARTIES will have the right from time to time to change their respective addresses upon written notice to the other PARTY given as provided above. If any date or notice period described in this Agreement ends on a Saturday, Sunday or legal holiday, the applicable period for calculating the Notice will be extended to the first business day following such Saturday, Sunday or legal holiday.

N. ENTIRE AGREEMENT

This Agreement constitutes the entire Agreement between the PARTIES relative to the subject matter hereof. There have not been and are no agreements, covenants, representations or warranties among the PARTIES, either oral or written, relative to such subject matter other than those expressly stated or provided for herein.

O. PARTIES BOUND/PROPERTY BENEFITED

This Agreement shall be binding upon and inure to the benefit of the authorized successors and/or assigns of the PARTIES. The PARTIES hereto acknowledge that each has entered into this Agreement willingly and that each PARTY has equal bargaining powers. Neither PARTY has been coerced or has acted under duress.

P. AMENDMENT

This Agreement may be amended or modified only by written instrument executed by the PARTIES.

Q. APPLICABLE LAW; VENUE

This Agreement is entered into pursuant to, and is to be construed and enforced in accordance with, the laws of the State of Texas, and all obligations of the PARTIES are performable in Collin County. Exclusive venue for any action to enforce or construe this Agreement shall be in the Collin County District Court.

R. SUBSEQUENT CHANGE IN ANNEXATION LAW NOT APPLICABLE

No subsequent change in the law regarding annexation shall affect the enforceability of this Agreement or the CITY'S ability to annex the Property covered herein pursuant to the terms of this Agreement.

S. INVALID PROVISION

Any clause, sentence, provision, paragraph or article of this Agreement held by a court of competent jurisdiction to be invalid, illegal or ineffective shall not impair, invalidate or nullify the remainder of this Agreement, and the remainder of this Agreement shall be construed as if such invalid, illegal or ineffective provision had never been contained herein. If a court of competent jurisdiction determines that any covenant regarding involuntary annexation is void or unenforceable the remainder of this Agreement shall remain in full force and effect.

T. OTHER INSTRUMENTS AND APPROVALS

The PARTIES agree to execute and deliver all such instruments and documents as are or may become reasonably necessary or convenient to effectuate and carry out the purposes of this Agreement.

U. NO WAIVER

This Agreement may be enforced by any OWNER or the CITY by any proceeding at law or in equity. Failure to do so shall not be deemed a waiver to enforce the provisions of this Agreement thereafter. Furthermore, no consent or waiver, expressed or implied, by either PARTY to this Agreement to or of any default of any covenant or provision hereof by either PARTY shall be construed as a consent or waiver to or any other default of the same or any other covenant or provision.

V. ASSIGNMENT

(a) This Agreement may be assigned one (1) time, in its entirety and without the consent of the CITY, by PCB Properties, LLC ("PCB") to any entity to which PCB sells all of the Property (the "Purchaser"). The assignment must be in writing, must bind the Purchaser to perform and assume all duties and obligations of the OWNER under this Agreement, and must include a release by PCB of any claims it may have against the CITY arising from or related to this Agreement or otherwise arising from or related to the Property. Upon delivery to the CITY of a copy of such assignment, PCB shall be unconditionally and irrevocably released from any and all duties and obligations of the OWNER under this Agreement, and the CITY shall look to the Purchaser for the performance of all duties and obligations of the OWNER under this Agreement. In addition, upon delivery to the CITY of a copy of such assignment, the CITY shall be deemed to have released PCB from any claims the CITY may have against PCB arising from or related to this Agreement or otherwise arising from or related to the ownership or development of the Property or otherwise arising from or related to the performance or non-performance by the Purchaser of its duties and obligations as the OWNER under this Agreement.

(b) Except as provided in Subsection (a) above, this Agreement shall not be otherwise assignable by the OWNER without the prior written consent of the CITY, and such consent shall not be unreasonably withheld, conditioned, or delayed.

(c) An assignee approved or authorized in accordance with this Agreement shall be considered a "PARTY" for the purposes of this Agreement.

W. COUNTERPART ORIGINALS

This Agreement may be executed in multiple counterpart originals, each of which shall have equal dignity and effect.

X. NO THIRD-PARTY BENEFICIARIES

This Agreement only inures to the benefit of, and may only be enforced by, the PARTIES. No other person or entity shall have any right, title, or interest under this Agreement or otherwise be deemed to be a third-party beneficiary of this Agreement.

CITY OF McKINNEY

By: _____
JASON GRAY By Rob Daake, Deputy City Manager
City Manager and authorized signatory

Date Signed: 7-11-13

ATTEST:

Sandy Hart 7/2/13

SANDY HART, TRMC, MMC
City Secretary

BLANCA I. GARCIA
Assistant City Secretary

CITY OF McKINNEY TEXAS COLLIN COUNTY, TEXAS

OWNER:

PCB PROPERTIES, LLC
a TEXAS limited liability corporation,

By: Anthony Levatino
Name: Anthony Levatino
Title: President
Date Signed: 04.26.2013

THE STATE OF TEXAS §
COUNTY OF COLLIN §

Rob Daake, Deputy

BEFORE ME, the undersigned authority, in and for said County, Texas, on this day personally appeared ~~JASON GRAY~~, City Manager of the City of McKinney, a Texas Municipal Corporation, known to me to be the person who's name is subscribed to the foregoing instrument, and acknowledged to me that he has executed the same on the CITY'S behalf.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS 11th DAY OF July 2013.

MONA B. ROBINSON
Notary Public
STATE OF TEXAS
My Comm. Exp. 08/14/2013

Mona B. Robinson
Notary Public Collin County, Texas
My commission expires 8-14-2013

THE STATE OF TEXAS,
COUNTY OF Dallas

This instrument was acknowledged before me on this day by Antony Levatino, in his capacity as President of PCB PROPERTIES, LLC, a Texas limited liability corporation, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same on behalf of and as the act of the Limited Partnership.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS 26 DAY OF April 2013.

ELYCE ELLINGTON
Notary Public, State of Texas
My Commission Expires
May 04, 2014

Elyce Ellington
Notary Public Dallas County, Texas
My commission expires 5-4-14

EXHIBIT A

DESCRIPTION OF PROPERTY

OWNER'S CERTIFICATE

STATE OF TEXAS)

COUNTY OF COLLIN)

WHEREAS, McKINNEY-WILLOW WOOD, L.P., a Texas limited partnership, is the owner of that certain tract of land situated in the ABNER SMALLEY SURVEY, ABSTRACT NUMBER 864, the POLLY A. BOONE SURVEY, ABSTRACT NUMBER 1048, the JOHN HART SURVEY, ABSTRACT NUMBER 423 and the MANNING CLEMMENTS SURVEY, ABSTRACT NUMBER 224, in Collin County, Texas, being a portion of McKINNEY WILLOW WOOD, L.P., 187.437 acres, as described in Special Warranty Deed from MCKINNEY ETJ VENTURE, L.P., a Texas limited partnership, to McKINNEY WILLOW WOOD, L.P., a Texas limited partnership, as filed for record under Clerk's File Number 20070417000515690 of the Land Records of Collin County, Texas, and all of McKINNEY-WILLOW WOOD, L.P., 119.154 acres, as described in Special Warranty Deed from SAMI EL CHAMI and DEBBIE EL CHAMI, to McKINNEY-WILLOW WOOD, L.P., a Texas limited partnership, as filed for record under Clerk's File Number 20081122001662060 of the Land Records of Collin County, Texas, being more particularly described by metes and bounds as follows:

BEGIN at a PK Nail & Disc (PETSCHE & ASSOC., INC.) set for corner in the center of COUNTY ROAD 278 at the northwest corner of the tract of the land described in Warranty Deed to R. E. AYCOCK, JR., and spouse BARSHIA AYCOCK, as filed for record in Volume 5432, Page 6904 of the Land Records of Collin County, Texas, said corner being the true northeast corner of said WILLOW WOOD, L.P. 187.437 acres;

THENCE S06°20'12"W, along the true east boundary of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, and the west boundary of said AYCOCK tract, at 30.17 feet pass a 1/2" capped iron rebar (RPLS 5392) found for witness corner, at 1640.73 feet pass a 1/2" capped iron rebar (RPLS 5392) found for corner at the southwest corner of said AYCOCK tract and the northeast corner of the tract of land described in Warranty Deed to LEE A. BROCK and wife SARA A. BROCK AND RODNEY N. DOYLE and wife APRIL DOYLE, as filed for record in Volume 5875, Page 3172 of the Land Records of Collin County, Texas, continuing in all a distance of 2353.47 feet to a 1/2" iron rebar found for corner at an angle point in the east boundary of said McKINNEY WILLOW WOOD, L.P. 187.437 acres, and the west boundary of said BROCK & DOYLE tract;

THENCE S00°30'00"W, continuing along the east boundary of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, and the west boundary of said BROCK & DOYLE tract, a distance of 1723.18 feet to a 1/2" capped iron rebar (RPLS 5392) found for corner at an angle point in the easterly boundary of said WILLOW WOOD, L.P., 187.437 acres, said corner also being the northwest corner of the land reserved by the RESOLUTION TRUST CORPORATION (RTC) out of TRACT ONE of the land described in Special Warranty Deed to GEORGE D. GROGAN, as filed for record under Clerk's File No. 93-0004692 of the land Records of Collin County, Texas;

THENCE S43°48'22"W, along the southeasterly boundary of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, and the northwesterly boundary of said RTC tract, a distance of 527.30 feet to a 1/2" capped iron rebar (RPLS 5392) found for corner at the southerly most southeast corner of said McKINNEY-WILLOW WOOD, L.P., 187.437 acres, and the southwest corner of the land reserved by the RTC, said corner also being on a north boundary of said TRACT ONE;

THENCE N78°34'19"W, along the south boundary of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, and along a north boundary of said TRACT ONE, a distance of 74.35 feet to a 1/2" iron rebar found for corner at the southerly most southwest corner of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, and the northerly most southeast corner of said McKINNEY-WILLOW WOOD, L.P., 119.154 acres;

THENCE N77°22'28"W, along a southerly boundary of said McKINNEY-WILLOW WOOD, L.P., 119.154 acres, and continuing along a north boundary of said TRACT ONE, a distance of 326.52 feet to a 1/2" iron rebar found for an ell corner;

THENCE S01°04'32"W, along an east boundary of said McKINNEY-WILLOW WOOD, L.P., 119.154 acres, and a west boundary of said TRACT ONE, a distance of 536.77 feet to a 1/2" capped iron rebar (PETSCHE & ASSOC., INC.) set for corner;

THENCE S43°47'42"W, along the southeast boundary of said McKINNEY-WILLOW WOOD, L.P., 119.154 acres, continuing along a west boundary of said TRACT ONE, a distance of 303.51 feet to a 1/2" iron rebar found for corner;

THENCE N88°20'18"W, along the south boundary of said McKINNEY-WILLOW WOOD, L.P., 119.154 acres, and the southerly most north boundary of said TRACT ONE, a distance of 1310.06 feet to a 1/2" capped iron rebar (PETSCHE & ASSOC., INC.) set for corner;

THENCE N88°40'10"W, continuing along the south boundary of said McKINNEY-WILLOW WOOD, L.P., 119.154 acres, and the southerly most north boundary of said TRACT ONE, a distance of 292.13 feet to a 3/8" iron rebar found for corner;

THENCE in a northwesterly direction, along the southwesterly boundary of said McKINNEY-WILLOW WOOD, L.P., 119.154 acres, the following two (2) courses:

1.) N19°33'25"W, along a distance of 87.30 feet to a 3/8" iron rebar found for corner under 14" elm tree;

2.) N30°06'17"W, a distance of 120.23 feet

to a 3/8" iron rebar set for corner, said corner being on an east boundary of said TRACT ONE;

THENCE N00°41'55"E, along the west boundary of said McKINNEY-WILLOW WOOD, L.P., 119.154 acres, and on east boundary of said TRACT ONE, a distance of 1080.59 feet to a 60d spike found for corner at an ell corner;

THENCE N86°18'31"W, along the northerly most south boundary of said McKINNEY-WILLOW WOOD, L.P., 119.154 acres, and the northerly most north boundary of said TRACT ONE, a distance of 929.44 feet to a 1" smooth steel rod found for corner at the northerly most southwest corner of said McKINNEY-WILLOW WOOD, L.P., 119.154 acres, said corner being at the intersection of an established fence to the north and the east, said corner also being the approximate location of the southwest corner of said ABNER SMALLEY SURVEY;

THENCE N00°41'22"E, along the west boundary of said McKINNEY-WILLOW WOOD, L.P., 119.154 acres, and the westerly most east boundary of said TRACT ONE, a distance of 842.55 feet to a 5/8" capped iron rebar (GEER) found for corner at the northwest corner of said TRACT ONE, said corner also being on the easterly right-of-way line of STATE HIGHWAY NO. 5;

THENCE in a northeasterly direction, along the west boundary of said McKINNEY-WILLOW WOOD, L.P., 119.154 acres, and the easterly right-of-way line of said STATE HIGHWAY NO. 5, the following two (2) courses:

1.) N25°52'15"E, a distance of 445.57 feet to a wood right-of-way monument found for corner;

2.) N20°42'32"E, a distance of 224.08 feet

to a 5/8" capped iron rebar (GEER) found for corner at the northwest corner of said McKINNEY-WILLOW WOOD, L.P., 119.154 acres, said corner also being the southwest corner of the lands owned by PILKINTON, as described in Deeds recorded in Volume 754, Page 104, Volume 687, Page 285, Volume 1236, Page 285, Volume 1263, Page 828, and Volume 783, Page 737, a portion of which was willed to JOAN BRANDON, Probate Docket No. 80-284, all of the land Records of Collin County, Texas;

THENCE in an easterly direction, along the north boundary of said McKINNEY-WILLOW WOOD, L.P., 119.154 acres, and the south boundary of said PILKINTON and BRANDON lands, the following four (4) courses:

1.) S88°40'36"E, a distance of 201.36 feet to a 1/2" iron rebar found for corner;

2.) S88°36'56"E, a distance of 400.06 feet to a 5/8" capped iron rebar (GEER) found for corner;

3.) S89°10'40"E, a distance of 248.34 feet to a 5/8" capped iron rebar (GEER) found for corner;

4.) S89°51'44"E, a distance of 144.96 feet

to a 1/2" iron rebar found for corner at the northeast corner of said McKINNEY-WILLOW WOOD, L.P., 119.154 acres, the southeast corner of said BRANDON land, and the northerly most southwest corner of said McKINNEY WILLOW WOOD, L.P., 187.437 acres;

THENCE N00°28'39"W, along the west boundary of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, and the east boundary of said BRANDON land, a distance of 453.30 feet to a 1" iron pipe found for corner at the northeast corner of said BRANDON land;

THENCE N89°49'28"W, along a south boundary of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, and the north boundary of said BRANDON land, a distance of 238.75 feet to a 14" Elm tree found for corner at the southeast corner of the tract of land described in Special Warranty Deed to BILLY DENSMORE, as filed for record under Clerk's File No. 20070322000386590, of the Land Records of Collin county, Texas;

LEGAL DESCRIPTION: (Continued)

THENCE N00°56'00"W, along a the west boundary of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, and the east boundary of said BILLY DENSMORE tract, at 211.15 pass the southeast corner of the tract of land described in Warranty Deed to BILLY HARRIS, as filed for record under Clerk's File No. 96-0080446 of the Land Records of Collin County, Texas, continuing in all a distance of 272.68 feet to a fence post found for corner;

THENCE N02°35'33"W, continuing along the west boundary of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, and the east boundary of said BILLY HARRIS tract, a distance of 291.07 feet to a 1/2" PK Nail & Disc (PETSCHE & ASSOC., INC.) set for corner at the northeast corner of said HARRIS tract, said corner also being in the center of said COUNTY ROAD 278;

THENCE S73°13'13"W, along a south line of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, the north line of said HARRIS tract and the centerline of said COUNTY ROAD 278, a distance of 56.66 feet to a PK Nail & Disc (PETSCHE & ASSOC., INC.) set for corner;

THENCE N03°27'20"E, along the west boundary of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, and the east boundary of the aforesaid DENSMORE tract, a distance of 242.78 feet to a wood right-of-way monument found for corner at the northerly most corner of said DENSMORE tract on the easterly right-of-way of said STATE HIGHWAY NO. 5;

THENCE N41°45'37"E, along the west boundary of said McKINNEY WILLOW WOOD, L.P. 187.437 acres, and the easterly right-of-way of said STATE HIGHWAY NO. 5, a distance of 32.18 feet to a wood right-of-way monument found for corner at the southwest corner of the land described in Special Warranty Deed to ASAD AHMADI, as filed for record in Volume 5946, Page 1508 of the Land Records of Collin County, Texas;

THENCE S89°53'16"E, along a north boundary of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, and the south boundary of said ASAD AHMADI, a distance of 213.61 feet to a 1/2" Iron rebar found for corner at the southeast corner of said ASAD AHMADI tract and the southwest corner of LOT 1, BLOCK A of the C & F ADDITION, according to the Minor thereof, as file for record in Cabinet O, Page 496 of the Plat Records of Collin County, Texas;

THENCE S89°59'17"E, continuing along a north boundary of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, and the south boundary of said LOT 1, BLOCK A of the C & F ADDITION, a distance of 235.38 feet to a point for corner in the center of an unnamed branch;

THENCE in a northerly direction, along the westerly boundary of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, and with the center of said branch the following twenty (20) courses:

1.) N87°25'02"E, a distance of 89.67 feet to a point for corner;

2.) N07°04'02"E, a distance of 25.10 feet to a point for corner;

3.) N37°17'02"E, a distance of 59.10 feet to a point for corner;

4.) N15°43'58"W, a distance of 57.40 feet to a point for corner;

5.) N56°16'58"W, a distance of 30.60 feet to a point for corner;

6.) N16°59'58"W, a distance of 52.90 feet to a point for corner;

7.) N58°55'02"E, a distance of 63.90 feet to a point for corner;

8.) N42°30'02"E, a distance of 42.50 feet to a point for corner;

9.) N22°57'02"E, a distance of 50.60 feet to a point for corner;

10.) N12°13'02"E, a distance of 47.60 feet to a point for corner;

11.) N25°44'02"E, a distance of 44.50 feet to a point for corner;

12.) N15°59'58"W, a distance of 46.90 feet to a point for corner;

13.) N19°16'02"E, a distance of 39.90 feet to a point for corner;

14.) N58°03'02"E, a distance of 40.10 feet to a point for corner;

15.) N15°53'02"E, a distance of 32.70 feet to a point for corner;

16.) N70°35'02"E, a distance of 74.90 feet to a point for corner;

17.) N34°56'02"E, a distance of 33.70 feet to a point for corner;

18.) S68°37'58"E, a distance of 45.70 feet to a point for corner;

19.) S19°02'02"W, a distance of 30.90 feet to a point for corner;

20.) S70°34'58"E, a distance of 73.93 feet

to a 1/2" capped iron rebar (PETSCHE & ASSOC., INC.) set for corner in the center of said COUNTY ROAD 278;

THENCE in a northeasterly direction, along the westerly boundary of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, and the centerline of said COUNTY ROAD 278, the following six (6) courses:

1.) N26°46'04"E, a distance of 162.07 feet to a PK Nail & Disc (PETSCHE & ASSOC., INC.) set at the point of curvature of a curve having a radius of 525.00 feet and a central angle of 21°46'09";

2.) along the arc of said curve to the right, a distance of 199.47 feet to a 1/2" capped iron rebar (PETSCHE & ASSOC., INC.) set for corner at the point of tangency of said curve;

3.) N48°32'13"E ,a distance of 149.56 feet to a PK Nail & Disc (PETSCHE & ASSOC., INC.) set for corner;

4.) N50°52'00"E, a distance of 127.46 feet to a PK Nail & Disc (PETSCHE & ASSOC., INC.) set for corner;

5.) N56°21'36"E, a distance of 28.39 feet to a PK Nail & Disc (PETSCHE & ASSOC., INC.) set at the point of curvature of a curve having a radius of 350.00 feet and a central angle of 26°05'14";

6.) along the arc of said curve to the right, a distance of 159.36 feet

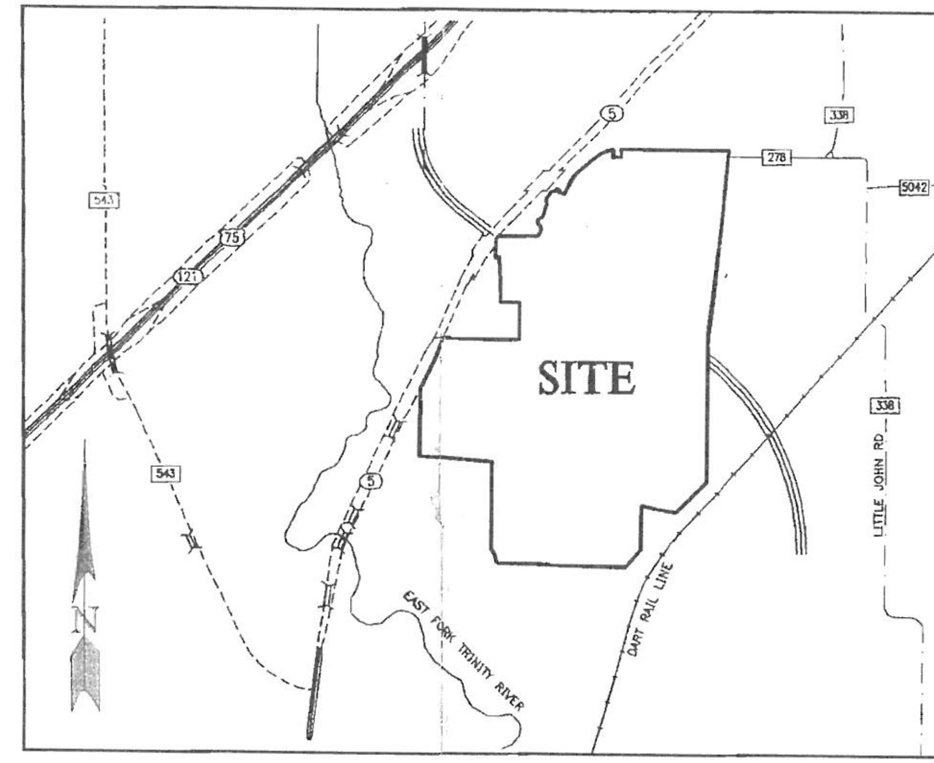
to a PK Nail & Disc (PETSCHE & ASSOC., INC.) set for corner at the northwest corner of the land described in a Deed to NORTH COLLIN WATER SUPPLY CORPORATION, as filed for record in Volume 784, Page 658 of the Land Records of Collin County, Texas;

THENCE S00°23'04"W, along the west boundary of said NORTH COLLIN WATER SUPPLY CORPORATION, as now laid out and in use, a distance of 101.01 feet to a 3/8" iron rebar found for corner at the southwest corner of said NORTH COLLIN WATER SUPPLY CORPORATION;

THENCE S89°36'56"E, along the south boundary of said NORTH COLLIN WATER SUPPLY CORPORATION, as now laid out and in use, a distance of 103.00 feet to a 1/2" capped iron rebar (PETSCHE & ASSOC., INC.) set for corner at the southeast corner of said NORTH COLLIN WATER SUPPLY CORPORATION;

THENCE N00°23'04"E, along the east boundary of said NORTH COLLIN WATER SUPPLY CORPORATION, as now laid out and in use, a distance of 104.37 feet to a PK NAIL & Disc set for corner at the northeast corner of said NORTH COLLIN WATER SUPPLY CORPORATION, said corner also being in the center of said COUNTY ROAD 278;

THENCE S89°36'56"E, along the north boundary of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, and the centerline of said COUNTY ROAD 278, a distance of 1308.33 feet back to the POINT OF BEGINNING and containing 306.591 acres of land, more or less.



NOT TO SCALE

FOR REVIEW PURPOSES ONLY
NOT RECORDED!
USE AT YOUR OWN RISK

REVISED
PLANNING

PRELIMINARY-FINAL PLAT

THE ESTATES OF WILLOW WOOD

AN ADDITION TO COLLIN COUTNY, TEXAS
655 RESIDENTIAL LOTS, 15 COMMON AREAS (1 BEING AN AMENITY CENTER)
1 ELEMENTARY SCHOOL PARCEL , 4 DEVELOPMENT PARCELS
3 RETAIL PARCELS

BEING 306.591 ACRES SITUATED IN
THE ABNER SMALLEY SURVEY, ABSTRACT NUMBER 864,
THE POLLY A. BOONE SURVEY, ABSTRACT NUMBER 1048,
THE JOHN HART SURVEY, ABSTRACT NUMBER 423 AND
THE MANNING CLEMMENTS SURVEY, ABSTRACT NUMBER 224
COLLIN COUNTY, TEXAS.

