

THE STATE OF TEXAS §
COUNTY OF BRAZORIA §
CITY OF MANVEL §

LARRY AKERY, COUNCIL PLACE 1
DAVID LANDS, COUNCIL PLACE 2
HARRY OPLIGER, COUNCIL PLACE 3
ED PERRY, COUNCIL PLACE 4
CRYSTAL SARMIENTO, COUNCIL PLACE 5
JEROME HUDSON, COUNCIL PLACE 6



DAN DAVIS, MAYOR
DAN JOHNSON, CITY MANAGER
TAMMY BELL, CITY SECRETARY

**NOTICE OF A CITY COUNCIL MEETING
OF THE CITY OF MANVEL
April 1, 2024**

**NOTICE IS HEREBY GIVEN
5:00 P.M. WORKSHOP – 6:00 P.M. REGULAR SESSION**

Pursuant to Chapter 551, Title 5 of the Texas Government Code, the Texas Open Meetings Act, notice is hereby given that the Manvel City Council will convene a regular meeting at the Manvel City Hall, located at 20031 Hwy 6, Manvel Tx 77578 for the purpose of discussing and if appropriate, take action with respect to the following items:

NOTE: The City Council of the City of Manvel reserves the right to discuss any items in Closed Session whenever authorized under the Texas Open Meetings Act, Chapter 551, of the Texas Government Code. The City Council may discuss the items on this agenda in any order.

This facility is wheelchair accessible and accessible parking spaces are available. Requests for accommodations or interpreter services must be made 48 hours prior to this meeting. Please contact the City Secretary at 281-489-0630 x6 for further information.

CITY OF MANVEL MISSION STATEMENT

“The City of Manvel will continue to be a unique, vibrant, growth-managed community that will meet the needs of its citizens through the efforts of local government and civic-minded individuals by promoting well-planned development, cost-effective professional management, and competent and responsive municipal services.”

Workshop Session

Presentation/Discussion on the Fiscal Year 2022-2023 Audit as presented by Belt Harris Pechacek, LLLP.

Discussion on Accessory Dwelling Units (ADU's).

Discussion on the Design Criteria Manual (including fencing requirements).

Discussion on any topic as listed on the current agenda.

Regular Session

Call To Order

Invocation

Inspirational Reading - Councilmember Sarmiento

Pledge

Pledge of Allegiance and Texas Pledge: "Honor the Texas flag; I pledge allegiance to thee Texas, one state under God, one and indivisible.

Presentations

Proclamations

National Public Safety Telecommunicators Week - April 14-20, 2024

Fair Housing Month - April, 2024

National Child Abuse Prevention Month - April, 2024

Certificates

Teen Court

Manvel FFA Chapter

Public Hearing

TO HEAR INPUT FROM THE PUBLIC REGARDING AN ORDINANCE OF THE CITY OF MANVEL, TEXAS AMENDING THE ZONING ORDINANCE OF THE CITY, BY AMENDING THE ZONING CLASSIFICATION OF 457.0 ACRES OF LAND GENERALLY LOCATED EAST OF STATE HIGHWAY 288, NORTH OF HIGHWAY 6, GENERALLY SOUTH OF DEL BELLO BOULEVARD, AND WEST OF FARM TO MARKET 1128, FROM SINGLE-FAMILY RESIDENTIAL DISTRICT AND PLANNED UNIT DEVELOPMENT (PUD) TO PLANNED UNIT DEVELOPMENT (PUD) AND AMENDMENTS TO THE VALENCIA PLANNED UNIT DEVELOPMENT; PROVIDING FOR THE AMENDMENT OF THE CITY'S OFFICIAL ZONING MAP, PROVIDING FOR SEVERABILITY; AND PROVIDING A PENALTY IN AN AMOUNT NOT TO EXCEED \$2,000 FOR EACH DAY OF VIOLATION OF ANY PROVISION HEREOF.

Public Comments: "Comment Card" Required

o Members of the public with business before the board, NOT scheduled on the agenda as a public hearing (that have submitted a public comment card) may have three (3) minutes to address the board. o The board may not participate in any discussion and cannot vote on the subject you present unless it is listed on the agenda as an action item.

City Manager Update

Update on current events and city issues.

Consent Agenda

1. Acceptance of the meeting minutes to date.
2. Approve the second and final reading of Ordinance 2024-O-15;
AN ORDINANCE AMENDING THE CODE OF ORDINANCES OF THE CITY OF MANVEL, TEXAS, CHAPTER 71. "UTILITIES" BY AMENDING SECTION 71-5 SEWER, TO PROVIDE FOR AVERAGE BILLING; PROVIDING A PENALTY IN AN AMOUNT NOT TO EXCEED \$2,000.00 FOR ANY VIOLATION OF ANY PROVISION OF THIS ORDINANCE; REPEALING ALL ORDINANCES OR PARTS OF ORDINANCES INCONSISTENT OR IN CONFLICT HERewith; AND PROVIDING FOR SEVERABILITY.
3. Approve the second and final reading of Ordinance No. 2024-O-03;
AN ORDINANCE OF THE CITY OF MANVEL, TEXAS, FINDING AND DETERMINING THAT PUBLIC CONVENIENCE AND NECESSITY NO LONGER REQUIRE THE CONTINUED EXISTENCE OF CITY RIGHT-OF-WAY CONSISTING OF A 2.713 ACRE TRACT OF LAND IN THE H.T & B.R.R. CO. SURVEY, SECTION 62, ABSTRACT NO. 484, BRAZORIA COUNTY, TEXAS, BEING A PORTION OF BISSELL ROAD (50 FOOT WIDE) LOCATED WEST OF MERIDIANA PARKWAY AND EAST OF THE GCWA CANAL; VACATING, ABANDONING, AND CLOSING SAID PUBLIC RIGHT-OF-WAY; AUTHORIZING THE MAYOR TO EXECUTE AND THE CITY SECRETARY TO ATTEST, RESPECTIVELY, QUITCLAIM DEEDS CONVEYING RESPECTIVE INTERESTS IN SAID ABANDONED RIGHT-OF-WAY TO THE ABUTTING PROPERTY OWNER(S); PROVIDING FOR SEVERABILITY; AND CONTAINING OTHER PROVISIONS RELATING TO THE SUBJECT. (Forwarded with favorable recommendation by PD&Z 6/0)
4. Approve the second and final reading of Ordinance No. 2024-O-13;
AN ORDINANCE OF THE CITY OF MANVEL, TEXAS AMENDING THE ZONING ORDINANCE OF THE CITY, BY AMENDING THE ZONING CLASSIFICATION OF 1,735 ACRES of land GENERALLY LOCATED EAST OF STATE HIGHWAY 288 AND SOUTH OF HIGHWAY 6 FROM OPEN PLANNED UNIT DEVELOPMENT (O-PUD) TO PLANNED UNIT DEVELOPMENT (PUD) FOR THE MERIDIANA PLANNED UNIT DEVELOPMENT AND RENAMING THIS DEVELOPMENT FROM SEVEN OAKS RANCH TO THE MERIDIANA DEVELOPMENT; PROVIDING FOR THE AMENDMENT OF THE CITY'S OFFICIAL ZONING MAP; PROVIDING FOR SEVERABILITY; AND PROVIDING A PENALTY IN AN AMOUNT NOT TO EXCEED \$2,000 FOR EACH DAY OF VIOLATION OF ANY PROVISION HEREOF. (Forwarded with favorable recommendation by PD&Z 6/0)
5. Acceptance of infrastructure improvements for Manvel Town Center Private Paving 1A to begin the Two-Year Maintenance Period.
6. Final acceptance of infrastructure improvements for Manvel Town Center Public Utilities Phase 1 B and release the associated maintenance bond.
7. Final acceptance of infrastructure improvements for Manvel Town Center Water Plant and release the associated maintenance bond.
8. Acceptance of infrastructure improvements for Pomona Section 25 to begin the Two- Year Maintenance Period.

Items Removed from Consent Agenda

Regular Agenda

1. Consideration and possible action to approve the first of two readings of Ordinance 2024-O-12;
AN ORDINANCE OF THE CITY OF MANVEL, TEXAS AMENDING THE ZONING ORDINANCE OF THE CITY, BY AMENDING THE ZONING CLASSIFICATION OF 457.0 ACRES OF LAND GENERALLY LOCATED EAST OF STATE HIGHWAY 288, NORTH OF HIGHWAY 6, GENERALLY SOUTH OF DEL BELLO BOULEVARD, AND WEST OF FARM TO MARKET 1128, FROM SINGLE-FAMILY RESIDENTIAL DISTRICT AND PLANNED UNIT DEVELOPMENT (PUD) TO PLANNED UNIT DEVELOPMENT (PUD) AND AMENDMENTS TO THE VALENCIA PLANNED UNIT DEVELOPMENT; PROVIDING FOR THE AMENDMENT OF THE CITY'S OFFICIAL ZONING MAP, PROVIDING FOR SEVERABILITY; AND PROVIDING A PENALTY IN AN AMOUNT NOT TO EXCEED \$2,000 FOR EACH DAY OF VIOLATION OF ANY PROVISION HEREOF. (Forwarded with favorable recommendation by PD&Z 4/1)
2. Consideration and possible action on a subdivision variance request seeking to vary Chapter 62, Sections 62-108(a) (4, 5, and 11), lot dimensions, residential lots not served by public water and sewer, and a flag or key-shaped lot, for an approximate 0.9445-acre tract of land generally located 475 feet southwest from the southwest corner of Patterson Road and Chocolate Bayou Road (PID 711015).
3. Consideration and possible action to approve a subdivision variance request seeking to vary Chapter 62, Section 62-116(a), structures near pipelines, for an approximately 0.2311-tract of land located at 9706 Soto Street (PID 702290) and authorize the Mayor to execute the Development Agreement.
4. Consideration and possible action to approve the Fiscal Year 2022-2023 Audit as presented by Belt Harris Pechacek, LLLP.
5. Consideration and possible action to direct staff regarding Accessory Dwelling Units (ADU's).
6. Consideration and possible action to direct staff on amending the Design Criteria Manual.
7. Consideration and possible action to approve Ordinance 2024-O-18;
AN ORDINANCE AMENDING ORDINANCE NO. 2023-O-32 AMENDING THE CITY FISCAL YEAR 2024 BUDGET ENDING SEPTEMBER 30, 2024, BY AMENDING THE GENERAL FUND BUDGET TO FUND THE INSTALLATION OF THE FLOCK CAMERAS ON ALL ENTRY POINTS OF THE CITY. DIRECTING THE BUDGET OFFICER TO FILE OR CAUSE TO BE FILED A COPY OF THE AMENDED BUDGET WITH THE CITY SECRETARY AND WITH THE OFFICE OF THE BRAZORIA COUNTY CLERK AND PROVIDING THIS ORDINANCE SHALL BECOME EFFECTIVE FROM AND AFTER ITS PASSAGE AND ADOPTION.
8. Consideration and possible action to approve Resolution 2024-R-11;
A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MANVEL SUPPORTING MANVEL POLICE DEPARTMENT'S PARTICIPATION IN THE EXPLORER CLUB PROGRAM.

Mayor and Council Comments

Update on current events and city issues.

Additionally, pursuant to Texas Government Code § 551.0415, City Council Members and city staff may make a report about items of community interest during a meeting of the governing body without having given notice of the report.

Items of community interest include:

- Expressions of thanks, congratulations, or condolence;
- Information regarding holiday schedules;
- An honorary or salutary recognition of a public official, public employee, or other citizen, except that a discussion regarding a change in the status of a person's public office or public employment is not an honorary or salutary recognition for purposes of this subdivision;
- A reminder about an upcoming event organized or sponsored by the governing body;
- Information regarding a social, ceremonial, or community event organized or sponsored by an entity other than the governing body that was attended or is scheduled to be attended by a member of the governing body or an official or employee of the municipality; and
- Announcements involving an imminent threat to the public health and safety of people in the municipality that has arisen after the posting of the agenda.

Adjourn

CERTIFICATION

I, Alyssa Deaton, Assistant City Secretary for the City of Manvel, do hereby certify that the foregoing Agenda of the Manvel City Council is true and correct and that I posted such notice on the bulletin board at the Manvel City Hall; a place convenient and readily accessible to the public on 3/28/2024 in accordance with the Texas Open Meetings Act (Tex. Gov't. Code §551.001 et.seq). Said notice remained posted for at least 72 hours preceding the scheduled time of the meeting.


ALYSSA DEATON, ASSISTANT CITY SECRETARY
CITY OF MANVEL, TEXAS



CITY OF MANVEL DESIGN CRITERIA MANUAL

April 17, 2023



Approved by:

**Manvel City Council
Subdivision Ordinance**

Resolution 2022-R-17

Originally adopted as
Resolution 2008-R-04 on April 28, 2008
and Revised:

1. December 15, 2008
2. August 23, 2010
3. September 26, 2011
4. December 10, 2012
5. December 9, 2013
6. January 12, 2015
7. January 25, 2016
8. April 11, 2016
9. April 24, 2017
10. January 29, 2018
11. April 2, 2018
12. August 5, 2019
13. June 7, 2021
14. October 17, 2022

CITY OF MANVEL DESIGN CRITERIA MANUAL

Table of Contents

Section	Title
1	Graphic Requirements
2	Wastewater
3	Water
4	Paving
5	Drainage
6	Site Development
7	Modifications

SECTION 1 GRAPHIC REQUIREMENTS

1.0 GENERAL

1.01 CHAPTER INCLUDES:

Graphic requirements for all construction drawings including City of Manvel (public) projects, non-City of Manvel (private) projects, and all utility projects without a current Franchise Agreement.

1.02 REFERENCES – Refer to the City of Manvel Website for additional information.

1.03 DEFINITIONS

CADD (Computer Aided Drafting Design) - the preparation of documents utilizing computer facilities for the production of drawings, plans, prints and other related documents.

1.04 DESIGN REQUIREMENTS

- A. Provide a cover sheet for all projects involving three or more design drawings (excluding standard detail sheets). Plan sheet numbers shall be shown on the cover sheet or area key map. Include a vicinity map, at a scale of 1" = 1/2 mile, to identify project locations. Also provide approval block for the City of Manvel with a note stating that approval is valid for 2 years from date of signatures.
- B. Drawings shall be prepared on nominal 24-inch x 36-inch overall drawings.
- C. Show service area on cover sheet or area map.
- D. The engineer shall also submit, at the time of plan approval, an electronic version (*in .pdf, and .dwg, format*) of the CADD drawings on CD of the development showing all lot lines and associated lot information, rights-of-way, easements, contours, utilities, and all drainage and paving improvements.
- E. Details of special structures (not covered by approved standard drawings, such as stream or gully crossings, special manholes, or junction boxes, etc.) shall be drawn with vertical and horizontal scales equal to each other.
- F. Each set of construction drawings shall contain paving and utility key drawings indexing specific plan and profile sheets. Standard City drawings, where applicable, shall be included. All sheets shall have standard title blocks. Where applicable, show Brazoria County key drawings and numbers.
- G. Draw key overall layouts to a minimum scale of 1 inch = 100 feet.
- H. Plan stationing must run from left to right, except for short streets or lines originating from a major intersection, where the full length can be shown on one sheet.

- I. A north arrow is required on all sheets and should be oriented either toward the top or to the right. This requirement is waived under the following conditions:
 - 1. A storm or wastewater sewer whose flow is from west to east or from south to north.
 - 2. A primary outfall ditch drainage facility whose flow is from west to east or from south to north.
 - 3. Stationing is intended to start from the cardinal points of the compass and proceed in the direction of construction.
- J. Standard scales permitted for plans and profiles of paving and utility construction drawings are as follows:
 - 1. Major thoroughfares, streets with esplanades over 400 feet in length, or special intersections:
1 inch = 20 feet horizontal, 1 inch = 2 feet vertical
 - 2. Minor or residential single-family streets:
1 inch = 20 feet horizontal, 1 inch = 2 feet vertical
1 inch = 40 feet horizontal, 1 inch = 4 feet vertical
1 inch = 50 feet horizontal, 1 inch = 5 feet vertical
 - 3. Scales above are minimum; larger scales may be used to show details of construction.
- K. Each sheet shall have a benchmark elevation and description defined, and a current flood zone determination statement.
- L. The seal, date, and original signature of the Registered Professional Engineer responsible for the drawings shall be required on each sheet developed by the engineer. The engineer may use a stamped or embossed imprint for his/her seal; however, the embossed imprint must be shaded such that it will reproduce on prints.
- M. A copy of the proposed final plat conforming to the approved Preliminary Plat for new developments shall be included with the final drawings when submitted for final approval.
- N. If a roadway exists where drawings are being prepared to improve or construct new pavement or a utility, label the existing roadway width, surface type, and thickness, if available without destruction of pavement. Pavement thickness can be ascertained by coring with the core hole grout filled to protect pavement prior to construction.
- O. Show all streets and road alignment on drawings.
- P. Develop drawings to accurate scale showing proposed pavement, typical cross sections, details, lines and grade, and all existing topography within street right-of-way, and any easement contiguous with the right-of-way. At the intersection, the cross-street details shall be shown at sufficient distance (20-foot minimum distance outside the primary roadway right-of-way) in each direction along cross street for designing adequate street crossings.

- Q. Match lines between plan and profile sheets shall not be placed or shown within cross street intersections including cross street right-of-way.
- R. Natural ground profiles shall be shown as follows:
1. For non-City of Manvel (privately-funded) projects, center line profiles are satisfactory except where a difference of 0.50 feet or more exists from one right-of-way or easement line to the other, in which case, dual profiles are required.
 2. For City of Manvel (publicly funded) projects, provide natural ground profiles for each right-of-way line. Easement profiles shall conform to S below.
- S. Basic plan and profile sheets shall contain the following information:
1. Identify all lot lines, property lines, easements, right-of-way, and drainage outfalls.
 2. Label each plan sheet as to street/easement widths, pavement widths, pavement thickness where applicable, type of roadway materials, curbs, intersection radii, curve data, stationing, existing utilities (type and location), and any other pertinent feature affecting design.
 3. Show all utility lines 4 inches in diameter or larger within the right-of-way or construction easement in profile view. Show all utility lines, regardless of size, in the plan view including fiber optic cables.
 4. Graphically, show flow line elevations and direction of flow for all existing ditches.
 5. Label proposed top of curb grades except at railroad crossings. Center line grades are acceptable only for paving without curb and gutters.
 6. Curb return elevations for turnouts shall show in profiles.
 7. The center line elevation at the property line of all existing driveways shall be shown in profile.
 8. Station all esplanade noses or the center line of all esplanade openings with esplanade width shown - both existing and proposed.
 9. The design of both roadways is required on all paving sections with an esplanade.
 10. Station all PCs, PTs, radius returns, and grade change PIs in plan view. Station all radius returns and grade change PIs in profile with their respective elevations.
 11. Show Hydraulic Grade Line (HGL) and identify Ponding Depth on profile drawings.
- T. Provide a pollution prevention plan with legend. See Site Development (Section 6) under Design Requirements.
- U. Submit 3 printed sets of construction plans on 24" x 36" paper in addition to pdf file for review: (1) Engineering, (2) Community Services, and (3) Fire Marshal.

- V. Approved plans will be valid for a period of 2 years and a note shall be included on the cover sheet indicating same. No extension will be granted. If work has not commenced by the 2-year expiration date, the plans will need to be resubmitted and reviewed and new plan review fees paid. The “commencement of work” shall be defined by the following milestones:
1. Preconstruction Meeting has occurred with the selected contractor
 2. Civil Site Improvement Permits have been acquired by the selected contractor
 3. Construction Equipment has been mobilized to the Site.
- W. Identify sidewalks, water meters, sewer taps, manholes, fire hydrants, and water valves on Site Plans for residential and commercial projects.
- X. For all projects located within a MUD, a Water and Sewer Utility Availability Summary Table shall be provided with/within every plan and plat submittal. The Table will include a summary of currently platted lots and corresponding connections, along with reserved connections and planned future connections. It will also include the current capacity of the water and wastewater facilities (plant(s), lift stations, etc.) within the MUD.

SECTION 2 WASTEWATER

1.0 GENERAL

1.01 CHAPTER INCLUDES:

Criteria for the design of wastewater collection systems.

1.02 REFERENCES

Texas Commission on Environmental Quality (TCEQ) - "Design Criteria for Domestic Wastewater Systems" - Texas Administration Code - Chapter 217 and "Design Criteria for Sewerage Systems" Chapter 317 (current revision).

1.03 DEFINITIONS

This Chapter addresses the design of the wastewater collection systems within the public right-of-way or a dedicated public easement. Sanitary sewers located on private property that are not in a dedicated easement, are under the jurisdiction of the Plumbing Code, and will be addressed/reviewed by the Building Official. Where used in these regulations, the following terms shall be construed to carry the meanings given below:

- A. Public Sewer - A closed conduit that conveys wastewater flow and which is located within the public right-of-way or dedicated public easement. A public sewer (or public sewer system) is intended to serve more than one (1) "owner" or occupant.
- B. Private Sewer - A closed conduit that conveys wastewater flow and is constructed and maintained by a private entity(s) (i.e., homeowner's association). Private sewers may be located in areas such as a private street or common area. Private sewers are subject to the design and construction requirements of the Plumbing Code and must discharge to a public sewer.
- C. Sewer Main - A sewer that receives the flow from one or more lateral sewers.
- D. Lateral Sewer - A sewer running laterally down a street, alley, or easement, which receives only the flow from the abutting property.
- E. Service Lead - A sewer that branches off a public sewer and extends to the limits of the public right-of-way. It shall be construed as having reference to a public sewer branching off from a main or lateral sewer to serve one or more houses, single-family lots, or other types of small land tracts situated in the same block with the said main or lateral sewer, but not directly adjacent thereto. Such a line shall never exceed 150 feet in length. If the sewer is designed to serve more than two houses, or the equivalent of two single-family residences along a street, a lateral sewer as defined above shall be constructed.
- F. Service Connection - A private sewer from a single source to the main or lateral sewer in the street, alley, or easement adjacent thereto. Service connections are covered by the Building Code. It will be owned and maintained by the owner of the property being served by said sewer.
- G. Project Area - The area within the immediate vicinity of the public sewer to be constructed.

- H. Stack - A riser pipe constructed on main or lateral sewers which are deeper than 8 feet to facilitate construction of service leads or service connections.
- I. Force Main - A pressure-rated conduit (i.e., ductile iron pipe, pressure-rated PVC, etc.) that conveys wastewater from a pump station to a discharge point.

1.04 DESIGN REQUIREMENTS

A. Easements for wastewater lines.

1. Wastewater lines shall be located within street right-of-way, permanent access easements with overlapping public utility easements, easements adjacent to street rights-of way or recorded wastewater easements.
2. When outside of a public street right-of-way or permanent access easement with an overlapping public utility easement, easements must be dedicated and restricted for wastewater lines only.
3. When possible, easements should be adjacent to public rights-of-way.
4. Easements containing wastewater lines must be at least 20-feet wide and the wastewater line must be centered in the easement.
5. Wastewater lines along State rights-of-way shall be installed outside of the right-of-way in a separate 20-foot minimum adjacent easement.
6. No back-lot easements will be allowed for the installation of wastewater lines.

B. Drawings

1. Before any main or lateral sewer is constructed and before a permit will be issued for the construction of same, plans and profiles of the proposed sewer shall be prepared and submitted to the City for approval.
2. The plan view will show the exact location of the proposed line in the street, alley or easement with respect to the edge of the particular right-of-way, the transit base line, and any nearby utilities, major landscaping, and other structures affecting construction.

C. Main and Lateral Sewers

1. Sewers in curved easements, easements defined by property lines and combined easements containing other public utilities must be shown both in detailed plan and profile views.
2. The profile should show other underground and surface utilities and facilities, both in parallel and at crossings; the size, grade of the proposed line, the elevation of same to hundreds of a foot at all manholes, changes of grade and dead-ends; and the proposed finished grade over the sewer. It should show the actual ground line as it exists prior to construction of the sewer. Where proposed fill or cut is contemplated, the proposed new ground line should be shown as a separate line from the actual ground line. Type of pipe and bedding shall comply with City of Manvel Standard Specifications and Standard Details.

3. Where sewers are to be placed between existing pavement and the street right-of-way (or interior easement line) or under existing pavement or topping, show the existing ground line at both sides (or the closest side or sewers near the edge) of the right-of-way or adjacent sewer easement.

D. Sewer mains - plan and profile required

1. Sanitary sewer layouts for residential subdivisions should use a minimum horizontal scale of 1 inch = 40 feet with a vertical scale of 1 inch = 4 feet, or as allowed per Section 1, 1.04, J. A scale of 200 feet per inch may be used provided the following information is shown on the layout:
 - a. All easements containing or buffering sanitary sewers are shown at points of size change; all manhole locations are shown.
 - b. The sewer alignment shall accurately reflect the relative location of the sewer as shown on the detailed plan view.
 - c. All service leads that cross-street pavement or serve adjacent property are to be shown on the layout. The detail plans and profiles shall show the flow lines of all service leads at the street or easement right-of-way.
 - d. The number and size of the lots depicted on both the overall sewer layout sheet and the individual plan and profile sheets shall match the number and size of the lots depicted on the final plat after recordation.
 - e. On the overall sanitary sewer layout sheet, the size and direction of flow for all existing and proposed sewers shall be shown.
 - f. The location of the proposed sewer within the public right-of-way, a dedicated easement adjacent to the public right-of-way, or side lot easement (if allowed by the City).
 - g. The overall sanitary sewer layout sheet shall show the area, in acres, which the proposed sewer(s) is (are) designed to serve. Include a location map that references the average to nearby major thoroughfare and boulevard streets. The scale of the location map shall be 1 inch = 2,000 feet or less.
2. Commercial subdivision sanitary sewer layouts for large areas and with a scale of 400 feet or more per inch must have an additional set of layouts at not more than 200 feet per inch, with match lines and a small index map showing which portion of the overall layout that each sheet's layout represents.
3. Acceptable horizontal scales for the detailed plan and profile views are 10 feet, 20 feet, 40 feet and not more than 50 feet maximum per inch. Horizontal scale for major thoroughfares and boulevards shall be 1 inch = 20 feet or less.
4. Acceptable vertical scales for detailed profile views are 2 feet, 4 feet, and not more than 5 feet maximum per inch unless otherwise approved. Vertical scale for major thoroughfares and boulevards shall be 1 inch = 2 feet or less.

5. The plan view shall show, at a minimum, the following information for the project area:
 - a. All topographical features;
 - b. Stationing for the proposed sewers;
 - c. All existing utilities (i.e., telephone, gas, power, etc.);
 - d. Any significant landscaping and/or other structures which might impact construction and/or construction related activities;
 - e. The width and type of all existing and proposed easements;
 - f. All proposed service leads;
 - g. The limits of bore and/or tunnel;
 - h. Locations where pressure pipe is to be installed for water line crossings;
 - i. Drawings for residential subdivisions shall show the proposed location, by stations, of all service leads, service connections, and stacks. The distance from the sewer or transit base line station to the nearest existing manhole shall be shown in the plan view or on an additional sewer layout sheet with a scale no more than 1 inch = 100 feet.

6. The profile view shall show, at a minimum, the following information for the project area:
 - a. Underground and/or surface utilities/facilities which are either parallel to the proposed sewer or cross the proposed sewers;
 - b. The proposed sewer's diameter and grade for each manhole section;
 - c. The flow line elevation for all sanitary sewers at each manhole;
 - d. The rim elevation of all existing and proposed manholes;
 - e. The flow line elevation at each sheet "break" (i.e., from one sheet to another);
 - f. Type of pipe bedding/backfill shall be noted on each plan/profile sheet;
 - g. The finished grade for proposed and existing pavement where "fill" and/or "cut" is proposed, the proposed new ground line should be shown as a separate line from the existing ground line;
 - h. The existing ground line for the "near side" of the public right-of-way where a sewer is to be placed between the edge of existing pavement and the edge of the public right-of-way;
 - i. The existing ground line at the centerline of the proposed sanitary sewer where a sanitary sewer is to be placed within an existing easement. Show any proposed and/or existing pavement.
 - j. The flow line elevation of all service leads where it crosses the edge of the public right-of-way or the dedicated easement adjacent to the public right-of-way;
 - k. The limits of bore and/or tunnel;
 - l. Locations where pressure pipe is to be installed for water line crossings;
 - m. The location of special backfill and/or proposed stacks shall be identified by "stations" indicated on the design plans.
 - n. The location of stacks shall be labeled with stations.

E. Service leads

1. Service leads shall be at the property line between two (2) adjoining lots, or as directed by the City. A single 6-inch service lead located at the property line between two (2) adjoining lots would serve two (2) single-family residences with a wye placed at the end of the service lead. Do not extend the wye clean-outs beyond the edge of either the public right-of-way or dedicated easement.
2. Any service lead extension of more than 50 feet parallel to the street right-of-way shall be treated as a lateral sewer.
3. Service leads from developments with more than 17,500 gallons-per-day flows shall discharge into a proposed or existing manhole. Where the flow line of the service is 24 inches or greater above the flow line of the manhole, provide a standard external drop to manhole.
 - a. Service leads shall be provided to serve each lot within proposed development inside the City limits.
 - b. Service leads shall be 6 inches in diameter (minimum). If the length of a service lead exceeds 100 feet or the width of the public right-of-way by more than 20 feet, the minimum diameter shall be 8 inches and a manhole shall be utilized for connection to the public sewer.
 - c. Service leads with a diameter of 6 inches shall utilize "full body" fitting (extruded or factory-fabricated) for connection to the proposed public sewer or an approved saddle-type connector for connection to an existing public sewer.
 - d. Saddle-type connectors shall be installed with the "stub" oriented between the "spring line" (3 o'clock and 9 o'clock positions) and 45 degrees from the "spring line" ("1:30" and "10:30" positions). Tees (aka, "full body fittings") shall be oriented in the same manner.
 - e. The service lead shall be designated to minimize the use of bends, as site conditions will permit.
 - f. Service leads exceeding the limits defined in 1.04.E.2. shall have a manhole at each end; as well as, a plan/profile drawing for each right-of-way crossing. All, or part, of these service leads which are located in a public right-of-way, alley or dedicated sanitary sewer or public utility easement may be treated as a public sewer; depending upon the location of the terminal manhole and any intermediate manholes.
 - g. For all existing lots (which are not served in accordance with these guidelines) that need a service lead, if the distance to the nearest existing sewer is less than 50 feet, the service lead is under the jurisdiction of the Plumbing Code.
4. Service leads shall not be connected to a force main. (Grinder pumps are not allowed.)

F. General Requirements

1. Sanitary sewers within the City of Manvel's jurisdiction shall allow for orderly expansion of the system and shall conform to the Master Wastewater Plan for the City of Manvel.
2. Sewers shall be sized based on the minimum requirements set out in this standard and the standard wastewater flow rates as established by the City of Manvel and shall be no less than 315 gallons per connection per day.

3. All sewers shall conform to the minimum requirements of the Texas Department of Health, "Design Criteria for Sewerage Systems".
4. Sewers shall be separated from water lines by a minimum of nine (9) feet. Sewers crossing utilities other than water, a minimum of six (6) inches of clearance must be maintained.
5. The public sanitary sewer, as maintained by the City of Manvel, shall be defined as all sewers, including stacks and service leads, that serve more than one sewer connection, that are located in public easements or street rights-of-way, and that are installed in accordance with these Standards.
6. Sanitary lines greater than 6 inches require stacks with 5 feet minimum cover. (Stacks are to be shown on plans with stations). Place stacks and wyes or tees as shown. Where no stacks are shown, it is the responsibility of the licensed plumber to place a City approved saddle for connection to the line and the responsibility of the City Inspector to determine that such saddle is water tight and properly installed.
7. Materials and construction to conform to latest City of Manvel specifications with all amendments thereto, including standard leak test.
8. Unless noted otherwise, all public sewers and service leads shall be embedded in cement stabilized sand; to 6 inches below the pipe, 12 inches above the pipe and to 6 inches on each side. All such bedding shall be compacted to 95% standard proctor density. The cross-section so described herein shall be termed the "embedment zone."
9. Backfill all excavation areas/trenches under or within 1-foot of existing or proposed pavement with cement-stabilized sand from the top of the pipe "embedment zone" to the bottom of the subgrade. Cement-stabilized sand must develop 100-psi compression at 48 hours. Backfill shall be compacted to 95% standard proctor density.
10. The location of all proposed stacks shall be shown by stations in the drawings.
11. Construction notes shall designate the kind and class of pipe with exceptions to the construction notes to be shown on the plan and profile sheets.
12. Non-sanitary sewer easements or fee strips such as pipeline, power company, drainage district, railroad, etc., are in and of themselves insufficient and unacceptable to permit laying to sanitary sewers and/or force mains across or along the underlying private property or restricted non-sanitary use type of public property.
13. All public sanitary sewers shall be located within a public right-of-way (ROW) or easement.
14. Where an easement for a public sewer ends at a public right-of-way, the last manhole shall be extended into the public right-of-way at a minimum of 2 feet beyond the property line; or as close to the public right-of-way as possible due to acceptable clearances required for other utilities (i.e., water line and storm sewers).

15. The drawings for the sewer shall show the location of any existing known pipe or duct that might interfere with the construction of the sewer and call to the attention of the City any known obstacles that might be encountered in constructing the sewer in any location under consideration. The Professional Engineer shall determine the existence of pipes, ducts and/or obstacles from a visual survey on the ground plus research of all public records and private records when available.
16. All sanitary sewer mains shall be constructed utilizing SDR 26.
17. Sanitary sewer lines shall be centered in sanitary sewer line easements.
18. In subdivisions platted or created after January 1, 1988, for single-family dwellings where each lot maintains an individual water well supply and an on-site sewage facility (OSSF) the sewage disposal plan shall show the approved water well location and sanitary control easement around the well within a 100 feet radius in which no subsurface sewage system may be constructed.
19. No back-lot easements will be allowed for the installation of sanitary sewer lines.
20. All new wastewater lines to be installed with tracer wire for future line locates, unless lines are deeper than 10 feet.

G. Line Size

1. The minimum pipe diameter for a public sanitary sewer shall be 8 inches.
2. Four-inch service leads shall be confined to the limits of the lot, which they serve and shall serve only the equivalent of one single-family lot. No 4- inch sewer shall be laid in any street, alley, or right-of-way.
3. Six-inch service leads shall not serve more than the equivalent of two single-family lots or other types of small land tracts.
4. Four-inch and six-inch service leads for single-family residential lots shall have a minimum grade of 0.70 percent.
5. For commercial service leads such as street bores, submit a copy of the approved plumbing drawings to establish the required size of the line. The minimum size lead shall be 6 inches.
6. All main and lateral sewers will end in manholes, except for special and/or unusual situations and subject to specific approval by the City.
7. All sewer lines shall be laid at a size and depth to conform to designs permitting an orderly expansion of the sewer system of the City and so as to avoid a duplication of lines in the future.
8. The City shall be the final judge as to sizes and depths required and exceptions to "lateral service leads" as previously defined.

H. Line Depth

1. The sewer should be laid with the top of the pipe a minimum of 3 feet below finished grade or top of curb, whichever is lower.
2. Sewer laid in street rights-of-way with curb and gutter paved streets shall have a minimum cover of 4 feet from the top of the pipe to the top of the curb to anticipate future sewer extension.
3. Sewers laid in street right-of-way with crowned roads and side ditches shall have a minimum cover of 5 feet from the average ground line at the adjacent street right-of-way to the top of pipe.
4. Where the minimum cover as specified in paragraphs H, 1,2, and 3 above is not possible, the sewer shall be laid in Class 150 (150 psi) pressure pipe or rigid factory-made pipe with cement stabilized sand as shown in standard detail. Ductile iron pipe shall be lined with either a polyethylene or polyurethane coating as approved by the pipe manufacturer and applied by either the pipe manufacturer or an approved application. The minimum liner thickness shall be 40 mil.
5. Maximum depth for sanitary sewer lines shall be 20 feet from average ground surface to pipe invert.

I. Line Grades

The following table lists the minimum grades for 6–30-inch public sewers. The minimum grade is based on a minimum full pipe velocity of 2.0 feet per second (fps). The maximum grade is based on a maximum full pipe velocity of 10.0 feet per second (fps). In both cases, the Manning Formula has been used with an "n" of 0.013. The use of different pipe materials will not alter the use of 0.013 for the purpose of the Design Manual.

Inside Dimension (I.D.) of Pipe in Inches	Minimum Slope (in Percent)
6	0.70
8	0.33
10	0.25
12	0.20
15	0.15
18	0.11
21	0.10
24	0.08
27	0.07
30	0.06

For sewers larger than 30 inches in diameter, the Professional Engineer of record shall determine the appropriate grade utilizing the Manning Formula, $n = 0.013$ and a full pipe velocity of 2.0 fps.

J. Manholes

1. All manholes shall be precast concrete, unless the Professional Engineer submits a "cast in place" manhole design for review and approval by the City Engineer. All precast manholes to incorporate a "boot" type connector for sewer diameters up to 24". For sewer diameters greater than 24 inches, utilize either the "boot" type connector (if available) or an integral gasket. All precast manholes shall conform to the latest ASTM requirements.
2. For all public sewers, manholes shall be placed at all changes in alignment, changes in grade, junction points, and either at street, alley, or easement intersections as designs may require.
 - a. Sewers laid in easements shall have a manhole in each street crossed by the sewer.
 - b. The maximum distance between manholes shall be 350 feet.
 - c. Sewers with the same, or approximate flow line elevation shall intersect each other at a 90-degree angle. However, where a true perpendicular intersection cannot be obtained, and where the "entering" sewer intersects the receiving sewer at, or about, the same flow line, one or more manholes shall be utilized to maintain a minimum angle of 80 degrees at the point of intersection. When the "entering" sewer is on the upstream side of the manhole, the minimum angle between the sewers may be reduced to a 45-degree angle; provided:
 - (1) A distinct flow channel can be maintained within the manhole when the flowline elevations of the sewers are at, or within, one (1) pipe diameter of the smaller pipe; or
 - (2) When the flow line elevation of the "entering" pipe is above the crown of the "primary" sewer and clearance can be provided between the sewers.
 - d. Manholes shall be placed at all dead-end mains and laterals.
 - e. Criteria for connections to, and utilization of, manholes.
 - (1) Where manholes are utilized to facilitate connections between public sewers, when possible, the sewers shall match the manhole's flow line, match the elevation of each other's crown or utilize an "outside" manhole drop.
 - (2) Connections between public sewers at the manhole shall adhere to the following criteria when possible:
 - (a) The elevation of the crown of the discharging sewer shall either match the elevation of the crown of the receiving sewer or be approved as special cases by the City.
 - (b) A standard drop connection is required when the difference in elevation between discharging sewer flowline and receiving flowline is greater than 24 inches.
 - (3) The routing of service connection directly to manholes will be allowed only where the flowline elevation of the existing sanitary sewer is more than 10 feet below grade and there is no available stack and either
 - (a) The lot to be so connected is a single-family, owner-occupied, single lot residence connection to an existing manhole; or
 - (b) The lot to be so connected is a single-family, owner- occupied, single lot residence connecting to a proposed manhole at the end of a cul-de-sac.
 - (4) When routing an approved service connection to a manhole (see Item "3"), the wall penetration shall not be greater than 10 inches in diameter and shall be cored and sealed using grout as approved by the Standard Wastewater Products Committee.

- (5) When routing an approved service connection to a manhole (see Item "3"), the connections shall utilize an external drop and shall adhere to the following criteria:
 - (a) The manhole wall penetration shall be a minimum of 10 feet below the manhole rim elevation and shall not be greater than 10 inches in diameter;
 - (b) The drop shall be 6 inches in diameter and shall be constructed of SDR 26 PVC pipe (ATSM D 3034-94);
 - (c) The drop shall be located 45 degrees from the upstream side of the main sewer;
 - (d) The wall penetration (core) shall be sealed using a "grout" as approved by the City Engineer.
- (6) All public sewers shall terminate in a manhole. Clean-outs will not be utilized except at the end of each service lead.
 - (a) The manhole cover shall have a minimum diameter of 32 inches.
 - (b) All sanitary sewer manholes shall have stainless steel inflow protectors.
- f. Manholes to be coated with Raven 405. Sewper Coat is an approved alternative.
- g. Manholes shall not be located within a driveway, street, or sidewalk.

K. Lift Stations and Wastewater Treatment Plants

1. Lift station design shall comply with the City of Manvel specifications, with a storage volume in the wet well equal to 1.5 times the peak design flow to the lift station. Add 10% to account for volume displaced by pumps.
2. Minimum site size shall be 40 feet by 40 feet. Smaller sites that are adjacent to public rights-of-way are contiguous to green space or similar land use areas, may be approved when adequate odor control provisions are provided.
3. Pumps shall be sized to operate at optimum efficiency. Minimum acceptable efficiency at the operating point will be sixty percent (60%).
4. Operation and maintenance should be considered in the design of the station and the location of the station.
5. Wet well working volume should be sized to allow for the minimum pump cycle of six (6) minutes for each pump.
6. Prior to installation controls and equipment shall be approved by Community Services.
7. Emergency operations shall be considered. Provide fittings and a blind flange that will be readily accessible for emergency bypass pumping.
8. The inlet structure shall be designed to minimize turbulence.
9. The velocity in the Force Main and riser pipes shall be between 3 and 8 fps.
10. The wet well shall be sized to provide adequate clearance between the pumps (refer to manufacturers recommended clearances).

11. A peak factor of four (4) shall be used for Lift Station design.
12. A minimum of two (2) feet of clearance shall be provided between pumps and between pump and wall.
13. Low water levels shall be at least six (6) inches above impeller.
14. Complete immersion of submersible pump motor at low water level is preferred.
15. Tie steel in Lift Station bottom to wall (includes caisson construction situation) to provide watertight wet well.
16. Nuts, bolts, chains and all other metal components within wet well shall be stainless steel.
17. Vent pipe shall be six (6) inches minimum diameter equipped with odor control system.
18. The following Hazen-Williams Coefficient shall be used for various pipe types:

PVC	New	C = 160
	10-year	C = 140
DIP	New	C = 140
	10-year	C = 100
19. Provide minimum 8' board fence (either masonry, cedar or heart redwood) with steel posts in concrete, and a treated 2"x6" (or wider) rot board along the bottom.
20. Entrance drive to be at least fourteen (14) feet wide concrete pavement. Provide enough room to park inside site. Provide rolling gate with minimum 10' wide gate.
21. Indicate method of drainage on site plan. Internal drainage, sheet flow and valley gutter driveways are acceptable. Drain to street or storm sewer, never onto adjacent private property.
22. Locate control panel and wet well hatch above 100-year flood plain. Call out the 100-year flood plain elevation on the plans.
23. Dual stainless steel guide rails (or other pump removal method that avoids entering wet well) are required for submersible pumps.
24. A tee, plug valve (or gate valve), and blind flange assembly is required on the force main on the downstream side of the discharge valves and header. This is required so truck-mounted pumps can bypass the lift station pumps and piping while work is being done.
25. Bedding for PVC force main is bank sand a minimum of 6 inches from all sides of pipe.
26. PVC force mains must be C-900.
27. DIP force mains are to be bedded in bank sand and polyethylene wrapped.
28. When calculating headloss in force main and piping, use of K factors on fittings, with the Hazen-Williams formula, is preferred.
29. Backfill structural excavations (wet well, etc.) with cement stabilized sand.

30. Lift station site plans shall be submitted in scales of 1-inch = 5-feet or 1-inch = 10-feet.
31. Provide a protective coating or concrete additive to interior walls of wet well. Community Services shall approve coating or additive used.
32. Lift station shall be equipped with a telemetry system, approved by City and compatible with existing system. A bubbler system shall be installed and connected to telemetry system to monitor status of lift station.
33. Permanent power supply to lift stations and wastewater treatment plants shall be 3-phase (and 480 volts where possible) and installed prior to City Council acceptance.
34. A system of floats shall be provided to control pumps.
35. A pressure gauge suitable for application shall be installed on each discharge pipe.
36. Emergency backup generator (natural gas or diesel) to be installed on site and hard-wired to the electrical panel, with an automatic transfer switch (permanent installation; not a portable or trailer-mount style). Additionally, a quick-connect style plug to be installed on the panel, as a backup precaution, upon preapproval from Community Services. Generators must be new when installed (not refurbished or previously used).
37. Refer to Section 6 Controlled Access Gate Requirements.

1.05 APPURTENANCES - Reserved

1.06 SUBMITTALS

- A. Preliminary design - submit the following for review and comment:
 1. Copies of any documents which grant approval of exceptions to the City design criteria.
 2. Design calculations for line sizes and grades
 3. Contour map for overall area.
 4. Plan and profile sheets showing proposed improvements (City projects only).
 5. Geotechnical soils report for the project (City projects only).
- B. Final design - submit the following for approval:
 1. Final documents of the above plus plan and profile sheets and Geotechnical soils reports.
 2. Review prints.
 3. Original drawings.

1.07 QUALITY ASSURANCE

- A. Prepare calculations and construction drawings under the supervision of a Professional Engineer trained and Licensed under the disciplines required by the drawings. The final construction drawings must be sealed, signed, and dated by the Professional Engineer responsible for the development of the drawings.
- B. Prior to release of the maintenance bond (and in conjunction with the final walk-thru), the developer shall have all sanitary sewer lines (within the project boundary) inspected with television equipment. Any pipe settlement which causes excess ponding of water in pipeline, any misaligned joints, or other defects shall be cause for rejection. The developer shall provide the City with one copy of the TV videotape and one copy of the TV inspection report. For each segment, the video tape and corresponding written report shall clearly identify:
 - 1. Each line segment being inspected.
 - 2. The size and type of pipe being inspected.
 - 3. Accurate footage of the line segment inspected.
 - 4. Deficiencies in materials, alignment, pipe grade, or any other apparent deficiencies; and
 - 5. Locations of all service connections.

2.0 EXECUTION

2.01 RESEARCH REQUIREMENTS

- A. Research existing utility and right-of-way information.
- B. Verify that no restrictions exist that will deny approval of the project concept.

2.02 DESIGN ANALYSIS

Calculations of design flow for overall development project. All wastewater components in the City of Manvel and its ETJ shall be designed for a minimum of 315 gallons per equivalent single-family connection.

2.03 DRAWINGS

Drawings shall include layout sheets with contours, plan and profile sheets, and detail sheets for special items and treatment plants.

SECTION 3 WATER

1.0 GENERAL

1.01 CHAPTER INCLUDES:

Criteria for the design of water distribution systems.

1.02 REFERENCES

- A. Texas Commission on Environmental Quality (TCEQ), Water Utilities Division "Rules and Regulations for Public Water Systems," latest revision.
- B. American Water Works Association (AWWA).
- C. National Sanitation Foundation (NSF).
- D. Texas Department of Health.
- E. Texas State Board of Insurance.

1.03 DEFINITIONS

Water Line - Closed conduits designed to distribute potable water for human consumption to various areas and provide fire protection. Line size and fire protection accessory locations are dependent on distance from primary source and quantity of demand.

1.04 DESIGN REQUIREMENTS

- A. Easements for water lines
 - 1. Lines shall be located within street right-of-way, permanent access easements with overlapping public utility easements, easements adjacent to street rights-of way or recorded water line easements.
 - 2. When outside of a public street right-of-way or permanent access easement with an overlapping public utility easement, easements must be dedicated and restricted for water lines only.
 - 3. When possible, easements should be adjacent to public rights-of-way.
 - 4. When possible, water line easements shall be contiguous to a paved access.
 - 5. For water lines located outside of street rights-of-way, the minimum width of easement shall be 20 feet.
 - 6. For water mains located within 5 feet from the right-of-way line, the outside edge of a water line easement shall be located 10 feet from the right-of-way line.

7. Water lines along State rights-of-way shall be installed outside of the right-of-way in a separate 20-foot minimum contiguous easement.
 8. No back-lot easements will be allowed for the installation of water lines.
 9. Commercial Developments inside the City requiring on-site fire hydrants must provide a minimum 20-foot water line easement for the water line and fire hydrant.
 10. Water lines shall be centered in water line easements.
 11. When using side lot easements, such easements shall be a minimum of 20 feet in width, located on one lot or centered between lots. If centered between lots, the water line may be centered within the five feet of one lot, or centered in the easement.
 12. Location of a water main in an easement not adjoining a public right-of-way shall be prohibited. When approved, these water mains will be centered in a 20-foot wide exclusive easement restricted to water only.
- B. Location of water lines
1. Locate water lines within a street right-of-way whenever possible.
 2. In the event that a proposed water line cannot be located within the street right-of-way, locate water lines in the center of a dedicated water line easement.
 3. When a water line is placed parallel to another utility line, other than a sanitary sewer, the water line shall have a minimum of 4 feet horizontal clearance from outside wall of the water line to the outside wall of the existing utility.
 4. All new water lines to be installed with tracer wire for future line locates.
- C. Water line size
1. 6-inch lines may be used within cul-de-sacs or if the line is less than 1,000 feet in length and interconnected between two lines which are 8 inches in size or larger. The maximum number of fire hydrants or flushing valves on any length of 6-inch line is one.
 2. 8-inch lines may be used for lines over 1,000 feet long or when 2 or more fire hydrants or flushing valves are required.
 3. 12 inch and larger lines - lines to be determined by the Professional Engineer (P.E.) and City of Manvel.
- D. Dead-end lines shall be avoided.

E. Depth of cover

1. 14 inch and smaller mains and fire lines shall have a minimum cover of 4 feet from top of curb. For open ditch roadway sections, 12 inch and smaller shall be installed at least 3 feet below the ultimate flowline of the ditch or 6 feet below natural ground at the right-of-way line, whichever is deeper.
2. 16 inch and larger mains shall have minimum cover of 5 feet from top of curb. For open ditch roadway sections, 16 inch and larger mains shall be installed at least 3 feet below the flow line of the ditch or 7 feet below natural ground at the right-of-way line, whichever is deeper.
3. Changes in grade to clear other utilities or underground features may be made by deflecting pipe joints. The maximum designed deflection shall be one-half ($\frac{1}{2}$) of the manufacturer's allowable deflection. If a depth greater than 8 feet to the top of the pipes is required, a welded steel section will be used. The standard depth of cover maintained on the water main and the grade change shall be made using the welded steel section. The installation of fittings for vertical deflections or changes in grade shall not be allowed except with specific approval of the City of Manvel.

F. Water line crossings

1. Where a water line crosses another utility (public or private) other than a sanitary sewer, a minimum of 6 inches of clearance must be maintained between the outside wall of the water line and the outside wall of the utility.
2. Elevated Stream and Ditch Crossings
 - a. All water lines shall be steel or restrained joint metallic pipe and shall extend a minimum of 15 feet beyond the last bend or to the right-of-way line, whichever is greater.
 - b. Elevated crossings are preferred to underground crossings.
 - c. Support water lines on existing or proposed bridges. The following criteria may be used when approved in advance by the City Engineer:
 - (1) Have adequate structural capacity.
 - (2) Have sufficient clearance above the bent cap elevation for installation under the bridge.
 - (3) Design elevated crossings with the elevation of the bottom of the water line above the low chord of the nearest adjacent bridge or a minimum of 1 $\frac{1}{2}$ feet above the 100-year flood plain elevation, whichever is higher.
 - (4) Extend pipe from right-of-way to right-of-way for crossings.
 - (5) Provide sufficient span length to accommodate the cross section of future widening of the stream or ditch, if available.
 - (6) Support the line on columns spaced to accommodate the structural capacity of the pipe considering deflection and loading.
 - (7) Base column support design on soil capacity, spacing, loading, and structural requirements.

G. Underground crossings

1. Provide a minimum 3-foot clearance above the top of the pipe to the ultimate flow line of the ditch.
2. Provide sufficient length to exceed the ultimate development of the stream or ditch.
3. All water lines shall be steel or restrained joint pipe and shall extend a minimum of 15 feet beyond the last bend or to the right-of-way, whichever is greater and have valves located on both sides of the crossing.

H. State highway and County Road crossings

1. Extend carrier pipe from right-of-way to right-of-way.
2. Use welded steel pipe or restrained joint pipe in steel casing under existing and future roadways from a point 15 feet outside of the service road or outside of pavement toward the right-of-way, to a similar point on the other side of the highway across the right-of-way. For highway or roadway crossings with open ditch sections, extend the casing from right-of-way to right-of-way.
3. State highway crossings shall be constructed in conformance with the requirements of the Texas Department of Transportation.
4. When additional right-of-way has been acquired or will be required for future widening, the casing, should be carried to within 10 feet of each future right-of-way line.

I. Street crossings

1. All street crossings shall be perpendicular to the right-of-way.
2. All water mains, services and sprinkler line crossings under major thoroughfare boulevards shall be encased using a minimum of PVC pipe, SDR, as shown on the construction detail for "Water Main Encasement." Welded steel pipe may be substituted on street crossings, when specifically approved by the City Engineer.
3. Crossings under existing concrete streets, other than major thoroughfares, shall be constructed by boring and jacking. PVC pipe shall be jacked into place with equipment designed for that purpose. Water may be used to facilitate boring and jacking operations. Jetting the pipe main into place will not be permitted. When conditions exist that warrant an open cut across an existing street, the City may specifically approve the crossing.
4. All open cut installations under existing or proposed streets shall be backfilled as shown in the construction details.
5. All street crossings shall be constructed in accordance with construction plans approved by the City. The City shall inspect all street crossings. All street crossings shall meet the requirements of these standards.
6. All street, road, and creek crossings shall be cased with a larger diameter pipe.

J. Oil and gas pipeline crossings

Do not use metallic pipe when crossing oil or gas transmission lines unless a cathodic system is implemented with City approval. Other pipe may be used, regardless of depth, subject to approval by the City. Maintain minimum 2-foot separation between pipeline and water line.

K. On-site fire loops within commercial and multi-family developments

For developments requiring on-site fire hydrants, comply with the following requirements to allow maintenance and future repair operations:

1. Do not allow placement of structures or equipment pads over easement.
2. Provide 10-foot wide longitudinal pavement joint along easement lines where the water line is located under driveway, parking or street pavement.
3. Locate public fire line within 20' easement, or provide fire line meter at the property line.

L. Additional requirements

1. The carrier pipeline shall extend a minimum of 1 foot beyond the end of the casing to allow flanged joints to be constructed.
2. For welded steel bends, extend steel pipe a minimum of 5 feet beyond the bend.
3. PVC sleeves to be installed under all concrete driveways and streets for future expansion.
4. PVC sleeves to be installed in medians for irrigation lines.
5. Coordinate sleeve size with Community Services.

M. Auger (bore) construction

Use the following general criteria for establishing auger or bore sections:

1. Auger or bore sections shall be clearly shown on drawings.
2. Improved streets - use auger construction to cross the street regardless of surface. Auger length shall be computed as roadway width at proposed bore location plus 5 feet to either side of the roadway, where applicable.
3. Sidewalks - when the water line crosses under a sidewalk in good condition, the sidewalk shall either be bored and jacked or the sidewalk shall be removed and replaced to the City of Manvel criteria, whichever is cost effective. Bore and jack length shall be at least the width of the sidewalk. The proposed type of construction shall be noted on the plans.
4. Bore Pits - Bore pits shall be at least 3 feet from back of curb and 5 feet from the back of curb on a major thoroughfare. All bore pits shall be shored in accordance with OSHA requirements. Bore pits and/or receiving pits to be located in street or driveway paving, shall be shown on plans.

N. Water quality

The layout of the overall water distribution system shall provide maximum circulation of water to prevent future problems of odor, taste, or color due to stagnant water.

1. Provide a source of fresh water at each end or at multiple points of a subdivision. Provide ways to create circulation and place valves and fire hydrants to allow simple flushing of all lines.
2. Avoid dead-ends. When necessary, isolate dead-ends with a line valve, fire hydrant at the line's end, along with an Eclipse 9800i-Genesis Auto Flusher.
3. Where stubs are provided for future extensions, isolate the stubs with a valve and do not allow service connections to stubs until extended. Place one full pipe joint between the valve and stub.
4. Water mains shall be looped unless physically impossible.
5. All materials, which come in contact with public drinking water in any stage, must conform with ANSI/NSF Standard 60.
6. Layout and size of all water mains shall be consistent with the overall layout and phasing plan of the City's water system. The overall water system shall be designed to maintain required TCEQ minimum pressure throughout the system.
7. In an unavoidable dead-end situation, reduce the sizes of pipe successively. Carry an 8-inch pipe to the next to last fire hydrant; use a 6-inch PVC to the end of the line. Provide a fire hydrant at the end of the main.

O. Clearance of water line from other utilities.

1. New water lines parallel to sanitary sewers and force mains
 - a. Locate water lines a minimum of 9 feet horizontally, outside wall to outside wall, when parallel to sanitary sewers or force mains. Use the following procedure when 9 feet of separation cannot be achieved:

When a new water line is to parallel an existing sanitary force main or gravity sanitary sewer and the 9-foot minimum separation distance cannot be maintained, the existing sanitary sewer shall be replaced with lined ductile iron or PVC pipe meeting ASTM specifications, having a minimum working pressure rating of 150 psi or greater and equipped with pressure type joints. The water lines and sanitary sewer shall be separated by a minimum vertical distance of 2 feet, and a minimum horizontal distance of 4 feet, measured between the nearest outside walls of the pipe, and in all cases, the water line shall be located above the sewer. When a water main crosses a utility other than sanitary sewer, a minimum of 6 inches of clearance must be maintained, and the water main shall have one joint of pipe, a minimum 18 feet long, centered on the other utility.

- b. Where a sanitary sewer crosses the water main, and that portion of the sewer within 9 feet of the water is constructed as described in Section 290.44(e) of the TCEQ Rules and Regulations, the water line may be placed no closer than 6 inches from the sewer. The separation distance must be measured between the nearest outside pipe diameters. The water line shall be located at a higher elevation than the sewer, wherever possible and one joint, a minimum of 18 feet long, of the new pipe must be centered on the existing line.
- 2. When water lines are installed in areas, which have existing sanitary sewers, every effort should be made to maintain 9 feet of separation between the outside pipe diameters of the two lines. Where this separation cannot be achieved because of local conditions, which must be fully documented in any planning material submitted, the following spaces shall be observed:
 - a. Where a new water line is to cross, or be installed in parallel with an existing sanitary sewer, and the sewer is constructed as described in Section 290.44(e) of the TCEQ Rules and Regulations, the separation distances specified in those rules shall apply as though the sewer were new.
 - b. Where a new water line is to be installed in parallel to existing clay, truss, or concrete gravity sewer showing no evidence of leakage vertically and 4 feet horizontally, the sanitary sewer need not be disturbed. Should excavation for the water line produce evidence that the sewer is leaking, and then the sewer must be repaired.
 - c. Where a new water main is to cross an existing clay, truss, or concrete gravity sewer showing no evidence of leakage, the sewer need not be disturbed if the water line is to be installed at least 24 inches above the existing sewer. A full joint of the water line, at least 18 feet long, should be centered over the sewer crossing, in this case, so as to provide maximum protection against contamination.
 - d. Existing clay, truss or concrete sewer pipe which shows no evidence of leakage and because of physical limitations must remain at a higher elevation than the proposed intersecting water line or closer than 2 feet may remain undisturbed if the water line is inserted in a joint of pressure type encasement pipe at least 18 foot long and 2 nominal sizes larger than the water line. The encasement pipe should be centered on the sewer crossing and both ends sealed with cement grout. In lieu of this procedure, that portion of the sewer within 9 feet of the water line may be replaced with cast iron or ductile iron pipe with watertight joints as described in Section 290.44(e) of the TCEQ Rules and Regulations, above.
- 3. Sanitary manholes - provide a minimum 9-foot horizontal clearance from outside wall of existing or proposed manholes unless manholes and connecting sewers can be made water tight and tested for no leakage. If a 9-foot clearance cannot be obtained, the water line may be located closer to the manhole when prior approval has been obtained from the City of Manvel by using one of the procedures below; however, in no case shall the clearance be less than 4 feet.
 - a. Water line may be encased in a carrier pipe. Encasement shall be a steel water line in a steel carrier pipe. Open cut and backfilled with cement stabilized sand compacted backfill.
 - b. The water line may be augured past the manhole with one 20-foot section of C-900 PVC pipe 150 psi, installed centered about the existing sanitary manhole with pressure grout using a bentonite/clay mixture.

4. Fire hydrants. Do not install fire hydrants within 9 feet vertically or horizontally of sanitary sewer mains, service leads, and force mains regardless of construction.

P. Water Plants

1. All new storage tanks to be elevated; not ground level. Developer to provide proposed timeline, plan, and funding mechanism for Elevated Storage Tank subject to review and approval by the City.
2. Emergency backup generator (natural gas or diesel) to be installed on site and hard-wired to the electrical panel, with an automatic transfer switch (permanent installation; not a portable or trailer-mount style). Additionally, a quick-connect style plug to be installed on the panel, as a backup precaution, upon preapproval by Community Services. Permanent power supply to water plants shall be installed prior to City Council acceptance. Generators must be new when installed (not refurbished or previously used).
3. Provide minimum 8' board fence (either masonry, cedar or heart redwood) with steel posts in concrete, and a treated 2"x6" (or wider) rot board along the bottom.
4. Entrance drive to be at least fourteen (14) feet wide concrete pavement. Provide enough room to park inside site. Provide rolling gate with minimum 10' wide gate.
5. Indicate method of drainage on site plan. Internal drainage, sheet flow and valley gutter driveways are acceptable. Drain to street or storm sewer, never onto adjacent private property.
6. Refer to Section 6 Controlled Access Gate Requirements.

1.05 APPURTENANCES

A. Valves - Set at maximum distances along line as follows:

1. Six inch (6") through fourteen inch (14") - 1000 feet.
2. Sixteen inch (16") through twenty inch (20") - 2000 feet.
3. The total number of valves at any intersection shall equal the total number of lines leading out from the intersection point minus one, three (3) valves for a cross, and two (2) valves for a tee, unless otherwise specified.

B. Valve Types - All valves shall open counterclockwise and have mechanical joints:

1. Six inch (6") through fourteen inch (14") shall be gate valves.
2. Sixteen inch (16") through twenty inch (20") shall be butterfly valves.

C. Valve Locations

1. All mains shall be valved within the street right-of-way or within a dedicated water line easement. Valves shall not be placed under or within 2 feet of ultimate pavement.

2. Valves are normally located on the projection of intersecting street right-of-way lines or at the curb return adjoining a paved street across the main. Tapping sleeves and valves are excluded from this requirement.
 3. Isolate fire hydrants and flushing valves from the service line with a valve located in the fire hydrant or flushing valve branch. This valve shall not be located in the slope or flowline of ditches on roadside ditch roadways.
 4. Intermediate valves, not located on the projection line of the right-of-way line, shall be located on lot lines or 5 feet from fire hydrants but not set in driveways.
 5. Locate valves a minimum of 9 feet horizontally from sanitary sewer crossings.
 6. Valves shall not be located within a driveway, sidewalk, or street.
- D. Fire hydrants and flushing valves.
1. Spacing
 - a. Single Family Residential Development:
300 foot maximum spacing and at all street intersections
 - b. Non-Residential, Commercial Developments and/or Multi-Family Developments:
300 foot maximum spacing and at all street intersections. Fire hydrants shall be placed to locate a hydrant within 300 feet of all points of each building.
 2. Location in or along street rights-of-way
 - a. Fire hydrants shall be primarily located at street intersections where possible.
 - b. Locate fire hydrants at P.C.s of the intersection curb radius, 3 feet behind the curb or projected future curb.
 - c. On all State highways and roadside ditch roadways, set the fire hydrants within 3 feet of right-of-way lines. Fire hydrants lead valves shall not be located in the slopes or flowlines of ditches.
 - d. Set intermediate fire hydrants on lot lines, as extended to pavement, when located between right of way intersections. These locations may be adjusted 5 feet either way to miss driveways or other obstructions. In either case, do not locate fire hydrants closer than 3 feet from curbed driveways or 5 feet from non- curbed driveways.
 - e. Fire hydrants and flushing valves shall not be installed within 9 feet of a sanitary sewer system under any condition.
 3. Location of fire hydrants or flushing valves outside the street right-of-way
 - a. The City Fire Marshal will establish and approve the location of fire hydrants and flushing valves in apartment complexes and platted private street developments within the City.
 - b. Locate fire hydrants and flushing valves in protected, easily accessible areas behind curb lines.
 - c. For fire hydrants or flushing valves which are located adjacent to water lines constructed in 20-foot-wide water line easements, the fire hydrant or flushing valve shall be centered in a minimum 10'x10' separate easement.
 - d. For commercial and multi-family developments inside the City, provide isolation valves at each end of fire loops requiring on-site fire hydrants.

4. Fire Flow
Fire hydrants must be able to meet current NFPA and adopted Fire Code regulations.
 5. Fire hydrants shall be audited and painted per City specifications
 - a. The barrel (base) and caps shall be baked-on paint Safety Red.
 - b. The bonnet (top) shall be baked-on paint according to the size of the line:

Red	4-inch water line
Yellow	6-inch water line
White	8-inch water line
Green	10-20 inch water line
Orange	24-inch water line and above
 6. 5" built-in Storz connections and dust covers are required on all hydrants.
 7. Fire Department Connections (FDC's) when required shall be remotely located from buildings and have Storz connections. The Fire Department Connection (FDC) shall be located at a point no further than twenty (20) feet from a fire apparatus access road, remotely located at a horizontal distance that is greater than the height of the building on the main street side, and easily accessible to the Fire Department. The location of the FDC shall be such so as to provide hose connections that shall not block access to the building or obstruct other fire apparatus from accessing the building. There shall be an approved sign as specified by the Fire Marshal designating the address served by the FDC. A fire hydrant shall be located within fifty (50) feet of the FDC measured along a fire apparatus road. If there is a conflict between this section and another section of this code, the most restrictive requirement shall apply.
 8. All new fire hydrants to be Mueller A423 Super Centurion with 5" Storz outlet. East Jordan WaterMaster 5CD250 fire hydrants with 5" Storz outlet are an approved alternative.
 9. There shall be a minimum clearance of 3 feet around each fire hydrant.
 10. Fire Department Connections (FDC's) shall be located within 50 feet of a fire hydrant.
 11. Buildings equipped with a standpipe system shall have a fire hydrant within 50 feet of the FDC.
 12. All fire hydrants located in the City and its ETJ shall be identified with a blue reflector affixed to the pavement so that a hydrant is readily visible to arriving fire companies. On unpaved streets, a blue reflector shall be affixed to a post as close as practicable to the edge of the roadway so as to be visible.
- E. Fittings
1. All fittings shall be identified and described on the construction plans.
 2. Fittings are not permitted in fire hydrant leads.
 3. Normally, all water main fittings shall be ductile iron mechanical joints only.
 4. All plugs shall be provided with retention clamps.

5. Polyethylene tube encasement shall conform with the minimum requirements of "Polyethylene Encasement for Gray and Ductile Cast-Iron Piping for Water and Other Liquids", ANSI/AWWA C105, current revision. Soils within the project shall be tested in accordance with Appendix A of ANSI/AWWA C105 to adequately determine the requirements for encasement.
6. Thrust blocking shall be required on all bends, tees, plugs and combinations thereof.
7. All fittings and fire hydrants to be tied together with 3/4-inch stainless steel all- threads and I-bolts or approved equal (i.e., Mega Lugs).

F. Water main service

1. Water main service for lines in or along street rights-of-way.
 - a. Meters 2 inch and smaller - located in rights-of-way, water line easements, or in a minimum 5'x5' separate water meter easement. Meters shall be located in areas with easy access and protection from traffic and adjacent to right-of-way whenever possible.
 - b. Meters 3 inches and larger - located at the property line or in a minimum 10' x 20' separate water meter easement if necessary.
 - (1) Meters shall be located in areas with easy access and protection from traffic and adjacent to rights-of-ways whenever possible.
 - (2) Meters shall not be located in areas enclosed by fences.
 - c. Separate tap and service leads shall be designed for each meter.
 - d. Long service connections to be minimum 1-inch leads within 2-inch PVC casing.
 - e. No water line service shall exceed 150 feet in length.
2. For proposed apartments or town homes in private street developments, provide one master meter sized for the entire development. Exceptions may be granted by the City of Manvel for unusual circumstances. If an exception is approved, do not interconnect multiple meters.
3. All sprinkler and irrigation lines must be equipped with a backflow prevention device according to its application as required by TCEQ. Every new and existing non-single-family residential user is required to install a backflow prevention assembly at any meter servicing such a user's property. The backflow assembly shall be located after the meter for an irrigation system and in a vault near the building for a sprinkler system. A certified tester shall test the backflow prevention assembly annually and submit the results to the City.

1.06 SUBMITTALS

- A. General - Conform to the following submittal requirements in addition to those of general procedure of the City of Manvel.
- B. Water Line Sizes - Submit justification, calculations, and locations for proposed 6-inch lines and for lines 12-inch and larger, for approval by the City of Manvel, unless sizes are provided by the City.
- C. Valves - Submit information for approval by the City of Manvel with justification and locations for use of 16-inch and 20-inch gate valves proposed as substitutes for butterfly valves.

D. Water Meter Service

1. For construction inside city limits, submit an application for meter services and metered sprinkler connections, to the Building Inspections Division, prior to construction.
2. Submit requests for more than one service meter in proposed private street or multi-family developments to the City.
3. All new and replacement water meters to be 3/4-inch Neptune E-Coder R900i unless approved by the City Engineer.

E. Elevated stream or ditch crossings - Submit design calculations for support columns and column spacing.**F. Master Development Plan - For multiple phase developments, submit a master development plan.****G. Backflow Prevention**

1. All irrigation lines must be equipped with backflow prevention devices per TCEQ.
2. A double check backflow prevention assembly is required for 3" and larger lines.
3. Every new and existing non-single-family residential user is required to install a backflow prevention assembly at any meter servicing such a user's property.
4. Refer to Section 71-7 of the City Code.

1.07 QUALITY ASSURANCE

Prepare calculations and construction drawings under the supervision of a Professional Engineer trained and licensed under the disciplines required by the drawings. The final construction drawings must be sealed, signed, and dated by the Professional Engineer responsible for the development of the drawings.

2.0 EXECUTION**2.01 RESEARCH REQUIREMENTS**

- A. Research existing utility and right-of-way information.
- B. Verify that no restrictions exist that will deny approval of the project concept.

2.02 DESIGN ANALYSIS

- A. Water line sizes - Prepare narrative justification and calculations for proposed 6-inch lines and for lines 12-inch and larger, unless sizing is provided by the City of Manvel in advance.
- B. Elevated stream or Ditch Crossings - Prepare design calculations for support columns and column spacing.
- C. Developments of 100 acres or more to provide Regionalization Plan, including interconnection(s) with adjacent properties subject to review and approval by the City.

- D. All water components in the City of Manvel and its ETJ shall be designed for a minimum of 360 gallons per day per equivalent single-family connection.

2.03 DRAWINGS

- A. General: Conform to the following drawing requirements in addition to those of "Graphic Requirements" and the City's standard water line details and standard specifications.
- B. Appurtenances - Identify, describe and enclose in rectangular box on drawings.
 - 1. Valves
 - a. Designate 6-inch through 12-inch gate valves with box as GV&B.
 - b. Provide complete description and size for other valves.
 - 2. Water meters, service leads, and metered sprinkler connections.
 - a. Show the location of service line tees, tapping sleeve and valves, valve boxes, and temporary plugs to be installed to serve future 3-inch or larger meters.
 - b. Develop plan and profile sheets for 4-inch and larger leads and all service connections that cross state rights-of-way (FM1128, SH6, etc.).
- C. Construction features
 - 1. Show all special construction features required to complete the project in a safe, convenient and economical manner.
 - 2. Auger Construction
 - a. If the construction is predominately open cut, all portions of the street that must be augured shall be clearly shown on drawings by location and length. Include designation for sections at trees with 6 inches or larger diameters located within 10 feet of water Line.
 - b. Curbs - Include a requirement on drawings for construction of wheel chair ramps at street intersections where curbs are to be removed or are damaged by water line construction. Conform to the City's standards for ramps.

SECTION 4 PAVING

1.0 GENERAL

1.01 CHAPTER INCLUDES:

Design guidelines for streets, criteria for street paving, and standard paving notes for drawing call outs.

1.02 REFERENCES

- A. AASHTO - American Association of State Highway and Transportation Officials.
- B. ASTM - American Society for Testing Materials.
- C. ACI - American Concrete Institute.
- D. MUTCD - Texas Manual on Uniform Traffic Control Devices.
- E. City of Manvel Transportation Corridor Plan

1.03 DEFINITIONS

- A. Geotechnical Engineer - An engineer certified by the American Association for Laboratory Accreditation (A2LA).
- B. HMAC - Hot Mix Asphaltic Concrete.
- C. Curb and Gutter Sections - Full width concrete pavement with doweled on 4-inch by 12-inch curbs. Curb and gutter sections require inlets and underground storm sewers.
- D. Roadway ditch sections - Ditch sections adjacent to either full width reinforced concrete pavement or asphaltic pavement. Roadside ditch sections do not require underground storm sewers; however, the ditch sections must be designed to accommodate the storm runoff.

1.04 DESIGN REQUIREMENTS

The following design requirements are applicable to all pavement within the City of Manvel, and its ETJ.

- A. General
 - 1. All paving shall be approved by the City of Manvel for all streets within the City.
 - 2. Street design should conform to all applicable planning tools, such as the Texas Manual on Uniform Traffic Control Devices, major thoroughfare plans, master plans, etc. Other considerations for design should include street function, street capacity, service levels, traffic safety, pedestrian safety, and utility locations. These additional considerations may affect the minimum requirements set forth herein. Refer to the City of Manvel Major Thoroughfare Plan and Transportation Corridor Plan.
 - 3. Design shall conform to the City of Manvel Standard Details.

B. Minimum Width Requirements and Paving

1. The minimum ROW width for all streets in the City of Manvel and its ETJ is 60 feet. The minimum pavement width for all developments is:
 - a. Curb and Gutter sections: 28 feet back-to-back of curb (B/B).
 - b. Open-ditch sections: 26 feet edge to edge of pavement.
2. Per the City of Manvel Thoroughfare Plan, a minimum 80 feet ROW is required for the following:
 - a. Charlotte
 - b. Chocolate Bayou
 - c. Dogwood Avenue
 - d. Iowa Lane
 - e. Jordan Road
 - f. Rodeo Drive
 - g. Uzzell Road
3. Per the City of Manvel Thoroughfare Plan, a minimum 100 feet ROW is required for the following:
 - a. Bahler Avenue (CR 100)
 - b. Bissell Road
 - c. Booth Road
 - d. Cemetery Road (Harkey Road)
 - e. Clark Road
 - f. Lewis Lane
 - g. Oil Field Road (County Road 98)
 - h. Scopel Road
4. Per the City of Manvel Thoroughfare Plan, a minimum 120 feet ROW is required for the following:
 - a. Airline Road (County Road 48)
 - b. Bailey Avenue (County Road 101)
 - c. Croix Road (Country Road 58)
 - d. Del Bello Boulevard (Rodeo Palms Parkway / Belcher / County Road 397)
 - e. Kirby Drive
 - f. Manvel Parkway (County Road 94)
 - g. Markham Road
 - h. Masters Road (FM1128 / County Road 67)
 - i. McCoy Road (Meridiana / Peters / Patterson / County Road 89 / Old Chocolate Bayou)
 - j. Pearland Sites Road (County Road 99 / County Road 143)
 - k. Pollard Boulevard (County Road 90)
 - l. Southfork Drive (County Road 59)

C. Minimum Thickness and Reinforcement Requirements for Concrete Pavement

The following requirements are the minimum allowable. Pavement thickness and reinforcement shall be designed by the Professional Engineer responsible for the project based on a current soil analysis and recommendations by a qualified geotechnical engineer.