PREPARED FOR :

McKinney – Willow Wood, L.L.C., General Partner
6514 Tulip Road
Dallas, TEXAS 75230
1-469-879-2511

PETSCHE & ASSOCIATES, INC.
Professional Engineers – Land Surveyors – Development Consultants
2581 Metrocentre Boulevard, Suite 6, West Palm Beach, Florida 33407 (561) 640-3890
2600 Eldorado Parkway, Suite 240, McKinney, Texas 75070 (972) 562-9606

Drawn by:	Date:	SCALE:	JOB NUMBER:	SHEET	OF
PMV	1-23-08		06-224-PF4		
Prepared by: PMV	Checked by: CA7	N/A	06-224	1	8

OWNER'S CERTIFICATE

STATE OF TEXAS }

COUNTY OF COLLIN }

WHEREAS, McKINNEY-WILLOW WOOD, L.P., a Texas limited partnership, is the owner of that certain tract of land situated in the ABNER SMALLEY SURVEY, ABSTRACT NUMBER 864, the POLLY A. BOONE SURVEY, ABSTRACT NUMBER 1048, the JOHN HART SURVEY, ABSTRACT NUMBER 423 and the MANNING CLEMMENTS SURVEY, ABSTRACT NUMBER 224, in Collin County, Texas, being a portion of McKINNEY WILLOW WOOD, L.P., 187.437 acres, as described in Special Warranty Deed from McKINNEY ETJ VENTURE, L.P., a Texas limited partnership, to McKINNEY WILLOW WOOD, L.P., a Texas limited partnership, as filed for record under Clerk's File Number 20070417000515690 of the Land Records of Collin County, Texas, and all of McKINNEY-WILLOW WOOD, L.P., 119.154 acres, as described in Special Warranty Deed from SAMI EL CHAMI and DEBBIE EL CHAMI, to McKINNEY-WILLOW WOOD, L.P., a Texas limited partnership, as filed for record under Clerk's File Number 20061122001662080 of the Land Records of Collin County, Texas, being more particularly described by metes and bounds as follows:

BEGIN at a PK Nail & Disc (PETSCHE & ASSOC., INC.) set for corner in the center of COUNTY ROAD 278 at the northwest corner of the tract of the land described in Warranty Deed to R. E. AYCOCK, JR., and spouse BARSHIA AYCOCK, as filed for record in Volume 5432, Page 6904 of the Land Records of Collin County, Texas, said corner being the true northeast corner of said WILLOW WOOD, L.P. 187.437 acres;

THENCE S06°20'12"W, along the true east boundary of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, and the west boundary of said AYCOCK tract, at 30.17 feet pass a 1/2" capped iron rebar (RPLS 5392) found for witness corner, at 1640.73 feet pass a 1/2" capped iron rebar (RPLS 5392) found for corner at the southwest corner of said AYCOCK tract and the northeast corner of the tract of land described in Warranty Deed to LEE A. BROCK and wife SARA A. BROCK AND RODNEY N. DOYLE and wife APRIL DOYLE, as filed for record in Volume 5675, Page 3172 of the Land Records of Collin County, Texas, continuing in all a distance of 2353.47 feet to a 1/2" iron rebar found for corner at an angle point in the east boundary of said McKINNEY WILLOW WOOD, L.P. 187.437 acres, and the west boundary of said BROCK & DOYLE tract;

THENCE S00°30'00"W, continuing along the east boundary of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, and the west boundary of said BROCK & DOYLE tract, a distance of 1723.18 feet to a 1/2" capped iron rebar (RPLS 5392) found for corner at an angle point in the easterly boundary of said WILLOW WOOD, L.P., 187.437 acres, said corner also being the northwest corner of the land reserved by the RESOLUTION TRUST CORPORATION (RTC) out of TRACT ONE of the land described in Special Warranty Deed to GEORGE D. GROGAN, as filed for record under Clerk's File No. 93-0004892 of the land Records of Collin County, Texas;

THENCE S43°48'22"W, along the southeasterly boundary of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, and the northwesterly boundary of said RTC tract, a distance of 527.30 feet to a 1/2" capped iron rebar (RPLS 5392) found for corner at the southerly most southeast corner of said McKINNEY-WILLOW WOOD, L.P., 187.437 acres, and the southwest corner of the land reserved by the RTC, said corner also being on a north boundary of said TRACT ONE;

THENCE N78°34'19"W, along the south boundary of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, and along a north boundary of said TRACT ONE, a distance of 74.35 feet to a 1/2" iron rebar found for corner at the southerly most southwest corner of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, and the northerly most southeast corner of said McKINNEY-WILLOW WOOD, L.P., 119.154 acres;

THENCE N77°22'28"W, along a southerly boundary of said McKINNEY-WILLOW WOOD, L.P., 119.154 acres, and continuing along a north boundary of said TRACT ONE, a distance of 326.52 feet to a 1/2" iron rebar found for an ell corner;

THENCE S01°04'32"W, along an east boundary of said McKINNEY-WILLOW WOOD, L.P., 119.154 acres, and a west boundary of said TRACT ONE, a distance of 536.77 feet to a 1/2" capped iron rebar (PETSCHE & ASSOC., INC.) set for corner;

THENCE S43°47'42"W, along the southeast boundary of said McKINNEY-WILLOW WOOD, L.P., 119.154 acres, continuing along a west boundary of said TRACT ONE, a distance of 303.51 feet to a 1/2" iron rebar found for corner;

THENCE N88°20'18"W, along the south boundary of said McKINNEY-WILLOW WOOD, L.P., 119.154 acres, and the southerly most north boundary of said TRACT ONE, a distance of 1310.06 feet to a 1/2" capped iron rebar (PETSCHE & ASSOC., INC.) set for corner;

THENCE N88°40'10"W, continuing along the south boundary of said McKINNEY-WILLOW WOOD, L.P., 119.154 acres, and the southerly most north boundary of said TRACT ONE, a distance of 292.13 feet to a 3/8" iron rebar found for corner;

THENCE in a northwesterly direction, along the southwesterly boundary of said McKINNEY-WILLOW WOOD, L.P., 119.154 acres, the following two (2) courses:

1.) N19°33'25"W, along a distance of 87.30 feet to a 3/8" iron rebar found for corner under 14" elm tree;

2.) N30°06'17"W, a distance of 120.23 feet

to a 3/8" iron rebar set for corner, said corner being on an east boundary of said TRACT ONE;

THENCE N00°41'55"E, along the west boundary of said McKINNEY-WILLOW WOOD, L.P., 119.154 acres, and an east boundary of said TRACT ONE, a distance of 1060.59 feet to a 60d spike found for corner at an ell corner;

THENCE N86°18'31"W, along the northerly most south boundary of said McKINNEY-WILLOW WOOD, L.P., 119.154 acres, and the northerly most north boundary of said TRACT ONE, a distance of 929.44 feet to a 1" smooth steel rod found for corner at the northerly most southwest corner of said McKINNEY-WILLOW WOOD, L.P., 119.154 acres, said corner being at the intersection of an established fence to the north and the east, said corner also being the approximate location of the southwest corner of said ABNER SMALLEY SURVEY;

THENCE N00°41'22"E, along the west boundary of said McKINNEY-WILLOW WOOD, L.P., 119.154 acres, and the westerly most east boundary of said TRACT ONE, a distance of 842.55 feet to a 5/8" capped iron rebar (GEER) found for corner at the northeast corner of said TRACT ONE, said corner also being on the easterly right-of-way line of STATE HIGHWAY NO. 5;

THENCE in a northeasterly direction, along the west boundary of said McKINNEY-WILLOW WOOD, L.P., 119.154 acres, and the easterly right-of-way line of said STATE HIGHWAY NO. 5, the following two (2) courses:

1.) N25°52'15"E, a distance of 445.57 feet to a wood right-of-way monument found for corner;

2.) N20°42'32"E, a distance of 224.08 feet

to a 5/8" capped iron rebar (GEER) found for corner at the northwest corner of said McKINNEY-WILLOW WOOD, L.P., 119.154 acres, said corner also being the southwest corner of the lands owned by PILKINTON, as described in Deeds recorded in Volume 754, Page 104, Volume 687, Page 285, Volume 1236, Page 285, Volume 1263, Page 828, and Volume 783, Page 737, a portion of which was willed to JOAN BRANDON, Probate Docket No. 80-284, all of the land Records of Collin County, Texas;

THENCE in an easterly direction, along the north boundary of said McKINNEY-WILLOW WOOD, L.P., 119.154 acres, and the south boundary of said PILKINTON and BRANDON lands, the following four (4) courses:

1.) S88°40'36"E, a distance of 201.36 feet to a 1/2" iron rebar found for corner;

2.) S88°36'56"E, a distance of 400.06 feet to a 5/8" capped iron rebar (GEER) found for corner;

3.) S89°10'40"E, a distance of 249.34 feet to a 5/8" capped iron rebar (GEER) found for corner;

4.) S89°51'44"E, a distance of 144.96 feet

to a 1/2" iron rebar found for corner at the northeast corner of said McKINNEY-WILLOW WOOD, L.P., 119.154 acres, the southeast corner of said BRANDON land, and the northerly most southwest corner of said McKINNEY WILLOW WOOD, L.P., 187.437 acres;

THENCE N00°26'39"W, along the west boundary of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, and the east boundary of said BRANDON land, a distance of 453.30 feet to a 1" iron pipe found for corner at the northeast corner of said BRANDON land;

THENCE N89°49'28"W, along a south boundary of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, and the north boundary of said BRANDON land, a distance of 238.75 feet to a 14" Elm tree found for corner at the southeast corner of the tract of land described in Special Warranty Deed to BILLY DENSMORE, as filed for record under Clerk's File No. 20070322000386390, of the Land Records of Collin county, Texas;

LEGAL DESCRIPTION: (Continued)

THENCE N00°56'00"W, along a the west boundary of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, and the east boundary of said BILLY DENSMORE tract, at 211.15 pass the southeast corner of the tract of land described in Warranty Deed to BILLY HARRIS, as filed for record under Clerk's File No. 96-0090446 of the Land Records of Collin County, Texas, continuing in all a distance of 272.68 feet to a fence post found for corner;

THENCE N02°35'33"W, continuing along the west boundary of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, and the east boundary of said BILLY HARRIS tract, a distance of 291.07 feet to a 1/2" PK Nail & Disc (PETSCHE & ASSOC., INC.) set for corner at the northeast corner of said HARRIS tract, said corner also being in the center of said COUNTY ROAD 278;

THENCE S73°13'13"W, along a south line of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, the north line of said HARRIS tract and the centerline of said COUNTY ROAD 278, a distance of 58.66 feet to a PK Nail & Disc (PETSCHE & ASSOC., INC.) set for corner;

THENCE N03°27'20"E, along the west boundary of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, and the east boundary of the aforesaid DENSMORE tract, a distance of 242.76 feet to a wood right-of-way monument found for corner at the northerly most corner of said DENSMORE tract on the easterly right-of-way of said STATE HIGHWAY NO. 5;

THENCE N41°45'37"E, along the west boundary of said McKINNEY WILLOW WOOD, L.P. 187.437 acres, and the easterly right-of-way of said STATE HIGHWAY NO. 5, a distance of 32.18 feet to a wood right-of-way monument found for corner at the southwest corner of the land described in Special Warranty Deed to ASAD AHMADI, as filed for record in Volume 5845, Page 1508 of the Land Records of Collin County, Texas;

THENCE S89°53'16"E, along a north boundary of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, and the south boundary of said ASAD AHMADI, a distance of 213.61 feet to a 1/2" iron rebar found for corner at the southeast corner of said ASAD AHMADI tract and the southwest corner of LOT 1, BLOCK A of the C & F ADDITION, according to the Minor thereof, as file for record in Cabinet D, Page 436 of the Plat Records of Collin County, Texas;

THENCE S89°59'17"E, continuing along a north boundary of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, and the south boundary of said LOT 1, BLOCK A of the C & F ADDITION, a distance of 235.38 feet to a point for corner in the center of an unnamed branch;

THENCE in a northerly direction, along the westerly boundary of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, and with the center of said branch the following twenty (20) courses:

1.) N87°25'02"E, a distance of 69.67 feet to a point for corner;

2.) N07°04'02"E, a distance of 25.10 feet to a point for corner;

3.) N37°17'02"E, a distance of 59.10 feet to a point for corner;

4.) N15°43'58"W, a distance of 57.40 feet to a point for corner;

5.) N36°16'58"W, a distance of 30.60 feet to a point for corner;

6.) N16°59'58"W, a distance of 52.90 feet to a point for corner;

7.) N58°55'02"E, a distance of 63.90 feet to a point for corner;

8.) N42°30'02"E, a distance of 42.50 feet to a point for corner;

9.) N22°57'02"E, a distance of 50.60 feet to a point for corner;

10.) N12°13'02"E, a distance of 47.60 feet to a point for corner;

11.) N25°44'02"E, a distance of 44.50 feet to a point for corner;

12.) N15°59'58"W, a distance of 46.90 feet to a point for corner;

13.) N19°16'02"E, a distance of 39.90 feet to a point for corner;

14.) N58°03'02"E, a distance of 40.10 feet to a point for corner;

15.) N15°53'02"E, a distance of 32.70 feet to a point for corner;

16.) N70°35'02"E, a distance of 74.90 feet to a point for corner;

17.) N34°56'02"E, a distance of 33.70 feet to a point for corner;

18.) S68°37'58"E, a distance of 45.70 feet to a point for corner;

19.) S19°02'02"W, a distance of 30.90 feet to a point for corner;

20.) S70°34'58"E, a distance of 73.93 feet

to a 1/2" capped iron rebar (PETSCHE & ASSOC., INC.) set for corner in the center of said COUNTY ROAD 278;

THENCE in a northeasterly direction, along the westerly boundary of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, and the centerline of said COUNTY ROAD 278, the following six (6) courses:

1.) N26°46'04"E, a distance of 162.07 feet to a PK Nail & Disc (PETSCHE & ASSOC., INC.) set at the point of curvature of a curve having a radius of 525.00 feet and a central angle of 21°46'09";

2.) along the arc of said curve to the right, a distance of 199.47 feet to a 1/2" capped iron rebar (PETSCHE & ASSOC., INC.) set for corner at the point of tangency of said curve;

3.) N48°32'13"E ,a distance of 149.56 feet to a PK Nail & Disc (PETSCHE & ASSOC., INC.) set for corner;

4.) N50°53'00"E, a distance of 127.46 feet to a PK Nail & Disc (PETSCHE & ASSOC., INC.) set for corner;

5.) N56°21'36"E, a distance of 28.39 feet to a PK Nail & Disc (PETSCHE & ASSOC., INC.) set at the point of curvature of a curve having a radius of 350.00 feet and a central angle of 26°05'14";

6.) along the arc of said curve to the right, a distance of 159.36 feet

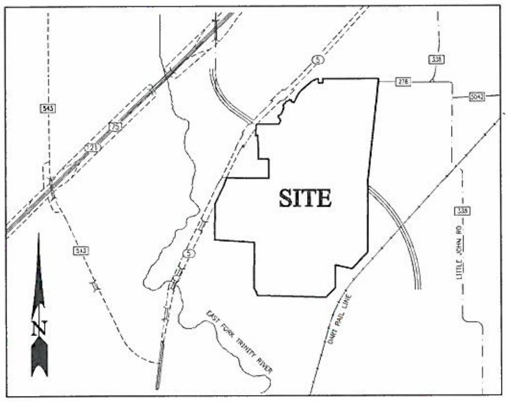
to a PK Nail & Disc (PETSCHE & ASSOC., INC.) set for corner at the northwest corner of the land described in a Deed to NORTH COLLIN WATER SUPPLY CORPORATION, as filed for record in Volume 784, Page 658 of the Land Records of Collin County, Texas;

THENCE S00°23'04"W, along the west boundary of said NORTH COLLIN WATER SUPPLY CORPORATION, as now laid out and in use, a distance of 101.01 feet to a 3/8" iron rebar found for corner at the southwest corner of said NORTH COLLIN WATER SUPPLY CORPORATION;

THENCE S88°36'56"E, along the south boundary of said NORTH COLLIN WATER SUPPLY CORPORATION, as now laid out and in use, a distance of 103.00 feet to a 1/2" capped iron rebar (PETSCHE & ASSOC., INC.) set for corner at the southeast corner of said NORTH COLLIN WATER SUPPLY CORPORATION;

THENCE N00°23'04"E, along the east boundary of said NORTH COLLIN WATER SUPPLY CORPORATION, as now laid out and in use, a distance of 104.37 feet to a PK NAIL & Disc set for corner at the northeast corner of said NORTH COLLIN WATER SUPPLY CORPORATION, said corner also being in the center of said COUNTY ROAD 278;

THENCE S89°36'56"E, along the north boundary of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, and the centerline of said COUNTY ROAD 278, a distance of 1308.33 feet back to the POINT OF BEGINNING and containing 306.591 acres of land, more or less.



NOT TO SCALE

FOR REVIEW PURPOSES ONLY
NOT RECORDED!
USE AT YOUR OWN RISK

RECORD PLAT

WILLOW WOOD ESTATES

AN ADDITION TO COLLIN COUTNY, TEXAS
655 RESIDENTIAL LOTS, 15 COMMON AREAS (1 BEING AN AMENITY CENTER)
AND 8 DEVELOPMENT PARCELS
BEING 306.591 ACRES SITUATED IN
THE ABNER SMALLEY SURVEY, ABSTRACT NUMBER 864,
THE POLLY A. BOONE SURVEY, ABSTRACT NUMBER 1048,
THE JOHN HART SURVEY, ABSTRACT NUMBER 423 AND
THE MANNING CLEMMENTS SURVEY, ABSTRACT NUMBER 224
COLLIN COUNTY, TEXAS.

PREPARED FOR :

McKinney — Willow Wood, L.L.C., General Partner
6514 Tulip Road
Dallas, TEXAS 75230
1-469-879-2511

PETSCHE & ASSOCIATES, INC.
Professional Engineers – Land Surveyors – Development Consultants
2581 Metrocentre Boulevard, Suite 6, West Palm Beach, Florida 33407 (561) 640-3800
2600 Eldorado Parkway, Suite 240, McKinney, Texas 75070 (972) 562-9606

Drawn by: PMV	Date: 8-10-09	SCALE:	JOB NUMBER: 06-224RP	SHEET	OF
Prepared by: PMV	Checked by: CAZ	NONE	06-224	1	14

EXHIBIT A-1

MASTER GENERAL DEVELOPMENT PLAN

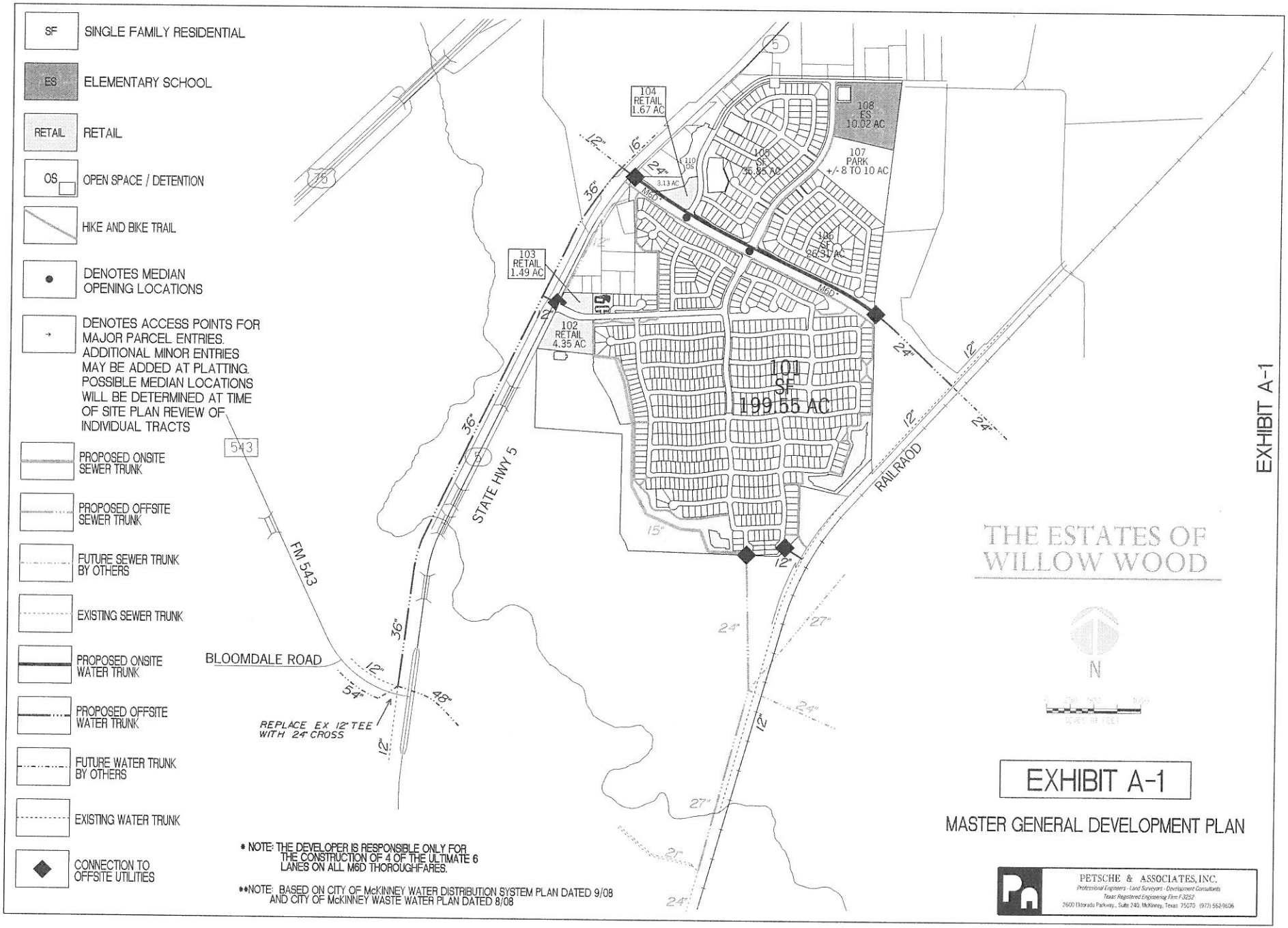

SF SINGLE FAMILY RESIDENTIAL
ES ELEMENTARY SCHOOL
RETAIL RETAIL
OS OPEN SPACE / DETENTION
HIKE AND BIKE TRAIL
DENOTES MEDIAN OPENING LOCATIONS
DENOTES ACCESS POINTS FOR MAJOR PARCEL ENTRIES. ADDITIONAL MINOR ENTRIES MAY BE ADDED AT PLATTING. POSSIBLE MEDIAN LOCATIONS WILL BE DETERMINED AT TIME OF SITE PLAN REVIEW OF INDIVIDUAL TRACTS
PROPOSED ONSITE SEWER TRUNK
PROPOSED OFFSITE SEWER TRUNK
FUTURE SEWER TRUNK BY OTHERS
EXISTING SEWER TRUNK
PROPOSED ONSITE WATER TRUNK
PROPOSED OFFSITE WATER TRUNK
FUTURE WATER TRUNK BY OTHERS
EXISTING WATER TRUNK
CONNECTION TO OFFSITE UTILITIES
104 RETAIL 1.67 AC
108 ES 10.02 AC
105 SF 36.85 AC
107 PARK +/- 8 TO 10 AC
110 OS 3.13 AC
106 SF 26.31 AC
103 RETAIL 1.49 AC
102 RETAIL 4.35 AC
101 SF 199.55 AC
M6D
STATE HWY 5
RAILROAD
FM 543
BLOOMDALE ROAD
REPLACE EX 12" TEE WITH 24" CROSS
* NOTE: THE DEVELOPER IS RESPONSIBLE ONLY FOR THE CONSTRUCTION OF 4 OF THE ULTIMATE 6 LANES ON ALL M6D THOROUGHFARES.
**NOTE: BASED ON CITY OF McKINNEY WATER DISTRIBUTION SYSTEM PLAN DATED 9/08 AND CITY OF McKINNEY WASTE WATER PLAN DATED 8/08
THE ESTATES OF WILLOW WOOD
N
EXHIBIT A-1
MASTER GENERAL DEVELOPMENT PLAN
PETSCHE & ASSOCIATES, INC.
Professional Engineers - Land Surveyors - Development Consultants
Texas Registered Engineering Firm F-3252
2600 Eldorado Parkway., Suite 240, McKinney, Texas 75070 (972) 562-9606

EXHIBIT A-1

EXHIBIT A-2

PRELIMINARY ENGINEER'S COST ESTIMATE
WILLOW WOOD WATER AND SEWER INFRASTRUCTURE

PETSCHE & ASSOCIATES, INC.

PROFESSIONAL ENGINEERS - LAND SURVEYORS - DEVELOPMENT CONSULTANTS

PRELIMINARY ENGINEER'S COST EST.
WILLOW WOOD WATER and SEWER INFRASTRUCTURE

EXHIBIT A-2

WTH Funding, LLC

WILLOW WOOD ESTATES

NOTE: THIS DOCUMENT IS A PRELIMINARY LAND DEVELOPMENT COST ESTIMATE AND IS BASED ON
1) CONCEPTUAL SITE PLAN PREPARED BY PETSCHE & ASSOCIATES, INC., DATED 10/2007
2)CONCEPTUAL ENGINEERING PLAN PREPARED BY PETSCHE & ASSOCIATES, INC., DATED 11/09/2007.
3) PRELIMINARY ENGINEERING PLANS DATED 7/31/09
4) ESTIMATES DO NOT INCLUDE "FUTURE DEVELOPMENT" COSTS
5) ESTIMATES WITHOUT THE BENEFIT OF FINAL ENGINEERING PLANS
6) UTILITIES BASED ON CITY OF McKINNEY REVISED WATER DATED 9/08 AND REVISED WASTEWATER DATED 8/08
7) UNIT COSTS BASED ON CURRENT BUDGET PRICING OBTAINED FROM PCI/RPMx CONTRACTORS

ITEM		TOTAL
SUMMARY : ONSITE		
FIRST 12" OF 24" WATER-ALONG PRINCIPAL ARTERIAL ONSITE (2990+/-' x $65/L.F.)	$	194,350.00
FIRST 12" OF 15" SANITARY SEWER FROM COLLECTOR ROAD TO SOUTH PROPERTY LINE (LINE #24/LINE"B" 3630+/-' x $64/L.F.)	$	232,320.00
SUBTOTAL	$	426,670.00
ENGINEERING - (Including: Design, Permit, Platting) 8%	$	34,133.60
ENGINEERING - (Including: Construction Layout) 4%	$	17,066.80
INSPECTION FEE (3.5%)	$	14,933.45
BONDING	$	7,680.06
SUBTOTAL	$	73,813.91
TOTAL ONSITE	$	500,483.91
SUMMARY : ONSITE - UPSIZE		
UPSIZE 24" WATER - ALONG PRINCIPAL ARTERIAL ONSITE (2990+/-' x $167/L.F. - 65/L.F.)	$	304,980.00
UPSIZE 15" SANITARY SEWER FROM COLLECTOR ROAD TO SOUTH PROPERTY LINE (LINE #24/LINE"B" 3630+/-' x $74/L.F. - $64/L.F.)	$	36,300.00
SUBTOTAL	$	341,280.00
ENGINEERING - (Including: Design, Permit, Platting) 8%	$	27,302.40
ENGINEERING - (Including: Construction Layout) 4%	$	13,651.20
INSPECTION FEE (3.5%)	$	11,944.80
BONDING	$	6,143.04
SUBTOTAL	$	59,041.44
TOTAL ONSITE - UPSIZE **	$	400,321.44
SUMMARY : OFFSITE		
24" WATER - CONNECTION FROM SH 5 TO LINE ALONG PRINCIPAL ARTERIAL AND FROM END OF PRINCIPAL ARTERIAL TO EXISTING 12" @ UNION PACIFIC RR (1315 +/-' X $167/L.F. + JACK & BORE $100,000)	$	319,605.00
36" WATER - ALONG STATE HIGHWAY 5 FROM BLOOMDALE TO FUTURE PRINCIPAL ARTERIAL - (6,200+/-' x $302/L.F.)	$	1,872,400.00
12" WATER AT SE CORNER CONNECTION TO 12" @UNION PACIFIC RR (250+/-' x $65/L.F.)	$	16,250.00
SANITARY SEWER-FROM SOUTH P/L - SOUTH TO HONEY CREEK - (LINE #24-1,800+/-' 24" x $114/L.F.+LINE #21-2,000+/-' 27" x $144/L.F.)	$	493,200.00
SANITARY SEWER-ALONG STATE HIGHWAY 5 - (1,260+/-' 12" x $64/L.F.)	$	80,640.00
SUBTOTAL	$	2,782,095.00
ENGINEERING - (Including: Design, Permit, Platting) 8%	$	222,567.60
ENGINEERING - (Including: Construction Layout) 4%	$	111,283.80
ENGINEERING - (Including: Tree Survey & Mitigation Plan)	$	13,000.00
OFFSITE EASEMENT ACQUISITION - PREPARATION OF EASEMENT DOCUMENTS	$	6,000.00
OFFSITE EASEMENT ACQUISITION - COST FOR EASEMENTS	$	-
INSPECTION FEE (3.5%)	$	97,373.33
BONDING	$	50,077.71
SUBTOTAL	$	500,302.44
TOTAL OFFSITE **	$	3,282,397.44
**NOTE: TOTAL ELIGIBLE FOR IMPACT FEE CREDIT / REIMBURSEMENT FROM CITY	$	3,682,718.88
CONTINGENCY - 15%	$	627,480.42
GRAND TOTAL - (EXCLUDING EASEMENT ACQUISITION COSTS)	$	4,810,683.20

2600 Eldorado Parkway, Suite 240, McKinney, Texas 75070 (972) 562-9606

EXHIBIT A-3

RECORD PLAT – 655 LOTS

OWNER'S CERTIFICATE

STATE OF TEXAS)

COUNTY OF COLLIN)

WHEREAS, McKINNEY-WILLOW WOOD, L.P., a Texas limited partnership, is the owner of that certain tract of land situated in the ABNER SMALLEY SURVEY, ABSTRACT NUMBER 864, the POLLY A. BOONE SURVEY, ABSTRACT NUMBER 1049, the JOHN HART SURVEY, ABSTRACT NUMBER 423 and the MANNING CLEMMENTS SURVEY, ABSTRACT NUMBER 224, in Collin County, Texas, being a portion of McKINNEY WILLOW WOOD, L.P., 187.437 acres, as described in Special Warranty Deed from MCKINNEY ETJ VENTURE, L.P., a Texas limited partnership, to McKINNEY WILLOW WOOD, L.P., a Texas limited partnership, as filed for record under Clerk's File Number 20070417000515690 of the Land Records of Collin County, Texas, and all of McKINNEY-WILLOW WOOD, L.P., 119.154 acres, as described in Special Warranty Deed from SAMI EL CHAMI and DEBBIE EL CHAMI, to McKINNEY-WILLOW WOOD, L.P., a Texas limited partnership, as filed for record under Clerk's File Number 20061122001662060 of the Land Records of Collin County, Texas, being more particulary described by metes and bounds as follows:

BEGIN at a PK Nail & Disc (PETSCHE & ASSOC., INC.) set for corner in the center of COUNTY ROAD 278 at the northwest corner of the tract of the land described in Warranty Deed to R. E. AYCOCK, JR., and spouse BARSHIA AYCOCK, as filed for record in Volume 5432, Page 6904 of the Land Records of Collin County, Texas, said corner being the true northeast corner of said WILLOW WOOD, L.P. 187.437 acres;

THENCE S06°20'12"W, along the true east boundary of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, and the west boundary of said AYCOCK tract, at 30.17 feet pass a 1/2" capped iron rebar (RPLS 5392) found for witness corner, at 1640.73 feet pass a 1/2" capped iron rebar (RPLS 5392) found for corner at the southwest corner of said AYCOCK tract and the northeast corner of the tract of land described in Warranty Deed to LEE A. BROCK and wife SARA A. BROCK AND RODNEY N. DOYLE and wife APRIL DOYLE, as filed for record in Volume 5875, Page 3172 of the Land Records of Collin County, Texas, continuing in all a distance of 2353.47 feet to a 1/2" iron rebar found for corner at an angle point in the east boundary of said McKINNEY WILLOW WOOD, L.P. 187.437 acres, and the west boundary of said BROCK & DOYLE tract;

THENCE S00°30'00"W, continuing along the east boundary of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, and the west boundary of said BROCK & DOYLE tract, a distance of 1723.18 feet to a 1/2" capped iron rebar (RPLS 5392) found for corner at an angle point in the easterly boundary of said WILLOW WOOD, L.P., 187.437 acres, said corner also being the northwest corner of the land reserved by the RESOLUTION TRUST CORPORATION (RTC) out of TRACT ONE of the land described in Special Warranty Deed to GEORGE D. GROGAN, as filed for record under Clerk's File No. 93-0004692 of the land Records of Collin County, Texas;

THENCE S43°48'22"W, along the southeasterly boundary of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, and the northwesterly boundary of said RTC tract, a distance of 527.30 feet to a 1/2" capped iron rebar (RPLS 5392) found for corner at the southerly most southeast corner of said McKINNEY-WILLOW WOOD, L.P., 187.437 acres, and the southwest corner of the land reserved by the RTC, said corner also being on a north boundary of said TRACT ONE;

THENCE N78°34'19"W, along the south boundary of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, and along a north boundary of said TRACT ONE, a distance of 74.35 feet to a 1/2" iron rebar found for corner at the southerly most southwest corner of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, and the northerly most southeast corner of said McKINNEY-WILLOW WOOD, L.P., 119.154 acres;

THENCE N77°22'28"W, along a southerly boundary of said McKINNEY-WILLOW WOOD, L.P., 119.154 acres, and continuing along a north boundary of said TRACT ONE, a distance of 326.52 feet to a 1/2" iron rebar found for an ell corner;

THENCE S01°04'32"W, along an east boundary of said McKINNEY-WILLOW WOOD, L.P., 119.154 acres, and a west boundary of said TRACT ONE, a distance of 536.77 feet to a 1/2" capped iron rebar (PETSCHE & ASSOC., INC.) set for corner;

THENCE S43°47'42"W, along the southeast boundary of said McKINNEY-WILLOW WOOD, L.P., 119.154 acres, continuing along a west boundary of said TRACT ONE, a distance of 303.51 feet to a 1/2" iron rebar found for corner;

THENCE N88°20'19"W, along the south boundary of said McKINNEY-WILLOW WOOD, L.P., 119.154 acres, and the southerly most north boundary of said TRACT ONE, a distance of 1310.06 feet to a 1/2" capped iron rebar (PETSCHE & ASSOC., INC.) set for corner;

THENCE N88°40'10"W, continuing along the south boundary of said McKINNEY-WILLOW WOOD, L.P., 119.154 acres, and the southerly most north boundary of said TRACT ONE, a distance of 292.13 feet to a 3/8" iron rebar found for corner;

THENCE in a northwesterly direction, along the southwesterly boundary of said McKINNEY-WILLOW WOOD, L.P., 119.154 acres, the following two (2) courses:

1.) N19°33'25"W, along a distance of 87.30 feet to a 3/8" iron rebar found for corner under 14" elm tree;

2.) N30°06'17"W, a distance of 120.23 feet

to a 3/8" iron rebar set for corner, said corner being on an east boundary of said TRACT ONE;

THENCE N00°41'55"E, along the west boundary of said McKINNEY-WILLOW WOOD, L.P., 119.154 acres, and an east boundary of said TRACT ONE, a distance of 1060.59 feet to a 60d spike found for corner at an ell corner;

THENCE N86°18'31"W, along the northerly most south boundary of said McKINNEY-WILLOW WOOD, L.P., 119.154 acres, and the northerly most north boundary of said TRACT ONE, a distance of 929.44 feet to a 1" smooth steel rod found for corner at the northerly most southwest corner of said McKINNEY-WILLOW WOOD, L.P., 119.154 acres, said corner being at the intersection of an established fence to the north and the east, said corner also being the approximate location of the southwest corner of said ABNER SMALLEY SURVEY;

THENCE N00°41'22"E, along the west boundary of said McKINNEY-WILLOW WOOD, L.P., 119.154 acres, and the westerly most east boundary of said TRACT ONE, a distance of 642.55 feet to a 5/8" capped iron rebar (GEER) found for corner at the northwest corner of said TRACT ONE, said corner also being on the easterly right-of-way line of STATE HIGHWAY NO. 5;

THENCE in a northeasterly direction, along the west boundary of said McKINNEY-WILLOW WOOD, L.P., 119.154 acres, and the easterly right-of-way line of said STATE HIGHWAY NO. 5, the following two (2) courses:

1.) N25°53'15"E, a distance of 445.57 feet to a wood right-of-way monument found for corner;

2.) N20°43'32"E, a distance of 224.08 feet

to a 5/8" capped iron rebar (GEER) found for corner at the northwest corner of said McKINNEY-WILLOW WOOD, L.P., 119.154 acres, said corner also being the southwest corner of the lands owned by PILKINTON, as described in Deeds recorded in Volume 754, Page 104, Volume 687, Page 285, Volume 1236, Page 285, Volume 1263, Page 828, and Volume 783, Page 737, a portion of which was willed to JOHN BRANDON, Probate Docket No. 60-284, all of the land Records of Collin County, Texas;

THENCE in an easterly direction, along the north boundary of said McKINNEY-WILLOW WOOD, L.P., 119.154 acres, and the south boundary of said PILKINTON and BRANDON lands, the following four (4) courses:

1.) S88°40'36"E, a distance of 201.36 feet to a 1/2" iron rebar found for corner;

2.) S88°36'56"E, a distance of 400.06 feet to a 5/8" capped iron rebar (GEER) found for corner;

3.) S89°10'40"E, a distance of 248.34 feet to a 5/8" capped iron rebar (GEER) found for corner;

4.) S89°51'44"E, a distance of 144.96 feet

to a 1/2" iron rebar found for corner at the northeast corner of said McKINNEY-WILLOW WOOD, L.P., 119.154 acres, the southeast corner of said BRANDON land, and the northerly most southwest corner of said McKINNEY WILLOW WOOD, L.P., 187.437 acres;

THENCE N00°26'39"W, along the west boundary of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, and the east boundary of said BRANDON land, a distance of 453.30 feet to a 1" iron pipe found for corner at the northeast corner of said BRANDON land;

THENCE N89°49'28"W, along a south boundary of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, and the north boundary of said BRANDON land, a distance of 238.75 feet to a 14" Elm tree found for corner at the southeast corner of the tract of land described in Special Warranty Deed to BILLY DENSMORE, as filed for record under Clerk's File No. 20070322000388590, of the Land Records of Collin county, Texas;

LEGAL DESCRIPTION: (Continued)

THENCE N00°56'00"W, along a the west boundary of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, and the east boundary of said BILLY DENSMORE tract, at 211.15 pass the southeast corner of the tract of land described in Warranty Deed to BILLY HARRIS, as filed for record under Clerk's File No. 95-0080446 of the Land Records of Collin County, Texas, continuing in all a distance of 272.68 feet to a fence post found for corner;

THENCE N02°35'33"W, continuing along the west boundary of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, and the east boundary of said BILLY HARRIS tract, a distance of 291.07 feet to a 1/2" PK Nail & Disc (PETSCHE & ASSOC., INC.) set for corner at the northeast corner of said HARRIS tract, said corner also being in the center of said COUNTY ROAD 278;

THENCE S73°13'13"W, along a south line of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, the north line of said HARRIS tract and the centerline of said COUNTY ROAD 278, a distance of 56.66 feet to a PK Nail & Disc (PETSCHE & ASSOC., INC.) set for corner;

THENCE N03°27'20"E, along the west boundary of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, and the east boundary of the aforesaid DENSMORE tract, a distance of 242.76 feet to a wood right-of-way monument found for corner at the northerly most corner of said DENSMORE tract on the easterly right-of-way of said STATE HIGHWAY NO. 5;

THENCE N41°45'37"E, along the west boundary of said McKINNEY WILLOW WOOD, L.P. 187.437 acres, and the easterly right-of-way of said STATE HIGHWAY NO. 5, a distance of 32.15 feet to a wood right-of-way monument found for corner at the southwest corner of the land described in Special Warranty Deed to ASAD AHMADI, as filed for record in Volume 5946, Page 1508 of the Land Records of Collin County, Texas;

THENCE S89°53'16"E, along a north boundary of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, and the south boundary of said ASAD AHMADI, a distance of 213.61 feet to a 1/2" iron rebar found for corner at the southeast corner of said ASAD AHMADI tract and the southwest corner of LOT 1, BLOCK A of the C & F ADDITION, according to the Minor thereof, as file for record in Cabinet D, Page 486 of the Plat Records of Collin County, Texas;

THENCE S89°59'17"E, continuing along a north boundary of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, and the south boundary of said LOT 1, BLOCK A of the C & F ADDITION, a distance of 235.38 feet to a point for corner in the center of an unnamed branch;

THENCE in a northerly direction, along the westerly boundary of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, and with the center of said branch the following twenty (20) courses:

1.) N87°25'02"E, a distance of 69.67 feet to a point for corner;

2.) N07°04'02"E, a distance of 25.10 feet to a point for corner;

3.) N37°17'02"E, a distance of 59.10 feet to a point for corner;

4.) N15°43'58"W, a distance of 37.40 feet to a point for corner;

5.) N56°16'58"W, a distance of 30.60 feet to a point for corner;

6.) N16°59'58"W, a distance of 52.90 feet to a point for corner;

7.) N58°55'02"E, a distance of 63.90 feet to a point for corner;

8.) N42°30'02"E, a distance of 42.50 feet to a point for corner;

9.) N22°57'02"E, a distance of 50.60 feet to a point for corner;

10.) N12°13'02"E, a distance of 47.60 feet to a point for corner;

11.) N25°44'02"E, a distance of 44.50 feet to a point for corner;

12.) N15°50'58"W, a distance of 46.90 feet to a point for corner;

13.) N19°16'02"E, a distance of 39.90 feet to a point for corner;

14.) N58°03'02"E, a distance of 40.10 feet to a point for corner;

15.) N15°53'02"E, a distance of 32.70 feet to a point for corner;

16.) N70°35'02"E, a distance of 74.90 feet to a point for corner;

17.) N34°56'02"E, a distance of 33.70 feet to a point for corner;

18.) S65°37'58"E, a distance of 45.70 feet to a point for corner;

19.) S19°02'02"W, a distance of 36.90 feet to a point for corner;

20.) S70°34'58"E, a distance of 73.93 feet

to a 1/2" capped iron rebar (PETSCHE & ASSOC., INC.) set for corner in the center of said COUNTY ROAD 278;

THENCE in a northeasterly direction, along the westerly boundary of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, and the centerline of said COUNTY ROAD 278, the following six (6) courses:

1.) N26°46'04"E, a distance of 162.07 feet to a PK Nail & Disc (PETSCHE & ASSOC., INC.) set at the point of curvature of a curve having a radius of 525.00 feet and a central angle of 21°46'09".

2.) along the arc of said curve to the right, a distance of 199.47 feet to a 1/2" capped iron rebar (PETSCHE & ASSOC., INC.) set for corner at the point of tangency of said curve;

3.) N48°32'13"E ,a distance of 149.56 feet to a PK Nail & Disc (PETSCHE & ASSOC., INC.) set for corner;

4.) N50°52'00"E, a distance of 127.46 feet to a PK Nail & Disc (PETSCHE & ASSOC., INC.) set for corner;

5.) N56°21'36"E, a distance of 28.39 feet to a PK Nail & Disc (PETSCHE & ASSOC., INC.) set at the point of curvature of a curve having a radius of 350.00 feet and a central angle of 25°05'14",

6.) along the arc of said curve to the right, a distance of 159.36 feet

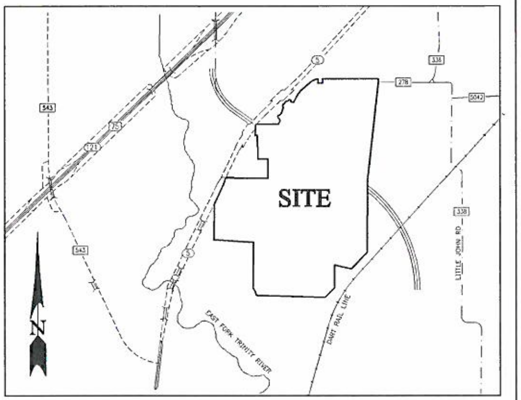
to a PK Nail & Disc (PETSCHE & ASSOC., INC.) set for corner at the northwest corner of the land described in a Deed to NORTH COLLIN WATER SUPPLY CORPORATION, as filed for record in Volume 784, Page 658 of the Land Records of Collin County, Texas;

THENCE S00°23'04"W, along the west boundary of said NORTH COLLIN WATER SUPPLY CORPORATION, as now laid out and in use, a distance of 101.01 feet to a 3/8" iron rebar found for corner at the southwest corner of said NORTH COLLIN WATER SUPPLY CORPORATION;

THENCE S89°36'56"E, along the south boundary of said NORTH COLLIN WATER SUPPLY CORPORATION, as now laid out and in use, a distance of 103.00 feet to a 1/2" capped iron rebar (PETSCHE & ASSOC., INC.) set for corner at the southeast corner of said NORTH COLLIN WATER SUPPLY CORPORATION;

THENCE N00°23'04"E, along the east boundary of said NORTH COLLIN WATER SUPPLY CORPORATION, as now laid out and in use, a distance of 104.37 feet to a PK NAIL & Disc set for corner at the northeast corner of said NORTH COLLIN WATER SUPPLY CORPORATION, said corner also being in the center of said COUNTY ROAD 278;

THENCE S89°36'56"E, along the north boundary of said McKINNEY WILLOW WOOD, L.P., 187.437 acres, and the centerline of said COUNTY ROAD 278, a distance of 1308.33 feet back to the POINT OF BEGINNING and containing 305.591 acres of land, more or less



NOT TO SCALE

FOR REVIEW PURPOSES ONLY
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USE AT YOUR OWN RISK

RECORD PLAT

WILLOW WOOD ESTATES

AN ADDITION TO COLLIN COUTNY, TEXAS
655 RESIDENTIAL LOTS, 15 COMMON AREAS (1 BEING AN AMENITY CENTER)
AND 8 DEVELOPMENT PARCELS
BEING 305.591 ACRES SITUATED IN
THE ABNER SMALLEY SURVEY, ABSTRACT NUMBER 864,
THE POLLY A. BOONE SURVEY, ABSTRACT NUMBER 1048,
THE JOHN HART SURVEY, ABSTRACT NUMBER 423 AND
THE MANNING CLEMMENTS SURVEY, ABSTRACT NUMBER 224
COLLIN COUNTY, TEXAS.

PREPARED FOR :

McKinney - Willow Wood, L.L.C., General Partner
6514 Tulip Road
Dallas, TEXAS 75230
1-469-879-2511

PETSCHE & ASSOCIATES, INC.
Professional Engineers - Land Surveyors - Development Consultants
2581 Metrocentre Boulevard, Suite 6, West Palm Beach, Florida 33407 (561) 640-3800
2600 Eldorado Parkway, Suite 240, McKinney, Texas 75070 (972) 562-9606

Drawn by: PMV	Date: 8-10-09	SCALE:	JOB NUMBER: 06-224RP	SHEET	OF
Prepared by: PMV	Checked by: CAZ	NONE	06-224	1	14

STATE OF TEXAS }

COUNTY OF COLLIN }

NOW THEREFORE KNOW ALL MEN BY THESE PRESENTS:

THAT WE, McKINNEY WILLOW WOOD, L.P., a Texas limited partnership, do hereby adopt this Record Plat designating the herein described property as THE ESTATES OF WILLOW WOOD, an addition to Collin County, Texas, and do hereby dedicate to the public use forever the streets, non-exclusive public utility, storm drainage easements, water easements and the sewer utility easements, as shown hereon, to the City of McKinney and all public utilities desiring to use same. All and any public utility and the City of McKinney shall have the right to remove and keep removed all or parts of any building, fences, shrubs, trees or other improvements or growths, which in any way endanger or interfere with the construction, maintenance or efficiency of its respective systems, without the necessity, at any time, of procuring the permission of anyone.

This plat approved subject to all platting ordinances, rules, regulations, and resolutions of the City of McKinney, Texas.

WITNESS MY HAND at McKinney, Texas, this _____ day of _____, 2009, A.D.

McKINNEY-WILLOW WOOD, L.P., a Texas limited partnership

By: McKINNEY WILLOW WOOD, L.L.C., a Texas limited liability company, its General Partner

By: _____
NAME: Steve Tapiritz
TITLE: Manager

STATE OF TEXAS }

COUNTY OF COLLIN }

BEFORE the undersigned authority, a Notary Public in and for the State of Texas, on this day personally appeared Steve Tapiritz, as Manager of McKINNEY WILLOW WOOD, L.L.C., a Texas limited liability company, the authorized representative of McKINNEY WILLOW WOOD, L.P., a Texas limited partnership, upon behalf of said limited liability company and limited partnership, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purpose and considerations therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this the _____ day of _____, 2008, A.D.

_____
NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS

"Approved and Accepted"

_____
Mayor
City Of McKinney, Texas

_____
Date

SURVEYOR'S CERTIFICATE

THAT I, Paul M. Valentine, Registered Professional Land Surveyor, do hereby certify that I prepared this plat from an actual and accurate survey of the land and that the corner monuments shown hereon were found and/or placed under my personal supervision in accordance with the Platting Rules and Regulations of the City of McKinney, Collin County, Texas.

Paul M. Valentine, RPLS
State of Texas
Certificate Number 5359

STATE OF TEXAS }

COUNTY OF COLLIN }

BEFORE the undersigned authority, a Notary Public in and for the State of Texas, on this day personally appeared Paul M. Valentine, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purpose and considerations therein expressed, and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this the _____ day of _____, 2008, A.D.

_____
NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS

SURVEYOR'S NOTES:

1.) The subject property lies within the City of McKinney, Texas, FLOOD ZONES "A" and "X" as indicated on Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map Number 48085C0175 G, Revised January 19, 1996, and Flood Insurance Rate Map Number 48085C0325 G, Revised January 19, 1996.

2.) State Plane Coordinates for selected corners shown hereon are in U.S. feet (North American Datum of 1983, Texas North Central Zone) and were obtained from Global Positioning System observations on June 7, 2007, using United States Geodetic Survey (USGS) monument "Melissa" for control.

3.) All common areas are to be dedicated to and maintained by the Home Owner's Association.

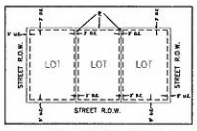
4.) All common areas are public utility, drainage, surface drainage, non-exclusive landscape and pedestrian access easements and open space.

5.) This survey represents the combination of two separate parcels of land. The northerly parcel was conveyed to WILLOW WOOD, L.P., Clerk's File No. 20070417000515590, L.R.C.C.T., the southerly parcel was conveyed to McKINNEY-WILLOW WOOD, L.P., Clerk's File No. 20061212001660260, L.R.C.C.T.

6.) Bearings shown hereon are based on an assumed meridian of S08°20'12"W, along the true northeasterly line of the parcel of land described in Special Warranty Deed to WILLOW WOOD, L.P., a Texas limited partnership, as filed for record under Clerk's File No. 20061123001652250 of the Land Records of Collin County Texas; said line being the west line of the land described in Warranty Deed to R. E. AYCOCK, JR., and spouse BARBARA AYCOCK, as filed for record in Volume 5432, Page 6804 of the Land Records of Collin County, Texas and are given for the purpose of delineating angles only.

7.) The roads and storm drainage facilities are dedicated to and are to be maintained by City of Mckinney, Texas.

8.) The sanitary sewer and water main facilities are dedicated to and are to be maintained by the City of McKinney, Texas.



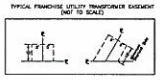
SURFACE DRAINAGE AND UTILITY EASEMENTS
(NOT TO SCALE)

(TYPICAL FOR ALL LOTS & DIMENSIONED AS SHOWN)

TYPICAL EASEMENTS FOR FRANCHISED ELECTRICAL EQUIPMENT, INCLUDING UNDERGROUND ELECTRICAL CABLES, TRANSFORMERS, TELEPHONE PEDESTALS, GAS LINES, CATV RISERS, AND CABLES.

NOTE: A FENCE MAY BE CONSTRUCTED ALONG LOT LINES WITHIN A SURFACE DRAINAGE EASEMENT PROVIDED THE FENCE DOES NOT OBSTRUCT SURFACE DRAINAGE.

TYPICAL FRANCHISE UTILITY TRANSFORMER EASEMENT
(NOT TO SCALE)



"PRELIMINARY, THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE."

FOR REVIEW PURPOSES ONLY
NOT RECORDED!
USE AT YOUR OWN RISK

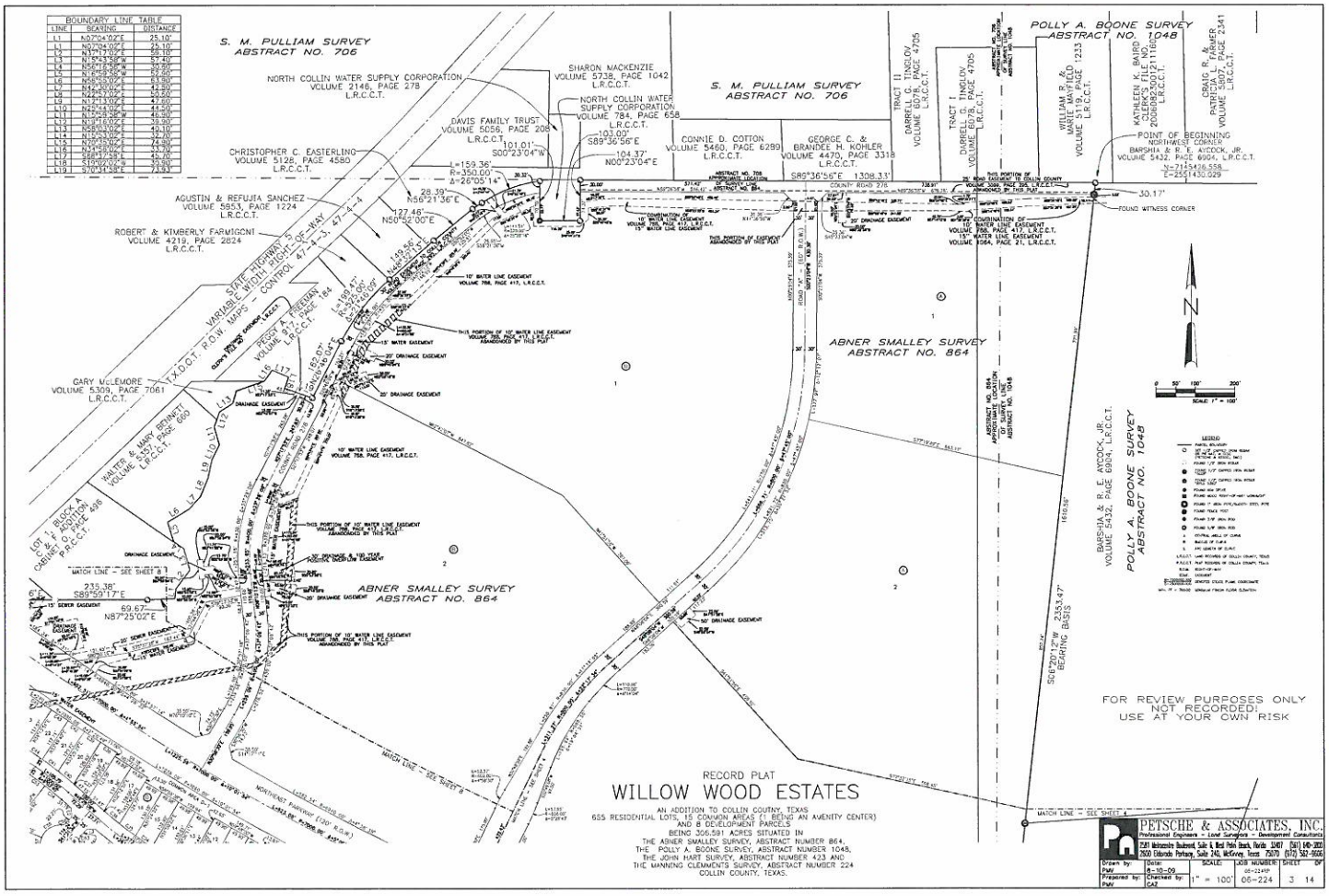
RECORD PLAT

WILLOW WOOD ESTATES

AN ADDITION TO COLLIN COUNTY, TEXAS
655 RESIDENTIAL LOTS, 15 COMMON AREAS (1 BEING AN AMENITY CENTER)
AND 8 DEVELOPMENT PARCELS
BEING 306.591 ACRES SITUATED IN
THE ABNER SHALLEY SURVEY, ABSTRACT NUMBER 864,
THE POLLY A. BOONE SURVEY, ABSTRACT NUMBER 1048,
THE JOHN HART SURVEY, ABSTRACT NUMBER 423 AND
THE MANNING CLEMMENTS SURVEY, ABSTRACT NUMBER 224
COLLIN COUNTY, TEXAS.

PETSCHE & ASSOCIATES, INC.
Professional Engineers – Land Surveyors – Development Consultants
5201 Watercrest Boulevard, Suite 4, West Palm Beach, Florida 33417 (561) 848-2800
2600 Eldorado Parkway, Suite 240, McKinney, Texas 75070 (972) 562-9696

Drawn by:	Date:	SCALE:	JOB NUMBER:	SHEET	OF
PMV	9-10-09		08-224P		
Prepared by:	Checked by:	N/A	08-224	2	14
PMV	CAP				



RECORD PLAT

WILLOW WOOD ESTATES

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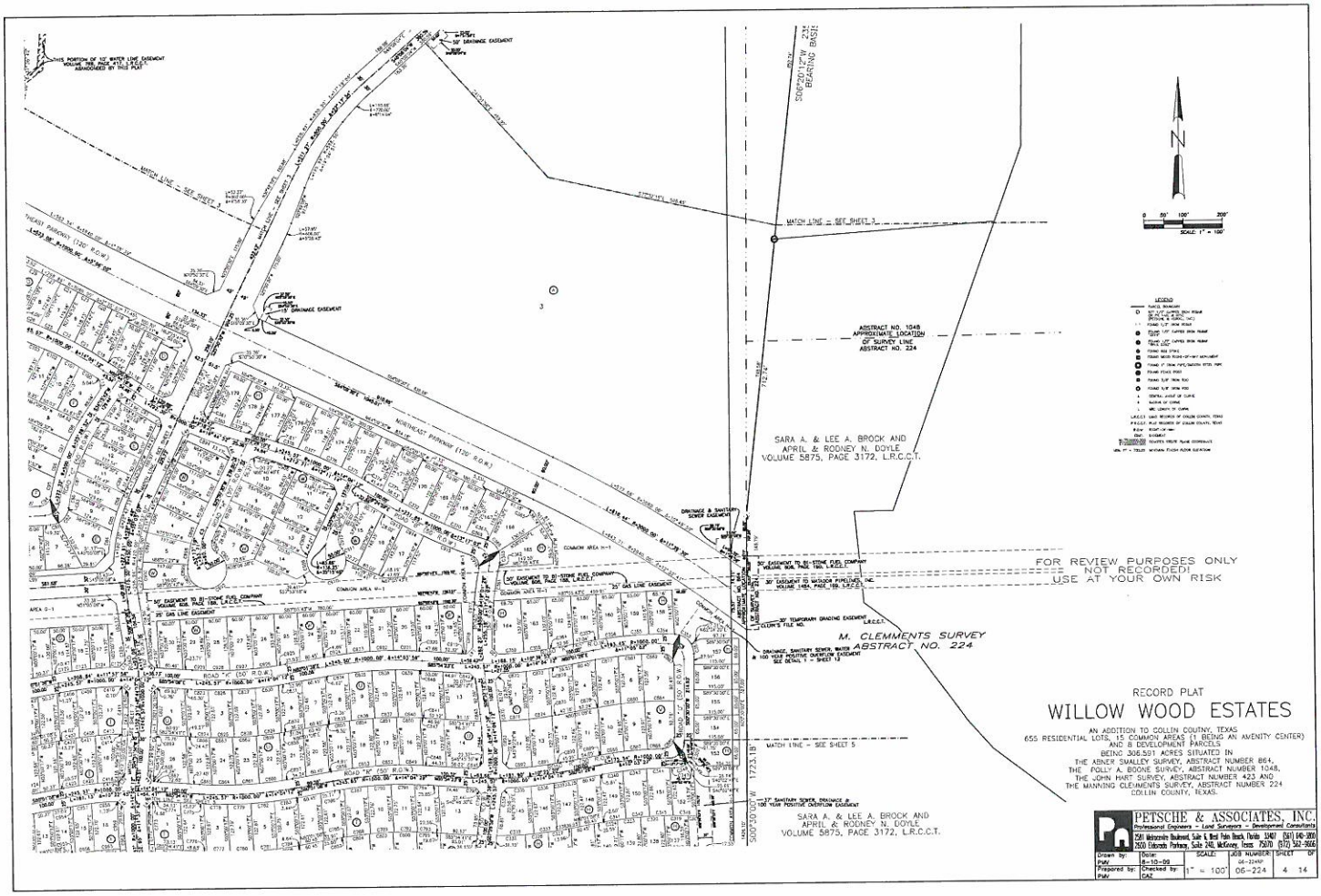
THE MANNING CLEMMENTS SURVEY, ABSTRACT NUMBER 224
COLLIN COUNTY, TEXAS.