1. For pavement widths less than or equal to 28 feet B/B of curb:
 - a. Minimum concrete slab thickness shall be 6 inches with $f_c = 4,000$ psi and reinforcement shall be Grade 60, $f_y = 60,000$ psi, #4 deformed reinforcing bars spaced at 18 inches center to center both ways and minimum lap lengths of 18 inches. Expansion joints shall be placed at the end of each curb return and at a maximum spacing of 60 feet.
 - b. Minimum stabilized subgrade thickness shall be 6 inches.
2. For pavement widths greater than 28 feet B/B and for major arterial thoroughfares:
 - a. Minimum concrete slab thickness shall be 7 inches with $f_c = 4,000$ psi and reinforcement shall be Grade 60, $f_y = 60,000$ psi, #4 deformed reinforcing bars spaced at 18 inches center to center both ways and minimum lap lengths of 18 inches. Expansion joints shall be placed at the end of each curb return and at a maximum spacing of 60 feet on residential and collector streets, and a maximum spacing of 60 feet on boulevards and major thoroughfares.
 - b. Minimum stabilized subgrade thickness shall be 8 inches.

D. Subgrade Treatment

Geotechnical Engineer shall base depth of subgrade stabilization on structural number (SN) in conjunction with pavement thickness design. Following is a general guidance for subgrade treatment:

1. For subgrade soil conditions with a clay content of 10.0% or higher and plasticity index (PI) of 10 or more, the subgrade shall be stabilized with lime. Subgrade shall be stabilized with a minimum 6% lime by weight, at required thickness and compacted to 95% standard proctor density. Alternative subgrade stabilization may be substituted when specific recommendations are made by the geotechnical engineer for the project, and when specifically approved by the City Engineer.
2. For subgrade soil conditions containing clean sand with no clay content, the subgrade shall be stabilized with cement.

E. Requirements for Intersections, Turnouts, Transitions, and Thoroughfares

1. At a "T" intersection with a street that has not been improved to its ultimate width, concrete pavement should be stopped either at the right-of-way line or the end of the curb return, whichever would require less concrete removal at a future date.
2. For roadway turnouts placed at an existing street intersection, the turnout should be designed to fit the ultimate pavement width of the intersecting cross street and then transitioned to the existing roadway.

3. The usual transition length for meeting an open-ditch street is 50 feet for street widths less than or equal to 28 feet B/B; 75 feet for 37 feet B/B width; and 100 feet for 41 feet B/B width.
 - a. Streets other than concrete shall have transitions with a minimum thickness of 8 inches of lime stabilized subgrade, 6 inches of hot-mix asphaltic concrete base, or approved equal, with 2 inches of hot-mix asphaltic surfacing.
 - b. Concrete streets shall have transitions with a minimum thickness of 6 inches of stabilized subgrade and 6 inches of concrete pavement.
 4. When paving only one roadway of a proposed two-roadway thoroughfare (boulevard section) all left-turn lanes and esplanade crossovers shall be paved to the centerline of the street right-of-way.
- F. Requirements for Roadway Pavement with existing Open-Ditch Sections
1. No new open-ditch drainage systems are permitted.
 2. Minimum grade on ditches shall be 0.20 percent.
 3. Ditch capacity shall be designed to handle runoff as determined by the City Drainage Design Requirements.
 4. The maximum side slope shall not exceed 3:1.
 5. Culverts for roadside ditch only, shall be designed to carry ditch discharge, but not less than 18-inch diameter pipe constructed of reinforced concrete.
 6. The radius for cul-de-sac pavement shall be 50 feet in a 60' radius ROW.
- G. Requirements for Roadway Pavement with Curb and Gutter Sections
1. Inlet spacing:
 - a. Curb inlets shall be spaced and sized to intercept the calculated runoff for the design storm. The water surface elevation at the inlet shall be less than or equal to the top of curb for the design storm flow.
 - b. Maximum travel distance of water in the street to a curb inlet shall be 300 feet on a major thoroughfare and in a commercial area. The maximum travel distance of water in the street permitted in a single-family residential area shall be 500 feet.
 - c. Curb inlets should be located on the intersecting side street at an intersection with a major thoroughfare. Locations on the major thoroughfare at intersections shall be specifically approved by the City Engineer.
 - d. Curb inlets shall have grate inlets lids.
 - e. Backfill around inlets with 1.5 sacks per cubic yard of cement stabilized and to top of first stage inlets.
 2. Minimum gutter gradient shall be 0.30 percent.
 3. Maximum cut from finished grade at property line to top of curb shall be 1.75 feet.
 4. The desired slope for driveways is 2% to 8%. A maximum slope of 10% may be allowed with specific approval of the City.

5. Minimum grade shall be 1 percent fall around intersection turnout for a maximum radius of 25 feet. Grades for larger radius shall be determined on an individual basis.
6. Vertical curves shall be installed when algebraic differences in grades exceed 1 percent. Elevations shall be shown at 10-foot intervals through vertical curves. Maintain a minimum of 0.03-foot elevation change at 10-foot intervals by altering the calculated elevations.
7. The radius for cul-de-sac pavement shall be 50 feet in a 60 feet radius ROW.
8. When a curb and gutter section intersects a drainage ditch, the grade of gutter shall be above the designed water surface of the ditch.
9. Minimum gutter grade for cul-de-sac shall be 0.60 percent.
10. Major thoroughfares shall be in accordance with AASHTO.
11. The amount of cross slope over the pavement section should be shown on the drawings. The usual cross slope is 3/8 inch per foot from curb line to quarter, and 1/4-inch per foot from quarter point to the center line, and 7/8-inch per foot for left-turn lanes.
12. A minimum gradient of 0.40 percent around the longest radius is required on an L-Type street intersection.
13. When meeting an existing curbed street, top of curb grades shall be designed to meet an elevation 6 inches above the existing gutter. At existing inlets, top of curb grades shall be designed to match existing top of curb elevations.
14. Fill lines shall be shown on the drawings. If fill is required and the pavement is adjacent to a nonparticipating property owner, fill easements from this property owner shall be obtained, filed, and a copy of the easements shall accompany the final drawings. Construction of this nature will require back-slope drainage design to prevent trapping storm runoff.
15. Grades should be labeled for all tops of curb. Centerline grades are acceptable for open-ditch sections only.

H. Requirements for Inlets with Curb and Gutter Sections:

1. Type "BB" with grate tops or type "H-2" inlets shall be used on all curb and gutter sections within the City depending on runoff requirements.
2. Inlets should be placed away from the major thoroughfare and on the side streets at street intersections.
3. Attempt to keep the proposed inlets away from esplanade openings and out of major thoroughfare intersections.
4. Inlets shall be placed at the end of pavement in order to eliminate drainage from the pavement gutter into an open-ditch.

5. On open-ditch streets, place stubs with ring grates from inlets to ditches.
- I. Requirements for Curbs and Sidewalks:
1. Standard curb height is 4-inches and 12-inches wide for curb located along outside edges of residential streets. Curb height for streets other than residential shall be 6 inches. The curb height for all esplanades shall be 6-inches.
 2. Sidewalk wheelchair ramps are required at all intersections and driveways. The design and installation of such ramps shall comply with Texas Accessibility Standards Architectural Barriers requirements.
 3. All sidewalks are to be constructed in accordance with the City of Manvel Standard Details and Master Thoroughfare Plan. The design and installation of such sidewalks shall comply with Texas Accessibility Standards Architectural Barriers requirements.
 4. Sidewalks are required along all streets. The developer, prior to the City's final acceptance of the infrastructure, must install sidewalks along reserves and ROW.
 5. Sidewalks may be constructed as part of the issuance of a building permit, for single-lot site development projects where a sidewalk is the only required infrastructure construction. For such projects, a certificate of occupancy shall not be issued prior to City's final acceptance of the sidewalk.
 6. Generally, sidewalks shall have a width of not less than 5 feet. Along streets that do not have a corresponding street type cross-section in the Master Thoroughfare Plan (including streets with open-ditches), sidewalks shall have a width of not less than 5 feet.
 7. Non-residential site development projects within City of Manvel ETJ shall include a sidewalk within the building setback area if a sidewalk is not permitted within the public right-of-way.
 8. The location of all proposed and existing sidewalks shall be shown on the construction drawings and plan and profile drawings.
- J. Requirements for Miscellaneous Items:
1. The type and amount of subgrade treatment shall be shown on the drawings.
 2. Paving headers shall be placed at the end of all concrete pavements.
 3. All concrete to be removed shall be saw cut before removal.
 4. Sight distance requirements based on the design speed the roadway shall be used for determining lengths of crest vertical curves for all pavements except boulevard sections which shall be designed for 45 mph.
 5. Standard City of Manvel barricades shall be placed at the end of all dead-end streets not terminating in a cul-de-sac.

6. Submit to the appropriate drainage agency before City approval.
7. A letter of agreement approving the construction plan crossing is required when paving is placed over a transmission pipeline.
8. When meeting existing concrete pavement, horizontal dowels shall be used if no exposed reinforcing steel for interconnection with new pavement exists. Horizontal dowels shall be Grade 60, #6 rebar, 24-inches long, drilled and embedded 12-inches into the center of the existing slab and epoxied. Dowels shall be 18 inches center to center, unless otherwise specified.
9. When concrete is removed for interconnections, the pavement shall be saw-cut, and existing concrete removed, to expose a minimum of 15-inches of reinforcing steel. If no reinforcing steel exists, use horizontal dowels as previously described.
10. Dead-end streets or ends of concrete slabs designed to be extended in the future shall have paving headers and 15-inches of reinforcing steel exposed beyond the pavement, coated with asphalt and wrapped with burlap or paving headers and dowel type expansion joint for future pavement tie.
11. Pavement extensions shall connect to the existing pavement with a pavement undercut and a minimum steel overlap of 18-inches.
12. Concrete pavement thickness design is required for all pavement within industrial areas and on major thoroughfares. Concrete pavement thickness design shall be based on AASHTO design procedures for rigid pavements.
13. The pavement structure for each roadway shall be designed based on soil data from the site and based on the anticipated traffic volume, loading and service life of the proposed pavement structure. The design engineer is responsible for ensuring that the pavement structure is designed to withstand the anticipated loads that are expected on the roadway.
14. Adjust manhole frames and covers within the limits of the pavement to meet the proposed final top of slab.
15. Adjust manhole frames and covers outside the limits of the pavement to conform to the final grading plan.
16. No more than one (1) shrinkage crack shall be allowed in each header section. A shrinkage crack is defined as extending one half or more of the full depth of the concrete (i.e., 3" or more on 6" thick concrete) appearing within 2 years of the final concrete placement. If two (2) or more shrinkage cracks appear in a header, the entire section shall be removed and replaced at contractor's expense.
17. If shrinkage cracks are less than one half of the depth of the concrete (i.e., less than 3" on 6" thickness) then a recommendation letter and data sheets are required from the testing laboratory as to the type of sealant which will be used to seal the shrinkage cracks. This recommendation shall be approved by the City Engineer before application of sealant.
18. Core samples for the sections will be taken no sooner than the twenty-eight (28) day break of the original concrete pour sample.

19. All medians must be sleeved for future irrigation lines.
20. Refer to MUTCD for pavement and curb markings near stopping points, crosswalks, etc.
21. All under-pavement utility crossings to be sleeved.
22. Manholes, fire hydrants and water valves shall not be located within a driveway, sidewalk, or street.

K. Original Manvel Townsite

1. The Original Manvel Townsite (OMT) area is bounded by Cemetery Road on the east, Large Drive on the north, McCoy Road on the west, and the railroad tracks (sitting just north of Bissell Road), on the south.
2. The special regulations in this section shall apply to lots in the OMT zoned Light Commercial or Planned Unit Development (PUD) allowing for commercial land use, where the lot is five (5) acres or less.
3. Roads in the OMT may be constructed with a minimum 26-feet wide asphalt (instead of concrete), with a minimum thickness of 8 inches of lime stabilized subgrade, 6 inches of hot-mix asphaltic concrete base, and 2 inches of hot-mix asphaltic surfacing.
4. Roadside ditches (open ditches) are permitted in the OMT.

1.05 APPURTENANCES – Reserved

1.06 SUBMITTALS – Reserved

1.07 QUALITY ASSURANCE.

- A. All construction drawings and specifications shall be prepared by or under the supervision of a currently Registered Professional Engineer of the State of Texas, and all documents shall be sealed, dated, and signed by the engineer responsible for their preparation.
- B. All geotechnical work shall be performed by or under the supervision of a currently Registered Professional Engineer of the State of Texas disciplined in the science of soil analysis. All reports and documents shall be sealed, dated, and signed by the engineer responsible for their preparation.
- C. The designated laboratory technician must be on the jobsite at all times during the placement of concrete.

2.0 EXECUTION

2.01 RESEARCH REQUIREMENTS – Reserved

2.02 DESIGN ANALYSIS

- A. All pavement design shall be supported by calculations to establish the required thickness and reinforcement.
- B. The current soils report shall be the basis for design considering the use, loading, and life span of the proposed pavement.

- C. Storm sewer inlets shall be established in such numbers and in such locations as to effectively drain storm water from paved sections. A graphical plot and calculations of the hydraulic gradient shall be furnished by the design engineer.
- D. Open-ditch drainage shall be designed to accommodate the anticipated storm runoff, and all culverts shall be designed to accommodate the expected ditch capacity. Construction drawings shall indicate the direction of flow in the ditches, and profiles of the ditches shall reflect this slope. Anticipated volumes of storm drainage shall be identified in each ditch to enable future culverts to be sized to accommodate anticipated runoff.

SECTION 5 DRAINAGE

1.0 GENERAL

1.01 CHAPTER INCLUDES:

Criteria for the design of storm drainage improvements.

- A. Design requirements - The drainage criteria administered by the City of Manvel and complemented by Brazoria County for newly designed areas provides protection from structural flooding from a 100-year storm event. This is accomplished with the application of various drainage enhancements such as storm sewers, roadside ditches, open channels, detention and overland (sheet) runoff. The combined system is intended to prevent structural flooding from extreme events up to a 100-year storm.
- B. Street Drainage - Street ponding of short duration is anticipated and designed to contribute to the overall drainage capability of the system. Storm sewers and roadside ditch conduits are designed as a balance of capacity and economics. These conduits are designed to convey less intense, more frequent rainfalls with the intent of allowing for traffic movement during these events. When rainfall events exceed the capacity of storm sewer system, the additional run-off is intended to be stored or conveyed overland in a manner that reduces the threat of flooding to structures.
- C. Flood Control - The City of Manvel is a participant in the National Flood Insurance Program. The intent of the flood insurance program is to make insurance available at low cost by providing for measures that reduce the likelihood of structural flooding.
- D. Relationship to the Platting Process - Approval of storm drainage is a part of the review process for planning and platting of new development.

1.02 REFERENCES

- A. City of Manvel Flood Damage Prevention Ordinance subsequent revisions.
- B. Brazoria County Design Criteria Manual

1.03 DEFINITIONS

Conduit - any open or closed device for conveying flowing water.

Drainage Area Map - Area map of watershed, which is subdivided to show each area served by each subsystem.

FEMA - Federal Emergency Management Agency

Hydraulic Grade Line - A line representing the pressure head available at any given point within the drainage system.

In-Fill Development - Development of open tracts of land in areas where the storm drainage infrastructure is already in place and takes advantage of the existing infrastructure as a drainage outlet.

Public storm sewers - Defined as sewers and appurtenances that provide drainage for a public right-of-way, or more than one private tract, and are located in public right-of-way or easement. Private storm sewers provide internal drainage for a reserve or other tract. Private storm sewer connections to public storm sewers shall occur at a manhole or at the back of an inlet. All private storm sewers shall be constructed in conformance with these standards.

Rainfall frequency- Probability of a rainfall event of defined characteristics occurring in any given year. The National Weather Service publishes information on rainfall frequency. For the purpose of storm drainage design, the following frequencies are applicable:

1. 5-year frequency – a rainfall intensity having a 20 percent probability of occurrence in any given year, or nominally likely to occur once every 5 years.
2. 10-year frequency – a rainfall intensity having a 10 percent probability of occurrence in any given year, or nominally likely to occur once every 10 years.
3. 25-year frequency – a rainfall intensity having a 4 percent probability of occurrence in any given year, or nominally likely to occur every 25 years.
4. 100-year frequency - a rainfall intensity having a 1 percent probability of occurrence in any given year, or nominally likely to occur every 100 years.

Redevelopment - A change in land use that alters the impervious cover from one type of development of either the same type or another type, and takes advantage of the existing infrastructure in place as a drainage outlet.

Sheet Flow - Overland storm run-off that is not conveyed in a defined conduit, and is typically in excess of the capacity of the conduit.

1.04 DESIGN REQUIREMENTS

All designs of drainage facilities should meet the requirements of the City of Manvel Standard Specifications and Standard Drawings.

A. Determination of Run-off

1. Design Storm Events - All drainage improvements shall be designed for the following storm frequencies:

Road Side Ditch	5 years
Storm Sewers	5 years
Channels/Storm Sewers/Culverts draining 100 acres or less	25 years
Bridges	100 years
Creeks/Channels/Culverts draining 100 acres or more	100 years

2. The Rational Method shall be used for determining the peak flow rate in the sizing of all drainage improvements.

- a. Time of Concentration (minutes) is the time required for peak runoff from the entire upstream contributing area to reach the point of interest. Time of concentration can be calculated based upon an analysis of the actual travel time from the most remote point in the drainage area. The travel path should be clearly denoted and a sketch included in the design calculations.

$$t_c = D/60V + 10 \text{ (minutes)}$$

$$D = \text{flow distance (ft)}$$

$$V = \text{flow velocity (ft/sec)}$$

For purposes of calculating t_c , use the following velocities:

$$V = 0.5 \text{ ft/sec for overland flow (undeveloped)}$$

$$V = 1.0 \text{ ft/sec for overland flow (developed)}$$

$$V = 1.5 \text{ ft/sec or flow across paved surfaces or along gutter flowlines.}$$

$$V = 2 \text{ ft/sec for flow in ditch or channel}$$

$$V = 3 \text{ ft/sec for flow in storm sewer}$$

- b. Rainfall Intensity (inches/hour) shall be calculated using the following formula:

$$I = \frac{b}{(d + t_c)^e}$$

Values to be used in Manvel are listed below:

Rainfall Frequency	b	d	e
5-year	58.019	9.236	0.712
10-year	57.515	7.777	0.676
25-year	52.780	5.022	0.618
100-year	46.316	1.555	0.533

b, d, and e values are derived from a single frequency rainfall intensity graph.

b = the y-intercept of the straight line

d = a constant used to adjust the relationship to plot as a straight line

e = the slope of the straight line

Source: Brazoria County Drainage Criteria Manual May 2022

- c. The Rational Method is a method for calculating the peak run-off for a storm drain system. The formula for determining the peak flow rate is:

$$Q = C_f CIA$$

Q = Flow rate (cubic feet per second (cfs))

C_f = Frequency factor, if the product of C_f and C exceeds 1.0, use 1.0

C = Runoff Coefficient

I = Rainfall intensity (inches/hour) for a given storm frequency

A = Area (acres)

For the purposes of calculating C_f use the following values:

C_f = 1.00, for storm frequencies of 10 years or less

C_f = 1.10, for storm frequencies of 25 years

C_f = 1.25, for storm frequencies of 100 years

For the purposes of calculating C use the following values:

<u>Land Use Type</u>	<u>Run-off Coefficient</u>
Raw Undeveloped Acres	0.20
Improved Undeveloped Acres (i.e., mowed, filled, re-graded, etc.)	0.30
Park Land	0.40
Residential:	
Single Family Estates (≥ 2 acres)	0.45
Single Family Estates (≥ 1 acre)	0.50
Single Family (< 1 acre)	0.55
Garden Homes	0.65
Multi Family Low	0.75
Multi Family Medium	0.80
Multi Family High	0.85
Mobile Homes	0.85
Commercial	0.90
Industrial	0.95
Pond (detention and amenity)	1.00

Alternatively, the run-off coefficient "C" in the rational method formula can be calculated from the equation:

$$C = 0.6Ia + 0.2$$

C = watershed coefficient

Ia = impervious area/total area

If the alternate form is to be submitted, the calculation of C shall be provided as part of the drainage calculations.

B. Design of storm sewers

1. Design Frequency

a. Newly Developed Areas

The design storm event for sizing storm sewers in newly developing areas will be a 5-year rainfall. In the case where new development will interfere with the natural sheet flow of the land, the storm system must accommodate the runoff. Runoff should not be allowed to run over newly developed lots or streets. Stub out streets next to underdeveloped areas are to stub out storm lines to the limits of the streets.

b. Redevelopment or In-fill Development

The existing storm drain will be evaluated using a 5-year storm, assuming no development takes place. The storm drain will be evaluated with the development in place.

(1) If the proposed redevelopment has a lower or equal impervious cover, no modifications to the existing storm drain are required.

(2) If the hydraulic gradient of the existing storm drain is below the top of the curb, no improvements to the existing storm drain are required.

c. Private Drainage Systems

Storm sewers for private drainage systems should conform to the City of Manvel Standards for public drainage systems.

(1) An approved development permit must be filed with the City of Manvel before any work shall be done on a private drainage system. Part of the development permit include a plan and profile sheets detailing the scope of the work including elevations.

(2) Open ditch areas may be converted into storm sewer lines with the approval of a development permit. Guidelines for the process are available at the City of Manvel.

2. Velocity Considerations

a. All storm drains shall be designed by the application of Manning's Equation and the Continuity Equation:

$$\text{Manning's Equation: } V = (1.486/n) R^{2/3} S^{1/2}$$

V = velocity (ft/sec)

R = hydraulic radius (area in square feet/wetted perimeter in feet)

S = slope of energy line in feet

n = coefficient of roughness

n = 0.013 for concrete pipes,

n = 0.024 for CMP

n = 0.011 for PVC

n = 0.012 for HDPE

Note: All public storm sewers must be constructed of RCP. Manning's roughness coefficients for CMP, PVC, and HDPE are to be used for private storm sewers only. All storm sewer pipes entering City of Manvel ROW shall be RCP.

$$\text{Continuity Equation: } Q = VA$$

Q = discharge (cfs)

V = velocity (ft/sec)

A = cross sectional area of conduit (ft²)

- b. Design velocities shall be 3 feet per second with the pipe flowing full.
- c. Maximum velocities shall not exceed 7 feet per second.
- d. Minimum Storm Sewer Pipe Slopes:

<u>Pipe Diameter</u>	<u>% Slope</u>
18	0.26
24	0.18
30	0.14
36	0.11
42	0.08
48	0.07
54	0.06
60	0.05

For pipe sizes not listed above, the minimum slope should be determined utilizing a design velocity of 3 fps.

3. Pipe Sizes and Placement

- a. Use the storm sewer and inlet leads with at least 24-inch inside diameter or equivalent cross section. Box culverts shall be at least 2 feet x 2 feet. Closed conduits: circular, elliptical, or box, shall be selected based on hydraulic principals and economy of size and shape.
- b. Larger pipes upstream should not flow into smaller pipes downstream unless construction constraints prohibit the use of a larger pipe downstream, or the improvements are outfalling into an existing system, or the upstream system is intended for use in detention.
- c. Match crowns of pipe at any size change unless severe depth constraints prohibit.
- d. Locate storm sewers in public street rights-of-way or in parallel and adjoining easements or in approved easements. Easements must be at least 20-feet wide and the storm sewer must be centered in the easement. Side and back lot easements are discouraged.
- e. Follow the alignment of the right-of-way or easement when designing cast in place concrete storm sewers.
- f. A straight line shall be used for inlet leads and storm sewers.
- g. Center culverts in side lot storm sewer easements.
- h. Storm boxes may substitute for pipes when workable space is an issue.

4. Starting Water Surface and Hydraulic Gradient

- a. The hydraulic gradient shall be calculated assuming the top of the outfall pipe as the starting water surface.
- b. At drops in pipe flowline, should the upstream pipe be higher than the hydraulic grade line, then the hydraulic grade line shall be recalculated assuming the starting water surface to be at the top of pipe at that point.
- c. For the design storm, the hydraulic gradient shall at all times be below the gutter line for all newly developed areas.
- d. Hydraulic grade lines shall be shown on all profile drawings.

5. Manhole Locations

Use manholes for precast conduits at the following locations:

- a. Size or cross section changes.
- b. Inlet lead and conduit intersections.
- c. Changes in pipe grade.
- d. Street intersections.
- e. A maximum spacing of 500 feet measured along the conduit run.
- f. Manholes shall be placed so as not to be located in the driveway area.

6. Inlets

- a. Locate inlets at all low points in gutter.
- b. Valley gutters across intersections are not permitted.
- c. Inlet spacing is generally a function of gutter slope. For minimum gutter slopes, the maximum spacing of inlets shall result from a gutter run of 500 feet from high point in pavement or the adjacent inlet on a continuously graded street section, with a maximum of 1000 feet of pavement draining towards any one inlet location.
- d. Use only Standard Inlets:

Inlet	Application	Capacity
Type A	Parking Lots/Small Areas	2.5 cfs
Type B-B	Residential	5.0 cfs
Type D	Parking Lots	2.0 cfs
Type E	Roadside ditches	20.0 cfs
Type H-2	Residential / Commercial	5.0 cfs
- e. Do not use "Beehive" grate inlets or other "specialty" inlets.
- f. Do not use grate top inlets in unlined roadside ditch.
- g. Place inlets at the end of the proposed pavement, if drainage will enter or leave pavement.
- h. Do not locate inlets adjacent to esplanade openings.
- i. Place inlets on side streets intersecting major streets, unless special conditions warrant otherwise.
- j. On-grade inlets shall be allowed.

C. Consideration of Overland Flow

1. Design Frequency. The design frequency for consideration of overland sheet flow shall consider extreme storm events, which exceed the capacity of the underground storm sewer system resulting in ponding and overland sheet flow through the development to the primary outlet.
2. Relationship of Structure to Street. All structures shall be constructed according to the Flood Damage Prevention Ordinance and should be higher than the highest level of ponding anticipated from the extreme event analysis.

3. Calculation of Flow
 - a. Streets will be designed so that consecutive high points in the street will provide for a gravity flow of drainage to the ultimate outlet.
 - b. The maximum depth of ponding at high points will be the top of curb or the centerline of roads without curb.
 - c. The maximum depth of ponding at low points will be 12-inches above the gutter on curb and gutter roads, or 6 inches above the centerline of roads without curb.
 - d. Sheet flow between lots can be provided only through a defined drainage easement.
 - e. A map shall be provided to delineate extreme event flow direction through a proposed development and how this flow is discharged to the primary drainage outlet.
 - f. In areas where ponding occurs and no sheet flow path exists, then a calculation showing that run-off from the 100-year event can be conveyed and remain in compliance with the other terms of this section must be provided.
 4. Overland Flow shall enter outfall drainage facilities (channels or detention pond) through a storm sewer sized to convey the 100-year event. Calculations shall be submitted for sizing the structure and determining that adequate inlet capacity exists.
- D. Design of Open Channels
1. Design Frequency
 - a. Open channels shall be designed according to methods described in the corresponding Drainage District's Design Criteria Manual.
 - b. Design standards for channel construction should follow the requirements specified in the corresponding Drainage District's Design Criteria Manual.
 - c. Design standards for the outfalls into channels should conform to those in the corresponding Drainage District's Design Criteria Manual.
 2. Determination of Water Surface Elevation.
 - a. Water surface elevations shall be calculated using Manning's Equation and the Continuity equation.
 - b. For the design storm event, the water surface should be calculated to remain within banks and below freeboard.
 3. Design of Culverts
 - a. Head losses in culverts shall conform to TxDOT requirements.
 - b. Generally, only RCP will be approved for culverts in City right-of-way.

E. Design of Roadside Ditches

1. Design Frequency
 - a. The design storm event for the roadside ditch shall be to 0.5 feet below the edge of pavement or the natural ground at the right-of-way line, whichever is lower.
 - b. Design capacity for a roadside ditch shall be to 0.5 feet below the edge of pavement or the natural ground at the right-of-way line, whichever is lower.
 - c. The design must include an extreme event analysis to indicate that structures will not be flooded.
2. Velocity Considerations
 - a. For grass-lined sections, the design velocity shall be 2.0 feet per second during the design event. The maximum velocity shall be 5 fps.
 - b. A grass-lined or unimproved roadside ditch shall have side slopes no steeper than three horizontal to one vertical.
 - c. Minimum grades for roadside ditches shall be 0.2-foot per 100-foot.
 - d. Calculation of velocity will use a Manning's roughness coefficient of 0.040 for earthen sections and 0.025 for ditches with paved inverts.
 - e. Use erosion control methods acceptable to the City when design velocities are expected to be greater than 3 feet per second.
3. Culverts
 - a. Culverts will be placed at all driveway and roadway crossings, and other locations where appropriate.
 - b. Culverts will be designed assuming inlet control.
 - c. Roadside culverts are to be sized based on drainage area. Calculations are to be provided for each block based on design criteria presented in this manual.
 - d. Cross open channels with roadside culverts no smaller than 18 inches in diameter or equivalent. The size of culvert used shall not create a head loss of more than 0.20 feet greater than the normal water surface profile without the culvert.
 - e. Use erosion control methods acceptable to the City when design velocities are expected to be greater than 3 feet per second.
 - f. Sloped end treatments (S.E.T.) must be placed at all driveways. If S.E.T.'s cannot be used due to space constraints, the culvert must be extended 12" on each side of the driveway. A head wall may be used to replace the extension of the culverts.
 - g. HDPE may be used between driveway culverts, but not under driveways or street crossings. All driveway and street culverts to be RCP or RCB.
4. Depth and Size Limitations
 - a. Residential streets - maximum depth not to exceed 3 feet from edge of pavement.
 - b. Roadside ditch bottoms should be at least 2 feet wide.
 - c. Ditches in adjoining and parallel easements shall have the top of bank not less than 2 feet from the outside easement line.
 - d. Roadside ditch side slopes shall not exceed 3 horizontal to 1 vertical.
5. Roadside open-ditch drainage systems will be permitted only within the Original Manvel Townsite, or with City Council approval.
6. Existing roadside open-ditch drainage systems adjacent to new developments to be converted to underground storm sewer system by said developer.

F. Design of Outfalls

1. Shall conform to the corresponding Drainage District's Design Criteria Manual.
2. Detention pond and storm sewer outfalls shall be placed one foot above the flowline of the receiving channel.
3. Outfalls shall be placed 6 inches above the flowline of the receiving roadside ditch.
4. Wet detention ponds may be connected by a submerged pipe.
5. Outfalls must have a means to control erosion and washouts (i.e., concrete paving, interlocking blocks). Riprap is not acceptable.

G. Storm Water Detention

The purpose of storm water detention is to mitigate the effect of new development on an existing drainage system. If 20% or less of the entire property (single SFR lot, not subdivision) will be affected by new impervious cover, then a new or revised drainage plan will not be required.

1. Application of Detention.
 - a. As a normal consideration, storm water detention is required. The use of on-site detention is required in order to mitigate potential damage to existing structures unless the current infrastructure is improved, or the City has developed a plan for a detention facility to serve the overall area.
 - b. Design calculations for sizing the detention basin and related structures must be performed by the applicable method described in the following sections.
 - c. All calculations shall be sealed and signed by a Registered Professional Engineer.
 - d. A concrete parking lot may be used as part of the detention system, provided that the maximum depth of water over the inlet does not exceed nine (9") inches and the maximum depth in the parking stall does not exceed six (6") inches.
 - e. The Rational Method can be used for determining the peak release rate and the peak inflow rate for a detention pond.
2. Calculation of Detention Volume
 - a. The Modified Rational Method may be used to determine the detention storage volume for developments that are 5 acres or smaller.
 - b. A simplified method may be used for determining the amount of detention volume required based upon a rate of 0.65 acre-feet per gross acre. This method may only be used for developments less than 100 acres.
(i.e., 5-acre site $\times$ 0.65 = 3.25 acre-feet)
 - c. The Triangular Hydrograph method may be used for determining the amount of detention volume required for development of 100 acres or less.
 - d. The Unit Hydrograph Method (Small Watershed Method), which calculates the required detention storage volume by determining the difference in volumes between the inflow and outflow hydrographs, may be used for developments less than 100 acres.
 - e. For developments with more than 100 acres, a detailed hydrologic analysis utilizing the HEC-HMS, HEC-RAS Flood Hydrograph method will be required.

3. Calculation of Outlet Size

Outfalls, which utilize a pipe restrictor to control outflow, shall use the orifice equation.

a. Reducer or Restrictor Pipes shall be sized as follows:

(1) Use the following equations to calculate the required outflow orifice:

$$\text{Area of pipe} = \pi d^2/4$$

$$Q = CA (2 gh)^{1/2}$$

$$D = Q^{1/2} / 2.25 h^{-1/4}$$

Q = outflow discharge in cfs.

C = 0.8

h = water surface differential (ft)

D = orifice diameter (ft)

A = area of pipe (ft²)

g = gravity (32.2 ft/s²)

(2) For head differential in systems outfalling into a roadside ditch or storm sewer use actual head loss or 1-foot whichever is greater. For all other discharge conditions use 2 feet or difference of 100-year water surface elevation and elevation of 25-year storm in receiving channel, whichever is greater.

(3) For detention systems outfalling into a public storm sewer, the restrictor shall be sized based upon the peak 5-year developed flow.

(4) For detention systems outfalling into a public roadside ditch, the restrictor shall be sized based upon the peak 5-year undeveloped flow.

(5) For detention systems outfalling into creeks, channels or storm sewers sized to carry the 25-year or 100-year storm, the restrictor shall be metered to release the 5-year, 25-year and 100-year undeveloped flows.

(6) Restrictor shall be either the required diameter or the equivalent cross-sectional area. The orifice diameter "D" shall be a minimum of 6 inches.

(7) Detention ponds less than one (1) acre in size shall have a minimum of 4 inches of freeboard. All ponds one (1) acre or larger in size shall have at least one (1') foot of freeboard. When a parking lot is used for detention per 1d. above, freeboard is not required within the parking lot. Freeboard shall be measured from the maximum 100-year water surface elevation and shall not be used in the calculation of storage or mitigation.

4. Detention Pond Structural Requirements

a. Side slopes shall not exceed a slope of 4 horizontally to 1 vertically.

b. Dry ponds with lengths over 50 feet shall have a concrete pilot channel.

c. Concrete pilot channels shall have a minimum width of 4 feet and a minimum thickness of 4 inches with #3 rebar spaced at 12 inches on center each way. The concrete channels shall be constructed of 5-sack cement concrete with a compressive strength of 2500 psi at 28 days. Provide a 1-inch depression per every 1-foot of transverse slope with redwood headers spaced every 40 feet.

d. Appropriate covering (grass, slope paving, etc.) shall be established on side slopes and pond bottom to prevent erosion during periods of maximum water velocity.

e. A concrete gravity spillway, set at the maximum ponding elevation, shall be provided at the detention pond outfall structure.

f. Wet detention ponds and ponds with vertical walls shall provide access for safety and maintenance purposes. Wet detention systems shall have a method in-place to minimize stagnation, such as an aeration system.

g. Dry detention ponds shall not be designed with less than two feet of depth.

5. Ownership and Easements
 - a. Pumped detention or floodplain mitigation facilities are not allowed.
 - b. Maintenance responsibility of the detention facility must be indicated on the plat.
 - c. All properties being served shall have drainage access to the pond.
 - d. A maintenance agreement must be provided when multiple tracts are being served.
 - e. A maintenance berm must be provided around all sides of detention and floodplain mitigation facilities.
 - (1) The minimum maintenance berm width for dry ponds is 20 feet.
 - (2) The minimum maintenance berm width for wet ponds is 30 feet.
6. Off-Site Detention

Off-site detention, such as regional or sub-regional detention, may be used provided:

 - a. The detention facility is in the same watershed or sub-watershed as the developer's site.
 - b. The drainage area is less than 100 acres.
 - c. Excess detention capacity may not be used for mitigation of fill in the flood plain.
 - d. The Developer provides conveyance to the detention facility without having a detrimental effect on any adjacent properties.
 - e. If conveyance is directed through properties not directly owned by the developer, an executed contract or recorded deed between the parties agreeing to the said conveyance must be presented.
 - f. This procedure is approved by both the City and the corresponding drainage entity during preliminary plan review.
 - g. It is the desire of the City of Manvel that regional detention be utilized when available. If new development is within the service area of a publicly owned or operated regional storm water detention facility, connection to such regional facility shall be as required by the drainage master plan applicable to such facility.
7. Redevelopment and Additions
 - a. Additional impervious cover may be added to an existing single-family residential lot (1-time allowance), provided that the cumulative increase does not exceed 20% of the original impervious cover for that lot.
 - b. A drainage plan and detention calculations will be required for any proposed improvements, additions, or redevelopment in excess of the 20% impervious cover allotment.
 - c. All commercial and non-residential new developments, additions, or redevelopment will require a new or revised drainage plan for additional impervious cover.

1.05 RESERVED

1.06 SUBMITTALS

A. Preliminary Design - Submit for Review and Comment

One-line drawings are required as part of the platting process and include:

1. Approximate definition of lots and street patterns.
2. The approximate drainage areas for each system.
3. A definition of the proposed drainage system by single line.
4. The proposed pipe diameters.
5. Any proposed drainage easements.
6. Floodplain boundary, if any.

B. Final Design - Submit the Following for Approval

1. Copies of any documents which show approval of exceptions to the City design criteria.
2. Design calculations for storm line sizes and grades, and for detention facilities, if any.
3. Design calculations for the hydraulic grade line of each line or ditch, and for detention facilities, if any.
4. Contour map and drainage area map of the project.
5. Plan and profile sheets showing storm water design (public facilities only).
6. Projects located within a Flood Plain boundary or within a Flood Plain Management area shall show the Flood Plain boundary or Flood Plain area, as appropriate, on the one-line drawing or drainage area map.
7. Soil boring logs.
8. All drainage plans shall have a current FEMA flood zone determination statement.

C. Signature - Submit the Following for Approval

1. Review prints.
2. Original drawings.
3. Storm water detention maintenance agreement letters.

1.07 QUALITY ASSURANCE

A. Prepare calculations and construction drawings under the supervision of a Professional Engineer trained and licensed under the disciplines required by the drawings. The final construction drawings and all design calculations must be sealed, signed, and dated by the Professional Engineer responsible for the development of the drawings.

B. Prior to release of the maintenance bond (and in conjunction with the final walk-thru), the developer shall have all storm sewer lines (within the project boundary) inspected with television equipment. Any pipe settlement which causes excess ponding of water in pipeline, any misaligned joints, or other defects shall be cause for rejection. The developer shall provide the City with one copy of the TV videotape and one copy of the TV inspection report. For each segment, the video tape and corresponding written report shall clearly identify:

1. Each line segment being inspected.
2. The size and type of pipe being inspected.
3. Accurate footage of the line segment inspected.
4. Deficiencies in materials, alignment, pipe grade, or any other apparent deficiencies.

2.0 EXECUTION

2.01 RESEARCH REQUIREMENTS – Reserved

2.02 DESIGN ANALYSIS

- A. All projects shall be tied to National Geodetic Survey (NGS) Datum adjustment, which matches the Federal Emergency Management Agency (FEMA) rate maps or the most current NGVD, which matches the FEMA rate maps. In the event GPS surveying is used to establish benchmarks, at least two references to benchmarks relating to the FEMA rate maps must be identified. Equations may be used to translate other datum adjustments to the required adjustment.
- B. Plan sets will include a drainage area map, which shall contain all storm sewer drainage calculations as determined by the Rational Method.
- C. All drainage systems for curb and gutter pavements shall be underground closed conduits; individual residential lot drainage is exempt. Drainage systems for pavements without curb and gutter shall be roadside open-ditch sections.
- D. Soil boring with logs shall be made along the alignment of all storm sewers having a cross section equal to or greater than 72 inches in diameter or equivalent cross section area. Boring should be taken at intervals not to exceed 500 linear feet and to a depth not less than 3 feet below the flow line of the sewer. The required bedding will be determined from the soil boring.
- E. Plan sets shall include the 5-year Hydraulic Grade Line for storm sewers and roadside ditches on the plan and profile sheets. They shall also include the 100-year ponding depth on the plan and profile sheets.
- E. Pumped systems (for detention or floodplain mitigation) are not allowed.

SECTION 6 SITE DEVELOPMENT

1.0 GENERAL

1.01 CHAPTER INCLUDES: Site Development

1.02 REFERENCES

- A. City of Manvel Zoning Ordinance.
- B. City of Manvel Subdivision Ordinance.

1.03 DEFINITIONS

Commission – Planning, Development and Zoning Commission

1.04 DESIGN REQUIREMENTS

A. Site Development Requirements

1. General Requirements

- a. Site development plans for all site developments within the City of Manvel and its ETJ shall be approved by the City prior to construction.
- b. Site developments, not including single family residential, shall include any project that affects public water, wastewater, storm drainage, or paving facilities.
- c. All site developments shall conform to the requirements of these Standards and applicable rules and regulations of the City of Manvel.
- d. All wastewater, drainage and paving site development improvements shall be privately owned, operated and maintained up to and including the connection to the public system.
- e. All water site development improvements shall be privately owned, operated and maintained up to, but not including, the meter and meter vault.
- f. Restore the City of Manvel ROW to existing or better condition.
- g. Private utilities and service lines shall be placed in an easement or on the property being served.
- h. Hours of Construction are 7:00 AM to 9:00 PM, Monday through Saturday.
- i. As-Built Construction Plans (Record Drawings) and a Two-Year Maintenance Bond (in the amount of 100% of the cost of the infrastructure improvements, valid two years from the date the infrastructure is accepted by City Council) shall be required for all public improvements being dedicated to the City.

2. Design Review Requirements for Site Development Plans.
 - a. All site development plans for proposed developments shall be submitted to the City for approval prior to construction. Site development plans shall show all proposed water, wastewater, paving, parking, drainage, street signage, streetlight locations, flood protection facilities, and sidewalks with approved ADA ramps locations.
 - b. A traffic impact study shall be required for any development proposal expected to generate traffic volumes that will significantly impact the capacity and/or safety of the street system. All proposed developments generating volumes of 5,000 trips per day or greater shall meet this criterion. The trip estimate shall be based on the latest version of the Institute of Transportation Engineers, Trip Generation Manual.
 - c. The developer should first schedule a Pre-Development Meeting (PDM) with the City of Manvel. At this meeting, the developer should be able to discuss infrastructure issues and the feasibility of developing the site.
 - d. The next step is to prepare the Civil site plan submittal to be reviewed by staff. The submittal for the site plan requires electronic copy and 3 copies of:
 1. Site Plan
 2. Landscaping Plan
 3. Elevation Plan
 4. Drainage Plan
 5. Utility Plan
 6. Grading Plan
 7. Storm Water Pollution Prevention Plan

To be provided to Permits Department staff with relevant application forms. The City will typically respond within 2 to 4 weeks of the initial submittal.
 - e. Submittal to the appropriate drainage agency is required.
 - f. Electronic copy of site development plans shall be submitted to the Permits Department with relevant application form for Building Official's review. The City will typically respond within 2 to 4 weeks of the initial submittal.
3. Building Slab Elevations - Minimum building slab elevations shall conform to the requirements of the City of Manvel Flood Damage Prevention Ordinance.
4. Water Service - Water service lines and meters shall be sized in accordance with requirements set out in Section 3 of the Design Criteria Manual.
5. Sanitary Sewer Service - Sanitary sewer service leads are normally installed during construction of the public sanitary sewer. When a sanitary sewer service lead is to be installed for a site development, refer to the Wastewater Collection System Design Requirements. All lots, tracts, or reserves shall be connected directly to a public sanitary sewer by a single lead. The City shall be contacted for all sanitary sewer connections for commercial projects within the City.

6. Site Drainage Requirements - All commercial, industrial, office, recreational, and multi-family tracts shall have an internal drainage system. The internal drainage system shall connect all site runoff into a storm sewer system that shall connect to the public drainage facilities in the area, except with specific approval.
 - a. The internal site storm sewer shall be connected to a public storm sewer and a manhole or at an inlet adjoining the site. The site drainage outfall shall be connected to the nearest existing drainage system with adequate capacity to serve the drainage area. Where extension of the existing drainage system is required, all costs for extension shall be the responsibility of the development.
 - b. All internal facilities shall be designed by a Registered Professional Engineer and shall be sized to drain the site in accordance with these standards.
 - c. Drainage calculations shall be submitted with all site development plans. Other supporting data may be required by the City.
 - d. When the site drains directly into a Brazoria County facility and/or into a highway right-of-way, the appropriate governmental entity (entities) shall approve the site development connection to public facilities.
7. Driveways
 - a. It is desirable to minimize the number of driveways on all streets in order to reduce the number of conflict points and facilitate traffic flow. It is recognized, however, that certain existing tracts may not be able to fully comply with the following standards due to limited frontage or other constraints.
 - b. When compliance with these criteria is precluded due to the location of driveways on adjoining properties, attempts should be made to obtain alternative access where feasible, including joint access driveways, access easements to adjoining properties or access to intersecting streets.
 - c. If it can be demonstrated to the City that sufficient attempts to secure alternative access have been made and that such access is still not possible, the City may accept a Traffic Impact Analysis performed by a Registered Professional Engineer to permit a deviation to the driveway spacing requirements indicated herein.
 - d. Residential driveways shall be a minimum of 12 feet wide (and a maximum of 24 feet) at the right-of-way line and should be placed away from the property line.
 - e. Residential lots must have a minimum of 120 feet of frontage in order to be eligible for two driveways on the same lot and they shall have 50 feet of separation between them.
 - f. Residential lots should not front on collector streets, thoroughfares, or arterials. For residential lots that do front on collector streets, they must have an internal turnaround or circle drive to minimize conflict points.
 - g. Non-residential driveways shall be 25 feet to 35 feet wide of pavement.
 - h. Driveways shall be spaced with a minimum of 50-feet separation.
 - i. Islands may be allowed within non-residential driveways, but must have a minimum of 12.5' travel lanes, and be pre-approved by the Fire Marshal.
 - j. Driveways on major thoroughfares/boulevard streets shall be placed no closer than 125 feet from the ultimate curb line of an intersecting major thoroughfare or boulevard street.
 - k. Driveways on collector/ minor streets are to be placed no closer than 75 feet from the ultimate curb line of an intersecting major thoroughfare/boulevard street.
 - l. Driveways on major thoroughfares/boulevard streets are to be placed no closer than 75 feet from the ultimate curb line of an intersecting collector commercial/minor street.

- m. For purposes of determining the separation distance, the back of curb or edge of street shall be used in conjunction with the edge of driveway which is closest and parallel to the street.
- n. Non-residential tracts with less than 150 feet of frontage on a public street shall have no more than 1 driveway. Non-residential tracts with between 150 and 320 feet of frontage on a public street shall have no more than 2 driveways. Non-residential tracts with between 321 feet and 600 feet of frontage on a public street shall have no more than 3 driveways. Non-residential tracts with over 600 feet of frontage on a public street shall have driveways specially designed and specifically approved by the City.
- o. Non-residential driveway connections to the public street shall be approved and inspected by the City of Manvel.
- p. Driveway radii shall not extend beyond the projection of a property corner to the back of the curb.
- q. Non-Residential Driveways shall be concrete, installed according to the City of Manvel Construction Details.
- r. On concrete streets, Residential Driveways shall be concrete, installed according to the City of Manvel Construction Details.
- s. On asphalt streets, Residential Driveways shall be concrete or asphalt, installed according to the City of Manvel Construction Details.
- t. Driveways shall be evaluated with respect to signage, landscaping and structures for adequate sight distance.
- u. A note stating, "Access to adjacent property and common driveways may be required," shall be placed on the site plan.
- v. Curb returns for driveways shall be, at a minimum:
 - (1) For residential driveways:
 - (a) 5 feet on local streets
 - (b) 10 feet on collector streets, major thoroughfares and boulevards
 - (2) For non-residential driveways:
 - (a) 25 feet on local streets
 - (b) 35 feet on collector streets, major thoroughfares, boulevards and local streets less than 28 feet in width.
- w. Per Section 59-53 of the Manvel City Code, manholes, fire hydrants, and water valves shall not be located within a driveway, sidewalk, or street.

8. Controlled Access Gate Requirements

- a. Plans for access control systems shall be submitted to the Fire Marshal's Office and approved prior to construction.
- b. All access control gates shall have emergency means of operation in the event of power loss.
- c. Access control gates shall provide a clear, passable width of at least twenty feet.
- d. A Knox® key switch and Click2Enter-I.V4 scanner radio receiver shall be provided for all controlled access gates. The key switch shall operate all gates.
- e. A Knox® pad lock and Click2Enter-I.V4 scanner radio receiver shall be provided for all non-motorized gates.
- f. The location of the key switch shall be approved by the Fire Marshal's Office.
- g. The owner shall maintain all parts of the access system and keep them in good working order.
- h. The Fire Marshal's Office and Police Dispatch shall be notified immediately of any damage to the access system that hinders access including, but not limited to, damage to the key box, lock, or gates.

9. Pollution Prevention

A pollution prevention plan shall be provided for all site development projects.

- a. Filter fabric fence shall be installed at the perimeter of the site before construction is to begin.
- b. Once construction is completed, either filter fabric fence, 5 feet of hydro mulch or sod shall be installed at the back of all curbs, or other Best Management Practices shall be implemented.
- c. Refer to the storm water ordinance for additional requirements.

10. Parking Lot Guidelines

A parking lot layout is required to ensure that adequate off-street parking is provided with the construction, alteration, remodeling or change of use of any building or change in use of land.

- a. Off-street parking spaces shall be located on the same lot, tract, parcel, or premises as the use being served or on other property of the same or less restrictive zoning classification that the owner of the premises being served has a continuing right to use for parking. When the off-street parking spaces are not located on the same lot, tract, parcel, or premises being served, the distance from the center of the parking lot to an entrance to the building or use shall not exceed 300 feet in distance, measured along the shortest available pedestrian route with public access.
- b. Any existing building or use that is enlarged, structurally altered, or remodeled to the extent of increasing or changing the use by more than 50 percent as it existed shall be accompanied by off-street parking for the entire building or use. When the enlargement, structural alteration, or remodeling is to the extent that the use is not increased or changed by more than 50 percent, additional off-street parking shall only be required for the increased or changed floor area or use.
- c. Existing parking spaces may not be used to satisfy additional off-street parking requirements unless the existing spaces exceed the number recommended for the building or use for which the existing spaces are associated. Commercial areas may be phased. Parking from earlier phases may count for future uses.
- d. The Parking Group Table can be found in the Zoning Ordinance, Section 77-45.

- e. The design and dimensions of off-street parking areas shall be in accordance with the following table of minimum dimensions. The minimum size of a parking spaces shall be 10 (ten) feet wide and twenty (20) feet long. All dimensions below are in feet:

	<i>Angle</i>			
	<i>0°</i>	<i>45°</i>	<i>60°</i>	<i>90°</i>
Stall, parallel to aisle	25.0	10.0	10.0	10.0
Stall, perpendicular to aisle	10.0	20.0	20.0	20.0
Aisle width, one-way	25.0	15.0	18.0	25.0
Aisle width, two-way	25.0	25.0	25.0	25.0
Cross aisle, one-way	25.0	25.0	25.0	25.0
Cross aisle, two-way	25.0	25.0	25.0	25.0

- f. Off-street parking spaces shall be clearly marked. Parking spaces abutting an adjoining property line or street right-of-way shall be provided with wheel guards or bumper guards so located that no part of a normally parked vehicle will extend beyond the property line. When wheel guards are used, they shall be centered 2.5 feet from the property line for 90-degree parking, 2.3 feet for 60-degree parking, and 2.0 feet for 45-degree and 30-degree parking.
- g. Approval of the parking area layout and design of all off-street parking areas shall be by the City. The City shall determine that spaces provided are usable, and that the circulation pattern of the area is adequate.
- h. Mixed/Combination of Land Uses - Where a mixed or combination of land uses are proposed, parking shall be calculated based on the respective requirements of each land use. Shared parking is encouraged, if appropriate.
- i. All new parking shall be constructed with concrete, with a minimum slab thickness of 6 inches with $f_c = 3,500$ psi and reinforcement shall be Grade 60, $f_y = 60,000$ psi, #4 deformed reinforcing bars spaced at 18 inches center to center both ways and minimum lap lengths of 18 inches.
- j. Existing asphalt parking lots can remain, be repaired, and be expanded as asphalt parking lots.
11. Fences in any single-family residential district or subdivision may not exceed six feet in height except when located on a major thoroughfare where fences shall not exceed eight feet in height. Fences in districts other than single-family residential, may not exceed eight feet in height. Barbed wire fences are only allowed on property at least two acres in size and the barbed wire portion of the fence shall be no higher than 52 inches as measured from the natural ground.
- Perimeter fencing adjacent to Major Thoroughfares shall be masonry.
 - Perimeter fencing adjacent to Detention Ponds and Amenity Lakes shall be ornamental (wrought) iron.
 - Perimeter fencing to be installed prior to the release of the Maintenance Bond.

12. Driveway Culverts

a. *New Culverts*

- (1) Driveway culverts will be set by Community Services on city-maintained roads.
- (2) The Department will not set culverts in rights-of-way for State roads or on private roads.
- (3) Citizens wishing new culverts to be set are required to furnish reinforced concrete pipe (RCP) of a suitable size as determined by Department personnel. Reasonable notice from citizen is required.
- (4) New culverts will be backfilled with soil or other material available on the site at the time culvert is set. Any material other than in-place soil must be purchased by the citizen from a vendor of their choosing. Clean out openings or grates must be supplied by the citizen if the culvert is longer than 48 feet.

b. *Existing Culverts*

- (1) When drainage projects are undertaken by the Department, culverts may be enlarged if necessary, and replaced with RCP at Department's expense. Installation will be completed as follows:
 - (a) Culverts covered with base material will be re-covered with base material.
 - (b) Asphalt or concrete removed will be replaced with like material (asphalt for asphalt and concrete for concrete).
 - (c) When the Department undertakes projects to re-surface roads with asphalt, asphalt will be tapered outside edge of pavement at existing driveways to avoid abrupt drop off.

c. *Culvert Installation*

- (1) Stake and mark the ditch where you would like to have the culvert set. Call City of Manvel, Permits Department and have a work order prepared. We will send out our Community Services Personnel to measure the ditch; and will call you with the correct size of reinforced concrete pipe you need to purchase.
- (2) Once the size is determined, order the reinforced concrete culvert pipe and have them delivered to the site. The only dirt we typically use to cover pipe is fill dirt (what we usually dig out of the ditch when we set the culverts). After your culverts are delivered to the site, give City Hall a call and we will put in another work order to install the culverts.

d. *Driveway Surface*

- (1) Contractor shall insure that alignment of culvert pipe is not altered during such operation.
- (2) If concrete surfacing is added by citizen's contractor: An expansion joint shall be provided two feet beyond outer edge of pipe on each side of culvert pipe, to facilitate removal of concrete as may be necessary to enlarge pipe during drainage improvement projects.
- (3) No concrete shall be placed within 11 feet of roadway centerline.

13. Streetlights
 - a. All new streetlights within a subdivision to be installed by the developer.
 - b. All monthly electrical charges and any maintenance and operation costs for streetlights within a subdivision to be paid for by the homeowners' association or MUD, as applicable.
 - c. All new streetlights to be LED Modules/Fixtures.
 - d. Refer to City Code 62-114.
 - e. Streetlights to be installed at all intersections, dead-ends, cul-de-sacs, and at a minimum spacing of 250 feet; or consistent with a photometric layout, as approved by the City.
 - f. Streetlights on Streets ($\leq 80'$ ROW) shall have minimum 60-watt LED. Streetlights on Thoroughfares ($> 80'$ ROW) shall have minimum 180-watt LED.
14. Fire Apparatus Access Roads and Fire Lanes
 - a. Fire apparatus access roads and Fire Lanes shall have a radius of 25 feet and unobstructed width of not less than 25 feet exclusive of shoulders, except for approved security gates in accordance with Section 503.6 of the Fire Code, and an unobstructed vertical clearance of not less than 14 feet (4267 mm).
 - b. Fire apparatus access roads shall be designed and maintained to support imposed loads of 80,000 lbs. for fire apparatus and shall be surfaced so as to provide all-weather driving capabilities.
 - c. Fire Lane Marking Striping, signs, or other markings, when approved by the fire code official, shall be provided for fire apparatus access roads to identify such roads or prohibit the obstruction thereof. Striping, signs and other markings shall be maintained in a clean and legible condition at all times and be replaced or repaired when necessary to provide adequate visibility.
 - (1) Striping – Fire apparatus access roads shall be continuously marked by painted lines of red traffic paint six inches (6") in width to show the boundaries of the lane. The words "NO PARKING FIRE LANE TOW-A-WAY ZONE" or "FIRE LANE NO PARKING TOW-A-WAY ZONE" shall appear in four inch (4") white letters at 25 feet intervals on the red border markings along both sides of the fire lanes. Where a curb is available, the striping shall be on the vertical face of the curb.
 - (2) Signs – Signs shall read "NO PARKING FIRE LANE TOW-A-WAY ZONE" or "FIRE LANE NO PARKING TOW-A-WAY ZONE" and shall be 12" wide and 18" high. Signs shall be painted on a white background with letters and borders in red, using not less than 2" lettering. Signs shall be permanently affixed to a stationary post and the bottom of the sign shall be six feet, six inches (6'6") above finished grade. Signs shall be spaced not more than fifty feet (50') apart along both sides of the fire lane. Signs may be installed on permanent buildings or walls or as approved by the Fire Marshal.
 - d. Where a portion of the facility or building hereafter is constructed or moved into or within the jurisdiction is more than 300 feet from a hydrant on a fire apparatus road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains shall be provided where required by the Fire Marshal.

15. Address Identification. New and existing buildings shall be provided with address identification. The address identification shall be legible and placed in a position that is visible from the street or road fronting the property. Address identification characters shall contrast with their background. Address numbers shall be Arabic numbers or alphabetical letters. Numbers shall not be spelled out. Each character shall be not less than 6 inches (152.4 mm) high with a minimum stroke width of 1/2 inch (12.7 mm). Where required by the fire code official, address numbers shall be provided in additional approved locations to facilitate emergency response. Where access is by means of a private road, buildings do not immediately front a street, and/or the building cannot be viewed from the public way, a monument, or other approved sign with approved 6 inch (152.4 mm) height building numerals or addresses and 4 inch (101.6 mm) height suite/apartment numerals of a color contrasting with the background of the building or other approved means shall be used to identify the structure. Numerals or addresses shall be posted on a minimum 20 inch (508 mm) by 30 inch (762 mm) background on border. Address identification shall be maintained.

Exception: R-3 Single Family occupancies shall have approved numerals of a minimum 4 inches (88.9 mm) in height and a color contrasting with the background clearly visible and legible from the street fronting the property and rear alleyway where such alleyway exists.

16. 2" PVC Conduit shall be installed along Major Thoroughfares for future City of Manvel fiber optic network.
17. A Photometric Plan is required for all Non-Residential Site Plans. The Photometric Plan shall show lighting calculations in foot-candles along all property lines. The maximum allowable light level is 0.5 foot-candles along all property lines.
18. For all projects located within a MUD, a Water and Sewer Utility Availability Summary Table shall be provided with/within every plan and plat submittal. The Table will include a summary of currently platted lots and corresponding connections, along with reserved connections and planned future connections. It will also include the current capacity of the water and wastewater facilities (plant(s), lift stations, etc.) within the MUD.

2.0 EXECUTION

2.01 RESEARCH REQUIREMENTS

- A. Discuss project concepts outlining proposed features and usage with the City.
- B. Research existing utility and right-of-way information.
- C. Verify that no restrictions exist that will deny approval of the project concept.

2.02 DESIGN ANALYSIS – Reserved

2.03 DRAWINGS

- A. The plans shall include an overall drainage layout showing:
 - 1. Total area (in acres) of site to be drained.
 - 2. Area (in acres) drained to each inlet.
 - 3. Contours or an adequate number of spot elevations to indicate area drained to each inlet.
 - 4. Top elevation and flowline elevation at each inlet.
 - 5. Gradient and size on each private storm sewer.
 - 6. Computations to support pipe sizes and grades shown
 - 7. Design velocity for storm sewers shall be 3 feet per second.
 - 8. TX DOT permit shall be required for drainage affecting a state owned/maintained facility. Submit permit with site plan.
 - 9. The drawings shall be prepared and sealed by a Registered Professional Engineer.
 - 10. The size and location of the detention facility shall be indicated on the plans, along with the size and location of the outfall structure.
- B. All drainage plans shall be approved by the appropriate drainage entity prior to City approval.
- C. The site plan shall show all water and sewer service lines, sizes, grades and alignments with appropriate ties into existing public trunk lines.
- D. The site plan shall show all parking areas.
- E. The site plan shall indicate the types and location of all existing and proposed landscaping. Landscaping shall meet the minimum requirements of the Zoning Ordinance. A tree survey is required for first 20 feet of depth adjacent to all proposed streets. If no trees exist, a note to that affect shall be placed on the site plan.
- F. The site plan shall show all proposed and existing building setbacks, locations, heights and square footage of all proposed buildings.
- G. The land use for all adjacent property shall be shown on the site plan.
- H. All parking lot pavement for site plans shall be engineered to provide for regular use of vehicles expected to utilize the parking area and based upon the soil conditions underlying the parking area. A Registered Professional Engineer shall certify the design submitted for approval.
- I. Concrete sidewalks (a minimum of 5 feet wide and 4 inches thick with steel reinforcement) shall be required along all street frontages. The design and installation of such sidewalks shall comply with Texas Accessibility Standards Architectural Barriers requirements. The location of all proposed and existing sidewalks shall be shown on the construction drawings.
- J. Show location of signs, screening walls or fences (indicate height, minimum 8 feet) and dumpsters (with appropriate screening).
- K. No improvements to the right-of-way shall be made without prior City approval. This includes planting trees in the right-of-way of residential and non-residential areas.
- L. In the event that there is a discrepancy in the drainage criteria requirements between the City and the applicable Drainage District, the City Engineer may determine which criteria will apply.

**CITY OF MANVEL
DESIGN CRITERIA MANUAL
SECTION 7 - MODIFICATION FORM**

Variations to technical standards identified in the Design Criteria Manual may be permitted by the City of Manvel City Engineer. The modification proposal must be submitted by a registered Professional Engineer following generally accepted engineering standards and such proposal contains the following information and substantiates the findings in paragraph four (4) below. If an appeal to the City of Manvel City Engineer decision is requested, the Planning Development & Zoning (PD&Z) will review that appeal and make a recommendation to City Council. City Council will have final authority on the approval or denial of the Appeal.

PROJECT NAME: _____
PROJECT ENGINEER: _____

**SUBMITTAL
DATE:**

**This entire form must be completed in its entirety. If form is submitted
incomplete, it will be administratively rejected.**

SUBDIVISION NAME: _____

MODIFICATION LOCATION:

1. Set forth the proposed deviation to the technical standard.

2. Set forth the impact such deviation has on speed differential and street capacity, the likelihood of accidents, the long-term maintenance and operation effect, the degree of functionality and efficiency, the technological advancements involved, and other relevant matters.

3. Show a comparison of the technical standard to the proposed deviation with respect to overall safety and quality, speed differential, street capacity, existing and projected accidents, long-term maintenance and operation, degree of functionality, degree of efficiency, technological advancements, and other relevant matters.

4. Describe all mitigating improvements that reduce the negative impact of the proposed deviation on overall safety and quality, speed differential, street capacity, accident occurrences, long-term maintenance and operation, degree of functionality, degree of efficiency and demonstrating the degree to which the proposed deviation detrimentally affects the foregoing. Other relevant factors, including technological advances, should be explained by describing how they will affect the proposed development. Mitigating improvements can include but are not limited to, traffic control devices, pavement improvements, added acceleration or deceleration lanes or reservoirs, and other on-site improvements.

SUMMARY & CONCLUSION/RECOMMENDATION FOR MODIFICATION:

List of Supporting Documentation Attached?

Yes____

No____

Seal of Professional Engineer:



City of Manvel Use ONLY

1. Modification Request:

Approved

Denied

City Engineer

Date

2. Planning Development & Zoning:

Recommended

Not Recommended

Chair

Date

3. City Council:

Approved

Denied

Mayor

Date

Proclamation

OFFICE OF THE MAYOR CITY OF MANVEL

Whereas, National Public Safety Telecommunicators Week is observed annually during the second week of April to honor the thousands of men and women who serve as 911 telecommunicators, dispatchers, and call-takers across the United States; and

Whereas, public safety telecommunicators are the first point of contact in times of crisis, providing lifesaving assistance, guidance, and support to individuals in need; and

Whereas, public safety telecommunicators play a critical role in coordinating emergency response efforts, ensuring that police, fire, and emergency medical services are dispatched quickly and efficiently; and

Whereas, public safety telecommunicators work tirelessly and selflessly, often under stressful and demanding conditions, to ensure the safety and well-being of our communities; and

Whereas, during National Public Safety Telecommunicators Week, we recognize and express our gratitude to these dedicated professionals for their unwavering commitment to public safety and their invaluable contributions to our communities;

Now, Therefore, I, Dan Davis, by virtue of the authority vested in me as Mayor of the City of Manvel, Texas, do hereby proclaim April 14-20, 2024 as



“National Public Safety Telecommunicators Week”

in the City of Manvel, Texas and urge all citizens to join me in recognizing the contributions of public safety telecommunicators and expressing our appreciation for their service.

I encourage all citizens to take this opportunity to learn more about the vital role that public safety telecommunicators play in keeping our communities safe and to express their gratitude to these dedicated professionals for their hard work and dedication.

In witness thereof, I have hereunto set my hand and caused the seal of the City of Manvel to be affixed.

Dan Davis, Mayor
April 1, 2024

Proclamation

OFFICE OF THE MAYOR
CITY OF MANVEL

Whereas, every child deserves to grow up in a safe, stable, and nurturing environment, free from abuse and neglect; and

Whereas, child abuse and neglect are serious problems that affect children of all ages, races, and socioeconomic backgrounds, with long-lasting effects on their physical, mental, and emotional well-being; and

Whereas, it is estimated that 1 in 4 girls and 1 in 6 boys will be victims of sexual abuse before their 18th birthday and that only 1 in 10 abuse victims will ever tell someone about their abuse, with more than 90% of victims being abused by someone they know and trust; and

Whereas, A National Call to Action states that the rate of child abuse is ten times the rate of cancer, highlighting the urgent need for continued efforts to protect our children; and

Whereas, during National Child Abuse Prevention Month, we renew our commitment to preventing child abuse and neglect and supporting families in our communities.

Now, Therefore, I, Dan Davis, by virtue of the authority vested in me as Mayor of the City of Manvel, Texas, do hereby proclaim April 2024 as



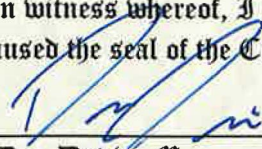
“National Child Abuse Prevention Month ”

in the City of Manvel, Texas and call upon all citizens to join in efforts to prevent child abuse and neglect, support families in crisis, and promote the well-being of all children.

I urge all citizens to learn the signs of child abuse and neglect, report suspected abuse or neglect, and support organizations and programs that work to prevent child abuse and support families in need.



In witness whereof, I have hereunto set my hand and caused the seal of the City of Manvel to be affixed.



Dan Davis, Mayor
March 26, 2024

PROCLAMATION

WHEREAS, the Department of Housing and Urban Development has initiated the sponsorship of activities during the month of April of each year designed to reinforce the Department’s commitment to the concept of Fair Housing; and

WHEREAS, the City of Manvel supports equal access to all Americans to homeownership opportunities; and

WHEREAS, the City of Manvel supports equal housing for all our citizens without regard to race, color, religion, sex, disability, or national origin; and

WHEREAS, the City of Manvel supports programs that will educate the public concerning their rights to fair housing opportunities; and

WHEREAS, the City of Manvel is honored to join the Federal Government, the State of Texas, and local jurisdictions across America in celebrating the rich diversity of our people to live where they choose.

NOW, THEREFORE, be it resolved, I, Dan Davis, Mayor of the City of Manvel, do hereby proclaim April as:

“FAIR HOUSING MONTH”

IN WITNESS WHEREOF, I have hereunto set my hand and caused the Seal of the City of

_____ to be affixed this the _____ day of _____, 2024.

Dan Davis, Mayor



CITY COUNCIL DATA SHEET

MEETING DATE: April 1, 2024

TOPIC: Consideration and possible action regarding amending the zoning ordinance by changing the zoning classification of 457.0 acres of land generally located east of State Highway 288, North of Highway 6, Generally South of Del Bellow Boulevard, and West of Farm to Market 1128, from Single-family Residential District (SFR) and Planned Unit Development to Planned Unit Development (PUD) for the Valencia Planned Unit Development and adopt the amended Valencia Planned Unit Development document.

BACKGROUND: The Valencia Planned Unit Development (PUD) is primarily a residential project that consists of approximately 457.0 acres of land and is located east of State Highway 288, north of Highway 6, generally south of Del Bello Boulevard, and generally west of Farm to Market 1128. The Valencia Planned Unit Development was approved on August 16, 2024, under Ordinance #2021-O-18. This amendment proposes to add intends to add 18.6 acres to the development. These proposed amendments have been outlined within the attached staff report.

STAFF RECOMMENDATION: Staff recommends the PD&Z recommends approval of Ordinance No. 2024-O-12 as the proposed amendments to the Valencia Planned Unit Development (PUD) are following the goals of the City and will be a majority of single-family detached residences.

PD&Z DISCUSSION: At the March 25, 2024, meeting of the Planning, Development and Zoning Commission ("the PD&Z"), a public hearing was held during which no comments from the public were received. The PD&Z discussion included clarification regarding the new commercial tract on the southeast corner of Charlotte and Pollard Street. The Drill site location was discussed, and any development would require compliance with the City's Ordinances, which have a required 2,000 distance from residential homes.

PD&Z RECOMMENDATION: The PD&Z Commission recommended approval of Ordinance No. 2024-O-12 with a vote of four (4) "Yeas" to one (1) "Nays" at the March 25, 2024, meeting.

ATTACHMENTS Staff Report, Ordinance No. 2024-O-12, Proposed PUD Document.
--

FUNDING ISSUES

- | |
|--|
| ☒ Not applicable
☐ Not budgeted
☐ Full amount already budgeted
☐ Funds to be transferred from Acct.# |
|--|

SUBMITTING STAFF MEMBER	FINANCE DIRECTOR APPROVAL _____
--------------------------------	--

Evan DuVall Zoning Administrator	CITY MANAGER APPROVAL _____
-------------------------------------	------------------------------------

**Staff Report: Summary of Proposed Valencia
Planned Unit Development (PUD) Amendment**

.

Introduction: The Valencia Planned Unit Development (PUD) is primarily a residential project that consists of approximately 457.0 acres of land and is located east of State Highway 288, north of Highway 6, generally south of De Bell Boulevard, and generally west of Farm to Market 1128. The Valencia Planned Unit Development was approved on August 16, 2024, under Ordinance #2021-O-18. This amendment proposes to add intends to add 18.6 acres to the development and have the following proposed amendments. These modifications have been outlined below in two categories.

1. Proposed Substantial Changes.

- a. Adding an Additional Commercial Tract
- b. Modifications of signage requirements
- c. Single-family Section C-08 and Boulevard Entrance
- d. Charlotte Roadway Expansion
- e. Drill Site/Open Space location.

2. Minor Changes.

- a. Circulation on parkland dedication requirements
- b. Specialty Residential Product and added conceptual standards for zero lot line and zipper lot homes.

3. Public Hearing Comments from 3/25/2024 PD&Z

- a. No comments were received.

1. Proposed Substantial changes:

- a. Adding an Additional Commercial Tract:** This amendment adds a 1.5-acre commercial tract on the southeast corner of Charlotte Street and Pollard

Boulevard (See exhibit one and two). This area is shown in the plan as C-06 and is adjacent to Lake B within the Valencia development.

b. Modifications of signage requirements: The signage section has been modified the existing regulations for Primary Entry Monuments, Secondary Entry Signs, Temporary Construction/Sales Signs, and Temporary Community Signs.

- i. **Primary Entry Monuments:** The entry monument was modified to be a sign that is twenty (20) feet in height, sixty (60) feet in length, maximum area of 400 square feet and twenty (20) feet in depth. This was modified from a maximum of 35' tall, a twenty (20) by twenty (20) foot tower, eighty (80) feet in length, and a maximum of 450 square feet. This amendment is a further clarification of the signage requirements and is less than the previously approved primary entry monument.
- ii. **Secondary Entry Signs:** The secondary entry monument sign has been changed to be no greater than 25' in height, forty (40) feet in length, and fifteen (15) feet in depth. A water cistern of twenty-five (25) feet in height by fifteen (15) feet in length. The combined area of this tower and secondary monument sign shall not be over 400 square feet. The previous secondary entry signs were a maximum of twelve (12) feet tall, by twelve (12) feet for the tower footprint, and the blade wall with a maximum height of eight (8) feet and thirty (35) feet in length, and a maximum of 150 square feet. Although this is an increase in sign height, these signs will assist in branding this development within the city.
- iii. **Temporary Construction Signs/Sales signs:** Temporary construction signs have been changed to a maximum of sixty-four (64) square feet from the previous amendment of 32 square feet. The maximum height remains the same as previous at eight (8) feet in height and eight (8) feet in width. These signs will be removed when the principal building site is occupied.
- iv. **Temporary Community Signs:** A total of ten (10) community signs are proposed along Pollard Boulevard, State Highway 6, and Del Bello Boulevard. This proposal has an increase of two signs allowed on Pollard Boulevard to make a total of four, two additional signs on Del Bello Boulevard to make a total of four, and two signs on State Highway 6 where there were none previously. These offsite signs will continue to be a maximum of 128 square feet with a maximum of 10 feet in height and be removed 30 days following the permanent resident occupying the last model home.

c. Single-family Section C-08 and Boulevard Entrance: This seven-acre single-family residential section is a total seven acres and proposes to utilize a Boulevard

entrance from a future extension of Charlotte Roadway. This would match similar residential sections in the Lakeland subdivision located just east of this area.

- d. **Charlotte Roadway Expansion:** A This proposal puts in place the requirements for the expansion of Charlotte Street with the development of residential and an approved 380 development agreement with City Council. Currently, Charlotte Street was not improved by Lakeland to easily connect to this development.
- e. **Drill Site/Open Space location::** The existing drill site location has been moved easterly within the development adjacent to section C-08. This area has been designated as open space and will be utilized as open space within the community. Any drill site within the City of Manvel must adhere to strict requirements found within the City's Sec. 35-101 of the Oil and Gas Wells. These strict requirements include a minimum of 2,000 feet from any residential building or subdivision deed restricted to residential use.