PETSCHE & ASSOCIATES, INC.
Professional Engineers - Land Surveyors - Development Consultants
5241 Waterside Boulevard, Suite A, West Palm Beach, Florida 33417 (561) 649-2800
2600 Eldorado Parkway, Suite 240, McKinney, Texas 75070 (972) 562-9556

Drawn by:	Date:	SCALE:	JOB NUMBER:	SHEET	OF
PW	4-10-09		06-224P		
Prepared by: PW	Checked by: CAZ	1" = 100'	06-224	3	14



RECORD PLAT

WILLOW WOOD ESTATES

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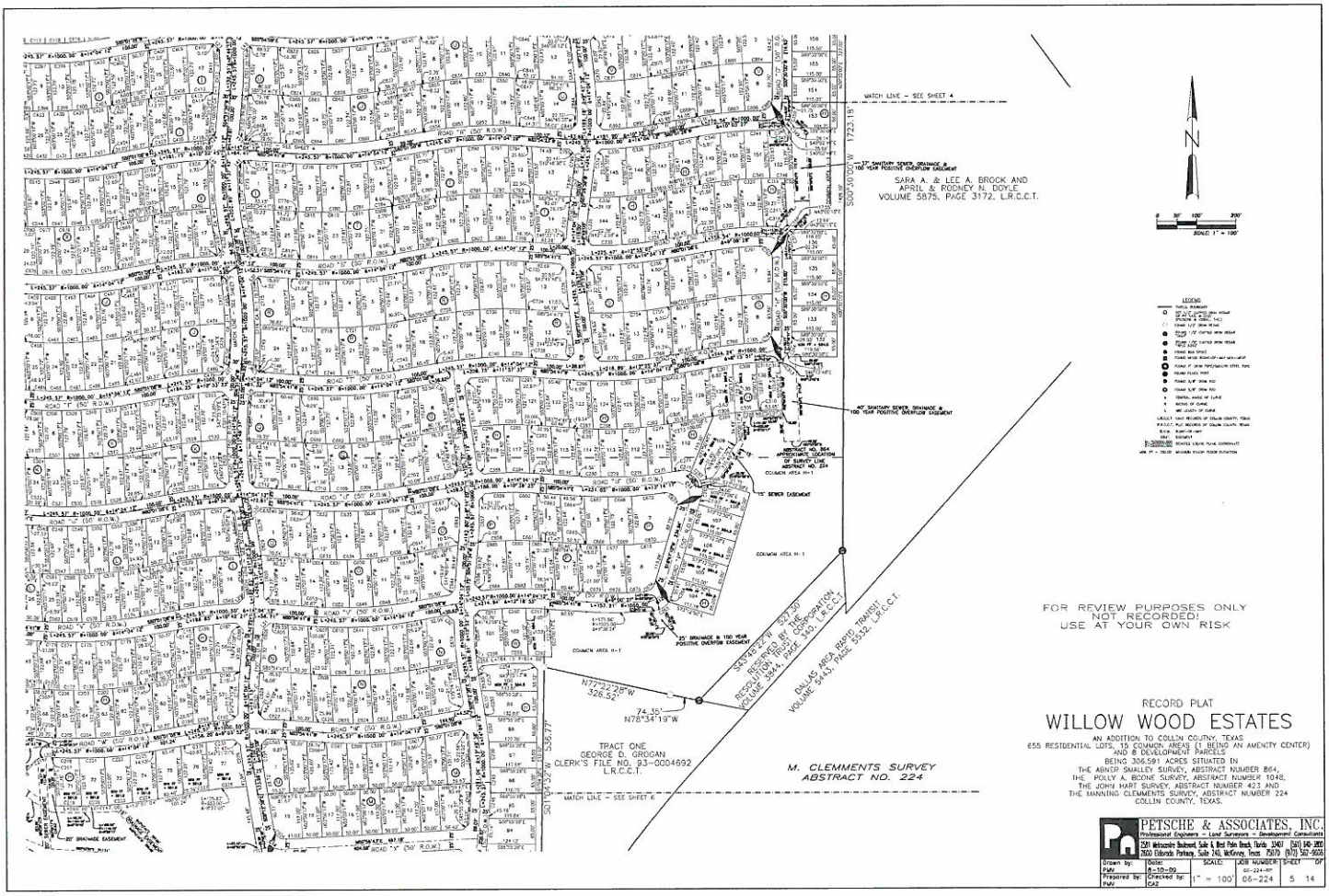
THE JOHN HART SURVEY, ABSTRACT NUMBER 423 AND
THE MANNING CLEMMENTS SURVEY, ABSTRACT NUMBER 224
COLLIN COUNTY, TEXAS.

PETSCHE & ASSOCIATES, INC.
Professional Engineers - Land Surveyors - Development Consultants
7501 Wiltshire Boulevard, Suite 6, West Palm Beach, Florida 33407 (561) 640-3000
2500 Eldorado Parkway, Suite 240, McKinney, Texas 75070 (972) 562-9666

Drawn by:	Date:	SCALE:	JOB NUMBER:	SHEET	OF
PWV	6-10-09		06-224HR		
Prepared by:	Checked by:	1" = 100'	06-224	4	14
PWV	CAC				

ASV


MATCH LINE - SEE SHEET 4
SARA A. & LEE A. BROCK AND
APRIL & RODNEY N. DOYLE
VOLUME 5875, PAGE 3172, L.R.C.C.T.
S00°30'00"W 1723.15'
N
SCALE: 1" = 100'
LEGEND
FOR REVIEW PURPOSES ONLY
NOT RECORDED!
USE AT YOUR OWN RISK
RECORD PLAT
WILLOW WOOD ESTATES
AN ADDITION TO COLLIN COUNTY, TEXAS
655 RESIDENTIAL LOTS, 15 COMMON AREAS (1 BEING AN AMENITY CENTER)
AND 8 DEVELOPMENT PARCELS
BEING 306.591 ACRES SITUATED IN
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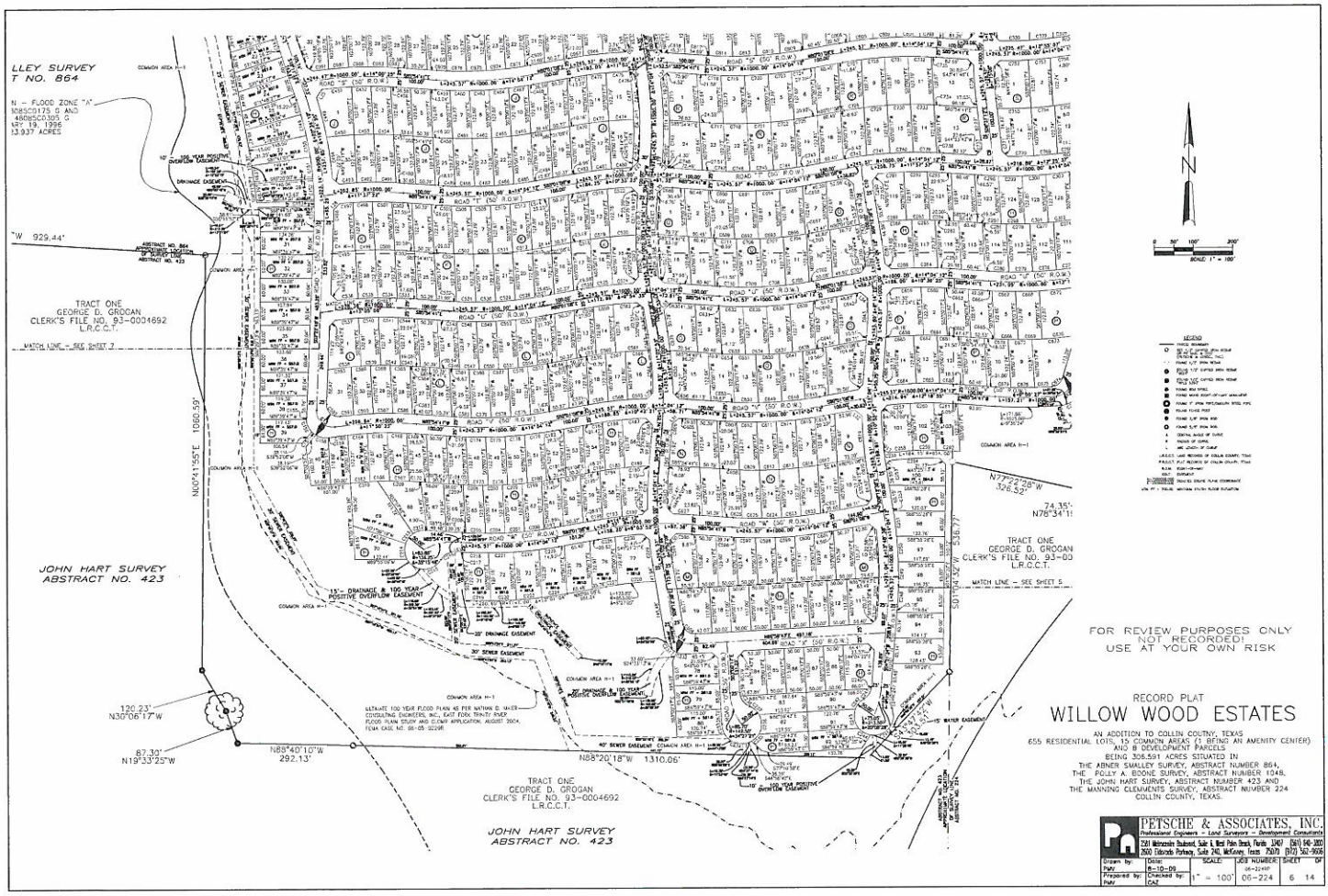
THE POLLY A. BOONE SURVEY, ABSTRACT NUMBER 1045,
THE JOHN HART SURVEY, ABSTRACT NUMBER 423 AND
THE MANNING CLEMMENTS SURVEY, ABSTRACT NUMBER 224
COLLIN COUNTY, TEXAS.
TRACT ONE
GEORGE D. GROGAN
CLERK'S FILE NO. 93-0004692
L.R.C.C.T.
M. CLEMMENTS SURVEY
ABSTRACT NO. 224
MATCH LINE - SEE SHEET 6
N77°22'28"W
326.52'
74.35'
N78°34'19"W
535.77'
SOUTH 22.9± ACRES
RESERVED BY THE
RESOLUTION TRUST CORPORATION
VOLUME 5944, PAGE 140, L.R.C.C.T.
DALLAS AREA RAPID TRANSIT
VOLUME 5414, PAGE 5532, L.R.C.C.T.
PETSCHE & ASSOCIATES, INC.
Professional Engineers - Land Surveyors - Development Consultants
2501 Metrocentre Boulevard, Suite A, West Palm Beach, Florida 33407 (561) 640-2820
2500 Eldorado Parkway, Suite 140, McKinney, Texas 75070 (972) 562-4026
Drawn by: PMV
Date: 8-10-09
Prepared by: PMV
Checked by: CAZ
SCALE: 1" = 100'
JOB NUMBER: 06-224
SHEET 5 OF 14



FOR REVIEW PURPOSES ONLY
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RECORD PLAT

WILLOW WOOD ESTATES

AN ADDITION TO COLLIN COUNTY, TEXAS
655 RESIDENTIAL LOTS, 15 COMMON AREAS (1 BEING AN AMENITY CENTER)
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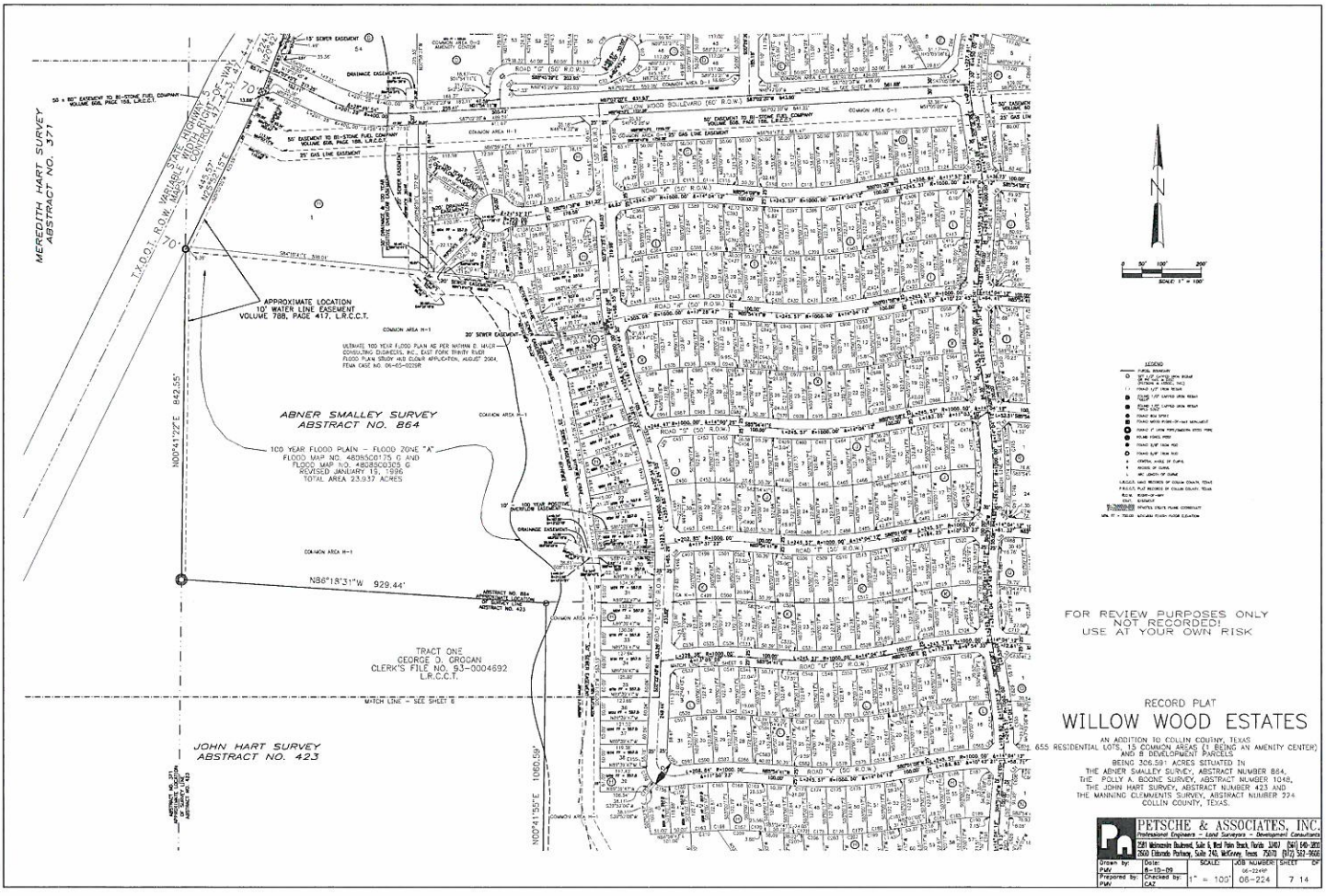
THE JOHN HART SURVEY, ABSTRACT NUMBER 423 AND
THE MANNING CLEAVMENTS SURVEY, ABSTRACT NUMBER 224
COLLIN COUNTY, TEXAS.

PETSCHE & ASSOCIATES, INC.
Professional Engineers - Land Surveyors - Development Consultants
2121 Waterside Boulevard, Suite 6, West Palm Beach, Florida 33401 (561) 640-1001
2500 Tidwell Parkway, Suite 240, McKinney, Texas 75070 (972) 562-9008

Drawn by:	Date:	SCALE:	JOB NUMBER:	SHEET	OF
PMV	8-10-09	1" = 100'	06-224	6	14
Prepared by: PMV	Checked by: CAZ				



RECORD PLAT

WILLOW WOOD ESTATES

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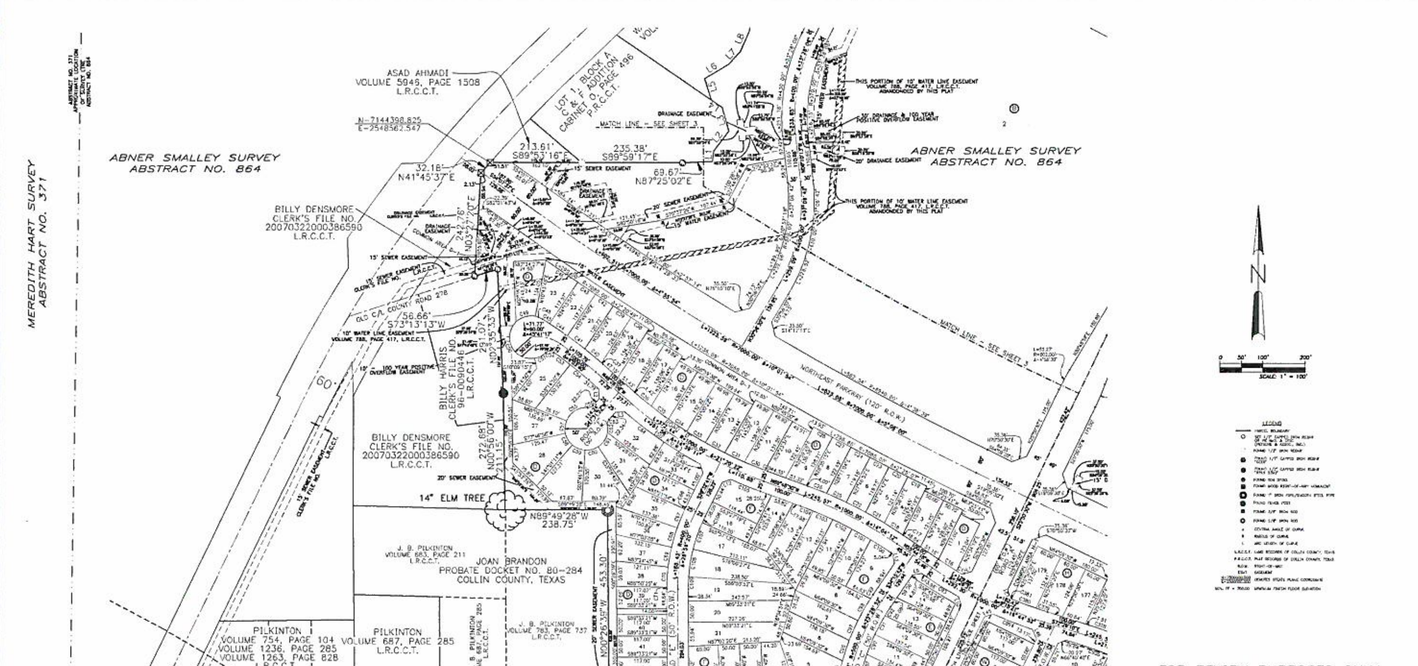
THE POLLY A. BOONE SURVEY, ABSTRACT NUMBER 1048,
THE JOHN HART SURVEY, ABSTRACT NUMBER 423 AND
THE MANNING CLEMMENTS SURVEY, ABSTRACT NUMBER 324
COLLIN COUNTY, TEXAS.

PETSCHE & ASSOCIATES, INC.
Professional Engineers - Land Surveyors - Development Consultants
701 Wisconsin Boulevard, Suite 5, Red Palm Beach, Florida 33461 (561) 540-2811
360 Colorado Parkway, Suite 240, McKinney, Texas 75070 (972) 562-9002

Drawn by:	Date:	SCALE:	JOB NUMBER:	SHEET	OF
PMV	6-10-09		06-224P		
Prepared by:	Checked by:	1" = 100'	06-224	7	14
PMV	CAZ				

ASV



FOR REVIEW PURPOSES ONLY
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RECORD PLAT

WILLOW WOOD ESTATES

AN ADDITION TO COLLIN COUTNY, TEXAS
655 RESIDENTIAL LOTS, 15 COMMON AREAS (1 BEING AN AMENITY CENTER)
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THE JOHN HART SURVEY, ABSTRACT NUMBER 423 AND
THE MANNING CLEMVENTS SURVEY, ABSTRACT NUMBER 224
COLLIN COUNTY, TEXAS.

PETSCHE & ASSOCIATES, INC.
Professional Engineers - Land Surveyors - Development Consultants
2581 Metrocentre Boulevard, Suite 6, West Palm Beach, Florida 33407 (561) 640-3800
2500 Eldorado Parkway, Suite 240, McKinney, Texas 75070 (972) 562-9606

Drawn by: PMV	Date: 8-10-09	SCALE:	JOB NUMBER: 06-224RP	SHEET OF
Prepared by: PMV	Checked by: CAZ	1" = 100'	06-224	8 14

CURVE TABLE

CURVE #	DELTA	RADIUS	LENGTH	TANGENT	CH. BRG	CHORD
C1	26°51'17"	40.00'	18.75'	9.54'	S14°54'45"W	18.58'
C2	83°08'43"	40.00'	58.04'	35.74'	N54°54'45"W	53.09'
C3	26°51'17"	40.00'	18.75'	9.54'	N14°54'45"W	18.58'
C4	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"E	56.57'
C5	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"E	56.57'
C6	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"W	56.57'
C7	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"W	56.57'
C8	8°46'26"	40.00'	6.12'	3.07'	S41°22'32"W	6.12'
C9	4°05'17"	1050.00'	74.93'	37.48'	S43°59'53"W	74.91'
C10	3°40'08"	1050.00'	67.23'	33.63'	S47°54'26"W	67.22'
C11	1°00'49"	1050.00'	18.58'	9.29'	S50°17'30"W	18.58'
C12	89°12'43"	40.00'	62.28'	39.37'	S89°03'01"W	56.18'
C13	1°50'07"	40.00'	1.28'	0.64'	N44°11'55"W	1.28'
C14	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"E	56.57'
C15	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"E	56.57'
C16	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"W	56.57'
C17	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"W	56.57'
C18	8°46'26"	40.00'	6.12'	3.07'	N49°37'28"W	6.12'
C19	4°05'17"	1050.00'	74.93'	37.48'	N43°59'53"E	74.91'
C20	3°40'08"	1050.00'	67.23'	33.63'	N47°54'26"E	67.22'
C21	1°00'49"	1050.00'	18.58'	9.29'	N50°17'30"E	18.58'
C22	89°12'43"	40.00'	62.28'	39.37'	N89°03'01"E	56.18'
C23	1°50'07"	40.00'	1.28'	0.64'	S44°11'55"E	1.28'
C24	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"E	56.57'
C25	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"W	56.57'
C26	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"W	56.57'
C27	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"E	56.57'
C28	8°46'26"	40.00'	6.12'	3.07'	S41°22'32"W	6.12'
C29	4°05'17"	1050.00'	74.93'	37.48'	S43°59'53"W	74.91'
C30	3°40'08"	1050.00'	67.23'	33.63'	S47°54'26"W	67.22'
C31	1°00'49"	1050.00'	18.58'	9.29'	S50°17'30"W	18.58'
C32	89°12'43"	40.00'	62.28'	39.37'	S89°03'01"W	56.18'
C33	1°50'07"	40.00'	1.28'	0.64'	N44°11'55"W	1.28'
C34	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"E	56.57'
C35	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"E	56.57'
C36	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"W	56.57'
C37	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"W	56.57'
C38	8°46'26"	40.00'	6.12'	3.07'	N49°37'28"W	6.12'
C39	4°05'17"	1050.00'	74.93'	37.48'	N43°59'53"E	74.91'
C40	3°40'08"	1050.00'	67.23'	33.63'	N47°54'26"E	67.22'
C41	1°00'49"	1050.00'	18.58'	9.29'	N50°17'30"E	18.58'
C42	89°12'43"	40.00'	62.28'	39.37'	N89°03'01"E	56.18'
C43	1°50'07"	40.00'	1.28'	0.64'	S44°11'55"E	1.28'
C44	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"E	56.57'
C45	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"W	56.57'
C46	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"W	56.57'
C47	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"E	56.57'
C48	90°00'00"	30.00'	18.30'	9.42'	S89°43'04"E	18.48'
C49	1°49'56"	30.00'	1.92'	0.96'	N1°48'06"E	1.92'
C50	4°05'17"	1050.00'	74.93'	37.48'	N43°59'53"E	74.91'
C51	3°40'08"	1050.00'	67.23'	33.63'	N47°54'26"E	67.22'
C52	1°00'49"	1050.00'	18.58'	9.29'	N50°17'30"E	18.58'
C53	89°12'43"	40.00'	62.28'	39.37'	N89°03'01"E	56.18'
C54	1°50'07"	40.00'	1.28'	0.64'	S44°11'55"E	1.28'
C55	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"E	56.57'
C56	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"W	56.57'
C57	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"W	56.57'
C58	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"E	56.57'
C59	8°46'26"	40.00'	6.12'	3.07'	S41°22'32"W	6.12'
C60	4°05'17"	1050.00'	74.93'	37.48'	S43°59'53"W	74.91'
C61	3°40'08"	1050.00'	67.23'	33.63'	S47°54'26"W	67.22'
C62	1°00'49"	1050.00'	18.58'	9.29'	S50°17'30"W	18.58'
C63	89°12'43"	40.00'	62.28'	39.37'	S89°03'01"W	56.18'
C64	1°50'07"	40.00'	1.28'	0.64'	N44°11'55"W	1.28'
C65	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"E	56.57'
C66	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"E	56.57'
C67	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"W	56.57'
C68	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"W	56.57'
C69	8°46'26"	40.00'	6.12'	3.07'	N49°37'28"W	6.12'
C70	4°05'17"	1050.00'	74.93'	37.48'	N43°59'53"E	74.91'
C71	3°40'08"	1050.00'	67.23'	33.63'	N47°54'26"E	67.22'
C72	1°00'49"	1050.00'	18.58'	9.29'	N50°17'30"E	18.58'
C73	89°12'43"	40.00'	62.28'	39.37'	N89°03'01"E	56.18'
C74	1°50'07"	40.00'	1.28'	0.64'	S44°11'55"E	1.28'
C75	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"E	56.57'
C76	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"W	56.57'
C77	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"W	56.57'
C78	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"E	56.57'
C79	8°46'26"	40.00'	6.12'	3.07'	S41°22'32"W	6.12'
C80	4°05'17"	1050.00'	74.93'	37.48'	S43°59'53"W	74.91'
C81	3°40'08"	1050.00'	67.23'	33.63'	S47°54'26"W	67.22'
C82	1°00'49"	1050.00'	18.58'	9.29'	S50°17'30"W	18.58'
C83	89°12'43"	40.00'	62.28'	39.37'	S89°03'01"W	56.18'
C84	1°50'07"	40.00'	1.28'	0.64'	N44°11'55"W	1.28'
C85	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"E	56.57'
C86	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"E	56.57'
C87	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"W	56.57'
C88	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"W	56.57'
C89	8°46'26"	40.00'	6.12'	3.07'	N49°37'28"W	6.12'
C90	4°05'17"	1050.00'	74.93'	37.48'	N43°59'53"E	74.91'
C91	3°40'08"	1050.00'	67.23'	33.63'	N47°54'26"E	67.22'
C92	1°00'49"	1050.00'	18.58'	9.29'	N50°17'30"E	18.58'
C93	89°12'43"	40.00'	62.28'	39.37'	N89°03'01"E	56.18'
C94	1°50'07"	40.00'	1.28'	0.64'	S44°11'55"E	1.28'
C95	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"E	56.57'
C96	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"W	56.57'
C97	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"W	56.57'
C98	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"E	56.57'
C99	8°46'26"	40.00'	6.12'	3.07'	S41°22'32"W	6.12'
C100	4°05'17"	1050.00'	74.93'	37.48'	S43°59'53"W	74.91'
C101	3°40'08"	1050.00'	67.23'	33.63'	S47°54'26"W	67.22'
C102	1°00'49"	1050.00'	18.58'	9.29'	S50°17'30"W	18.58'
C103	89°12'43"	40.00'	62.28'	39.37'	S89°03'01"W	56.18'
C104	1°50'07"	40.00'	1.28'	0.64'	N44°11'55"W	1.28'
C105	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"E	56.57'
C106	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"E	56.57'
C107	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"W	56.57'
C108	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"W	56.57'
C109	8°46'26"	40.00'	6.12'	3.07'	N49°37'28"W	6.12'
C110	4°05'17"	1050.00'	74.93'	37.48'	N43°59'53"E	74.91'
C111	3°40'08"	1050.00'	67.23'	33.63'	N47°54'26"E	67.22'
C112	1°00'49"	1050.00'	18.58'	9.29'	N50°17'30"E	18.58'
C113	89°12'43"	40.00'	62.28'	39.37'	N89°03'01"E	56.18'
C114	1°50'07"	40.00'	1.28'	0.64'	S44°11'55"E	1.28'
C115	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"E	56.57'
C116	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"W	56.57'
C117	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"W	56.57'
C118	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"E	56.57'
C119	8°46'26"	40.00'	6.12'	3.07'	S41°22'32"W	6.12'
C120	4°05'17"	1050.00'	74.93'	37.48'	S43°59'53"W	74.91'
C121	3°40'08"	1050.00'	67.23'	33.63'	S47°54'26"W	67.22'
C122	1°00'49"	1050.00'	18.58'	9.29'	S50°17'30"W	18.58'
C123	89°12'43"	40.00'	62.28'	39.37'	S89°03'01"W	56.18'
C124	1°50'07"	40.00'	1.28'	0.64'	N44°11'55"W	1.28'
C125	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"E	56.57'
C126	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"E	56.57'
C127	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"W	56.57'
C128	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"W	56.57'
C129	8°46'26"	40.00'	6.12'	3.07'	N49°37'28"W	6.12'
C130	4°05'17"	1050.00'	74.93'	37.48'	N43°59'53"E	74.91'
C131	3°40'08"	1050.00'	67.23'	33.63'	N47°54'26"E	67.22'
C132	1°00'49"	1050.00'	18.58'	9.29'	N50°17'30"E	18.58'
C133	89°12'43"	40.00'	62.28'	39.37'	N89°03'01"E	56.18'
C134	1°50'07"	40.00'	1.28'	0.64'	S44°11'55"E	1.28'
C135	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"E	56.57'
C136	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"W	56.57'
C137	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"W	56.57'
C138	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"E	56.57'
C139	8°46'26"	40.00'	6.12'	3.07'	S41°22'32"W	6.12'
C140	4°05'17"	1050.00'	74.93'	37.48'	S43°59'53"W	74.91'
C141	3°40'08"	1050.00'	67.23'	33.63'	S47°54'26"W	67.22'
C142	1°00'49"	1050.00'	18.58'	9.29'	S50°17'30"W	18.58'
C143	89°12'43"	40.00'	62.28'	39.37'	S89°03'01"W	56.18'
C144	1°50'07"	40.00'	1.28'	0.64'	N44°11'55"W	1.28'
C145	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"E	56.57'
C146	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"E	56.57'
C147	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"W	56.57'
C148	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"W	56.57'
C149	8°46'26"	40.00'	6.12'	3.07'	N49°37'28"W	6.12'
C150	4°05'17"	1050.00'	74.93'	37.48'	N43°59'53"E	74.91'
C151	3°40'08"	1050.00'	67.23'	33.63'	N47°54'26"E	67.22'
C152	1°00'49"	1050.00'	18.58'	9.29'	N50°17'30"E	18.58'
C153	89°12'43"	40.00'	62.28'	39.37'	N89°03'01"E	56.18'
C154	1°50'07"	40.00'	1.28'	0.64'	S44°11'55"E	1.28'
C155	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"E	56.57'
C156	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"W	56.57'
C157	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"W	56.57'
C158	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"E	56.57'
C159	8°46'26"	40.00'	6.12'	3.07'	S41°22'32"W	6.12'
C160	4°05'17"	1050.00'	74.93'	37.48'	S43°59'53"W	74.91'
C161	3°40'08"	1050.00'	67.23'	33.63'	S47°54'26"W	67.22'
C162	1°00'49"	1050.00'	18.58'	9.29'	S50°17'30"W	18.58'
C163	89°12'43"	40.00'	62.28'	39.37'	S89°03'01"W	56.18'
C164	1°50'07"	40.00'	1.28'	0.64'	N44°11'55"W	1.28'
C165	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"E	56.57'
C166	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"E	56.57'
C167	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"W	56.57'
C168	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"W	56.57'
C169	8°46'26"	40.00'	6.12'	3.07'	N49°37'28"W	6.12'
C170	4°05'17"	1050.00'	74.93'	37.48'	N43°59'53"E	74.91'
C171	3°40'08"	1050.00'	67.23'	33.63'	N47°54'26"E	67.22'
C172	1°00'49"	1050.00'	18.58'	9.29'	N50°17'30"E	18.58'
C173	89°12'43"	40.00'	62.28'	39.37'	N89°03'01"E	56.18'
C174	1°50'07"	40.00'	1.28'	0.64'	S44°11'55"E	1.28'
C175	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"E	56.57'
C176	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"W	56.57'
C177	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"W	56.57'
C178	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"E	56.57'
C179	8°46'26"	40.00'	6.12'	3.07'	S41°22'32"W	6.12'
C180	4°05'17"	1050.00'	74.93'	37.48'	S43°59'53"W	74.91'
C181	3°40'08"	1050.00'	67.23'	33.63'	S47°54'26"W	67.22'
C182	1°00'49"	1050.00'	18.58'	9.29'	S50°17'30"W	18.58'
C183	89°12'43"	40.00'	62.28'	39.37'	S89°03'01"W	56.18'
C184	1°50'07"	40.00'	1.28'	0.64'	N44°11'55"W	1.28'
C185	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"E	56.57'
C186	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"E	56.57'
C187	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"W	56.57'
C188	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"W	56.57'
C189	8°46'26"	40.00'	6.12'	3.07'	N49°37'28"W	6.12'
C190	4°05'17"	1050.00'	74.93'	37.48'	N43°59'53"E	74.91'
C191	3°40'08"	1050.00'	67.23'	33.63'	N47°54'26"E	67.22'
C192	1°00'49"	1050.00'	18.58'	9.29'	N50°17'30"E	18.58'
C193	89°12'43"	40.00'	62.28'	39.37'	N89°03'01"E	56.18'
C194	1°50'07"	40.00'	1.28'	0.64'	S44°11'55"E	1.28'
C195	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"E	56.57'
C196	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"W	56.57'
C197	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"W	56.57'
C198	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"E	56.57'
C199	8°46'26"	40.00'	6.12'	3.07'	S41°22'32"W	6.12'
C200	4°05'17"	1050.00'	74.93'	37.48'	S43°59'53"W	74.91'
C201	3°40'08"	1050.00'	67.23'	33.63'	S47°54'26"W	67.22'
C202	1°00'49"	1050.00'	18.58'	9.29'	S50°17'30"W	18.58'
C203	89°12'43"	40.00'	62.28'	39.37'	S89°03'01"W	56.18'
C204	1°50'07"	40.00'	1.28'	0.64'	N44°11'55"W	1.28'
C205	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"E	56.57'
C206	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"E	56.57'
C207	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"W	56.57'
C208	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"W	56.57'
C209	8°46'26"	40.00'	6.12'	3.07'	N49°37'28"W	6.12'
C210	4°05'17"	1050.00'	74.93'	37.48'	N43°59'53"E	74.91'
C211	3°40'08"	1050.00'	67.23'	33.63'	N47°54'26"E	67.22'
C212	1°00'49"	1050.00'	18.58'	9.29'	N50°17'30"E	18.58'
C213	89°12'43"	40.00'	62.28'	39.37'	N89°03'01"E	56.18'
C214	1°50'07"	40.00'	1.28'	0.64'	S44°11'55"E	1.28'
C215	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"E	56.57'
C216	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"W	56.57'
C217	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"W	56.57'
C218	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"E	56.57'
C219	8°46'26"	40.00'	6.12'	3.07'	S41°22'32"W	6.12'
C220	4°05'17"	1050.00'	74.93'	37.48'	S43°59'53"W	74.91'
C221	3°40'08"	1050.00'	67.23'	33.63'	S47°54'26"W	67.22'
C222	1°00'49"	1050.00'	18.58'	9.29'	S50°17'30"W	18.58'
C223	89°12'43"	40.00'	62.28'	39.37'	S89°03'01"W	56.18'
C224	1°50'07"	40.00'	1.28'	0.64'	N44°11'55"W	1.28'
C225	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"E	56.57'
C226	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"E	56.57'
C227	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"W	56.57'
C228	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"W	56.57'
C229	8°46'26"	40.00'	6.12'	3.07'	N49°37'28"W	6.12'
C230	4°05'17"	1050.00'	74.93'	37.48'	N43°59'53"E	74.91'
C231	3°40'08"	1050.00'	67.23'	33.63'	N47°54'26"E	67.22'
C232	1°00'49"	1050.00'	18.58'	9.29'	N50°17'30"E	18.58'
C233	89°12'43"	40.00'	62.28'	39.37'	N89°03'01"E	56.18'
C234	1°50'07"	40.00'	1.28'	0.64'	S44°11'55"E	1.28'
C235	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"E	56.57'
C236	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"W	56.57'
C237	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"W	56.57'
C238	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"E	56.57'
C239	8°46'26"	40.00'	6.12'	3.07'	S41°22'32"W	6.12'
C240	4°05'17"	1050.00'	74.93'	37.48'	S43°59'53"W	74.91'
C241	3°40'08"	1050.00'	67.23'	33.63'	S47°54'26"W	67.22'
C242	1°00'49"	1050.00'	18.58'	9.29'	S50°17'30"W	18.58'
C243	89°12'43"	40.00'	62.28'	39.37'	S89°03'01"W	56.18'
C244	1°50'07"	40.00'	1.28'	0.64'	N44°11'55"W	1.28'
C245	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"E	56.57'
C246	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"E	56.57'
C247	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"W	56.57'
C248	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"W	56.57'
C249	8°46'26"	40.00'	6.12'	3.07'	N49°37'28"W	6.12'
C250	4°05'17"	1050.00'	74.93'	37.48'	N43°59'53"E	74.91'
C251	3°40'08"	1050.00'	67.23'	33.63'	N47°54'26"E	67.22'
C252	1°00'49"	1050.00'	18.58'	9.29'	N50°17'30"E	18.58'
C253	89°12'43"	40.00'	62.28'	39.37'	N89°03'01"E	56.18'
C254	1°50'07"	40.00'	1.28'	0.64'	S44°11'55"E	1.28'
C255	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"E	56.57'
C256	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"W	56.57'
C257	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"W	56.57'
C258	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"E	56.57'
C259	8°46'26"	40.00'	6.12'	3.07'	S41°22'32"W	6.12'
C260	4°05'17"	1050.00'	74.93'	37.48'	S43°59'53"W	74.91'
C261	3°40'08"	1050.00'	67.23'	33.63'	S47°54'26"W	67.22'
C262	1°00'49"	1050.00'	18.58'	9.29'	S50°17'30"W	18.58'
C263	89°12'43"	40.00'	62.28'	39.37'	S89°03'01"W	56.18'
C264	1°50'07"	40.00'	1.28'	0.64'	N44°11'55"W	1.28'
C265	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"E	56.57'
C266	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"E	56.57'
C267	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"W	56.57'
C268	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"W	56.57'
C269	8°46'26"	40.00'	6.12'	3.07'	N49°37'28"W	6.12'
C270	4°05'17"	1050.00'	74.93'	37.48'	N43°59'53"E	74.91'
C271	3°40'08"	1050.00'	67.23'	33.63'	N47°54'26"E	67.22'
C272	1°00'49"	1050.00'	18.58'	9.29'	N50°17'30"E	18.58'
C273	89°12'43"	40.00'	62.28'	39.37'	N89°03'01"E	56.18'
C274	1°50'07"	40.00'	1.28'	0.64'	S44°11'55"E	1.28'
C275	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"E	56.57'
C276	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"W	56.57'
C277	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"W	56.57'
C278	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"E	56.57'
C279	8°46'26"	40.00'	6.12'	3.07'	S41°22'32"W	6.12'
C280	4°05'17"	1050.00'	74.93'	37.48'	S43°59'53"W	74.91'
C281	3°40'08"	1050.00'	67.23'	33.63'	S47°54'26"W	67.22'
C282	1°00'49"	1050.00'	18.58'	9.29'	S50°17'30"W	18.58'
C283	89°12'43"	40.00'	62.28'	39.37'	S89°03'01"W	56.18'
C284	1°50'07"	40.00'	1.28'	0.64'	N44°11'55"W	1.28'
C285	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"E	56.57'
C286	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"E	56.57'
C287	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"W	56.57'
C288	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"W	56.57'
C289	8°46'26"	40.00'	6.12'	3.07'	N49°37'28"W	6.12'
C290	4°05'17"	1050.00'	74.93'	37.48'	N43°59'53"E	74.91'
C291	3°40'08"	1050.00'	67.23'	33.63'	N47°54'26"E	67.22'
C292	1°00'49"	1050.00'	18.58'	9.29'	N50°17'30"E	18.58'
C293	89°12'43"	40.00'	62.28'	39.37'	N89°03'01"E	56.18'
C294	1°50'07"	40.00'	1.28'	0.64'	S44°11'55"E	1.28'
C295	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"E	56.57'
C296	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"W	56.57'
C297	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"W	56.57'
C298	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"E	56.57'
C299	8°46'26"	40.00'	6.12'	3.07'	S41°22'32"W	6.12'
C300	4°05'17"	1050.00'	74.93'	37.48'	S43°59'53"W	74.91'
C301	3°40'08"	1050.00'	67.23'	33.63'	S47°54'26"W	67.22'
C302	1°00'49"	1050.00'	18.58'	9.29'	S50°17'30"W	18.58'
C303	89°12'43"	40.00'	62.28'	39.37'	S89°03'01"W	56.18'
C304	1°50'07"	40.00'	1.28'	0.64'	N44°11'55"W	1.28'
C305	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"E	56.57'
C306	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"E	56.57'
C307	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"W	56.57'
C308	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"W	56.57'
C309	8°46'26"	40.00'	6.12'	3.07'	N49°37'28"W	6.12'
C310	4°05'17"	1050.00'	74.93'	37.48'	N43°59'53"E	74.91'
C311	3°40'08"	1050.00'	67.23'	33.63'	N47°54'26"E	67.22'
C312	1°00'49"	1050.00'	18.58'	9.29'	N50°17'30"E	18.58'
C313	89°12'43"	40.00'	62.28'	39.37'	N89°03'01"E	56.18'
C314	1°50'07"	40.00'	1.28'	0.64'	S44°11'55"E	1.28'
C315	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"E	56.57'
C316	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"W	56.57'
C317	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"W	56.57'
C318	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"E	56.57'
C319	8°46'26"	40.00'	6.12'	3.07'	S41°22'32"W	6.12'
C320	4°05'17"	1050.00'	74.93'	37.48'	S43°59'53"W	74.91'
C321	3°40'08"	1050.00'	67.23'	33.63'	S47°54'26"W	67.22'
C322	1°00'49"	1050.00'	18.58'	9.29'	S50°17'30"W	18.58'
C323	89°12'43"	40.00'	62.28'	39.37'	S89°03'01"W	56.18'
C324	1°50'07"	40.00'	1.28'	0.64'	N44°11'55"W	1.28'
C325	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"E	56.57'
C326	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"E	56.57'
C327	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"W	56.57'
C328	90°00'00"	40.00'	62.83'	40.00'	N45°00'00"W	56.57'
C329	8°46'26"	40.00'	6.12'	3.07'	N49°37'28"W	6.12'
C330	4°05'17"	1050.00'	74.93'	37.48'	N43°59'53"E	74.91'
C331	3°40'08"	1050.00'	67.23'	33.63'	N47°54'26"E	67.22'
C332	1°00'49"	1050.00'	18.58'	9.29'	N50°17'30"E	18.58'
C333	89°12'43"	40.00'	62.28'	39.37'	N89°03'01"E	56.18'
C334	1°50'07"	40.00'	1.28'	0.64'	S44°11'55"E	1.28'
C335	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"E	56.57'
C336	90°00'00"	40.00'	62.83'	40.00'	S45°00'00"W	56.57'
C337	90°00'00"	40.00'	62.83'	40.00

CURVE TABLE						
CURVE#	DELTA	RADIUS	LENGTH	TANGENT	CH. BRG.	CHORD
C376	3°21'16"	1025.00'	60.01'	30.01'	S84°30'16"E	60.00'
C377	3°21'41"	1025.00'	60.13'	30.08'	S87°51'45"E	60.13'
C378	2°56'35"	1025.00'	52.65'	26.33'	S73°02'53"E	52.64'
C379	1°42'22"	975.00'	29.03'	14.52'	N77°37'59"W	29.03'
C380	3°32'21"	975.00'	60.23'	30.12'	N69°00'37"W	60.22'
C381	0°05'59"	975.00'	1.70'	0.85'	N52°11'28"W	1.70'
C382	1°50'41"	975.00'	31.39'	15.70'	N80°57'00"E	31.39'
C383	1°58'54"	1000.00'	34.59'	17.30'	N81°00'33"E	34.59'
C384	2°52'14"	1000.00'	50.10'	25.06'	N82°26'09"E	50.10'
C385	2°56'40"	975.00'	50.11'	25.06'	N83°20'40"E	50.10'
C386	2°56'20"	975.00'	50.01'	25.01'	N86°17'10"E	50.00'
C387	2°51'55"	1000.00'	50.01'	25.01'	N86°15'14"E	50.00'
C388	2°52'07"	1000.00'	50.04'	25.03'	N89°10'12"E	50.04'
C389	[illegible]	975.00'	50.04'	25.03'	N89°13'34"E	50.04'
C390	2°57'07"	975.00'	50.21'	25.11'	S87°44'47"E	50.20'
C391	2°52'14"	1000.00'	50.20'	25.11'	S87°57'30"E	50.19'
C392	[illegible]	1000.00'	10.63'	5.31'	S86°12'57"E	10.63'
C393	[illegible]	975.00'	7.66'	3.83'	S86°07'48"E	7.66'
C394	2°25'32"	1025.00'	43.39'	21.70'	N87°06'55"W	43.39'
C395	2°19'02"	1000.00'	40.43'	20.22'	N87°04'11"W	40.43'
C396	2°52'12"	1000.00'	50.09'	25.05'	N89°39'47"W	50.09'
C397	[illegible]	1025.00'	50.09'	25.05'	N89°43'41"W	50.08'
C398	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C399	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C400	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C401	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C402	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C403	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C404	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C405	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C406	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C407	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C408	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C409	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C410	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C411	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C412	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C413	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C414	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C415	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C416	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C417	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C418	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C419	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C420	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C421	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C422	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C423	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C424	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C425	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C426	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C427	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C428	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C429	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C430	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C431	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C432	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C433	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C434	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C435	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C436	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C437	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C438	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C439	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C440	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C441	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C442	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C443	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C444	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C445	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C446	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C447	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C448	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C449	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C450	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C451	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C452	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C453	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C454	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C455	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C456	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C457	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C458	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C459	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C460	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C461	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C462	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C463	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C464	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C465	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C466	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C467	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C468	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C469	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C470	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C471	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C472	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C473	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C474	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C475	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C476	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C477	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C478	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C479	0°04'21"	1025.00'	1.30'	0.65'	N88°11'21"E	1.30'
C480	2°54'46"	1025.00'	52.17'	26.09'	N89°41'46"E	52.17'
C481	2°47'55"	1025.00'	50.06'	25.03'	[illegible]	50.06'
C482	[illegible]	1025.00'	43.32'	21.67'	[illegible]	43.31'
C483	13°13'27"	970.00'	224.75'	[illegible]	S01°20'02"E	[illegible]
C484	[illegible]	975.00'	[illegible]	[illegible]	S88°14'42"W	[illegible]
C485	[illegible]	975.00'	50.20'	25.11'	S81°56'42"W	50.19'
C486	[illegible]	975.00'	50.04'	25.01'	S84°53'22"W	50.03'
C487	[illegible]	975.00'	50.01'	25.01'	S87°49'53"W	50.01'
C488	[illegible]	975.00'	50.11'	25.06'	N88°13'38"W	50.11'
C489	[illegible]	975.00'	31.36'	15.68'	N85°49'58"W	31.36'
C490	[illegible]	1025.00'	19.72'	9.86'	S88°27'44"E	19.72'
C491	[illegible]	1025.00'	50.17'	25.09'	S88°14'56"E	50.16'
C492	2°47'46"	1025.00'	50.03'	25.02'	N88°47'03"E	50.02'
C493	[illegible]	1025.00'	[illegible]	22.45'	N86°07'43"E	44.89'
C494	6°12'07"	975.00'	105.55'	[illegible]	S87°45'11"E	[illegible]
C495	3°23'17"	1000.00'	59.13'	29.58'	N84°37'10"E	[illegible]
C496	1°52'46"	925.00'	30.34'	15.17'	[illegible]	30.34'
C497	[illegible]	925.00'	[illegible]	[illegible]	[illegible]	[illegible]
C498	2°56'21"	975.00'	50.01'	25.01'	[illegible]	50.01'
C499	[illegible]	1000.00'	50.01'	25.01'	[illegible]	50.01'
C500	2°52'19"	1000.00'	50.12'	25.07'	[illegible]	50.12'

CURVE TABLE						
CURVE#	DELTA	RADIUS	LENGTH	TANGENT	CH. BRG.	CHORD
C501	2°56'45"	975.00'	50.13'	25.07'	S88°57'32"E	50.12'
C502	1°34'28"	975.00'	26.79'	13.40'	S86°41'55"E	26.79'
C503	1°42'16"	1000.00'	29.75'	14.88'	S86°45'49"E	29.75'
C504	1°13'20"	1000.00'	21.33'	10.67'	N88°31'21"W	21.33'
C505	1°21'28"	1025.00'	24.29'	12.14'	N88°35'25"W	24.29'
C506	2°48'12"	1025.00'	50.15'	25.08'	N88°40'14"W	50.14'
C507	2°52'25"	1000.00'	50.16'	25.08'	N88°34'13"W	50.15'
C508	2°51'55"	1000.00'	50.02'	25.02'	S88°33'35"W	50.02'
C509	2°47'46"	1025.00'	50.02'	25.02'	S88°31'47"W	50.02'
C510	2°47'45"	1025.00'	50.02'	25.01'	S85°44'01"W	50.01'
C511	2°51'57"	1000.00'	50.02'	25.01'	S85°41'38"W	50.01'
C512	2°52'22"	1000.00'	50.14'	25.07'	S82°49'28"W	50.13'
C513	2°48'08"	1025.00'	50.13'	25.07'	S82°56'05"W	50.13'
C514	1°30'53"	1025.00'	27.10'	13.55'	S80°46'34"W	27.10'
C515	1°22'10"	1000.00'	23.90'	11.95'	S80°42'12"W	23.90'
C516	1°33'19"	1000.00'	27.15'	13.57'	N80°47'47"E	27.14'
C517	1°24'26"	975.00'	23.95'	11.97'	N80°41'21"E	23.95'
C518	2°56'45"	975.00'	50.13'	25.07'	N82°51'57"E	50.13'
C519	2°52'10"	1000.00'	50.13'	25.07'	N83°00'37"E	50.12'
C520	3°47'23"	1000.00'	66.14'	33.08'	N86°20'27"E	66.13'
C521	5°19'54"	1025.00'	95.38'	47.72'	N87°11'37"E	95.34'
C522	3°35'29"	975.00'	61.11'	30.57'	N84°10'04"E	61.10'
C523	[illegible]	1025.00'	106.21'	53.16'	N83°25'26"W	106.16'
C524	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C525	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C526	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C527	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C528	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C529	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C530	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C531	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C532	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C533	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C534	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C535	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C536	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C537	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C538	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C539	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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C541	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C542	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C543	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C544	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C545	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C546	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C547	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C548	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C549	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C550	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C551	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C552	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C553	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C554	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C555	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C556	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C557	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C558	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C559	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C560	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C561	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C562	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C563	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C564	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C565	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C566	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C567	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C568	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C569	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C570	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C571	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C572	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C573	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C574	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C575	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C576	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C577	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C578	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C579	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C580	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C581	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C582	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C583	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C584	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C585	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C586	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C587	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C588	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C589	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C590	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C591	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C592	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C593	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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C595	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C596	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C597	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C598	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C599	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C600	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C601	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C602	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C603	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C604	83°47'10"	30.00'	43.87'	26.91'	N51°05'42"W	40.07'
C605	[illegible]	975.00'	[illegible]	[illegible]	[illegible]	17.60'
C606	[illegible]	1025.00'	[illegible]	[illegible]	[illegible]	14.13'
C607	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C608	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C609	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C610	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C611	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C612	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C613	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C614	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C615	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C616	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C617	1°01'35"	1000.00'	17.92'	8.96'	S80°51'55"W	17.91'
C618	1°10'49"	1025.00'	21.11'	10.56'	S80°48'32"W	21.11'
C619	5°50'11"	1025.00'	104.41'	52.25'	N83°52'26"W	104.37'
C620	[illegible]	1025.00'	41.87'	20.94'	N88°52'24"W	41.87'
C621	0°51'53"	975.00'	14.71'	7.36'	S89°27'04"W	14.71'
C622	[illegible]	975.00'	50.17'	25.09'	S87°21'12"W	50.16'
C623	[illegible]	975.00'	[illegible]	[illegible]	[illegible]	[illegible]
C624	2°56'21"	975.00'	[illegible]	25.01'	S82°14'26"W	50.01'
C625	2°56'47"	975.00'	50.14'	[illegible]	[illegible]	50.13'