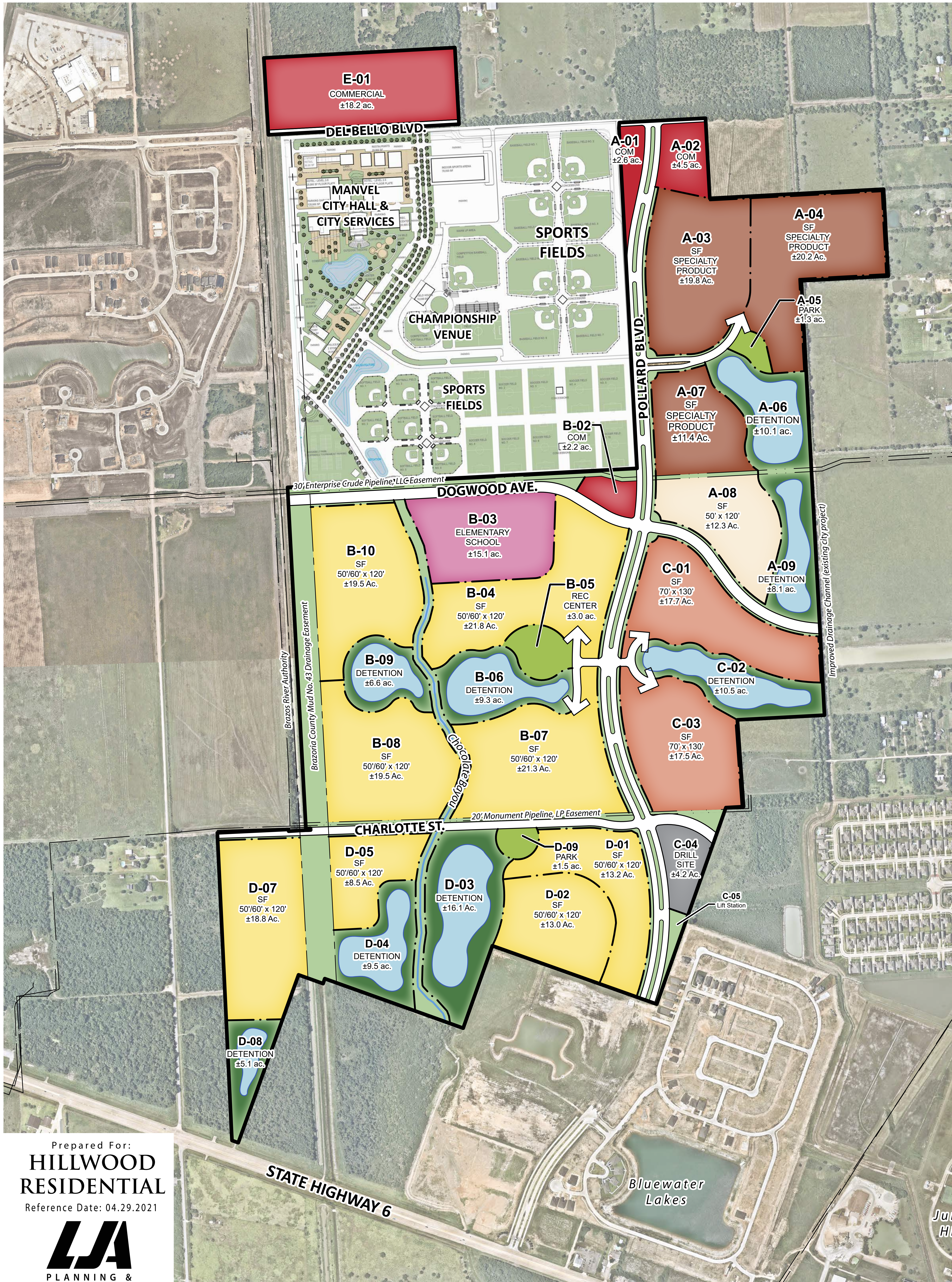
2. Proposed Minor changes.

- a. **Clarification of Parkland Dedication requirements:** Parkland dedication shown in the plans is for 1,100 proposed single-family units. If this development has an increase or decrease in units, these will be done proportionally with one acre of parkland for every 100 proposed single-family lots.
- b. **Specialty Residential Products Exhibits:** Exhibits have been added for the specialty residential products of zero-lot line, and zipper lot homes.



3. March 25, 2024 – PD&Z Public hearing comments and responses

- a. There were no comments received during the public hearing on this proposed Valencia PUD amendment.



Prepared For:
**HILLWOOD
RESIDENTIAL**
Reference Date: 04.29.2021

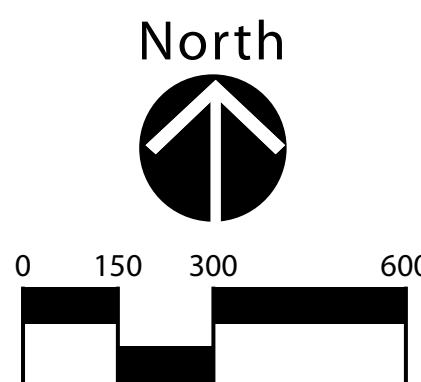
LJA
PLANNING &
LANDSCAPE
ARCHITECTURE

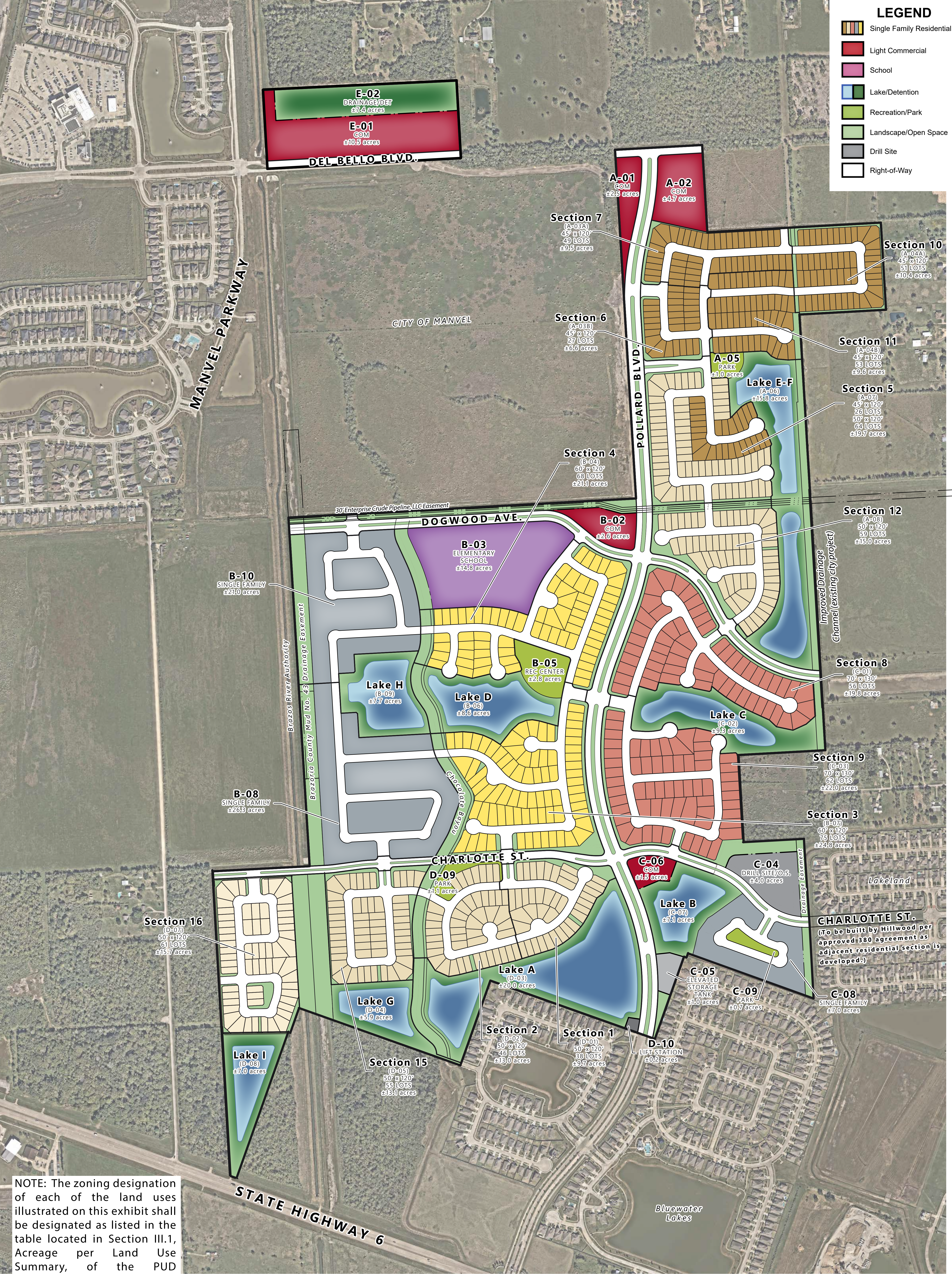
3600 W. Sam Houston Pkwy S, Suite 600
Houston, Texas 77042
713.953.5200

© Copyright 2021 LJA Engineering, Inc. Drawings, written material, and design concepts provided is considered property of LJA & shall not be reproduced in part or whole in any form or format without written consent of LJA.

This exhibit is an illustrative representation for presentation purposes only and should not be used for computation or construction purposes. The information provided within should be considered a graphic representation to aid in determining plan components and relationships and is subject to change without notice. All property boundaries, easements, road alignments, drainage, flood plains, environmental issues and other information shown is approximate and should not be relied upon for any purpose. No warranties, express or implied, concerning the actual design, accuracy, location, and character of the facilities shown on this exhibit are intended.

EXHIBIT E
Planned Unit Development
Conceptual Land Use Exhibit
SOWELL TRACT
±438.4 Acres of Land
Manvel, Texas





Prepared for
**HILLWOOD
RESIDENTIAL**

EXHIBIT E
Planned Unit Development
Conceptual Land Use Exhibit
VALENCIA
±457.0 Acres of Land
Manvel, Texas

Reference Date: 02.27.2024

ORDINANCE NO. 2024-O-12

AN ORDINANCE OF THE CITY OF MANVEL, TEXAS AMENDING THE ZONING ORDINANCE OF THE CITY, BY AMENDING THE ZONING CLASSIFICATION OF 457.0 ACRES OF LAND GENERALLY LOCATED EAST OF STATE HIGHWAY 288, NORTH OF HIGHWAY 6, GENERALLY SOUTH OF DEL BELLO BOULEVARD, AND WEST OF FARM TO MARKET 1128, FROM SINGLE-FAMILY RESIDENTIAL DISTRICT AND PLANNED UNIT DEVELOPMENT (PUD) TO PLANNED UNIT DEVELOPMENT (PUD) AND AMENDMENTS TO THE VALENCIA PLANNED UNIT DEVELOPMENT; PROVIDING FOR THE AMENDMENT OF THE CITY'S OFFICIAL ZONING MAP, PROVIDING FOR SEVERABILITY; AND PROVIDING A PENALTY IN AN AMOUNT NOT TO EXCEED \$2,000 FOR EACH DAY OF VIOLATION OF ANY PROVISION HEREOF.

* * * * *

WHEREAS, LJA Engineering, Inc., (“Applicant”), on behalf of Hillwood Residential, L.P., has made application to the City to amend the Valencia Planned Unit Development to add twenty acres of land to make the development for a total of approximately 457 acres; and

WHEREAS, the Applicant, has requested to rezone the total 457 acres of land from Single-Family Residential District and Planned Unit Development (PUD) to Planned Unit Development (PUD); and

WHEREAS, pursuant to Section 7 of the City’s Zoning Ordinance, the developer has modified the prepared development plan covering the property; and

WHEREAS, the Planning Development, and Zoning Commission and the City Council have conducted, in the time and manner required by law and the Zoning Ordinance of the City, a public hearing on said rezone and development plan amendment; and

WHEREAS, the Planning, Development, and Zoning Commission and the City Council have conducted, in the time and manner required by law and the Zoning Ordinance of the City, a public hearing on such request; and

WHEREAS, the Planning, Development, and Zoning Commission has recommended in its report the approval of such request, and the City Council deems it appropriate to approve said rezoning and development plan amendments; now, therefore,

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MANVEL, TEXAS:

Section 1. The facts and matters set forth in the preamble of this Ordinance are hereby found to be true and correct.

Section 2. The zoning classification of 457 acres generally east of State Highway 288, North of Highway 6, generally south of Del Bello Boulevard, and West of Farm to Market Road 1128, is hereby changed from Single-Family Residential (SFR) and Planned Unit Development (PUD) is hereby changed to Planned Unit Development (PUD) District as more particularly described in Exhibit “A”.

Section 3. The City Council has reviewed the amended development plan attached hereto as Exhibit “B” (the “Development Plan”) and complies with the findings in accordance with following Section 77-29(o)(5) of the City’s Zoning Ordinance.

Section 4. Development of the Property shall strictly comply with the **Valencia PUD Document**, attached hereto as Exhibit “B” and made a part of hereof for all purposes.

Section 5. The Zoning District Map of the City of Manvel shall be revised and amended to show the designation of said land, as described and provided in Section 2

above, with the appropriate reference thereon to the number and effective date of this Ordinance and a brief description of the nature of the change.

Section 6. The City Council hereby finds and determines that said rezoning comports to the City's comprehensive land use plan, and to the extent of any conflict, amends said comprehensive land use plan. This Ordinance shall in no manner amend, change, supplement, or revise any provision of any ordinance of the City of Manvel, save and except the change in zoning classification of said tracts as described above.

Section 7. In the event any section, paragraph, subdivision, clause, phrase, provision, sentence, or part of this Ordinance or the application of the same to any person or circumstance shall for any reason be adjudged invalid or held unconstitutional by a court of competent jurisdiction, it shall not affect, impair, or invalidate this Ordinance as a whole or any part or provision hereof other any part or provision hereof other than the part declared to be invalid or unconstitutional; and the City Council of the City of Manvel, Texas, declares that it would have passed each and every part of the same notwithstanding the omission of any and every part of the same notwithstanding the omission of any such part thus declared to be invalid or unconstitutional, or whether there be one or more parts.

Section 8. Any person who shall intentionally, knowingly, recklessly or with criminal negligence violate any provision of this Ordinance shall be deemed guilty of a misdemeanor and upon conviction, shall be fined in an amount not to exceed \$2,000.00. Each day of violation shall constitute a separate offense.

PASSED AND APPROVED on first reading this _____ day of _____, 2024.

PASSED, APPROVED, AND ADOPTED on second and final reading this
_____ day of _____, 2024.

Dan Davis, Mayor

ATTEST:

Tammy Bell, City Secretary

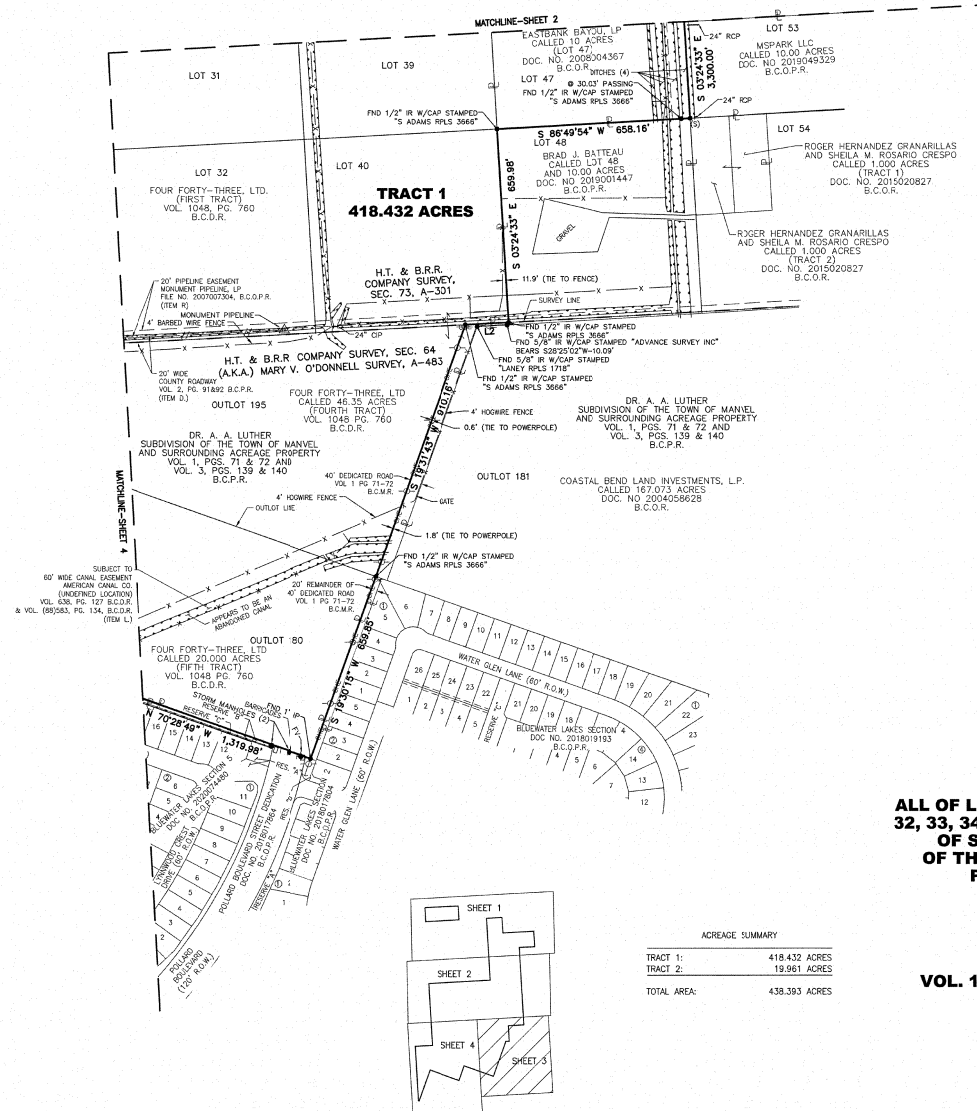
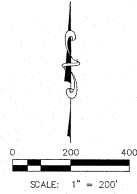
APPROVED AS TO FORM:

Robert Gervais, City Attorney

S:\Sector\Survey\Projects\LUMS001\2791\2101\CAD\SOWELL LTS.dwg 3/19/2021



VICINITY MAP
NOT TO SCALE



LINE	BEARING	DISTANCE
L1	N 70°29'23" W	33.64'
L2	S 86°43'56" W	147.25'

LEGEND	
B.C.D.R.	DEED RECORDS OF BRAZORIA COUNTY, TEXAS
E.C.O.R.	OFFICIAL RECORDS OF BRAZORIA COUNTY, TEXAS
B.C.P.R.	PLAT RECORDS OF BRAZORIA COUNTY, TEXAS
B.O.P.R.	OFFICIAL PUBLIC RECORDS OF BRAZORIA COUNTY, TEXAS
B.C.D.C.R.	DISTRICT CLERK RECORDS OF BRAZORIA COUNTY, TEXAS
DOC. NO.	DOCUMENT NUMBER
VOL./PG.	VOLUME/PAGE
R.O.W.	RIGHT-OF-WAY
P.O.B.	POINT OF BEGINNING
(S)	SET 5/8" R W/C STAMPED "LA SURIA"
IR	IRON ROD
IP	IRON PIPE
RCP	REINFORCED CONCRETE PIPE
CWP	CORRUGATED METAL PIPE
CPF	CORRUGATED PLASTIC PIPE
DR	DIST. IRON PIPE
A.K.A.	ALSO-KNOWN-AS
U.E.	UTILITY AGREEMENT
RES.	RESERVE
FND.	FOUND
CONC.	CONCRETE MONUMENT
1 ID	SAME OWNER
—	PROPERTY LINE
—	HIGHBANK OF DITCH
—	FEES (IS SPECIFIED)
—	OVERHEAD ELECTRIC
—	PIPELINE
Δ	PIPELINE MARKER
Δ	TELECOMMUNICATIONS MARKER
-O-	POWERLINE
—	GLY-WIRE
▲V	FLUSHING VALVE
▲W	WATER VALVE

**LAND TITLE SURVEY OF
438.393 ACRES
ALL OF LOTS 5, 6, 7, 8, 13, 14, 15, 16, 21, 22, 23, 24, 29, 30, 31,
32, 33, 34, 35, 36, 37, 38, 39, 40, 42, 43, 44, 45, 46, 47, AND 50
OF SECTION 73 AND LOTS 6 AND 12 OF DIVISION "O"
OF THE ALLISON RICHEY GULF COAST HOME COMPANY
PART OF SUBURBAN GARDENS SUBDIVISION,
VOL. 2, PAGE 91-92, B.C.P.R.**

**VOL. 1, PAGES 71-72 AND VOL. 3, PAGE 139-140, B.C.P.R.
ALL OF OUTLOTS 175 AND 195 AND
PART OF OUTLOTS 174 AND 180
DR. A. A. LUTHER SUBDIVISION OF MANVEL
AND SURROUNDING ACREAGE PROPERTY
VOL. 1, PAGES 71-72 AND VOL. 3, PAGE 139-140, B.C.P.R.
LOCATED IN THE**

**H.T. & B. R.R. CO. SURVEY, SEC 65, A-285,
H.T. & B. R.R. CO. SURVEY, SEC 73, A-301,
H.T. & B. R.R. CO. SURVEY, SEC 64 (A.K.A.)
MARY V. O'DONNELL SURVEY, A-483,
AND MARY V. O'DONNELL SURVEY, A-469
BRAZORIA COUNTY, TEXAS**

FEBRUARY 2021 JOB NO. LJAS001-2791-2101

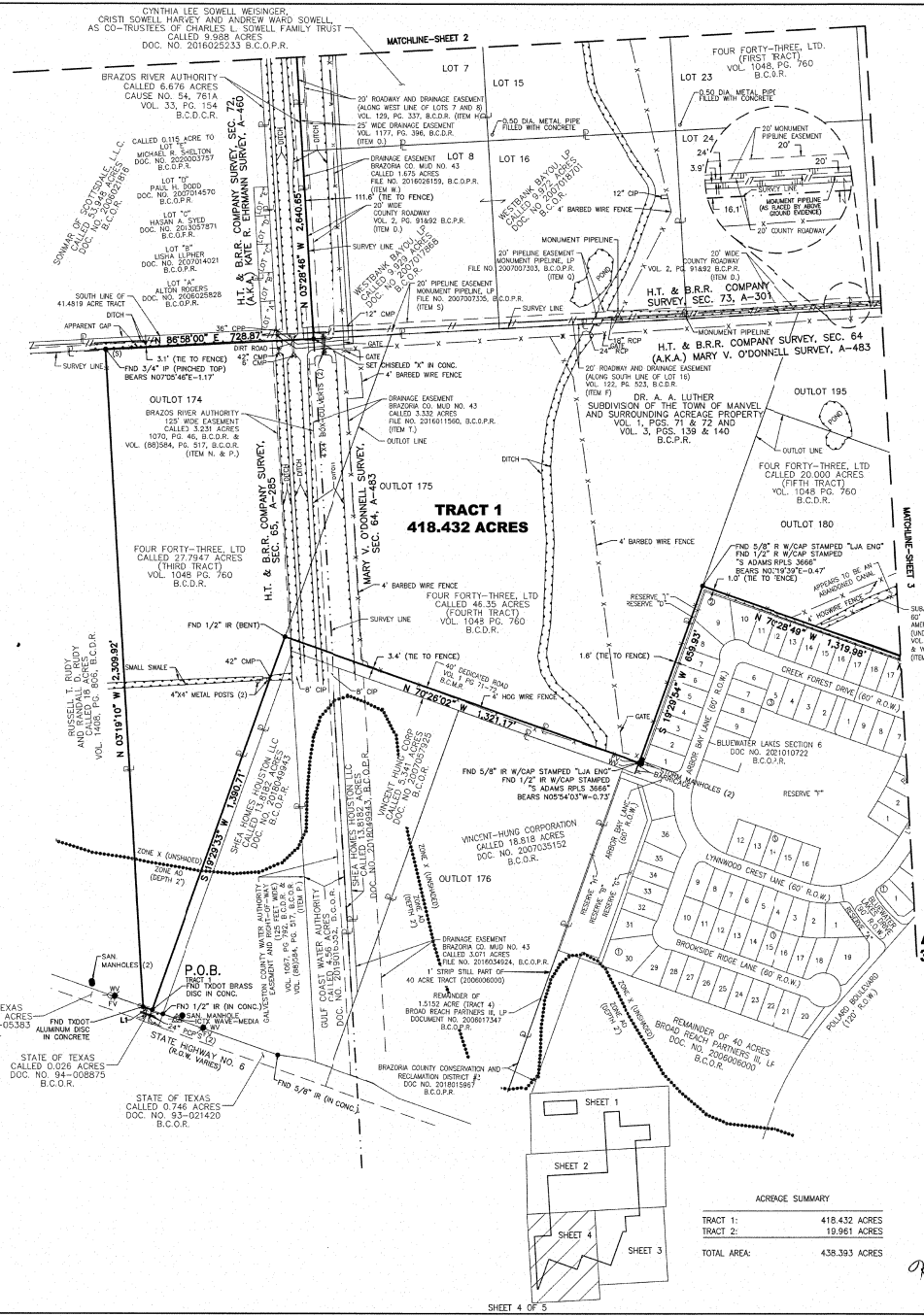
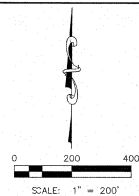
LJA Surveying, Inc. 
3600 W Sam Houston Parkway S Phone 713.953.5200
Suite 175 Fax 713.953.5026
Houston, Texas 77042 T.B.P.E.L.S. Firm No. 10194382



Exhibit C

SHEET 3 OF 5

3-19-21

[illegible]

LINE	BEARING	DISTANCE
1	N 29°29'23"	W 33.64'
12	S 80°49'50"	W 142.75'

LEGEND

B.C.D.R.	DEED RECORDS OF BRAZORIA COUNTY, TEXAS
B.C.O.R.	OFFICIAL RECORDS OF BRAZORIA COUNTY, TEXAS
B.C.F.R.	PLAT RECORDS OF BRAZORIA COUNTY, TEXAS
B.C.O.P.R.	OFFICIAL PUBLIC RECORDS OF BRAZORIA COUNTY, TEXAS
B.C.D.C.R.	DISTRICT CLERK RECORDS OF BRAZORIA COUNTY, TEXAS
DOC. NO.	DOCUMENT NUMBER
VOL./PG.	VOLUME/PAGE
R.O.W.	RIGHT-OF-WAY
P.O.B.	POINT OF BEGINNING
(S)	SET 5/8" W/1/4" STAMPED "LJ SURVEY"
IR	IRON ROD
IP	IRON PIPE
RCP	REINFORCED CONCRETE PIPE
CMR	CORRUGATED METAL PIPE
CMP	CORRUGATED PLASTIC PIPE
CIP	CAST IRON PIPE
A.K.A.	ALSO-KNOWN-AS
U.E.	UTILITY EASEMENT
RES.	RESERVE
FND.	FOUND
CONC.	CONCRETE MONUMENT
	SAME OWNER
	PROPERTY LINE
	HIGHBANK OF DITCH
	FENCE (AS SPECIFIED)
	OVERHEAD ELECTRIC
	PIPELINE
	PIPELINE MARKER
	TELECOMMUNICATIONS MARKER
	POWERPOLE
	QUI-WIPE
	FLUSHING VALVE
	WATER VALVE

**LAND TITLE SURVEY OF
438.393 ACRES
ALL OF LOTS 5, 6, 7, 8, 13, 14, 15, 16, 21, 22, 23, 24, 29, 30, 31,
32, 33, 34, 35, 36, 37, 38, 39, 40, 42, 43, 44, 45, 46, 47, AND 50
OF SECTION 73 AND LOTS 6 AND 12 OF DIVISION "O"
OF THE ALLISON RICHEY GULF COAST HOME COMPANY
PART OF SUBURBAN GARDENS SUBDIVISION,
VOL. 2, PAGE 91-92, B.C.P.R.
ALL OF OUTLOTS 175 AND 195 AND
PART OF OUTLOTS 174 AND 180
DR. A. A. LUTHER SUBDIVISION OF MANVEL
AND SURROUNDING ACREAGE PROPERTY
VOL. 1, PAGES 71-72 AND VOL. 3, PAGE 139-140, B.C.P.R.
LOCATED IN THE
H.T. & B. R.R. CO. SURVEY, SEC 65, A-285,
H.T. & B. R.R. CO. SURVEY, SEC 73, A-301,
H.T. & B. R.R. CO. SURVEY, SEC 64 (A.K.A.)
MARY V. O'DONNELL SURVEY, A-483,
AND MARY V. O'DONNELL SURVEY, A-469
BRAZORIA COUNTY, TEXAS**

LJA Surveying, Inc. 
3600 W Sam Houston Parkway S Phone 713.953.5200
Suite 175 Fax 713.953.5026
Houston, Texas 77042 T.B.P.E.L.S. Firm No. 10194382

Exhibit C

EXHIBIT "A"

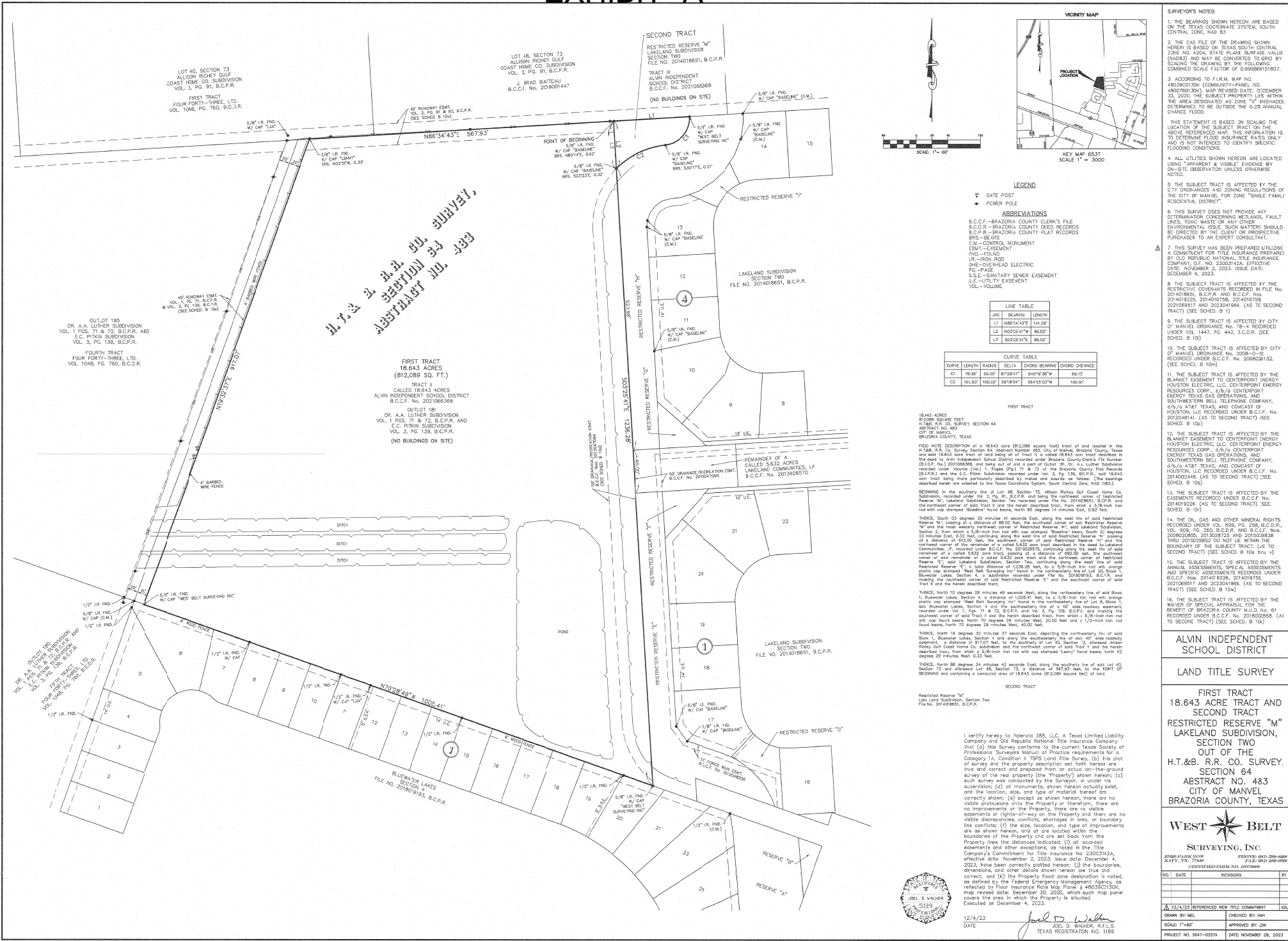


EXHIBIT "A"

NOTES:

1) ALL BEARINGS REFERENCED TO THE TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE, NAD 83, 1983 ADJ.
2) THIS SURVEY WAS PREPARED FROM INFORMATION PROVIDED BY CHICAGO TITLE OF TEXAS, LLC, AS AGENT FOR CHICAGO TITLE INSURANCE COMPANY, OF NO. CCH-COM-CIT7073337, HAVING AN EFFECTIVE DATE OF MARCH 3, 2021, AND AN ISSUED DATE MARCH 10, 2021. THE SURVEYOR DID NOT RESEARCH THE SUBJECT TRACT.

THE FOLLOWING ITEMS IN SCHEDULE B, ARE AS FOLLOWS:

10 D. ACCORDING TO THE PLAT RECORDED IN VOLUME 2, PAGE 91 AND 92 OF THE PLAT RECORDS OF BRAZORIA COUNTY, TEXAS; PUBLIC ROAD EASEMENT ALONG THE NORTH PROPERTY LINE (AS TO LOTS 5, 7, 13, 15, 19, 21, 23, 29, 31, 33, 34, 35, 37, 39, 43, 45 AND 47 AND OUTLOTS 174, 175 AND 195, OF TRACT 1);
PUBLIC ROAD EASEMENT ALONG THE SOUTH PROPERTY LINE (AS TO LOTS 6, 8, 14, 16, 22, 24, 30, 32, 34, 36, 38, 40, 42, 44, 46 AND 50, OF TRACT 1 AND TRACT 2);
PUBLIC ROAD EASEMENT ALONG THE WEST PROPERTY LINE (LOTS 5, 6, 7 AND 8, OF TRACT 1 AND LOT 6 OF TRACT 2); DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.

10 E. ROADWAY AND DRAINAGE EASEMENT(S) AND APPURTENANCES AS RESERVED IN A DOCUMENT: RESERVED BY: ALLISON-RICHEY GULF COAST HOME COMPANY
RECORDING DATE: JULY 30, 1913
RECORDING NO: VOLUME 120, PAGE 632, OF THE DEED RECORDS OF BRAZORIA COUNTY, TEXAS
AFFECTS: 20 FEET WIDE AND TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN (AS TO LOTS 5 AND 6, OF TRACT 1); DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.

10 F. ROADWAY AND DRAINAGE EASEMENT(S) AND APPURTENANCES AS RESERVED IN A DOCUMENT: RESERVED BY: ALLISON-RICHEY GULF COAST HOME COMPANY
RECORDING DATE: OCTOBER 9, 1913
RECORDING NO: VOLUME 122, PAGE 553, OF THE DEED RECORDS OF BRAZORIA COUNTY, TEXAS
AFFECTS: 20 FEET WIDE AND TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN (AS TO LOT 16, OF TRACT 1); DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.

10 G. ROADWAY AND DRAINAGE EASEMENT(S) AND APPURTENANCES AS RESERVED IN A DOCUMENT: RESERVED BY: ALLISON-RICHEY GULF COAST HOME COMPANY
RECORDING DATE: AUGUST 15, 1913
RECORDING NO: VOLUME 123, PAGE 117, OF THE DEED RECORDS OF BRAZORIA COUNTY, TEXAS
AFFECTS: 20 FEET WIDE AND TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN (AS TO LOT 42, OF TRACT 1); DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.

10 H. ROADWAY AND DRAINAGE EASEMENT(S) AND APPURTENANCES AS RESERVED IN A DOCUMENT: RESERVED BY: ALLISON-RICHEY GULF COAST HOME CORPORATION
RECORDING DATE: NOVEMBER 19, 1914
RECORDING NO: VOLUME 129, PAGE 237, OF THE DEED RECORDS OF BRAZORIA COUNTY, TEXAS
AFFECTS: 20 FEET WIDE AND TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN (AS TO LOTS 7 AND 8, OF TRACT 1); DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.

10 I. ROADWAY AND DRAINAGE EASEMENT(S) AND APPURTENANCES AS RESERVED IN A DOCUMENT: RESERVED BY: ALLISON-RICHEY GULF COAST HOME CORPORATION
RECORDING DATE: JUNE 25, 1914
RECORDING NO: VOLUME 130, PAGE 301, OF THE DEED RECORDS OF BRAZORIA COUNTY, TEXAS
AFFECTS: 20 FEET WIDE AND TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN (AS TO LOT 50, OF TRACT 1); DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.

10 J. ROAD EASEMENT(S) AND APPURTENANCES AS RESERVED IN A DOCUMENT:
RESERVED BY: ALLISON-RICHEY GULF COAST HOME COMPANY RECORDING DATE: FEBRUARY 27, 1918
RECORDING NO: VOLUME 145, PAGE 645, OF THE DEED RECORDS OF BRAZORIA COUNTY, TEXAS
AFFECTS: 20 FEET WIDE AND TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN (AS TO TRACT 2)

10 K. ROAD EASEMENT(S) AND APPURTENANCES AS RESERVED IN A DOCUMENT:
RESERVED BY: ALLISON-RICHEY GULF COAST HOME COMPANY RECORDING DATE: OCTOBER 15, 1920
RECORDING NO: VOLUME 165, PAGE 67, OF THE DEED RECORDS OF BRAZORIA COUNTY, TEXAS
AFFECTS: 20 FEET WIDE AND TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN (AS TO LOT 47, OF TRACT 1); DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.

10 L. LATERAL OR CANAL EASEMENT(S) AND APPURTENANCES AS GRANTED IN A DOCUMENT: GRANTED TO AMERICAN CANAL COMPANY
RECORDING DATE: NOVEMBER 22, 1955
RECORDING NO: VOLUME 638, PAGE 127, OF THE DEED RECORDS OF BRAZORIA COUNTY, TEXAS AND AS AFFECTED BY INSTRUMENT RECORDED IN VOLUME 680, PAGE 134, DEED RECORDS OF BRAZORIA COUNTY, TEXAS
AFFECTS: TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN (AS TO LOTS 25, 33, 34, 36, 38, 37, 45, 46 AND 47 AND OUTLOT 180 AND OUTLOT 195, OF TRACT 1 AND TRACT 2); DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.

10 M. LATERAL OR CANAL EASEMENT(S) AND APPURTENANCES AS GRANTED IN A DOCUMENT: GRANTED TO BRAZOS VALLEY RICE COMPANY
RECORDING DATE: OCTOBER 8, 1962
RECORDING NO: VOLUME 702, PAGE 667, OF THE DEED RECORDS OF BRAZORIA COUNTY, TEXAS AND INSTRUMENT RECORDED IN VOLUME 839, PAGE 578, DEED RECORDS OF BRAZORIA COUNTY, TEXAS
AFFECTS: TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN (AS TO LOT 50, OF TRACT 1); DOES AFFECT SUBJECT TRACT (LOT 50), NO DEFINED WIDTH.

10 N. DRAINAGE EASEMENT(S) AND APPURTENANCES AS GRANTED IN A DOCUMENT: GRANTED TO BRAZOS RIVER AUTHORITY
RECORDING DATE: SEPTEMBER 14, 1970
RECORDING NO: VOLUME 1070, PAGE 46, OF THE DEED RECORDS OF BRAZORIA COUNTY, TEXAS AFFECTS: TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN (AS TO OUTLOTS 174 AND 175, OF TRACT 1); DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.

10 O. ROAD AND DRAINAGE EASEMENT(S) AND APPURTENANCES AS REFERENCED IN A DOCUMENT: RECORDING DATE: SEPTEMBER 27, 1973
RECORDING NO: VOLUME 1177, PAGE 396, OF THE DEED RECORDS OF BRAZORIA COUNTY, TEXAS AFFECTS: REFERENCED IN PARAGRAPHS A AND B, TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN (AS TO LOT 7, OF TRACT 1); DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.

10 P. DRAINAGE EASEMENT(S) AND APPURTENANCES AS GRANTED IN A DOCUMENT: GRANTED TO GALVESTON COUNTY WATER AUTHORITY
RECORDING DATE: AUGUST 24, 1989
RECORDING NO: VOLUME 880, PAGE 517, DEED RECORDS OF BRAZORIA COUNTY, TEXAS AFFECTS: TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN (AS TO OUTLOT 174 AND 175, OF TRACT 1); DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.

10 Q. PIPELINE RIGHT-OF-WAY AND EASEMENT(S) AND APPURTENANCES AS GRANTED IN A DOCUMENT:
GRANTED TO: MONUMENT PIPELINE, L.P., A TEXAS LIMITED PARTNERSHIP RECORDING DATE: FEBRUARY 6, 2007
RECORDING NO: UNDER BRAZORIA COUNTY CLERK'S FILE NUMBER(S) 2007007003
AFFECTS: TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN (AS TO LOT 16, OF TRACT 1); DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.

10 R. PIPELINE RIGHT-OF-WAY AND EASEMENT(S) AND APPURTENANCES AS GRANTED IN A DOCUMENT:
GRANTED TO: MONUMENT PIPELINE, L.P., A TEXAS LIMITED PARTNERSHIP RECORDING DATE: FEBRUARY 6, 2007
RECORDING NO: UNDER BRAZORIA COUNTY CLERK'S FILE NUMBER(S) 2007007004
AFFECTS: TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN (AS TO LOTS 24, 32 AND 40, OF TRACT 1); DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.

10 S. PIPELINE RIGHT-OF-WAY AND EASEMENT(S) AND APPURTENANCES AS GRANTED IN A DOCUMENT:
GRANTED TO: MONUMENT PIPELINE, L.P., A TEXAS LIMITED PARTNERSHIP RECORDING DATE: FEBRUARY 6, 2007
RECORDING NO: UNDER BRAZORIA COUNTY CLERK'S FILE NUMBER(S) 2007007005
AFFECTS: TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN (AS TO LOT 8, OF TRACT 1); DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.

10 T. DRAINAGE EASEMENT(S) AND APPURTENANCES AS GRANTED IN A DOCUMENT:
GRANTED TO: BRAZORIA COUNTY MUNICIPAL UTILITY DISTRICT NO. 43 RECORDING DATE: MARCH 15, 2016
RECORDING NO: UNDER BRAZORIA COUNTY CLERK'S FILE NUMBER(S) 2016011560
AFFECTS: TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN (AS TO OUTLOTS 174 AND 175, OF TRACT 1); DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.

10 U. DRAINAGE EASEMENT(S) AND APPURTENANCES AS GRANTED IN A DOCUMENT:
GRANTED TO: BRAZORIA COUNTY MUNICIPAL UTILITY DISTRICT NO. 43 RECORDING DATE: JUNE 1, 2016
RECORDING NO: UNDER BRAZORIA COUNTY CLERK'S FILE NUMBER(S) 2016025269
AFFECTS: TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN (AS TO LOT 7, OF TRACT 1); DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.

10 V. DRAINAGE EASEMENT(S) AND APPURTENANCES AS GRANTED IN A DOCUMENT:
GRANTED TO: BRAZORIA COUNTY MUNICIPAL UTILITY DISTRICT NO. 43 RECORDING DATE: JUNE 6, 2016
RECORDING NO: UNDER BRAZORIA COUNTY CLERK'S FILE NUMBER(S) 2016026156
AFFECTS: TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN (AS TO LOTS 5 AND 6, OF TRACT 1); DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.
JUDGEMENT RECORDED UNDER BRAZORIA COUNTY CLERK'S FILE NO(S): 201605622-IS NOT RELATED TO SAID BOUND NO. 43 EASEMENT

10 W. DRAINAGE EASEMENT(S) AND APPURTENANCES AS GRANTED IN A DOCUMENT:
GRANTED TO: BRAZORIA COUNTY MUNICIPAL UTILITY DISTRICT NO. 43 RECORDING DATE: JUNE 6, 2016
RECORDING NO: UNDER BRAZORIA COUNTY CLERK'S FILE NUMBER(S) 2016026159
AFFECTS: TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN (AS TO LOT 8, OF TRACT 1); DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.

10 X. PIPELINE RIGHT-OF-WAY AND EASEMENT(S) AND APPURTENANCES AS GRANTED IN AN AGREED FINAL JUDGMENT: GRANTED TO: ENTERPRISE GRADE PIPELINE COMPANY LLC
RECORDING DATE: OCTOBER 19, 2016
RECORDING NO: UNDER BRAZORIA COUNTY CLERK'S FILE NUMBER(S) 2016051554 AND INSTRUMENT RECORDED UNDER BRAZORIA COUNTY CLERK'S FILE NO(S): 2016050622
AFFECTS: TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN (AS TO LOTS 5, 13, 21, 29, 37 AND 45, OF TRACT 1); DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.

10 Y. PERMANENT EASEMENT AGREEMENT AS EVIDENCED BY MEMORANDUM OF PERMANENT EASEMENT AGREEMENT EXECUTED BY: WESTBANK SAVILL, L.P., A TEXAS LIMITED PARTNERSHIP
RECORDING DATE: SEPTEMBER 28, 2019
RECORDING NO: UNDER BRAZORIA COUNTY CLERK'S FILE NO(S): 2019046366 (AS TO TRACT 1); DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.

10 Z. PERMANENT EASEMENT AGREEMENT AS EVIDENCED BY MEMORANDUM OF PERMANENT EASEMENT AGREEMENT EXECUTED BY FOUR PARTNERSHIP, LTD., A TEXAS LIMITED PARTNERSHIP
RECORDING DATE: SEPTEMBER 28, 2019
RECORDING NO: UNDER BRAZORIA COUNTY CLERK'S FILE NO(S): 2019047623 (AS TO TRACT 1); DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.

3) IN ACCORDANCE WITH THE FEDERAL EMERGENCY MANAGEMENT AGENCY, FLOOD INSURANCE RATE MAPS, MAP NO. 48039C030K AND MAP NO. 48039C030K, WITH A REVISED DATE OF DECEMBER 30, 2020, BY GRAPHICAL PLOTTING, THE SUBJECT TRACT LIES WITHIN ZONE "A0" (DEPTH 25) AND ZONE "X" (UNSHADED). ZONE "X" (UNSHADED) IS DEFINED AS AREAS DETERMINED TO BE OUTSIDE 0.2% ANNUAL CHANCE FLOODPLAIN. ZONE "A0" IS DEFINED AS A SPECIAL FLOOD HAZARD AREA WITH FLOOD DEPTHS OF 1 TO 3 FEET (EQUALITY SHEET FLOW OR SLOWING TORRANT). AVERAGE DEPTHS DETERMINED FOR AREAS OF ALLUVIAL FAN FLOODING. VELOCITIES ALSO DETERMINED. THE SPECIAL FLOOD HAZARD AREA IS THE AREA SUBJECT TO FLOODING BY THE 1% ANNUAL CHANCE FLOOD. "LHA DOES NOT WARRANT NOR SUBSCRIBE TO THE ACCURACY OR SCALE OF SAID MAPS."

4) MINERAL INTERESTS WERE NOT INVESTIGATED AS A PART OF THIS SURVEY.

5) THIS SURVEY DOES NOT DETERMINE THE LOCATION OF WETLANDS, FAULT LINES, OR OTHER ENVIRONMENTAL ISSUES SHOULD THEY EXIST.

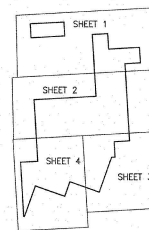
6) THERE IS NO VISIBLE EVIDENCE OF BURIAL GROUNDS OR MAJOR EARTH WORK AT THE TIME OF THE SURVEY.

7) THIS SURVEY IS ISSUED IN CONJUNCTION WITH THE METES AND BOUNDS DESCRIPTION BY LJA SURVEYING, INC. OF THE SAME CERTIFICATION DATE SHOWN HEREON, HEREBY REFERENCED AS PART 2 OF 2. THIS SURVEY IS PART 1 OF 2.

**LAND TITLE SURVEY OF
438.393 ACRES
ALL OF LOTS 5, 6, 7, 8, 13, 14, 15, 16, 21, 22, 23, 24, 29, 30, 31,
32, 33, 34, 35, 36, 37, 38, 39, 40, 42, 43, 44, 45, 46, 47, AND 50
OF SECTION 73 AND LOTS 6 AND 12 OF DIVISION "O"
OF THE ALLISON RICHEY GULF COAST HOME COMPANY
PART OF SUBURBAN GARDENS SUBDIVISION,
VOL. 2, PAGE 91-92, B.C.P.R.
ALL OF OUTLOTS 175 AND 195 AND
PART OF OUTLOTS 174 AND 180
DR. A. LUTHER SUBDIVISION OF MANVEL
AND SURROUNDING ACREAGE PROPERTY
VOL. 1, PAGES 71-72 AND VOL. 3, PAGE 139-140, B.C.P.R.
LOCATED IN THE
H.T. & B. RR CO. SURVEY, SEC 65, A-285,
H.T. & B. RR CO. SURVEY, SEC 73, A-301,
H.T. & B. RR CO. SURVEY, SEC 64 (A.K.A.)
MARY V. O'DONNELL SURVEY, A-483,
AND MARY V. O'DONNELL SURVEY, A-469
BRAZORIA COUNTY, TEXAS**

FEBRUARY 2021 JOB NO. LJA5001-2791-2101

LJA Surveying, Inc.
3600 W Sam Houston Parkway S Phone 713.953.5200
Suite 175 Fax 713.953.5026
Houston, Texas 77042 T.B.P.E.L.S. Firm No. 10194382



ACREAGE SUMMARY	
TRACT 1:	418.432 ACRES
TRACT 2:	19.961 ACRES
TOTAL AREA:	438.393 ACRES

Exh b t

**METES AND BOUNDS DESCRIPTION
OF
TRACT 1**

EXHIBIT "A"

A 418.318 acre (18,221,949 square feet) tract, being all of Lots 5, 6, 7, 8, 13, 14, 15, 16, 21, 22, 23, 24, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 42, 43, 44, 45, 46, 47 and 50 of the Allison-Richey Gulf Coast Home Company Suburban Gardens Subdivision of Section 73, H.T. & B. Railroad Company Survey, Abstract 301, according to the map or plat thereof, recorded in Volume 2, Page 91 and 92, of the Plat Records of Brazoria County, Texas (B.C.P.R.) and being all of those certain tracts conveyed to Westbank Bayou, LP, called 19.919 acres (Lots 5'6), recorded in Brazoria County Clerk's File Number (B.C.C.F. No.) 2007021508, called 9.929 acres (Lot 8), recorded in B.C.C.F. No. 2007017868 and called 9.972 acres (Lot 16), recorded in B.C.C.F. No. 2007018701 and being all of that certain tract conveyed to Charles L. Sowell called 9.988 acres (Lot 7), recorded in Volume 1177, Page 396, deed records of Brazoria County, Texas (B.C.D.R.), and being all of those certain tracts conveyed to Eastbank Bayou, LP, called 10 acres (Lot 33), recorded in B.C.C.F. No. 2007022032, called 19.944 acres (Lots 42-43), recorded in B.C.C.F. No. 2008004369 and called 10 acres (Lot 47), recorded in B.C.C.F. No. 2006004367 and being all of that certain tract conveyed to Four Forty-Three Annex No. 1, LTD., called 10.00 acres (Lot 50), recorded in B.C.C.F. No. 2006045403 and being a part of that certain tract conveyed to Four Forty-Three Ltd. (called 433.09 acres), recorded in Volume 1048, Page 760, B.C.D.R., with said 18,221,949 square foot tract of land being more particularly described by metes and bounds as follows:

COMMENCING at a 1/2 inch iron rod found at the Northeast corner of said Section 73 and an interior corner of the H.T. & B. Railroad Company Survey, Section 74, Abstract 493, recorded in Volume 2, Page 66, B.C.P.R.) and being at the centerline intersection of 60 foot Pollard Drive (as occupied) (Platted as 40 feet - Volume 2, Page 91 and 92, B.C.P.R.) and 60 foot Del Bello Boulevard (as occupied) (Platted as 50 feet - Volume 2, Page 66, B.C.P.R.), marking the northeast corner of the Michael D. Roland and Marcy D. Roland tract (called 5.46 acres), recorded in B.C.C.F. No. 2004072423 and 2007030104, the northwest corner of the Michael C. Black tract (called 4.00 acres), recorded in B.C.C.F. No. 96-015514 and the Northeast corner of said Section 73;

THENCE S86°50'29" W, along and with the common line of Section 73 and 74 and centerline of said 40 foot platted road, at 658.00 feet pass a point marking the southwest corner of Lot 1 of said Section 74 and the southeast corner of the Mary V O'Donnell Survey, Division "O", Abstract 469, recorded in Volume 2, Page 91 and 92, B.C.P.R., from which a 5/8 inch iron rod bears, S 38°48'33" W, 3.08 feet, continuing along and with the common line of Section 73 and Division "O" and centerline of said 40 foot platted road, a total distance of 1974.26 feet (called 1980.00 feet) to a 5/8 inch iron rod with cap stamped "FMS" set in the north line of Section 73, the north line of a 60 foot American Canal Company Easement, recorded in Volume 638, Page 127, B.C.D.R., the south line of said Division "O", Abstract 469, the south line of the Sylvia Buffy Orndorff and Dustin Aaron Different tract (called 13.93 acres), recorded in B.C.C.F. No. 2015054435, and the centerline of said 40' platted road, marking the northwest corner of the Katherine Ott Miles tract (called 5 acres), recorded in Volume 1459, Page 1, B.C.D.R., the northeast corner of said Eastbank Bayou, LP tract (Lot 33), and being the common corner of Lot 33 and 41 of said Section 73 at the most northerly Northwest corner and POINT OF BEGINNING of herein described tract:

THENCE S03°24'40" E, along and with the common line of said Lot 33 and 41, a distance of 660.58 feet (called 660.00 feet) to a 1/2 inch iron rod with cap stamped "Adams RPLS 3666" found, marking the southeast corner of said Eastbank Bayou, LP tract (Lot 33), the southwest corner of said Miles tract, the northwest corner of said Eastbank Bayou, LP tract (called 19.944 acres), an interior corner of herein described tract and being the common corner of Lots 33, 41, 42 and 34 of said Section 73;

THENCE N86°49'54" E, along and with the common line of Lots 41, 42, 49 and 50 of said Section 73, a distance of 1314.38 feet (called 1320.00 feet) to a 5/8 inch iron rod with cap stamped "FMS" set, marking the southeast corner of the Jane Hetherington Brown and Norman Paul Brown tract (called 5 acres), recorded in B.C.C.F. No. 2014042893, the southwest corner of the Suzanne Renae Scopel tract (called 5 acres), recorded in B.C.C.F. No. 2005013089, the northwest corner of the Jeffery Wayne Scopel tract (called 1.157 acres), recorded in B.C.C.F. No. 2005013109, the northeast corner of said Four Forty-Three Annex No. 1, LTD. Tract (called 10.00 acres) and the most easterly northeast corner of herein described tract and being the common corner of Lots 49, 55, 56 and 50 of said Section 73;

THENCE S03°25'11" E, along and with the common line of Lots 50 and 56 and east line of said Four Forty-Three Annex No. 1, LTD. tract, a distance of 660.67 feet (called 660.00 feet) to a 5/8 inch iron rod with cap stamped "FMS" set, marking the southwest corner of the Douglas Varner Tract (called 1.157 acres), recorded in Volume [91] 906, Page 253, of the official records of Brazoria County, Texas (B.C.O.R.), the northwest corner of the Laura Loterbauer tract (called Minor Plat of 2.50 acres), recorded in B.C.C.F. No. 2018006317, the northeast corner of the Louis Lira tract (called 20 acres), recorded in Volume 1694, Page 653, B.C.D.R. and an angle point for corner of herein described tract and being the common corner of Lots 50, 56, 57 and 51 of said Section 73;

THENCE S86°50'32" W, along and with the common line of Lots 50 and 51, same being the common line of said Four Forty-Three Annex No. 1, LTD. Tract and said Lira tract, a distance of 657.24 feet (called 660.00 feet), to a 5/8 inch iron rod with cap stamped "FMS" set, in the east line of said Eastbank Bayou, LP tract (called 19.944 acres), marking the southwest corner of said Four Forty-Three Annex No. 1, LTD. tract, the northwest corner of said Lira tract, an interior corner of herein described tract and being the common corner of Lots 50, 51, 43 and 42 of said Section 73;

THENCE S03°24'55" E, along and with the common line of Lots 43, 51, 44, 52, 45, 46 and 61 at 1320.21 feet (called 1320.00 feet) pass a point in the centerline of a 40 foot platted road, recorded in Volume 2, page 91 and 92, B.C.P.R. marking the northwest corner of the Coastal Bend Land Investments, LP tract (called 40.0060 acres) (called Lot 61), recorded in B.C.C.F. No. 2006049617 and being the common corner of Lots 44, 52, 61 and 45, continuing for a total distance of 3299.48 feet (called 3300.00 feet) to a 5/8 inch iron rod with cap stamped "FMS" set, marking the southwest corner of the Jose T. Villanueva and Trinidad Villanueva tract (called 5 acres), recorded in B.C.C.F. No. 2004036528, the northwest corner of the Roger Hernandez Gandarillas and Sheila M. Rosario Crespo tract (called 1.000 acre), recorded in B.C.C.F. No. 2015020827, the northeast corner of said Aspect Energy, LLC tract (called 10 acres), the southeast corner of the said Eastbank Bayou, LP tract (called 10 acres) (Lot 47), the most easterly southeast corner of herein described tract and being the common corner of Lots 53, 54, 48 and 47 of said Section 73;

THENCE S86°49'54" W, along and with the common line of Lots 48 and 47, same being the common line of said Eastbank Bayou, LP tract (Lot 47) and said Aspect Energy, LLC tract, a distance of 657.49 feet (called 660.00 feet) to a 1/2 iron rod with cap stamped "Adams RPLS 3666" found in the east line of the said 443.09 acre tract, marking the southwest corner of said Eastbank Bayou, LP tract and the northwest corner of said Aspect Energy, LLC tract, and interior corner of herein described tract and being the common corner of Lots 48, 40, 39 and 47 of said Section 73;

THENCE S03°24'40" E, along and with the common line of Lots 48 and 40, same being the common line of said Aspect Energy, LLC tract and said 443.09 acre tract, a distance of 660.05 feet (called 660.00 feet) to a 5/8 inch iron rod with cap stamped "FMS" set in the centerline of a 40 foot platted road, recorded in Volume 2, Page 91 and 92, B.C.P.R., in the called south line of Section 73 and the north line of the H.T. & B. Railroad Company Survey, Section 64, Abstract 483 and the north line of the Dr. A.A. Luther Subdivision of Manvel, recorded in Volume 1, Page 71 and 72 and Volume 3, Page 139 and 140, B.C.P.R. and the north line of Outlot 181 of said Dr. A.A. Luther Subdivision, marking the northwest corner of the Coastal Bend Land Investments, LP tract (remainder of a called 167.073 acre tract), recorded in B.C.C.F. No. 2004058628, the southwest corner of said Aspect Energy, LLC tract, an angle point in the east line of said 443.09 acre tract and an angle point for corner of herein described tract and being the common corner of Lots 48 and 40 of said Section 73, from which a 5/8 inch iron rod with cap stamped "Base Line" found marking the southeast corner of said Section 73 bears, S 86°50'11" W, 1975.03 feet;

THENCE S86°50'11" W, continuing along and with the common line of said Section 73, Section 64 and the Dr. A.A. Luther Subdivision, same being the common line of said Outlot 181 and Lot 40, and centerline of said 40 foot platted road, a distance of 147.66 feet to a 5/8 inch iron rod with cap stamped "FMS" set in said common line, marking the northeast corner of the Four Forty-Three, LTD. Tract (called 24.00 acres) (Outlot 195), recorded in Volume 1048, Page 760, B.C.D.R. and an interior corner of herein described tract and being the westerly line of a 40 foot platted road, recorded in Volume 1, Page 71 and 72 and Volume 3, Page 139 and 140, B.C.P.R.;

THENCE S19°30'25" W, along and with the easterly line of said Outlot 195 and the westerly line of said 40 foot platted road, at 909.98 feet pass a 1/2 inch iron rod found, marking the southeasterly corner of said Outlot 195 and the northeasterly corner of the Four Forty-Three, LTD. Tract (called 20.00 acres) (North 1/2 of Outlot 180), continuing for a total distance of 1569.69 feet to a 1 inch iron pipe found, marking the southeasterly corner of said 20.00 acre tract, the northeasterly corner of the Beazer Homes Texas, LP tract (called 19.99 acres) (south 1/2 Outlot 180), recorded in B.C.C.F. No. 2016050422 and an angle point in the westerly line of the Beazer Homes Texas, LP tract (called 5.40 acres), recorded in B.C.C.F. No. 2016050422 and the most easterly southeast corner of herein described tract;

THENCE N 70°27'42" W, along and with the common line of said North 1/2 of Outlot 180 and the South 1/2 of Outlot 180, a distance of 1319.95 feet (called 1320.00 feet) to a 1/2 inch iron rod with cap stamped "Adams RPLS 3666" found, in the easterly line of the Four Forty-Three, LTD. Tract (called 46.35 acres) (Outlot 175), marking the common corner of the South 1/2 and North 1/2 of Outlot 180 and an interior corner of herein described tract;

THENCE S19°29'54" W, along and with the common line of said 46.35 acre tract and said 19.99 acre tract, same being the common line of Outlot 180 and 175, a distance of 660.47 feet to a 1/2 inch iron rod with cap stamped "LJA Eng" found, in the north line of a 40 foot platted road, recorded in Volume 1, Page 71 and 72 and Volume 3, Page 139 and 140, B.C.P.R., marking the most westerly northwest corner of said 5.40 acre tract, the southeasterly corner of said 46.35 acre tract and the southwesterly corner of said 19.99 acre tract and an interior corner of herein described tract;

THENCE N 70°26'20" W, along and with the south line of 46.35 acre tract and the north line of said 40 foot platted road, a distance of 1321.08 feet to a 1/2 inch iron rod with cap stamped "Adams RPLS 3666" found, in the easterly line of the Four Forty-Three, LTD. Tract (called 27.7947 acres) (Outlot 174) and the westerly line of said 40 foot platted road, marking the southwesterly corner of said 46.35 acre tract and an interior corner of herein described tract;

THENCE S19°28'54" W, along and with the common line of said 27.7947 acre tract and westerly line of said 40 foot platted road, a distance of 1390.63 feet to a TxDot Brass Disk found in the northwesterly right-of-way (r.o.w.) line of State Highway No. 6 (a.k.a. Morris Avenue) (200' R.O.W.), recorded in B.C.C.F. No. 2013053500, marking the southeasterly corner of said 27.7947 acre tract and the most southerly southeast corner of herein described tract;

THENCE N 70°30'10" W, along the northwesterly r.o.w. line of said State Highway No. 6, a distance of 33.83 feet to a TxDot Brass Disk found, marking the southeasterly corner of the Russell T. Rudy and Randall D. Rudy tract (called 18 acres), recorded in Volume 1408, Page 806, B.C.D.R., the southwesterly corner of said 27.7947 acre tract and the most southerly southwest corner of herein described tract, from which a TxDot Brass Disk found, at the intersection of easterly r.o.w. line of County Road 82 (a.k.a. Iowa Lane) (60' R.O.W. as occupied), recorded in B.C.C.F. No. 2006021816 and the northwesterly r.o.w. line of said State Highway No. 6, marking the southwesterly corner of a 0.217 acre tract, recorded in B.C.C.F. No. 2013053500 bears, N 70°30'10" W, 365.23 feet;

THENCE N 03°19'19" W, along and with the common line of said 27.7947 acre tract and said 18 acre tract, a distance of 2310.10 feet to a 1/2 inch iron rod with cap stamped "Adams RPLS 3666" found, marking the northwest corner of said 27.7947 acre tract and an angle point for corner of herein described tract, from which a 3/4 inch pinched top pipe bears, N 09°17' W, 1.1 feet and from which an iron rod with cap stamped "Kalkomey" found in the easterly r.o.w. line of said County Road 82, marking the northwest corner of said 18 acre tract, bears S 87°00'54" W, 328.14 feet and a 5/8 inch iron rod found in the easterly r.o.w. line of said County Road 82, marking the southwest corner of a called 41.4819 acre tract, recorded in B.C.C.F. No. 2003061748 bears, N 02°13'14" W, 38.07 feet;

THENCE N86°57'38" E, along and with the north line of said 18 acre tract, a distance of 729.52 feet to a 5/8 inch iron rod with cap stamped "FMS" set, at the southwest corner of Section 73 and being in the centerline intersection of two 40 foot platted roads and being the common corner of said Section 73 and the H.T. & B. Railroad Company Survey, Section 72, Abstract 460, marking the southeast corner of the Brazos River Authority tract (called 6.676 acres) (cause no. 54,761A), recorded in Volume 33, Page 154, district clerk records of Brazoria County, Texas (B.C.D.C.R.), the southwest corner of the Brazoria County MUD No. 43 Drainage Easement (called 1.675 acres, recorded in B.C.C.F. No. 2016026159, the southwest corner of said 9.929 acre tract and an interior corner of herein described tract;

THENCE N 03°28'57" W, along and with the common line of said Section 73 and Section 72 and centerline of said 40 foot platted road, at 40.00 feet pass a point marking the southwest corner of a 0.34 acre tract (Parcel 1) out of said called 41.4819 acre tract, continuing for a total distance of 2640.38 feet (called 2640.00 feet) to a 1 inch iron pipe found, marking the northwest corner of a 0.25 acre tract (Parcel 2), the northwest corner of said 19.919 acre tract, the northwest corner of a 3.430 acre drainage easement, recorded in B.C.C.F. No. 2016026156, the northeast corner of said Brazos River Authority tract (called 6.676 acres), the southeast corner of the Brazos River Authority Parcel "D" tract (called 3.18 acres), recorded in Volume 1070, Page 315, B.C.D.R., the southwest corner of the Brazos River Authority Parcel "B" tract (called 0.61 acres), recorded in Volume 1070, Page 318, B.C.D.R., the southwest corner of the Brazoria County Municipal Utility District (M.U.D.) No. 43 Drainage Easement tract (called 1.739 acres), recorded in B.C.C.F. No. 2016011559 and the common corner of Lots 4 and 5, Section 73, from which a 1/2 inch iron rod found in the east r.o.w. line of County Road 82 (a.k.a. Iowa Lane) (60' R.O.W. as occupied), recorded in B.C.C.F. No. 2006021816, marking the southwest corner of the Joan Banneyer tract (called 1.367 acres), recorded in B.C.C.F. No. 2005003981 and the northwest corner of the Sonmar of Scottsdale, LLC tract (called 53.948 acres), bears S 86°37'46" W, 900.42 feet;

THENCE N 86°51'03" E, along and with the common line of herein described tract and said Lot 4 and the centerline of a 40 foot platted road, at 657.75 feet (called 660.00 feet) pass a 3/4 inch iron pipe found, marking the northeast corner of said 19.919 acre tract and the southwest corner of the 102929 Brazoria Inc. tract (called 34.90 acres), recorded in B.C.C.F. No. 2005033429 and being the common corner of Lots 4, 12, 13 and 5, and at 1973.99 feet (called 1980.00 feet) pass a 1/4 inch iron pipe found, marking the southeast corner of said 34.90 acre tract and being the common corner of Lots 20, 28, 29 and 21, continuing for a total distance of 2632.44 feet (called 2640.00 feet) to a 5/8 inch iron rod with cap stamped "FMS" found in the west line of a 60 foot American Canal Company Easement, recorded in Volume 638, Page 127, B.C.D.R., marking an interior corner of said remainder of a 433.09 acre tract and an interior corner of herein described tract and being the common corner of Lots 28, 36, 37 and 29 of said Section 73;

THENCE N 03°27'06" W, along and with the common line of Lots 28, 36, 27, 35, 26, 34, 25 and 33 and the west line of said 60 foot American Canal Company Easement, a distance of 2641.03 feet (called 2640.00 feet) to a 5/8 inch iron rod with cap stamped "FMS" found in the north line of Section 73, the north line of a said 60 foot American Canal Company Easement, the south line of the Mary V O'Donnell Survey, Division "O", Abstract 469, recorded in Volume 2, Page 91 and 92, B.C.P.R. the south line of the John and Edith Lebourg tract (called 6.978 acres), recorded in B.C.C.F. No. 98-053061, the north line of the Eastbank Bayou, LP tract (called 19.950 acres), recorded in B.C.C.F. No. 2007022032 and the centerline of said 40 foot platted road, marking the most northerly northwest corner of herein described tract and being the common corner of Lot 25 and 33 of said Section 73, from which a 1/2 inch iron rod found bears, S 82°35" E, 14.3 feet;

THENCE N 86°50'29" E, along and with the common line of Section 73, Division "O", the centerline of said 40 foot platted road and the north line of said 60 foot American Canal Company Easement, a distance of 659.60' (called 660.00 feet) to the POINT OF BEGINNING and containing a calculated area of 418.318 acres of land.

EXHIBIT "A"

FIRST TRACT

18.643 ACRES
812,089 SQUARE FEET
H.T.&B. R.R. CO. SURVEY, SECTION 64
ABSTRACT NO. 483
CITY OF MANVEL
BRAZORIA COUNTY, TEXAS

FIELD NOTE DESCRIPTION of a 18.643 acre (812,089 square foot) tract of land located in the H.T.&B. R.R. Co. Survey, Section 64, Abstract Number 483, City of Manvel, Brazoria County, Texas and said 18.643 acre tract of land being all of Tract II, a called 18.643 acre tract described in the deed to Alvin Independent School District recorded under Brazoria County Clerk's File Number (B.C.C.F. No.) 2021066368, and being out of and a part of Outlot 181, Dr. A.A. Luther Subdivision recorded under Volume (Vol.) 1, Pages (Pg.) 71 & 72 of the Brazoria County Plat Records (B.C.P.R.) and the E.C. Pitkin Subdivision recorded under Vol. 3, Pg. 139, B.C.P.R., said 18.643 acre tract being more particularly described by metes and bounds as follows: (The bearings described herein are oriented to the Texas Coordinate System, South Central Zone, NAD 1983.)

BEGINNING in the southerly line of Lot 48, Section 73, Allison Richey Gulf Coast Home Co. Subdivision, recorded under Vol. 2, Pg. 91, B.C.P.R. and being the northwest corner of Restricted Reserve "M", Lakeland Subdivision, Section Two recorded under File No. 2014018651, B.C.P.R. and the northeast corner of said Tract II and the herein described tract, from which a 5/8-inch iron rod with cap stamped "Baseline" found bears, North 85 degrees 14 minutes East, 0.62 feet;

THENCE, South 03 degrees 25 minutes 41 seconds East, along the west line of said Restricted Reserve "M", passing at a distance of 88.02 feet, the southwest corner of said Restricted Reserve "M" and the most westerly northwest corner of Restricted Reserve "H", said Lakeland Subdivision, Section 2, from which a 5/8-inch iron rod with cap stamped "Baseline" bears, South 23 degrees 23 minutes East, 0.32 feet, continuing along the west line of said Restricted Reserve "H", passing at a distance of 612.00 feet, the southwest corner of said Restricted Reserve "H" and the northwest corner of the remainder of a called 5.632 acre tract described in the deed to Lakeland Communities, LP, recorded under B.C.C.F. No. 2013029570, continuing along the west line of said remainder of a called 5.632 acre tract, passing at a distance of 692.00 feet, the southwest corner of said remainder of a called 5.632 acre tract and the northwest corner of Restricted Reserve "E", said Lakeland Subdivision, Section Two, continuing along the west line of said Restricted Reserve "E", a total distance of 1,236.28 feet, to a 5/8-inch iron rod with orange plastic cap stamped "West Belt Surveying Inc" found in the northeasterly line of Lot 20, Block 1, Bluewater Lakes, Section 4, a subdivision recorded under File No. 2018019193, B.C.P.R. and marking the southwest corner of said Restricted Reserve "E" and the southeast corner of said Tract II and the herein described tract;

THENCE, North 70 degrees 28 minutes 49 seconds West, along the northeasterly line of said Block 1, Bluewater Lakes, Section 4, a distance of 1,005.41 feet, to a 5/8-inch iron rod with orange plastic cap stamped "West Belt Surveying Inc" found in the northeasterly line of Lot 6, Block 1, said Bluewater Lakes, Section 4 and the southeasterly line of a 40' wide roadway easement, recorded under Vol. 1, Pgs. 71 & 72, B.C.P.R. and Vol. 3, Pg. 139, B.C.P.R. and marking the southwest corner of said Tract II and the herein described tract, from which a 5/8-inch iron rod with cap found bears, North 70 degrees 29 minutes West, 20.00 feet and a 1/2-inch iron rod found bears, North 70 degrees 29 minutes West, 40.00 feet;

EXHIBIT "A"

THENCE, North 19 degrees 32 minutes 37 seconds East, departing the northeasterly line of said Block 1, Bluewater Lakes, Section 4 and along the southeasterly line of said 40' wide roadway easement, a distance of 917.07 feet, to the southerly of Lot 40, Section 73, aforesaid Allison Richey Gulf Coast Home Co. subdivision and the northwest corner of said Tract II and the herein described tract, from which a 5/8-inch iron rod with cap stamped "Leany" found bears, North 02 degrees 29 minutes West, 0.33 feet;

THENCE, North 86 degrees 34 minutes 43 seconds East, along the southerly line of said Lot 40, Section 73 and aforesaid Lot 48, Section 73, a distance of 567.93 feet, to the POINT OF BEGINNING and containing a computed area of 18.643 acres (812,089 square feet) of land as depicted on the Land Title Survey dated: November 28, 2023, revised: December 4, 2023, prepared by West Belt Surveying, Inc., Project No. S647-0337A.

West Belt Surveying, Inc.
Certified Firm No. 10073800
21020 Park Row
Katy, Texas 77449
(281) 599-8288



Joel D. Walker
Joel D. Walker Date: 12/4/23
Texas Registration No. 5189

Exhibit "B"

Valencia Planned Unit Development

Prepared for:

Hillwood Residential, L.P.

Prepared by:



**PLANNING &
LANDSCAPE
ARCHITECTURE**

February 2024

I. INTRODUCTION.....	Page 3
II. PROJECT DESCRIPTION	Page 3
1. Land Use / Regulatory Compliance	Page 3
2. Justification	Page 3
3. Single-Family Residential	Page 4
4. Drill Site.....	Page 4
5. Potential School Site	Page 4
6. Parks and Open Space	Page 5
7. Other Land Uses	Page 5
III. ZONING	Page 6
1. Acreage per Land Use Summary	Page 7
2. Single-Family Residential Lot Distribution Table.....	Page 7
3. Commercial Land Uses	Page 8
IV. PARKS	Page 9
V. DEVELOPMENT REGULATIONS	Page 10
1. Architectural Regulations.....	Page 10
2. Street and Circulation System	Page 10
3. Traditional Single-Family	Page 11
4. Single-Family Specialty Product	Page 11
5. Streets.....	Page 13
6. Commercial	Page 14
7. Signage	Page 15
8. Trails	Page 18
9. Utilities	Page 18
10. Other Regulations	Page 19
VI. PHASING / DEVELOPMENT SCHEDULE	Page 19

EXHIBITS

Exhibit A - Area Location Exhibit
 Exhibit B – Project Aerial Exhibit
 Exhibit C – Survey
 Exhibit D - Legal Description
 Exhibit E - Conceptual Land Use Exhibit
 Exhibit F – Conceptual Single-Family Residential Exhibit
 Exhibit G - Conceptual Roadway Exhibit
 Exhibit H - Conceptual Amenities and Open Space Exhibit
 Exhibit I - Phasing Exhibit
 Exhibit J – Conceptual Project Signage Exhibit
 Exhibit K – Conceptual Signage Location Exhibit
 Exhibit L – Single-Family Residential Specialty Product
 Exhibit M – Single-Family Residential Specialty Product
 Exhibit N – Single-Family Residential Specialty Product

I. INTRODUCTION

This application was prepared on behalf of Hillwood Residential, L.P. pursuant to the City of Manvel's zoning ordinance Sec. 77-29 Planned Unit Development District (PUD) district. The purpose of a PUD District is to provide a high level of amenities, encourage a pedestrian friendly environment, and provide flexibility in the development of land subject to the development standards coordinated with the necessary public services and facilities.

The Valencia PUD is primarily a residential project that consists of approximately 457.0 acres of land and is located immediately east of State Highway 288, north of Highway 6, generally south of Del Bello Boulevard, and generally west of Farm-to-Market 1128. The Area Location Map (Exhibit A) located in the Exhibits section of this document illustrates the location of the property.

The property is generally flat with elevations ranging from 44 feet to 60 feet above mean sea level (MSL) and is largely comprised of prairie land and agricultural fields. The property is encumbered by several existing east-west pipeline easements and Chocolate Bayou which runs in a north-south direction on the western portion of the property. The MUD 43 Drainage Easement and a portion of the Brazos River Authority controlled drainage easement, at approximately 125 feet in width, runs north-south along the western property boundary.