CURVE TABLE						
CURVE#	DELTA	RADIUS	LENGTH	TANGENT	CH. BRG.	CHORD
C626	1°25'52"	975.00'	24.35'	12.18'	N86°37'37"W	24.35'
C627	2°49'26"	[illegible]	[illegible]	25.26'	S87°19'24"E	[illegible]
C628	5°55'44"	975.00'	100.89'	50.49'	N01°53'42"E	100.85'
C629	2°44'51"	1025.00'	49.15'	24.58'	S07°50'12"E	49.15'
C630	1°18'34"	975.00'	22.28'	11.14'	[illegible]	22.28'
C631	0°06'10"	1025.00'	1.84'	0.92'	N85°51'46"W	1.84'
C632	3°22'05"	1025.00'	60.27'	30.14'	N87°41'55"W	60.26'
C633	3°23'22"	1000.00'	59.16'	29.59'	N87°30'22"W	59.15'
C634	3°26'25"	1000.00'	60.05'	30.03'	S88°58'45"W	60.04'
C635	3°21'23"	1025.00'	60.04'	30.03'	S88°56'20"W	60.03'
C636	3°21'19"	1025.00'	60.03'	30.02'	S85°34'59"W	60.02'
C637	3°26'22"	1000.00'	60.03'	30.02'	S85°32'22"W	60.02'
C638	[illegible]	1000.00'	60.23'	30.12'	[illegible]	60.22'
C639	3°21'58"	1025.00'	60.22'	30.12'	S82°11'30"W	60.21'
C640	0°31'54"	1025.00'	9.51'	4.80'	S80°16'45"W	9.51'
C641	0°21'00"	1000.00'	6.11'	3.05'	S80°11'38"W	6.11'
C642	0°47'31"	975.00'	13.47'	6.74'	[illegible]	13.47'
C643	5°37'04"	975.00'	95.60'	47.84'	[illegible]	95.56'
C644	[illegible]	1025.00'	24.65'	12.32'	N04°11'14"E	24.65'
C645	2°12'34"	975.00'	37.60'	18.80'	[illegible]	37.60'
C646	2°30'14"	1000.00'	40.78'	20.40'	[illegible]	40.78'
C647	3°26'34"	1000.00'	60.08'	30.05'	[illegible]	60.08'
C648	3°31'33"	975.00'	60.09'	30.05'	[illegible]	60.08'
C649	3°31'36"	975.00'	[illegible]	30.07'	S89°31'22"W	[illegible]
C650	3°26'18"	1000.00'	[illegible]	[illegible]	[illegible]	[illegible]
C651	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C652	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C653	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C654	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C655	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C656	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C657	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C658	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C659	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C660	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C661	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C662	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C663	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C664	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C665	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C666	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C667	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C668	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C669	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C670	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C671	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C672	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C673	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C674	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C675	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C676	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C677	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C678	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C679	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C680	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C681	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C682	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C683	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C684	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C685	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C686	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C687	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C688	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C689	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C690	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C691	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C692	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C693	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C694	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C695	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C696	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C697	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C698	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C699	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C700	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C701	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C702	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C703	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C704	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C705	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C706	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C707	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C708	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C709	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C710	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C711	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C712	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C713	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C714	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C715	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C716	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C717	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C718	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C719	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C720	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C721	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C722	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C723	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C724	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C725	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C726	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C727	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C728	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C729	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C730	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C731	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C732	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C733	[illegible]	1000.00'	60.20'	30.11'	[illegible]	60.19'
C734	0°46'47"	1000.00'	13.61'	6.81'	[illegible]	13.61'
C735	[illegible]	975.00'	10.65'	5.32'	[illegible]	10.65'
C736	[illegible]	1025.00'	91.92'	45.99'	N04°30'04"W	91.89'
C737	1°19'15"	975.00'	[illegible]	11.25'	[illegible]	22.49'
C738	[illegible]	1025.00'	[illegible]	[illegible]	[illegible]	16.57'
C739	[illegible]	1025.00'	[illegible]	30.11'	[illegible]	60.18'
C740	[illegible]	1025.00'	[illegible]	30.02'	N88°07'15"E	60.01'
C741	[illegible]	1025.00'	[illegible]	[illegible]	N84°45'51"E	60.05'
C742	1°34'01"	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C743	3°12'42"	975.00'	[illegible]	[illegible]	[illegible]	[illegible]
C744	3°12'01"	975.00'	60.13'	30.08'	S83°19'45"W	60.12'
C745	[illegible]	975.00'	60.01'	30.01'	S86°31'36"W	60.00'
C746	3°31'36"	975.00'	60.11'	30.07'	N88°06'17"W	60.11'
C747	[illegible]	975.00'	[illegible]	16.45'	N86°57'40"W	32.88'
C748	0°50'10"	1025.00'	14.96'	[illegible]	[illegible]	14.96'
C749	[illegible]	1045.00'	[illegible]	52.23'	S01°59'52"W	104.34'
C750	4°58'48"	1000.00'	86.34'	43.20'	[illegible]	86.31'

LEGEND

- PARCEL BOUNDARY
- SET 1/2" CAPPED IRON REBAR (PETSCHE & ASSOC. INC.)
- FOUND 1/2" IRON REBAR
- FOUND 1/2" CAPPED IRON REBAR
- FOUND 1/2" CAPPED IRON REBAR
- FOUND IRON SPIKE
- FOUND WOOD RIGHT-OF-WAY MONUMENT
- FOUND 2" IRON PIPE/SHAKER STEEL PIPE
- FOUND FENCE POST
- FOUND 3/8" IRON ROD
- FOUND 1/2" IRON ROD
- Δ CENTRAL ANGLE OF CURVE
- R RADIUS OF CURVE
- L ARC LENGTH OF CURVE
- L.R.C.C.T. LAND RECORDS OF COLLIN COUNTY, TEXAS
- P.R.C.C.T. PLAT RECORDS OF COLLIN COUNTY, TEXAS
- R.O.W. RIGHT-OF-WAY
- ESMT. EASEMENT
- DENOTES STATE PLANE COORDINATE
- MIN. FF = 700.00 MINIMUM FINISH FLOOR ELEVATION

FOR REVIEW PURPOSES ONLY
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RECORD PLAT

WILLOW WOOD ESTATES

AN ADDITION TO COLLIN COUTNY, TEXAS
655 RESIDENTIAL LOTS, 15 COMMON AREAS (1 BEING AN AMENITY CENTER)
AND 8 DEVELOPMENT PARCELS
BEING 306.591 ACRES SITUATED IN
THE ABNER SMALLEY SURVEY, ABSTRACT NUMBER 864,
THE POLLY A. BOONE SURVEY, ABSTRACT NUMBER 1048,
THE JOHN HART SURVEY, ABSTRACT NUMBER 423 AND
THE MANNING CLEMMENTS SURVEY, ABSTRACT NUMBER 224
COLLIN COUNTY, TEXAS.

PETSCHE & ASSOCIATES, INC.
Professional Engineers – Land Surveyors – Development Consultants
2581 Metrocentre Boulevard, Suite 6, West Palm Beach, Florida 33407 (561) 640-3800
2500 Eldorado Parkway, Suite 240, McKinney, Texas 75070 (972) 562-9606

Drawn by:	Date:	SCALE:	JOB NUMBER:	SHEET	OF
PWV	8-10-09		06-224RP		
Prepared by: PWV	Checked by: CAZ	NONE	06-224	10	14

CURVE TABLE

CURVE#	DELTA	RADIUS	LENGTH	TANGENT	CH. BRG.	CHORD
C751	4°47'03"	975.00'	81.41'	40.73'	N04°13'41"W	81.39'
C752	4°05'26"	1025.00'	73.18'	36.60'	S88°31'22"W	73.16'
C753	3°21'25"	1025.00'	60.05'	30.03'	S84°47'56"W	60.04'
C754	3°26'27"	1000.00'	60.06'	30.04'	S84°44'08"W	60.05'
C755	2°59'47"	1000.00'	52.30'	26.15'	S81°31'01"W	52.29'
C756	3°06'06"	1025.00'	55.49'	27.75'	S81°34'11"W	55.48'
C757	1°30'28"	975.00'	25.66'	12.83'	N80°46'22"E	25.66'
C758	1°39'12"	1000.00'	28.86'	14.43'	N80°50'44"E	28.85'
C759	3°26'47"	1000.00'	60.13'	30.07'	N83°23'41"E	60.12'
C760	3°32'02"	975.00'	60.13'	30.08'	N83°17'37"E	60.13'
C761	3°10'03"	975.00'	53.91'	26.96'	N86°38'40"E	53.91'
C762	92°16'17"	30.00'	48.31'	31.21'	S45°38'09"E	43.26'
C763	4°26'47"	1000.00'	77.60'	38.82'	N87°20'25"E	77.58'
C764	86°59'56"	30.00'	45.55'	28.47'	S43°59'58"W	41.30'
C765	2°19'40"	1025.00'	41.64'	20.82'	N86°20'06"E	41.64'
C766	3°21'38"	1025.00'	60.12'	30.07'	N83°29'27"E	60.11'
C767	1°47'30"	1025.00'	32.05'	16.03'	N80°54'53"E	32.05'
C768	2°53'08"	975.00'	49.10'	24.56'	S81°27'42"W	49.10'
C769	3°31'46"	975.00'	60.06'	30.04'	S84°40'09"W	60.05'
C770	3°50'31"	975.00'	65.38'	32.70'	S88°11'17"W	65.37'
C771	1°56'25"	1025.00'	34.71'	17.36'	S05°39'00"E	34.71'
C772	9°13'48"	920.00'	156.45'	78.30'	N04°35'44"W	156.04'
C773	7°16'25"	955.00'	121.25'	60.71'	N07°45'31"W	121.17'
C774	1°00'31"	975.00'	17.16'	8.58'	S88°24'56"E	17.16'
C775	0°49'55"	1025.00'	14.58'	7.29'	N89°19'08"W	14.58'
C776	0°39'56"	1000.00'	11.62'	5.81'	N89°14'40"W	11.62'
C777	3°27'02"	1000.00'	60.21'	30.11'	N88°18'09"W	60.20'
C778	3°21'55"	1025.00'	60.20'	30.11'	N88°14'33"W	60.19'
C779	3°21'19"	1025.00'	60.02'	30.02'	S88°13'50"W	60.01'
C780	3°26'21"	1000.00'	60.02'	30.02'	S88°15'12"W	60.01'
C781	3°26'17"	1000.00'	60.05'	30.04'	S84°48'49"W	60.04'
C782	3°21'24"	1025.00'	60.05'	30.03'	S84°52'29"W	60.04'
C783	3°10'39"	1025.00'	56.85'	28.43'	S81°36'27"W	56.84'
C784	3°04'37"	1000.00'	53.65'	26.83'	S81°33'21"W	53.65'
C785	1°34'32"	1000.00'	27.50'	13.75'	N80°48'24"E	27.50'
C786	1°27'07"	975.00'	24.71'	12.36'	N80°44'41"E	24.71'
C787	3°32'03"	975.00'	60.14'	30.08'	N83°14'16"E	60.13'
C788	3°26'43"	1000.00'	60.13'	30.09'	N83°19'01"E	60.12'
C789	3°26'16"	1000.00'	60.01'	30.01'	N86°45'32"E	60.00'
C790	3°31'35"	975.00'	60.01'	30.01'	N86°46'05"E	60.00'
C791	3°31'52"	975.00'	60.11'	30.06'	S89°42'09"E	60.10'
C792	3°26'37"	1000.00'	60.10'	30.06'	S89°48'01"E	60.09'
C793	2°10'02"	1000.00'	37.82'	18.91'	S86°59'45"E	37.82'
C794	2°01'48"	975.00'	34.55'	17.28'	S86°55'17"E	34.54'
C795	1°15'55"	1025.00'	22.63'	11.31'	N86°32'19"W	22.63'
C796	1°53'47"	975.00'	32.25'	16.13'	S06°30'06"E	32.25'
C797	4°27'45"	1025.00'	79.83'	39.94'	N05°13'06"E	79.81'
C798	2°26'26"	1025.00'	43.66'	21.83'	S87°37'34"E	43.66'
C799	2°19'56"	1000.00'	40.71'	20.36'	S87°34'39"E	40.70'
C800	3°26'35"	1000.00'	60.09'	30.05'	S89°57'54"E	60.08'
C801	3°21'32"	1025.00'	60.09'	30.05'	N89°59'08"E	60.08'
C802	3°21'16"	1025.00'	60.01'	30.01'	N86°37'44"E	60.00'
C803	3°26'18"	1000.00'	60.01'	30.01'	N86°35'39"E	60.00'
C804	3°26'46"	1000.00'	60.14'	30.08'	N83°09'07"E	60.14'
C805	3°21'42"	1025.00'	60.14'	30.08'	N83°15'15"E	60.13'
C806	1°33'16"	1025.00'	27.81'	13.91'	N80°47'46"E	27.81'
C807	1°24'36"	1000.00'	24.61'	12.31'	N80°43'26"E	24.61'
C808	3°14'20"	1000.00'	56.57'	28.29'	S81°38'18"W	56.57'
C809	3°08'04"	975.00'	53.34'	26.68'	S81°35'10"W	53.33'
C810	3°31'44"	975.00'	60.05'	30.03'	S84°55'04"W	60.04'
C811	3°26'25"	1000.00'	60.05'	30.03'	S84°58'41"W	60.04'
C812	3°26'32"	1000.00'	60.07'	30.04'	S88°25'04"W	60.07'
C813	3°31'35"	975.00'	60.02'	30.01'	S88°26'45"W	60.02'
C814	3°32'23"	975.00'	60.24'	30.13'	N88°01'14"W	60.23'
C815	3°27'03"	1000.00'	60.23'	30.12'	N88°38'14"W	60.22'
C816	0°30'07"	1000.00'	8.76'	4.38'	N86°29'47"W	8.76'
C817	0°20'21"	975.00'	5.77'	2.89'	N86°34'51"W	5.77'
C818	0°41'48"	1025.00'	12.47'	6.23'	S86°15'35"E	12.47'
C819	0°09'45"	1025.00'	2.91'	1.45'	S86°41'22"E	2.91'
C820	2°48'53"	955.00'	46.91'	23.46'	N01°46'11"W	46.91'
C821	5°11'31"	1230.00'	111.33'	55.71'	S01°45'45"W	111.29'
C822	6°34'01"	1045.00'	119.77'	59.95'	S01°12'26"W	119.70'
C823	2°27'46"	1025.00'	44.06'	22.03'	N87°28'02"W	44.05'
C824	2°21'17"	1000.00'	41.10'	20.55'	N87°05'19"W	41.10'
C825	3°26'35"	1000.00'	60.09'	30.06'	N89°59'15"W	60.08'
C826	3°21'32"	1025.00'	60.09'	30.05'	S89°57'19"W	60.08'
C827	3°21'16"	1025.00'	60.01'	30.01'	S86°35'55"W	60.00'
C828	3°26'16"	1000.00'	60.01'	30.01'	S86°34'18"W	60.00'
C829	3°26'46"	1000.00'	60.15'	30.08'	S83°07'45"W	60.14'
C830	3°21'42"	1025.00'	60.14'	30.08'	S83°14'26"W	60.13'
C831	1°31'56"	1025.00'	27.41'	13.71'	S80°47'47"W	27.41'
C832	1°23'15"	1000.00'	24.22'	12.11'	S80°42'45"W	24.22'
C833	3°15'41"	1000.00'	56.92'	28.47'	N81°38'58"E	56.92'
C834	3°09'14"	975.00'	53.67'	26.84'	N81°36'15"E	53.66'
C835	3°31'43"	975.00'	60.05'	30.03'	N84°56'44"E	60.04'
C836	3°26'25"	1000.00'	60.05'	30.03'	N85°00'07"E	60.04'
C837	3°26'32"	1000.00'	60.03'	30.02'	N88°26'25"E	60.02'
C838	3°31'32"	975.00'	60.03'	30.02'	N88°28'26"E	60.02'
C839	3°32'24"	975.00'	60.24'	30.13'	S87°59'32"E	60.23'
C840	3°27'01"	1000.00'	60.23'	30.12'	S88°05'37"E	60.22'
C841	0°28'40"	1000.00'	8.34'	4.17'	S86°09'01"E	8.34'
C842	1°24'48"	1025.00'	25.29'	12.64'	N85°38'47"W	25.28'
C843	1°07'01"	975.00'	19.01'	9.51'	S86°33'41"E	19.01'
C844	6°13'06"	975.00'	105.83'	52.97'	S02°23'36"E	105.78'
C845	1°17'26"	975.00'	21.96'	10.98'	N86°33'08"W	21.96'
C846	0°18'56"	975.00'	5.38'	2.69'	S86°03'57"E	5.38'
C847	0°46'23"	1000.00'	13.49'	6.75'	S87°17'52"E	13.49'
C848	0°54'08"	1025.00'	16.14'	8.07'	S86°51'17"E	16.14'
C849	3°21'53"	1025.00'	60.20'	30.11'	S88°29'17"E	60.19'
C850	3°26'56"	1000.00'	60.20'	30.11'	S88°24'33"E	60.19'
C851	3°26'20"	1000.00'	60.02'	30.02'	N88°06'48"E	60.01'
C852	3°21'16"	1025.00'	60.02'	30.02'	N88°08'57"E	60.01'
C853	3°21'25"	1025.00'	60.05'	30.04'	N84°47'35"E	60.04'
C854	3°26'25"	1000.00'	60.06'	30.04'	N84°42'24"E	60.05'
C855	2°58'03"	1000.00'	51.79'	25.90'	N81°30'09"E	51.79'
C856	3°05'45"	1025.00'	55.38'	27.70'	N81°34'09"E	55.38'
C857	1°32'16"	975.00'	26.17'	13.09'	S80°47'16"W	26.17'
C858	1°40'56"	1000.00'	29.36'	14.68'	S80°51'36"W	29.36'
C859	3°26'47"	1000.00'	60.13'	30.07'	S83°25'25"W	60.12'
C860	3°32'01"	975.00'	60.13'	30.08'	S83°19'25"W	60.12'
C861	3°31'35"	975.00'	60.01'	30.01'	S86°51'13"W	60.00'
C862	3°26'18"	1000.00'	60.01'	30.01'	S86°51'55"W	60.00'
C863	3°26'36"	1000.00'	60.11'	30.06'	N89°41'37"W	60.10'
C864	3°31'51"	975.00'	60.11'	30.07'	N89°37'02"W	60.11'
C865	1°56'21"	975.00'	33.00'	16.50'	N86°57'51"W	33.00'
C866	2°03'37"	1000.00'	35.96'	17.98'	N86°55'29"W	35.96'
C867	1°03'27"	1025.00'	18.92'	9.46'	S86°25'24"E	18.92'
C868	0°51'14"	955.00'	14.23'	7.12'	N04°25'57"E	14.23'
C869	0°21'06"	1045.00'	6.41'	3.21'	S04°40'27"W	6.41'
C870	1°20'34"	1025.00'	24.02'	12.01'	S85°56'56"E	24.02'
C871	4°15'36"	1000.00'	74.35'	37.19'	S86°36'33"W	74.33'
C872	3°37'53"	1025.00'	64.96'	32.49'	S86°22'09"W	64.95'
C873	3°21'47"	1025.00'	60.16'	30.09'	S82°52'19"W	60.16'
C874	3°26'52"	1000.00'	60.17'	30.10'	S82°45'19"W	60.16'
C875	1°00'45"	1000.00'	17.67'	8.84'	S80°11'32"W	17.67'

CURVE TABLE

CURVE#	DELTA	RADIUS	LENGTH	TANGENT	CH. BRG.	CHORD
C876	1°10'00"	1025.00'	20.87'	10.43'	S80°35'25"W	20.87'
C877	3°32'26"	975.00'	60.26'	30.14'	N81°47'40"E	60.25'
C878	0°11'01"	1000.00'	3.20'	1.60'	N80°06'38"E	3.20'
C879	3°27'06"	1000.00'	60.24'	30.13'	N81°55'42"E	60.24'
C880	3°26'23"	1000.00'	60.03'	30.03'	N85°22'26"E	60.02'
C881	3°31'41"	975.00'	60.03'	30.03'	N85°19'44"E	60.03'
C882	3°06'55"	975.00'	53.01'	26.51'	N88°39'01"E	53.00'
C883	90°17'31"	30.00'	47.28'	30.15'	S44°38'46"E	42.53'
C884	4°20'08"	1000.00'	75.67'	37.85'	N89°15'42"E	75.65'
C885	88°46'22"	30.00'	46.48'	29.36'	S44°53'11"W	41.97'
C886	2°10'09"	1025.00'	38.80'	19.40'	N88°11'18"E	38.80'
C887	3°21'20"	1025.00'	60.03'	30.02'	N85°25'34"E	60.02'
C888	3°22'01"	1025.00'	60.23'	30.12'	N82°01'53"E	60.22'
C889	0°21'27"	1025.00'	6.40'	3.20'	N80°12'09"E	6.40'
C890	0°51'04"	975.00'	14.48'	7.24'	S80°26'57"W	14.48'
C891	3°32'12"	975.00'	60.18'	30.10'	S82°38'35"W	60.17'
C892	3°33'12"	975.00'	60.47'	30.24'	S86°11'17"W	60.46'
C893	5°58'04"	1025.00'	106.76'	53.43'	S02°17'37"E	106.71'
C894	5°34'46"	1025.00'	99.82'	49.95'	N86°50'50"W	99.78'
C895	10°57'30"	288.00'	55.08'	27.63'	S20°21'45"E	55.00'
C896	10°57'29"	405.00'	77.46'	38.85'	N20°21'45"E	77.34'
C897	10°57'29"	405.00'	77.46'	38.85'	N09°24'16"E	77.34'
C898	10°57'29"	288.00'	55.08'	27.62'	N09°24'16"E	55.00'
C899	2°18'53"	288.00'	11.63'	5.82'	N02°46'05"E	11.63'
C900	10°01'51"	405.00'	70.90'	35.54'	N01°05'24"W	70.81'
C901	60°18'27"	50.00'	52.63'	29.05'	N28°32'35"W	50.23'
C902	133°11'34"	50.00'	116.23'	115.52'	S64°42'25"W	91.72'
C903	49°14'43"	50.00'	42.97'	22.93'	S36°00'44"E	41.66'
C904	79°48'32"	25.00'	34.83'	20.91'	N20°13'40"W	32.08'
C905	6°09'44"	238.00'	25.60'	12.81'	N22°45'38"E	25.58'
C906	3°52'32"	975.00'	65.95'	32.99'	S70°17'54"E	65.94'
C907	6°03'13"	975.00'	103.01'	51.55'	S65°35'07"E	102.96'
C908	18°24'16"	50.00'	16.06'	8.10'	N15°38'22"E	15.99'
C909	39°32'56"	50.00'	34.51'	17.98'	N12°20'14"W	33.83'
C910	142°49'51"	50.00'	124.66'	148.27'	S73°28'27"W	94.72'
C911	36°49'41"	50.00'	32.14'	16.65'	S19°21'24"E	31.59'
C912	63°36'44"	40.00'	44.41'	24.81'	N05°37'52"W	42.16'
C913	1°48'07"	1025.00'	32.23'	16.12'	N59°19'07"W	32.23'
C914	3°21'25"	1025.00'	60.06'	30.04'	N61°53'48"W	60.05'
C915	7°23'41"	1025.00'	132.30'	66.24'	N67°16'22"W	132.21'
C916	85°51'21"	30.00'	44.11'	26.37'	S29°42'53"E	39.57'
C917	13°25'13"	875.00'	204.99'	102.97'	N04°30'28"E	204.52'
C918	0°19'38"	975.00'	5.57'	2.79'	N80°32'54"W	5.57'
C919	0°28'42"	975.00'	8.14'	4.07'	N86°08'44"W	8.14'
C920	0°42'50"	1025.00'	12.77'	6.39'	S85°15'48"E	12.77'
C921	3°22'57"	1025.00'	60.21'	30.11'	S88°18'11"E	60.20'
C922	3°21'19"	1025.00'	60.03'	30.02'	S88°20'11"E	60.02'
C923	3°21'22"	1025.00'	60.05'	30.03'	N84°59'50"E	60.04'
C924	3°16'32"	1025.00'	58.58'	29.30'	N81°39'54"E	58.58'
C925	1°19'18"	975.00'	22.49'	11.25'	S80°41'18"W	22.49'
C926	3°32'04"	975.00'	60.15'	30.08'	S83°06'59"W	60.14'
C927	3°31'35"	975.00'	60.01'	30.01'	S86°38'49"W	60.00'
C928	3°31'55"	975.00'	60.10'	30.06'	N89°49'26"W	60.09'
C929	2°09'19"	975.00'	36.68'	18.34'	N86°58'42"W	36.68'
C930	3°31'55"	1000.00'	61.08'	30.54'	S87°30'42"E	61.07'
C931	3°51'02"	1000.00'	67.20'	33.61'	N81°14'57"E	67.19'
C932	6°14'55"	975.00'	106.33'	53.22'	N12°47'42"W	106.28'
C933	4°14'51"	975.00'	72.15'	36.09'	N80°56'52"E	72.13'
C934	2°56'39"	975.00'	50.05'	25.03'	N84°32'16"E	50.05'
C935	2°52'03"	1000.00'	50.05'	25.03'	N84°36'38"E	50.04'
C936	2°51'55"	1000.00'	50.01'	25.01'	N87°28'39"E	50.00'
C937	2°56'19"	975.00'	50.01'	25.01'	N87°28'42"E	50.00'
C938	2°56'36"	975.00'	50.09'	25.05'	S89°34'43"E	50.09'
C939	2°52'14"	1000.00'	50.10'	25.05'	S89°34'45"E	50.09'
C940	2°18'41"	1000.00'	40.34'	20.17'	S87°59'01"E	40.34'
C941	2°11'50"	975.00'	37.39'	18.70'	S87°02'36"E	37.39'
C942	0°45'57"	1025.00'	13.68'	6.84'	N86°17'37"W	13.68'
C943	0°36'51"	1000.00'	10.72'	5.36'	N86°13'06"W	10.72'
C944	2°52'34"	1000.00'	50.20'	25.10'	N87°57'49"W	50.19'
C945	2°48'20"	1025.00'	50.19'	25.10'	N88°04'43"W	50.19'
C946	2°47'52"	1025.00'	50.04'	25.02'	S89°07'12"W	50.03'
C947	2°52'02"	1000.00'	50.04'	25.03'	S89°09'53"W	50.03'
C948	2°51'55"	1000.00'	50.01'	25.01'	S86°17'55"W	50.01'
C949	2°47'43"	1025.00'	50.01'	25.01'	S86°12'26"W	50.00'
C950	2°48'01"	1025.00'	50.10'	25.05'	S83°24'19"W	50.09'
C951	2°52'17"	1000.00'	50.11'	25.06'	S83°24'21"W	50.11'
C952	1°58'35"	1000.00'	34.50'	17.25'	S81°00'25"W	34.49'
C953	2°06'45"	1025.00'	37.69'	18.85'	S81°04'20"W	37.69'
C954	0°47'02"	975.00'	13.34'	6.67'	N80°24'39"E	13.34'
C955	0°56'51"	1000.00'	16.54'	8.27'	N80°29'34"E	16.54'
C956	2°52'28"	1000.00'	50.17'	25.09'	N82°24'13"E	50.16'
C957	2°56'55"	975.00'	50.18'	25.09'	N82°16'37"E	50.17'
C958	3°55'14"	975.00'	66.74'	33.38'	N85°41'52"E	66.73'
C959	6°40'07"	1045.00'	121.62'	60.88'	N01°30'00"W	121.55'
C960	3°48'07"	1000.00'	66.35'	33.19'	N85°44'31"E	66.34'
C961	3°22'29"	1045.00'	61.55'	30.77'	N07°31'23"W	61.54'
C962	9°15'35"	1030.00'	166.45'	83.41'	N04°34'30"W	166.28'
C963	3°10'56"	1025.00'	56.94'	28.48'	N86°32'59"E	56.93'
C964	2°44'38"	1000.00'	47.89'	23.95'	N86°18'15"E	47.88'
C965	2°52'14"	1000.00'	50.10'	25.05'	N83°27'49"E	50.10'
C966	2°48'01"	1025.00'	50.10'	25.05'	N83°33'29"E	50.09'
C967	2°08'21"	1025.00'	38.27'	19.14'	N81°05'18"E	38.27'
C968	2°00'35"	1000.00'	35.07'	17.54'	N81°01'25"E	35.07'
C969	0°54'52"	1000.00'	15.96'	7.98'	S80°28'34"W	15.96'
C970	0°45'00"	975.00'	12.76'	6.38'	S80°23'38"W	12.76'
C971	2°56'55"	975.00'	50.18'	25.09'	S82°14'35"W	50.17'
C972	2°52'28"	1000.00'	50.17'	25.09'	S82°27'14"W	50.16'
C973	2°51'56"	1000.00'	50.03'	25.02'	S85°14'28"W	50.02'
C974	2°56'34"	975.00'	50.03'	25.02'	S85°11'15"W	50.02'
C975	2°56'21"	975.00'	50.02'	25.01'	S88°07'37"W	50.01'
C976	2°51'56"	1000.00'	50.01'	25.01'	S88°06'25"W	50.01'
C977	2°52'19"	1000.00'	50.13'	25.07'	N89°01'37"W	50.12'
C978	2°56'46"	975.00'	50.13'	25.07'	N88°55'57"W	50.13'
C979	1°32'46"	975.00'	26.31'	13.16'	N86°41'04"W	26.31'
C980	1°40'37"	1000.00'	29.27'	14.64'	N86°44'59"W	29.26'
C981	1°14'59"	1000.00'	21.81'	10.91'	S86°32'10"E	21.81'
C982	1°23'05"	1025.00'	24.77'	12.39'	S86°36'13"E	24.77'
C983	2°48'11"	1025.00'	50.15'	25.08'	S88°41'51"E	50.14'
C984	2°52'25"	1000.00'	50.15'	25.08'	S88°35'53"E	50.15'
C985	2°51'58"	1000.00'	50.02'	25.02'	N88°31'56"E	50.02'
C986	2°47'46"	1025.00'	50.02'	25.02'	N88°30'10"E	50.02'
C987	2°47'45"	1025.00'	50.02'	25.01'	N85°42'24"E	50.01'
C988	2°51'57"	1000.00'	50.02'	25.01'	N85°39'58"E	50.01'
C989	4°54'33"	1000.00'	85.68'	42.87'	N81°46'43"E	85.66'
C990	2°16'25"	975.00'	38.69'	19.35'	N17°53'20"W	38.69'
C991	2°17'34"	1025.00'	41.02'	20.51'	N83°09'45"E	41.01'

LOTS LINE TABLE

LINE	BEARING	DISTANCE
L1	S23°05'07"W	22.76'
L2	S03°28'08"E	21.92'
L3	N86°10'44"E	21.79'
L4	S43°17'51"W	21.43'
L5	N47°48'55"W	22.12'
L6	N62°47'50"E	40.73'
L7	S27°12'10"E	20.79'
L8	N43°17'51"E	21.43'
L9	N79°15'42"E	21.92'
L10	S17°28'05"E	21.25'
L11	N46°42'09"W	22.40'
L12	N70°25'46"E	21.49'
L13	S10°44'18"E	21.92'
L14	N51°44'53"W	23.12'
L15	S41°19'45"W	22.99'
L16	S38°15'07"W	20.65'
L17	N37°20'29"E	14.35'
L18	N51°28'56"W	14.23'
L20	N45°51'03"W	21.81'
L21	N20°38'59"W	22.48'
L22	N38°52'10"E	20.05'
L23	S46°05'44"E	21.70'
L24	S46°15'15"W	20.64'
L25	N32°39'29"E	23.83'
L26	S45°23'41"E	20.69'
L27	S46°32'03"W	20.62'
L28	N42°33'08"E	20.76'
L29	S44°00'10"W	21.72'
L30	N42°52'15"E	23.32'
L31	N48°33'24"E	21.72'
L32	S50°30'26"E	23.56'
L33	N41°47'04"E	24.09'
L34	S40°58'26"E	21.47'
L35	N48°50'17"E	21.53'
L36	S53°08'45"E	22.61'
L37	N43°40'29"E	23.89'
L38	N40°55'41"W	22.23'
L39	N04°51'34"E	2.04'
L40	S04°51'34"W	15.62'
L41	N46°32'59"E	22.59'
L42	N47°59'26"W	19.47'
L43	N46°22'57"E	22.93'
L44	N41°55'17"W	22.27'
L45	N70°03'37"E	21.62'
L46	S21°43'37"E	23.24'
L47	S43°47'30"W	22.88'
L48	N45°51'29"W	19.95'
L49	S46°09'12"E	22.38'
L50	S39°27'55"W	23.28'
L51	N09°12'38"W	59.51'

LEGEND

PARCEL BOUNDARY

SET 1/2" CAPPED IRON REBAR (PETSCHE & ASSOC., INC.)