Generally, the surrounding land use is a mix of undeveloped acreage to the southwest, some large lot residential to the north, and standard single-family residential developments to the northwest, southeast, and south. The single-family residential developments are Bluewater Lakes to the south, Lakeland to the southeast, and Del Bello Lakes to the west. To the southeast lies Manvel Junior High and Manvel High School located at the intersection of State Highway 6 and McCoy Road. The future location of the Manvel City Center directly abuts the northwestern boundary of a portion of the development, south of Del Bello Boulevard.

The surrounding area can be seen on the Area Location Map and the Project Aerial map (Exhibit A and B).

II. PROJECT DESCRIPTION

1. Compliance with Comprehensive Plan

The Valencia PUD complies with the Manvel Comprehensive Plan by adhering to the development principles outlined in the plan. This is accomplished by encouraging well-planned quality residential and non-residential development; providing open space for recreation and protecting the natural environment; and offering a variety of housing choices (See Conceptual Land Use Plan, Exhibit E). The Valencia PUD has a well-defined network of both vehicular and pedestrian circulation systems that provide connectivity, not only to the project itself, but to existing developments to the south and west as well as to the future Manvel City Center. The diversity of housing types varies from the traditional single-family subdivision to higher density single-family specialty products that ensure residents of all ages and needs can fulfill their housing needs. The development of an internal parks system includes a recreation center, smaller parks, and significant open space areas that will help provide for the City's future open space needs.

2. Justification

The intent of the PUD District is to encourage high quality development in the City by providing additional flexibility to take advantage of special site characteristics, location, and land uses. This document establishes certain development standards that exceed the minimum Manvel

zoning regulation requirements for properties specifically located within the boundaries of the Valencia PUD.

The PUD will meet or exceed the minimum requirements of Manvel's zoning regulations through specific architectural design and engineering standards such as:

- Creating a PUD district which will respond to market conditions and maintain the flexibility necessary to address changes in the future;
- Incorporating unique single-family specialty products that will provide a variety of housing stock to ensure residents of all ages and needs can fulfill their housing requirements;
- Providing parks, amenitized detention areas, and a well-defined trail system; and
- Complying with the amended Major Thoroughfare Plan to provide sufficient connectivity throughout the project for vehicular and pedestrian activity.

3. Single-Family Residential

The traditional single-family residential component that will be found throughout the Valencia PUD will be a collection of individual neighborhoods that take their access from Dogwood Avenue, Charlotte Street and Pollard Boulevard, and/or an internal local street system that provides connections within the neighborhood and to the surrounding areas. The traditional single-family residential neighborhoods will be developed with lot sizes that vary from 50 feet to 70 feet or greater in width to respond to market conditions.

The single-family specialty products will provide unique types of residential development that is less than fifty feet in width that may include front loaded products, rear loaded or alley products, townhome alley products, and/or "zipper" lots (single-family lots with detached garages in alternating depths). The single-family specialty products neighborhoods will be developed with varying lot sizes and product types to respond to market conditions.

4. Drill Site

A 4.0-acre drill site is located on the north side of the future Charlotte Street extension, to the north of Bluewater Lakes Section 2, and to the west of Lakeland Section 2. The drill site will be used as open space area unless or until the mineral rights owners elect to exercise their drilling rights. The size and location of any drilling facility associated with the extraction of oil and gas shall be conceptual until a permit is issued by the City of Manvel in accordance with Chapter 35, of the *City of Manvel Code of Ordinances*. This drill site shall not be calculated towards the parkland dedication requirement. Should the surface owner acquire the mineral rights and elect to remove the drill site, the designated drill site shown on the exhibits to this Valencia PUD may be used as a park or for single-family residential uses (See Section III.2, Single-Family Residential Lot Distribution Table). If the designated drill site is used for a park, that acreage may be applied to the parkland dedication requirements.

5. Potential School Site

The project is located within the Alvin Independent School District. The size and the location of the proposed school site will be coordinated between the developer and the school district. In the event that Alvin Independent School District does not purchase the proposed school site, that site may be used for single-family residential uses (See Section II.2, Single-Family Residential Lot Distribution Table).

6. Parks and Open Space

Parks and open space accounts for approximately 36.6% of the gross acreage within the Valencia PUD. The open space calculation includes private parks, public parks, landscape reserves, pipeline easements, drainage easements, canal easements, trails, natural open space areas, drill sites, lakes/detention areas, and drainage facilities. The Valencia PUD Conceptual Amenities and Open Space Plan (Exhibit H) shows a private recreation center, public parks, lake/detention areas, and open space areas all connected via a pedestrian trail system. The proposed private recreation center, located to the west of Pollard Boulevard, will provide off-street parking and may contain active amenities such as water based recreational activities with commonly associated facilities, an active play area for children, and other passive amenities. In the event that a “splash pad” type amenity is installed, a water recirculation system will also be installed for the purpose of water conservation. The other two parks shown on Exhibit H will be public and have more passive facilities such as play areas for children, trails, picnic tables and benches. One of the lake/detention areas, designated D-03 on Exhibit H, may have active amenity features such as a kayak launch and fishing facilities. All land which is dedicated for the purpose of fulfilling the parkland dedication requirement will be developed with some form of either passive or active amenities. The various private recreation center, public parks, and trails will be developed as the adjacent residential sections are developed.

The pedestrian trail system will be comprised of a hierarchy of trail widths ranging from 12 feet in width to 6 feet in width; all sidewalks located in front of homes will be 5 feet in width.

The lakes within the Valencia PUD will maintain a constant water level while also serving as detention facilities for the project and provide a significant amount of open space. The lake/detention areas will not only enhance the aesthetic quality of the development but will provide numerous opportunities for the enjoyment of the residents.

7. Other Land Uses

The Valencia PUD has five proposed commercial sites located throughout the development; ±4.7 acre and ±2.5 acre commercial sites located at the southeast and southwest corners of Del Bello Boulevard and Pollard Boulevard, a ±2.6 acre commercial site located at the northwest corner of Pollard Boulevard and Dogwood Avenue, a ±1.5 acre commercial site at the southeast corner of Charlotte Street, and a ±10.5 acre site located on the northeast corner of Del Bello Boulevard and Manvel Parkway. It is anticipated that the commercial developments will largely be neighborhood retail in nature.

III. ZONING

1. Proposed Zoning

1. To implement the conceptual master plan as currently proposed, each of the proposed land uses has been assigned a zoning district consistent with the current City of Manvel zoning regulations as shown on the Composition of Land Use Table below. The various land uses will follow the development requirements for their assigned zoning district as described in the Zoning Ordinance, in effect when this PUD is approved, unless otherwise noted in this PUD. Notwithstanding the foregoing, no amendment shall impact the project's vested rights. When there is a conflict between the requirements in the regulations listed below and this PUD Document, this PUD Document will govern.

Land use shall be regulated on a total acreage basis. Each Land Use may be increased or decreased in acreage by up to 10% of the total gross acreage. The percentage land use area change is required to ensure the success of the Valencia PUD by maintaining the flexibility to modify land use sizes in response to changes in economic and market conditions. This will allow Valencia PUD to remain competitive in the real estate market over the life of the project and the ability to adjust as necessary to accommodate specific end users in a timely manner.

The land uses may be relocated within the boundaries of the PUD, as necessary to address economic and market conditions or future modification of roadway and drainage alignments. The Land Use Comparison table below provides a detailed tabulation of each land use within the development as shown on the Conceptual Land Use Exhibit, Exhibit E. All acreages shown below are subject to change as development occurs within the boundaries of the PUD and as allowed by this document.

2. Conversion of Specific Land Uses

- a. The conversion of the Drill Sites, Parkland, and/or Potential School will only be allowed to convert to parkland or single-family residential uses.
- b. Conversion of the Drill Sites and/or Potential School Site will be the only instance in which density may be increased within the development. However, the increase in density shall be limited to the traditional single-family lot products as described in Section III.V.3, Traditional Single-Family.
- c. In the event that the drill sites or school site is converted to single-family residential, this conversion of land use shall not be counted towards the ten percent (10%) of change described in Section III.1.

Type text here

A. Acreage per Land Use Summary

Land Use	Zoning District	Approximate Acreage	% Gross Acreage
Constraints			
Major Thoroughfare & Collector Roadways	PUD-SFR	37.6	
Existing Utility & Canal Easements	PUD-SFR	33.5	
Drainage & Detention	PUD-SFR	81.4	
Chocolate Bayou	PUD-SFR	7.6	
Drill Site	PUD-SFR	4.0	
Subtotal		164.1	36.0%
Community Elements			
Recreation Center & Parks	PUD-SFR	5.6	
Elementary School	PUD-SFR	14.8	
Landscape/Open Space	PUD-SFR	33.9	
Subtotal		54.3	11.7%
Commercial			
Commercial	PUD-LC	21.8	
Subtotal		21.8	4.8%
Single-Family Residential			
Single-Family Residential	PUD-SFR	216.8	
Subtotal		216.8	47.5%
Totals		457.0	100.0%

B. Single-Family Residential Lot Distribution Table

Lot Size	Allowable Percentage of Total Lots	Approximate Acreage
50' X 120' (Typical)	30%	65.0
60' X 120' (Typical)	32%	69.4
70' X 130' (Typical)	10%	21.7
Specialty Product	28%	60.7
Gross Residential Total	100%	216.8

Please refer to the Single-Family Residential Exhibit, Exhibit F, for the proposed location of the various lot products. The locations of the various products shown on the exhibit may be adjusted and/or moved within the boundaries of the PUD as allowed by this document. Refer to Section III.V.3 and Section III.V.4, of this document for a listing of lot sizes and applicable standards for the various single-family residential products, including the single-family specialty product. The 50 foot lots and Specialty Products combined shall not exceed a total of 58% of the total lot count in the project; the 60 foot lots and 70 foot lots may each be increased by an additional 10% of the total lot percentage. Additionally, if the drill site and/or the school site is converted to a residential use (See Section II.4

and II.5), any of the lot sizes shown on the table above may be used provided that the percentage ratio of the various lot sizes shall not be modified.

C. Commercial Land Uses

The proposed five (5) commercial tracts are intended to provide neighborhood-scaled commercial development with retail, service, and office uses. Below is a list of allowed uses within these tracts:

a. Permitted Uses:

- Retail bakeries
- Furniture and home furnishing stores
- Electronics and appliance stores
- Building material, garden equipment and supplies dealers
- Food and beverage stores
- Health and personal care stores
- Clothing and clothing accessories stores
- Sporting goods, hobby, book, and music stores
- General merchandise stores
- Misc. store retailers
- Postal Service
- Finance and insurance
- Real estate
- Lessors of nonresidential buildings (except mini warehouses)
- Consumer good rental
- Professional, scientific, and technical services
- Accounting, tax preparation, bookkeeping and payroll
- Veterinary services
- Management of companies and enterprises
- Administrative and support services
- Educational support services
- Social assistance
- Child day care services
- Arts, entertainment, and recreation
- Fitness and Sports Centers
- Food services and drinking places
- Electronic and precision

equipment repair and maintenance

- Automotive glass replacement shop
- Personal and laundry services

b. Office functions only:

- Any manufacturing or industrial related uses
- Support activities for agriculture and forestry
- Construction of buildings
- Transportation and warehousing
- Commercial and industrial machinery and equipment rental

c. Special Use Permit required:

- Beverage manufacturing
- Information
- Gasoline stations
- Ambulatory health care services
- Hospitals
- Lessors of mini warehouses and self-storage units
- Automotive and equipment rental
- Amusement, gambling, recreation industries
- Recreational goods rental
- Colleges, universities, professional, and business schools
- Nursing and residential care facilities
- Other residential care facilities

c. Special Use Permit required (con't)

- Bed and breakfast
- All other amusement and recreational industries
- Mobile food services
- Drinking places (alcoholic beverages)
- Automotive repairs and maintenance
- Personal and household

- Goods repair and maintenance
- Other personal care services
- Religious organizations
- Civil and social organizations
- Non-store retailers
- Technical and trade schools
- Other schools and instruction
- Accommodations

IV. PARKS

To meet the parks dedication requirement, there shall be a minimum of one acre of parkland dedicated for every 100 proposed single-family residential lots. Based upon the estimated number of 1,100 single-family residential lots, the Valencia PUD will be required to provide approximately ± 11 acres of parkland. In the event that the number of single-family residential lots exceeds the acreage listed above, the requirement of a minimum of one acre of parkland dedicated for every 100 proposed single-family residential lots shall apply. Should the number of lots decrease from the estimated number of 1,100, the requirement of a minimum of one acre of parkland dedicated for every 100 proposed single-family residential lots shall apply.

Parkland Dedication will be credited based on the following criteria:

- a. Private parks: No more than 50% of the required parkland dedication acreage shall be comprised of private parkland.
- b. Public parks: Public parkland shall be dedicated to the City of Manvel once the full reimbursement for the public park has been received and maintained by the Homeowners Association. However, to be considered public parkland, the area must be available to all residents of the City of Manvel.
- c. Trails: No more than 50% of the required parkland dedication acreage may be comprised of trails. To qualify for credit as trails, the following requirements must be met:
 - i. All-weather hike/bike paths, landscaping and sodding installed according to the construction standards of the city for trails;
 - ii. Have connections to surrounding private parks, public parks, open space, recreation areas, school and/or other trails/sidewalks;
 - iii. Reserves dedicated as parkland acreage for trails shall have an average minimum width of 25 feet.
- d. Lakes: No more than 35% of the required parkland dedication acreage may be comprised of lakes/detention. To qualify for credit as lakes, the following requirements must be met:
 - i. Be located adjacent to parkland or open space that is designated for public use;
 - ii. Maintain a constant water surface elevation;
 - iii. Have connections via trails/sidewalks to surrounding private parks, public parks, open space, recreation areas, school and/or other trails/sidewalks;
 - iv. Contain a minimum size of eight acres;
 - v. Have side slopes not to exceed a five to one (5:1) ratio in the location of any ingress/egress areas for the purpose of fishing or kayak related activities;
 - vi. Must be available to all residents of the City of Manvel.

The proposed parks dedication requirement will be met in the following manner:

Open Space Amenity	Acreage
Recreation Center (Private)	± 2.8 acres

Parks (Public)	±2.8 acres
Lake D-03 (Public)	±3.4 acres (maximum 35% credit)
Trails adjacent to Chocolate Bayou or Lake/detention areas (Public)	±2.0 acres (maximum 50% credit)
Total	±11.0 acres

The acreages and locations of the various parks shown on the above table may be adjusted and/or moved within the boundaries of the PUD as allowed by this document. A well-defined trail system will be constructed throughout the development as depicted on the Conceptual Amenities and Open Space Plan (Exhibit H). The Homeowners Association will be responsible for maintaining all private parks, public parks, open space, trails, and landscaped areas within the PUD.

V. DEVELOPMENT REGULATIONS

Unless otherwise outlined in this document, all City of Manvel regulations, as amended from time to time, shall apply to this PUD. If any provision of a future amended zoning or subdivision regulation imposes a higher standard than that provided for in this PUD document, then the provisions of this PUD document shall control. If any provision of any city regulation not contained in this PUD document imposes a higher standard, that regulation shall control. Notwithstanding the foregoing, no amendment shall impact the project's vested rights. When there is a conflict between the requirements in the development regulations listed below and this PUD Document, this PUD document will govern.

1. Architectural Standards

Residential and Commercial Development Guidelines shall be created to protect the integrity of the residential and commercial development within the PUD. The Commercial Development Guidelines shall comply with the architectural standards listed in Chapter 77-51 of the Manvel Code of Ordinances unless otherwise noted in this document. Below are additional regulations that apply to the architectural standards within the PUD:

- a. Structures located within recreation center or park sites shall follow building material standards and setbacks set forth in the Valencia CCRs.
- b. Structures not enclosed on at least three sides shall not be held to the Commercial Development Guidelines.
 - i. Such structures shall not be required to comply with Commercial setback or exterior building material requirements and shall follow building material standards and setbacks set forth in the Valencia CCRs

2. Street and Circulation System

The Valencia PUD will have sufficient mobility through the construction of several proposed roadways:

- Pollard Boulevard, a 120 foot wide thoroughfare running north-south through the property from its connection to Del Bello Boulevard in the north to its existing location in Bluewater Lakes;
- Del Bello Boulevard, a 120 foot wide thoroughfare that lies along the northern side of the future Manvel City Center. The existing thoroughfare connects to State Highway 288 to the west.
- Dogwood Avenue, an 80 foot collector road that runs east-west just to the south of the future Manvel City Center;
- Charlotte Street, a 80 foot collector road that runs east of Pollard Boulevard in the southern portion of the Valencia PUD. The portion of Charlotte right-of-way located adjacent to C-

- 08 and outside of the Valencia boundary shall only be developed as C-08 is developed;
- Charlotte Street, a 60 foot collector road that runs west of Pollard Boulevard in the southern portion of the Valencia PUD.
- Alleys shall be maintained by the HOA. The City will not be responsible for repairs or maintenance of any alley.

The thoroughfare and circulation plan for Valencia PUD and the surrounding vicinity is illustrated on the Conceptual Roadway Exhibit (Exhibit G). Refer to the Utility agreement and any amended agreements thereafter for applicable regulations and details regarding paving width, sidewalk width, and phasing of these roadways.

3. Traditional Single-Family

Lot Sizes and Standards:

- a. 50' lots:
 - i. Minimum lot size area: 6,000 square feet
 - ii. Minimum width – 50 feet (measured at the front yard setback)
 - iii. Front yard setback – 20 feet minimum
 - iv. Side yard setback – 5 feet minimum
 - v. Corner side yard setback – 10 feet minimum
 - vi. Garage Front yard setback – 25 feet minimum
 - vii. Rear yard setback – 15 feet minimum
 - viii. Building height – 40 feet maximum
- b. 60' lots:
 - i. Minimum lot size area: 7,200 square feet
 - ii. Minimum width – 60 feet (measured at the front building line)
 - iii. Front yard setback – 20 feet minimum
 - iv. Side yard setback – 5 feet minimum
 - v. Corner side yard setback – 10 feet minimum
 - vi. Garage Front yard setback – 25 feet minimum
 - vii. Rear yard setback – 15 feet minimum
 - viii. Building height – 40 feet maximum
- c. 70' lots:
 - i. Minimum lot size area: 8,400 square feet
 - ii. Minimum width – 70 feet (measured at the front yard setback)
 - iii. Front yard setback – 20 feet minimum
 - iv. Side yard setback – 5 feet minimum
 - v. Corner side yard setback – 10 feet minimum
 - vi. Garage Front yard setback – 25 feet minimum
 - vii. Rear yard setback – 15 feet minimum
 - viii. Building height – 40 feet maximum

If the rear property line of a corner parcel abuts the side property line of a neighboring parcel, the street side setback of the corner parcel must be a minimum of 15 feet

4. Single-Family Specialty Product

Please refer to Single-Family Specialty Product Exhibits L, M, & N in this document.
Lot Sizes and Standards:

- a. Front loaded detached lots:
 - i. Minimum width – 42 feet (measured at the front yard setback)
 - ii. Minimum depth – 120 feet
 - iii. Front yard setback – 20 feet minimum
 - iv. Side yard setback – 5 feet minimum
 - v. Corner side yard setback – 10 feet minimum
 - vi. Garage Front yard setback – 25 feet minimum
 - vii. Rear yard setback – 15 feet minimum
 - viii. Building height – 40 feet maximum
- b. Rear loaded (alley) detached lots:
 - i. Minimum width – 35 feet (measured at the front yard setback)
 - ii. Minimum depth – 100 feet
 - iii. Front yard setback – 15 feet minimum
 - iv. Rear yard setback – 10 feet minimum
 - v. Side yard setback – 5 feet minimum
 - vi. Corner side yard setback – 10 feet minimum
 - vii. Alley width – 20 feet
 - viii. Building height – 40 feet maximum
- c. Rear loaded (alley) attached lots:
 - i. Minimum width – 28 feet (measured at the front yard setback)
 - ii. Minimum depth – 90 feet
 - iii. Front yard setback – 15 feet minimum
 - iv. Rear yard setback – 10 feet minimum
 - v. Side yard setback – 5 feet minimum between structures
 - vi. Corner side yard setback – 10 feet minimum
 - vii. Alley width – 20 feet
 - viii. Common walls allowed on one side
 - ix. Building height – 40 feet maximum
- d. Rear loaded (alley) townhome lots:
 - i. Minimum width – 25 feet (measured at the front yard setback)
 - ii. Minimum depth – 90 feet
 - iii. Front yard setback – 15 feet minimum
 - iv. Rear yard setback – 10 feet minimum
 - v. Side yard setback – 5 feet minimum between structures
 - vi. Corner side yard setback – 10 feet minimum
 - vii. Alley width – 20 feet
 - viii. Common walls allowed on both sides
 - ix. Maximum number of attached units: Five
 - x. Minimum number of attached units: Two
 - xi. Only 20% of the units within a townhome development shall be allowed to have two attached units
 - xii. Building height – 40 feet maximum
- e. Zipper lots (single-family detached lots with alternating depth detached garages):
 - i. Minimum width – 25 feet (measured at the front yard setback)
 - ii. Minimum depth – 120 feet
 - iii. Front yard setback – 20 feet minimum
 - iv. Rear yard setback – 10 feet minimum
 - v. Side yard setback – 5 feet minimum
 - vi. Corner side yard setback – 10 feet minimum

- vii. Garage building line – 25 feet minimum
 - viii. If the garage is set to the minimum of 25 feet, then the adjacent lot shall have a minimum setback of 50 feet.
 - ix. Garage side setback – 0 feet with a minimum of 10 feet of separation from structures on the adjacent lot. Garage structures located less than four feet from the lot line shall have a “private four-foot perpetual drainage and maintenance easement” provided on the adjacent property and shown on the final plat.
 - x. Building height – 40 feet maximum
- f. Patio & Zero Lot Line Lots
- i. Minimum width – 50 feet (measured at the front yard setback)
 - ii. Minimum depth – 120 feet
 - iii. Front yard setback – 20 feet minimum
 - iv. Garage front yard setback – 25 feet minimum
 - v. Rear yard setback – 15 feet minimum
 - vi. Side yard setback – 5 feet minimum
 - vii. Corner side yard setback – 10 feet minimum
 - viii. A minimum of 0 feet to 5 feet on one side yard and 5 feet to 10 feet on the other side yard, with an aggregate minimum side yard setback of 10 feet between the two lots.
 - ix. In no case shall units on adjoining lots be separated by less than 10 feet in width
 - x. Patio home structures located less than four feet from the lot line shall have a “private four-foot perpetual drainage and maintenance easement” provided on the adjacent property and shown on the final plat.
 - xi. Building height – 40 feet maximum

If the rear property line of a corner parcel abuts the side property line of a neighboring parcel, the street side setback of the corner parcel must be a minimum of 15 feet.

Where alleys dead-end, a turnaround shall be provided. Waste collection in an alley shall only be provided if approved by the City’s waste haul contractor, otherwise, trash collection shall be taken from the front curb. The Homeowners Association shall enforce no parking and keep the alley clear from obstacles.

5. Streets

In the event that there is a conflict between the Valencia PUD and the Utility Agreement and any amended agreements thereafter, the Utility Agreement shall control. The development will provide points of access as required by Streets, Section 62-104(5) Multiple access points with the following modifications:

- a. Two points of access. There shall be a minimum two points of access from a collector street into a subdivision or subdivision phase, up to a maximum of 75 platted lots. A boulevard may be used as a second point of access to satisfy this requirement only for the parcel designated as C-08, as shown on the Conceptual Land Use Plan, Exhibit E. Section 1 (D-01) and Section 2 (D-02) shall share a boulevard entry and second point of access, but shall be platted separately. All entry points as shown on Exhibit E shall provide sufficient access to address. Section 15 (D-05) shall have one boulevard entry and a second connection via Section 2 (D-02).
- b. Three points of access. There shall be a minimum of three points of access from a collector street in a subdivision or subdivision phase for 76 to 175 platted lots.
- c. Four points of access. There shall be a minimum of four points of access from a collector

street in a subdivision or subdivision phase for 176 platted lots or greater.

- d. Boulevard entries. A boulevard entry may only be considered as two points of access when a third or fourth point of access is triggered under subsections 5.b. and 5.c. above.
- e. Future access: A future point of access to an undeveloped area may be used to qualify as a point of access to satisfy the requirements above.
- f. The only crossings of the existing drainage channel and canal easement along the western boundary of the PUD shall be Del Bello Boulevard, Dogwood Avenue and Charlotte Street. No additional street crossings shall be required.
- g. The parcel designated as C-08 shall only be required to provide one boulevarded point of access to Charlotte street due to existing development to the east and south, proposed detention pond to the west and size of the tract.

6. Commercial

- a. Minimum lot width – 60 feet (measured at the front yard setback)
- b. Minimum lot depth – 100 feet
- c. Front yard setback – 25 feet minimum
- d. Rear yard setback – 10 feet minimum
- e. Side yard setback – 5 feet minimum
- f. Corner side yard setback – 10 feet minimum
- g. Building Height:
 - i. Pad Site - No building may exceed thirty five feet in height.
 - ii. Commercial Anchor Tenant- No building may exceed sixty feet in height
- h. Building Materials:
 - i. All commercial buildings within the proposed commercial tracts must be composed of a minimum of 75% masonry exclusive of windows, doors, or other transparent materials. The calculation shall be based on the total square footage of all facades.
 - ii. The following materials shall meet the masonry requirement:
 - 1. Stone
 - 2. Brick
 - 3. Concrete (including tilt wall)
 - 4. Hollow clay tile
 - 5. Concrete Masonry Unit (CMU)
 - 6. Glass block
 - 7. True Stucco
 - 8. Insulated concrete forms (ICF)
 - i. Non-masonry materials may not exceed 25% of the building's elevation.
 - ii. The following non-masonry materials are permitted. Prior to approval of the use of the below materials, proof must be provided to show that the material and installation process meets ICC and Texas Windstorm standards and as approved by the City's Building Official or City Engineer.
 - 1. Cementitious Fiber
- j. Architectural metal panels to include, but not be limited to: lap-seam metal panels; exposed fastener panels; concealed fastener panels; flat plate metal panels; aluminum composite materials (ACM); metal composite materials (MCM); and/or formed metal panels (r-panels).
- k. Landscape Requirements
 - i. A minimum of 10% of the site (excluding building footprint) shall be landscaped.

- All pervious area shall be counted toward the total landscape area (excluding pavers).
- ii. Landscaping and/or a masonry fence shall screen outside storage areas, including but not limited to, loading docks, garbage collection bins and delivery entrances from adjacent property and public street right-of-way
 - iii. Street Trees
 - 1. A minimum of 1 tree is required for every 50 feet of street frontage.
 - 2. No street tree shall be less than three inch (3") caliper
 - 3. Trees may be grouped or placed at regular intervals so long as the spacing requirements listed above are met.
 - iv. Parking lot landscaping
 - 1. In addition to the Street Trees noted above, a minimum two inch (2") caliper tree shall be provided within or adjacent to the parking area at tree islands that:
 - a. Are at least 9 feet wide;
 - b. Each have a square footage minimum 180 square feet;
 - c. Provides 1 tree island for every 10 parking spaces;
 - d. The tree islands shall be planted with sod and/or other plantings.
 - 2. Shrub planting shall be placed along the perimeter of a parking lot to screen the parking lot. The shrubs shall be maintained at a maximum height of 36 inches. Parking lot shrubs shall be a minimum of 24-inches at the time of planting.
 - 3. At entrance and exits, shrubs shall be no higher than twelve (12) inches in height to comply with sight triangle requirements.

7. Signage

The proposed locations for the project signage can be found in the Conceptual Signage Location Exhibit (Exhibit K). All signage within the development will be in accordance with the Manvel City Sign Ordinance except for the items listed below. When there is a conflict between the requirements in the sign ordinance and this PUD Document, this PUD document will govern.

a. Residential Single-Family Development Signage:

- i. Primary Entry Monument: The overall primary entry monument shall consist of a primary monument sign, an attached sign blade wall, and an optional attached covered structure. The primary monument sign shall not exceed a sign area of 200 square feet. The sign blade wall shall attach the primary monument sign and the attached covered structure. The attached covered structure shall be open on three sides and shall contain roof signage that shall not exceed 200 square feet. The combined sign area of the primary monument sign and structure roof sign shall not exceed 400 square feet. The overall building envelope including the primary monument sign, attached sign structure, and attached covered structure shall be no greater than twenty feet (20') in height, sixty feet (60') in length, and twenty feet (20') in depth. These signs will be placed at the major entry point to the project.
- ii. Secondary Entry Monument: The secondary entry monument building envelope shall be no greater than twenty-five feet (25') in height, forty feet (40') in length, and fifteen feet (15') in depth. A water cistern twenty-five feet (25') in height by fifteen (15') in length shall contain signage on two walls of the water cistern. An ornamental/decorative fence may be provided as part of the overall design of the secondary entry monument and shall not be measured as part of the building envelope. The combined sign area of the tower and secondary monument sign

shall not exceed 400 square feet. These signs will be placed at the secondary entry points to the project.

- iii. Village/Park Entry Monument: Six feet (6') tall with a six-foot by six-foot (6'x6') tower footprint and an attached or isolated sign blade wall with a maximum size of six feet tall by twenty feet in length (6'x20'). The sign area shall not be greater than 64 square feet. These signs will be placed at the entry points to residential subdivisions within the project.
- iv. Model Home Monument: Used to identify different builder model homes to potential home buyers. The monuments shall be a maximum of 60 square feet in size and shall not to exceed five feet (5') in height. These monuments may be installed at model homes at various locations within the development. All model home monuments must be removed when the model home is purchased and used as a private home.
- v. Temporary Construction Signs/For Sale Signs: To be used during construction of the development. These signs recognize builders, architects, engineers, leasing representatives, lenders, and other associated with the project. There shall be one sign per parcel of land and the sign shall have a maximum of 64 square feet in size and not to exceed eight feet (8') in height and eight feet (8') in width per parcel of land. All temporary signs must be removed when the principle building on the applicable building site is occupied.
- vi. Temporary Community Signs: Used to direct potential home buyers to various neighborhoods and/or model homes. These temporary signs may be installed at various locations within the development. In addition, ten (10) offsite signs shall be permitted along these corridors:
 - Four (4) along Pollard Boulevard from State Highway 6;
 - Four (4) along Del Bello Boulevard from State Highway 288 to Pollard Boulevard;
 - Two (2) along State Highway 6 from State Highway 288 to Masters Road.

The Temporary Community Signs shall be a maximum of 128 square feet in size and shall not to exceed ten feet (10') in height. These signs may remain until 30 days following the permanent resident occupancy of the last model home. These signs may be placed within the right-of-way with the condition that they be located a minimum of four feet (4') from the back of curb. If a Temporary Community Sign is not in compliance with the above section, the City has the right to remove said sign at the expense of the developer with a ten (10) business days notification.

b. Commercial Development Signage:

- i. Building Mounted Signs
 - a. Maximum Sign Area: The total building mounted sign area shall not exceed a total of 2 square feet per linear foot of the façade width or 200 square feet, whichever is less.
 - b. Location/Number: Tenants are permitted to have one building mounted sign per building elevation facade, except those on a corner facing two public streets, which may have two (2) signs; one facing each street.
 - c. Illumination: Graphic sign bands must be internally illuminated. Internal illumination shall be LED or white neon tubing. All ballasts, transformers, conduits, and other necessary electrical and structural equipment must be

concealed.

i. **Monument Signs**

These signs shall be freestanding, double-sided monument type set perpendicular to the public street right-of-way.

- a. All monument signs shall be located a minimum of 10 feet from the property line.
- b. There shall be a minimum of 100 feet between monument signs.
- c. All monument signs must be perpendicular to the right of way.
- d. **Single Tenant Monument Sign**
 - i. Height - Maximum 6 feet (including base)
 - ii. Length – Maximum 13 feet
 - iii. Sign Area - Maximum of 45 square feet
 - iv. Location/Number: One single tenant monument sign per commercial tract, unless located on a corner; then one located on each public street. Sign shall be constructed perpendicular to the adjacent public street.
 - v. Illumination: Internal illumination shall be LED or white neon tubing

e. **Multi-Tenant Monument Sign**

- i. Height - Maximum 8 feet (including base)
- ii. Length – Maximum 13 feet.
- iii. Sign Area – Maximum of 65 square feet
- iv. Location/Number: One multi-tenant monument sign per commercial tract, unless located on a corner; then one located on each public street. Signs shall be constructed perpendicular to the adjacent public street. If anchor tenant occupies 50,000 SF or more, it may have an additional one single-tenant sign.
- v. If more than one sign is approved, they may not be placed any closer than 110 feet. In no case will there be more than one sign per entrance, unless permitted by Subsection e.iv. above.
- vi. Illumination: Internal illumination shall be LED or white neon tubing per sign specifications.

f. **Electronic Reader Boards**

Electronic Reader Boards/ LED screens are permitted under the following regulations:

- i. LED signs are permitted for on premised signs and/or for tenants within a single development;
- ii. No internal or external illumination of the LED screens will be allowed between the hours of 10pm and 6am;
- iii. Maximum illumination will be the difference between ambient light and full wattage cannot be more than .2 foot-candles at 75 feet;
- iv. Automatic dimmer equipment must be installed and operational; Maximum wattage at 6,500.
- v. Display Time - The message is displayed for a minimum of 15 seconds without changing, flashing, or scrolling;
- vi. Size of the changeable area is no greater than 25 percent of the overall signage area

c. School Signage:

i. **Building Mounted Signs**

- a. **Maximum Sign Area:** The total building mounted sign area shall not exceed a total of 2 square feet per linear foot of the façade width or 200 square feet,

whichever is less.:

- b. Location/Number: Tenants are permitted to have one building fascia sign per building elevation, except those on a corner facing two public streets, which may have two (2) signs; one facing each street.
- c. Illumination: Graphic sign bands must be internally illuminated. Internal illumination shall be LED or white neon tubing. All ballasts, transformers, conduits, and other necessary electrical and structural equipment must be concealed.

ii. Monument Signs

These signs shall be freestanding, double-sided monument type set perpendicular to the public street right-of-way.

- a. All signage shall be located a minimum of 10 feet from the property line.
- b. All signage must be perpendicular to the right of way.
- c. Height - Maximum 6 feet (including base)
- d. Length – Maximum 13 feet
- e. Sign Area - Maximum of 45 square feet
- f. Location/Number: One sign per school site, unless located on a corner; then one located on each public street. Sign shall be constructed perpendicular to the adjacent public street.
- g. Illumination: Internal illumination shall be LED or white neon tubing
- h. Electronic Reader Boards
Electronic Reader Boards/ LED screens are permitted under the following regulations:
 - i. LED signs are permitted for on premised signs;
 - ii. No internal or external illumination of the LED screens will be allowed between the hours of 10pm and 6am;
 - iii. Maximum illumination will be the difference between ambient light and full wattage cannot be more than .2 foot-candles at 75 feet;
 - iv. Automatic dimmer equipment must be installed and operational;
 - v. Maximum wattage at 6,500.
 - vi. Display Time - The message is displayed for a minimum of 15 seconds without changing, flashing, or scrolling;
 - vii. Size of the changeable area is no greater than 25 percent of the overall signage area

8. Trails

The pedestrian pathway system, which is illustrated on the Conceptual Amenities and Open Space Plan (Exhibit H), will use a combination of 12 foot wide and 8 foot wide primary trails, and additional trails of not less than five feet in width to serve the residents of the project and provide multiple pedestrian connections. The trails system will provide easy and safe pedestrian access to public parks, private parks, open space, commercial tracts, single-family residential areas, and the school (if any) located within the project.

9. Utilities

Utilities will be provided by a Municipal Utility District pursuant to a Utility Agreement with the City of Manvel approved at the same time as the Valencia PUD. In the event that there is a conflict between the Valencia PUD and the Utility Agreement and any amended agreements thereafter, the Utility Agreement shall control.

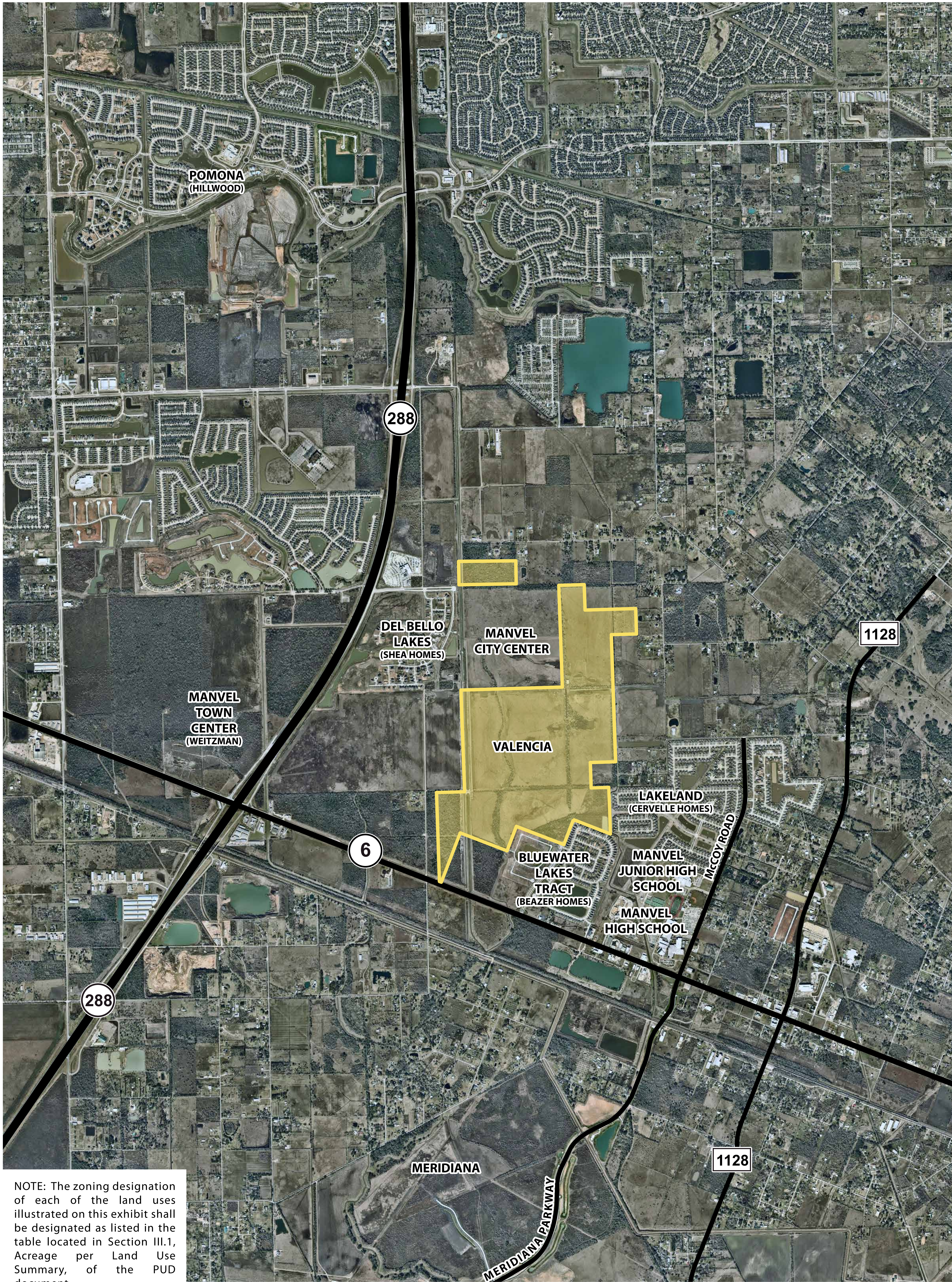
10. Other Regulations

- i. Fencing - Fences in any single-family residential district may not exceed seven (7') feet in height.
- ii. Proximity of structures to pipelines - No residential or commercial structure shall be erected or moved to a location nearer than 30 feet to any existing pipeline, except for low pressure distribution system pipeline as defined in section 62-2 of the Manvel Code of Ordinances.
- iii. Trees –Trees may be planted within right-of-way medians to enhance the overall landscape plan for the development. Trees shall be planted at a minimum spacing of 50 feet and located within the center of the right-of-way median. They may be located within other areas of the right-of-way in a limited manner to address physical or other constraints that exist in various areas throughout the development. In the event that there are utilities located within the future drip line of the tree, a suitable root barrier shall be used.
- iv. Off-street parking areas – Off-street parking areas shall be provided for the use of community occupants and guests at the recreation center site. Twenty-five (25) off-street parking stalls will be provided for the recreation center site.
- v. Paving Material – Permeable pavers, such as Trugrid or a comparable alternative, may be installed around non-residential buildings to fulfill fire code requirements.

V. PHASING / DEVELOPMENT SCHEDULE

The first phase of the project will be south of Del Bello Boulevard and Pollard Boulevard, working from the north to south as the project proceeds, as shown on the Phasing Exhibit (Exhibit I). The location and timing of future phases will be dependent upon market conditions and is subject to change. Commercial development will be driven by market conditions.

The construction of modular voter homes, shall be allowed to be located on the site throughout the duration of the project. A recorded final plat and/or permanent access shall not be required for such uses.



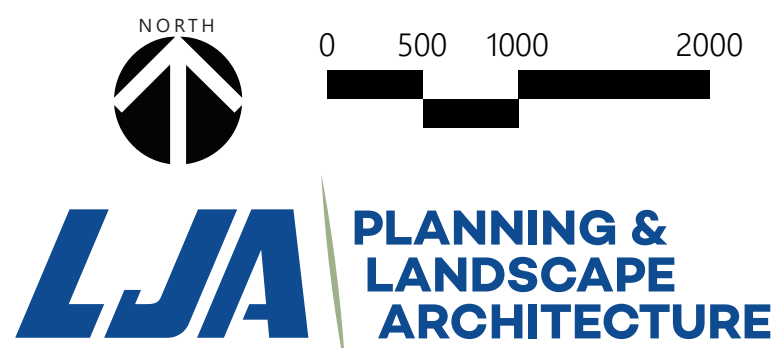
NOTE: The zoning designation of each of the land uses illustrated on this exhibit shall be designated as listed in the table located in Section III.1, Acreage per Land Use Summary, of the PUD document.

Prepared for
**HILLWOOD
RESIDENTIAL**

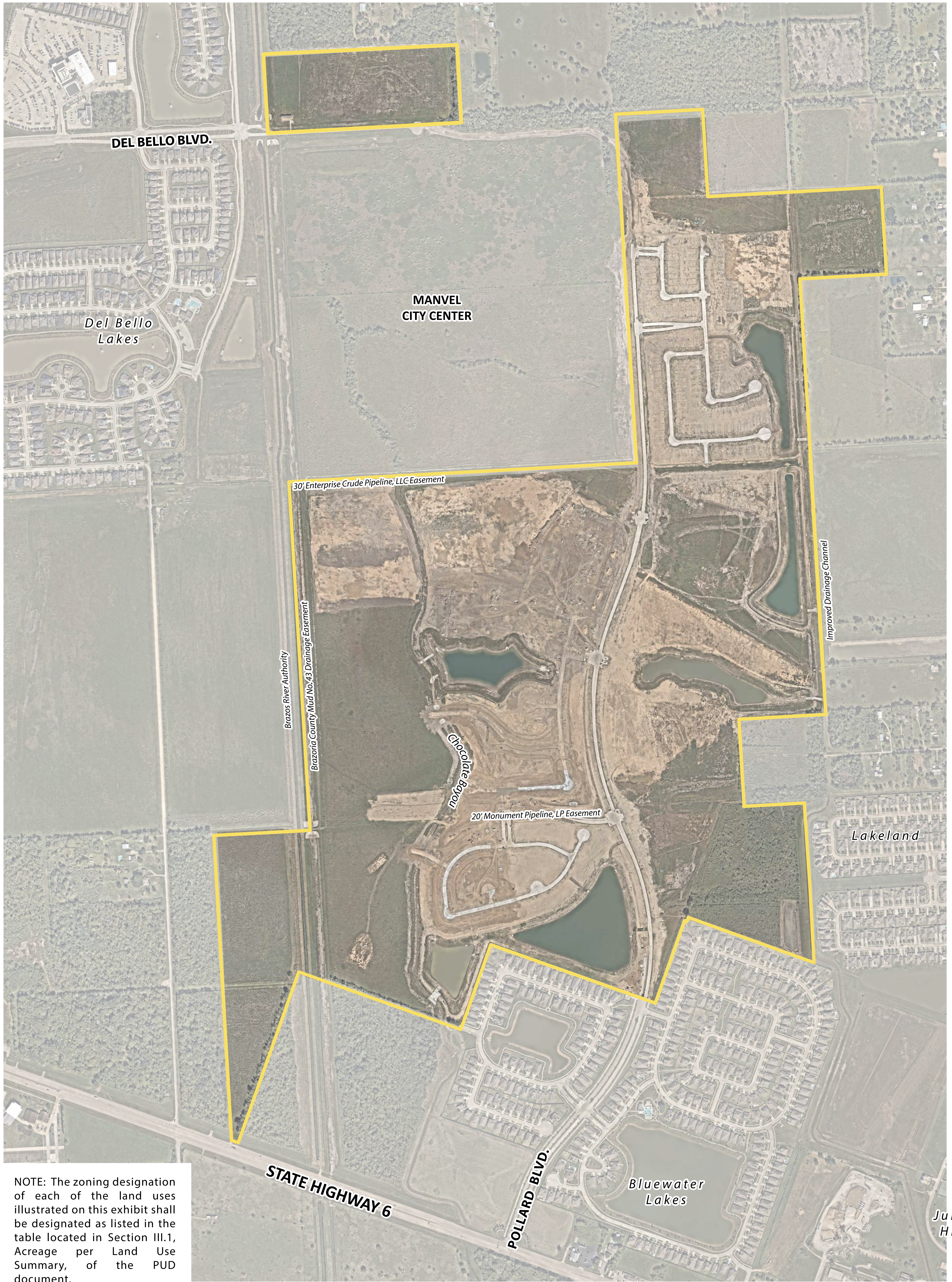
EXHIBIT A
Planned Unit Development
Area Location Exhibit
VALENCIA
±457.0 Acres of Land
Manvel, Texas

Reference Date: 02.27.2024

This exhibit is an illustrative representation for presentation purposes only and should not be used for computation or construction purposes. The information provided within should be considered a graphic representation to aid in determining plan components and relationships and is subject to change without notice. All property boundaries, easements, road alignments, drainage, flood plans, environmental issues and other information shown is approximate and should not be relied upon for any purpose. No warranties, express or implied, concerning the actual design, accuracy, location, and character of the facilities shown on this exhibit are intended.



RELATIONSHIPS | PROCESS | DESIGN



NOTE: The zoning designation of each of the land uses illustrated on this exhibit shall be designated as listed in the table located in Section III.1, Acreage per Land Use Summary, of the PUD document.

Prepared for
**HILLWOOD
RESIDENTIAL**

© Copyright 2024 LJA Engineering, Inc. Drawings, written material, and design concepts provided is considered property of LJA & shall not be reproduced in part or whole in any form or format without written consent of LJA.

This exhibit is an illustrative representation for presentation purposes only and should not be used for computation or construction purposes. The information provided within should be considered a graphic representation to aid in determining plan components and relationships and is subject to change without notice. All property boundaries, easements, road alignments, drainage, flood plains, environmental issues and other information shown is approximate and should not be relied upon for any purpose. No warranties, express or implied, concerning the actual design, accuracy, location, and character of the facilities shown on this exhibit are intended.

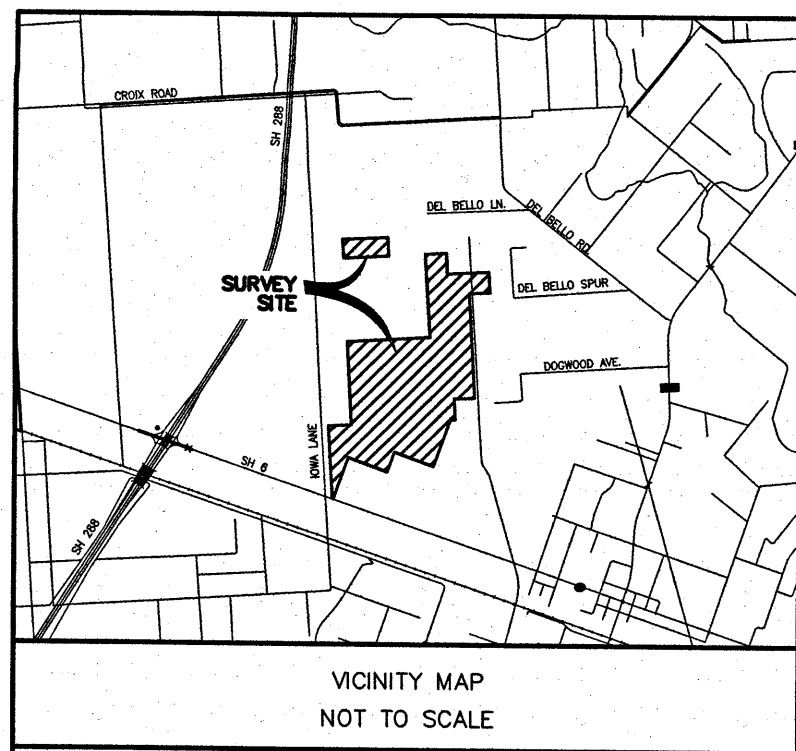
EXHIBIT B

Planned Unit Development
Project Aerial Exhibit

VALENCIA

±457.0 Acres of Land
Manvel, Texas

Reference Date: 02.27.2024



0 200 400
SCALE: 1" = 200'

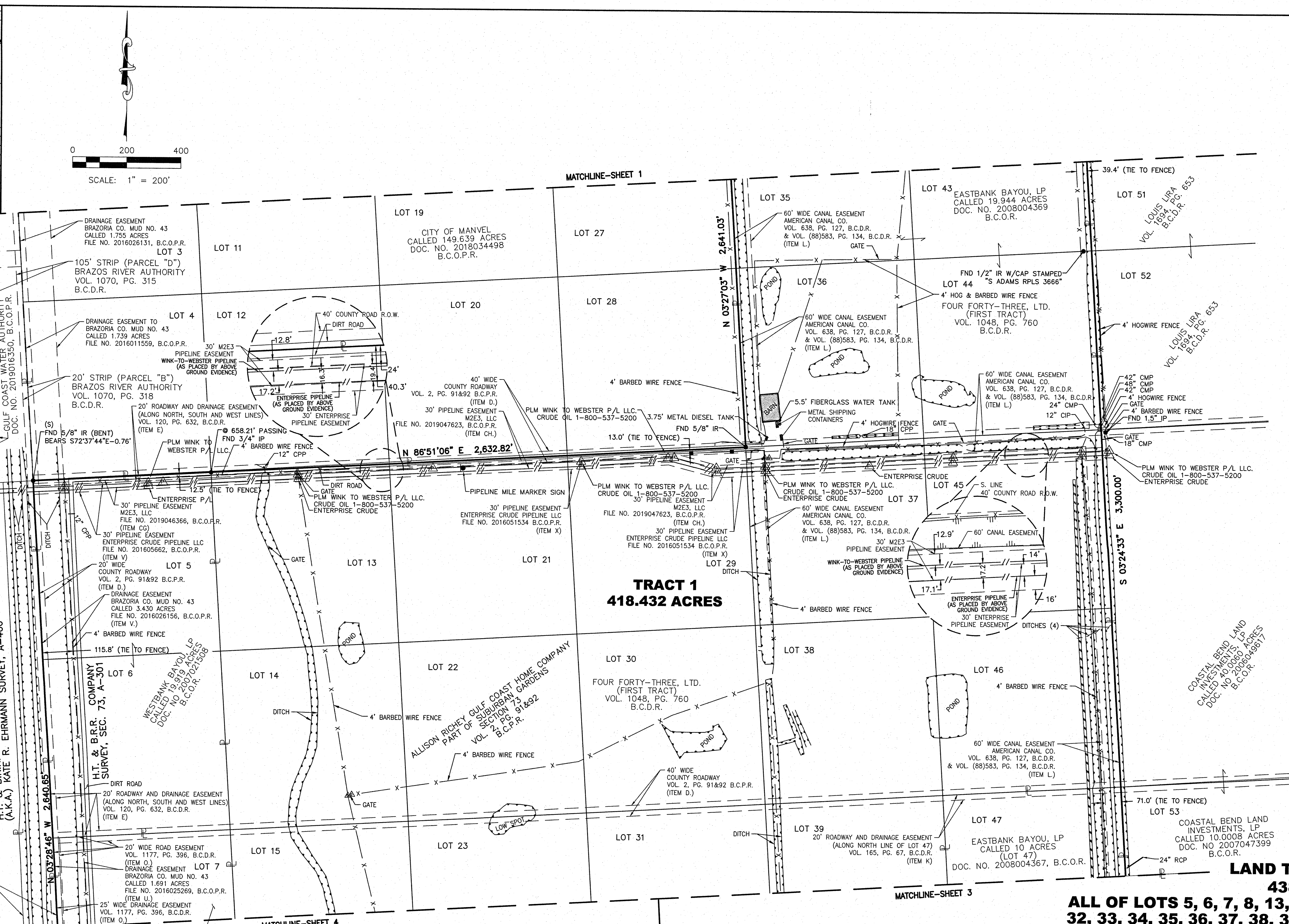
DOGWOOD AVENUE
(80' R.O.W.)
RIGHT-OF-WAY EASEMENT
DOGWOOD AVENUE
CALLED 0.1722 ACRE
DOC. NO. 2019016545, B.C.O.P.R.
RESERVE "D"
BOUNDARY LINE AGREEMENT
DOC. NO. 2019016350, B.C.O.P.R.
DOC. NO. 2019016552, B.C.O.P.R.
MANVEL PARKWAY
(120' R.O.W.)
SHEA HOMES HOUSTON LLC
CALLED 50.104 ACRES
DOC. NO. 2018049942, B.C.O.P.R.

PLM WINK TO WEBSTER P/L LLC.
CRUDE OIL 1-800-537-5200
ENTERPRISE CRUDE
SONNAR OF SCOTSDALE, LLC
CALLED 35.848 ACRES
DOC. NO. 2009021816, B.C.O.P.R.

H.T. & B.R.R. COMPANY SURVEY, SEC. 72,
(A.K.A.) KATE R. EHRLICH SURVEY, A-460
N 03°28'46" W 2,640.65'
BRAZOS RIVER AUTHORITY
CALLED 6.676 ACRES
(CAUSE NO. 54, 761A)
VOL. 33, PG. 154
B.C.D.C.R.

CYNTHIA LEE SOWELL WEISINGER,
CRISTI SOWELL HARVEY AND ANDREW WARD SOWELL,
AS CO-TRUSTEES OF CHARLES L. SOWELL FAMILY TRUST
CALLED 9.988 ACRES
DOC. NO. 2016025233 B.C.O.P.R.

EXHIBIT C



TRACT 1
418.432 ACRES

LAND TITLE SURVEY OF
438.393 ACRES

ALL OF LOTS 5, 6, 7, 8, 13, 14, 15, 16, 21, 22, 23, 24, 29, 30, 31,
32, 33, 34, 35, 36, 37, 38, 39, 40, 42, 43, 44, 45, 46, 47, AND 50
OF SECTION 73 AND LOTS 6 AND 12 OF DIVISION "O"
OF THE ALLISON RICHEY GULF COAST HOME COMPANY
PART OF SUBURBAN GARDENS SUBDIVISION,
VOL. 2, PAGE 91-92, B.C.P.R.

ALL OF OUTLOTS 175 AND 195 AND
PART OF OUTLOTS 174 AND 180
DR. A. A. LUTHER SUBDIVISION OF MANVEL
AND SURROUNDING ACREAGE PROPERTY
VOL. 1, PAGES 71-72 AND VOL. 3, PAGE 139-140, B.C.P.R.

LOCATED IN THE
H.T. & B. R.R. CO. SURVEY, SEC 65, A-285,
H.T. & B. R.R. CO. SURVEY, SEC 73, A-301,
H.T. & B. R.R. CO. SURVEY, SEC 64 (A.K.A.)
MARY V. O'DONNELL SURVEY, A-483,
AND MARY V. O'DONNELL SURVEY, A-469
BRAZORIA COUNTY, TEXAS

FEBRUARY 2021 JOB NO. LJA001-2791-2101

LJA Surveying, Inc.

3600 W Sam Houston Parkway S

Suite 175

Houston, Texas 77042

Phone 713.953.5200

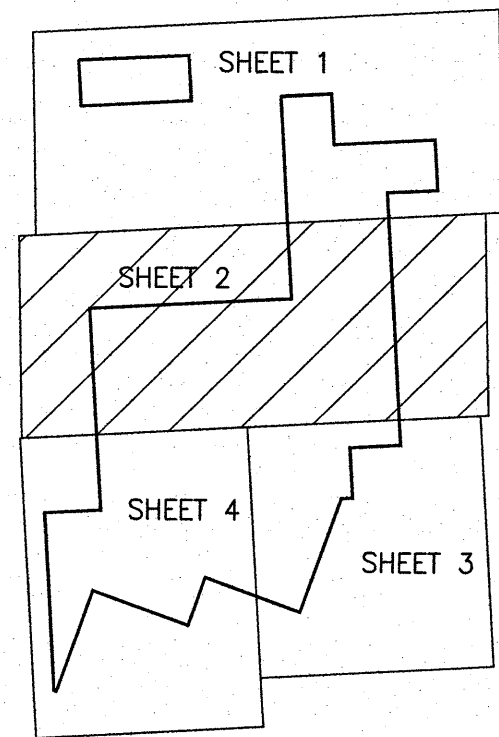
Fax 713.953.5026

T.B.P.E.L.S. Firm No. 10194382

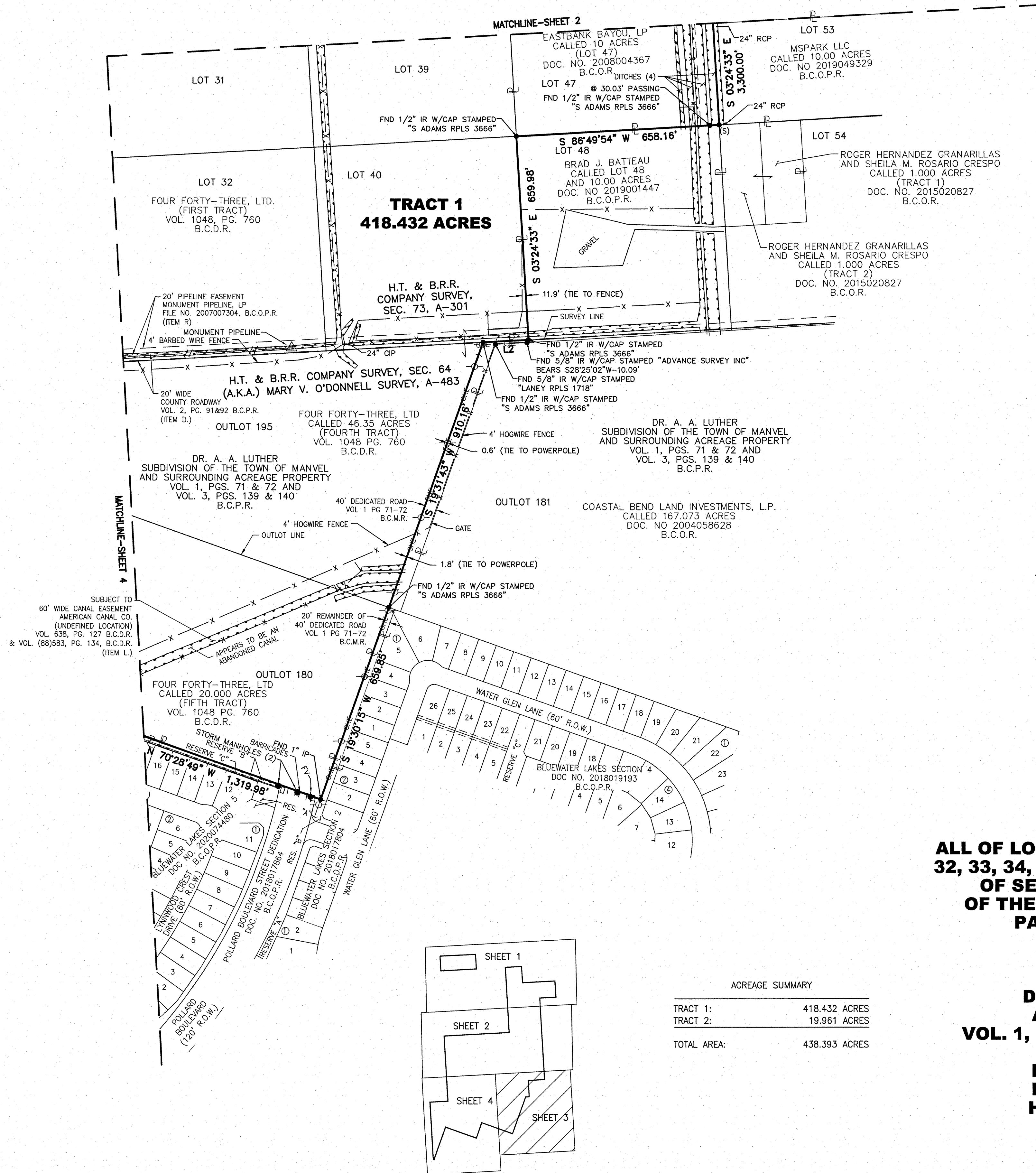
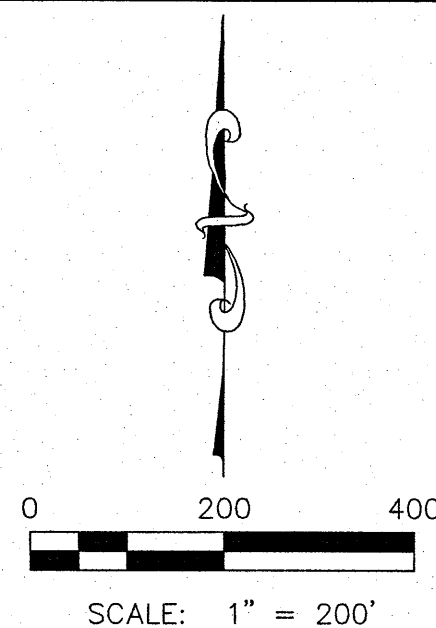
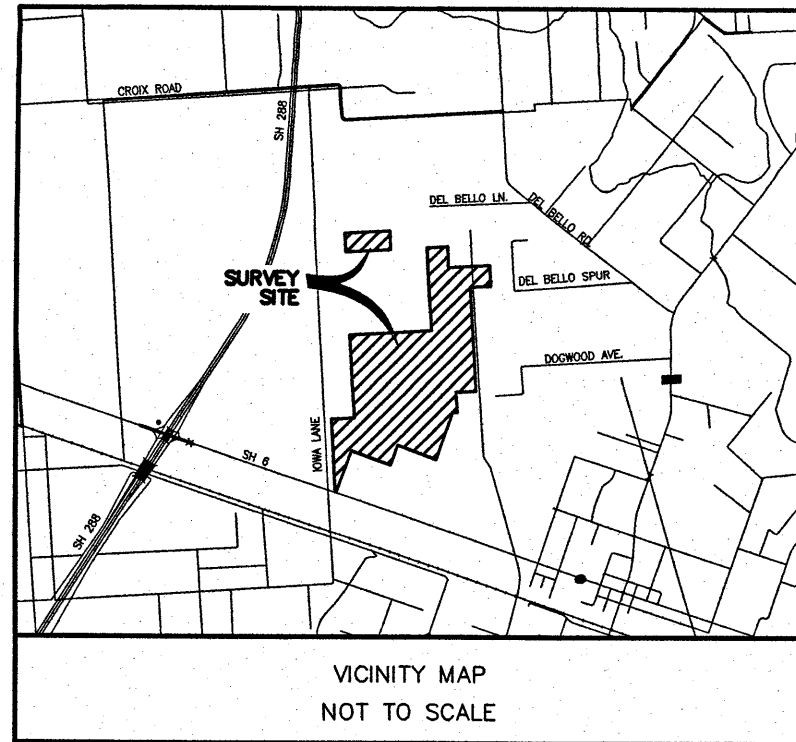
LINE	BEARING	DISTANCE
L1	N 70°29'23" W	33.64'
L2	S 86°49'56" W	147.25'

LEGEND

B.C.D.R.	DEED RECORDS OF BRAZORIA COUNTY, TEXAS
B.C.O.R.	OFFICIAL RECORDS OF BRAZORIA COUNTY, TEXAS
B.C.P.R.	PLAT RECORDS OF BRAZORIA COUNTY, TEXAS
B.C.O.P.R.	OFFICIAL PUBLIC RECORDS OF BRAZORIA COUNTY, TEXAS
B.C.D.C.R.	DISTRICT CLERK RECORDS OF BRAZORIA COUNTY, TEXAS
DOC. NO.	DOCUMENT NUMBER
VOL./PG.	VOLUME/PAGE
R.O.W.	RIGHT-OF-WAY
P.O.B.	POINT OF BEGINNING
(S)	SET 5/8" IR W/CAP STAMPED "LJA SURVEY"
IR	IRON ROD
IP	IRON PIPE
RCP	REINFORCED CONCRETE PIPE
CMP	CORRUGATED METAL PIPE
CPP	CORRUGATED PLASTIC PIPE
CIP	CAST IRON PIPE
A.K.A.	ALSO-KNOWN-AS
U.E.	UTILITY EASEMENT
RES.	RESERVE
FND.	FOUND
CONC.	CONCRETE MONUMENT
↓	SAME OWNER
—	PROPERTY LINE
—	HIGHBANK OF DITCH
—	FENCE (AS SPECIFIED)
—	OVERHEAD ELECTRIC
—	PIPELINE
△	PIPELINE MARKER
△	TELECOMMUNICATIONS MARKER
—	POWDERPOLE
—	GUY-WIRE
—	FLUSHING VALVE
—	WATER VALVE



ACREAGE SUMMARY	
TRACT 1:	418.432 ACRES
TRACT 2:	19.961 ACRES
TOTAL AREA:	438.393 ACRES



LINE	BEARING	DISTANCE
L1	N 70°29'23" W	133.64'
L2	S 86°49'56" W	147.25'

LEGEND

B.C.D.R.	DEED RECORDS OF BRAZORIA COUNTY, TEXAS
B.C.O.R.	OFFICIAL RECORDS OF BRAZORIA COUNTY, TEXAS
B.C.P.R.	PLAT RECORDS OF BRAZORIA COUNTY, TEXAS
B.C.O.P.R.	OFFICIAL PUBLIC RECORDS OF BRAZORIA COUNTY, TEXAS
B.C.D.C.R.	DISTRICT CLERK RECORDS OF BRAZORIA COUNTY, TEXAS
DOC. NO.	DOCUMENT NUMBER
VOL./PG.	VOLUME/PAGE
R.O.W.	RIGHT-OF-WAY
P.O.B.	POINT OF BEGINNING
(S)	SET 5/8" IR W/CAP STAMPED "LJA SURVEY"
IR	IRON ROD
IP	IRON PIPE
RCP	REINFORCED CONCRETE PIPE
CMP	CORRUGATED METAL PIPE
CPP	CORRUGATED PLASTIC PIPE
CIP	CAST IRON PIPE
A.K.A.	ALSO-KNOWN-AS
U.E.	UTILITY EASEMENT
RES.	RESERVE
FND.	FOUND
CONC.	CONCRETE MONUMENT
↓	SAME OWNER
—	PROPERTY LINE
—+—	HIGHBANK OF DITCH
—X—	FENCE (AS SPECIFIED)
—OHE—	OVERHEAD ELECTRIC
—//—	PIPELINE
△	PIPELINE MARKER
△	TELECOMMUNICATIONS MARKER
—O—	POWDERPOLE
—G—	GUY-WIRE
+FV	FLUSHING VALVE
+WV	WATER VALVE

LAND TITLE SURVEY OF
438.393 ACRES
ALL OF LOTS 5, 6, 7, 8, 13, 14, 15, 16, 21, 22, 23, 24, 29, 30, 31,
32, 33, 34, 35, 36, 37, 38, 39, 40, 42, 43, 44, 45, 46, 47, AND 50
OF SECTION 73 AND LOTS 6 AND 12 OF DIVISION "O"
OF THE ALLISON RICHEY GULF COAST HOME COMPANY
PART OF SUBURBAN GARDENS SUBDIVISION,
VOL. 2, PAGE 91-92, B.C.P.R.
ALL OF OUTLOTS 175 AND 195 AND
PART OF OUTLOTS 174 AND 180
DR. A. A. LUTHER SUBDIVISION OF MANVEL
AND SURROUNDING ACREAGE PROPERTY
VOL. 1, PAGES 71-72 AND VOL. 3, PAGE 139-140, B.C.P.R.
LOCATED IN THE
H.T. & B. R.R. CO. SURVEY, SEC 65, A-285,
H.T. & B. R.R. CO. SURVEY, SEC 73, A-301,
H.T. & B. R.R. CO. SURVEY, SEC 64 (A.K.A.)
MARY V. O'DONNELL SURVEY, A-483,
AND MARY V. O'DONNELL SURVEY, A-469
BRAZORIA COUNTY, TEXAS

FEBRUARY 2021 JOB NO. LJA5001-2791-2101

LJA Surveying, Inc.

3600 W Sam Houston Parkway S
Suite 175
Houston, Texas 77042

Phone 713.953.5200
Fax 713.953.5026
T.B.P.E.L.S. Firm No. 10194382

ACREAGE SUMMARY

TRACT 1:	418.432 ACRES
TRACT 2:	19.961 ACRES
TOTAL AREA:	438.393 ACRES

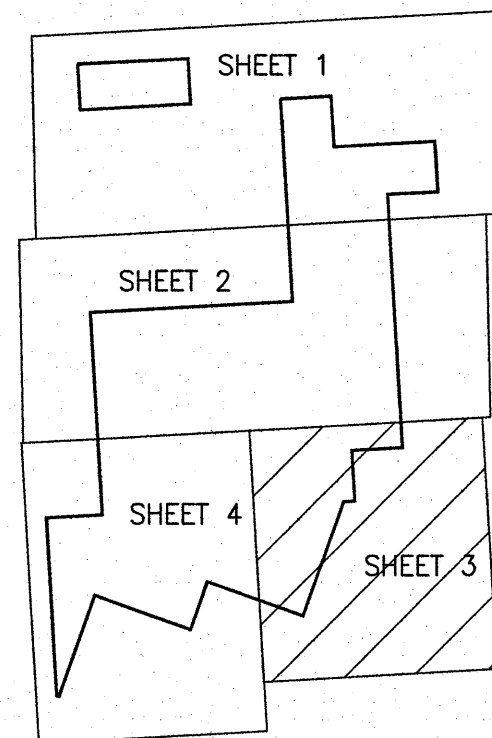
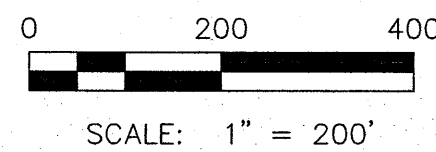
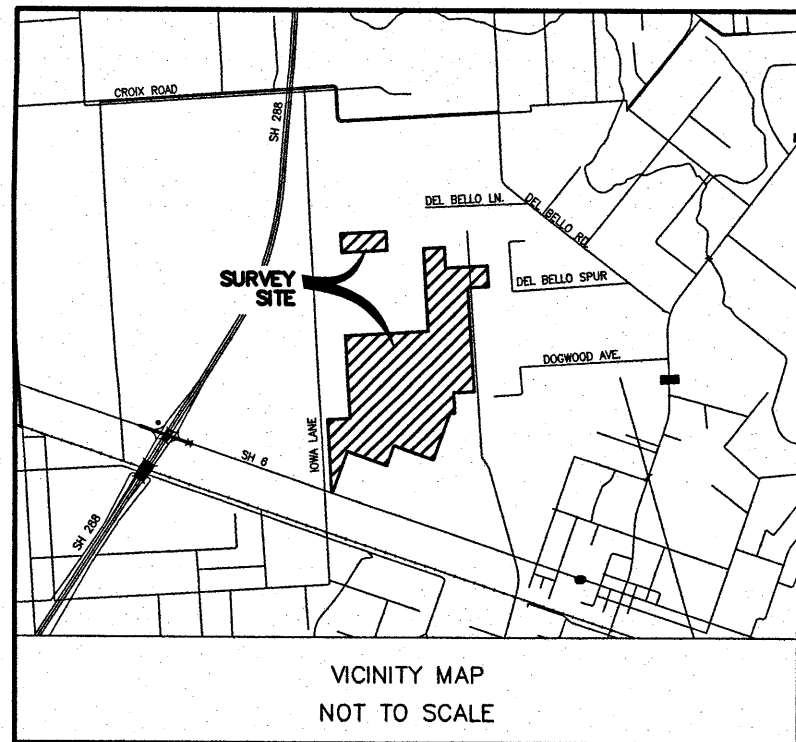


EXHIBIT C



SCALE: 1" = 200'

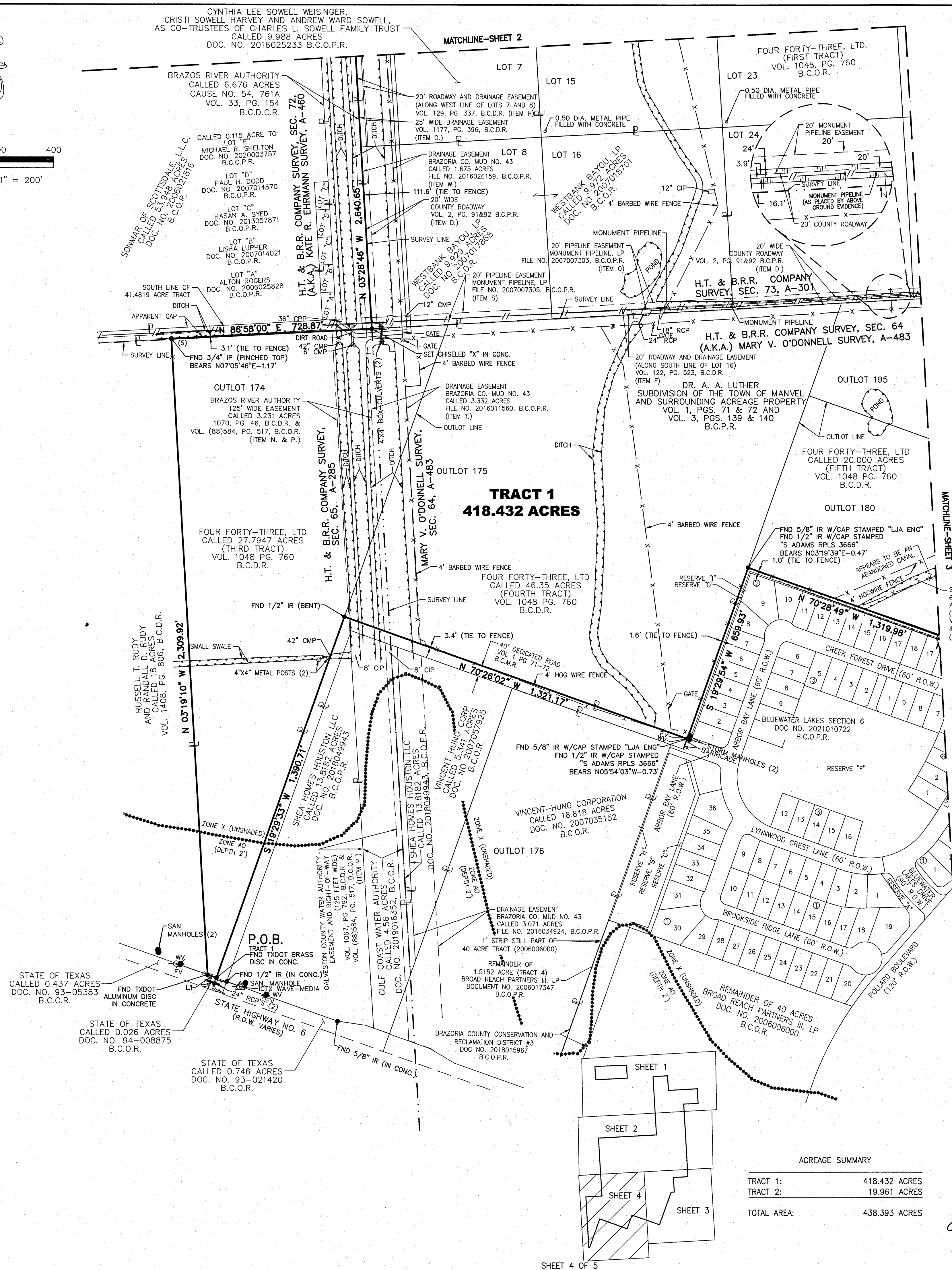
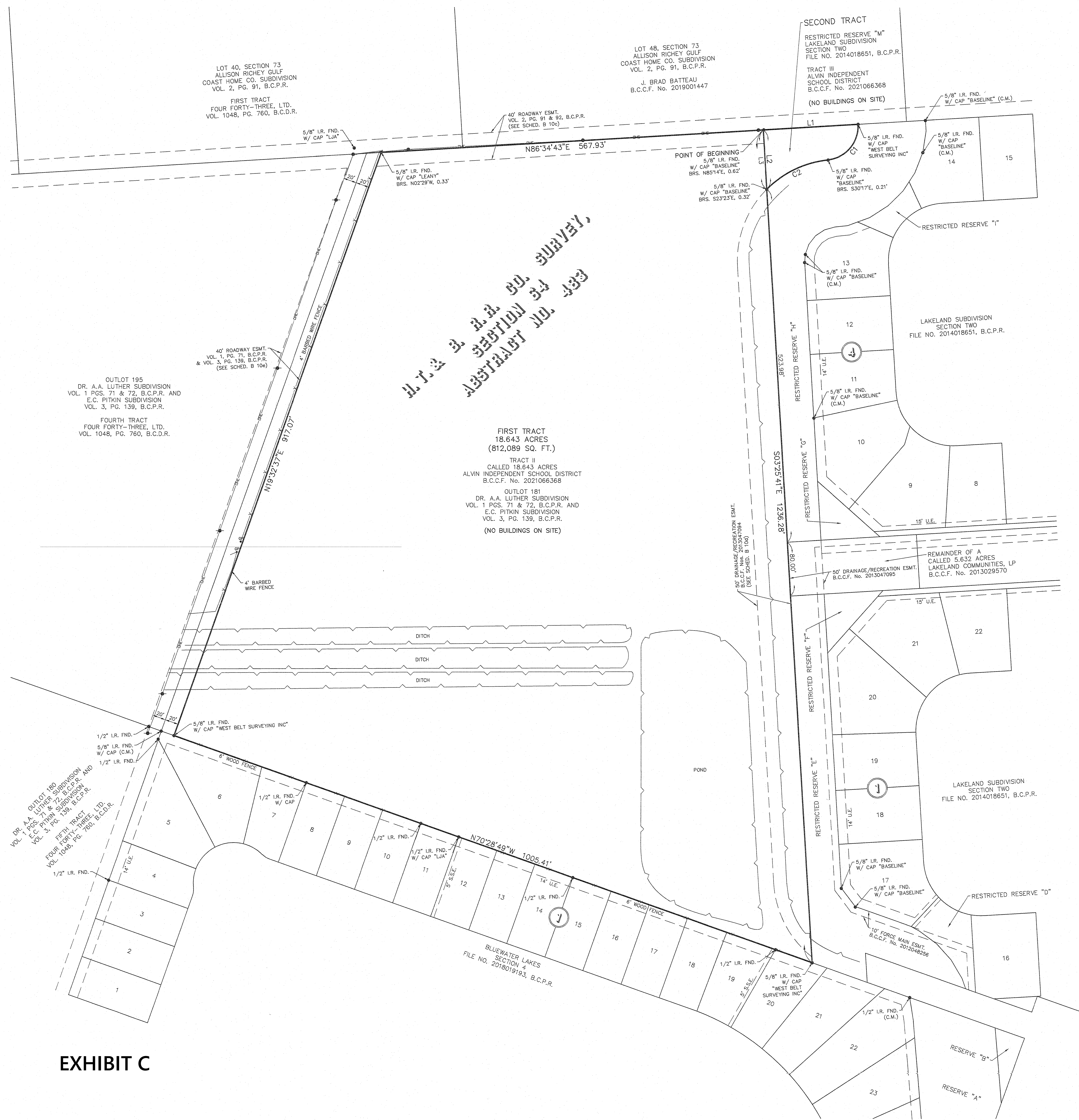


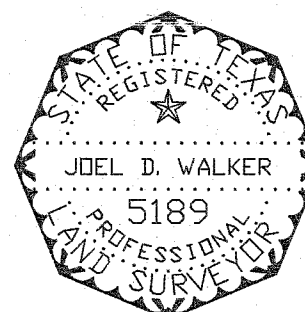
EXHIBIT C



I, certify hereby to Valdez 288, LLC, a Texas Limited Liability Company and Old Republic National Title Insurance Company that (a) this survey conforms to the current Texas Society of Professional Surveyors' standards; (b) I am duly licensed under Category 1A, Subpart II TSPS Land Title Survey; (c) This plot of survey and the property description set forth herein are true and correct and prepared from an actual on-the-ground survey of the real property (the "Property") shown hereon; (c) I have personally supervised or caused to be supervised the work supervision; (d) all monuments, shown hereon actually exist, and the location, size, and type of material thereof are correctly shown; (e) except as shown hereon, there are no visible discrepancies, conflicts, shortages in area, or boundary encroachments, easements, rights-of-way, or other improvements as are shown hereon, and all are located within the boundaries of the Property and are set back from the Property lines the distances indicated; (f) all recorded easements, rights-of-way, or other improvements on the Property's Commitment for Title Insurance No. 23003142A, effective date: November 2, 2023, issue date: December 4, 2023, have been correctly plotted hereon; (j) the boundaries, dimensions, and other details shown hereon are true and correct; and (k) I agree to defend, hold harmless, indemnify, and protect, as defined by the Federal Emergency Management Agency, as reflected by Floor Insurance Rate Map Panel # 48039C0130K, map revised date: December 30, 2020, which such map panel was used in whole or in part in the preparation of this survey. Executed on December 4, 2023.

12/4/23
DATE

Joel D Walker
JOEL D. WALKER, R.P.L.S.
TEXAS REGISTRATION NO. 5189



SURVEYOR'S NOTES:

1. THE BEARINGS SHOWN HEREON ARE BASED ON THE TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE, NAD 83

2. THE CAD FILE OF THE DRAWING SHOWN
HEREIN IS BASED ON TEXAS SOUTH CENTRAL
ZONE NO. 4204, STATE PLANE SURFACE VALUE
(NAD83) AND MAY BE CONVERTED TO GRID BY
SCALING THE DRAWING BY THE FOLLOWING
COMBINED SCALE FACTOR OF 0.999868151807.

3. ACCORDING TO F.I.R.M. MAP NO. 48039C0130K (COMMUNITY-PANEL NO. 4800760130K), MAP REVISED DATE: DECEMBER 30, 2020. THE SUBJECT PROPERTY LIES WITHIN THE AREA DESIGNATED AS ZONE "X" UNSHADED DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD.

THIS STATEMENT IS BASED ON SCALING THE LOCATION OF THE SUBJECT TRACT ON THE ABOVE REFERENCED MAP. THIS INFORMATION IS TO DETERMINE FLOOD INSURANCE RATES ONLY AND IS NOT INTENDED TO IDENTIFY SPECIFIC FLOODING CONDITIONS.

4. ALL UTILITIES SHOWN HEREON ARE LOCATED USING "APPARENT & VISIBLE" EVIDENCE BY ON-SITE OBSERVATION UNLESS OTHERWISE NOTED.

5. THE SUBJECT TRACT IS AFFECTED BY THE CITY ORDINANCES AND ZONING REGULATIONS OF THE CITY OF MANVEL FOR ZONE "SINGLE FAMILY RESIDENTIAL DISTRICT".

6. THIS SURVEY DOES NOT PROVIDE ANY DETERMINATION CONCERNING WETLANDS, FAULT LINES, TOXIC WASTE OR ANY OTHER ENVIRONMENTAL ISSUE. SUCH MATTERS SHOULD BE DIRECTED BY THE CLIENT OR PROSPECTIVE PURCHASER TO AN EXPERT CONSULTANT.

7. THIS SURVEY HAS BEEN PREPARED UTILIZING A COMMITMENT FOR TITLE INSURANCE PREPARED BY OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY, G.F. NO. 23003142A. EFFECTIVE DATE: NOVEMBER 2, 2023. ISSUE DATE: DECEMBER 4, 2023.

8. THE SUBJECT TRACT IS AFFECTED BY THE RESTRICTIVE COVENANTS RECORDED IN FILE No. 2014018651, B.C.P.R. AND B.C.C.F. Nos. 2014019226, 2014019758, 2014019759, 2021069517 AND 2023041966. (AS TO SECOND TRACT) (SEE SCHED. B 1)

9. THE SUBJECT TRACT IS AFFECTED BY CITY OF MANVEL ORDINANCE No. 78-4 RECORDED UNDER VOL. 1447, PG. 442, B.C.D.R. (SEE SCHED. B 101)

10. THE SUBJECT TRACT IS AFFECTED BY CITY
OF MANVEL ORDINANCE No. 2008-0-12
RECORDED UNDER B.C.C.F. No. 2008026132.
(SEE SCHED. B 10m)

11. THE SUBJECT TRACT IS AFFECTED BY THE
BLANKET EASEMENT TO CENTERPOINT ENERGY
HOUSTON ELECTRIC, LLC, CENTERPOINT ENERGY
RESOURCES CORP., d/b/a CENTERPOINT
ENERGY TEXAS GAS OPERATIONS, AND
SOUTHWESTERN BELL TELEPHONE COMPANY,
d/b/a AT&T TEXAS, AND COMCAST OF
HOUSTON, LLC RECORDED UNDER B.C.C.F. No.
2012048141. (AS TO SECOND TRACT) (SEE
SCHED. B 10p)

12. THE SUBJECT TRACT IS AFFECTED BY THE BLANKET EASEMENT TO CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC, CENTERPOINT ENERGY RESOURCES CORP., d/b/a CENTERPOINT ENERGY TEXAS GAS OPERATIONS, AND SOUTHWESTERN BELL TELEPHONE COMPANY, d/b/a AT&T TEXAS, AND COMCAST OF HOUSTON, LLC RECORDED UNDER B.C.C.F. No. 2014002448. (AS TO SECOND TRACT) (SEE SCHED. B 10q)

13. THE SUBJECT TRACT IS AFFECTED BY THE EASEMENTS RECORDED UNDER B.C.C.F. No. 2014019226. (AS TO SECOND TRACT) (SEE SCHED. B 10r)

14. THE OIL, GAS AND OTHER MINERAL RIGHTS
RECORDED UNDER VOL. 609, PG. 258, B.C.D.R.,
VOL. 609, PG. 260, B.C.D.R. AND B.C.C.F. Nos.
2008020855, 2013028725 AND 2015029838
THRU 2015029852 DO NOT LIE WITHIN THE
BOUNDARY OF THE SUBJECT TRACT. (AS TO
SECOND TRACT) (SEE SCHED. B 10s thru v)

15. THE SUBJECT TRACT IS AFFECTED BY THE ANNUAL ASSESSMENTS, SPECIAL ASSESSMENTS AND SPECIFIC ASSESSMENTS RECORDED UNDER B.C.C.F. Nos. 2014019226, 2014019758, 2021069517 AND 2023041966. (AS TO SECOND TRACT) (SEE SCHED. B 10w)

16. THE SUBJECT TRACT IS AFFECTED BY THE
WAIVER OF SPECIAL APPRAISAL FOR THE
BENEFIT OF BRAZORIA COUNTY M.U.D. No. 61
RECORDED UNDER B.C.C.F. No. 2018002858. (A
TO SECOND TRACT) (SEE SCHED. B 10x)

ALVIN INDEPENDENT
SCHOOL DISTRICT

LAND TITLE SURVEY

FIRST TRACT
18.643 ACRE TRACT AND
SECOND TRACT
RESTRICTED RESERVE "M"
LAKELAND SUBDIVISION,
SECTION TWO
OUT OF THE
H.T.&B. R.R. CO. SURVEY
SECTION 64
ABSTRACT NO. 483
CITY OF MANVEL
BRAZORIA COUNTY, TEXAS

WEST  BELT
SURVEYING, INC.

21020 PARK ROW
KATY, TX. 77449

PHONE: (281) 599-8200
FAX: (281) 492-6000

NO.	DATE	REVISIONS
-----	------	-----------

12/4/23	REFERENCED NEW TITLE COMMITMENT	
---------	---------------------------------	--

DRAWN BY: MDL	CHECKED BY: KMH
---------------	-----------------

SCALE: 1"=50'	APPROVED BY: JDW
PROJECT NO. 6647 0333A	DATE: NOVEMBER 28, 2003

NOTES:

1) ALL BEARINGS REFERENCED TO THE TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE, NAD 83, 1993 ADJ.

2) THIS SURVEY WAS PREPARED FROM INFORMATION PROVIDED BY CHICAGO TITLE OF TEXAS, LLC, AS AGENT FOR CHICAGO TITLE INSURANCE COMPANY, OF NO. CTH-COM-CIT20731337, HAVING AN EFFECTIVE DATE OF MARCH 3, 2021, AND AN ISSUED DATE MARCH 10, 2021. THE SURVEYOR DID NOT ABSTRACT THE SUBJECT TRACT.

THE FOLLOWING ITEMS IN SCHEDULE B, ARE AS FOLLOWS:

10 D. ACCORDING TO THE PLAT RECORDED IN VOLUME 2, PAGE 91 AND 92 OF THE PLAT RECORDS OF BRAZORIA COUNTY, TEXAS; PUBLIC ROAD EASEMENT ALONG THE NORTH PROPERTY LINE. (AS TO LOTS 5, 7, 13, 15, 19, 21, 23, 29, 31, 33, 34, 35, 37, 39, 43, 45 AND 47 AND OUTLOTS 174, 175 AND 195, OF TRACT 1)
PUBLIC ROAD EASEMENT ALONG THE SOUTH PROPERTY LINE. (AS TO LOTS 6, 8, 14, 16, 22, 24, 30, 32, 34, 36, 38, 40, 42, 44, 46 AND 50, OF TRACT 1 AND TRACT 2)
PUBLIC ROAD EASEMENT ALONG THE WEST PROPERTY LINE. (LOTS 5, 6, 7 AND 8, OF TRACT 1 AND LOT 6, OF TRACT 2). DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.

10 E. ROADWAY AND DRAINAGE EASEMENT(S) AND APPURTENANCES AS RESERVED IN A DOCUMENT: RESERVED BY: ALLISON-RICHEY GULF COAST HOME COMPANY
RECORDING DATE: JULY 30, 1913
RECORDING NO:VOLUME 120, PAGE 632, OF THE DEED RECORDS OF BRAZORIA, COUNTY, TEXAS
AFFECTS: 20 FEET WIDE AND TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN.(AS TO LOTS 5 AND 6, OF TRACT 1). DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.

10 F. ROADWAY AND DRAINAGE EASEMENT(S) AND APPURTENANCES AS RESERVED IN A DOCUMENT: RESERVED BY: ALLISON-RICHEY GULF COAST HOME COMPANY
RECORDING DATE: OCTOBER 9, 1913
RECORDING NO:VOLUME 122, PAGE 523, OF THE DEED RECORDS OF BRAZORIA, COUNTY, TEXAS
AFFECTS: 20 FEET WIDE AND TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN.(AS TO LOT 16, OF TRACT 1). DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.

10 G. ROADWAY AND DRAINAGE EASEMENT(S) AND APPURTENANCES AS RESERVED IN A DOCUMENT: RESERVED BY: ALLISON-RICHEY GULF COAST HOME COMPANY
RECORDING DATE: AUGUST 15, 1913
RECORDING NO:VOLUME 123, PAGE 17, OF THE DEED RECORDS OF BRAZORIA, COUNTY, TEXAS
AFFECTS: 20 FEET WIDE AND TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN.(AS TO LOT 42, OF TRACT 1). DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.

10 H. ROADWAY AND DRAINAGE EASEMENT(S) AND APPURTENANCES AS RESERVED IN A DOCUMENT: RESERVED BY: ALLISON-RICHEY GULF COAST HOME CORPORATION
RECORDING DATE: NOVEMBER 19, 1914
RECORDING NO:VOLUME 129, PAGE 337, OF THE DEED RECORDS OF BRAZORIA, COUNTY, TEXAS
AFFECTS: 20 FEET WIDE AND TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN. (AS TO LOTS 7 AND 8, OF TRACT 1). DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.

10 I. ROADWAY AND DRAINAGE EASEMENT(S) AND APPURTENANCES AS RESERVED IN A DOCUMENT: RESERVED BY: ALLISON-RICHEY GULF COAST HOME CORPORATION
RECORDING DATE: JUNE 25, 1914
RECORDING NO:VOLUME 130, PAGE 301, OF THE DEED RECORDS OF BRAZORIA, COUNTY, TEXAS
AFFECTS: 20 FEET WIDE AND TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN. (AS TO LOT 50, OF TRACT 1). DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.

10 J. ROAD EASEMENT(S) AND APPURTENANCES AS RESERVED IN A DOCUMENT:
RESERVED BY: ALLISON-RICHEY GULF COAST HOME COMPANY RECORDING DATE: FEBRUARY 27, 1918
RECORDING NO:VOLUME 145, PAGE 245, OF THE DEED RECORDS OF BRAZORIA, COUNTY, TEXAS
AFFECTS: 20 FEET WIDE AND TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN. (AS TO TRACT 2)

10 K. ROAD EASEMENT(S) AND APPURTENANCES AS RESERVED IN A DOCUMENT:
RESERVED BY: ALLISON-RICHEY GULF COAST HOME COMPANY RECORDING DATE: OCTOBER 15, 1920
RECORDING NO:VOLUME 165, PAGE 67, OF THE DEED RECORDS OF BRAZORIA, COUNTY, TEXAS
AFFECTS: 20 FEET WIDE AND TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN. (AS TO LOT 47, OF TRACT 1). DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.

10 L. LATERAL OR CANAL EASEMENT(S) AND APPURTENANCES AS GRANTED IN A DOCUMENT: GRANTED TO:AMERICAN CANAL COMPANY
RECORDING DATE: NOVEMBER 22, 1955
RECORDING NO:VOLUME 638, PAGE 127, OF THE DEED RECORDS OF BRAZORIA, COUNTY, TEXAS AND AS AFFECTED BY INSTRUMENT RECORDED IN VOLUME (88) 583, PAGE 134, DEED RECORDS BRAZORIA COUNTY, TEXAS
AFFECTS: TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN. (AS TO LOTS 25, 33, 34, 35, 36, 37, 45, 46 AND 47 AND OUTLOT 180 AND OUTLOT 195, OF TRACT 1 AND TRACT 2). DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.

10 M. LATERAL OR CANAL EASEMENT(S) AND APPURTENANCES AS GRANTED IN A DOCUMENT: GRANTED TO:BRAZOS VALLEY RICE COMPANY
RECORDING DATE: OCTOBER 8, 1962
RECORDING NO:VOLUME 702, PAGE 667, OF THE DEED RECORDS OF BRAZORIA, COUNTY, TEXAS AND AND INSTRUMENT RECORDED IN VOLUME 822, PAGE 278, DEED RECORDS BRAZORIA COUNTY, TEXAS
AFFECTS: TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN. (AS TO LOT 50, OF TRACT 1). DOES AFFECT SUBJECT TRACT(LOT 50), NO DEFINED WIDTH.

10 N. DRAINAGE EASEMENT(S) AND APPURTENANCES AS GRANTED IN A DOCUMENT: GRANTED TO: BRAZOS RIVER AUTHORITY
RECORDING DATE: SEPTEMBER 24, 1970
RECORDING NO:VOLUME 1070, PAGE 46, OF THE DEED RECORDS OF BRAZORIA, COUNTY, TEXAS AFFECTS:TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN. (AS TO QUOTLOTS 174 AND 175, OF TRACT 1). DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.

10 O. ROAD AND DRAINAGE EASEMENT(S) AND APPURTENANCES AS REFERENCED IN A DOCUMENT: RECORDING DATE: SEPTEMBER 27, 1973
RECORDING NO:VOLUME 1177, PAGE 396, OF THE DEED RECORDS OF BRAZORIA, COUNTY, TEXAS AFFECTS:REFERENCED IN PARAGRAPHS A. AND B. TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN. (AS TO LOT 7, OF TRACT 1). DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.

10 P. DRAINAGE EASEMENT(S) AND APPURTENANCES AS GRANTED IN A DOCUMENT: GRANTED TO: GALVESTON COUNTY WATER AUTHORITY
RECORDING DATE: AUGUST 24, 1988
RECORDING NO:IN VOLUME (88) 584, PAGE 517, DEED RECORDS BRAZORIA COUNTY, TEXAS AFFECTS: TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN. (AS TO OUTLOT 174 AND 175, OF TRACT 1). DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.

10 Q. PIPELINE RIGHT-OF-WAY AND EASEMENT(S) AND APPURTENANCES AS GRANTED IN A DOCUMENT:
GRANTED TO: MONUMENT PIPELINE, LP, A TEXAS LIMITED PARTNERSHIP RECORDING DATE: FEBRUARY 6, 2007
RECORDING NO:UNDER BRAZORIA COUNTY CLERK'S FILE NUMBER(S) 2007007303
AFFECTS: TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN. (AS TO LOT 16, OF TRACT 1). DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.

10 R. PIPELINE RIGHT-OF-WAY AND EASEMENT(S) AND APPURTENANCES AS GRANTED IN A DOCUMENT:
GRANTED TO: MONUMENT PIPELINE, LP, A TEXAS LIMITED PARTNERSHIP RECORDING DATE: FEBRUARY 6, 2007
RECORDING NO:UNDER BRAZORIA COUNTY CLERK'S FILE NUMBER(S) 2007007304
AFFECTS: TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN. (AS TO LOTS 24, 32 AND 40, OF TRACT 1). DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.

10 S. PIPELINE RIGHT-OF-WAY AND EASEMENT(S) AND APPURTENANCES AS GRANTED IN A DOCUMENT:
GRANTED TO: MONUMENT PIPELINE, LP, A TEXAS LIMITED PARTNERSHIP RECORDING DATE: FEBRUARY 6, 2007
RECORDING NO:UNDER BRAZORIA COUNTY CLERK'S FILE NUMBER(S) 2007007305
AFFECTS: TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN. (AS TO LOT 8, OF TRACT 1). DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.

10 T. DRAINAGE EASEMENT(S) AND APPURTENANCES AS GRANTED IN A DOCUMENT:
GRANTED TO: BRAZORIA COUNTY MUNICIPAL UTILITY DISTRICT NO. 43 RECORDING DATE: MARCH 15, 2016
RECORDING NO:UNDER BRAZORIA COUNTY CLERK'S FILE NUMBER(S) 2016011560
AFFECTS: TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN. (AS TO OUTLOTS 174 AND 175, OF TRACT 1). DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.

10 U. DRAINAGE EASEMENT(S) AND APPURTENANCES AS GRANTED IN A DOCUMENT:
GRANTED TO: BRAZORIA COUNTY MUNICIPAL UTILITY DISTRICT NO. 43 RECORDING DATE: JUNE 1, 2016
RECORDING NO:UNDER BRAZORIA COUNTY CLERK'S FILE NUMBER(S) 2016025269
AFFECTS: TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN. (AS TO LOT 7, OF TRACT 1). DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.

10 V. DRAINAGE EASEMENT(S) AND APPURTENANCES AS GRANTED IN A DOCUMENT:
GRANTED TO: BRAZORIA COUNTY MUNICIPAL UTILITY DISTRICT NO. 43 RECORDING DATE: JUNE 6, 2016
RECORDING NO:UNDER BRAZORIA COUNTY CLERK'S FILE NUMBER(S) 2016026156
AFFECTS: TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN. (AS TO LOTS 5 AND 6, OF TRACT 1). DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.
JUDGEMENT RECORDED UNDER BRAZORIA COUNTY CLERK'S FILE NO(S). 2016056622-IS NOT RELATED TO SAID BCMUD NO. 43 EASEMENT

10 W. DRAINAGE EASEMENT(S) AND APPURTENANCES AS GRANTED IN A DOCUMENT:
GRANTED TO: BRAZORIA COUNTY MUNICIPAL UTILITY DISTRICT NO. 43 RECORDING DATE: JUNE 6, 2016
RECORDING NO:UNDER BRAZORIA COUNTY CLERK'S FILE NUMBER(S) 2016026159
AFFECTS: TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN. (AS TO LOT 8, OF TRACT 1). DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.

10 X. PIPELINE RIGHT-OF-WAY AND EASEMENT(S) AND APPURTENANCES AS GRANTED IN AN AGREED FINAL JUDGMENT: GRANTED TO: ENTERPRISE CRUDE PIPELINECOMPANY LLC
RECORDING DATE: OCTOBER 19, 2016
RECORDING NO:UNDER BRAZORIA COUNTY CLERK'S FILE NUMBER(S) 2016051534 AND INSTRIMENT RECORDED UNDER BRAZORIA COUNTY CLERK'S FILE NO(S). 2016056622
AFFECTS: TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN. (AS TO LOTS 5, 13, 21, 29, 37 AND 45, OF TRACT 1). DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.

10 CG. PERMANENT EASEMENT AGREEMENT AS EVIDENCED BY MEMORANDUM OF PERMANENT EASEMENT AGREEMENT EXECUTED BY: WESTBANK BAYOU, L.P., A TEXAS LIMITED PARTNERSHIP
RECORDING DATE: SEPTEMBER 26, 2019
RECORDING NO.: UNDER BRAZORIA COUNTY CLERK'S FILE NO(S). 2019046366. (AS TO TRACT 1). DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.

10 CH. PERMANENT EASEMENT AGREEMENT AS EVIDENCED BY MEMORANDUM OF PERMANENT EASEMENT AGREEMENT EXECUTED BY:FOUR FORTY-THREE, LTD., A TEXAS LIMITED PARTNERSHIP
RECORDING DATE: SEPTEMBER 26, 2019
RECORDING NO.: UNDER BRAZORIA COUNTY CLERK'S FILE NO(S). 2019047623. (AS TO TRACT 1). DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.

3) IN ACCORDANCE WITH THE FEDERAL EMERGENCY MANAGEMENT AGENCY, FLOOD INSURANCE RATE MAPS, MAP NO. 48039C0130K, AND MAP NO. 48039C0110K, WITH A REVISED DATE OF DECEMBER 30, 2020, BY GRAPHICAL PLOTTING, THE SUBJECT TRACT LIES WITHIN ZONE "AO" (DEPTH 2') AND ZONE "X"(UNSHADED). ZONE "X"(UNSHADED) IS DEFINED AS AREAS DETERMINED TO BE OUTSIDE 0.2% ANNUAL CHANCE FLOODPLAIN. ZONE "AO" IS DEFINED AS A SPECIAL FLOOD HAZARD AREA WITH FLOOD DEPTHS OF 1 TO 3 FEET (USUALLY SHEET FLOW ON SLOPING TERRAIN); AVERAGE DEPTHS DETERMINED. FOR AREAS OF ALLUVIAL FAN FLOODING, VELOCITIES ALSO DETERMINED. THE SPECIAL FLOOD HAZARD AREA IS THE AREA SUBJECT TO FLOODING BY THE 1% ANNUAL CHANCE FLOOD. "LJA DOES NOT WARRANT NOR SUBSCRIBE TO THE ACCURACY OR SCALE OF SAID MAPS."

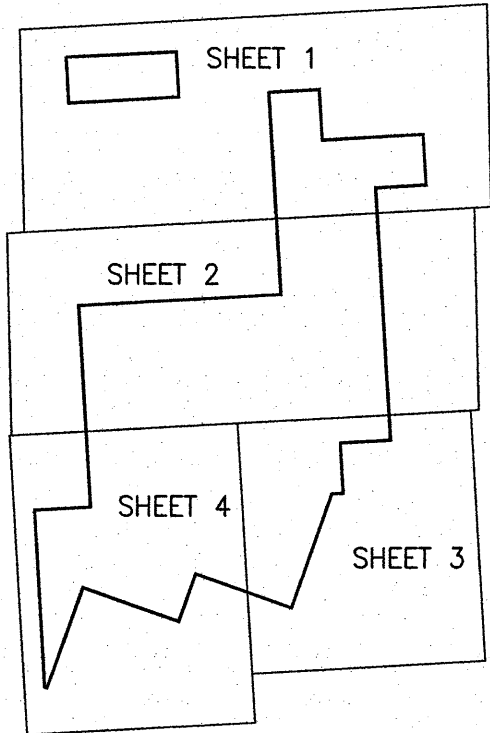
4) MINERAL INTERESTS WERE NOT INVESTIGATED AS A PART OF THIS SURVEY.

5) THIS SURVEY DOES NOT DETERMINE THE LOCATION OF WETLANDS, FAULT LINES, OR OTHER ENVIRONMENTAL ISSUES SHOULD THEY EXIST.

6) THERE IS NO VISIBLE EVIDENCE OF BURIAL GROUNDS OR MAJOR EARTH WORK AT THE TIME OF THE SURVEY.

7) THIS SURVEY IS ISSUED IN CONJUNCTION WITH THE METES AND BOUNDS DESCRIPTION BY LJA SURVEYING, INC. OF THE SAME CERTIFICATION DATE SHOWN HEREON, HEREBY REFERENCED AS PART 2 OF 2. THIS SURVEY IS PART 1 OF 2.

EXHIBIT C



ACREAGE SUMMARY	
TRACT 1:	418.432 ACRES
TRACT 2:	19.961 ACRES
TOTAL AREA:	438.393 ACRES

LAND TITLE SURVEY OF
438.393 ACRES
ALL OF LOTS 5, 6, 7, 8, 13, 14, 15, 16, 21, 22, 23, 24, 29, 30, 31,
32, 33, 34, 35, 36, 37, 38, 39, 40, 42, 43, 44, 45, 46, 47, AND 50
OF SECTION 73 AND LOTS 6 AND 12 OF DIVISION "O"
OF THE ALLISON RICHEY GULF COAST HOME COMPANY
PART OF SUBURBAN GARDENS SUBDIVISION,
VOL. 2, PAGE 91-92, B.C.P.R.
ALL OF OUTLOTS 175 AND 195 AND
PART OF OUTLOTS 174 AND 180
DR. A. A. LUTHER SUBDIVISION OF MANVEL
AND SURROUNDING ACREAGE PROPERTY
VOL. 1, PAGES 71-72 AND VOL. 3, PAGE 139-140, B.C.P.R.
LOCATED IN THE
H.T. & B. RR CO. SURVEY, SEC 65, A-285,
H.T. & B. RR CO. SURVEY, SEC 73, A-301,
H.T. & B. RR CO. SURVEY, SEC 64 (A.K.A.)
MARY V. O'DONNELL SURVEY , A-483,
AND MARY V. O'DONNELL SURVEY, A-469
BRAZORIA COUNTY, TEXAS

FEBRUARY 2021 JOB NO. LJA001-2791-2101

LJA Surveying, Inc.
3600 W Sam Houston Parkway S Phone 713.953.5200
Suite 175 Fax 713.953.5026
Houston, Texas 77042 T.B.P.E.L.S. Firm No. 10194382

EXHIBIT D

METES AND BOUNDS DESCRIPTION
OF
TRACT 1

A 418.318 acre (18,221,949 square feet) tract, being all of Lots 5, 6, 7, 8, 13, 14, 15, 16, 21, 22, 23, 24, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 42, 43, 44, 45, 46, 47 and 50 of the Allison-Richey Gulf Coast Home Company Suburban Gardens Subdivision of Section 73, H.T. & B. Railroad Company Survey, Abstract 301, according to the map or plat thereof, recorded in Volume 2, Page 91 and 92, of the Plat Records of Brazoria County, Texas (B.C.P.R.) and being all of those certain tracts conveyed to Westbank Bayou, LP, called 19.919 acres (Lots 5-6), recorded in Brazoria County Clerk's File Number (B.C.C.F. No.) 2007021508, called 9.929 acres (Lot 8), recorded in B.C.C.F. No. 2007017868 and called 9.972 acres (Lot 16), recorded in B.C.C.F. No. 2007018701 and being all of that certain tract conveyed to Charles L. Sowell called 9.988 acres (Lot 7), recorded in Volume 1177, Page 396, deed records of Brazoria County, Texas (B.C.D.R.), and being all of those certain tracts conveyed to Eastbank Bayou, LP, called 10 acres (Lot 33), recorded in B.C.C.F. No. 2007022032, called 19.944 acres (Lots 42-43), recorded in B.C.C.F. No. 2008004369 and called 10 acres (Lot 47), recorded in B.C.C.F. No. 2008004367 and being all of that certain tract conveyed to Four Forty-Three Annex No. 1, LTD., called 10.00 acres (Lot 50), recorded in B.C.C.F. No. 2006045403 and being a part of that certain tract conveyed to Four Forty-Three Ltd. (called 433.09 acres), recorded in Volume 1048, Page 760, B.C.D.R., with said 18,221,949 square foot tract of land being more particularly described by metes and bounds as follows:

COMMENCING at a 1/2 inch iron rod found at the Northeast corner of said Section 73 and an interior corner of the H.T. & B. Railroad Company Survey, Section 74, Abstract 493, recorded in Volume 2, Page 66, B.C.P.R.) and being at the centerline intersection of 60 foot Pollard Drive (as occupied) (Platted as 40 feet - Volume 2, Page 91 and 92, B.C.P.R.) and 60 foot Del Bello Boulevard (as occupied)(Platted as 50 feet - Volume 2, Page 66, B.C.P.R.), marking the northeast corner of the Michael D. Roland and Marcy D. Roland tract (called 5.46 acres), recorded in B.C.C.F. No. 2004072423 and 2007030104, the northwest corner of the Michael C. Black tract (called 4.00 acres), recorded in B.C.C.F. No. 96-015514 and the Northeast corner of said Section 73;

THENCE S 86°50'29” W, along and with the common line of Section 73 and 74 and centerline of said 40 foot platted road, at 658.00 feet pass a point marking the southwest corner of Lot 1 of said Section 74 and the southeast corner of the Mary V O'Donnell Survey, Division “O”, Abstract 469, recorded in Volume 2, Page 91 and 92, B.C.P.R., from which a 5/8 inch iron rod bears, S 38°48'33” W, 3.08 feet, continuing along and with the common line of Section 73 and Division “O” and centerline of said 40 foot platted road, a total distance of 1974.26 feet (called 1980.00 feet) to a 5/8 inch iron rod with cap stamped “FMS” set in the north line of Section 73, the north line of a 60 foot American Canal Company Easement, recorded in Volume 638, Page 127, B.C.D.R., the south line of said Division “O”, Abstract 469, the south line of the Sylvia Buffy Orndorff and Dustin Aaron Different tract (called 13.93 acres), recorded in B.C.C.F. No. 2015054435, and the centerline of said 40' platted road, marking the northwest corner of the Katherine Ott Miles tract (called 5 acres), recorded in Volume 1459, Page 1, B.C.D.R., the northeast corner of said Eastbank Bayou, LP tract (Lot 33), and being the common corner of Lot 33 and 41 of said Section 73 at the most northerly Northwest corner and **POINT OF BEGINNING** of herein described tract:

THENCE S 03°24'40” E, along and with the common line of said Lot 33 and 41, a distance of 660.58 feet (called 660.00 feet) to a 1/2 inch iron rod with cap stamped “Adams RPLS 3666” found, marking the southeast corner of said Eastbank Bayou, LP tract (Lot 33), the southwest corner of said Miles tract, the northwest corner of said Eastbank Bayou, LP tract (called 19.944 acres), an interior corner of herein described tract and being the common corner of Lots 33, 41, 42 and 34 of said Section 73;

THENCE N 86°49'54” E, along and with the common line of Lots 41, 42, 49 and 50 of said Section 73, a distance of 1314.38 feet (called 1320.00 feet) to a 5/8 inch iron rod with cap stamped “FMS” set, marking the southeast corner of the Jane Hetherington Brown and Norman Paul Brown tract (called 5 acres), recorded in B.C.C.F. No. 2014042893, the southwest corner of the Suzanne Renae Scopel tract (called 5 acres), recorded in B.C.C.F. No. 2005013089, the northwest corner of the Jeffery Wayne Scopel tract (called 1.157 acres), recorded in B.C.C.F. No. 2005013109, the northeast corner of said Four Forty-Three Annex No. 1, LTD. Tract (called 10.00 acres) and the most easterly northeast corner of herein described tract and being the common corner of Lots 49, 55, 56 and 50 of said Section 73;

THENCE S 03°25'11” E, along and with the common line of Lots 50 and 56 and east line of said Four Forty-Three Annex No. 1, LTD. tract, a distance of 660.67 feet (called 660.00 feet) to a 5/8 inch iron rod with cap stamped “FMS” set, marking the southwest corner of the Douglas Varner Tract (called 1.157 acres), recorded in Volume (91) 906, Page 253, of the official records of Brazoria County, Texas (B.C.O.R.), the northwest corner of the Laura Loterbauer tract (called Minor Plat of 2.50 acres), recorded in B.C.C.F. No. 2018006317, the northeast corner of the Louis Lira tract (called 20 acres), recorded in Volume 1694, Page 653, B.C.D.R. and an angle point for corner of herein described tract and being the common corner of Lots 50, 56, 57 and 51 of said Section 73;

THENCE S 86°50'32” W, along and with the common line of Lots 50 and 51, same being the common line of said Four Forty-Three Annex No. 1, LTD. Tract and said Lira tract, a distance of 657.24 feet (called 660.00 feet), to a 5/8 inch iron rod with cap stamped “FMS” set, in the east line of said Eastbank Bayou, LP tract (called 19.944 acres), marking the southwest corner of said Four Forty-Three Annex No. 1, LTD. tract, the northwest corner of said Lira tract, an interior corner of herein described tract and being the common corner of Lots 50, 51, 43 and 42 of said Section 73;

THENCE S 03°24'55” E, along and with the common line of Lots 43, 51, 44, 52, 45, 46 and 61 at 1320.21 feet (called 1320.00 feet) pass a point in the centerline of a 40 foot platted road, recorded in Volume 2, page 91 and 92, B.C.P.R. marking the northwest corner of the Coastal Bend Land Investments, LP tract (called 40.0060 acres)(called Lot 61), recorded in B.C.C.F. No. 2006049617 and being the common corner of Lots 44, 52, 61 and 45, continuing for a total distance of 3299.48 feet (called 3300.00 feet) to a 5/8 inch iron rod with cap stamped “FMS” set, marking the southwest corner of the Jose T. Villanueva and Trinidad Villanueva tract (called 5 acres), recorded in B.C.C.F. No. 2004036528, the northwest corner of the Roger Hernandez Gandarillas and Sheila M. Rosario Crespo tract (called 1.000 acre), recorded in B.C.C.F. No. 2015020827, the northeast corner of said Aspect Energy, LLC tract (called 10 acres), the southeast corner of the said Eastbank Bayou, LP tract (called 10 acres)(Lot 47), the most easterly southeast corner of herein described tract and being the common corner of Lots 53, 54, 48 and 47 of said Section 73;

THENCE S 86°49'54” W, along and with the common line of Lots 48 and 47, same being the common line of said Eastbank Bayou, LP tract (Lot 47) and said Aspect Energy, LLC tract, a distance of 657.49 feet (called 660.00 feet) to a 1/2 iron rod with cap stamped “Adams RPLS 3666” found in the east line of the of said 443.09 acre tract, marking the southwest corner of said Eastbank Bayou, LP tract and the northwest corner of said Aspect Energy, LLC tract, and interior corner of herein described tract and being the common corner of Lots 48, 40, 39 and 47 of said Section 73;

THENCE S 03°24'40” E, along and with the common line of Lots 48 and 40, same being the common line of said Aspect Energy, LLC tract and said 443.09 acre tract, a distance of 660.05 feet (called 660.00 feet) to a 5/8 inch iron rod with cap stamped “FMS” set in the centerline of a 40 foot platted road, recorded in Volume 2, Page 91 and 92, B.C.P.R., in the called south line of Section 73 and the north line of the H.T. & B. Railroad Company Survey, Section 64, Abstract 483 and the north line of the Dr. A.A. Luther Subdivision of Manvel, recorded in Volume 1, Page 71 and 72 and Volume 3, Page 139 and 140, B.C.P.R. and the north line of Outlot 181 of said Dr. A.A. Luther Subdivision, marking the northwest corner of the Coastal Bend Land Investments, LP tract (remainder of a called 167.073 acre tract), recorded in B.C.C.F. No. 2004058628, the southwest corner of said Aspect Energy, LLC tract, an angle point in the east line of said 443.09 acre tract and an angle point for corner of herein described tract and being the common corner of Lots 48 and 40 of said Section 73, from which a 5/8 inch iron rod with cap stamped “Base Line” found marking the southeast corner of said Section 73 bears, S 86°50'11” W, 1975.03 feet;

THENCE S 86°50'11” W, continuing along and with the common line of said Section 73, Section 64 and the Dr. A.A. Luther Subdivision, same being the common line of said Outlot 181 and Lot 40, and centerline of said 40 foot platted road, a distance of 147.66 feet to a 5/8 inch iron rod with cap stamped “FMS” set in said common line, marking the northeast corner of the Four Forty-Three, LTD. Tract (called 24.00 acres)(Outlot 195), recorded in Volume 1048, Page 760, B.C.D.R. and an interior corner of herein described tract and being the westerly line of a 40 foot platted road, recorded in Volume 1, Page 71 and 72 and Volume 3, Page 139 and 140, B.C.P.R.;

THENCE S 19°30'25” W, along and with the easterly line of said Outlot 195 and the westerly line of said 40 foot platted road, at 909.98 feet pass a 1/2 inch iron rod found, marking the southeasterly corner of said Outlot 195 and the northeasterly corner of the Four Forty-Three, LTD. Tract (called 20.00 acres)(North ½ of Outlot 180), continuing for a total distance of 1569.69 feet to a 1 inch iron pipe found, marking the southeasterly corner of said 20.00 acre tract, the northeasterly corner of the Beazer Homes Texas, LP tract (called 19.99 acres)(south ½ Outlot 180), recorded in B.C.C.F. No. 2016050422 and an angle point in the westerly line of the Beazer Homes Texas, LP tract (called 5.40 acres), recorded in B.C.C.F. No. 2016050422 and the most easterly southeast corner of herein described tract;

THENCE N 70°27'42” W, along and with the common line of said North ½ of Outlot 180 and the South ½ of Outlot 180, a distance of 1319.95 feet (called 1320.00 feet) to a 1/2 inch iron rod with cap stamped “Adams RPLS 3666” found, in the easterly line of the Four Forty-Three, LTD. Tract (called 46.35 acres)(Outlot 175), marking the common corner of the South ½ and North ½ of Outlot 180 and an interior corner of herein described tract;

THENCE S 19°29'54” W, along and with the common line of said 46.35 acre tract and said 19.99 acre tract, same being the common line of Outlot 180 and 175, a distance of 660.47 feet to a 1/2 inch iron rod with cap stamped “LJA Eng” found, in the north line of a 40 foot platted road, recorded in Volume 1, Page 71 and 72 and Volume 3, Page 139 and 140, B.C.P.R., marking the most westerly northwest corner of said 5.40 acre tract, the southeasterly corner of said 46.35 acre tract and the southwesterly corner of said 19.99 acre tract and an interior corner of herein described tract;

THENCE N 70°26'20” W, along and with the south line of 46.35 acre tract and the north line of said 40 foot platted road, a distance of 1321.08 feet to a 1/2 inch iron rod with cap stamped “Adams RPLS 3666” found, in the easterly line of the Four Forty-Three, LTD. Tract (called 27.7947 acres)(Outlot 174) and the westerly line of said 40 foot platted road, marking the southwesterly corner of said 46.35 acre tract and an interior corner of herein described tract;

THENCE S 19°28'54” W, along and with the common line of said 27.7947 acre tract and westerly line of said 40 foot platted road, a distance of 1390.63 feet to a TxDot Brass Disk found in the northwesterly right-of-way (r.o.w.) line of State Highway No. 6 (a.k.a. Morris Avenue)(200' R.O.W.), recorded in B.C.C.F. No. 2013053500, marking the southeasterly corner of said 27.7947 acre tract and the most southerly southeast corner of herein described tract;

THENCE N 70°30'10” W, along the northwesterly r.o.w. line of said State Highway No. 6, a distance of 33.83 feet to a TxDot Brass Disk found, marking the southeasterly corner of the Russell T. Rudy and Randall D. Rudy tract (called 18 acres), recorded in Volume 1408, Page 806, B.C.D.R., the southwesterly corner of said 27.7947 acre tract and the most southerly southwest corner of herein described tract, from which a TxDot Brass Disk found, at the intersection of easterly r.o.w. line of County Road 82 (a.k.a. Iowa Lane)(60' R.O.W. as occupied), recorded in B.C.C.F. No. 2006021816 and the northwesterly r.o.w. line of said State Highway No. 6, marking the southwesterly corner of a 0.217 acre tract, recorded in B.C.C.F. No. 2013053500 bears, N 70°30'10” W, 365.23 feet;

THENCE N 03°19'19” W, along and with the common line of said 27.7947 acre tract and said 18 acre tract, a distance of 2310.10 feet to a 1/2 inch iron rod with cap stamped “Adams RPLS 3666” found, marking the northwest corner of said 27.7947 acre tract and an angle point for corner of herein described tract, from which a 3/4 inch pinched top pipe bears, N 09°17' W, 1.1 feet and from which an iron rod with cap stamped “Kalkomey” found in the easterly r.o.w. line of said County Road 82, marking the northwest corner of said 18 acre tract, bears S 87°00'54” W, 328.14 feet and a 5/8 inch iron rod found in the easterly r.o.w. line of said County Road 82, marking the southwest corner of a called 41.4819 acre tract, recorded in B.C.C.F. No. 2003061748 bears, N 02°13'14” W, 38.07 feet;

THENCE N 86°57'38” E, along and with the north line of said 18 acre tract, a distance of 729.52 feet to a 5/8 inch iron rod with cap stamped “FMS” set, at the southwest corner of Section 73 and being in the centerline intersection of two 40 foot platted roads and being the common corner of said Section 73 and the H.T. & B. Railroad Company Survey, Section 72, Abstract 460, marking the southeast corner of the Brazos River Authority tract (called 6.676 acres)(cause no. 54,761A), recorded in Volume 33, Page 154, district clerk records of Brazoria County, Texas (B.C.D.C.R.), the southwest corner of the Brazoria County MUD No. 43 Drainage Easement (called 1.675 acres, recorded in B.C.C.F. No. 2016026159, the southwest corner of said 9.929 acre tract and an interior corner of herein described tract;

THENCE N 03°28'57” W, along and with the common line of said Section 73 and Section 72 and centerline of said 40 foot platted road, at 40.00 feet pass a point marking the southwest corner of a 0.34 acre tract (Parcel 1) out of said called 41.4819 acre tract, continuing for a total distance of 2640.38 feet (called 2640.00 feet) to a 1 inch iron pipe found, marking the northwest corner of a 0.25 acre tract (Parcel 2), the northwest corner of said 19.919 acre tract, the northwest corner of a 3.430 acre drainage easement, recorded in B.C.C.F. No. 2016026156, the northeast corner of said Brazos River Authority tract (called 6.676 acres), the southeast corner of the Brazos River Authority Parcel “D” tract (called 3.18 acres), recorded in Volume 1070, Page 315, B.C.D.R., the southwest corner of the Brazos River Authority Parcel “B” tract (called 0.61 acres), recorded in Volume 1070, Page 318, B.C.D.R., the southwest corner of the Brazoria County Municipal Utility District (M.U.D.) No. 43 Drainage Easement tract (called 1.739 acres), recorded in B.C.C.F. No. 2016011559 and the common corner of Lots 4 and 5, Section 73, from which a 1/2 inch iron rod found in the east r.o.w. line of County Road 82 (a.k.a. Iowa Lane)(60' R.O.W. as occupied), recorded in B.C.C.F. No. 2006021816, marking the southwest corner of the Joan Banneyer tract (called 1.367 acres), recorded in B.C.C.F. No. 2005003981 and the northwest corner of the Sonmar of Scottsdale, LLC tract (called 53.948 acres), bears S 86°37'46” W, 900.42 feet;

THENCE N 86°51'03” E, along and with the common line of herein described tract and said lot 4 and the centerline of a 40 foot platted road, at 657.75 feet (called 660.00 feet) pass a 3/4 inch iron pipe found, marking the northeast corner of said 19.919 acre tract and the southwest corner of the 102929 Brazoria Inc. tract (called 34.90 acres), recorded in B.C.C.F. No. 2005033429 and being the common corner of Lots 4, 12, 13 and 5, and at 1973.99 feet (called 1980.00 feet) pass a 1/4 inch iron pipe found, marking the southeast corner of said 34.90 acre tract and being the common corner of Lots 20, 28, 29 and 21, continuing for a total distance of 2632.44 feet (called 2640.00 feet) to a 5/8 inch iron rod with cap stamped “FMS” found in the west line of a 60 foot American Canal Company Easement, recorded in Volume 638, Page 127, B.C.D.R., marking an interior corner of said remainder of a 433.09 acre tract and an interior corner of herein described tract and being the common corner of Lots 28, 36, 37 and 29 of said Section 73;

THENCE N 03°27'06” W, along and with the common line of Lots 28, 36, 27, 35, 26, 34, 25 and 33 and the west line of said 60 foot American Canal Company Easement, a distance of 2641.03 feet (called 2640.00 feet) to a 5/8 inch iron rod with cap stamped “FMS” found in the north line of Section 73, the north line of a said 60 foot American Canal Company Easement, the south line of the Mary V O'Donnell Survey, Division “O”, Abstract 469, recorded in Volume 2, Page 91 and 92, B.C.P.R. the south line of the John and Edith Lebourgeois tract (called 6.978 acres), recorded in B.C.C.F. No. 98-053061, the north line of the Eastbank Bayou, LP tract (called 19.950 acres), recorded in B.C.C.F. No. 2007022032 and the centerline of said 40 foot platted road, marking the most northerly northwest corner of herein described tract and being the common corner of Lot 25 and 33 of said Section 73, from which a 1/2 inch iron rod found bears, S 82°35” E, 14.3 feet;

THENCE N 86°50'29” E, along and with the common line of Section 73, Division “O”, the centerline of said 40 foot platted road and the north line of said 60 foot American Canal Company Easement, a distance of 659.60' (called 660.00 feet) to the **POINT OF BEGINNING** and containing a calculated area of 418.318 acres of land.

EXHIBIT D

FIRST TRACT

18.643 ACRES
812,089 SQUARE FEET
H.T.&B. R.R. CO. SURVEY, SECTION 64
ABSTRACT NO. 483
CITY OF MANVEL
BRAZORIA COUNTY, TEXAS

FIELD NOTE DESCRIPTION of a 18.643 acre (812,089 square foot) tract of land located in the H.T.&B. R.R. Co. Survey, Section 64, Abstract Number 483, City of Manvel, Brazoria County, Texas and said 18.643 acre tract of land being all of Tract II, a called 18.643 acre tract described in the deed to Alvin Independent School District recorded under Brazoria County Clerk's File Number (B.C.C.F. No.) 2021066368, and being out of and a part of Outlot 181, Dr. A.A. Luther Subdivision recorded under Volume (Vol.) 1, Pages (Pg.) 71 & 72 of the Brazoria County Plat Records (B.C.P.R.) and the E.C. Pitkin Subdivision recorded under Vol. 3, Pg. 139, B.C.P.R., said 18.643 acre tract being more particularly described by metes and bounds as follows: (The bearings described herein are oriented to the Texas Coordinate System, South Central Zone, NAD 1983.)

BEGINNING in the southerly line of Lot 48, Section 73, Allison Richey Gulf Coast Home Co. Subdivision, recorded under Vol. 2, Pg. 91, B.C.P.R. and being the northwest corner of Restricted Reserve "M", Lakeland Subdivision, Section Two recorded under File No. 2014018651, B.C.P.R. and the northeast corner of said Tract II and the herein described tract, from which a 5/8-inch iron rod with cap stamped "Baseline" found bears, North 85 degrees 14 minutes East, 0.62 feet;

THENCE, South 03 degrees 25 minutes 41 seconds East, along the west line of said Restricted Reserve "M", passing at a distance of 88.02 feet, the southwest corner of said Restricted Reserve "M" and the most westerly northwest corner of Restricted Reserve "H", said Lakeland Subdivision, Section 2, from which a 5/8-inch iron rod with cap stamped "Baseline" bears, South 23 degrees 23 minutes East, 0.32 feet, continuing along the west line of said Restricted Reserve "H", passing at a distance of 612.00 feet, the southwest corner of said Restricted Reserve "H" and the northwest corner of the remainder of a called 5.632 acre tract described in the deed to Lakeland Communities, LP, recorded under B.C.C.F. No. 2013029570, continuing along the west line of said remainder of a called 5.632 acre tract, passing at a distance of 692.00 feet, the southwest corner of said remainder of a called 5.632 acre tract and the northwest corner of Restricted Reserve "E", said Lakeland Subdivision, Section Two, continuing along the west line of said Restricted Reserve "E", a total distance of 1,236.28 feet, to a 5/8-inch iron rod with orange plastic cap stamped "West Belt Surveying Inc" found in the northeasterly line of Lot 20, Block 1, Bluewater Lakes, Section 4, a subdivision recorded under File No. 2018019193, B.C.P.R. and marking the southwest corner of said Restricted Reserve "E" and the southeast corner of said Tract II and the herein described tract;

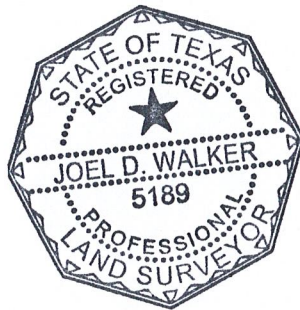
THENCE, North 70 degrees 28 minutes 49 seconds West, along the northeasterly line of said Block 1, Bluewater Lakes, Section 4, a distance of 1,005.41 feet, to a 5/8-inch iron rod with orange plastic cap stamped "West Belt Surveying Inc" found in the northeasterly line of Lot 6, Block 1, said Bluewater Lakes, Section 4 and the southeasterly line of a 40' wide roadway easement, recorded under Vol. 1, Pgs. 71 & 72, B.C.P.R. and Vol. 3, Pg. 139, B.C.P.R. and marking the southwest corner of said Tract II and the herein described tract, from which a 5/8-inch iron rod with cap found bears, North 70 degrees 29 minutes West, 20.00 feet and a 1/2-inch iron rod found bears, North 70 degrees 29 minutes West, 40.00 feet;

EXHIBIT D

THENCE, North 19 degrees 32 minutes 37 seconds East, departing the northeasterly line of said Block 1, Bluewater Lakes, Section 4 and along the southeasterly line of said 40' wide roadway easement, a distance of 917.07 feet, to the southerly of Lot 40, Section 73, aforesaid Allison Richey Gulf Coast Home Co. subdivision and the northwest corner of said Tract II and the herein described tract, from which a 5/8-inch iron rod with cap stamped "Leany" found bears, North 02 degrees 29 minutes West, 0.33 feet;

THENCE, North 86 degrees 34 minutes 43 seconds East, along the southerly line of said Lot 40, Section 73 and aforesaid Lot 48, Section 73, a distance of 567.93 feet, to the POINT OF BEGINNING and containing a computed area of 18.643 acres (812,089 square feet) of land as depicted on the Land Title Survey dated: November 28, 2023, revised: December 4, 2023, prepared by West Belt Surveying, Inc., Project No. S647-0337A.

West Belt Surveying, Inc.
Certified Firm No. 10073800
21020 Park Row
Katy, Texas 77449
(281) 599-8288



Joel D. Walker
Joel D. Walker Date: 12/4/23
Texas Registration No. 5189

EXHIBIT D

Exhibit B

Legal Description of Drill Site

[Attached]

August 19, 2021
Job No. LJAS001-2791-2104

DESCRIPTION OF
4.000 ACRES
DRILL SITE

Being 4.000 acres of land located in the H.T.& B. R.R. Company Survey, Section 64, (A.K.A.) Mary V. O'Donnell Survey, Abstract 483, Brazoria County, Texas, and also being a portion of Outlot 195 of the Dr. A. A. Luther Subdivision of Manvel and Surrounding Acreage Property, according to the plat recorded in Volume 1, Pages 71-72, and Volume 3, Pages 139-140 of the Plat Records of Brazoria County, Texas (B.C.P.R.), and a portion of that certain tract conveyed to Four Forty Three, Ltd. (described as Fourth Tract) by instrument of record in Volume 1048, Page 760, of the Deed Records of said Brazoria County, Texas (B.C.D.R.), said 4.000 acres being more particularly described as follows (all bearings referenced to the Texas Coordinate System, South Central Zone, NAD 83, 1993 adjustment);

COMMENCING for reference at a 1/2-inch iron rod with cap stamped, "S ADAMS RPLS 3666" found for the southeast corner of said Fourth Tract and said Outlot 195, same being the northeast corner of that certain called 20.000 acre tract, conveyed to Four Forty Three, Ltd. (described as Fifth Tract) by instrument of record in Volume 1048, Page 760, B.C.D.R. and Outlot 180 of said Dr. A. A. Luther Subdivision, same being on the northwesterly line of a called 40 foot wide-right-of-way as shown on said Dr. A. A. Luther Subdivision;

Thence, North 19° 31' 43" East, along the east line of said Fourth tract and said Outlot 195, same being a northwesterly line of said 40 foot wide right-of-way, 454.12 feet to the southeast corner and the POINT OF BEGINNING of the herein described tract;

Thence, South 89°45'12" West, departing said common line, 467.08 feet to a point for corner, the beginning of a curve;

EXHIBIT D

4.000 Acres

August 19, 2021
Job No. LJAS001-2791-2104

Thence, 78.42 feet along the arc of a non-tangent curve to the left, having a radius of 1,860.00 feet, a central angle of $02^{\circ} 24' 56''$, and a chord which bears North $21^{\circ} 46' 51''$ West, 78.41 feet to a point for corner;

Thence, North $22^{\circ} 59' 19''$ West, 225.66 feet to a point for corner, the beginning of a curve;

Thence, 49.74 feet along the arc of a tangent curve to the right, having a radius of 30.00 feet, a central angle of $95^{\circ} 00' 00''$, and a chord which bears North $24^{\circ} 30' 41''$ East, 44.24 feet to a point for corner, the beginning of a compound curve;

Thence, 324.76 feet along the arc of a non-tangent curve to the right, having a radius of 472.48 feet, a central angle of $39^{\circ} 22' 55''$, and a chord which bears North $89^{\circ} 47' 18''$ East, 318.40 feet to a point for corner;

Thence, South $70^{\circ} 28' 17''$ East, 340.27 feet to a point for corner on the northwesterly right of way line of the aforementioned 40 foot wide-right-of-way, same being the southeasterly line of the aforementioned Fourth Tract and the aforementioned Outlot 195, from which a 1/2-inch iron rod with cap stamped "S ADAMS RPLS 3666" found for the northwest corner of said 40 foot wide right-of-way, same being the northeast corner of said Fourth Tract, and said Outlot 195, said point lying on the south line of Lot 40 of the Allison Richey Gulf Coast Home Company Part of Suburban Gardens Subdivision, Section 73, according to the plat recorded in Volume 2, Pages 91-92, B.C.P.R. and that certain tract conveyed to Four Forty Three, Ltd. (described as First Tract) by instrument of record in Volume 1048, Page 760, B.C.D.R., same being the north line of the aforementioned Mary V. O'Donnell Survey bears North $19^{\circ} 31' 43''$ East, 237.23 feet;

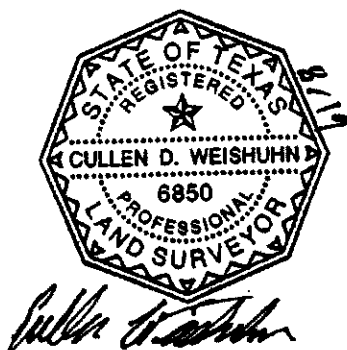
EXHIBIT D

4.000 Acres

August 19, 2021
Job No. LJA001-2791-2104

Thence, South 19° 31' 43" West, along the southeasterly line of said Fourth Tract and said Outlot 195, same being the northwesterly line of said 40 foot wide right-of-way, 218.81 feet to the POINT OF BEGINNING and containing 4.000 acres of land.

Corner monuments were not set at the Client's request.



LJA Surveying, Inc.

LEGEND

B.C.O.P.R. OFFICIAL PUBLIC RECORDS OF BRAZORIA COUNTY, TEXAS

B.C.O.R. OFFICIAL RECORDS OF BRAZORIA COUNTY, TEXAS

B.C.P.R. PLAT RECORDS OF BRAZORIA COUNTY, TEXAS

B.C.D.R. DEED RECORDS OF BRAZORIA COUNTY, TEXAS

P.O.C. POINT OF COMMENCING

P.O.B. POINT OF BEGINNING

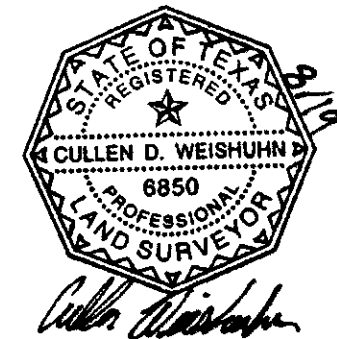
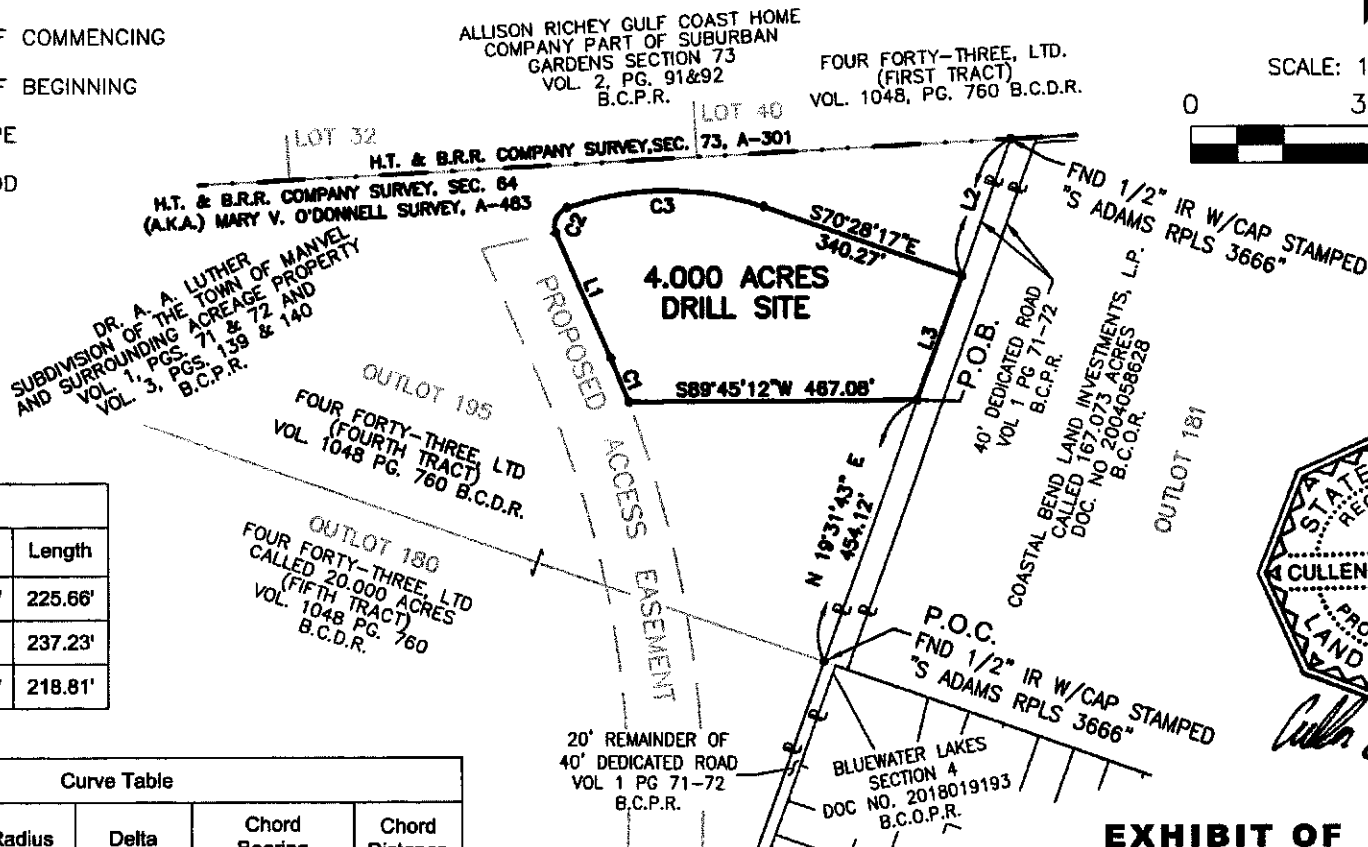
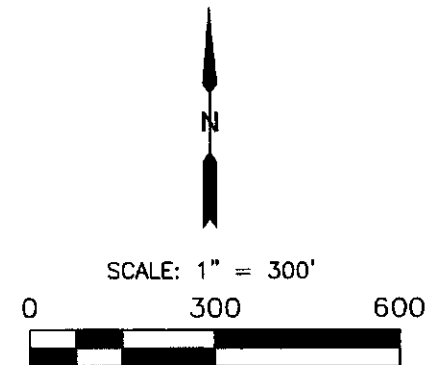
I.P. IRON PIPE

I.R. IRON ROD

VOL. VOLUME

PG. PAGE

EXHIBIT D



Line Table		
Line #	Direction	Length
L1	N22° 59' 19"W	225.66'
L2	N19° 31' 43"E	237.23'
L3	S19° 31' 43"W	218.81'

Curve Table					
Curve #	Arc Length	Radius	Delta	Chord Bearing	Chord Distance
C1	78.42'	1,860.00	2°24'56"	N21° 46' 51"W	78.41'
C2	49.74'	30.00	95°00'00"	N24° 30' 41"E	44.24'
C3	324.76'	472.48	39°22'55"	N89° 47' 18"E	318.40'

**EXHIBIT OF
4.000 ACRES
DRILL SITE
IN THE
H.T. & B.R.R. COMPANY SURVEY, SEC. 64
(A.K.A.) MARY V. O'DONNELL SURVEY, A-483
BRAZORIA COUNTY, TEXAS**

NOTES:

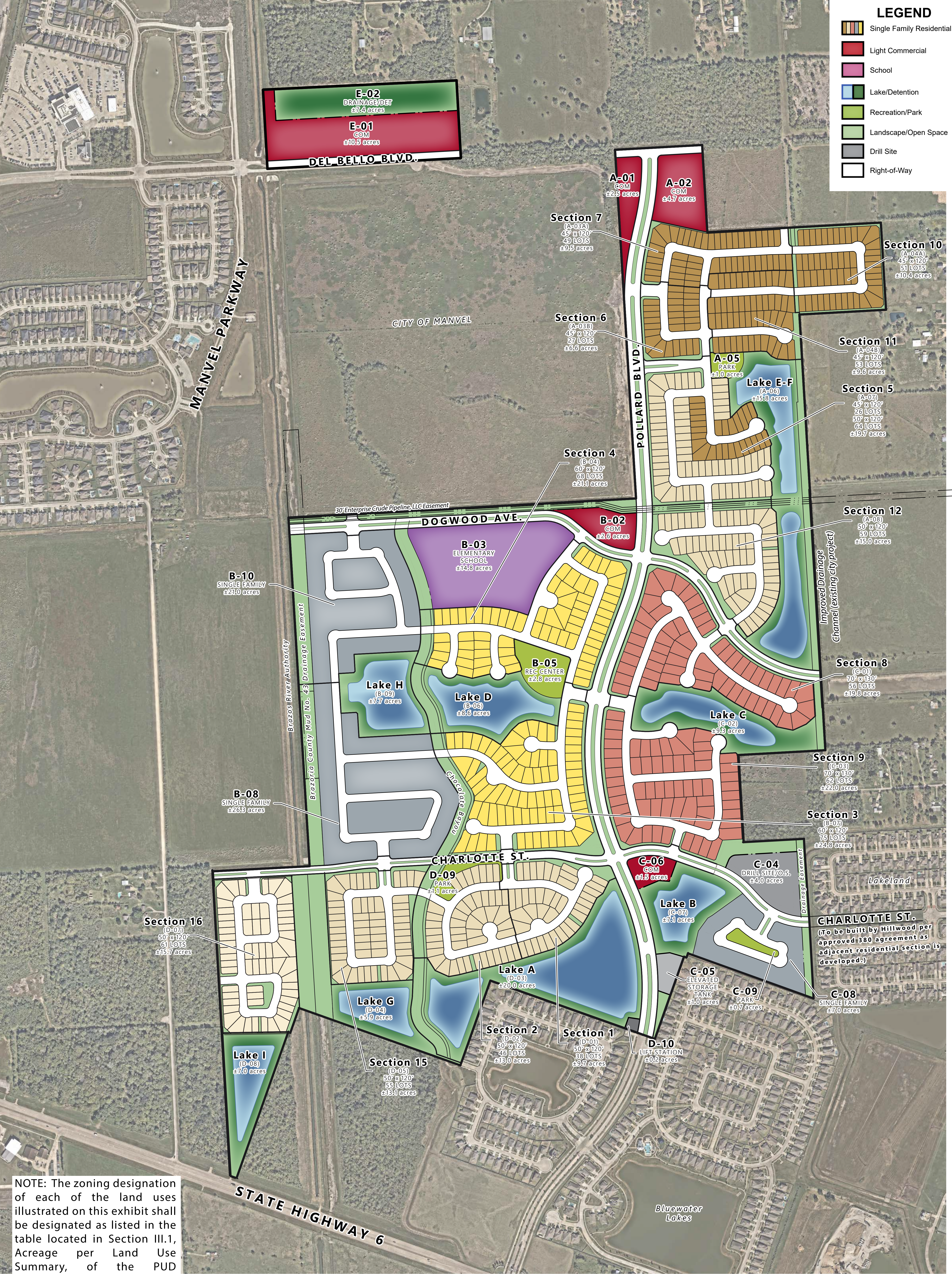
- ALL BEARINGS ARE REFERENCED TO THE TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE, NAD 83, 1993 ADJ.
- CORNER MONUMENTS WERE NOT SET AT THE CLIENT'S REQUEST.

AUGUST 2021 JOB NO. LJA001-2791-2104

LJA Surveying, Inc.

3600 W Sam Houston Parkway S Suite 175
Houston, Texas 77042
Phone 713.953.5200
Fax 713.953.5026
T.B.P.L.S. Firm No. 10194382

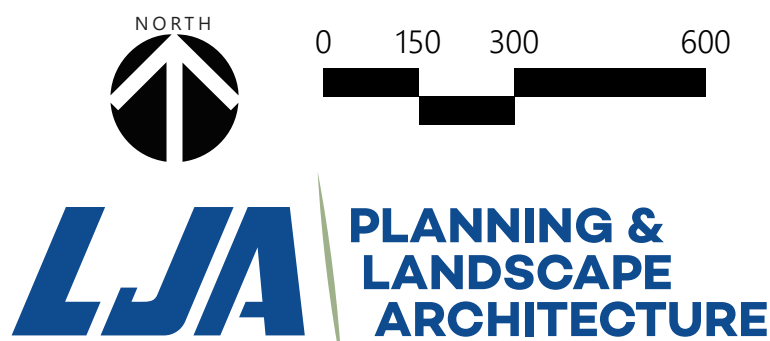




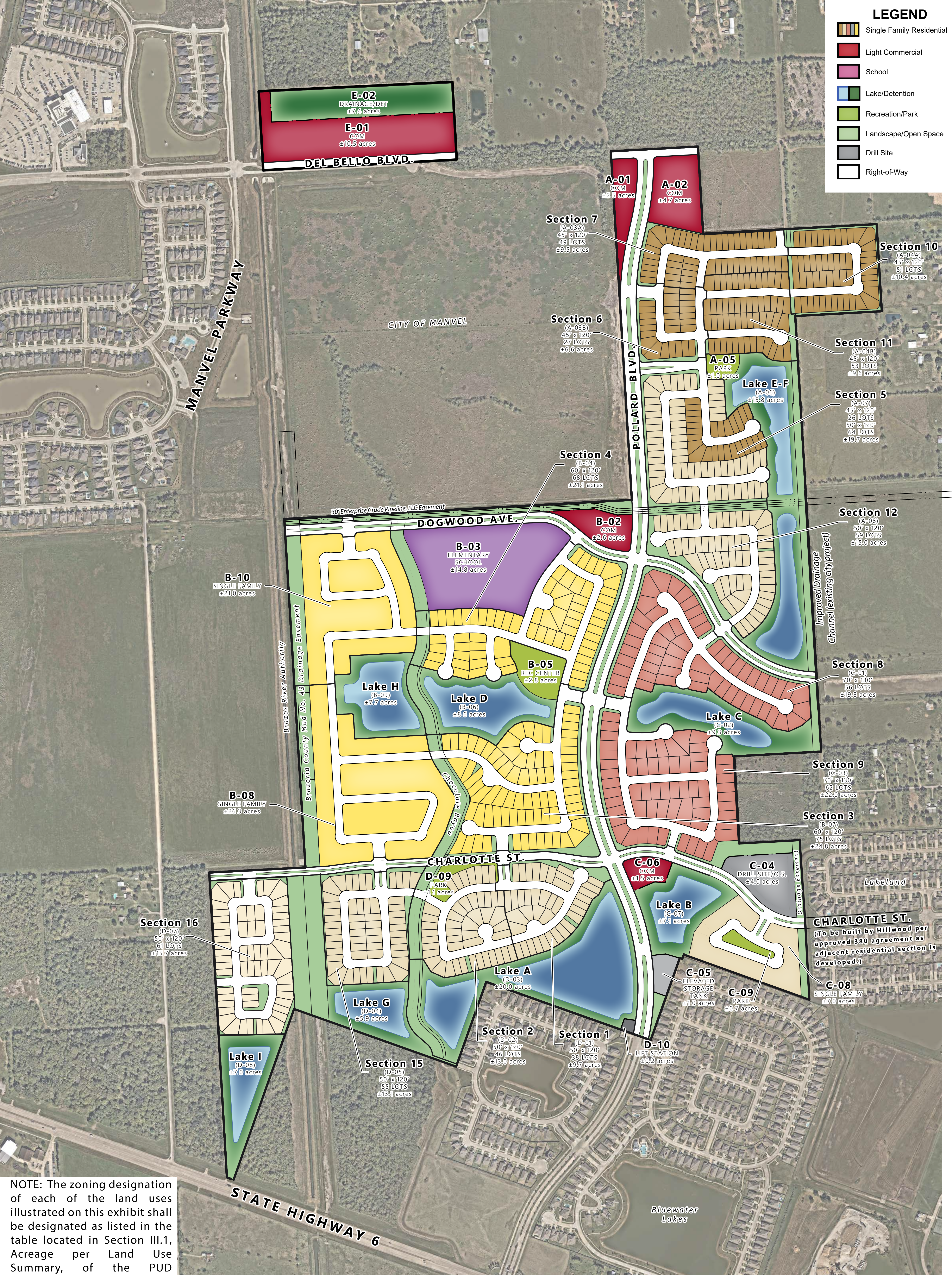
Prepared for
**HILLWOOD
RESIDENTIAL**

EXHIBIT E
Planned Unit Development
Conceptual Land Use Exhibit
VALENCIA
±457.0 Acres of Land
Manvel, Texas

Reference Date: 02.27.2024



RELATIONSHIPS | PROCESS | DESIGN



NOTE: The zoning designation of each of the land uses illustrated on this exhibit shall be designated as listed in the table located in Section III.1, Acreage per Land Use Summary, of the PUD document.