FOUND 1/2" IRON REBAR

L.R.C.C.T. LAND RECORDS OF COLLIN COUNTY, TEXAS

P.R.C.C.T. PLAT RECORDS OF COLLIN COUNTY, TEXAS

R.O.W. RIGHT-OF-WAY

ESMT. EASEMENT

FOR REVIEW PURPOSES ONLY
NOT RECORDED!
USE AT YOUR OWN RISK

RECORD PLAT

WILLOW WOOD ESTATES

AN ADDITION TO COLLIN COUTNY, TEXAS
655 RESIDENTIAL LOTS, 15 COMMON AREAS (1 BEING AN AMENITY CENTER)
AND 8 DEVELOPMENT PARCELS
BEING 306.591 ACRES SITUATED IN
THE ABNER SMALLEY SURVEY, ABSTRACT NUMBER 864,
THE POLLY A. BOONE SURVEY, ABSTRACT NUMBER 1048,
THE JOHN HART SURVEY, ABSTRACT NUMBER 423 AND
THE MANNING CLEMENTS SURVEY, ABSTRACT NUMBER 224
COLLIN COUNTY, TEXAS.

PETSCHE & ASSOCIATES, INC.
Professional Engineers – Land Surveyors – Development Consultants
2581 Metrocentre Boulevard, Suite 6, West Palm Beach, Florida 33407 (561) 640-3800
2600 Eldorado Parkway, Suite 240, McKinney, Texas 75070 (972) 562-9606

Drawn by: PWV	Date: 8-10-09	SCALE:	JOB NUMBER: 06-224RP	SHEET	OF
Prepared by: PWV	Checked by: CAZ	NONE	06-224	11	14

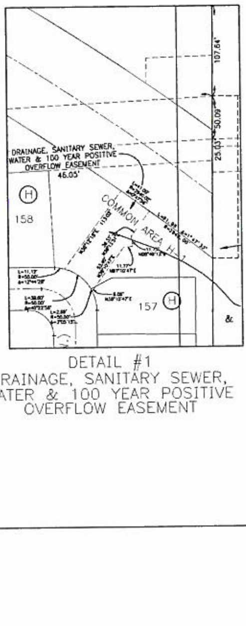
LOT	AREA S.F.
[illegible]	[illegible]

LOT	AREA S.F.
[illegible]	[illegible]

LOT	AREA S.F.
[illegible]	[illegible]

LOT	AREA S.F.
[illegible]	[illegible]

LOT	AREA S.F.
[illegible]	[illegible]



DETAIL #1
DRAINAGE, SANITARY SEWER, WATER & 100 YEAR POSITIVE OVERFLOW EASEMENT

LEGEND

FOR REVIEW PURPOSES ONLY
NOT RECORDED!
USE AT YOUR OWN RISK

RECORD PLAT

WILLOW WOOD ESTATES

AN ADDITION TO COLLIN COUTNY, TEXAS
655 RESIDENTIAL LOTS, 15 COMMON AREAS (1 BEING AN AMENITY CENTER) AND 8 DEVELOPMENT PARCELS
BEING 306.591 ACRES SITUATED IN
THE ABNER SMALLEY SURVEY, ABSTRACT NUMBER 864,
THE POLLY A. BOONE SURVEY, ABSTRACT NUMBER 1048,
THE JOHN HART SURVEY, ABSTRACT NUMBER 423 AND
THE MANNING CLEMMENTS SURVEY, ABSTRACT NUMBER 224
COLLIN COUNTY, TEXAS.

PETSCHE & ASSOCIATES, INC.
Professional Engineers – Land Surveyors – Development Consultants
2581 Metrocentre Boulevard, Suite 6, West Palm Beach, Florida 33407 (561) 640-3800
2600 Eldorado Parkway, Suite 240, McKinney, Texas 75070 (972) 562-9606

Drawn by:	Date:	SCALE:	JOB NUMBER:	SHEET	OF
PMV	8-10-09	AS SHOWN	06-224RP 06-224	12	14
Prepared by: PMV	Checked by: CAZ				

ASL

FOR REVIEW PURPOSES ONLY
NOT RECORDED!
USE AT YOUR OWN RISK

LEGEND

SCALE: 1" = 100'

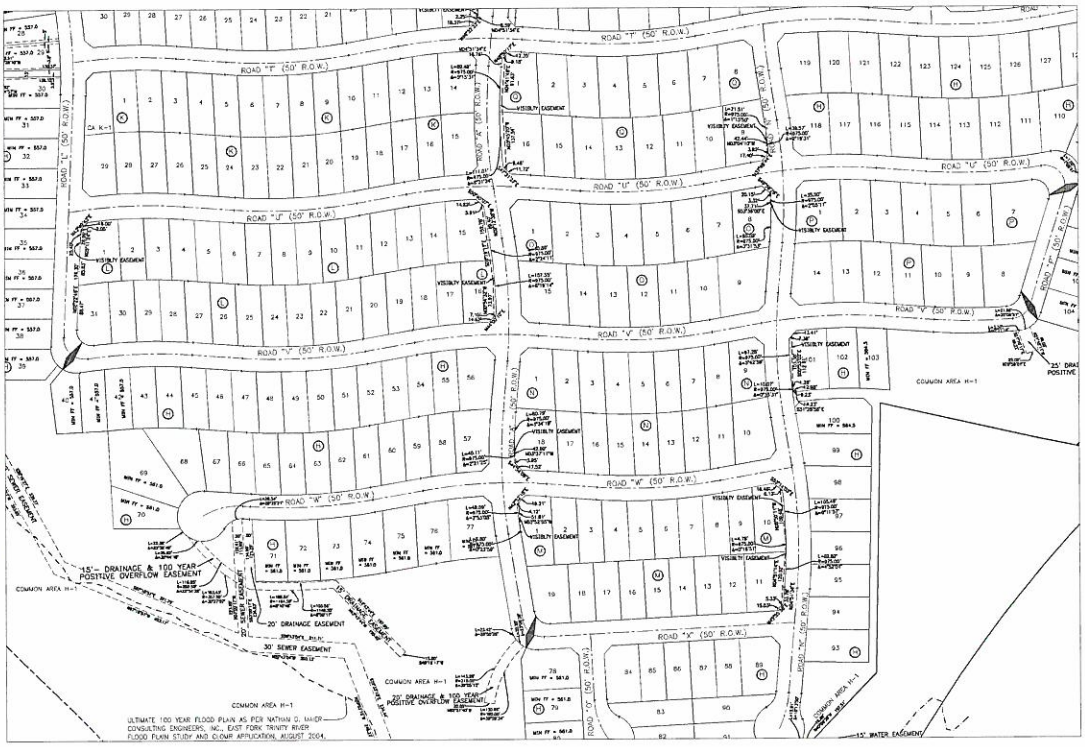
RECORD PLAT

WILLOW WOOD ESTATES

AN ADDITION TO COLLIN COUNTY, TEXAS
635 RESIDENTIAL LOTS, 15 COMMON AREAS (1 BEING AN AMENITY CENTER) AND 8 DEVELOPMENT PARCELS
BEING 306.591 ACRES SITUATED IN
THE ABNER SMALLEY SURVEY, ABSTRACT NUMBER 864,
THE POLLY A. BOONE SURVEY, ABSTRACT NUMBER 1048,
THE JOHN HART SURVEY, ABSTRACT NUMBER 423 AND
THE MANNING CLEMMENTS SURVEY, ABSTRACT NUMBER 224
COLLIN COUNTY, TEXAS.

PETSCHE & ASSOCIATES, INC.
Professional Engineers – Land Surveyors – Development Consultants
2381 Wisconsin Boulevard, Suite A, West Palm Beach, Florida 33407 (561) 640-2010
7000 Eldorado Parkway, Suite 240, McKinney, Texas 75070 (972) 542-9006

Drawn by: PMV	Date: 8-10-09	SCALE: 1" = 100'	JOB NUMBER: 08-224SP 08-224	SHEET 13 OF 14
Prepared by: PMV	Checked by: CAZ			



FOR REVIEW PURPOSES ONLY
NOT RECORDED!
USE AT YOUR OWN RISK

LEGEND

RECORD PLAT

WILLOW WOOD ESTATES

AN ADDITION TO COLLIN COUNTY, TEXAS
65 RESIDENTIAL LOTS, 15 COMMON AREAS (1 BEING AN AMENITY CENTER) AND 8 DEVELOPMENT PARCELS
BEING 306.591 ACRES SITUATED IN
THE ABNER SMALLEY SURVEY, ABSTRACT NUMBER 864,
THE POLLY A. BOOKE SURVEY, ABSTRACT NUMBER 1048,
THE JOHN HART SURVEY, ABSTRACT NUMBER 423 AND
THE MANNING CLEMIENTS SURVEY, ABSTRACT NUMBER 224
COLLIN COUNTY, TEXAS.

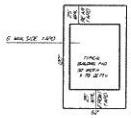
PETSCHE & ASSOCIATES, INC.
Professional Engineers - Land Surveyors - Development Consultants
2321 Intracoastal Boulevard, Suite 4, West Palm Beach, Florida 33407 (561) 845-2010
2900 Eldorado Parkway, Suite 240, McKinney, Texas 75070 (972) 562-9006

Drawn by: PMV	Date: 8-10-09	SCALE:	JOB NUMBER:	SHEET	OF
Prepared by: PMV	Checked by: CAS	1" = 100'	08-224	14	14

EXHIBIT B

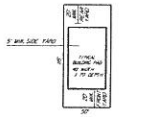
SITE PLAN

NORTH OF ARTERIAL

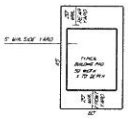


115-72
STANDARD LOT DIMENSIONS
TOTAL : 204 LOTS

SOUTH OF ARTERIAL



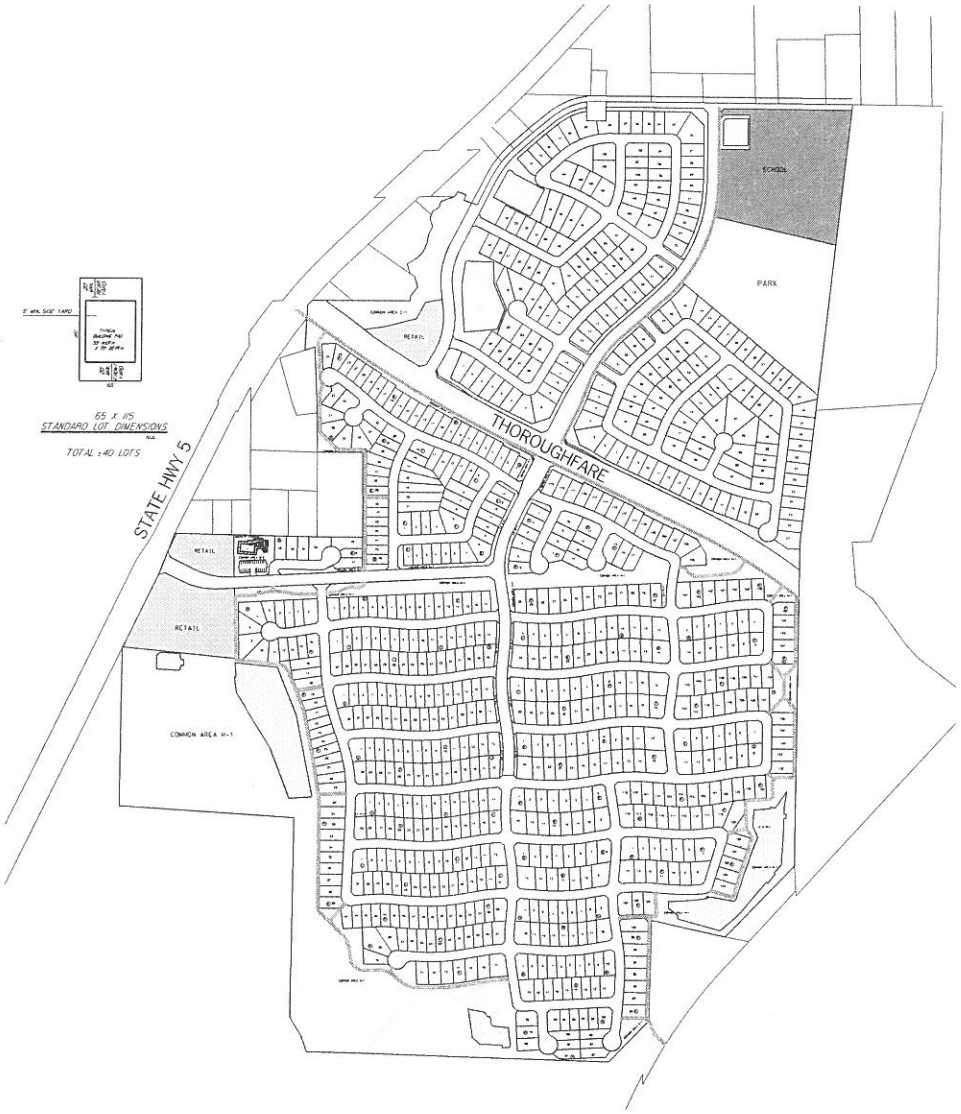
50 X 115
STANDARD LOT DIMENSIONS
TOTAL : 365 LOTS



60 X 115
STANDARD LOT DIMENSIONS
TOTAL : 250 LOTS

65 X 115
STANDARD LOT DIMENSIONS
TOTAL : 40 LOTS

SF	SINGLE FAMILY RESIDENTIAL
ES	ELEMENTARY SCHOOL
RETAIL	RETAIL
OS	OPEN SPACE / DETENTION
	HIKE AND BIKE TRAIL



N

0 250 500 1000
SCALE IN FEET
1" = 300'

EXHIBIT B

THE ESTATES OF WILLOW WOOD
SITE PLAN

PETSCHE & ASSOCIATES, INC.
Professional Engineers - Land Surveyors - Development Consultants
Texas Registered Engineering Firm F-3252
2600 Eldorado Parkway., Suite 240, McKinney, Texas 75070 (972) 562-9606

EXHIBIT C-1

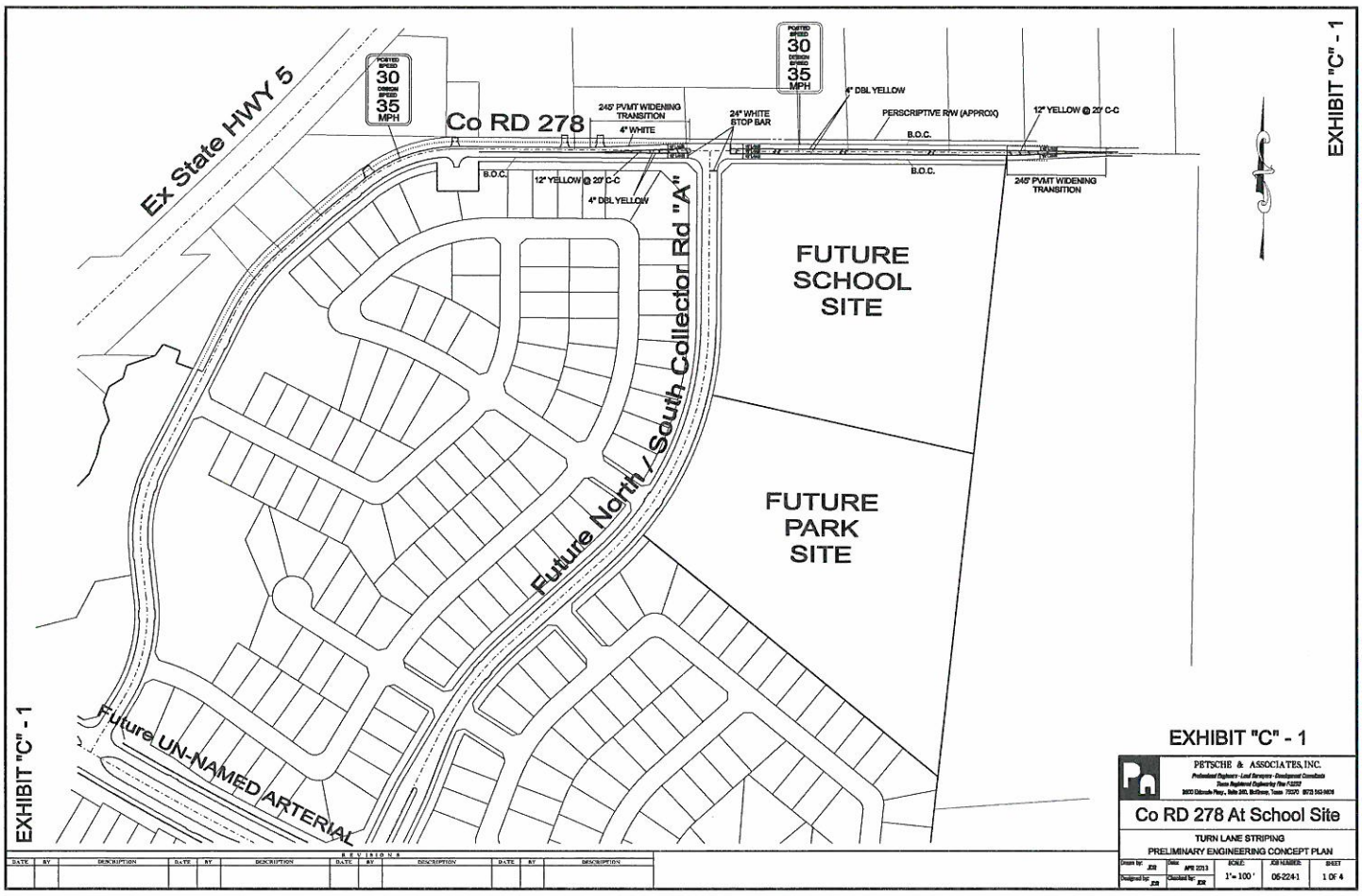


EXHIBIT "C" - 1
Ex State HWY 5
Co RD 278
POSTED SPEED 30
DOWN GRADE SPEED 35 MPH
245' PVMT WIDENING TRANSITION
4" WHITE
24" WHITE STOP BAR
4" DBL YELLOW
PERSCRIPTIVE R/W (APPROX)
12" YELLOW @ 25' C-C
B.O.C.
FUTURE SCHOOL SITE
FUTURE PARK SITE
Future North / South Collector Rd "A"
Future UN-NAMED ARTERIAL
EXHIBIT "C" - 1
EXHIBIT "C" - 1
PETSCHE & ASSOCIATES, INC.
Co RD 278 At School Site
TURN LANE STRIPING
PRELIMINARY ENGINEERING CONCEPT PLAN
APR 2013
1" = 100 '
06-224-1
1 OF 4

AK

EXHIBIT C-2

EXHIBIT "C" - 2

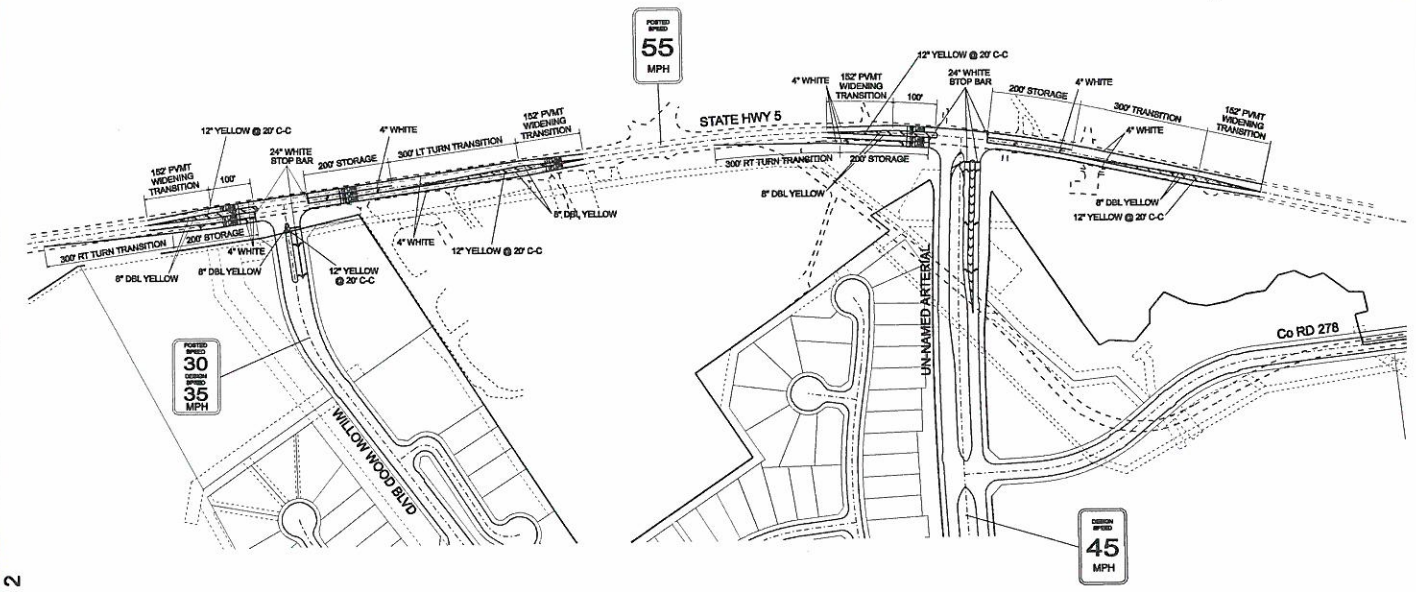


EXHIBIT "C" - 2

EXHIBIT "C" - 2

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PETSCHE & ASSOCIATES, INC.
Professional Engineers - Land Surveyors - Development Consultants
Texas Registered Engineering Firm F-2292
2607 Colorado Pkwy., Suite 240, Brittney, Texas 78070 (972) 562-9628

WILLOW WOOD / HWY 5

HWY 5 ENTRY ROAD & ARTERIAL TURN LANE STRIPING
PRELIMINARY ENGINEERING CONCEPT PLAN

Drawn by: JDR	Date: APR 2013	SCALE: 1" = 100'	JOB NUMBER: 06-224-1	SHEET 2 OF 4
Designed by: JDR	Checked by: JDR			

EXHIBIT C-3

EXHIBIT "C" - 3

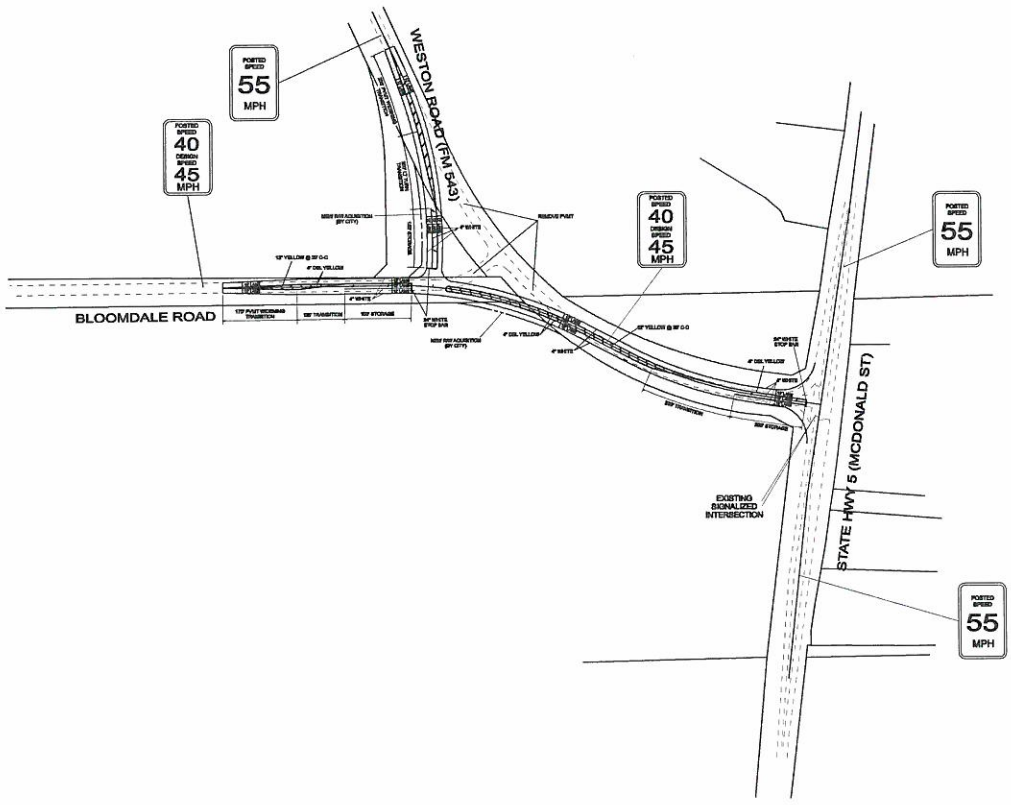


EXHIBIT "C" - 3

EXHIBIT "C" - 3

PETSCHE & ASSOCIATES, INC.
Professional Engineers - Land Surveyors - Development Consultants
Texas Registered Engineering Firm F-2212
2929 Colorado Pkwy., Suite 240, McKinney, Texas 75070 (972) 562-9409

BLOOMDALE RD / WESTIN RD / STATE HWY No. 5

ROADWAY REALIGNMENT & TURN LANE STRIPING
PRELIMINARY ENGINEERING CONCEPT PLAN

Drawn by: JDS	Date: APR 2013	SCALE: 1" = 100'	JOB NUMBER: 06-214-1	SHEET 3 OF 4
Designed by: JDS	Checked by: JDS			

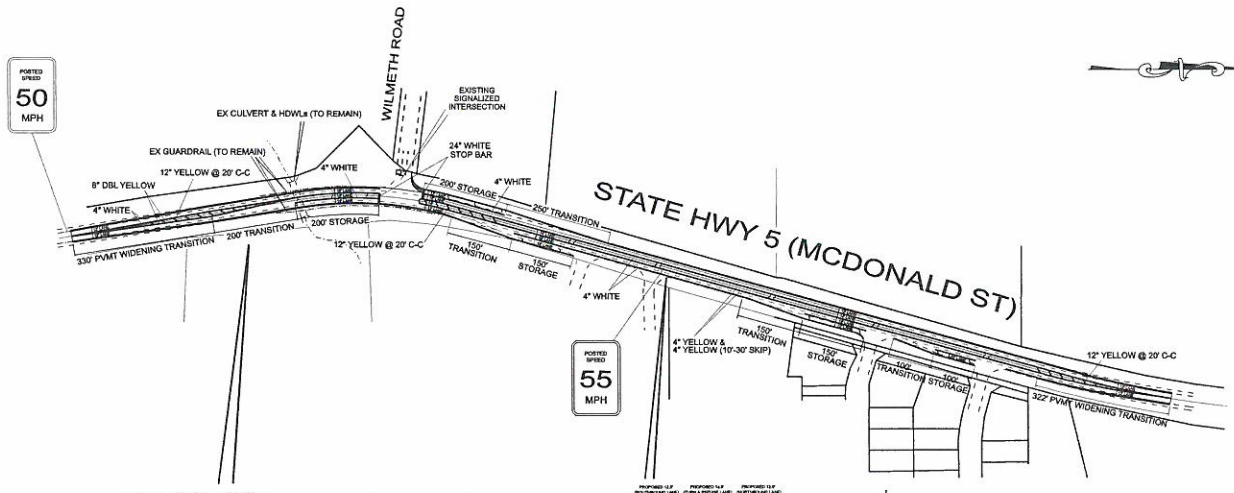
REVISIONS

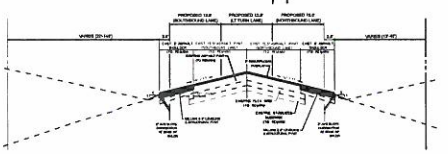
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

ASL

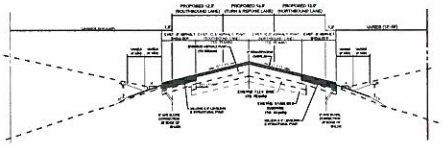
EXHIBIT C-4

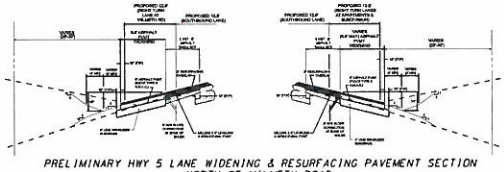
EXHIBIT "C" - 4





PRELIMINARY HWY 5 LANE WIDENING & RESURFACING PAVEMENT SECTION
SOUTH OF WILMETH ROAD
N.T.S.





PRELIMINARY HWY 5 LANE WIDENING & RESURFACING PAVEMENT SECTION
NORTH OF WILMETH ROAD
N.T.S.

EXHIBIT "C" - 4

EXHIBIT "C" - 4

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PETSCHE & ASSOCIATES, INC.
Professional Engineers - Land Surveyors - Development Consultants
Texas Registered Engineering Firm F-3252
2600 Dilanda Pkwy., Suite 240, McKinney, Texas 75070 (972) 562-9606

STATE HWY No. 5 / WILMETH RD

TURN LANE STRIPING & RESURFACING
PRELIMINARY ENGINEERING CONCEPT PLAN

Drawn by: JDR	Date: APR 2013	SCALE: 1"= 100'	JOB NUMBER: 06-224-1	SHEET: 4 OF 4
Designed by: JDR	Checked by: JDR			

ASL

EXHIBIT D

RECORD PLAT CONDITIONAL APPROVAL LETTER

November 17, 2009

Peter J. Petsche, PLS
Petsche & Associates, Inc.
2600 Eldorado Pkwy, Ste. 240
McKinney, TX 75070

RE: 08-144RP – Approval of a Record Plat for the Willow Wood Estates Addition, Approximately 306.60 Acres, Located Along the East Side of State Highway 5, Approximately 4,000 Feet North of F.M. 543, and South of F.M. 278.

Dear Mr. Petsche:

On November 17, 2009, Staff approved the record plat for the Willow Wood Estates Addition, which was received by the Planning Department on August 12, 2009. The approval is conditioned as follows:

1. The applicant satisfy the conditions as shown on the Standard Conditions for Amending Plat Approval Checklist, enclosed.

Prior to filing the plat for record:

2. The applicant revise the plat to provide a note that states: "All lots comply with the regulations of the City of McKinney's Subdivision Regulations."

3. The applicant provide additional right-of-way and easements onsite and offsite subject to review and approval by the City Engineer, including, but not limited to the alignment of proposed roads which are designed to intersect with State Highway 5.

4. The applicant revise the plat to add detention as one of the uses/easements for common areas in the Surveyor Notes.

5. The applicant revise the plat to show the 2009 DFIRM 100 year floodplain, 100 year fully developed floodplain and erosion hazard setbacks, subject to review and approval by the City Engineer.

6. The applicant revise the plat to show that all right-of-way dedications will be made to Collin County, Texas rather than the City of McKinney.

7. The applicant establish a home owner's association or property owner's association that will own and maintain any common areas including, but not limited to detention ponds and amenity center lots.

8. The applicant obtain all necessary permits necessary for the development of the project.

9. The applicant obtain permission from all private utility easement holders to conduct construction across easements in question.

10. Existing utility and easement abandonment and relocations are subject to review and approval by utility providers and the City Engineer.

A revised plat meeting the conditions of approval is required before the plat can be filed and a building permit can be issued. Please submit three (3) 24" x 36" prints and one (1) 11" x 17" reduction of the plat needing revisions to the Planning Department, Attention Anthony Satarino. These copies should be separate from any plans/plats submitted to the Project Expediters, Cookie Strickland and Dana Stillwell.

Consult the enclosed information about submitting mylars for review, signature, and filing. Please submit paper copies to the Planning Department, attention Anthony Satarino, for final review and approval prior to printing Mylars. This may avoid the need to correct or reprint mylars that need revisions. *The conditions of approval noted above must be met before the filing of the plat.*

As part of a continuing effort to improve service to applicants, the Planning Department is asking applicants to complete and return the enclosed survey. Please include any comments or suggestions on how we can provide better service to applicants.

If you have questions about the approval of this item, please contact the Planning Department at 972-547-2000.

Sincerely,

Michael Quint, Senior Planner

cc: Cookie Strickland and Dana Stillwell, Project Expeditors
Karen McCutcheon, Permit Planning Technician

Enclosures

ASL

Standard Conditions for Record Plat Approval Checklist

The conditions listed below marked with a "☒" need to be satisfied by the applicant, prior to issuance of a development permit:

☒ Approval of screening and buffering plans, including irrigation, in accordance with Section 142-106 of the Subdivision Ordinance, and as amended, by the Director of Planning, and approval of final screening and buffering plans, including irrigation, by the Director of Planning, by prior to installation of materials.

☒ Approval of public improvement construction plans, including location of any required sidewalks, Hike and Bike Trails, and fire hydrants, by the City Engineer.

☒ Approval of utility construction plans by the City Engineer.

☒ Approval of grading and drainage plans by the City Engineer.

☒ Approval of the proposed street names within this development by the City Engineer.

☐ The applicant comply with the requirements of the Tree Preservation Ordinance and obtain any necessary tree permits within the time frames specified within the Ordinance, subject to review and approval by the City Arborist.

The conditions listed below marked with a "☒" need to be satisfied by the applicant, prior to filing the record plat for recordation:

☒ Acceptance of all required public improvements by the City Engineer, unless otherwise specified within an approved facilities agreement.

☒ The applicant provide any additional easements as determined necessary by the City Engineer.

☒ Approval of annexation documentation, and filing thereof, incorporating the proposed development into the homeowners' association for the proposed development, including the dedication of common areas, and it maintenance responsibilities, and be subject to review and approval by the City Attorney, and filed for record.

☐ The applicant provide the following notation on the proposed plat: "All lots comply with the minimum size requirements as required by the zoning district."

☐ The applicant provide state plane coordinates at two points on the plat, in accordance with Article III of the Subdivision Ordinance, subject to review and approval by the City Engineer.

☐ The applicant satisfy park land dedication obligations, in accordance with Article IV of the Subdivision Ordinance, subject to review and approval by the Director of Parks and Recreation.

☒ Payment of pro-rata fees, as determined by the City Engineer.

☒ Payment of median landscaping fees for medians within divided roadways, in lieu of the applicant landscaping and irrigating the medians, in the amount of $17 per linear foot for the distance parallel to the subject property.

Prior to issuance of a building permit:

☒ Payment of impact fees in accordance with Ordinances 2008-10-174 (utilities) and 2008-10-173 (roadway), or as specified within an approved facilities agreement or development agreement.

AL

EXHIBIT E

BIRKHOFF STUDY

BIRKHOFF, HENDRICKS & CARTER, L.L.P.
PROFESSIONAL ENGINEERS

11910 Greenville Ave., Suite 600 Dallas, Texas 75243 Fax (214) 461-8390 Phone (214) 361-7900

JOHN W. BIRKHOFF, P.E.
GARY C. HENDRICKS, P.E.
JOE R. CARTER, P.E.
MATT HICKEY, P.E.
ANDREW MATA, JR., P.E.
JOSEPH T. GRAJEWSKI, III, P.E.
DEREK B. CHANEY, P.E.

March 28, 2013

Mr. Jason A. Frey, P.E.
Sr. Project Engineer
Petsche & Associates, Inc.
2600 Eldorado Parkway #240
McKinney, TX 75070

Re: Willow Wood Water Analysis

Dear Mr. Frey:

We have completed a hydraulic analysis utilizing the City of McKinney existing water model for the proposed Willow Wood development. Our analysis included the following four parts:

1. Determine how many Willow Wood lots can be constructed based on the City's current supply to the 794 pressure zone.
2. Determine how many lots can be connected to the 12-inch City of Melissa Supply Line without reducing service to the City of Melissa.
3. Determine how many lots can be constructed if the proposed SH-5 36-inch and the future east-west thoroughfare 24-inch transmission mains are constructed, but not connected to the 12-inch Melissa Supply Line.
4. Determine how many lots can be constructed if the proposed Willow Wood SH-5 36-inch and the future east-west thoroughfare 24-inch transmission mains are constructed and connected to the 12-inch Melissa Supply Line without reducing service to the City of Melissa.

Each of these analyses was completed utilizing the City of McKinney's existing hydraulic model.

The City of McKinney currently provides supply to the City of Meliss's ground storage reservoir located north of SH-121 in the City of Melissa. The City of McKinney provided the City of Melissa's ground storage reservoir ground elevation and air gap elevation for this analysis. Exhibit 1 represents the pipes that were included in the model for the proposed Willow Wood development. The lines colored red on Exhibit 1 represent proposed Willow Wood water lines added to the model based on a CAD file provided by Petchse & Associates. Petchse & Associates also provided a development plan to begin building homes beginning in June 2014, with 100 units per year until a buildout of 859 single family units, 7.51-Ac retail, 10.02-Ac school and 8 to 10-Ac for a park. The proposed Willow Wood development is located in the Cty of McKinney's 794 Pressure Zone

ANALYSIS

PART 1 (794 PRESSURE ZONE SUPPLY REQUIREMENTS)

Chapter 290.41 (b) of the TCEQ Rules and Regulations for Public Water systems requires public water distributions systems to have sources of supply with a safe yield capable of supplying maximum daily demands. The first part of our analysis was to determine the current maximum daily demand in the City of McKinney's 794 Pressure Zone. Based on the City's pumping rate and elevated storage tank level historical data from the summer of 2012, the maximum daily demand in 2012 occurred on August 3, 2012 at a rate of 10.6-MGD

The 794 Pressure Zone is currently supplied treated water from the North Texas Municipal Water District (NTMWD) at a rate of 10-MGD to a 2-MG ground storage reservoir shared by the City of McKinney and the NTMWD. Based on these rates, the 794 Pressure Zone is at capacity today and will require additional supply in order for additional growth to occur.

A second supply point is planned for the 794 Pressure Zone called the Bloomdale Pump Station, which will be located in the vicinity of U.S. 75 and Bloomdale Road. The NTMWD is scheduled to have their infrastructure in place to supply the proposed Bloomdale Pump Station in the year 2018. As such, the City of McKinney is planning to have the proposed Bloomdale Pump Station ready by the year 2018.

One possibility to increase supply to the 794 Pressure Zone between 2013 and 2018 is to install a Pressure Reducing Valve (PRV) between the 850 Pressure Zone and the 794 Pressure Zone. A PRV will allow water to be transferred from the 850 Pressure Zone to the 794 Pressure Zone automatically based on hydraulic conditions. The preferred location for a PRV is the existing 24-inch water line at Virginia Parkway and Northbrook Drive.

Possible drawbacks to a PRV are the maintenance that will be required by the City to keep the PRV operational and the energy loss that will occur as the pressure is reduced from the higher pressure 850 Pressure Zone to the lower pressure 794 Pressure Zone.

The remaining analysis results in Parts 2 through 4 of this letter report are based on increasing supply in accordance with TCEQ requirements to the 794 Pressure Zone.

PART 2 (SINGLE CONNECTION TO MELISSA 12" SUPPLY LINE)

The second part of the analysis consisted of determining the number of single family units that can be connected to McKinney's distribution system with the connection of the proposed Willow Wood 24-inch east/west transmission main to the existing City of Melissa 12-inch Supply Line. Connection to this supply line will need to be approved by both the City of Melissa and the City of McKinney.

The City of McKinney is obligated to provide a 0.50-MGD supply to the City of Melissa through the existing 12-inch Melissa Supply Line. We started the analysis by determining the pressure at the end of the Melissa Supply Line, at the air gap elevation, under existing conditions. The model results showed a delivery pressure of 28-32-psi at Melissa's ground storage reservoir air gap elevation.

Next, the first 100 Willow Wood single family units were added to the model under a single point of connection scenario. The model results showed under normal maximum daily demands for 100 lots, pressure in Willow Wood will range between 64 and 90-psi depending on the ground elevation and the pressure at the Melissa ground storage reservoir ranged between 23-31-psi.

A fire flow analysis was then run to determine if City fire flow requirements could be achieved. The City's current fire flow requirements for a residential area are 3,500-gpm at 20-psi at the fire location, 35-psi elsewhere in the distribution system and a maximum line velocity of 10-fps. The following are the fire flow results for this scenario:

- 750-gpm Fire Flow – 47-psi at fire location and 10-psi at the Melissa Ground Storage Reservoir
- 1,500-gpm Fire Flow – 15-psi at fire location and 0-psi at the Melissa Ground Storage Reservoir

Part 2 Results – The first 100 units could be provided service with a single point of connection to the existing Melissa 12-inch supply line under normal maximum daily demand conditions. However, City fire flow requirements were not achieved, nor could flow be provided to the City of Melissa with a fire flow exceeding 750-gpm in Willow Wood. Under a 750-gpm fire flow scenario, coordination with the City of McKinney fire department would be needed with fire sprinklers possibly being required by the City of McKinney in each of the homes constructed until the system is looped by the proposed 36-inch and 24-inch transmission mains.

PART 3 (OFFSITE 36"AND 24" CONSTRUCTED – NO MELISSA CONNECTION)

The third part of the analysis consisted of determining the number of single family units that can be connected to Mckinney's distribution system with the proposed Willow Wood SH-5 36-inch and future east/west thoroughfare 24-inch transmission mains constructed, *without a connection to the Melissa 12-inch supply line.*

Three Scenarios were run in this part, 100-lots (Year 2014), 300-lots (Year 2017) and 859-lots (Year 2022) along with the demands added for the non-residential uses in the 859 lot scenario. The Year 2014 and Year 2017 lot scenarios were run to simulate the existing system prior to the Bloomdale Pump Station being in service. In the 100 and 300 lot scenarios, demands were added to the model in the portion of the proposed Willow Wood development located south of the proposed east/west thoroughfare. The Year 2022 scenario distributed demands throughout the entire proposed Willow Wood development and included the future Bloomdale Pump Station in in the model. No other changes were made to the model to represent projected Year 2022 conditions other than adding the Willow Wood buildout condition with the Bloomdale Pump Station in service.

With each of these lot scenarios, an average daily demand water age analysis of the proposed 24-inch and 36-inch transmission mains and a maximum daily demand fire flow analysis within the proposed Willow Wood development were completed. The fire flow was placed at the highest ground elevation within the proposed Willow Wood development (J8008 in 100 & 300 Lot Scenarios; J8012 in 859 Lot Scenario). The model results for the Part 3 scenarios are summarized in Table 1:

TABLE 1
WILLOW WOOD WITH 36" AND 24" AND NO CONNECTION TO MELISSA 12" LINE

Lots	Max Day Pressure at Willow Wood (psi)	Max Day Pressure at Melissa Ground Str. (psi)	Fire Flow at Willow Wood (gpm)	Pressure During Fire Flow at Willow Wood (psi)	Pressure During Fire Flow at Melissa Ground Str. (psi)	Water Age 36" SH-5 During Avg. Day (Days)	Water Age 24" Fut. Thoroughfare During Avg. Day (Days.)
100	70-95	27-32	1,500	63	27	5.6	6.7
			3,500	43	24		
300	65-93	27-31	1,500	62	27	3.1	3.8
			3,500	40	23		
859	72-108	32-39	1,500	60	31	5.4	5.8
			3,500	55	30		

Part 3 Results – The two scenarios for 100 and 300 lots showed acceptable system pressures in the proposed Willow Wood development, acceptable supply pressures to the City of Melissa and the ability to provide a 3,500-gpm fire flow at junction J8008 (High Elevation South of proposed East/West thoroughfare). Water age improved from 6.7-days to 3.8-days as demands increased from 100 to 300 lots.

The 859 Lot scenario, which included the future Bloomdale Pump Station, showed system pressure increased in the proposed Willow Wood development to 72 to 108-psi. Although no connection was made to the Melissa 12" Supply Line, pressure did increase to the Melissa delivery point (32 to 39-psi). Water Age did increase in this scenario back to a condition similar to the 100 lot scenario prior to the Bloomdale Pump Station. This can be contributed to the large diameter ground storage reservoir and transmission mains planned for the Bloomdale Pump Station that were added to the model and run in this scenario. In our opinion, water age will likely be less than the results presented in Table 1 for the 859 Lot scenario since additional demands will be placed on the system by the year 2022 that are not reflected in this model. We are in the process of creating a 2022 model for the City with the Water Distribution Master Plan update currently underway. Once that model is completed, the water age for the 859 lot scenario can be run again for more conclusive water age results.

PART 4 (OFFSITE 36"AND 24" CONSTRUCTED – MELISSA CONNECTION TO WILLOW WOOD 24")

The last part of the analysis was the same as the Part 3 analysis, except a single connection was made to the Melissa 12-inch Supply Line with the proposed 24-inch transmission main to loop the proposed Willow Wood development into the City of McKinney distribution system.

The model results for the Part 4 scenarios are summarized in Table 2:

TABLE 2
WILLOW WOOD WITH 36" AND 24" – 24" CONNECTED TO MELISSA 12" LINE

Lots	Max Day Pressure at Willow Wood (psi)	Max Day Pressure at Melissa Ground Str. (psi)	Fire Flow at Willow Wood (gpm)	Pressure During Fire Flow at Willow Wood (psi)	Pressure During Fire Flow at Melissa Ground Str. (psi)	Water Age 36" SH-5 During Avg. Day (Days)	Water Age 24" Fut. Thoroughfare During Avg. Day (Days.)
100	67-93	29-34	1,500	63	25	3.1	3.5
			3,500	47	12		
300	65-93	28-33	1,500	63	25	2.8	3.1
			3,500	45	10		
859	73-105	37-46	1,500	70	36	4.8	5.0
			3,500	55	32		

Part 4 Results – The results in this scenario showed a connection to the Melissa 12-inch Supply line provided maximum daily demand and fire flow pressure results similar to the Part 3 results where the connection to the Melissa 12-inch supply line was not made. However, water age dropped approximately in half with the first 100-lots and was reduced to 3-days or less with 300-lots. Water age in Table 2 for the 859 lot scenario should be considered conservative since a complete 2022 model is not available at this time.

CONCLUSIONS

The City of McKinney's 794 Pressure Zone is at capacity for maximum daily demand supply from NTMWD. This is not expected to change until the year 2018 when the NTMWD is anticipated to provide a new supply delivery point to the City's planned Bloomdale Pump Station. In the interim, additional supply is needed for the 794 Pressure Zone. One possibility is the installation of a PRV located on Virgina Parkway at Northbrook Drive that will allow the City to bleed water from the 850 Pressure Zone to the 794 Pressure Zone. Under this condition, the City can meet its TCEQ requirements for supply. However, a PRV will result in energy loss as energy is reduced though the valve as water bleeds from a higher pressure zone to a lower pressure zone. The costs of the energy loss will need to be discussed with the City of McKinney prior to moving forward with a PRV supply option.

The model results presented in the Analysis portion of this report are based on adequate supply being made available to the 794 Pressure Zone. Assuming the supply requirements are met, the model results showed the following:

- The first 100 units could be connected to the existing City of Melissa 12-inch supply line with adequate pressure available to the proposed Willow Wood development during maximum daily demand conditions. However, only a 750-gpm fire flow can be achieved without interrupting the City's obligation to provide 0.50-MGD supply to the City of Melissa. Under this condition the City of McKinney Fire Department may require fire sprinkler be installed in each home until the proposed 36-inch SH-5 line is constructed and looped into the Melissa supply line. Further, any connection to the Melissa 12-inch Supply Line will require approval by both the City of Melissa and the City of McKinney.

- If the proposed 36-inch SH-5 and 24-inch future east/west thoroughfare transmission mains are constructed and a connection to the City of Melissa 12-inch supply line is not possible, adequate water pressure is available to meet maximum daily demands for all 859 lots and non-residential areas and a fire flow demand of 3,500-gpm. Target water age is 3 days preferred and up to 4-day maximum. In the no connection to the Melissa supply line scenario, water age exceeds 4-days in the proposed 24-inch and 36-inch transmission mains until 300 lots are developed, in place and utilizing water.
- When the proposed 36-inch SH-5 and 24-inch future east/west thoroughfare water lines are connected to the 12-inch Melissa supply line, water age is reduced in approximately half and within the target water age for the initial stages of the Willow Wood development.
- The water age results for the proposed 24-inch and 36-inch transmission mains 859 lot scenarios is likely on the high side since a 2022 model with projected 2022 demands and infrastructure is not available at this time. A 2022 model is currently being developed and could be available in the next few months if additional water age analysis is needed.

RECOMMENDATIONS

1. Prior to Willow Wood adding lots to the 794 Pressure Zone, additional supply is required. We recommend supply possibilities, such as the PRV option discussed in this letter report, be discussed with City of McKinney to determine how to increase supply prior to 2018.
2. Construct proposed 36-inch SH-5 and 24-inch future east/west thoroughfare transmission mains with the initial phases of development. If a connection to the Melissa Supply Line is not possible, discussions with the City of McKinney regarding water age, water quality, flushing and other possible uses of the water in the 36-inch and 24-inch transmission mains needs to occur.
3. If approved by the City of Melissa and the City of McKinney, connect the proposed 24-inch transmission main to the existing 12-inch Melissa supply line. This improves water age and provides redundancy in the event the proposed 36-inch SH-5 transmission main is out of service.

If supply is increased and these recommendations are implemented, the City of McKinney's water distribution system can provide the level of water service required to support both the initial stages and buildout conditions of the proposed Willow Wood development.

We are available to discuss the results of this analysis further at your convenience.

Sincerely,

Matt Hickey, P.E.

cc: Mr. Michael Hebert, P.E. – City of McKinney

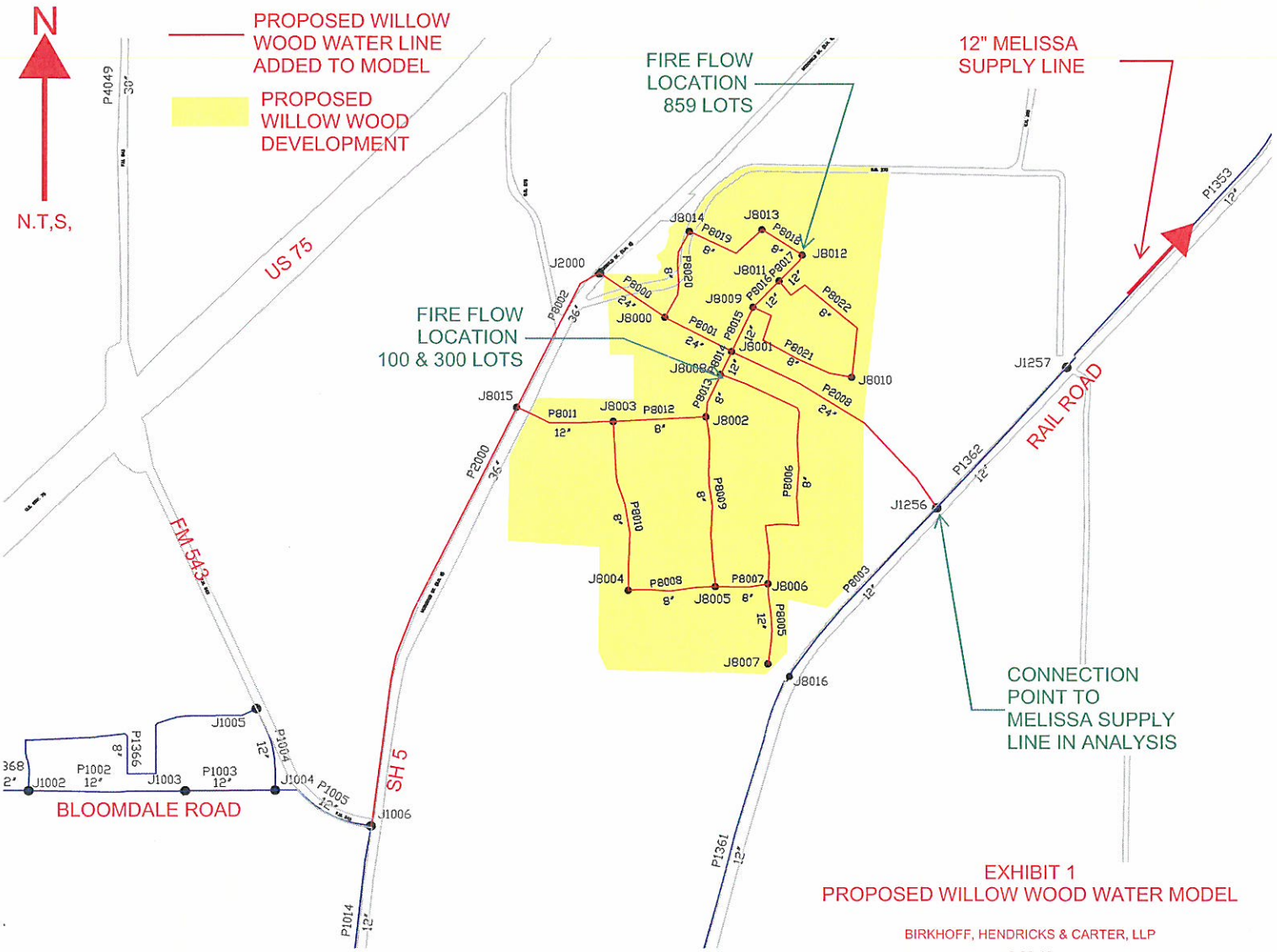


EXHIBIT 1
PROPOSED WILLOW WOOD WATER MODEL

BIRKHOFF, HENDRICKS & CARTER, LLP
3-28-13

Filed and Recorded
Official Public Records
Stacey Kemp, County Clerk
Collin County, TEXAS
08/06/2013 03:37:54 PM
$304.00 DFOSTER
20130806001110210