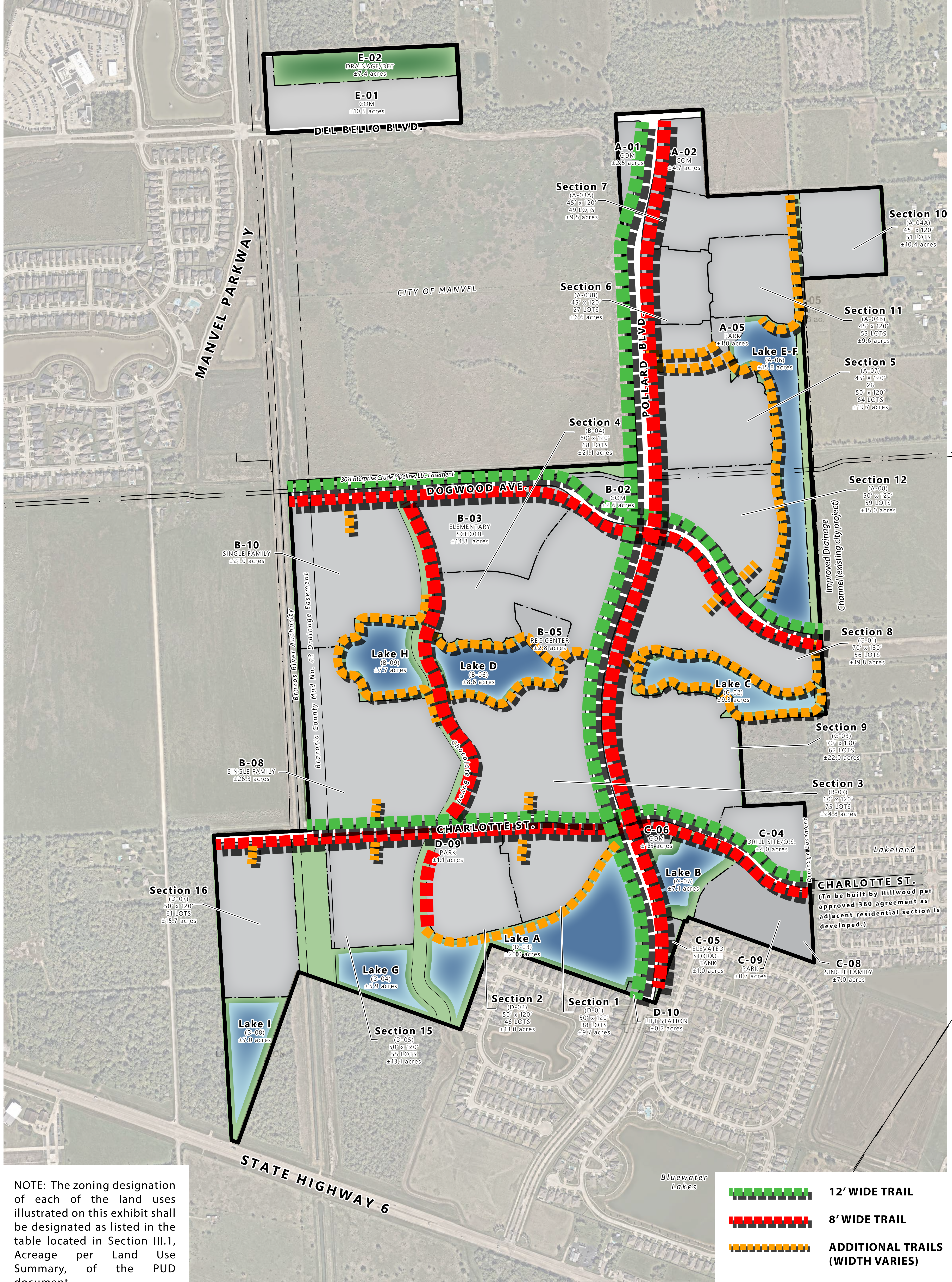
Prepared for
**HILLWOOD
RESIDENTIAL**

EXHIBIT F

Planned Unit Development
Single Family Residential Exhibit

VALENCIA

±457.0 Acres of Land
Manvel, Texas



NOTE: The zoning designation of each of the land uses illustrated on this exhibit shall be designated as listed in the table located in Section III.1, Acreage per Land Use Summary, of the PUD document.

Prepared for
**HILLWOOD
RESIDENTIAL**

EXHIBIT H
Planned Unit Development
Conceptual Amenities and Open Space Exhibit
VALENCIA
±457.0 Acres of Land
Manvel, Texas

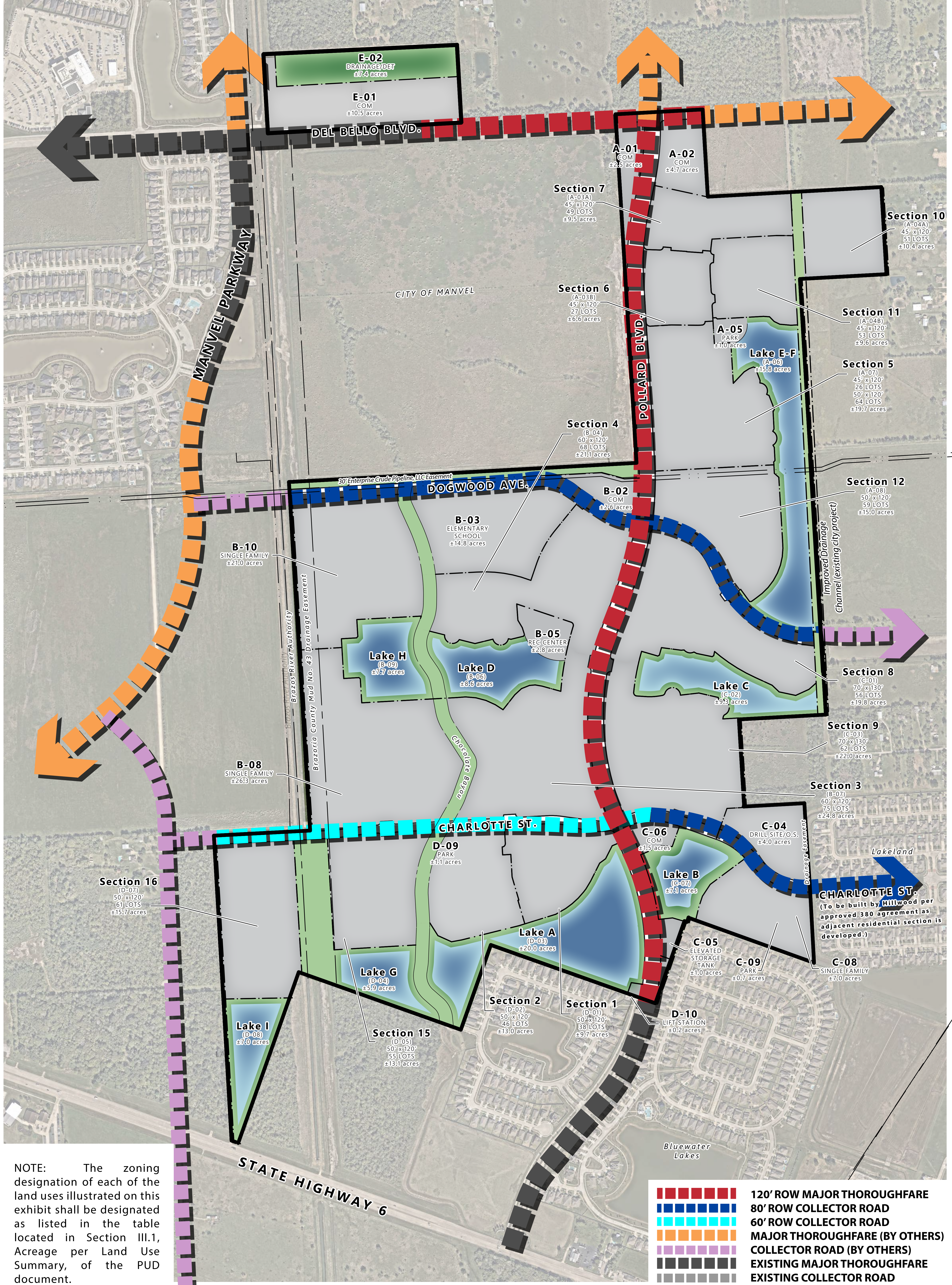
Reference Date: 02.27.2024



0 150 300 600

LJA **PLANNING & LANDSCAPE ARCHITECTURE**

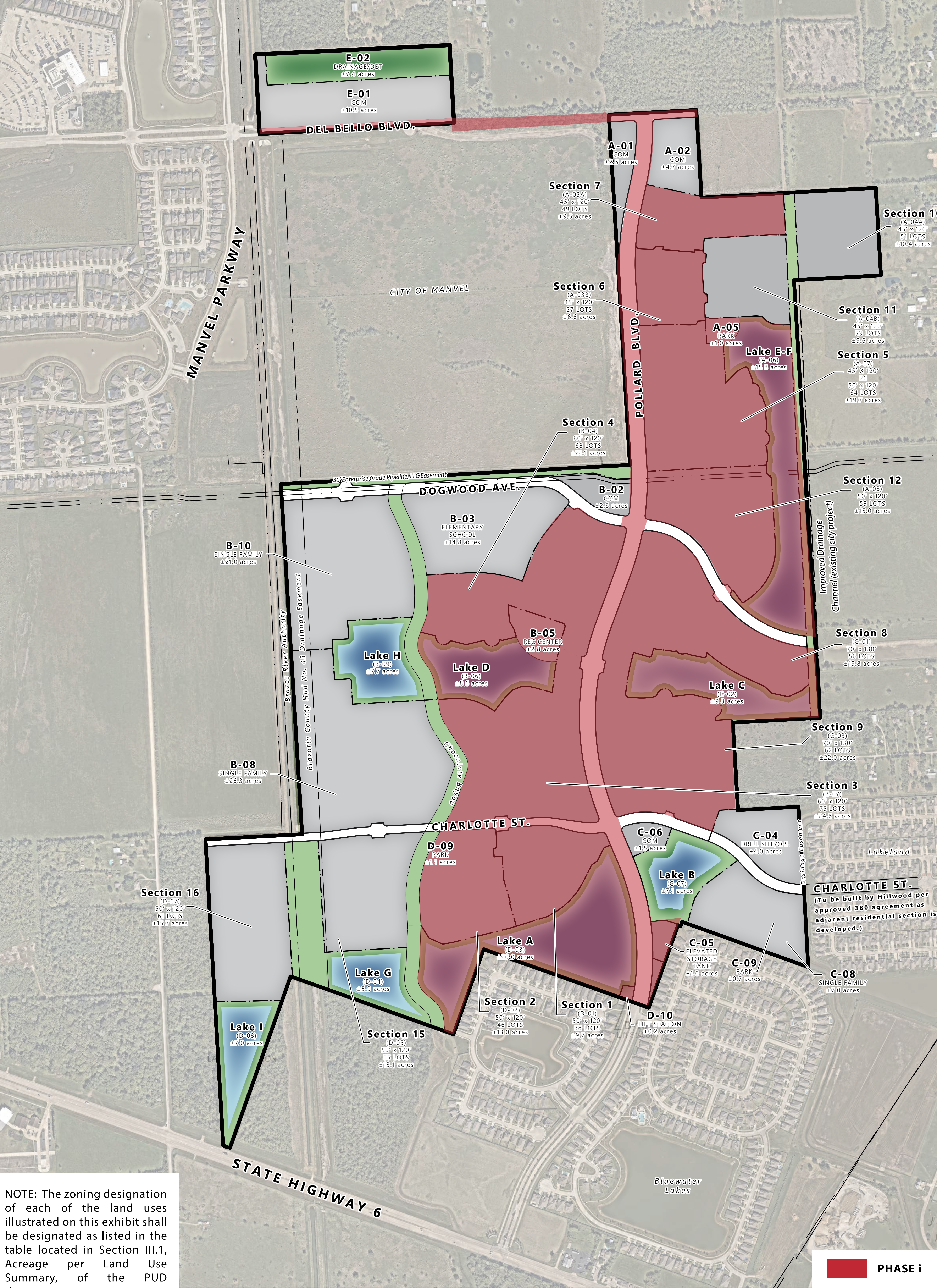
RELATIONSHIPS | PROCESS | DESIGN



NOTE: The zoning designation of each of the land uses illustrated on this exhibit shall be designated as listed in the table located in Section III.1, Acreage per Land Use Summary, of the PUD document.

Prepared for
**HILLWOOD
RESIDENTIAL**

EXHIBIT G
Planned Unit Development
Conceptual Roadway Exhibit
VALENCIA
±457.0 Acres of Land
Manvel, Texas



NOTE: The zoning designation of each of the land uses illustrated on this exhibit shall be designated as listed in the table located in Section III.1, Acreage per Land Use Summary, of the PUD document.

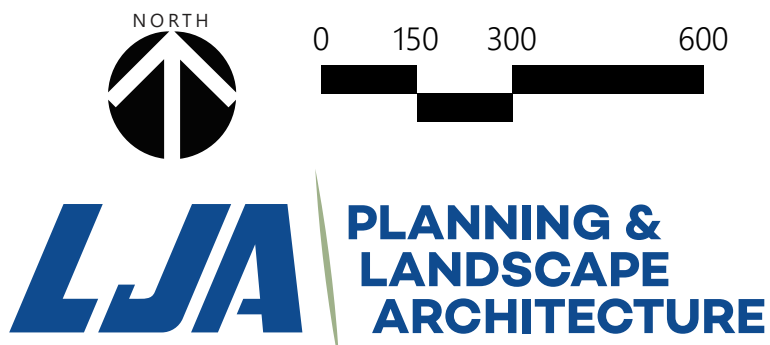
Prepared for
**HILLWOOD
RESIDENTIAL**

© Copyright 2024 LJA Engineering, Inc. Drawings, written material, and design concepts provided is considered property of LJA & shall not be reproduced in part or whole in any form or format without written consent of LJA.
This exhibit is an illustrative representation for presentation purposes only and should not be used for computation or construction purposes. The information provided within should be considered a graphic representation to aid in determining plan components and relationships and is subject to change without notice. All property boundaries, easements, road alignments, drainage, flood plans, environmental issues and other information shown is approximate and should not be relied upon for any purpose. No warranties, express or implied, concerning the actual design, accuracy, location, and character of the facilities shown on this exhibit are intended.

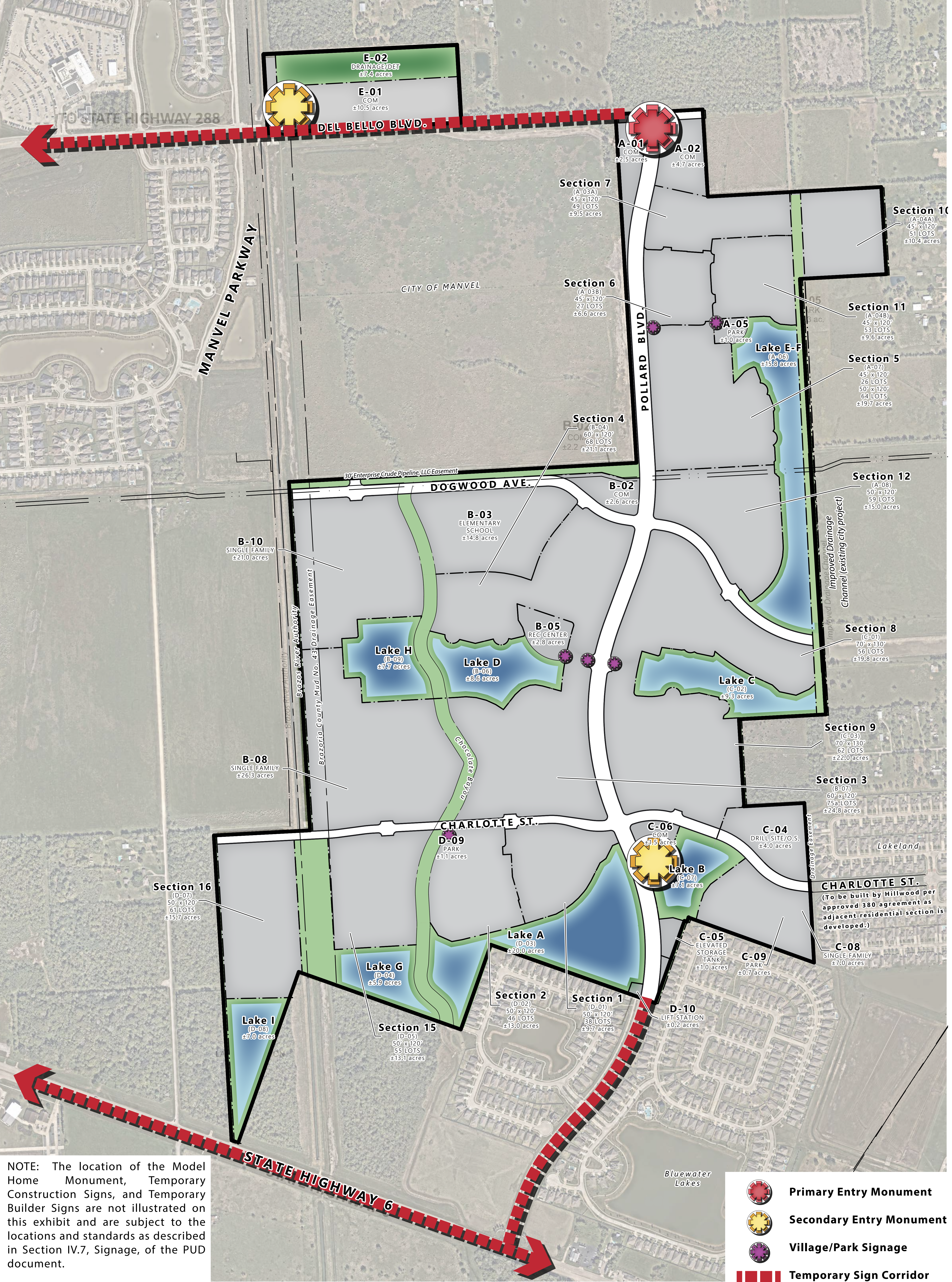
EXHIBIT I

Planned Unit Development
Phasing Exhibit
VALENCIA
±457.0 Acres of Land
Manvel, Texas

Reference Date: 02.27.2024

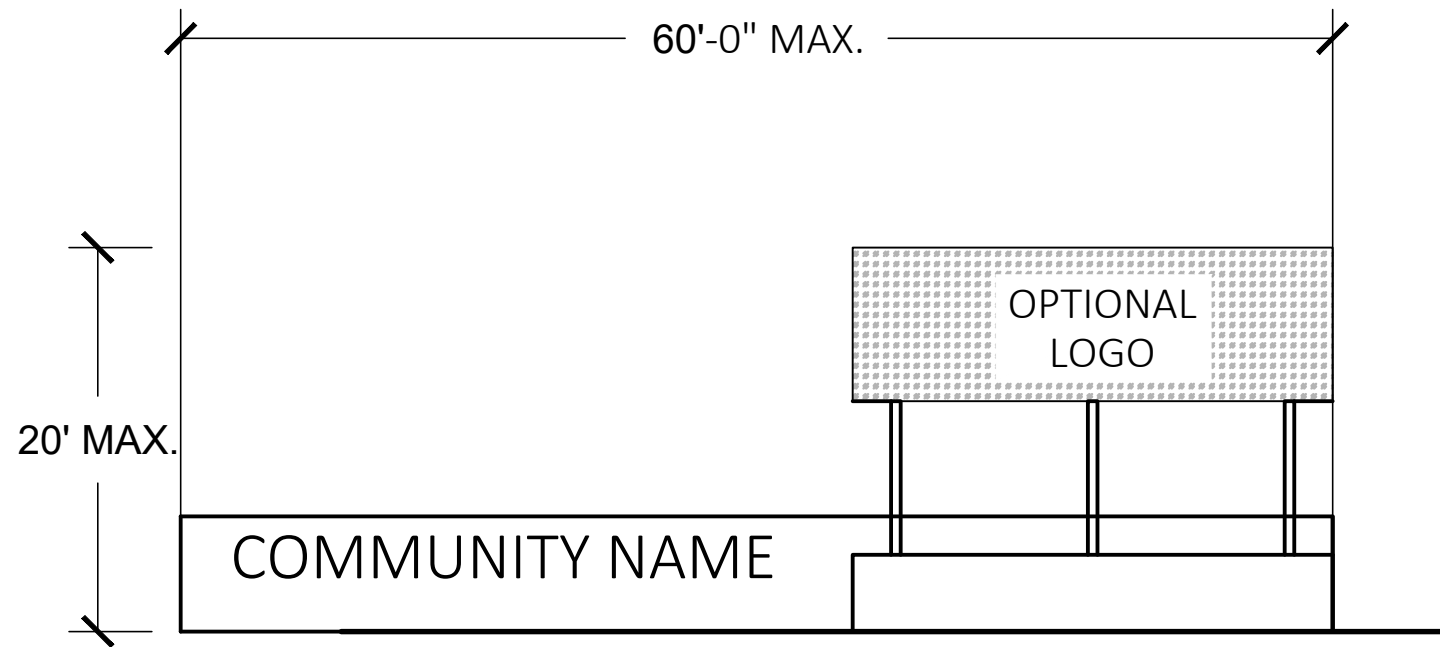


RELATIONSHIPS | PROCESS | DESIGN

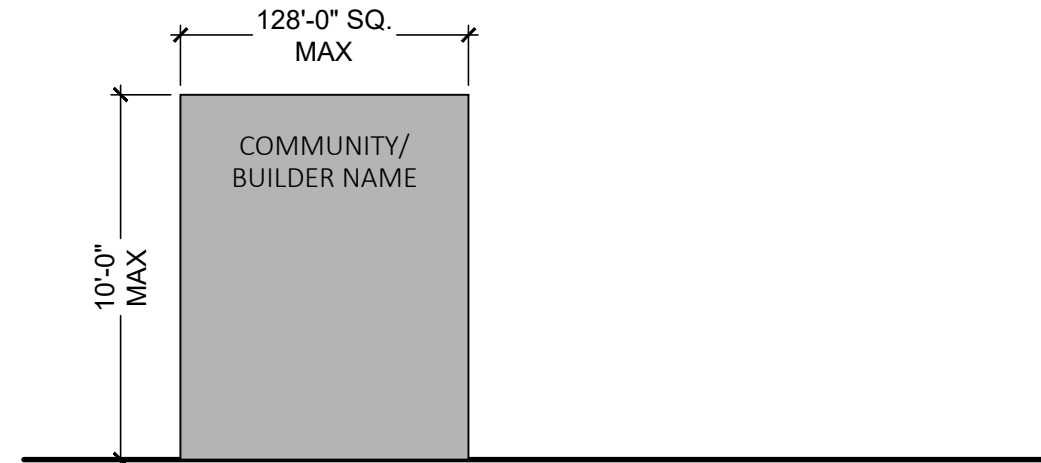


Prepared for
**HILLWOOD
RESIDENTIAL**

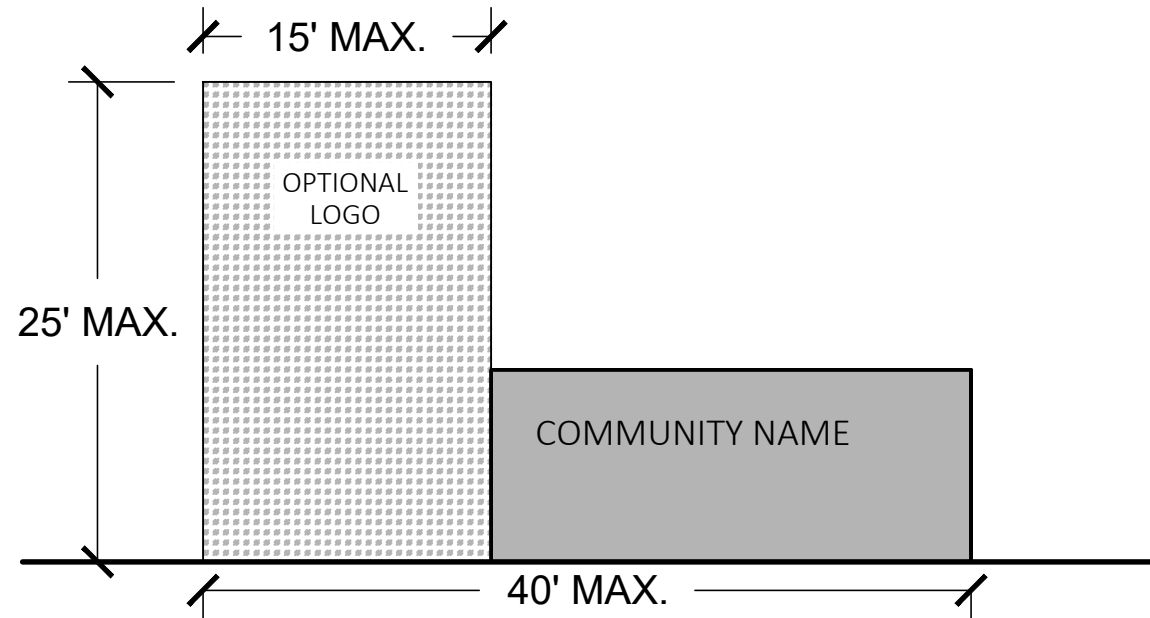
EXHIBIT J
Planned Unit Development
Conceptual Project Signage Exhibit
VALENCIA
±457.0 Acres of Land
Manvel, Texas



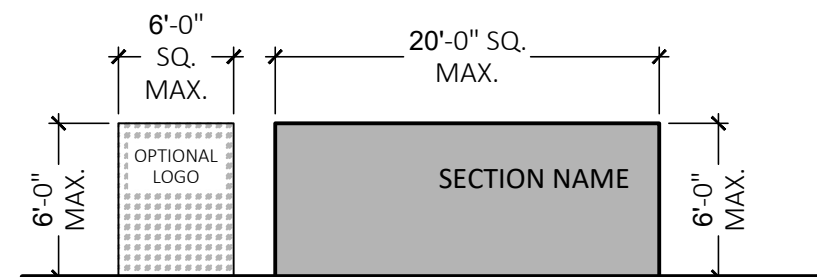
PRIMARY ENTRY MONUMENTS



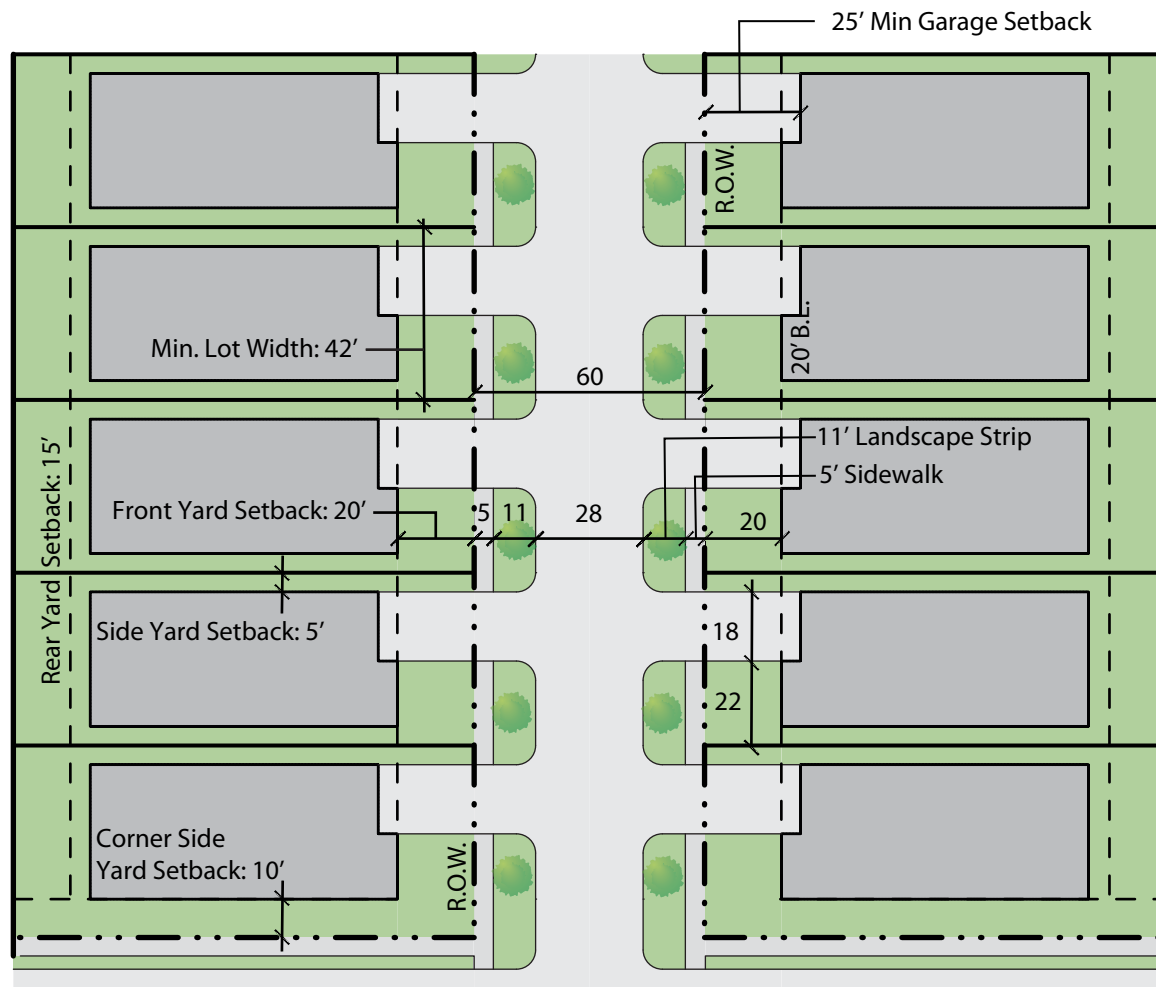
TEMPORARY COMMUNITY SIGNAGE



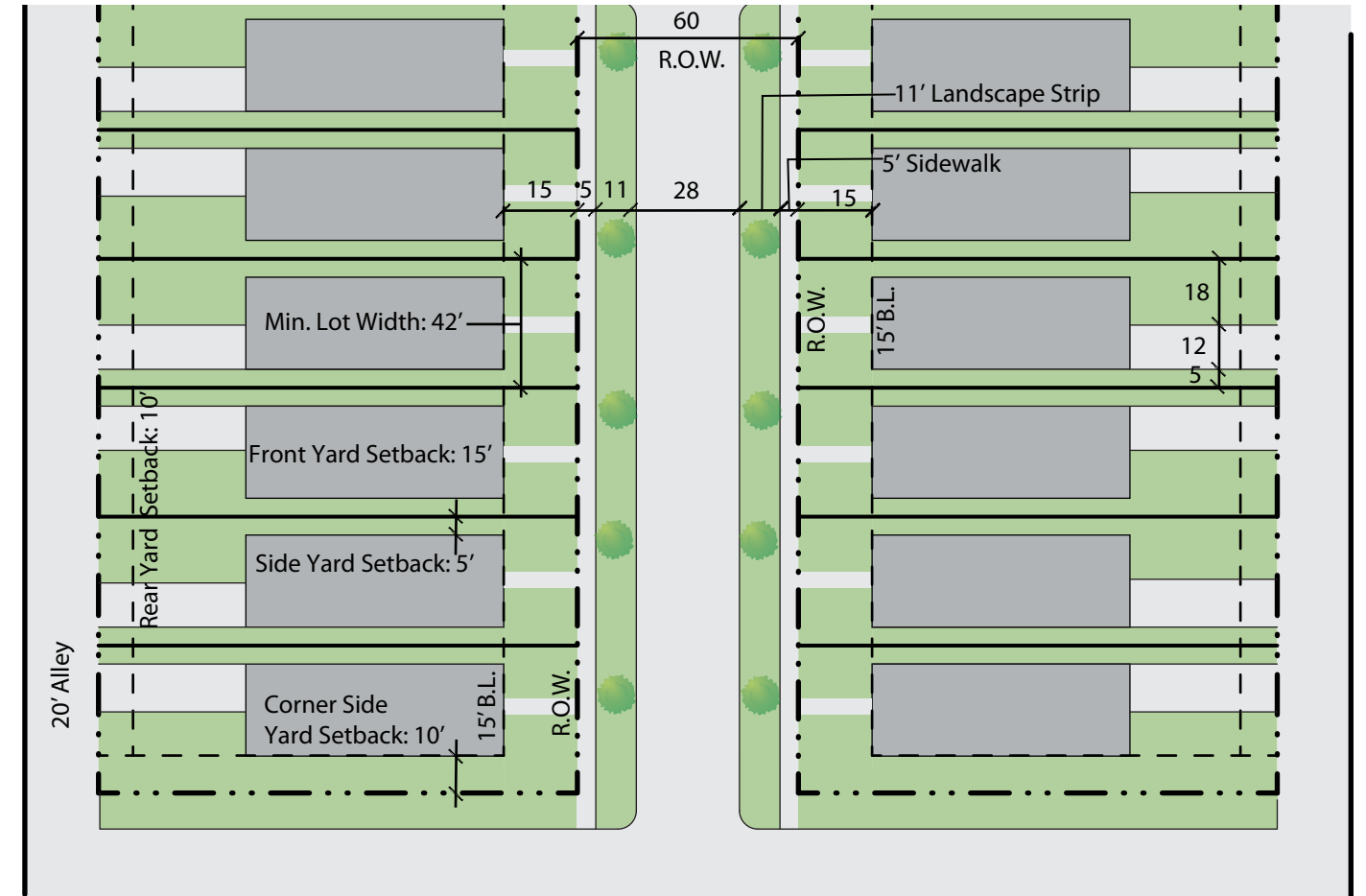
SECONDARY ENTRY MONUMENTS



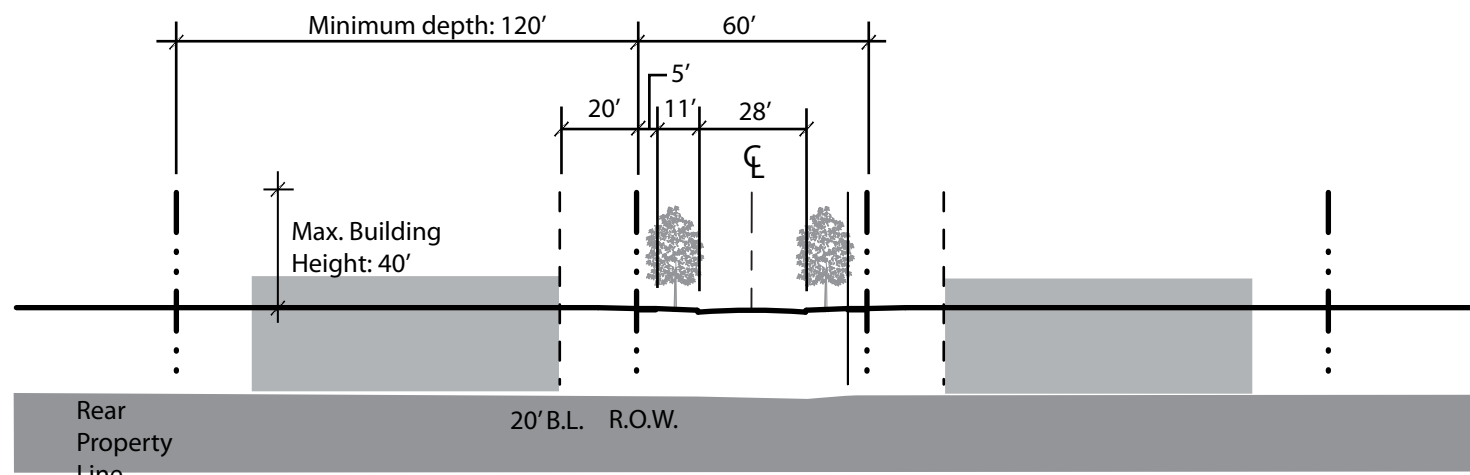
VILLAGE/PARK ENTRY MONUMENTS



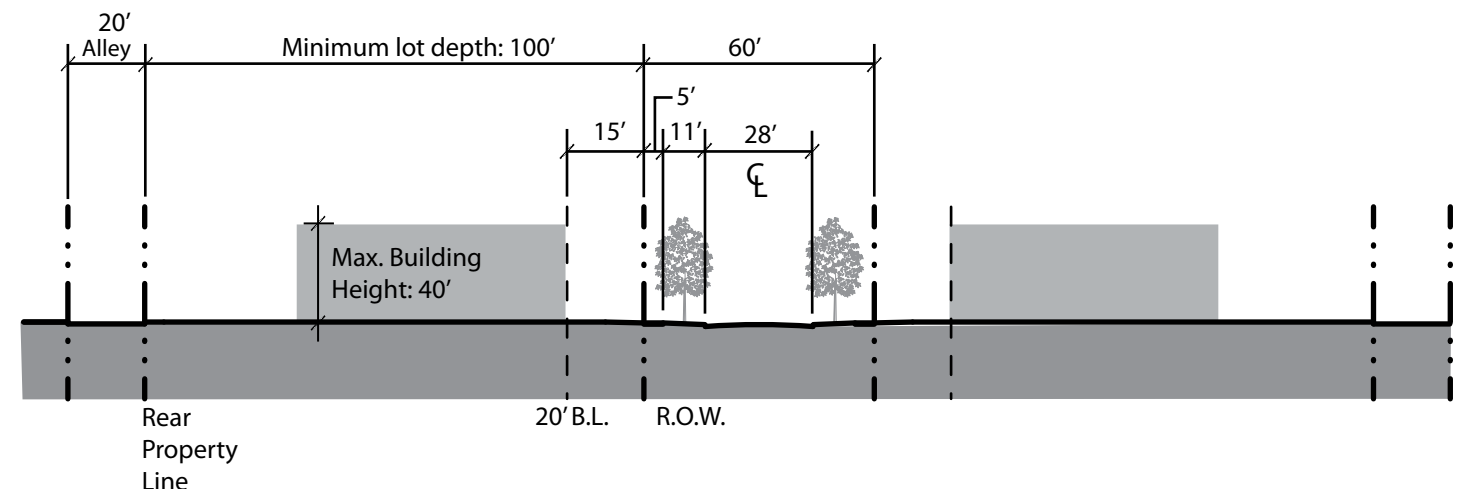
1. Plan Front Load 42' Product - 60' R.O.W.



2. Plan 35' Alley Product - 60' R.O.W.



1. Section Front Load 42' Product - 60' R.O.W.



2. Section 35' Alley Product - 60' R.O.W.

Prepared for

HILLWOOD RESIDENTIAL

© Copyright 2024 LJA Engineering, Inc. Drawings, written material, and design concepts provided is considered property of LJA & shall not be reproduced in part or whole in any form or format without written consent of LJA.

This exhibit is an illustrative representation for presentation purposes only and should not be used for computation or construction purposes. The information provided within should be considered a graphic representation to aid in determining plan components and relationships and is subject to change without notice. All property boundaries, easements, road alignments, drainage, flood plains, environmental issues and other information shown is approximate and should not be relied upon for any purpose. No warranties, express or implied, concerning the actual design, accuracy, location, and character of the facilities shown on this exhibit are intended.

EXHIBIT L

Planned Unit Development
Specialty Product Exhibits for Front Load and Alley Products

VALENCIA

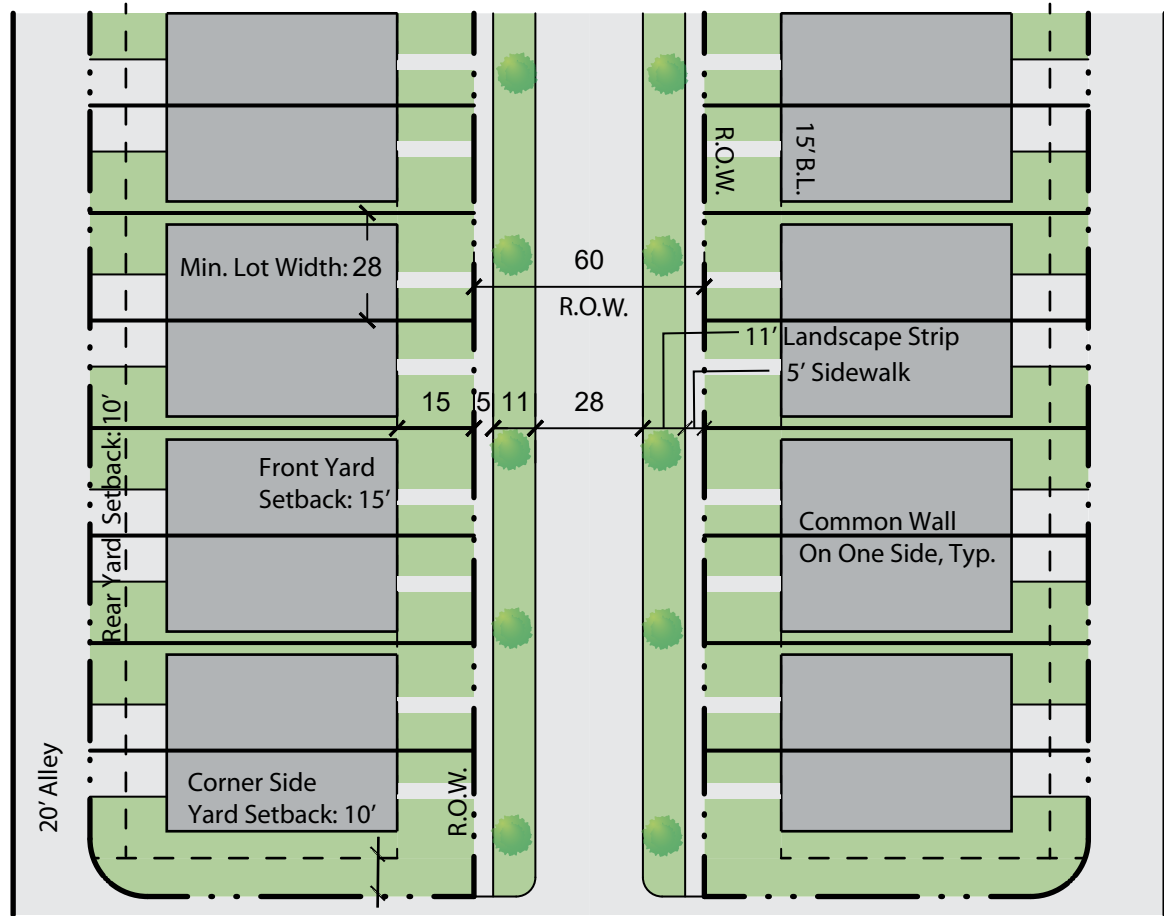
±458.4 Acres of Land
Manvel, Texas

Reference Date: 02.27.2024

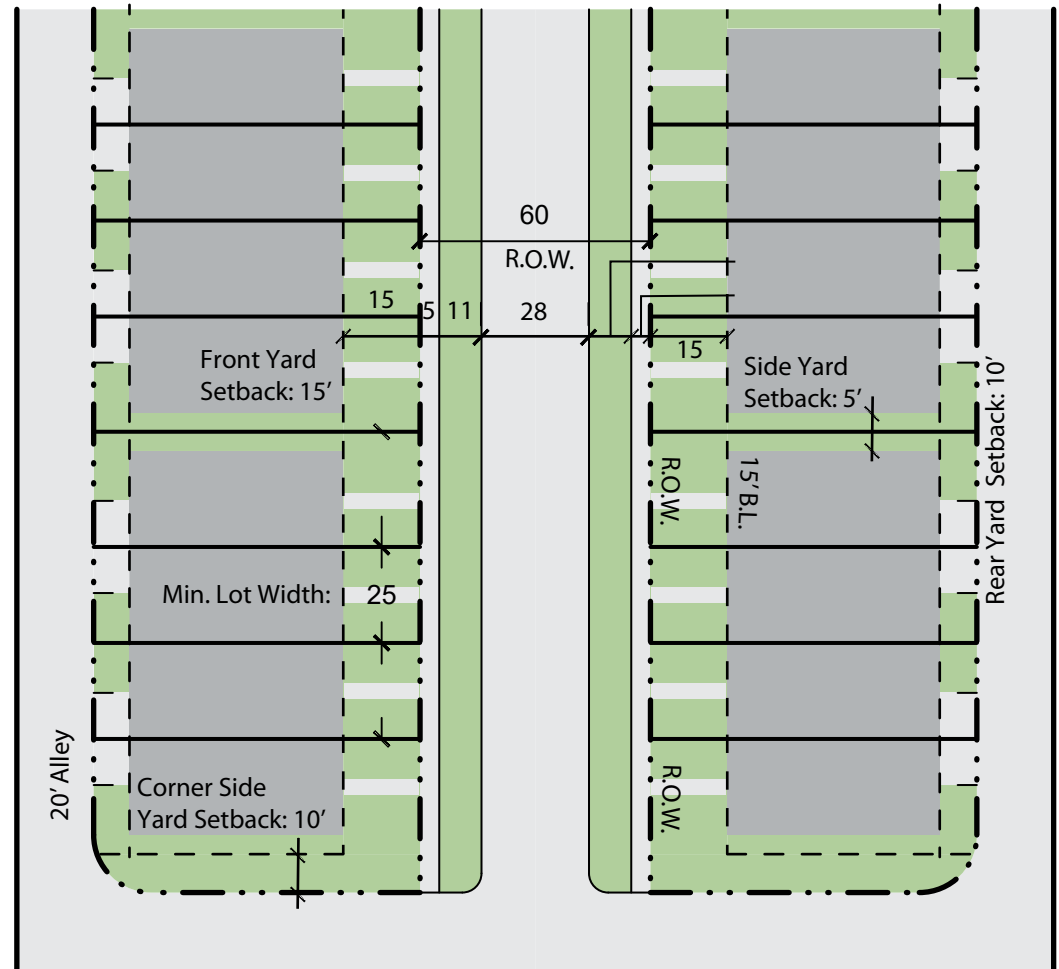


LJA PLANNING & LANDSCAPE ARCHITECTURE

RELATIONSHIPS | PROCESS | DESIGN

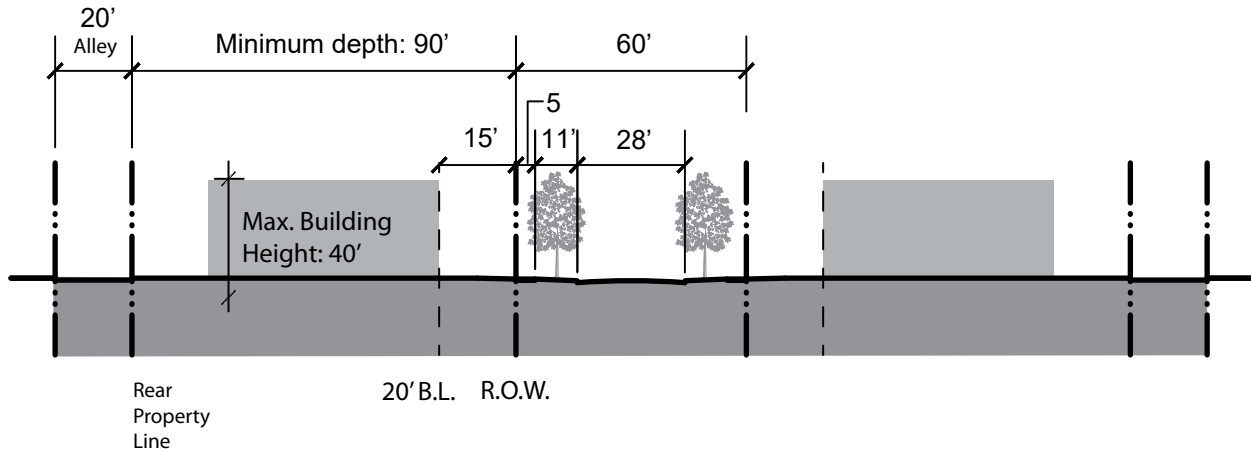


3. Plan: Rear Load 28' Attached Product - 60' R.O.W.

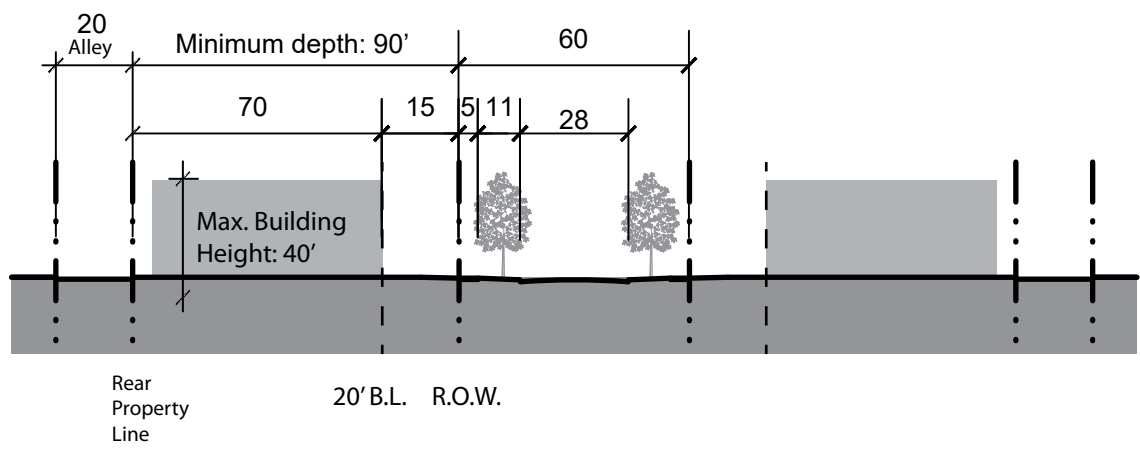


4. Plan: Rear Load 25' Townhome Product - 60' R.O.W.

Note:
 Max. Number of Attached Units: 5
 Min. Number of Attached Units: 2



3 Section: Rear Load 28' Attached Product - 60' R.O.W.



4. Section: Rear Load 25' Townhome Product - 60' R.O.W.

Prepared for

HILLWOOD RESIDENTIAL

© Copyright 2024 LJA Engineering, Inc. Drawings, written material, and design concepts provided is considered property of LJA & shall not be reproduced in part or whole in any form or format without written consent of LJA.

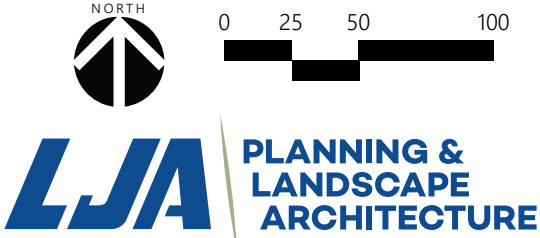
This exhibit is an illustrative representation for presentation purposes only and should not be used for computation or construction purposes. The information provided within should be considered a graphic representation to aid in determining plan components and relationships and is subject to change without notice. All property boundaries, easements, road alignments, drainage, flood plains, environmental issues and other information shown is approximate and should not be relied upon for any purpose. No warranties, express or implied, concerning the actual design, accuracy, location, and character of the facilities shown on this exhibit are intended.

EXHIBIT M

Planned Unit Development

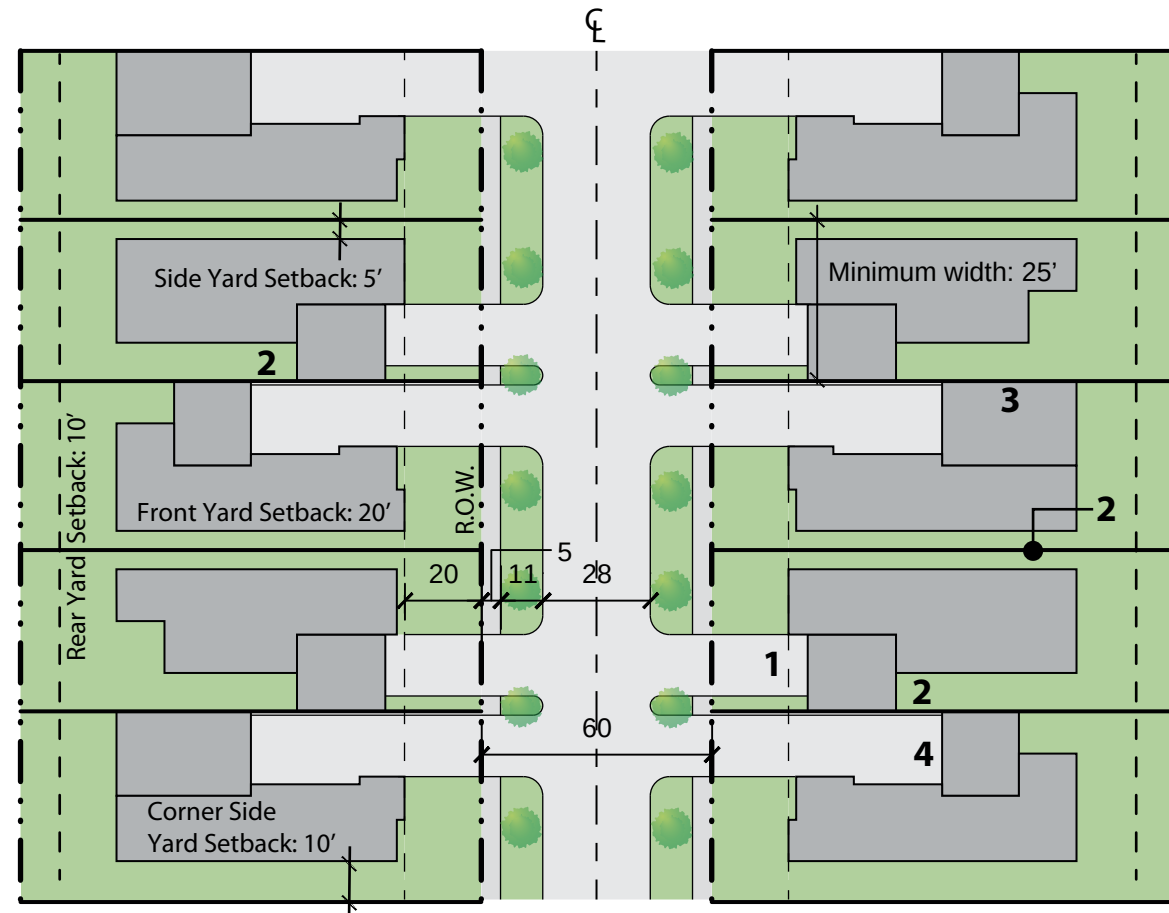
VALENCIA

±458.4 Acres of Land
Manvel, Texas

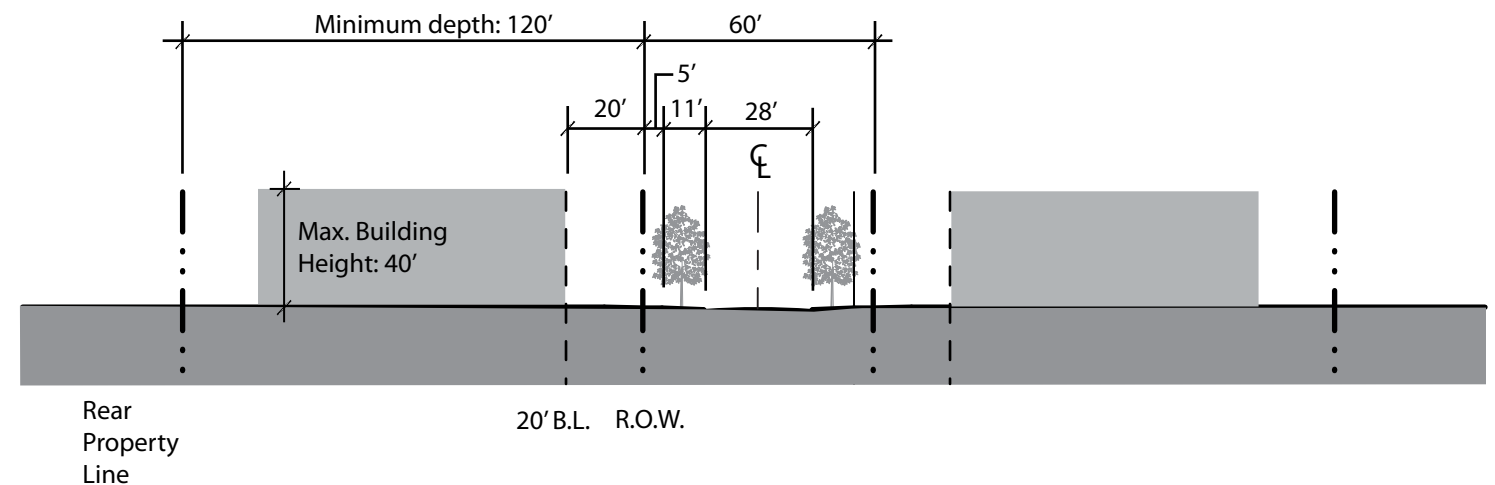
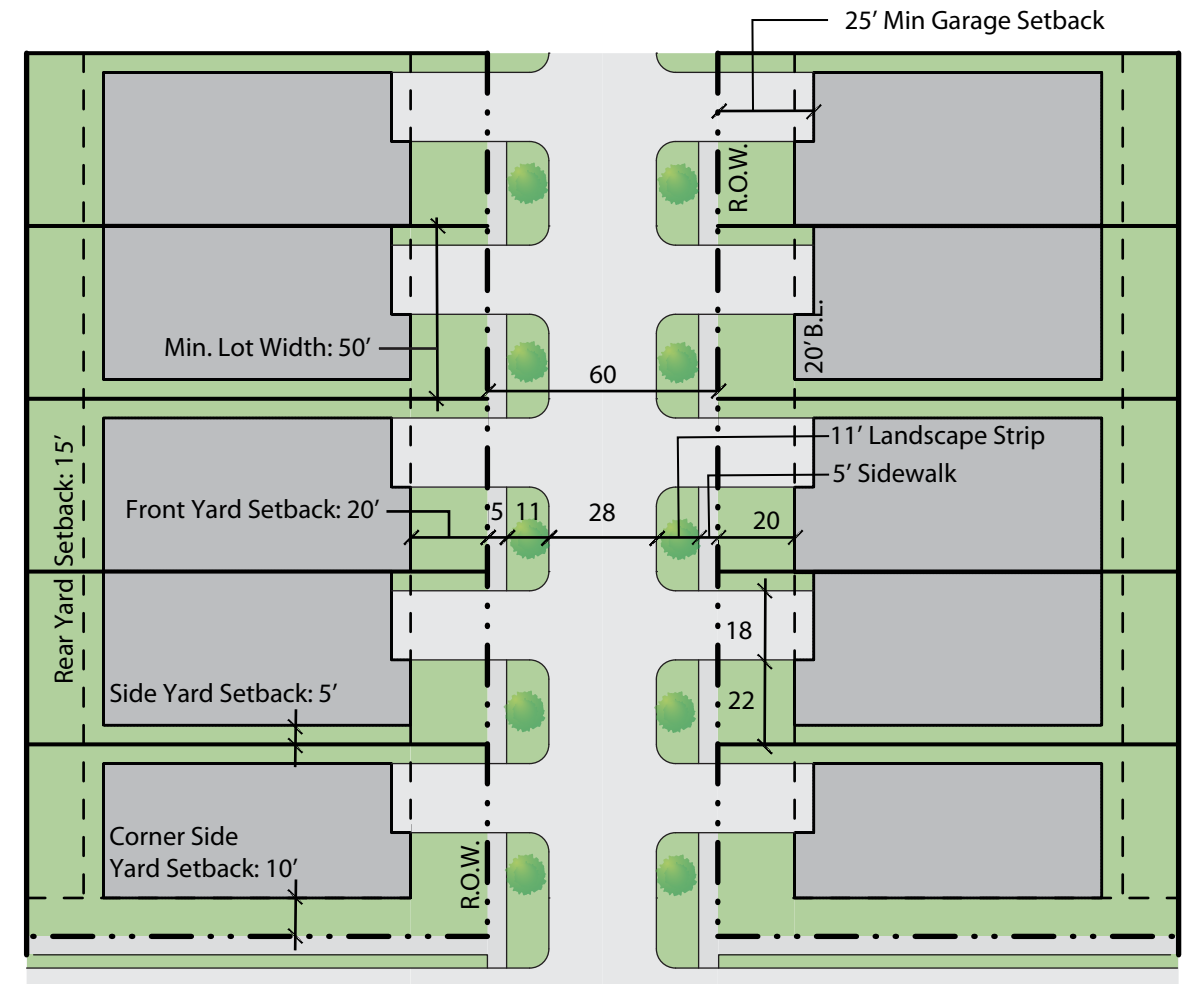
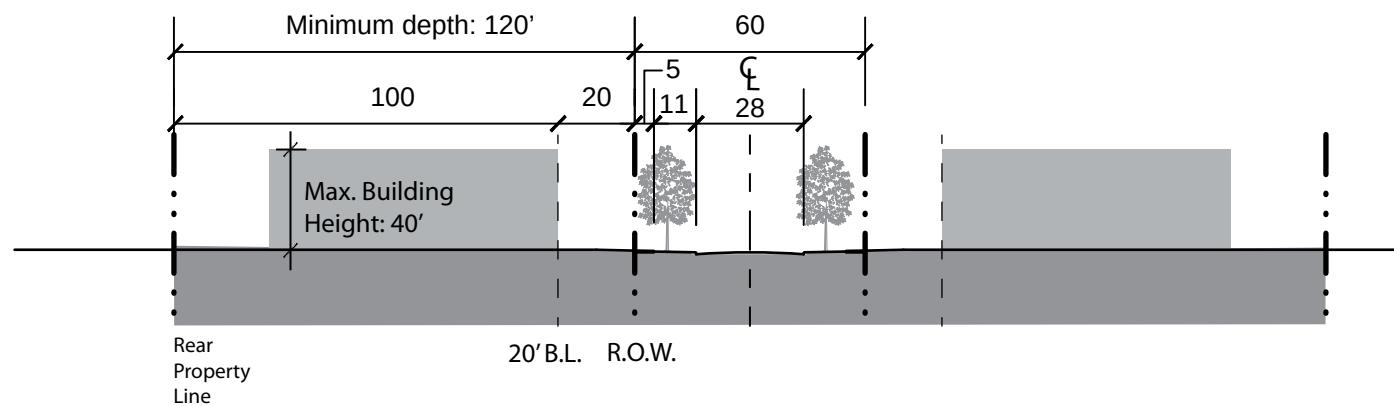


RELATIONSHIPS | PROCESS | DESIGN

Reference Date: 02.27.2024



1. 25' Min Garage Setback
2. 10' Min. Building separation
3. Zero Lot line at garage, typ.
4. 50' Setback



Prepared for

HILLWOOD RESIDENTIAL

© Copyright 2024 LJA Engineering, Inc. Drawings, written material, and design concepts provided is considered property of LJA & shall not be reproduced in part or whole in any form or format without written consent of LJA.

This exhibit is an illustrative representation for presentation purposes only and should not be used for computation or construction purposes. The information provided within should be considered a graphic representation to aid in determining plan components and relationships and is subject to change without notice. All property boundaries, easements, road alignments, drainage, flood plains, environmental issues and other information shown is approximate and should not be relied upon for any purpose. No warranties, express or implied, concerning the actual design, accuracy, location, and character of the facilities shown on this exhibit are intended.

EXHIBIT N

Planned Unit Development

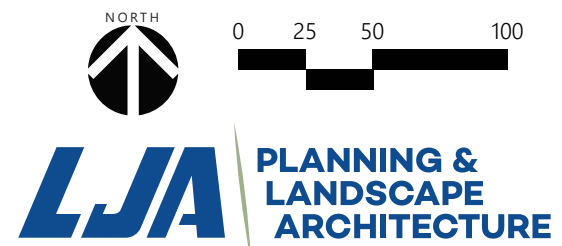
Specialty Product Exhibits for Zipper Lot and Patio/Zero Lot Line Products

VALENCIA

±458.4 Acres of Land
Manvel, Texas

6. Section: Patio & Zero Lot Line Product - 60' R.O.W.

Reference Date: 02.27.2024



RELATIONSHIPS | PROCESS | DESIGN

ORDINANCE NO. 2024-O-15

AN ORDINANCE AMENDING THE CODE OF ORDINANCES OF THE CITY OF MANVEL, TEXAS, CHAPTER 71. “UTILITIES” BY AMENDING SECTION 71-5 SEWER, TO PROVIDE FOR AVERAGE BILLING; PROVIDING A PENALTY IN AN AMOUNT NOT TO EXCEED \$2,000.00 FOR ANY VIOLATION OF ANY PROVISION OF THIS ORDINANCE; REPEALING ALL ORDINANCES OR PARTS OF ORDINANCES INCONSISTENT OR IN CONFLICT HEREWITH; AND PROVIDING FOR SEVERABILITY.

* * * * *

WHEREAS, pursuant to **Tex. Loc. Gov’t Code** § 552.001(b), a municipality is permitted to operate and regulate a utility system “in a manner that protects the interests of the municipality”;

WHEREAS, the City Council deems it in the best interest of the customers of the City to compute sewer billing on the average of the three winter months (November, December, and January); and

WHEREAS, this revision to the city’s utility ordinance is deemed to be in the best interest of the City of Manvel; NOW THEREFORE,

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MANVEL, TEXAS:

Section 1. The Code of Ordinances of the City of Manvel, Texas is hereby amended by amending Chapter 75. “Sewer,” to read and provide as follows:

“Chapter 71 UTILITIES

...

Sec. 71-5. Sewer.

(a) *Single-family residential users:*

First 2,000 gallons	\$39.11 (base)
All over 2,000 gallons	\$3.34 per 1,000 gallons

(b) *Multifamily residential users:*

First 2,000 gallons	\$39.11 (base)
All over 2,000 gallons	\$3.34 per 1,000 gallons

(c) *Commercial users:*

First 2,000 gallons	\$45.63 (base)
All over 2,000 gallons	\$3.34 per 1,000 gallons

(d) *Additional applications.* The fee for any 1,000-gallon unit shall also apply to any portion of a 1,000-gallon unit.

(e) *Sewer fees.* Sewer fees are calculated using the metered amount of water provided to the user. Sewer fees shall be calculated using the average of the sewer fees of the winter months. Each customer's water meter readings during the three consecutive winter months (November, December, and January) shall be used each year to determine the customer's winter monthly average sewer fee. This winter monthly average sewer fee will then be applied to the sewer component of the customer's utility bills as a fixed monthly sewer fee charged to the household over the following year. The city shall not be required to prove that the water went into the city's sewer system.

(f) *Quality of sewage.*

(1) *Domestic waste.* Only ordinary liquid and water-carried waste from domestic activities that is amenable to biological treatment and that is discharged from sanitary conveniences of buildings connected to a public sanitary sewer system shall be discharged in the city's sanitary sewer lines. Waste resulting from any process of commerce or industry may not be discharged in the city's sanitary sewer lines except as authorized pursuant to subsection (f)(2) of this section.

(2) *Commercial and industrial waste.* All discharges other than waste described in subsection (f)(1) of this section are prohibited unless the user has applied to and received written authorization from the city for such discharge. The applicant must file a statement with the city containing the following information:

- a. Name and address of applicant;
- b. Type of industry, business, activity, or other waste-creative process;
- c. Quantity of waste to be discharged;
- d. Typical analysis of waste;
- e. Type of pretreatment proposed; and
- f. Such other information as the city may request in writing.

The city shall have the right to reject any application for discharge of nondomestic waste into the city's sanitary sewer lines if the city determines in its sole discretion that the proposed discharge may be harmful to the city's sanitary sewer system or the

environment. The city also shall have the right in approving any application for the discharge of nondomestic waste to impose any limitations on such discharge that the city determines in its sole discretion to be necessary to protect the city's sanitary sewer system or the environment.

- (3) *National categorical pretreatment standard.* If a user is subject to a national categorical pretreatment standard pursuant to regulations promulgated by the Environmental Protection Agency under Section 307 of the Federal Clean Water Act, the user is prohibited from discharging pollutants into the city's sanitary sewer system in violation of applicable categorical pretreatment standards.
- (4) *City testing; pretreatment.* The city shall have the right to sample and test any user's discharge at the discretion of the city's operator, with no limit as to the frequency of the tests, and to charge the user for the city's cost of such sampling and testing. The city also shall have the right to require pretreatment, at the user's expense, of any discharge of nondomestic waste if the city determines in its sole discretion that pretreatment of such waste is necessary to protect the city's sanitary sewer system or the environment, even if pretreatment is not otherwise required pursuant to subsection (f)(3) of this section."

Section 2. **Penalty.** Any person who shall intentionally, knowingly, recklessly, or with criminal negligence violate any provision of this chapter shall be deemed guilty of a misdemeanor and, upon conviction, shall be fined in an amount not to exceed \$2,000.00. Each day of violation shall constitute a separate offense.

Section 3. **Repealer.** All ordinances or parts of ordinances inconsistent or in conflict herewith, are, to the extent of such inconsistency or conflict, hereby repealed.

Section 4. **Severability.** In the event any clause, phrase, provision, sentence, or part of this Ordinance or the application of the same to any person or circumstance shall for any reason be adjudged invalid or held unconstitutional by a court of competent jurisdiction, it shall not affect, impair, or invalidate this Ordinance as a whole or any part or provision hereof other than the part declared to be invalid or unconstitutional; and the City Council of the City of Manvel, Texas, declares that it would have passed each and every part of the same notwithstanding the omission of any such part thus declared to be invalid or unconstitutional, whether there be one or more parts.

PASSED AND APPROVED on first reading this _____ day of _____,
2024.

PASSED, APPROVED, AND ADOPTED on second and final reading this
_____, 2024.

Dan Davis, Mayor

Attest:

Tammy Bell, City Secretary

APPROVED AS TO FORM:

Robert Gervais, City Attorney

ORDINANCE NO. 2023-O-34

AN ORDINANCE AMENDING THE CODE OF ORDINANCES OF THE CITY OF MANVEL, TEXAS, CHAPTER 71. "UTILITIES" BY ADOPTING NEW RATES FOR WATER AND SEWER; MAKING OTHER CHANGES TO THE ORDINANCE GOVERNING THE PROVISION OF UTILITIES WITHIN THE CITY OF MANVEL; PROVIDING A PENALTY IN AN AMOUNT NOT TO EXCEED \$2,000.00 FOR ANY VIOLATION OF ANY PROVISION OF THIS ORDINANCE; REPEALING ALL ORDINANCES OR PARTS OF ORDINANCES INCONSISTENT OR IN CONFLICT HERewith; AND PROVIDING FOR SEVERABILITY.

* * * * *

WHEREAS, pursuant to **Texas Water Code** § 13.042, the governing body of each municipality has exclusive original jurisdiction over all water and sewer utility rates, operations, and services provided by a water and sewer utility within its corporate limits;

WHEREAS, pursuant to **Tex. Loc. Gov't Code** § 552.001(b), a municipality is permitted to operate and regulate a utility system "in a manner that protects the interests of the municipality";

WHEREAS, the City Council of the City of Manvel seeks to exercise its exclusive original jurisdiction over water and sewer utility rates and operations and adopt new rates and provisions governing the provision of utilities by the City of Manvel; and

WHEREAS, the City Council commissioned Freese and Nichols to prepare a Water and Wastewater Rate Study to report on water and sewer rates and utility operations; and

WHEREAS, the City Council has reviewed all necessary data to make a reasonable determination of rate base, expenses, investment, and rate of return within the municipal boundaries, including the Water and Wastewater Rate Study by Freese and Nichols; and

WHEREAS, the City Council deems the new rates to be fair, just, and reasonable; and

WHEREAS, the revisions to the city's utility ordinance are deemed to be in the best interest of the City of Manvel; NOW THEREFORE,

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MANVEL, TEXAS:

Section 1. The Code of Ordinances of the City of Manvel, Texas is hereby amended by amending Chapter 71. "Utilities", to read and provide as follows:

"Chapter 71 UTILITIES

ARTICLE I. IN GENERAL

Sec. 71-4. Water rates.

(a) *Monthly rates.*

- (1) *Single-family residential users.* Single-family residential users shall be charged monthly for water as follows:

First 2,000 gallons	[\$28.36] <u>\$32.59</u> base charge
All over 2,000 gallons	[\$2.60] <u>\$3.34</u> per 1,000 gallons

(2) *Multifamily residential users.*

- a. *Single meter.* Each multifamily building that is served by a single meter shall be charged monthly.
- b. *Multiple meters.* If a multifamily building is served by more than one meter, water delivered through each meter shall be charged the base rate for single-family residential users multiplied by the number of units served through such meter, with consumption over the base amount charged at the rates quoted above for single-family residential users.
- (3) *Commercial users.* Each business unit occupied by a separate business, including separate establishments within a single building, whether connected by a single meter or multiple meters, shall be charged monthly for water as follows:

First 2,000 gallons	[\$34.03] <u>\$39.11</u> base
All over 2,000 gallons	[\$2.60] <u>\$3.34</u> per 1,000 gallons

- (4) *Irrigation systems.* Metered water connections established solely for the purpose of providing water to irrigation systems shall be charged monthly for water usage at the above-quoted rates that apply to such type of user. There shall be no sewer service charge for irrigation meters.
- (5) *One-thousand gallon unit.* The fee for any 1,000-gallon unit shall also apply to any portion of a 1,000-gallon unit.
- (b) *Pressure of water.* The city intends to use all reasonable efforts to supply adequate pressure of water to any user. The city does not and will not guarantee to any user a specific quantity

or pressure of water for any purpose whatsoever. The city is required only to furnish a connection to its water system and in no case shall the city be liable for the failure or refusal to furnish water or any particular amount or pressure of water; however, the city shall use reasonable efforts to supply water to all users at an acceptable minimum pressure.

(c) *Sale or use of water or sewer services.*

- (1) No person or entity except the city shall sell or resell water from the city's water system.
- (2) No person or entity except the city shall sell or resell city sewer services.
- (3) No person or entity except the city shall receive or use water from the city's water system without having a direct connection to the city's water system.
- (4) No person or entity except the city shall receive or use city sewer services without having a direct connection to the city's sewer system.
- (5) It is an affirmative defense to this subsection that the person or entity has the express, written, unrevoked consent of the city council or its designee for such sale, resale, receipt, or use.

Sec. 71-5. Sewer.

(a) *Single-family residential users:*

First 2,000 gallons	[\$34.03] <u>\$39.11</u> base
All over 2,000 gallons	[\$2.60] <u>\$3.34</u> per 1,000 gallons

(b) *Multifamily residential users:*

First 2,000 gallons	[\$34.03] <u>\$39.11</u> base
All over 2,000 gallons	[\$2.60] <u>\$3.34</u> per 1,000 gallons

(c) *Commercial users:*

First 2,000 gallons	[\$39.71] <u>\$45.63</u> base
All over 2,000 gallons	[\$2.60] <u>\$3.34</u> per 1,000 gallons

- (d) *Additional applications.* The fee for any 1,000-gallon unit shall also apply to any portion of a 1,000-gallon unit.
- (e) *Sewer fees.* Sewer fees are calculated using the metered amount of water provided to the user. The city shall not be required to prove that the water went into the city's sewer system.
- (f) *Quality of sewage.*
 - (1) *Domestic waste.* Only ordinary liquid and water-carried waste from domestic activities that is amenable to biological treatment and that is discharged from sanitary

conveniences of buildings connected to a public sanitary sewer system shall be discharged in the city's sanitary sewer lines. Waste resulting from any process of commerce or industry may not be discharged in the city's sanitary sewer lines except as authorized pursuant to subsection (f)(2) of this section.

- (2) *Commercial and industrial waste.* All discharges other than waste described in subsection (f)(1) of this section are prohibited unless the user has applied to and received written authorization from the city for such discharge. The applicant must file a statement with the city containing the following information:
- a. Name and address of applicant;
 - b. Type of industry, business, activity, or other waste-creative process;
 - c. Quantity of waste to be discharged;
 - d. Typical analysis of waste;
 - e. Type of pretreatment proposed; and
 - f. Such other information as the city may request in writing.

The city shall have the right to reject any application for discharge of nondomestic waste into the city's sanitary sewer lines if the city determines in its sole discretion that the proposed discharge may be harmful to the city's sanitary sewer system or the environment. The city also shall have the right in approving any application for the discharge of nondomestic waste to impose any limitations on such discharge that the city determines in its sole discretion to be necessary to protect the city's sanitary sewer system or the environment.

- (3) *National categorical pretreatment standard.* If a user is subject to a national categorical pretreatment standard pursuant to regulations promulgated by the Environmental Protection Agency under Section 307 of the Federal Clean Water Act, the user is prohibited from discharging pollutants into the city's sanitary sewer system in violation of applicable categorical pretreatment standards.
- (4) *City testing; pretreatment.* The city shall have the right to sample and test any user's discharge at the discretion of the city's operator, with no limit as to the frequency of the tests, and to charge the user for the city's cost of such sampling and testing. The city also shall have the right to require pretreatment, at the user's expense, of any discharge of nondomestic waste if the city determines in its sole discretion that pretreatment of such waste is necessary to protect the city's sanitary sewer system or the environment, even if pretreatment is not otherwise required pursuant to subsection (f)(3) of this section.

- (d) *Maintenance and repair.* It shall be the responsibility of each user to maintain the water and sewer lines from the building served to the point of connection to the city's system.
- (e) *Out-of-city service.* The city council shall determine whether to provide any utility service to areas outside of the city and the terms and conditions for such service.
- (f) *Nonliability of city.* Neither the city nor its agents, employees, officers, or representatives shall bear any liability to any person other than the city for any act, omission, or condition in any way directly or indirectly related to the subject matter of this article.

Section 3. **Effective date.** The rates established by this ordinance shall take effect the first billing cycle that occurs after October 2, 2023.

Section 4. **Penalty.** Any person who shall intentionally, knowingly, recklessly, or with criminal negligence violate any provision of this chapter shall be deemed guilty of a misdemeanor and, upon conviction, shall be fined in an amount not to exceed \$2,000.00. Each day of violation shall constitute a separate offense.

Section 5. **Repealer.** All ordinances or parts of ordinances inconsistent or in conflict herewith, are, to the extent of such inconsistency or conflict, hereby repealed.

Section 6. **Severability.** In the event any clause, phrase, provision, sentence, or part of this Ordinance or the application of the same to any person or circumstance shall for any reason be adjudged invalid or held unconstitutional by a court of competent jurisdiction, it shall not affect, impair, or invalidate this Ordinance as a whole or any part or provision hereof other than the part declared to be invalid or unconstitutional; and the City Council of the City of Manvel, Texas, declares that it would have passed each and every part of the same notwithstanding the omission of any such part thus declared to be invalid or unconstitutional, whether there be one or more parts.

PASSED AND APPROVED on first reading this 18th day of September, 2023.

PASSED, APPROVED, AND ADOPTED on second and final reading this 2nd day of October, 2023.



Dan Davis, Mayor

Attest:



Tammy Bell, City Secretary

APPROVED AS TO FORM:



Robert Gervais, City Attorney



EXHIBIT A

2022 Water and Wastewater Rate Study prepared by Freese and Nichols



MANVEL CITY COUNCIL DATA SHEET

MEETING DATE: March 18, 2024

TOPIC: A request by GR-M1, Ltd. (Meridiana Developer) to abandon a 2,360.64-foot portion of Bissell Road right-of-way identified as a 2.713-acre tract of land situated in the H.T. & R.R. Co. Survey, Section 62, Abstract 484, Brazoria County, Texas. (Public Hearing only).

BACKGROUND: The property owner, GR-M1, Ltd. (Meridiana Developer), has made a request to abandon a 2,360.64 linear foot portion of Bissell Road right-of-way. The 2.713-acre portion of right-of-way abuts the GCWA Canal (west), Burlington Northern Satna Fe railway (north) and Meridiana Parkway (east). The request has been made so the property owner can develop the approximate 70.754-acre remaining tract with garden homes. A preliminary plat, Meridiana Section 82 Detention Reserve, was conditionally approved by the Commission on November 13, 2023. One of the preliminary plat conditions included an approved amendment to the Meridiana GDP to include the 70-acres within the GDP boundary. In addition, an amendment to the Meridiana O-PUD has been filed with the City to approve the use of 'garden home' as a permitted land use.

As part of this application packet, no objection letters for the Bissell Road right-of-way abandonment have been received from Brazoria County MUD No. 57, AT&T and BNSF Railway. The Brazoria County MUD No. 57 has offered no objection, AT&T has offered no objection, but requires 811 marking of AT&T lines prior to any construction and BNSF Railway has offered no objection subject to the City retaining an easement for existing utilities and drainage ditches and access to the signboard. In response to BNSF's no objection, the property owner has provided a 25-foot drainage easement along the northern boundary of the Meridiana Section 82 Detention Reserve Preliminary Plat. Further, the property owner has stated there is no evidence of a signboard either by survey or aerial photography which was referenced in BNSF's no objection letter. The City Secretary's Office has also submitted the right-of-way abandonment request to the utility companies and has received no objection. Lastly, there are no other property owners that would be denied access to Bissell Road from this location.

At the January 8, 2024, PD&Z meeting, staff explained that comments regarding the Meridiana O-PUD amendment have been provided to the applicant. Also, that staff is waiting for an amended GDP to be submitted with the revised O-PUD amendment. Because staff has not had the opportunity to review the right-of-way abandonment application with an amended GDP and O-PUD for this site, staff previously recommended the Commission to table this item so that the request can be brought back for consideration with the amended O-PUD and GDP. PD&Z Commission

unanimously voted to table the item based on staff recommendation. During the public hearing portion of this item, no members of the public spoke for or against the abandonment of this portion of the Bissell Road right-of-way.

On January 16, 2024, a public hearing was held at the City Council Meeting in regards for the abandonment of this proposed section of Bissell Road. During this public hearing no member of the public spoke in favor or against this item. It was noted that this item would be on a future City Council agenda after the PD&Z received more input from the future improvements for this area for the Meridiana Development.

On March 11, 2024 this proposed abandonment 2,260.64-foot portion of Bissel Road was recommended for approval as this roadway is not needed for future connectivity, and a revised Planned Unit Development has been received. No member of the

PD&Z DISCUSSION: At the March 11, 2024, meeting of the Planning, Development and Zoning Commission ("the PD&Z"), the Commission received the information regarding the amended Planned Unit Development for Meridiana and provided a recommendation to City Council.

PD&Z RECOMMENDATION: The PD&Z Commission recommended approval of Ordinance No. 2023-O-03 with a vote of six (6) "Yeas" to zero (0) "Nays" at the March 11, 2024, meeting.



ATTACHMENTS: Ordinance No. 2023-O-03, ROW Abandonment Application, Bissell Road ROW Survey, Bissell Road Abandonment Exhibits, BNSF LONO, BCMUD No. 57 LONO, Letter of Objection from AT&T, Meridiana Section 82 Detention Reserve Preliminary Plat (conditionally approved November 13, 2023),

FUNDING ISSUES

- ☒ **Not applicable**
☐ **Not budgeted**
☐ **Full amount already budgeted**
☐ **Funds to be transferred from Acct.#**

SUBMITTING STAFF MEMBER

Evan DuVall
Zoning Administrator

FINANCE DIRECTOR APPROVAL _____

CITY MANAGER APPROVAL _____

ORDINANCE NO. 2023-O-03

AN ORDINANCE OF THE CITY OF MANVEL, TEXAS, FINDING AND DETERMINING THAT PUBLIC CONVENIENCE AND NECESSITY NO LONGER REQUIRE THE CONTINUED EXISTENCE OF CITY RIGHT-OF-WAY CONSISTING OF A 2.713 ACRE TRACT OF LAND IN THE H. T. & B.R.R. CO. SURVEY, SECTION 62, ABSTRACT NO. 484, BRAZORIA COUNTY, TEXAS, BEING A PORTION OF BISSELL ROAD (50 FOOT WIDE) LOCATED WEST OF MERIDIANA PARKWAY AND EAST OF THE GCWA CANAL; VACATING, ABANDONING, AND CLOSING SAID PUBLIC RIGHT-OF-WAY; AUTHORIZING THE MAYOR TO EXECUTE AND THE CITY SECRETARY TO ATTEST, RESPECTIVELY, QUITCLAIM DEEDS CONVEYING RESPECTIVE INTERESTS IN SAID ABANDONED RIGHT-OF-WAY TO THE ABUTTING PROPERTY OWNER(S); PROVIDING FOR SEVERABILITY; AND CONTAINING OTHER PROVISIONS RELATING TO THE SUBJECT.

* * * * *

WHEREAS, GR-M1 Ltd., a Texas limited partnership, the property owner of land located west of Meridiana Parkway and east of the GCWA canal, has petitioned the City of Manvel, Texas, to vacate, abandon, and close the hereinafter described right-of-way abutting its property; and

WHEREAS, said right-of-way is known as a 2.713 acre tract of land in the H.T & B.R.R. CO. Survey, Section 62, Abstract No. 484, Brazoria County, Texas, being a portion of Bissell Road (50 foot wide) located west of Meridiana Parkway and east of the GCWA canal; and

WHEREAS, the property owner has submitted the necessary application and information and fees to the City to review the request for abandonment, said application attached hereto as Exhibit A;

WHEREAS, the City Council has determined that such public right-of-way is no longer necessary for public convenience and necessity and should be vacated, abandoned, and closed, and any interest in said right of way released; now, therefore;

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MANVEL, STATE OF TEXAS:

Section 1. The facts and recitations set forth in the preamble of this Ordinance are hereby found to be true and correct.

Section 2. The City Council of the City of Manvel, Texas, hereby finds and determines that public convenience and necessity no longer require the continued existence of city right-of-way consisting of a 2.713 acre tract of land in the H.T & B.R.R. CO. Survey, Section 62, Abstract No. 484, Brazoria County, Texas, being a portion of Bissell Road (50 foot wide) west of Meridiana Parkway and east of the GCWA canal and being more particularly described by metes and bounds, and shown by map, as attached as Exhibit B, attached hereto and incorporated herein.

Section 3. The right-of-way is hereby vacated, abandoned, and closed, and any public right of way interest therein is released.

Section 4. This abandonment is subject to, and contingent upon, payment of all fees and consideration (as determined by the appraisal commissioned in connection with this abandonment request, as may be modified by city council) by the Applicant, or other satisfaction of said consideration requirement as may determined by Council, as well as fulfillment of all other requirements of state law, city ordinances, and the City's abandonment policy.

Section 5. Upon satisfaction of the above, the Mayor and City Secretary are hereby authorized to execute and attest, respectively, a quitclaim deed, conveying the respective abandoned right of way interests to the abutting property owner(s), upon request.

Section 6. Repealer. All ordinances or parts of ordinances, or resolutions, official or unofficial policies, or practices inconsistent or in conflict herewith, are, to the extent of such inconsistency or conflict, hereby repealed.

Section 7. Severability. In the event any clause, phrase, provision, sentence, or part of this Ordinance or the application of the same to any person or circumstance shall for any

reason be adjudged invalid or held unconstitutional by a court of competent jurisdiction, it shall not affect, impair, or invalidate this Ordinance as a whole or any part or provision hereof other than the part declared to be invalid or unconstitutional; and the City Council of the City of Manvel, Texas, declares that it would have passed each and every part of the same notwithstanding the omission of any such part thus declared to be invalid or unconstitutional, whether there be one or more parts.

PASSED AND APPROVED on first reading this _____ day of _____, 2024.

PASSED, APPROVED, AND ADOPTED on second and final reading this _____ day of _____, 2024.

Dan Davis, Mayor

ATTEST:

Tammy Bell, City Secretary

APPROVED AS TO FORM:

Robert Gervais, City Attorney

Exhibit A

City of Manvel
20025 Hwy 6 * Manvel, TX 77578
Phone 281-489-0630 Fax 281-489-0634

**Application for Abandonment, Vacation, Closing and Relocation
of Streets, Alleys, Rights-of-Way and Easements**
Fees: \$1000.00 (to be paid after staff determines if the request is feasible)

Date September 22, 2023

Name of property owner: (Proof of ownership must be provided)

GP-M1, Ltd., a Texas limited partnership

Address: 1602 Avenue D, Suite 100, Katy, TX 77493 Phone# 832-437-7863

Reason and intent for requested action:

The developer is requesting to abandon the portion of Bissell Road west of Meridiana Parkway and east of the GCWA Canal. The total distance of
this portion of ROW is 2,360.64 feet and abuts the developer's property on the south portion of Bissell Road as well as the
B.N.S.F. Railroad Company tract on the north side of Bissell Road. This portion of Bissell Road is currently not developed
and does not provide adequate traffic flow through the area. There are no recorded documents that dedicate this
portion of Bissell Road. The surrounding tracts are provided access by Alleluia Trail, Kruezer Road, Kirchner Road, and
Meridiana Parkway.

Entire limits and extent of the property to be abandoned, vacated, closed or relocated:

A 2.713 acre tract of land situated in the H.T. & R.R. Co. Survey, Section 62, Abstract 484, Brazoria County, Texas to be
abandoned.

Ashley Waggoner
Signature of Applicant

Exhibit A

Procedures:

Date of Action September 22, 2023

FEES PAID \$1,000

Check Number 2747

Collect the following documents

☒ A formal recent survey prepared by a registered professional land surveyor that identifies the location and physical configuration of the site. The survey shall also specify the acreage or square footage;

☒ The proper legal description of the property to be considered for abandonment, including, if appropriate, a metes and bounds description verified by a registered surveyor or by county records (that will identify the property by a legal instrument with volume, page, etc.); and

☒ Collect administration processing fee of \$1,000.00 to cover the cost of the title report, appraisal, staff and consultant review time, and the ordinance and deed preparation legal fees;

Staff procedures:

☐ Commission a title report of the area to be abandoned.

☐ Commission an independent appraisal of the area to be abandoned;

☐ Send letters to all utility companies, drainage districts, affected city departments, and/or other interested agencies identifying the proposed action and requesting a letter of "no objection" from each of the concerned entities within thirty (30) days; and

☐ Determine if a utility easement is needed in the area considered to be abandoned and, if determined to be necessary, to have the new utility easement reserved in the deed of conveyance or obtained separately and recorded in the property deed record to be filed with the Brazoria County Clerk.

☐ Scheduled Public Hearing Date for Planning Development and Zoning

☐ Scheduled Public Hearing Date for City Council (1st reading of the ordinance)

☐ Notice to property owners will be initiated ten (10) days prior to the scheduled public hearing. The city shall provide written notice of such public hearing to each owner of real property, as indicated by the most recently approved city tax roll, whose property abuts or lies within 200 feet of the subject street, alley, right-of-way or easement.

☐ Collect tender/escrow by the applicant(s) of the appraised value of the abandoned area (must be collected prior to second reading of the ordinance)

☐ Upon request by applicant, and the pre-payment of all recordation fees, a quitclaim deed will be prepared and filed in the deed records of the Brazoria County Clerk. The Mayor and City Manager are authorized to execute said quitclaim deeds.

Exhibit B

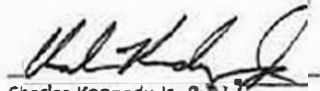
**METES AND BOUNDS DESCRIPTION
BEING A 2.713 ACRE TRACT OF LAND
IN THE H.T.&B.R.R. CO. SURVEY, SECTION 62, ABSTRACT 484
BRAZORIA COUNTY, TEXAS**

DESCRIPTION OF A 2.713 ACRE TRACT OF LAND IN THE H. T. & B.R.R.CO.SURVEY, SECTION 62, ABSTRACT NO. 484, BRAZORIA COUNTY, TEXAS, BEING A PORTION OF BISSELL ROAD (50 FOOT WIDE); SAID 2.713 ACRE TRACT OF LAND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS, (BEARINGS BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM OF 1983, SOUTH CENTRAL ZONE, AS DETERMINED BY GPS MEASUREMENTS):

BEGINNING at a 5/8-inch capped iron rod stamped "E.H.R.A. 713-784-4500" found in the southerly right of way of Bissell Road marking the northerly common corner of a called 3.5 acre tract recorded under Brazoria County Clerk's File Number (B.C.C.F. NO.) 91889441 and a called 53.50 acre tract recorded under B.C.C.F. NO. 2009019609;

- 1) **THENCE**, North 19°33'24" East for a distance of 50.00 feet to a point for corner the northerly right-of-way line of said Bissell Road same being the southerly line of the B.N. & S.F. R.R. CO. (100 foot wide) as recorded in Vol. 78, Pg. 9 of the Brazoria County Deed Records (B.C.D.R.) and marking the northwesterly corner of the herein described tract of land;
- 2) **THENCE**, South 70°29'03" East, along the common line of said B.N. & S.F. R.R. CO. and said Bissell Road for a distance of 2,367.15 feet to a 5/8-inch capped iron rod stamped "E.H.R.A. 713-784-4500" found at the northwesterly intersection said Bissell Road and Meridiana Parkway as per the plat Meridiana Parkway Phase 7 Replat recorded under B.C.P.R. 2021007273;
- 3) **THENCE**, South 26°58'03" West, along the westerly right-of-way line of said Meridiana Parkway for a distance of 50.43 feet to the southeasterly corner of the herein described tract of land being in the southerly line of said Bissell Road and the northerly line of a 2.883 acre tract of land recorded under B.C.C.F. No. 2009015073;
- 4) **THENCE**, North 70°29'03" West, along the southerly line of Bissell Road same being the northerly line of said 2.883 acre tract, a called 15.61 acre tract of land recorded under B.C.C.F. No. 2009015073 and the aforementioned 53.50 acre tract of for a distance of 2,360.64 feet to the **POINT OF BEGINNING** and containing or 2.713 acres of land. This description has been prepared in conjunction with an exhibit map (08101100V-2021-EHAC01.dwg) prepared by EHRA dated July 29, 2021.

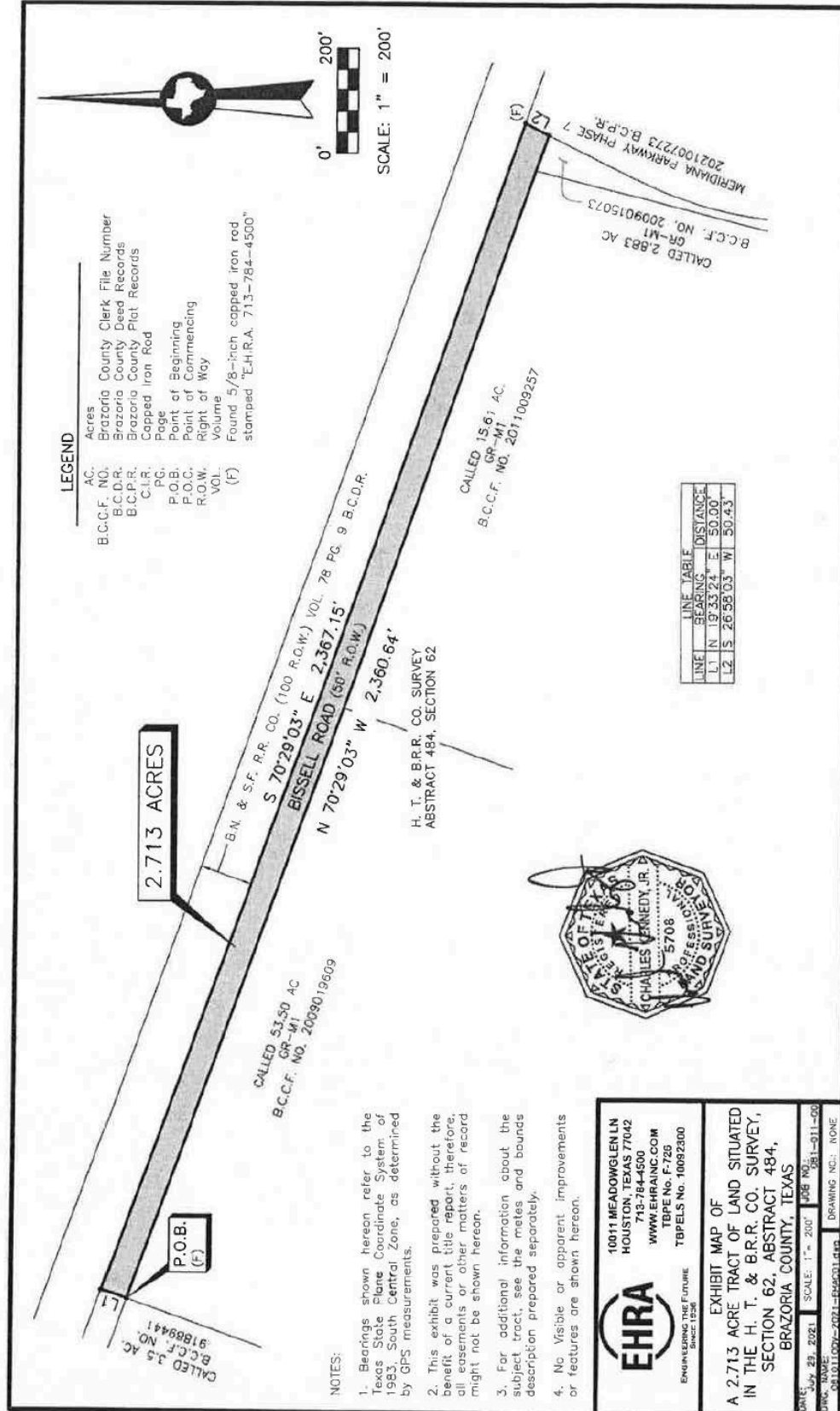
EDMINSTER, HINSHAW, RUSS AND ASSOCIATES, INC. dba EHRA, Inc. TPPELS No. 10092300


Charles Kennedy Jr., R.L.S.
Texas Registration No. 5708
10011 Meadowglen Ln
Houston, Texas 77042
713-784-4500



Date: July 29, 2021
Job No: 081-011-00
File No: R:\2008\081-011-00\documents\technical\2021\July\08101100V-2021-EHAC01-MB.doc

Exhibit B



City of Manvel
20025 Hwy 6 * Manvel, TX 77578
Phone 281-489-0630 Fax 281-489-0634

**Application for Abandonment, Vacation, Closing and Relocation
of Streets, Alleys, Rights-of-Way and Easements**
Fees: \$1000.00 (to be paid after staff determines if the request is feasible)

Date September 22, 2023

Name of property owner: (Proof of ownership must be provided)

GR-M1, Ltd., a Texas limited partnership

Address: 1602 Avenue D, Suite 100, Katy, TX 77493 Phone# 832-437-7863

Reason and intent for requested action:

The developer is requesting to abandon the portion of Bissell Road west of Meridiana Parkway and east of the GCWA Canal. The total distance of
this portion of ROW is 2,360.64 feet and abuts the developer's property on the south portion of Bissell Road as well as the
B.N.S.F. Railroad Company tract on the north side of Bissell Road. This portion of Bissell Road is currently not developed
and does not provide adequate traffic flow through the area. There are no recorded documents that dedicate this
portion of Bissell Road. The surrounding tracts are provided access by Alleluia Trail, Kruezer Road, Kirchner Road, and
Meridiana Parkway.

Entire limits and extent of the property to be abandoned, vacated, closed or relocated:

A 2.713 acre tract of land situated in the H.T. & R.R. Co. Survey, Section 62, Abstract 484, Brazoria County, Texas to be
abandoned.

Ashley Waggoner
Signature of Applicant

Procedures:

Date of Action September 22, 2023

FEES PAID \$1,000

Check Number 2747

Collect the following documents

✓ A formal recent survey prepared by a registered professional land surveyor that identifies the location and physical configuration of the site. The survey shall also specify the acreage or square footage;

✓ The proper legal description of the property to be considered for abandonment, including, if appropriate, a metes and bounds description verified by a registered surveyor or by county records (that will identify the property by a legal instrument with volume, page, etc.); and

✓ Collect administration processing fee of \$1,000.00 to cover the cost of the title report, appraisal, staff and consultant review time, and the ordinance and deed preparation legal fees;

Staff procedures:

_____ Commission a title report of the area to be abandoned.

_____ Commission an independent appraisal of the area to be abandoned;

_____ Send letters to all utility companies, drainage districts, affected city departments, and/or other interested agencies identifying the proposed action and requesting a letter of "no objection" from each of the concerned entities within thirty (30) days; and

_____ Determine if a utility easement is needed in the area considered to be abandoned and, if determined to be necessary, to have the new utility easement reserved in the deed of conveyance or obtained separately and recorded in the property deed record to be filed with the Brazoria County Clerk.

_____ Scheduled Public Hearing Date for Planning Development and Zoning

_____ Scheduled Public Hearing Date for City Council (1st reading of the ordinance)

_____ Notice to property owners will be initiated ten (10) days prior to the schedule public hearing. The city shall provide written notice of such public hearing to each owner of real property, as indicated by the most recently approved city tax roll, whose property abuts or lies within 200 feet of the subject street, alley, right-of-way or easement.

_____ Collect tender/escrow by the applicant(s) of the appraised value of the abandoned area (must be collected prior to second reading of the ordinance)

_____ Upon request by applicant, and the pre-payment of all recordation fees, a quitclaim deed will be prepared and filed in the deed records of the Brazoria County Clerk. The Mayor and City Manager are authorized to execute said quitclaim deeds.



Bissell Road R.O.W.: Portion to be Abandoned

2.713 acres of right-of-way situated in the H.T. & B.R.R. Co. Survey, Section 62, Abstract 484, Brazoria County, Texas

P:\081-011-150\LandPlan\ROW Abandonment\Bissell Road Abandonment\EXHIBITS\Bissell Road ROW Abandonment Area.dwg Sep 13, 2023-11:28am Edited by: awaggoner

September, 2023

0 50' 100' 200'
SCALE: 1"=200'
TRUE SCALE AT 11" x 17"



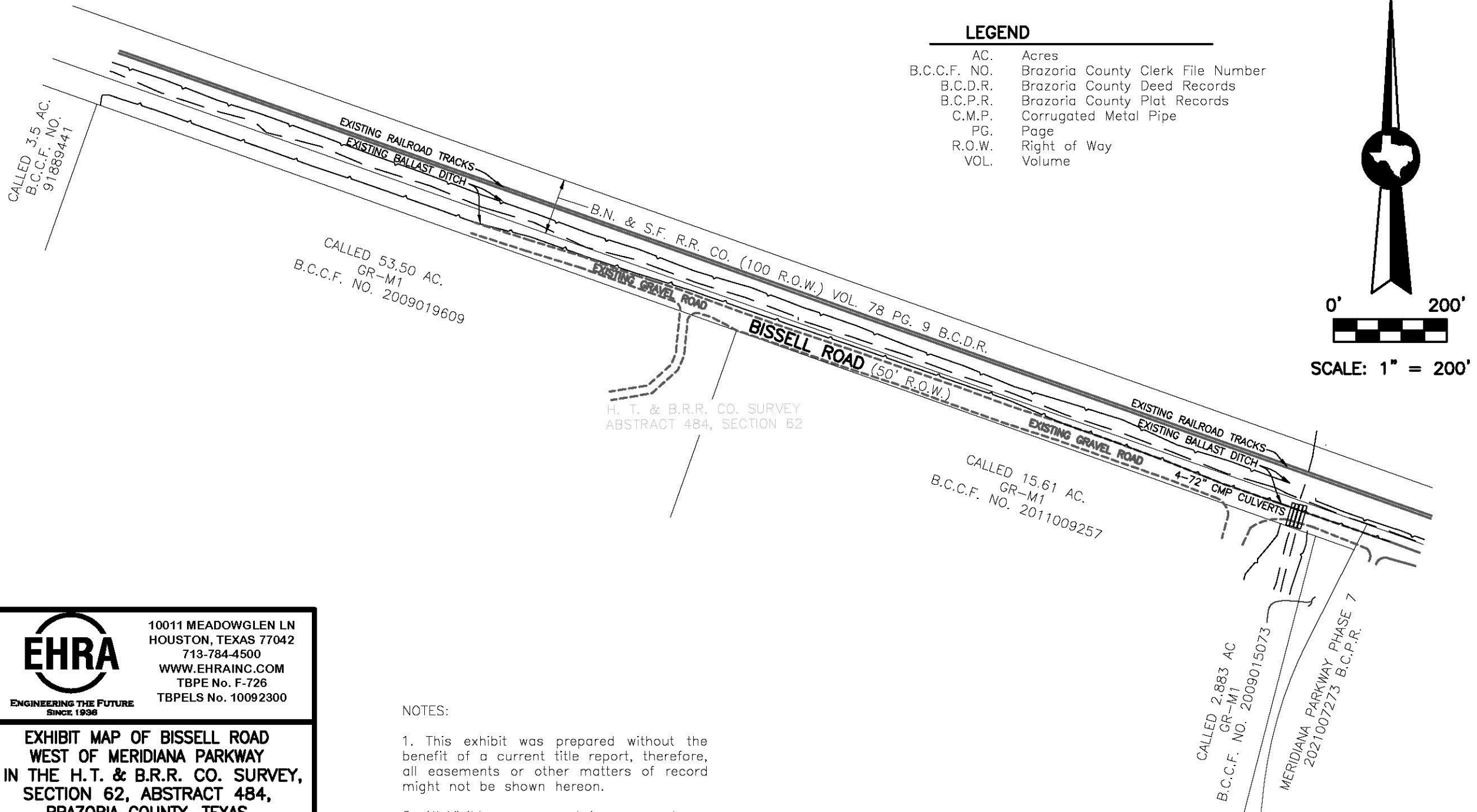
EHRA JOB NO.
081-011-150

No warranty or representation of intended use,
design or proposed improvements are made
herein. All Plans for land or facilities are subject
to change without notice.



ENGINEERING THE FUTURE
SINCE 1936

10011 MEADOWGLEN LANE
HOUSTON, TEXAS 77042
713.784.4500
EHRATEAM
TBPE No. F-726
TBPLS No. 10092300



LEGEND

AC.	Acres
B.C.C.F. NO.	Brazoria County Clerk File Number
B.C.D.R.	Brazoria County Deed Records
B.C.P.R.	Brazoria County Plat Records
C.M.P.	Corrugated Metal Pipe
PG.	Page
R.O.W.	Right of Way
VOL.	Volume



SCALE: 1" = 200'



ENGINEERING THE FUTURE
SINCE 1936

10011 MEADOWGLEN LN
HOUSTON, TEXAS 77042
713-784-4500
WWW.EHRAINCO.COM
TBPE No. F-726
TBPELS No. 10092300

**EXHIBIT MAP OF BISSELL ROAD
WEST OF MERIDIANA PARKWAY
IN THE H.T. & B.R.R. CO. SURVEY,
SECTION 62, ABSTRACT 484,
BRAZORIA COUNTY, TEXAS**

DATE: NOV. 2, 2022 SCALE: 1"= 200' JOB NO.: 081-011-00
DWG. NAME: 08101100V-2022-EHRW01.dwg DRAWING NO.: NONE

NOTES:

1. This exhibit was prepared without the benefit of a current title report, therefore, all easements or other matters of record might not be shown hereon.

2. All Visible or apparent improvements or features may not be shown hereon.



Dean Ferris
Director Right of Way

BNSF Railway Company
2500 Lou Menk Drive Fort
Worth, TX 76131-2828

817-867-0734

Dean.Ferris@bnsf.com

September 1, 2023

City of Manvel
Planning, Development, and Zoning Commission
6615 FM 1128
Manvel, TX 77578

RE: Proposed vacation of Bissell Road west of Highway 288 and south of the
BNSF Railway Company right of way

To Whom it may concern:

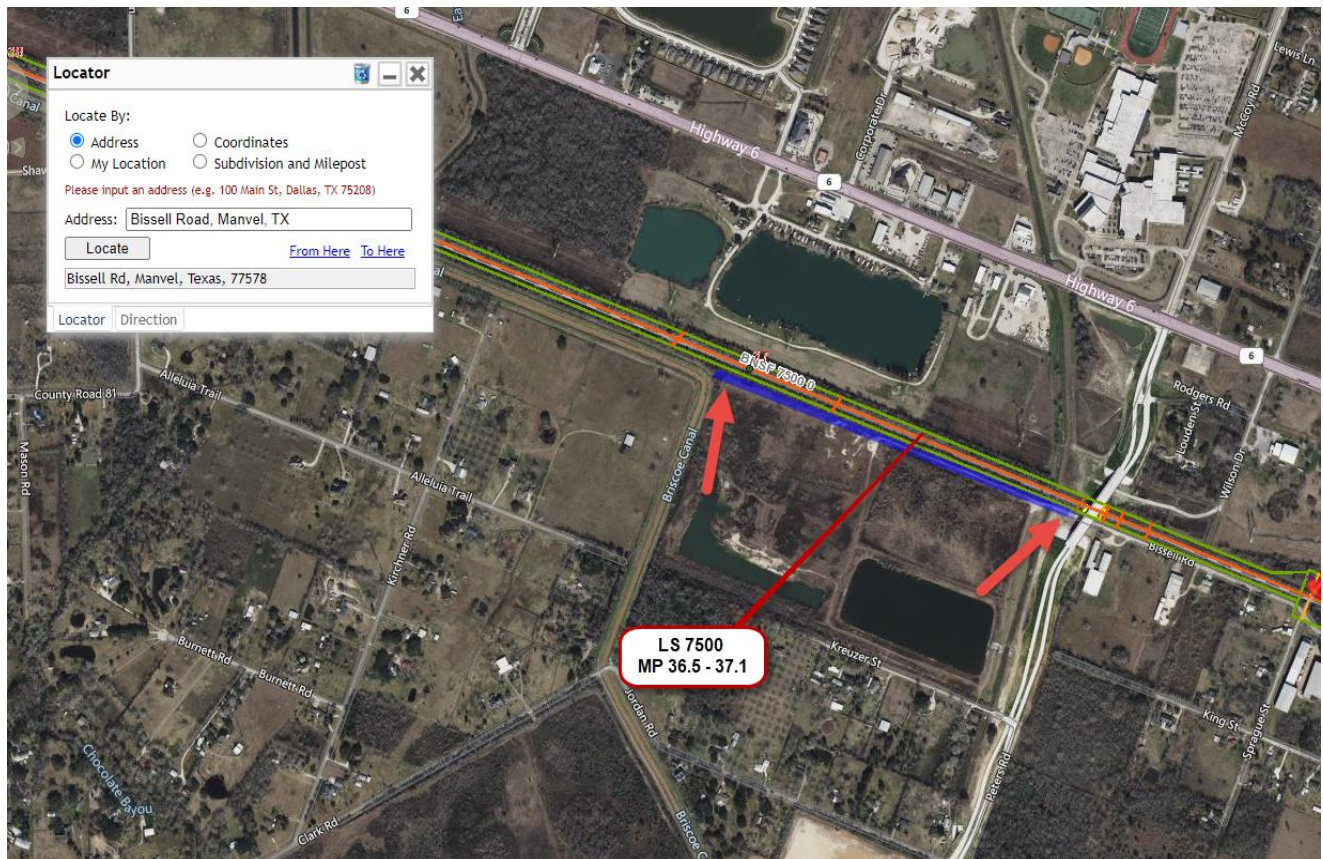
BNSF Railway Company, owner of the right of way adjoining the north side of
Platted Bissell Road west Highway 288 and continuing west to the Briscoe Canal
as shown on the attached aerial, has no objection to the vacation of this Street
right of way subject to the City retaining an Easement for existing utilities and
drainage ditches within the Road right of way, access to the signboard south of
the BNSF tracks and west of Highway 288 and BNSF Not receiving any interest
in receiving any of the vacated Street right of way except the right to continue to
use the drainage Easement for ditches located thereon.

Sincerely,

A handwritten signature in blue ink, appearing to read "Dean Ferris", with a stylized flourish extending to the right.

Dean Ferris
Director Right of Way
BNSF Railway Company

Attachment



September 13, 2023

Mr. Brad Sweitzer
EHRA
10011 Meadowglen Lane
Houston, Texas 77042

Re: Bissell Road Right-Of-Way Abandonment
Brazoria County MUD No. 57
EHRA Project No. 071-045-00

Dear Mr. Sweitzer:

Edminster, Hinshaw, Russ & Associates, Inc. d/b/a EHRA has reviewed the subject exhibits and interposes “No Objection” to the abandonment of an approximately 2.7 AC section of Bissel Road right-of way located in and adjacent to the Meridiana Development.

If you have any questions or need additional information regarding this matter, please feel free to contact me at (713)784-4500.

Sincerely,



Hannah Ritchey, P.E.

HR/sf

cc: Mr. Dan Johnson – City of Manvel
Jared Bowlin, P.E. – Firm



January 17, 2024

Tammy Bell
Manvel City Hall
PO Box 187
Manvel, TX 77578

RE: ROW ABANDONMENT – Bissell Road, Manvel, Texas.

Ms. Bell,

Southwestern Bell Telephone Company (SWBT) offers "**NO OBJECTION**" at this time to the ROW abandonment of the 50' ROW of Bissell Road west of Meridiana Parkway and east of the GCWA Canal, situated in the H.T. & R.R. Survey, Section 62, Abstract 484, Brazoria County, Texas as shown on attached Exhibit "A", and described in the email and attached survey dated December 8, 2023.

There are existing SWBT facilities located with 50' of the ROW. Please have existing facilities located and marked by calling Cable Locate 811 before beginning construction. Questions can be referred to the AT&T Engineer Michael Travis at mt4089@att.com or 281-853-4496.

If you have any questions, please contact me by email at sm8285@att.com.

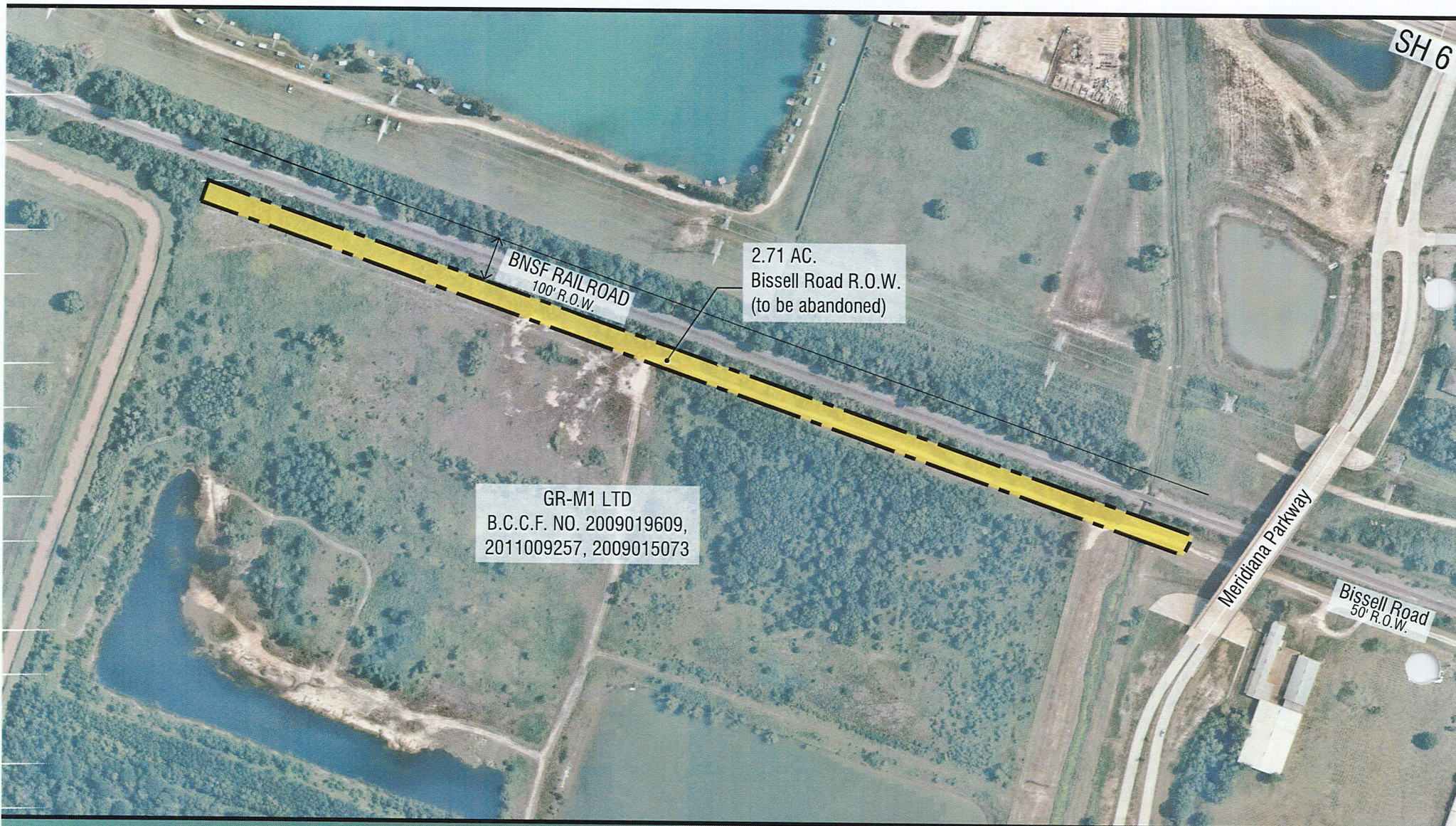
Sincerely,

Sonya Merrill

Sonya Merrill
Manager-Engineering
Right-of-Way

Attachment

EXHIBIT "A"



Bissell Road R.O.W.: Portion to be Abandoned

2.713 acres of right-of-way situated in the H.T. & R.R. Co. Survey, Section 62, Abstract 484, Brazoria County, Texas

P:\091-011-150\LandPlan\ROW Abandonment\Bissell Road Abandonment\EXHIBITS\Bissell Road ROW Abandonment Area.dwg, Sep 13, 2023 11:38am Edited by: awaggoner

September, 2023

1" = 50' 1" = 100' 1" = 200'
SCALE: 1" = 200'
TRUE SCALE AT 11"x 17"



EHRA JOB NO.
081-011-150

No warranty or representation is made by EHRA as to the accuracy or completeness of the information provided. All plans for use or modification are subject to change without notice.



ENGINEERING THE FUTURE
SINCE 1936

10011 MEADOWGLEN LANE
HOUSTON, TEXAS 77042
713.784.4500
EHRA TEAM
TBPE No. F-726
TBPLS No. 10092300

P:\08-011-230\PLAT\Map\Section 82 Detention Reserve_Plat revdwg Dct 31, 2023-3\Map Edited by plp\stcla

GENERAL NOTES:

- Bearing orientation is based on the Texas State Plane Coordinate System of 1983, South Central Zone as determined by GPS measurements.
- The Coordinates shown hereon are Texas South Central Zone No. 4204 state plane grid coordinates (NAD 83) and may be brought to surface by applying the following scale factor: 0.99986742185.
- According to the Federal Emergency Management Agency Flood Insurance Rate Map, Brazoria County, Texas, Community Panel No.4803C0110K, dated December 30, 2020, the property lies within Area AO.

This flood statement does not imply that the property or structures thereon will be free from flooding or flood damage. On rare occasions floods can and will occur and flood heights may be increased by man-made or natural causes. The location of the flood zone was determined by scaling from said FEMA map. The actual location, as determined by elevation contours, may differ. Edminster, Hinshaw, Russ & Associates, Inc. d/b/a EHRA, assumes no liability as to the accuracy of the location of the flood zone limits. This flood statement shall not create liability on the part of Edminster, Hinshaw, Russ & Associates, Inc. d/b/a EHRA.
- B.C.C.F. Indicates Brazoria County Clerk's File.
B.L. Indicates Building Line.
D.E. Indicates Drainage Easement.
M.H. Indicates Manhole.
P.G. Indicates Page.
P.A.E. Indicates Permanent Access Easement.
P.O.B. Indicates Point of Beginning.
P.U.E. Indicates Public Utility Easement.
P.V.T. Indicates Private.
R. Indicates Radius.
R.O.W. Indicates Right-Of-Way.
S.S.E. Indicates Sanitary Sewer Easement.
STM.S.E. Indicates Storm Sewer Easement.
U.E. Indicates Utility Easement.
VOL. Indicates Volume.
W.L.E. Indicates Water Line Easement.
X. Indicates change in street name.
- The property subdivided in the foregoing plat lies in Brazoria County, the City of Manvel, Brazoria County M.U.D. No. 57, Alvin Independent School District, and Brazoria County Conservation & Reclamation District No. 3.
- Property within the boundaries of this plat and adjacent to any drainage easement, ditch, gully, creek, or natural drainage way shall hereby be restricted to keep such drainage ways and easements clear of fences buildings, plantings, and other obstructions.
- Before final plat recordation, the property within the boundaries of this plat will be annexed into Ordinance numbers 2009-O-03, 2009-O-04, and 2009-O-05 of the City of Manvel, Texas dated February 23, 2009, as well as the Administrative Changes regarding Ordinance number 2009-O-04, approved on March 3, 2022.
- All sidewalks shall be constructed in accordance with City of Manvel Ordinance No. 2009-O-04.
- Contour lines shown hereon are based on the NGS Benchmark E 306 being noted hereon.
- No residential, commercial, or industrial structure, other than structures necessary to operate the pipeline, shall be erected or moved to a location nearer than 50 feet to any pipeline, except for low pressure distribution system pipeline as defined in section 62-2, as per Manvel Ordinance Sec. 62-116a.
- Preliminary, this document shall not be recorded for any purpose and shall not be used or viewed or relied upon as a final survey document.
- Approval of the preliminary plat does not constitute acceptance of the subdivision, but is merely an authorization to proceed with the preparation of the final plat. Approval of the preliminary plat shall expire 12 months after commission approval, unless the final plat has been submitted to commission for final approval during that time. Upon written request of the subdivider, an extension of time may be given, at the discretion of the commission, for a single extension period of six months, provided the subdivider has shown good faith in proceeding to complete the work necessary prior to filing the final plat.
- Reserve "A" provides a total of 5.2 acres of unencumbered open space within the boundary of this plat.

BRAZORIA COUNTY CONSERVATION & RECLAMATION DISTRICT NO. 3:

- Drainage easements may be used by any government body for purposes of drainage work, provided Brazoria County Conservation & Reclamation District No. 3 (B.C.C.R.D.#3) is properly notified.
- All drainage easements shown hereon shall be kept clear of fences, building, foundations, plantings and other obstructions to the operation and maintenance of drainage facilities, landscaping shall be permitted within the detention ponds located within this subdivision.
- Maintenance of detention facilities shall be the sole responsibility of the owner of the property. B.C.C.R.D.#3 shall provide maintenance of regional facilities owned and constructed by B.C.C.R.D.#3, or sub-regional facilities constructed by developer(s) for which ownership has been transferred to B.C.C.R.D.#3 with their approval. B.C.C.R.D.#3 shall be responsible only for the maintenance of facilities owned by them, unless B.C.C.R.D.#3 specifically contracts or agrees to maintain other facilities.
- The sides of drainage channels and detention facilities shall be hydromulch seeded.
- Outfall structures and culverts shall comply with Section III C, 2 of the Brazoria County Conservation and Reclamation District No. 3 Regulations. Brazoria County Conservation and Reclamation District No. 3 has adopted the Brazoria County Drainage criteria manual as its guide. Erosion protection for outfall structures must be of reinforced concrete. Concrete rubble is not allowed.
- B.C.C.R.D.#3 approval of the final drainage plans and final plat (if required) does not affect the property rights of third parties. The developer shall be responsible for obtaining and maintaining any and all easements, fee strips and/or any other right-of-way across third party properties for the purpose of moving excess run-off of B.C.C.R.D.#3 drainage facilities as contemplated by the final drainage plans and the final plat.
- B.C.C.R.D.#3 personnel shall have the right to enter upon the property for inspection at any time during construction or as may be warranted to ensure the detention facilities operating properly.
- Detention is required by B.C.C.R.D. #3 in order to offset additional storm runoff due to the increased impervious cover from the development.

BENCHMARK(S):

NGS MONUMENT # E 306 DISK SET IN TOP OF CONCRETE MONUMENT, LOCATED 2.0 MILES WEST OF MANVEL, 2 MILES WEST ALONG THE GULF, COLORADO AND SANTA FE RAILWAY FROM STATION AT MANVEL, BRAZORIA COUNTY, 0.2 MILE WEST OF A SHELL-ROAD CROSSING, 5-1/2 FEET NORTHWEST OF MILE POLE 38, 39 FEET SOUTH OF THE SOUTH RAIL, 33 FEET NORTH OF THE CENTERLINE OF A DIRT ROAD, 6.7 FEET NORTH OF THE RIGHT-OF-WAY FENCE, 3 FEET WEST OF A WHITE WOODEN WITNESS POST AND SET IN THE TOP OF A CONCRETE POST ABOUT FLUSH WITH THE GROUND.
ELEV.=52.00 (NAVD '88) 1991 ADJUSTMENT

RESERVE TABLE

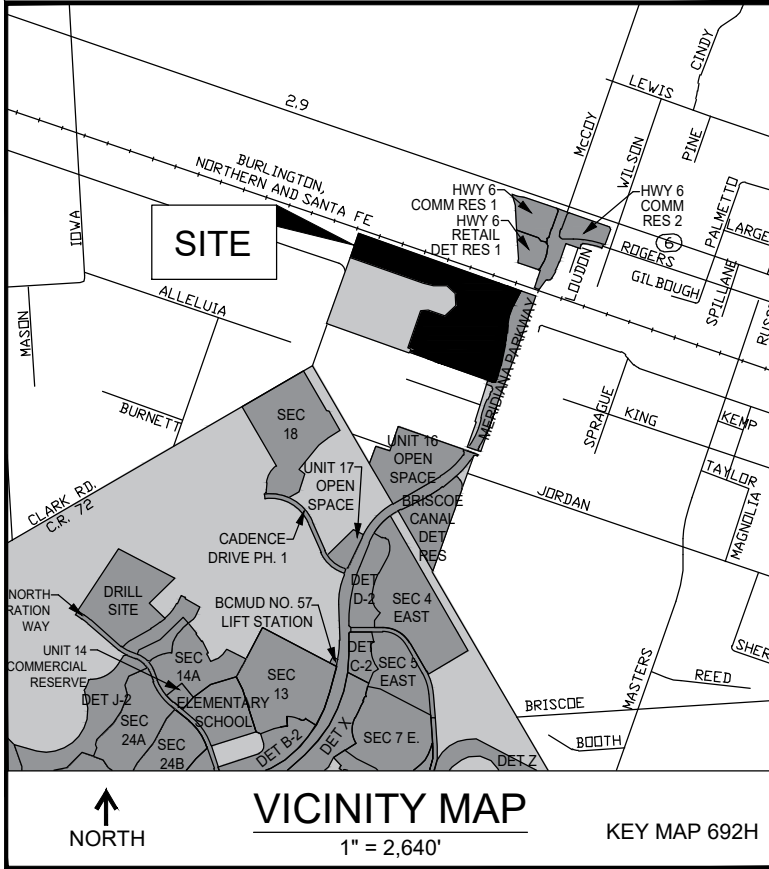
RESERVE	RESTRICTIONS	SQ. FT.	ACREAGE	MAINTENANCE
A	DETENTION, LANDSCAPE, RECREATION, OPEN SPACE, & UTILITY PURPOSES	1,581,619.99	36.31	B.C.M.U.D. NO. 57
B	DRAINAGE, LANDSCAPE, OPEN SPACE, & UTILITY PURPOSES	53,493.65	1.23	B.C.M.U.D. NO. 57
C	DRAINAGE, LANDSCAPE, OPEN SPACE, & UTILITY PURPOSES	197,400.04	4.53	B.C.M.U.D. NO. 57
D	LANDSCAPE, OPEN SPACE, & UTILITY PURPOSES	57,156.68	1.31	B.C.M.U.D. NO. 57
		1,889,670.36	43.38	

CURVE TABLE

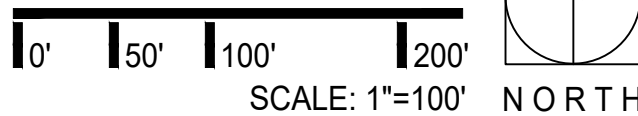
CURVE	RADIUS	ARC LENGTH	CHORD BEARING	CHORD LENGTH
C1	780.00'	301.70'	S 15°53'13" W	299.82'
C2	1,490.00'	121.28'	S 07°08'16" W	121.25'
C3	2,000.00'	97.06'	S 10°51'36" W	97.05'
C4	3,000.00'	15.11'	S 12°32'41" W	15.11'
C5	2,000.00'	244.97'	S 16°02'52" W	244.81'
C6	25.00'	39.27'	S 64°33'24" W	35.36'

LINE TABLE

LINE	ANGLE	DISTANCE
L1	S 09°28'11" W	66.76'
L2	S 12°32'20" W	39.92'
L3	S 19°33'24" W	24.68'
L4	N 19°33'24" E	50.00'
L5	N 70°26'36" E	50.00'
L6	N 81°45'59" E	104.47'



OWNER CONTACT INFORMATION
GR-M1, LTD., A TEXAS LIMITED PARTNERSHIP
1602 AVENUE D, STE. 100
KATY, TX 77493
832-916-2162



Meridiana Section 82 Detention Reserve Preliminary Plat A Subdivision of 43.38 acres out of the H.T. & B.R.R. Co. Survey, Section 64, A-483, and H.T. & B.R.R. Co. Survey, Section 62, A-484, City of Manvel, Brazoria County, Texas.

1 Block and 4 Reserves

Owner: GR-M1, LTD., a Texas Limited Partnership

Sheet 1

November 3, 2023

10011 MEADOWGLEN LANE
HOUSTON, TEXAS 77042
713.784.4500
WWW.EHRATEAM.COM
TBP# E NG. F-726
TBP# S NO. 1007200

EHRA

ENGINEERING THE FUTURE
SINCE 1956

No warranty or representation of intended use, design or construction is made by EHRA. All drawings and specifications are subject to change without notice.
EHRA JOB NO. 081-011-210

GENERAL NOTES:

- Bearing orientation is based on the Texas State Plane Coordinate System of 1983, South Central Zone as determined by GPS measurements.
- The Coordinates shown hereon are Texas South Central Zone No. 4204 state plane grid coordinates (NAD 83) and may be brought to surface by applying the following scale factor: 0.99986742185.
- According to the Federal Emergency Management Agency Flood Insurance Rate Map, Brazoria County, Texas, Community Panel No.48039C0110K, dated December 30, 2020, the property lies within Zone AO.

This flood statement does not imply that the property or structures thereon will be free from flooding or flood damage. On rare occasions floods can and will occur and flood heights may be increased by man-made or natural causes. The location of the flood zone was determined by scaling from said FEMA map. The actual location, as determined by elevation contours, may differ. Edminster, Hinshaw, Russ & Associates, Inc. d/b/a EHRA, assumes no liability as to the accuracy of the location of the flood zone limits. This flood statement shall not create liability on the part of Edminster, Hinshaw, Russ & Associates, Inc. d/b/a EHRA.
- B.C.C.F. Indicates Brazoria County Clerk's File.
B.L. Indicates Building Line.
D.E. Indicates Drainage Easement.
M.H. Indicates Manhole.
PG. Indicates Page.
P.A.E. Indicates Permanent Access Easement.
P.O.B. Indicates Point of Beginning.
P.U.E. Indicates Public Utility Easement.
P.V.T. Indicates Private.
R. Indicates Radius.
R.O.W. Indicates Right-Of-Way.
S.S.E. Indicates Sanitary Sewer Easement.
STM.S.E. Indicates Storm Sewer Easement.
U.E. Indicates Utility Easement.
VOL. Indicates Volume.
W.L.E. Indicates Water Line Easement.
X. Indicates change in street name.
- The property subdivided in the foregoing plat lies in Brazoria County, the City of Manvel, Brazoria County M.U.D. No. 57, Alvin Independent School District, and Brazoria County Conservation & Reclamation District No. 3.
- Property within the boundaries of this plat and adjacent to any drainage easement, ditch, gully, creek, or natural drainage way shall hereby be restricted to keep such drainage ways and easements clear of fences buildings, plantings, and other obstructions.
- Before final plat recordation, the property within the boundaries of this plat will be annexed into Ordinance numbers 2009-O-03, 2009-O-04, and 2009-O-05 of the City of Manvel, Texas dated February 23, 2009, as well as the Administrative Changes regarding Ordinance number 2009-O-04, approved on March 3, 2022.
- All sidewalks shall be constructed in accordance with City of Manvel Ordinance No. 2009-O-04.
- Contour lines shown hereon are based on the NGS Benchmark E 306 being noted hereon.
- No residential, commercial, or industrial structure, other than structures necessary to operate the pipeline, shall be erected or moved to a location nearer than 50 feet to any pipeline, except for low pressure distribution system pipeline as defined in section 62-2, as per Manvel Ordinance Sec. 62-116a.
- Preliminary, this document shall not be recorded for any purpose and shall not be used or viewed or relied upon as a final survey document.
- Approval of the preliminary plat does not constitute acceptance of the subdivision, but is merely an authorization to proceed with the preparation of the final plat. Approval of the preliminary plat shall expire 12 months after commission approval, unless the final plat has been submitted to commission for final approval during that time. Upon written request of the subdivider, an extension of time may be given, at the discretion of the commission, for a single extension period of six months, provided the subdivider has shown good faith in proceeding to complete the work necessary prior to filing the final plat.
- Reserve "A" provides a total of 5.2 acres of unencumbered open space within the boundary of this plat.

BRAZORIA COUNTY CONSERVATION & RECLAMATION DISTRICT NO. 3:

- Drainage easements may be used by any government body for purposes of drainage work, provided Brazoria County Conservation & Reclamation District No. 3 (B.C.C.R.D.#3) is properly notified.
- All drainage easements shown hereon shall be kept clear of fences, building, foundations, plantings and other obstructions to the operation and maintenance of drainage facilities, landscaping shall be permitted within the detention ponds located within this subdivision.
- Maintenance of detention facilities shall be the sole responsibility of the owner of the property. B.C.C.R.D.#3 shall provide maintenance of regional facilities owned and constructed by B.C.C.R.D.#3, or sub-regional facilities constructed by developer(s) for which ownership has been transferred to B.C.C.R.D.#3 with their approval. B.C.C.R.D.#3 shall be responsible only for the maintenance of facilities owned by them, unless B.C.C.R.D.#3 specifically contracts or agrees to maintain other facilities.
- The sides of drainage channels and detention facilities shall be hydromulch seeded.
- Outfall structures and culverts shall comply with Section III C, 2 of the Brazoria County Conservation and Reclamation District No. 3 Regulations. Brazoria County Conservation and Reclamation District No. 3 has adopted the Brazoria County Drainage criteria manual as its guide. Erosion protection for outfall structures must be of reinforced concrete. Concrete rubble is not allowed.
- B.C.C.R.D.#3 approval of the final drainage plans and final plat (if required) does not affect the property rights of third parties. The developer shall be responsible for obtaining and maintaining any and all easements, fee strips and/or any other right-of-way across third party properties for the purpose of moving excess run-off of B.C.C.R.D.#3 drainage facilities as contemplated by the final drainage plans and the final plat.
- B.C.C.R.D.#3 personnel shall have the right to enter upon the property for inspection at any time during construction or as may be warranted to ensure the detention facilities operating properly.
- Detention is required by B.C.C.R.D. #3 in order to offset additional storm runoff due to the increased impervious cover from the development.

BENCHMARK(S):

NGS MONUMENT # E 306 DISK SET IN TOP OF CONCRETE MONUMENT, LOCATED 2.0 MILES WEST OF MANVEL, 2 MILES WEST ALONG THE GULF, COLORADO AND SANTA FE RAILWAY FROM THE STATION AT MANVEL, BRAZORIA COUNTY, 0.2 MILE WEST OF A SHELL-ROAD CROSSING, 5-1/2 FEET NORTHWEST OF MILE POLE 38, 39 FEET SOUTH OF THE SOUTH RAIL, 33 FEET NORTH OF THE CENTERLINE OF A DIRT ROAD, 6.7 FEET NORTH OF THE RIGHT-OF-WAY FENCE, 3 FEET WEST OF A WHITE WOODEN WITNESS POST AND SET IN THE TOP OF A CONCRETE POST ABOUT FLUSH WITH THE GROUND.
ELEV.=52.00 (NAVD '88) 1991 ADJUSTMENT

RESERVE TABLE

RESERVE	RESTRICTIONS	SQ. FT.	ACREAGE	MAINTENANCE
A	DETENTION, LANDSCAPE, RECREATION, OPEN SPACE, & UTILITY PURPOSES	1,581,619.99	36.31	B.C.M.U.D. NO. 57
B	DRAINAGE, LANDSCAPE, OPEN SPACE, & UTILITY PURPOSES	53,493.65	1.23	B.C.M.U.D. NO. 57
C	DRAINAGE, LANDSCAPE, OPEN SPACE, & UTILITY PURPOSES	197,400.04	4.53	B.C.M.U.D. NO. 57
D	LANDSCAPE, OPEN SPACE, & UTILITY PURPOSES	57,156.68	1.31	B.C.M.U.D. NO. 57
		1,889,670.36	43.38	

CURVE TABLE

CURVE	RADIUS	ARC LENGTH	CHORD BEARING	CHORD LENGTH
C1	780.00'	301.70'	S 15°53'13" W	299.82'
C2	1,490.00'	121.28'	S 07°08'16" W	121.25'
C3	2,000.00'	97.06'	S 10°51'36" W	97.05'
C4	3,000.00'	15.11'	S 12°32'41" W	15.11'
C5	2,000.00'	244.97'	S 16°02'52" W	244.81'
C6	25.00'	39.27'	S 64°33'24" W	35.36'

LINE TABLE

LINE	ANGLE	DISTANCE
L1	S 09°28'11" W	66.76'
L2	S 12°32'20" W	39.92'
L3	S 19°33'24" W	24.68'
L4	N 19°33'24" E	50.00'
L5	N 70°36'36" W	50.00'
L6	N 81°45'59" E	104.47'





MANVEL CITY COUNCIL DATA SHEET

MEETING DATE: March 18, 2024

TOPIC: Consideration and possible action regarding amending the zoning ordinance by changing the zoning classification of 1,735 acres of land generally located east of State Highway 288 and south of Highway 6 from Seven Oaks Ranch Open-Planned Unit Development (O-PUD) to the Meridiana Planned Unit Development (PUD) for the Meridiana PUD and adopt the amended Meridiana PUD document.

BACKGROUND: The Meridiana Development is a primarily residential development of approximately 2,906 acres. Of the total development, approximately 1,735 acres will be within the City of Manvel, 26 acres are within Alvin, and 1,145 acres are within Iowa Colony. The developer has submitted this proposed amendment #3 to the currently approved Planned Unit Development (O-PUD) for the portion of Meridiana within the City of Manvel.

STAFF RECOMMENDATION: Staff recommends conditional approval of Ordinance No. 2024-O-13 as the proposed amendments to the Meridiana Planned Unit Development are in line with the goals of the City and will be comprised of a majority of single-family detached residences.

Recommended Condition.

1. All appeals for staff interpretation will be heard before the Zoning Board of Adjustment, instead of the City Council as proposed.

PD&Z DISCUSSION: At the March 11, 2024, meeting of the Planning, Development and Zoning Commission ("the PD&Z"), a public hearing was held during which public comments were received. The public in attendance provided input regarding roadway conditions, drainage, and notification comments. The public hearing comments and responses are outlined in the attached staff report.

PD&Z RECOMMENDATION: The PD&Z Commission recommended conditional approval of Ordinance No. 2024-O-13 with a vote of six (6) "Yeas" to zero (0) "Nays" at the March 11, 2024, meeting.

Recommended Condition:

1. All appeals for staff interpretation will be heard before the Zoning Board of Adjustment, instead of the City Council as proposed.

ATTACHMENTS: Staff Report with exhibits, and Ordinance No. 2024-O-13.**FUNDING ISSUES**

- ☒ Not applicable
☐ Not budgeted
☐ Full amount already budgeted
☐ Funds to be transferred from Acct.#

SUBMITTING STAFF MEMBER

Evan DuVall
Zoning Administrator

FINANCE DIRECTOR APPROVAL _____**CITY MANAGER APPROVAL** _____

Staff Report

Summary of Proposed Amendment #3 to the Meridiana Open-Planned Unit Development.

Introduction:

The Meridiana Development is a primarily residential development of approximately 2,906 acres. Of the total development, approximately 1,735 acres will be within the City of Manvel, 26 acres are within City of Alvin, and 1,145 acres are within City of Iowa Colony. The developer has submitted this proposed amendment #3 to the currently approved Open-Planned Unit Development (O-PUD) for the portion of the Meridiana within the City of Manvel. This proposal also rezones the existing Open-Planned Unit Development District and adds an additional 72 acres and rezones the entire development to the Planned Unit Development District (PUD) in compliance with the current ordinance. These modifications have been outlined below in two categories. Additionally, a summary from the March 11, 2024 Planning Development and Zoning Commission has been added below.

1. Proposed Substantial Changes.

- a. Addition of 72 acres into PUD
- b. Land Use Designation Amendments
- c. Creation of a Garden Home Land Use Designation
- d. Signage Amendments
- e. Residential one-acre lots on Masters Road
- f. Reduction of total residential density and controlling lot widths by density limitations.
- g. Right-of-way width to a minimum of 50 in width with Utility Easements
- h. Kreuzer Road and limits of roadways improvements.
- i. Public safety site relocation



2. Minor Changes.

- a. Circulation modifications
- b. Renaming this project from Seven Oaks Ranch to Meridiana
- c. Residential Intersection spacing minimum.
- d. Flood plain statement updated.
- e. Sidewalk exhibit has been added for Texas Accessibility Standards Compliance
- f. Appeal process updated for staff interpretations.

3. March 11, 2024 – PD&Z Public hearing comments and responses

- a. Roadway comments
- b. Drainage comments
- c. Notification comments

1. Proposed Substantial changes:

- a. **Additional Land to the PUD:** This amendment adds an additional roughly 72 acres of land to the development, generally located west of Meridiana Parkway

and Kruezer Road. This area is being designated as Garden Homes and Open Space, Parks and Detention within the Meridiana land use plan.

- b. Land Use Designation Amendments:** The land use categories for the development have been modified to reflect the additional 72.0 acres that are being added into this O-PUD and additional modifications to the location of other land uses. These proposed amendments include adding a total of 30.0 acres that are being designated as Garden Homes, which are single-family residential homesites. A total of 30 acres are being designated patio homes, making the total area of 80 acres for patio homes within this development. A new commercial tract has been designated on the southwest corner of Jordan Road and Meridiana Parkway. and a total of 39.40 acres have been added to the Parks and Open Space land use designation for a total of 450.2 acres of the Meridiana O-PUD (See Exhibit 1, 2 and 3).
- c. Creation of a Garden Home Land Use Designation:** The Garden Home land use designation has been added and defined within the development. This proposal allows for any new property added to this Open-Planned Unit Development to be added as the Garden Home designation, unless otherwise requested by the Developer.

Garden Home – The Garden Home category (GH) is intended for the development of detached single family dwelling units on the perimeter of the overall project boundary. Lots shall have a minimum lot width of 50 feet and a minimum lot area of 6,300 square feet.

- d. Signage Amendments:** A signage section has been added to describe the allowable signage within the Meridiana Development, whereas in the previously approved plan it followed the City's sign ordinance, and any variance required approval from City Council. All signage not stipulated, such as wall signs, will follow the City's regulations. The signage specifically stipulated are primary entry monument, secondary entry monument, section monument, commercial monument, and temporary builder signs (See Exhibit 4).
 - i. Primary Entry Monument:** Maximum height of 25' and 36' in width, maximum sign area of 216 Square feet. Only two locations are permitted for these signs, Meridiana Parkway and Highway 6 and Jordan Road/Meridiana Parkway.
 - ii. Second Entry Monument:** Maximum height of 10' and maximum size of 80 square feet. These locations are at Pursley Boulevard and Clark Road, and Cumulus Drive and Masters Roadway.
 - iii. Section Monument:** Maximum height of 6' and 40' in width, with a maximum of 32 square feet. Each section is allowed an entry monument for the ingress and egress of a section.

- iv. **Commercial Monument:** Maximum height of 6' and 13' in width. Maximum square-footage is 45 square feet. Minimum separation of 100 feet, and one sign per single tenant commercial tract, unless on a corner, then one monument sign will be permitted on each public street.
- v. **Temporary Builder Signs:** A maximum height of 10' and 6' in width, with a maximum square-footage of 60 square feet.
- e. **Residential one-acre lots on Masters Road:** This amendment further allows for one-acre or larger homesites located on the north side of Masters Road as well as typical residential lots. These properties can be served by well and septic if they are developed as one-acre or larger lots. These lots can also be developed as single-family lots served by water and sewer service from the Municipal Utility Districts. These lots will not have individual access to Masters Road to comply with the restrictions for Masters Road found in the development agreement.
- f. **Reduction of total residential density and controlling lot widths by density limitations:** This proposal reduces the current residential density from 2.43 dwelling units to 2.329 dwelling units per gross acre. If there is additional land added to this development, this new gross density will be applied to the project. This amendment proposes to remove the 20% maximum for lots less than 60 feet in width and use the density requirement to regulate lot widths, but the Single-Family District restricts these  being 55 feet in width or larger. This means that new sections single-family divisions will be minimum will be a minimum of 55 feet in width and 6,300 square feet in size, or larger.
- g. **Right-of-way width to a minimum of 50 in width with Utility Easements.** This amendment requires a minimum of 60-foot right-of-way for local roads that have 50% or more of lots equal or greater than 70 feet in width. All other local roadways can be a minimum of 50-foot width but require 10-foot-wide utility easements adjacent to this right-of-way. This smaller width right-of-way will have the same pavement with of 28' and will generally look the same as the 60-foot right-of-way.
- h. **Kreuzer Road and limitations of extension:** Kreuzer Road is the southern boundary of the tracts of land that are being added to the O-PUD. The proposed roadway improvements with this amendment is to not improve this street to the western boundary of any Meridiana development, but just the minimum required for access.
- i. **Public safety/facilities site relocation:** Public Safety Site has been relocated from the Village Center area to an area off of Jordan Road, generally located west of Jordan Road and Meridiana Parkway. This site will be designated as public facilities, not just public safety, which will allow for additional uses for public uses.

2. Proposed Minor changes.

- a. **Circulation modifications:** Removal of the Village Center Major Thoroughfare standards and utilize the Major Thoroughfare standards. A Major Thoroughfare is a minimum of 120 feet in width, which allows the development to have consistent right-of-way widths, versus the previous Village Center Major Thoroughfare (See Exhibit 5).
- b. **Renaming this project from Seven Oaks Ranch to Meridiana:** This includes corrections for roadways that were previously mentioned as McCoy Road and Seven Oaks Parkway.
- c. **Residential Intersection spacing minimum:** Intersections of local roadways will be a minimum of 125' from centerline to centerline.
- d. **Flood plain statement updated:** Flood plain statement has been modified to the most recent 2020 maps.
- e. **Sidewalk exhibit has been added for Texas Accessibility Standards Compliance:** A Sidewalk exhibit has been added to show compliance with Texas Accessibility Standards for local roads.
- f. **Appeal process updated for staff interpretations:** Any interpretations from staff can be appealed to the City Council by the developer and heard by the City Council within 60 days (approximately 2 months) of appeal. Staff has recommended that all appeals of staff decision go to the Zoning Board of Adjustment instead of the City Council.



3. March 11, 2024 – PD&Z Public hearing comments and responses

These comments were received from the public during the public hearing portion of this item. The public's concerns are found in the following three categories; 1. Roadway comments, 2. Drainage comments, 3. Notification comments. Each of these items also has a response to the comments included.

- a. **Roadway comments: Members of the public spoke regarding the following roadway concerns.**
 - i. **Bridge at Jordan and Clark Street:** A member of the public spoke regarding the replacement of the bridge and whether the Jordan St roadway will be improved. There was also a concern raised regarding the potential increase in noise output from the bridge improvement.
 - 1. **Response:** The city has been working with TxDOT to replace this Bridge, and to make it stronger and safer. The city has worked to

remove the existing S-curve out of the bridge and make the bridge safer and stronger. Additionally, this bridge alignment has resulted in a 1.5-acre tract that is proposed for public facilities for the City of Manvel. Currently, there is no plan for this parcel.

- ii. **Maintenance of Jordan Street:** A member of the public expressed concerns regarding the road maintenance of Jordan Street due to the current condition.

- 1. **Response:** The city is waiting for the completion of the TxDOT Clark Bridge replacement project and will subsequently be looking to address roadway maintenance for this street.

- iii. **Jordan Street and Meridiana Parkway Intersection:** Two members of the public spoke regarding the intersection of Jordan Street and Meridiana Parkway. This is especially difficult for members of the public turning left from Jordan on to Meridiana Parkway.

- 1. **Response:** A flashing “intersection ahead” sign and rumble strips exist to alert drivers of the Sora/Cumulus and Meridiana Parkway intersection. This intersection will be looked at as the development continues to develop.

- iv. **Sora/Cumulus and Meridiana Parkway:** A member of the public spoke regarding issues and incidents at this intersection. They questioned what is planned for this area and whether there are any plans for stripes in the roadway or increased signage demarcation.

- 1. **Response:** The Developer’s representative stated that this area will be looked at when other areas are developed. A flashing “intersection ahead” sign and rumble strips exist to alert drivers of the Sora/Cumulus and Meridiana Parkway intersection. This project has additional developments, driveways, traffic, and roadway improvements as required by a traffic impact analysis and this will assist in improving the roadway.

- v. **Pursley Road and the northern boundary of Meridiana:** A member of the public spoke regarding the future of Pursley Road in areas adjacent to county and city boundaries. The proposed roadway plan shows esplanade openings in this area.

- 1. **Response:** The developer has stated that half of the boulevard has been constructed for Pursley Road, and that there are currently no plans to improve the other side of this roadway for this development. Additionally, this roadway is on the City of Manvel and county boundary, so it is not expected that there will be any additional improvements to Pursley Road in the near future.

- vi. **Meridiana Parkway and Highway 6:** The public spoke regarding the right-turn on to Meridiana Parkway from Highway 6, and that the current traffic configuration is not adequate for this intersection.

- 1. **Response:** The City and the Developer have been working with TxDOT to revise the right turn configuration heading south from

Highway 6 to Meridiana Parkway. This improvement is being coordinated during the commercial tract construction and is expected to be completed in the near future.

- b. **Drainage Concerns:** Members of the public spoke regarding the additional elevation of the Meridiana Development, in some places these areas can be higher than adjacent land. Additionally, there were some complaints about the maintenance of drainage ditches on Jordan Street.
 - i. **Response:** The City of Manvel, and the drainage district review and approve all drainage improvements for the development. Additionally, Meridiana has done a significant amount of floodplain mitigation for this area during the development of this project. The developer stated that ditches were dug to reroute water that flowed through their property prior to the development of Meridiana. Furthermore, approvals are required from Brazoria Drainage District #5 and #3 for any improvements in this area.
- c. **Notification comments:** Members of the public spoke regarding the notification map and inquired as to how this proposal might affect their property. A few members of the public also recommended better language in these notices.
 - i. **Response:** Staff has acknowledged that the notification map needs to be improved to be less confusing during the public hearing notifications. These improvements will include a separate legend showing the 200-foot buffer location, and notification parcels. Additionally, the city will work on the language of these notices in the future and add a website link for more information for larger projects.

Exhibit 3: Proposed Land Use Comparison table

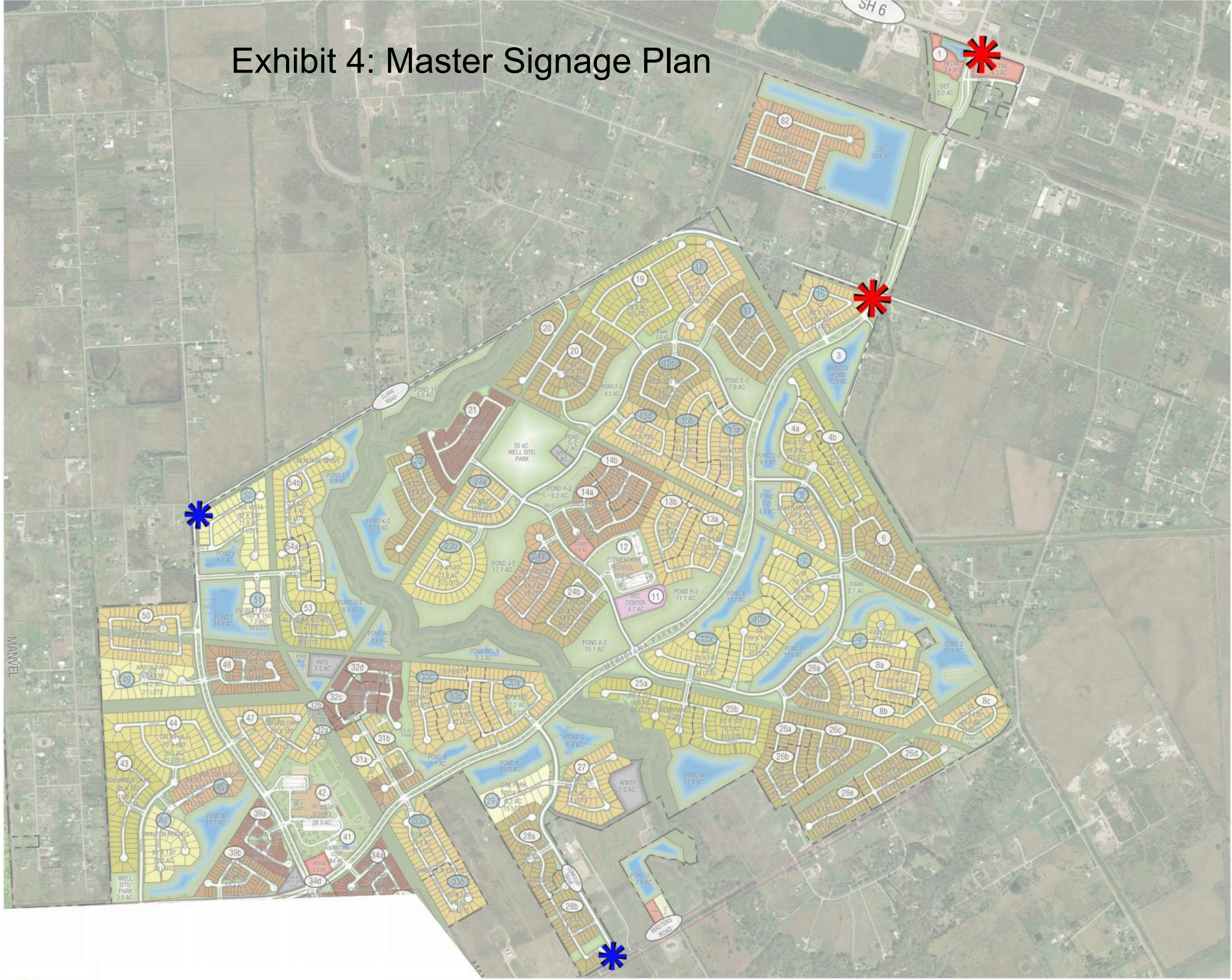
Exhibit 3: Proposed Land Uses						
Proposed 2024 Amendment Land Use			Current Development Land Use		Difference*	
Land Use	Gross Acres	%	Gross Acres	%	Gross Acres	%
Single Family (SF)	924.1	53%	950.40	57%	-26.30	-4%
Garden Home (GH)	30	4%	0.00	0%	30.00	4%
Patio Home (PH)	80.1	5%	50.10	3%	30.00	2%
Townhome (TH)	35	2%	35.00	2%	0.00	0%
Village Center (VC)	37.7	2%	37.70	2%	0.00	0%
Commercial (C)	12.2	1%	13.20	1%	-1.00	0%
Institutional (I)	70	4%	70.00	4%	0.00	0%
Rights-of-Way *	96.1	6%	96.10	6%	0.00	0%
Parks & Open Space (P-OS)	450.2	23%	410.80	25%	39.40	-2%
Totals	1,735.40	100%	1663.30	100%		
* New percent changes reflect the total acres of the new development compared to the existing development, which means that the acreage within the development could increase, but still show as a decrease in percentage due to the added acreage.						

Exhibit 4: Master Signage Plan

- LEGEND
- 

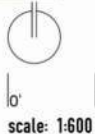
PRIMARY ENTRY MONUMENT
- 

SECONDARY ENTRY MONUMENT



Primary and
Secondary Entry
Monuments

Master Signage Plan



date: 10.02.23

anderson
1201 main street, suite 1340
dallas, tx 75202

Legend

- Major Thoroughfare
- Collector
- Neighborhood Collector
- Esplanade Opening

Exhibit 5: Circulation Plan.

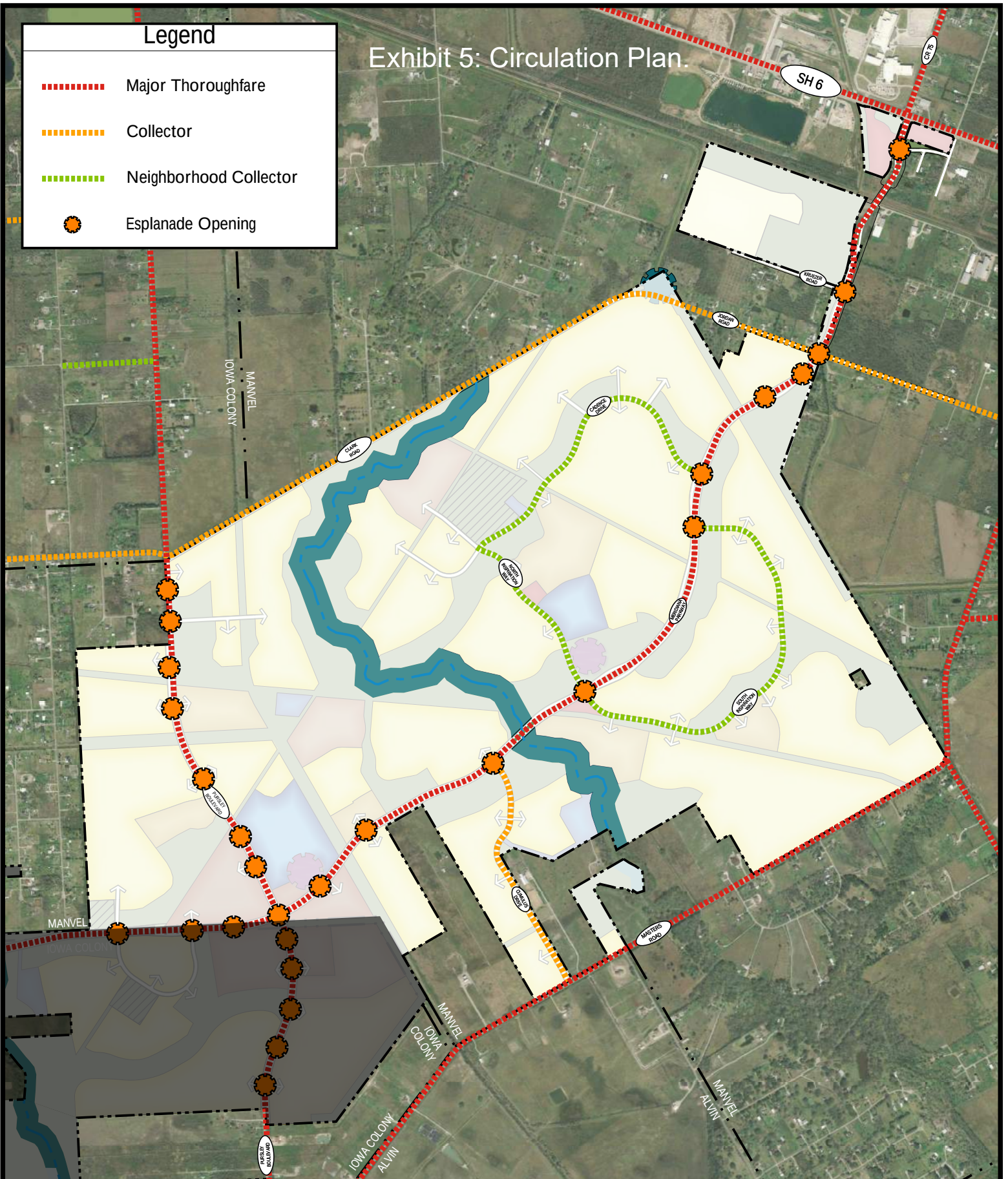


Exhibit 7: Circulation Plan - Manvel

Brazoria County, Texas

NOT TO SCALE



EHRA
ENGINEERING THE FUTURE
Since 1936

EHRA JOB NO.
081-011-150

10011 MEADOWGLEN LANE
HOUSTON, TEXAS 77042
713.784.4500
EHRA TEAM
TBPE No. F-726
TBPLS No. 10092300

No warranty or representation of
intended use, design or proposed
improvements are made herein. All
Plans for land or facilities are
subject to change without notice.

Exhibit 1: Current Land Use Plan

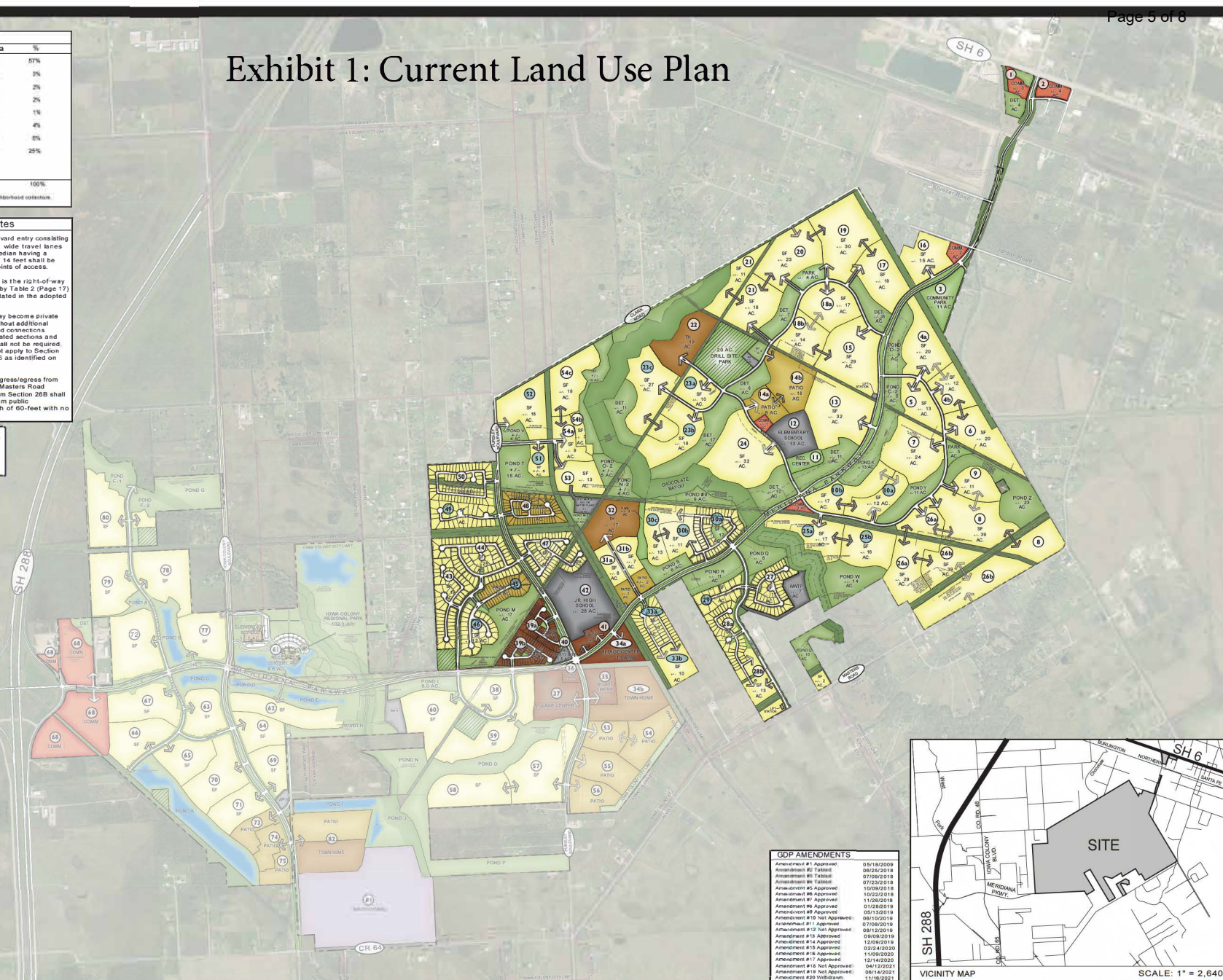
Land Use Table		
Use	Gross Area	%
Single Family (SF)	+/- 841 AC	57%
Patio Home (PH)	+/- 55 AC	3%
Townhome (TH)	+/- 36 AC	2%
Village Center (VC)	+/- 38 AC	2%
Commercial (C)	+/- 13 AC	1%
Institutional (I)	+/- 73 AC	4%
Rights-of-Way*	+/- 99 AC	6%
Parks & Open Space (P-OS)	+/- 408 AC	28%
Drill Site		
Totals	+/- 1,853 AC	100%

* Includes proposed major thoroughfares, collectors, and neighborhood arterials.

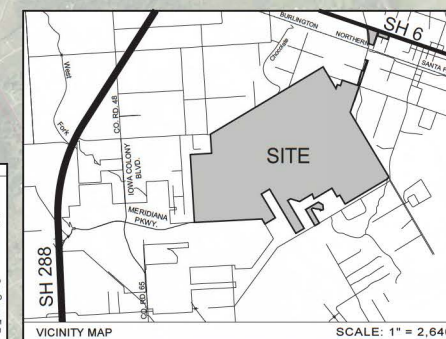
Legend	Notes
 Private Gated Section  Public Section  Divided or Boulevard Entry  Standard Entry	1. A divided or boulevard entry consisting of two (2) 20-foot wide travel lanes separated by a median having a minimum width of 14 feet shall be considered two points of access. 2. A standard entry is the right-of-way width determined by Table 2 (page 17) or as otherwise stated in the adopted O-PUD document. 3. Public sections may become private gated sections without additional consideration. Road connections between private gated sections and public sections shall not be required. This note shall not apply to Section 20 and Section 25 as identified on this document. 4. The Clark Road ingress/egress from Section 20 and S Masters Road ingress/egress from Section 20B shall maintain a minimum public right-of-way width of 60-feet with no parking.

THIS GENERAL DEVELOPMENT PLAN APPROVED BY THE CITY OF MARVEL PLANNING
DEVELOPMENT AND ZONING COMMISSION

PLANNING, DEVELOPMENT AND ZONING COMMISSION



GDP AMENDMENTS	
Amendment #1 Approved	05/18/2009
Amendment #2 Approved	06/25/2018
Amendment #3 Tabular	07/09/2018
Amendment #4 Tabular	07/23/2018
Amendment #5 Approved	10/09/2018
Amendment #6 Approved	10/22/2018
Amendment #7 Approved	11/28/2018
Amendment #8 Approved	01/28/2019
Amendment #9 Approved	08/13/2019
Amendment #10 Not Approved	08/10/2019
Amendment #11 Approved	08/13/2019
Amendment #12 Not Approved	08/13/2019
Amendment #13 Approved	12/09/2019
Amendment #14 Approved	02/24/2020
Amendment #15 Approved	11/09/2020
Amendment #16 Approved	12/14/2020
Amendment #17 Not Approved	04/12/2021
Amendment #18 Not Approved	06/14/2021
Amendment #19 Not Approved	11/16/2021
Amendment #20 Withdrawn	



Meridiana General Development Plan: Amendment #21

Brazoria County, TX

November 19, 2021

1" = 100' SCALE 1" = 400' NORTH

EHRA

SHRIMP MARSHLANDS
HOUSTON, TEXAS 77042
713.294.0000
WWW.EHRA.ORG
1001 N. Loop West, Suite 1000
HOUSTON, TEXAS 77002

EHRA JOB NO. 081-011-150

NO GUARANTEE OF ACCURACY OR COMPLETION OF PROJECT IS MADE BY EHRA OR ITS CONSULTANTS.

Land Use Table

Use	Area
 Single Family Home	914 Ac.
 Garden Home	30 Ac.
 Patio Home	88 Ac.
 Townhome	35 Ac.
 Village Center	38 Ac.
 Commercial	15 Ac.
 Institutional	70 Ac.
 Right of Way	96 Ac.
 Parks, Detention, OS	450 Ac.
 Drill Site	
 Rec Center	
 Public Facilities Site	
Site Total	1,736 Ac.

Exhibit 2: Proposed Land Use

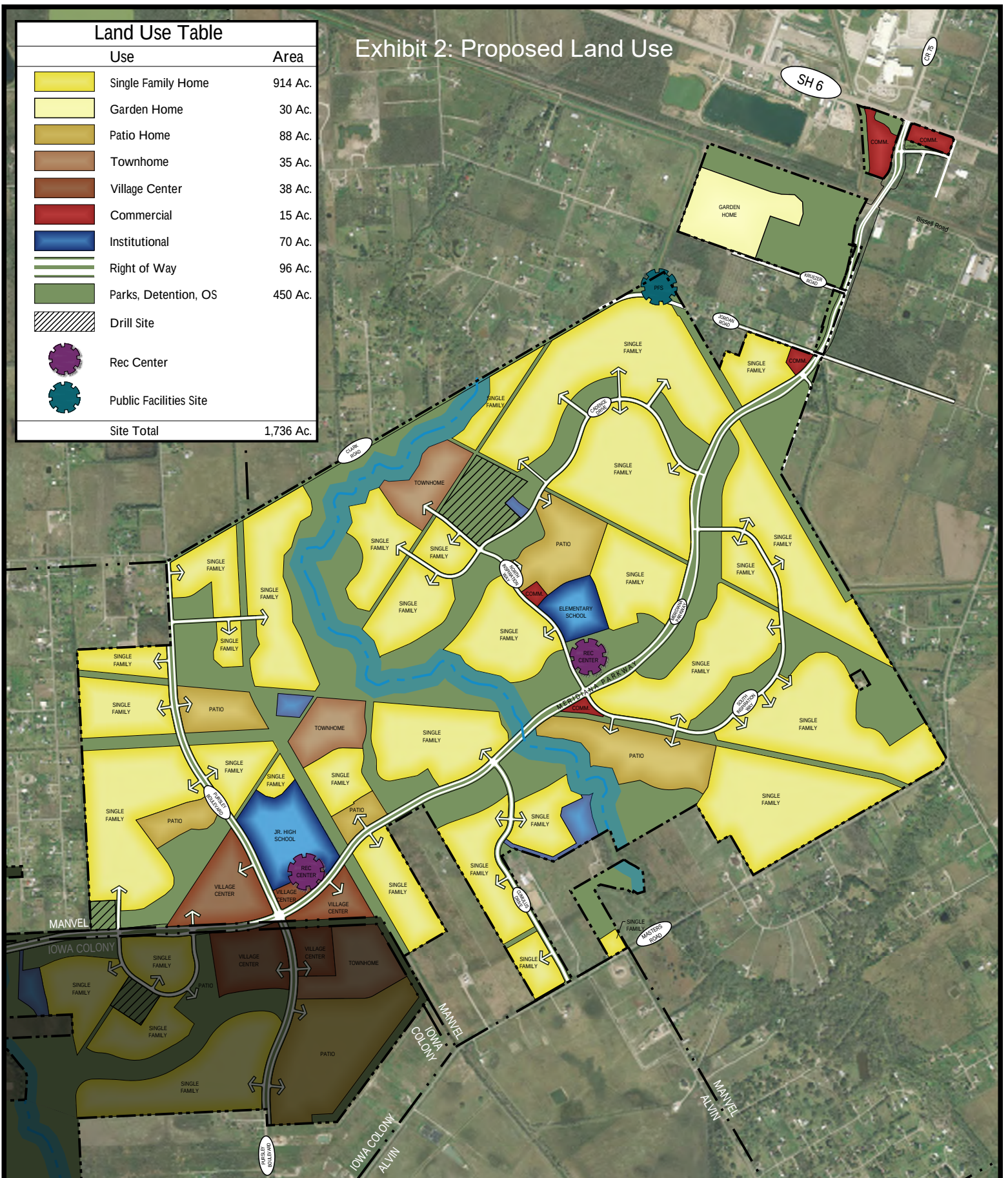


Exhibit 5: Preliminary Land Use Plan - Manvel

Brazoria County, Texas

NOT TO SCALE



EHRA
ENGINEERING THE FUTURE
SINCE 1936

EHRA JOB NO.
081-011-150

10011 MEADOWGLEN LANE
HOUSTON, TEXAS 77042
713.784.4500
EHRA TEAM
TBPE No. F-726
TBPLS No. 10092300

No warranty or representation of
intended use, design or proposed
improvements are made herein. All
Plans for land or facilities are
subject to change without notice.

ORDINANCE NO. 2024-O-13

**AN ORDINANCE OF THE CITY OF MANVEL, TEXAS
AMENDING THE ZONING ORDINANCE OF THE CITY, BY
AMENDING THE ZONING CLASSIFICATION OF 1,735 ACRES
OF LAND GENERALLY LOCATED EAST OF STATE HIGHWAY
288 AND SOUTH OF HIGHWAY 6 FROM OPEN PLANNED UNIT
DEVELOPMENT (O-PUD) TO PLANNED UNIT DEVELOPMENT
(PUD) FOR THE MERIDIANA PLANNED UNIT DEVELOPMENT;
PROVIDING FOR THE AMENDMENT OF THE CITY'S
OFFICIAL ZONING MAP; PROVIDING FOR SEVERABILITY;
AND PROVIDING A PENALTY IN AN AMOUNT NOT TO
EXCEED \$2,000 FOR EACH DAY OF VIOLATION OF ANY
PROVISION HEREOF.**

* * * * *

WHEREAS, GR-M1, Ltd. Is the developer of a certain 1,735 acres tract of land, more particularly described in Exhibit “A” attached hereto and incorporated herein by this reference for all purposes (the “Property”); and

WHEREAS, this development is known as “Seven Oaks Ranch” development with a total 1663.3-acres and is currently zoned Open Planned Unit Development District (O-PUD) adopted by Ordinance #2009-O-04; and

WHEREAS, the development currently known as “Seven Oaks Ranch” development and is to be renamed to the “Meridiana” development; and

WHEREAS, an additional 72.0 acres is being added to the development for a total acreage of 1,735 acres and is being rezoned to the Planned Unit Development District (PUD); and

WHEREAS, pursuant to Section 7 of the City’s Zoning Ordinance, the developer has modified the prepared development plan covering the property; and

WHEREAS, the Planning Development, and Zoning Commission and the City Council have conducted, in the time and manner required by law and the Zoning

Ordinance of the City, a public hearing on said rezone and development plan amendment;
and

WHEREAS, the Planning, Development, and Zoning Commission and the City Council have conducted, in the time and manner required by law and the Zoning Ordinance of the City, a public hearing on such request; and

WHEREAS, the Planning, Development, and Zoning Commission has recommended in its report the approval of such request, and the City Council deems it appropriate to approve said rezoning and development plan amendments; now, therefore,

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MANVEL, TEXAS:

Section 1. The facts and matters set forth in the preamble of this Ordinance are hereby found to be true and correct.

Section 2. The zoning classification of 1,735 acres generally located east of State Highway 288 and South of Highway 6 is hereby changed to Planned Unit Development (PUD) District as more particularly described in Exhibit “A”.

Section 3. The City Council has reviewed the amended development plan attached hereto as Exhibit “B” (the “Development Plan”) and complies with the findings in accordance with following Section 77-29(o)(5) of the City’s Zoning Ordinance.

Section 4. Development of the Property shall strictly comply with the **Meridiana PUD Document**, attached hereto as Exhibit “B” and made a part of hereof for all purposes.

Section 5. The Zoning District Map of the City of Manvel shall be revised and amended to show the designation of said land, as described and provided in Section 2

above, with the appropriate reference thereon to the number and effective date of this Ordinance and a brief description of the nature of the change.

Section 6. The City Council hereby finds and determines that said rezoning comports to the City's comprehensive land use plan, and to the extent of any conflict, amends said comprehensive land use plan. This Ordinance shall in no manner amend, change, supplement, or revise any provision of any ordinance of the City of Manvel, save and except the change in zoning classification of said tracts as described above.

Section 7. In the event any section, paragraph, subdivision, clause, phrase, provision, sentence, or part of this Ordinance or the application of the same to any person or circumstance shall for any reason be adjudged invalid or held unconstitutional by a court of competent jurisdiction, it shall not affect, impair, or invalidate this Ordinance as a whole or any part or provision hereof other any part or provision hereof other than the part declared to be invalid or unconstitutional; and the City Council of the City of Manvel, Texas, declares that it would have passed each and every part of the same notwithstanding the omission of any and every part of the same notwithstanding the omission of any such part thus declared to be invalid or unconstitutional, or whether there be one or more parts.

Section 8. Any person who shall intentionally, knowingly, recklessly or with criminal negligence violate any provision of this Ordinance shall be deemed guilty of a misdemeanor and upon conviction, shall be fined in an amount not to exceed \$2,000.00. Each day of violation shall constitute a separate offense.

PASSED AND APPROVED on first reading this _____ day of _____, 2024.

PASSED, APPROVED, AND ADOPTED on second and final reading this
_____ day of _____, 2024.

Dan Davis, Mayor

ATTEST:

Tammy Bell, City Secretary

APPROVED AS TO FORM:

Robert Gervais, City Attorney



MANVEL CITY COUNCIL DATA SHEET

MEETING DATE:

TOPIC: Acceptance of infrastructure improvements for Manvel Town Center Private Paving 1A to begin the Two-Year Maintenance Period.

BACKGROUND: City Staff has approved the final walk through on this project for the civil site work. The applicant has submitted the Two-Year Maintenance Bond with the City Secretary's Office and the As-Built Construction Plans have been submitted to Development Services Department.

STAFF RECOMMENDATION: Staff recommends City Council accept the infrastructure improvements for this project to begin the Two-Year Maintenance Period.

ATTACHMENTS: N/A

FUNDING ISSUES

- ☒ Not applicable
☐ Not budgeted
☐ Full amount already budgeted
☐ Funds to be transferred from Acct.#

SUBMITTING STAFF MEMBER
Robbie Hall

FINANCE DIRECTOR APPROVAL Yes

CITY MANAGER APPROVAL Yes



MANVEL CITY COUNCIL DATA SHEET

MEETING DATE:

TOPIC: Final acceptance of infrastructure improvements for Manvel Town Center Public Utilities Phase 1 B and release the associated maintenance bond.

BACKGROUND: City Staff has conducted a final acceptance walk-through for Manvel Town Center Water Plant on March 13, 2024, to conclude the maintenance period which began on March 13, 2022. All punch list items have been addressed.

STAFF RECOMMENDATION: Staff recommends City Council accept the infrastructure improvements for this project and release the associated maintenance bonds.

ATTACHMENTS: N/A

FUNDING ISSUES

- ☒ Not applicable
- ☐ Not budgeted
- ☐ Full amount already budgeted
- ☐ Funds to be transferred from Acct.#

SUBMITTING STAFF MEMBER
Robbie Hall

FINANCE DIRECTOR APPROVAL Yes

CITY MANAGER APPROVAL Yes



MANVEL CITY COUNCIL DATA SHEET

MEETING DATE:

TOPIC: Final acceptance of infrastructure improvements for Manvel Town Center Water Plant and release the associated maintenance bond.

BACKGROUND: City Staff has conducted a final acceptance walk-through for Manvel Town Center Water Plant on March 18, 2024, to conclude the maintenance period which began on March 18, 2022. All punch list items have been addressed.

STAFF RECOMMENDATION: Staff recommends City Council accept the infrastructure improvements for this project and release the associated maintenance bonds.

ATTACHMENTS: N/A

FUNDING ISSUES

- ☒ Not applicable
- ☐ Not budgeted
- ☐ Full amount already budgeted
- ☐ Funds to be transferred from Acct.#

SUBMITTING STAFF MEMBER
Robbie Hall

FINANCE DIRECTOR APPROVAL Yes

CITY MANAGER APPROVAL Yes



MANVEL CITY COUNCIL DATA SHEET

MEETING DATE:

TOPIC: Acceptance of infrastructure improvements for Pomona Section 25 to begin the Two-Year Maintenance Period.

BACKGROUND: City Staff has approved the final walk through on this project for the civil site work. The applicant has submitted the Two-Year Maintenance Bond with the City Secretary's Office and the As-Built Construction Plans have been submitted to Development Services Department.

STAFF RECOMMENDATION: Staff recommends City Council accept the infrastructure improvements for this project to begin the Two-Year Maintenance Period.

ATTACHMENTS: N/A

FUNDING ISSUES

- ☒ Not applicable
- ☐ Not budgeted
- ☐ Full amount already budgeted
- ☐ Funds to be transferred from Acct.#

SUBMITTING STAFF MEMBER
Robbie Hall

FINANCE DIRECTOR APPROVAL Yes
CITY MANAGER APPROVAL Yes



CITY COUNCIL DATA SHEET

MEETING DATE: April 1, 2024

TOPIC: Consideration and possible action regarding amending the zoning ordinance by changing the zoning classification of 457.0 acres of land generally located east of State Highway 288, North of Highway 6, Generally South of Del Bellow Boulevard, and West of Farm to Market 1128, from Single-family Residential District (SFR) and Planned Unit Development to Planned Unit Development (PUD) for the Valencia Planned Unit Development and adopt the amended Valencia Planned Unit Development document.

BACKGROUND: The Valencia Planned Unit Development (PUD) is primarily a residential project that consists of approximately 457.0 acres of land and is located east of State Highway 288, north of Highway 6, generally south of Del Bello Boulevard, and generally west of Farm to Market 1128. The Valencia Planned Unit Development was approved on August 16, 2024, under Ordinance #2021-O-18. This amendment proposes to add intends to add 18.6 acres to the development. These proposed amendments have been outlined within the attached staff report.

STAFF RECOMMENDATION: Staff recommends the PD&Z recommends approval of Ordinance No. 2024-O-12 as the proposed amendments to the Valencia Planned Unit Development (PUD) are following the goals of the City and will be a majority of single-family detached residences.

PD&Z DISCUSSION: At the March 25, 2024, meeting of the Planning, Development and Zoning Commission ("the PD&Z"), a public hearing was held during which no comments from the public were received. The PD&Z discussion included clarification regarding the new commercial tract on the southeast corner of Charlotte and Pollard Street. The Drill site location was discussed, and any development would require compliance with the City's Ordinances, which have a required 2,000 distance from residential homes.

PD&Z RECOMMENDATION: The PD&Z Commission recommended approval of Ordinance No. 2024-O-12 with a vote of four (4) "Yeas" to one (1) "Nays" at the March 25, 2024, meeting.

ATTACHMENTS Staff Report, Ordinance No. 2024-O-12, Proposed PUD Document.
--

FUNDING ISSUES

- | |
|--|
| ☒ Not applicable
☐ Not budgeted
☐ Full amount already budgeted
☐ Funds to be transferred from Acct.# |
|--|

SUBMITTING STAFF MEMBER	FINANCE DIRECTOR APPROVAL _____
--------------------------------	--

Evan DuVall Zoning Administrator	CITY MANAGER APPROVAL _____
-------------------------------------	------------------------------------

**Staff Report: Summary of Proposed Valencia
Planned Unit Development (PUD) Amendment**

.

Introduction: The Valencia Planned Unit Development (PUD) is primarily a residential project that consists of approximately 457.0 acres of land and is located east of State Highway 288, north of Highway 6, generally south of De Bell Boulevard, and generally west of Farm to Market 1128. The Valencia Planned Unit Development was approved on August 16, 2024, under Ordinance #2021-O-18. This amendment proposes to add intends to add 18.6 acres to the development and have the following proposed amendments. These modifications have been outlined below in two categories.

1. Proposed Substantial Changes.

- a. Adding an Additional Commercial Tract
- b. Modifications of signage requirements
- c. Single-family Section C-08 and Boulevard Entrance
- d. Charlotte Roadway Expansion
- e. Drill Site/Open Space location.

2. Minor Changes.

- a. Circulation on parkland dedication requirements
- b. Specialty Residential Product and added conceptual standards for zero lot line and zipper lot homes.

3. Public Hearing Comments from 3/25/2024 PD&Z

- a. No comments were received.

1. Proposed Substantial changes:

- a. **Adding an Additional Commercial Tract:** This amendment adds a 1.5-acre commercial tract on the southeast corner of Charlotte Street and Pollard

Boulevard (See exhibit one and two). This area is shown in the plan as C-06 and is adjacent to Lake B within the Valencia development.

b. Modifications of signage requirements: The signage section has been modified the existing regulations for Primary Entry Monuments, Secondary Entry Signs, Temporary Construction/Sales Signs, and Temporary Community Signs.

- i. **Primary Entry Monuments:** The entry monument was modified to be a sign that is twenty (20) feet in height, sixty (60) feet in length, maximum area of 400 square feet and twenty (20) feet in depth. This was modified from a maximum of 35' tall, a twenty (20) by twenty (20) foot tower, eighty (80) feet in length, and a maximum of 450 square feet. This amendment is a further clarification of the signage requirements and is less than the previously approved primary entry monument.
- ii. **Secondary Entry Signs:** The secondary entry monument sign has been changed to be no greater than 25' in height, forty (40) feet in length, and fifteen (15) feet in depth. A water cistern of twenty-five (25) feet in height by fifteen (15) feet in length. The combined area of this tower and secondary monument sign shall not be over 400 square feet. The previous secondary entry signs were a maximum of twelve (12) feet tall, by twelve (12) feet for the tower footprint, and the blade wall with a maximum height of eight (8) feet and thirty (35) feet in length, and a maximum of 150 square feet. Although this is an increase in sign height, these signs will assist in branding this development within the city.
- iii. **Temporary Construction Signs/Sales signs:** Temporary construction signs have been changed to a maximum of sixty-four (64) square feet from the previous amendment of 32 square feet. The maximum height remains the same as previous at eight (8) feet in height and eight (8) feet in width. These signs will be removed when the principal building site is occupied.
- iv. **Temporary Community Signs:** A total of ten (10) community signs are proposed along Pollard Boulevard, State Highway 6, and Del Bello Boulevard. This proposal has an increase of two signs allowed on Pollard Boulevard to make a total of four, two additional signs on Del Bello Boulevard to make a total of four, and two signs on State Highway 6 where there were none previously. These offsite signs will continue to be a maximum of 128 square feet with a maximum of 10 feet in height and be removed 30 days following the permanent resident occupying the last model home.

c. Single-family Section C-08 and Boulevard Entrance: This seven-acre single-family residential section is a total seven acres and proposes to utilize a Boulevard

entrance from a future extension of Charlotte Roadway. This would match similar residential sections in the Lakeland subdivision located just east of this area.

- d. Charlotte Roadway Expansion:** A This proposal puts in place the requirements for the expansion of Charlotte Street with the development of residential and an approved 380 development agreement with City Council. Currently, Charlotte Street was not improved by Lakeland to easily connect to this development.
- e. Drill Site/Open Space location::** The existing drill site location has bene moved easterly within the development adjacent to section C-08. This area has been designated as open space and will be utilized as open space within the community. Any drill site within the City of Manvel must adhere to strict requirements found within the City's Sec. 35-101 of the Oil and Gas Wells. These strict requirements include a minimum of 2,000 feet from any residential building or subdivision deed restricted to residential use.

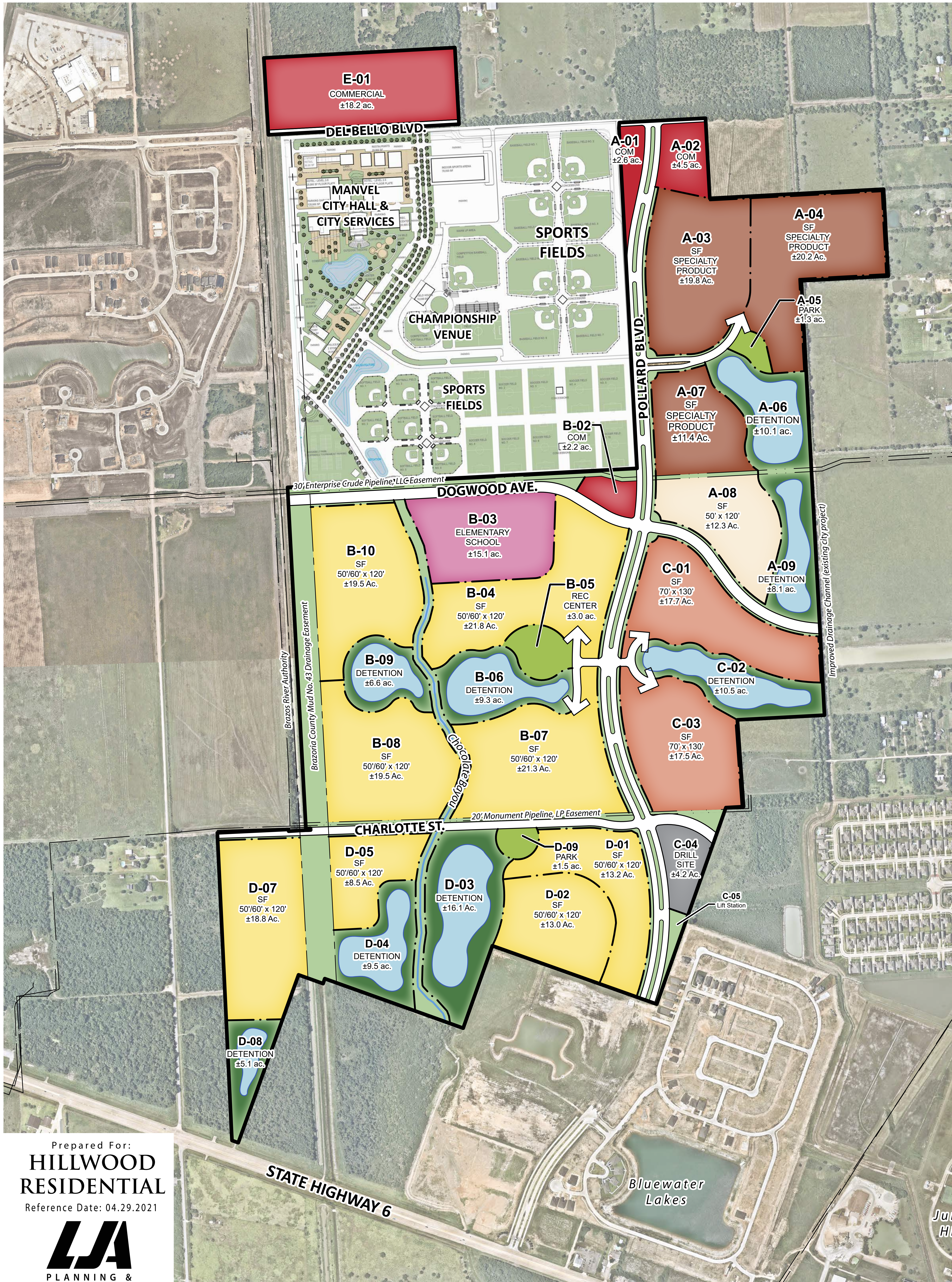
2. Proposed Minor changes.

- a. Clarification of Parkland Dedication requirements:** Parkland dedication shown in the plans is for 1,100 proposed single-family units. If this development has an increase or decrease in units, these will be done proportionally with one acre of parkland for every 100 proposed single-family lots.
- b. Specialty Residential Products Exhibits:** Exhibits have been added for the specialty residential products of zero-lot line, and zipper lot homes.



3. March 25, 2024 – PD&Z Public hearing comments and responses

- a.** There were no comments received during the public hearing on this proposed Valencia PUD amendment.



Prepared For:
**HILLWOOD
RESIDENTIAL**
Reference Date: 04.29.2021

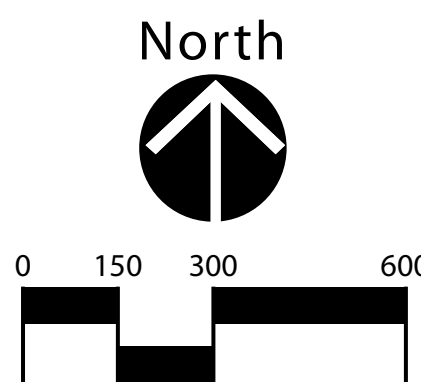


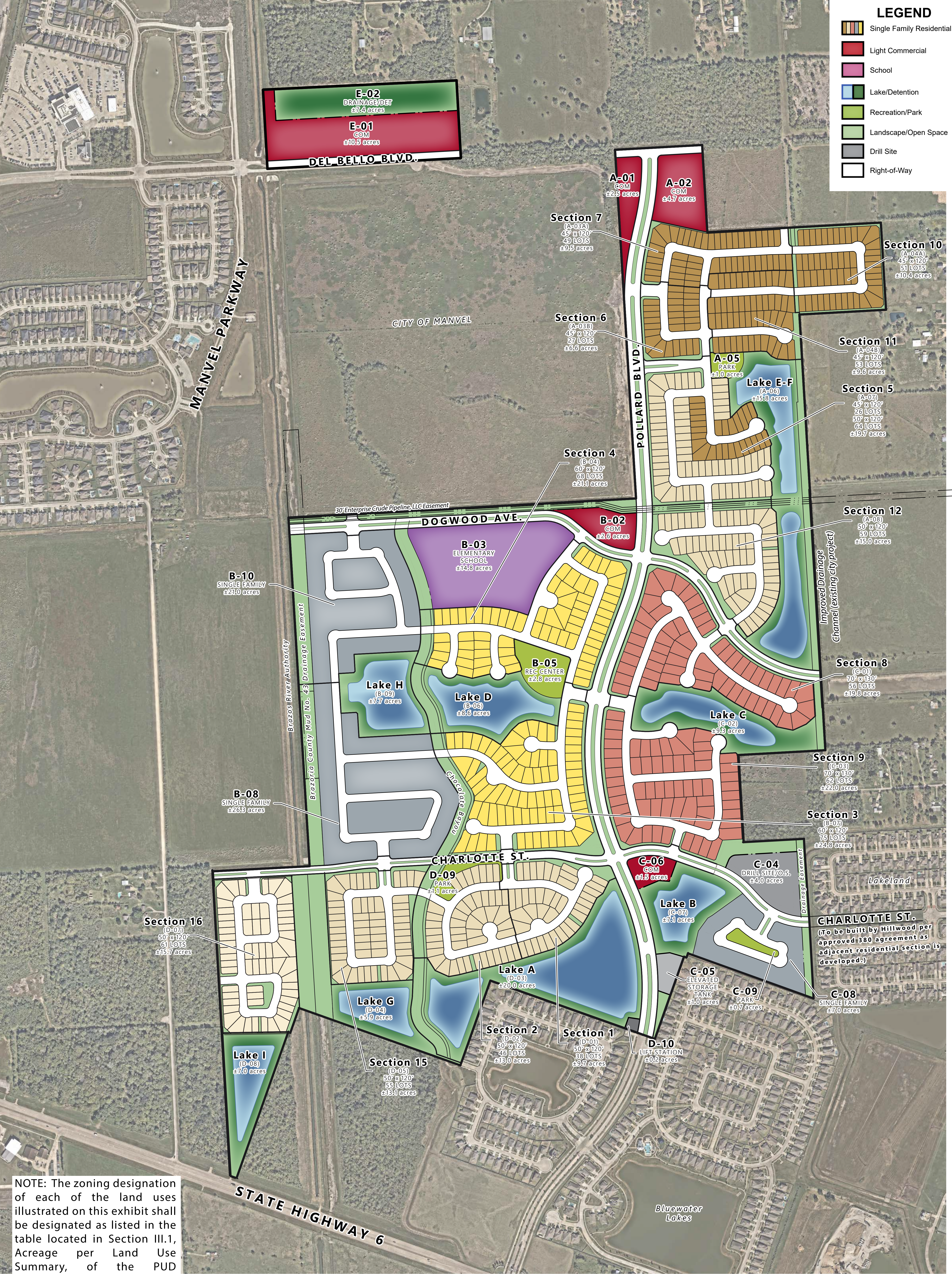
3600 W. Sam Houston Pkwy S, Suite 600
Houston, Texas 77042
713.953.5200

This exhibit is an illustrative representation for presentation purposes only and should not be used for computation or construction purposes. The information provided within should be considered a graphic representation to aid in determining plan components and relationships and is subject to change without notice. All property boundaries, easements, road alignments, drainage, flood plains, environmental issues and other information shown is approximate and should not be relied upon for any purpose. No warranties, express or implied, concerning the actual design, accuracy, location, and character of the facilities shown on this exhibit are intended.

EXHIBIT E

Planned Unit Development
Conceptual Land Use Exhibit
SOWELL TRACT
±438.4 Acres of Land
Manvel, Texas





Prepared for
**HILLWOOD
RESIDENTIAL**

EXHIBIT E
Planned Unit Development
Conceptual Land Use Exhibit
VALENCIA
±457.0 Acres of Land
Manvel, Texas

Reference Date: 02.27.2024

ORDINANCE NO. 2024-O-12

AN ORDINANCE OF THE CITY OF MANVEL, TEXAS AMENDING THE ZONING ORDINANCE OF THE CITY, BY AMENDING THE ZONING CLASSIFICATION OF 457.0 ACRES OF LAND GENERALLY LOCATED EAST OF STATE HIGHWAY 288, NORTH OF HIGHWAY 6, GENERALLY SOUTH OF DEL BELLO BOULEVARD, AND WEST OF FARM TO MARKET 1128, FROM SINGLE-FAMILY RESIDENTIAL DISTRICT AND PLANNED UNIT DEVELOPMENT (PUD) TO PLANNED UNIT DEVELOPMENT (PUD) AND AMENDMENTS TO THE VALENCIA PLANNED UNIT DEVELOPMENT; PROVIDING FOR THE AMENDMENT OF THE CITY'S OFFICIAL ZONING MAP, PROVIDING FOR SEVERABILITY; AND PROVIDING A PENALTY IN AN AMOUNT NOT TO EXCEED \$2,000 FOR EACH DAY OF VIOLATION OF ANY PROVISION HEREOF.

* * * * *

WHEREAS, LJA Engineering, Inc., (“Applicant”), on behalf of Hillwood Residential, L.P., has made application to the City to amend the Valencia Planned Unit Development to add twenty acres of land to make the development for a total of approximately 457 acres; and

WHEREAS, the Applicant, has requested to rezone the total 457 acres of land from Single-Family Residential District and Planned Unit Development (PUD) to Planned Unit Development (PUD); and

WHEREAS, pursuant to Section 7 of the City’s Zoning Ordinance, the developer has modified the prepared development plan covering the property; and

WHEREAS, the Planning Development, and Zoning Commission and the City Council have conducted, in the time and manner required by law and the Zoning Ordinance of the City, a public hearing on said rezone and development plan amendment; and

WHEREAS, the Planning, Development, and Zoning Commission and the City Council have conducted, in the time and manner required by law and the Zoning Ordinance of the City, a public hearing on such request; and

WHEREAS, the Planning, Development, and Zoning Commission has recommended in its report the approval of such request, and the City Council deems it appropriate to approve said rezoning and development plan amendments; now, therefore,

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MANVEL, TEXAS:

Section 1. The facts and matters set forth in the preamble of this Ordinance are hereby found to be true and correct.

Section 2. The zoning classification of 457 acres generally east of State Highway 288, North of Highway 6, generally south of Del Bello Boulevard, and West of Farm to Market Road 1128, is hereby changed from Single-Family Residential (SFR) and Planned Unit Development (PUD) is hereby changed to Planned Unit Development (PUD) District as more particularly described in Exhibit “A”.

Section 3. The City Council has reviewed the amended development plan attached hereto as Exhibit “B” (the “Development Plan”) and complies with the findings in accordance with following Section 77-29(o)(5) of the City’s Zoning Ordinance.

Section 4. Development of the Property shall strictly comply with the **Valencia PUD Document**, attached hereto as Exhibit “B” and made a part of hereof for all purposes.

Section 5. The Zoning District Map of the City of Manvel shall be revised and amended to show the designation of said land, as described and provided in Section 2

above, with the appropriate reference thereon to the number and effective date of this Ordinance and a brief description of the nature of the change.

Section 6. The City Council hereby finds and determines that said rezoning comports to the City's comprehensive land use plan, and to the extent of any conflict, amends said comprehensive land use plan. This Ordinance shall in no manner amend, change, supplement, or revise any provision of any ordinance of the City of Manvel, save and except the change in zoning classification of said tracts as described above.

Section 7. In the event any section, paragraph, subdivision, clause, phrase, provision, sentence, or part of this Ordinance or the application of the same to any person or circumstance shall for any reason be adjudged invalid or held unconstitutional by a court of competent jurisdiction, it shall not affect, impair, or invalidate this Ordinance as a whole or any part or provision hereof other any part or provision hereof other than the part declared to be invalid or unconstitutional; and the City Council of the City of Manvel, Texas, declares that it would have passed each and every part of the same notwithstanding the omission of any and every part of the same notwithstanding the omission of any such part thus declared to be invalid or unconstitutional, or whether there be one or more parts.

Section 8. Any person who shall intentionally, knowingly, recklessly or with criminal negligence violate any provision of this Ordinance shall be deemed guilty of a misdemeanor and upon conviction, shall be fined in an amount not to exceed \$2,000.00. Each day of violation shall constitute a separate offense.

PASSED AND APPROVED on first reading this _____ day of _____, 2024.

PASSED, APPROVED, AND ADOPTED on second and final reading this
_____ day of _____, 2024.

Dan Davis, Mayor

ATTEST:

Tammy Bell, City Secretary

APPROVED AS TO FORM:

Robert Gervais, City Attorney

EXHIBIT "A"

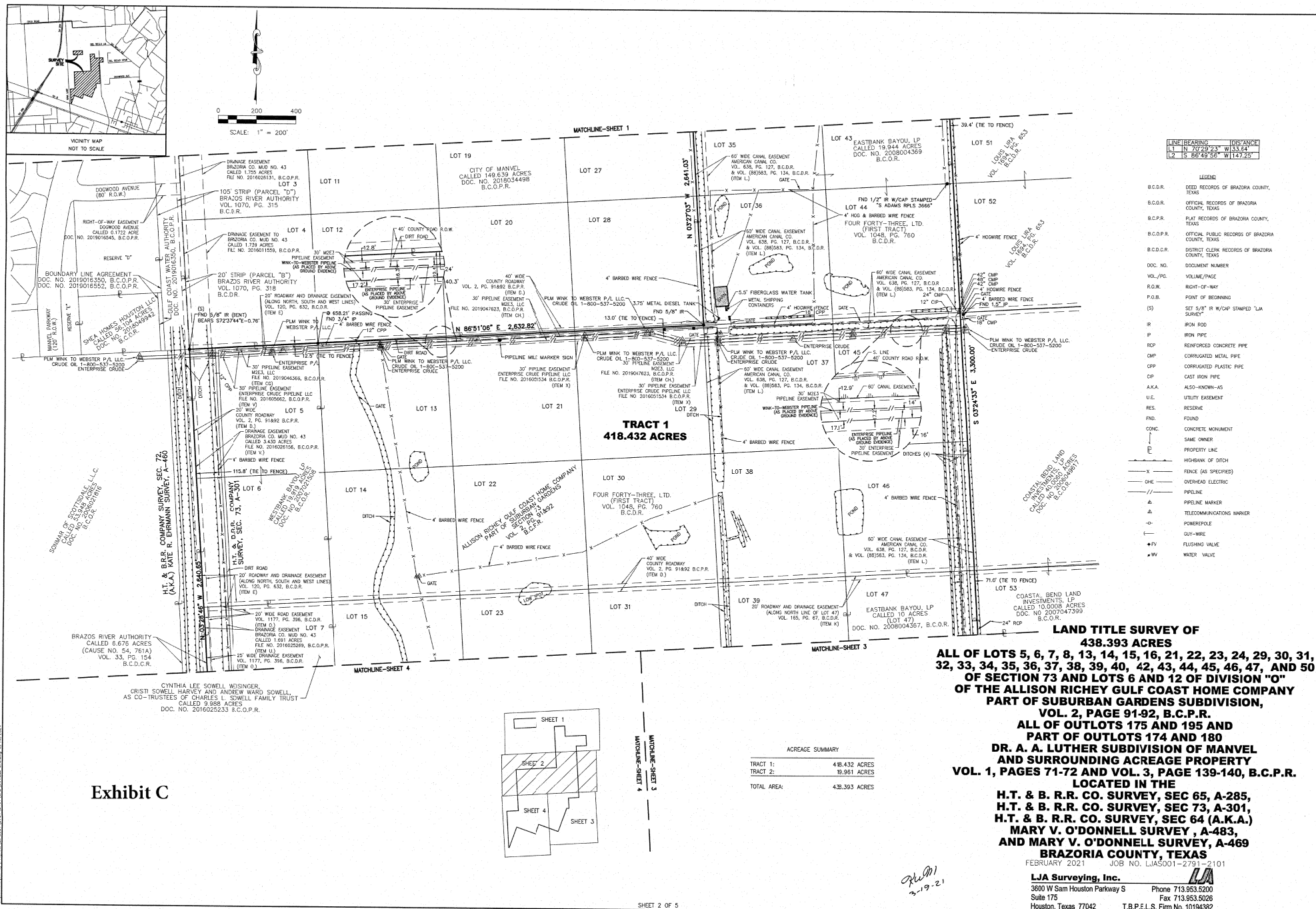
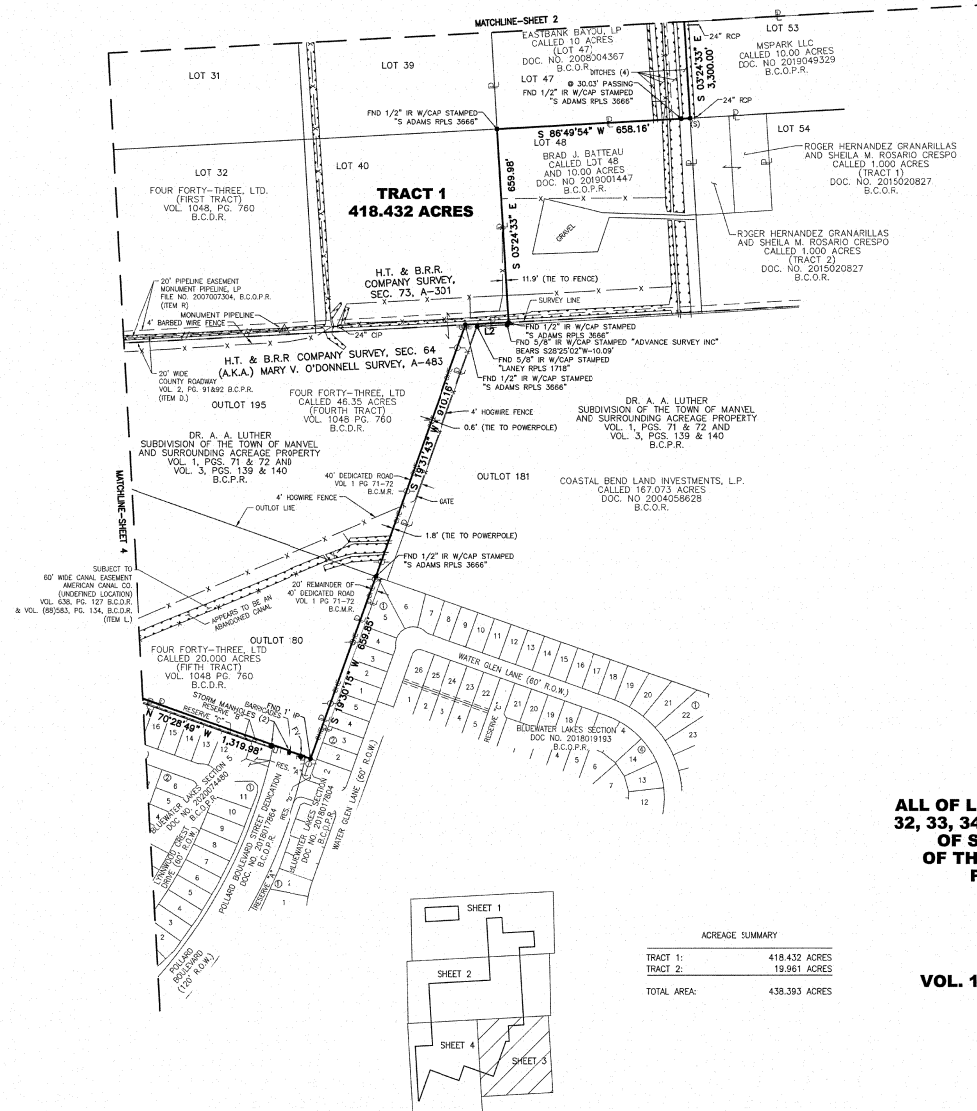
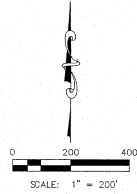


Exhibit C

VICINITY MAP
NOT TO SCALE



LINE	BEARING	DISTANCE
L1	N 70°29'23" W	33.64'
L2	S 86°43'56" W	147.25'

<u>LEGEND</u>	
B.C.D.R.	DEED RECORDS OF BRAZORIA COUNTY, TEXAS
E.C.O.R.	OFFICIAL RECORDS OF BRAZORIA COUNTY, TEXAS
B.C.P.R.	PLAT RECORDS OF BRAZORIA COUNTY, TEXAS
B.O.P.R.	OFFICIAL PUBLIC RECORDS OF BRAZORIA COUNTY, TEXAS
B.C.D.C.R.	DISTRICT CLERK RECORDS OF BRAZORIA COUNTY, TEXAS
DOC. NO.	DOCUMENT NUMBER
VOL./PG.	VOLUME/PAGE
R.O.W.	RIGHT-OF-WAY
P.O.B.	POINT OF BEGINNING
(S)	SET 5/8" R W/C STAMPED "LA SURIA"
IR	IRON ROD
IP	IRON PIPE
RCP	REINFORCED CONCRETE PIPE
CWP	CORRUGATED METAL PIPE
CPF	CORRUGATED PLASTIC PIPE
DR	DIST. IRON PIPE
A.K.A.	ALSO-KNOWN-AS
U.E.	UTILITY AGREEMENT
RES.	RESERVE
FND.	FOUND
CONC.	CONCRETE MONUMENT
1 ID	SAME OWNER
—	PROPERTY LINE
—	HIGHBANK OF DITCH
—	FEES (IS SPECIFIED)
—	OVERHEAD ELECTRIC
—	PIPELINE
Δ	PIPELINE MARKER
Δ	TELECOMMUNICATIONS MARKER
-O-	POWERLINE
—	OLY-WIRE
▲V	FLUSHING VALVE
▲W	WATER VALVE

**LAND TITLE SURVEY OF
438.393 ACRES
ALL OF LOTS 5, 6, 7, 8, 13, 14, 15, 16, 21, 22, 23, 24, 29, 30, 31,
32, 33, 34, 35, 36, 37, 38, 39, 40, 42, 43, 44, 45, 46, 47, AND 50
OF SECTION 73 AND LOTS 6 AND 12 OF DIVISION "O"
OF THE ALLISON RICHEY GULF COAST HOME COMPANY
PART OF SUBURBAN GARDENS SUBDIVISION,
VOL. 2, PAGE 91-92, B.C.P.R.**

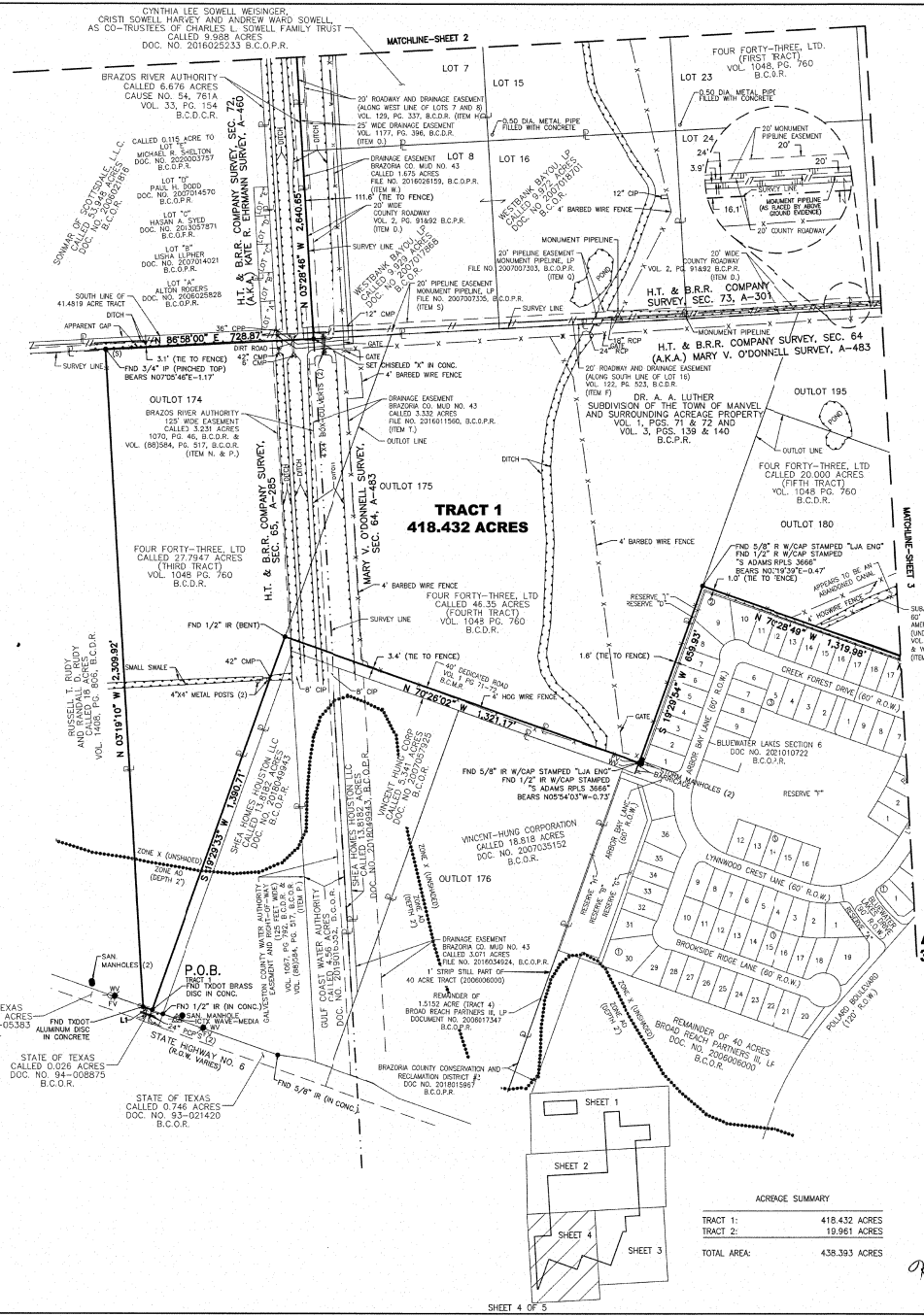
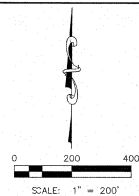
**VOL. 1, PAGES 71-72 AND VOL. 3, PAGE 139-140, B.C.P.R.
ALL OF OUTLOTS 175 AND 195 AND
PART OF OUTLOTS 174 AND 180
DR. A. A. LUTHER SUBDIVISION OF MANVEL
AND SURROUNDING ACREAGE PROPERTY
VOL. 1, PAGES 71-72 AND VOL. 3, PAGE 139-140, B.C.P.R.
LOCATED IN THE**

**H.T. & B. R.R. CO. SURVEY, SEC 65, A-285,
H.T. & B. R.R. CO. SURVEY, SEC 73, A-301,
H.T. & B. R.R. CO. SURVEY, SEC 64 (A.K.A.)
MARY V. O'DONNELL SURVEY, A-483,
AND MARY V. O'DONNELL SURVEY, A-469
BRAZORIA COUNTY, TEXAS**

FEBRUARY 2021 JOB NO. LJA001-2791-2101

LJA Surveying, Inc. 
3600 W Sam Houston Parkway S Phone 713.953.5200
Suite 175 Fax 713.953.5026
Houston, Texas 77042 T.B.P.E.L.S. Firm No. 10194382

Exhibit C

[illegible]

LINE	BEARING	DISTANCE
1	N 29°29'23"	W 33.64'
12	S 80°49'50"	W 142.75'

LEGEND

B.C.D.R.	DEED RECORDS OF BRAZORIA COUNTY, TEXAS
B.C.O.R.	OFFICIAL RECORDS OF BRAZORIA COUNTY, TEXAS
B.C.F.R.	PLAT RECORDS OF BRAZORIA COUNTY, TEXAS
B.C.O.P.R.	OFFICIAL PUBLIC RECORDS OF BRAZORIA COUNTY, TEXAS
B.C.D.C.R.	DISTRICT CLERK RECORDS OF BRAZORIA COUNTY, TEXAS
DOC. NO.	DOCUMENT NUMBER
VOL./PG.	VOLUME/PAGE
R.O.W.	RIGHT-OF-WAY
P.O.B.	POINT OF BEGINNING
(S)	SET 5/8" W/1/4" STAMPED "LJ SURVEY"
IR	IRON ROD
IP	IRON PIPE
RCP	REINFORCED CONCRETE PIPE
CMR	CORRUGATED METAL PIPE
CMP	CORRUGATED PLASTIC PIPE
CIP	CAST IRON PIPE
A.K.A.	ALSO-KNOWN-AS
U.E.	UTILITY EASEMENT
RES.	RESERVE
FND.	FOUND
CONC.	CONCRETE MONUMENT
	SAME OWNER
	PROPERTY LINE
	HIGHBANK OF DITCH
	FENCE (AS SPECIFIED)
	OVERHEAD ELECTRIC
	PIPELINE
	PIPELINE MARKER
	TELECOMMUNICATIONS MARKER
	POWERPOLE
	QUAY-WIRE
	FLUSHING VALVE
	WATER VALVE

**LAND TITLE SURVEY OF
438.393 ACRES
ALL OF LOTS 5, 6, 7, 8, 13, 14, 15, 16, 21, 22, 23, 24, 29, 30, 31,
32, 33, 34, 35, 36, 37, 38, 39, 40, 42, 43, 44, 45, 46, 47, AND 50
OF SECTION 73 AND LOTS 6 AND 12 OF DIVISION "O"
OF THE ALLISON RICHEY GULF COAST HOME COMPANY
PART OF SUBURBAN GARDENS SUBDIVISION,
VOL. 2, PAGE 91-92, B.C.P.R.
ALL OF OUTLOTS 175 AND 195 AND
PART OF OUTLOTS 174 AND 180
DR. A. A. LUTHER SUBDIVISION OF MANVEL
AND SURROUNDING ACREAGE PROPERTY
VOL. 1, PAGES 71-72 AND VOL. 3, PAGE 139-140, B.C.P.R.
LOCATED IN THE
H.T. & B. R.R. CO. SURVEY, SEC 65, A-285,
H.T. & B. R.R. CO. SURVEY, SEC 73, A-301,
H.T. & B. R.R. CO. SURVEY, SEC 64 (A.K.A.)
MARY V. O'DONNELL SURVEY, A-483,
AND MARY V. O'DONNELL SURVEY, A-469
BRAZORIA COUNTY, TEXAS**

LJA Surveying, Inc. 
3600 W Sam Houston Parkway S Phone 713.953.5200
Suite 175 Fax 713.953.5026
Houston, Texas 77042 T.B.P.E.L.S. Firm No. 10194382

Exhibit C

EXHIBIT "A"

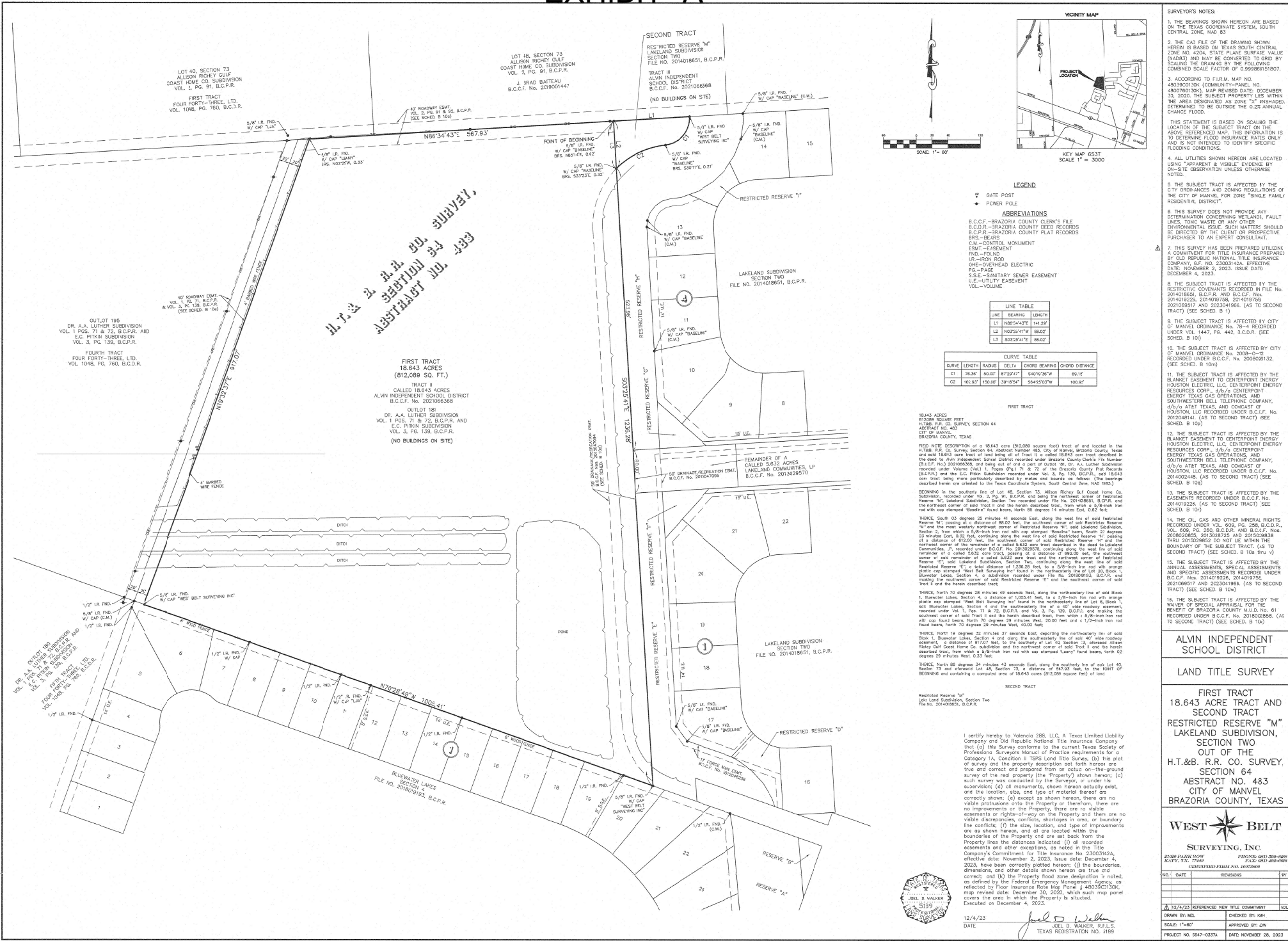


EXHIBIT "A"

NOTES:

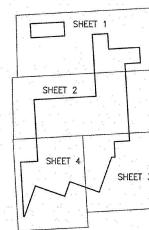
- 1) ALL BEARINGS REFERENCED TO THE TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE, NAD 83, 1983 ADJ.
- 2) THIS SURVEY WAS PREPARED FROM INFORMATION PROVIDED BY CHICAGO TITLE OF TEXAS, LLC, AS AGENT FOR CHICAGO TITLE INSURANCE COMPANY, OF NO. CCH-COM-CIT0703337, HAVING AN EFFECTIVE DATE OF MARCH 3, 2021, AND AN ISSUED DATE MARCH 10, 2021. THE SURVEYOR DID NOT RESEARCH THE SUBJECT TRACT.
- THE FOLLOWING ITEMS IN SCHEDULE B, ARE AS FOLLOWS:
- 10 D. ACCORDING TO THE PLAT RECORDED IN VOLUME 2, PAGE 91 AND 92 OF THE PLAT RECORDS OF BRAZORIA COUNTY, TEXAS; PUBLIC ROAD EASEMENT ALONG THE NORTH PROPERTY LINE (AS TO LOTS 5, 7, 13, 15, 19, 21, 23, 29, 31, 33, 34, 35, 37, 39, 43, 45 AND 47 AND OUTLOTS 174, 175 AND 195, OF TRACT 1);
- 10 E. PUBLIC ROAD EASEMENT ALONG THE SOUTH PROPERTY LINE (AS TO LOTS 6, 8, 14, 16, 22, 24, 30, 32, 34, 36, 38, 40, 42, 44, 46 AND 50, OF TRACT 1 AND TRACT 2);
- 10 F. PUBLIC ROAD EASEMENT ALONG THE WEST PROPERTY LINE (LOTS 5, 6, 7 AND 8, OF TRACT 1 AND LOT 6 OF TRACT 2); DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.
- 10 E. ROADWAY AND DRAINAGE EASEMENT(S) AND APPURTENANCES AS RESERVED IN A DOCUMENT: RESERVED BY: ALLISON-RICHEY GULF COAST HOME COMPANY
- RECORDING DATE: JULY 30, 1913
- RECORDING NO: VOLUME 120, PAGE 632, OF THE DEED RECORDS OF BRAZORIA COUNTY, TEXAS
- AFFECTS: 20 FEET WIDE AND TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN (AS TO LOTS 5 AND 6, OF TRACT 1); DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.
- 10 F. ROADWAY AND DRAINAGE EASEMENT(S) AND APPURTENANCES AS RESERVED IN A DOCUMENT: RESERVED BY: ALLISON-RICHEY GULF COAST HOME COMPANY
- RECORDING DATE: OCTOBER 9, 1913
- RECORDING NO: VOLUME 122, PAGE 553, OF THE DEED RECORDS OF BRAZORIA COUNTY, TEXAS
- AFFECTS: 20 FEET WIDE AND TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN (AS TO LOT 16, OF TRACT 1); DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.
- 10 G. ROADWAY AND DRAINAGE EASEMENT(S) AND APPURTENANCES AS RESERVED IN A DOCUMENT: RESERVED BY: ALLISON-RICHEY GULF COAST HOME COMPANY
- RECORDING DATE: AUGUST 15, 1913
- RECORDING NO: VOLUME 123, PAGE 117, OF THE DEED RECORDS OF BRAZORIA COUNTY, TEXAS
- AFFECTS: 20 FEET WIDE AND TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN (AS TO LOT 42, OF TRACT 1); DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.
- 10 H. ROADWAY AND DRAINAGE EASEMENT(S) AND APPURTENANCES AS RESERVED IN A DOCUMENT: RESERVED BY: ALLISON-RICHEY GULF COAST HOME CORPORATION
- RECORDING DATE: NOVEMBER 19, 1914
- RECORDING NO: VOLUME 129, PAGE 237, OF THE DEED RECORDS OF BRAZORIA COUNTY, TEXAS
- AFFECTS: 20 FEET WIDE AND TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN (AS TO LOTS 7 AND 8, OF TRACT 1); DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.
- 10 I. ROADWAY AND DRAINAGE EASEMENT(S) AND APPURTENANCES AS RESERVED IN A DOCUMENT: RESERVED BY: ALLISON-RICHEY GULF COAST HOME CORPORATION
- RECORDING DATE: JUNE 25, 1914
- RECORDING NO: VOLUME 130, PAGE 301, OF THE DEED RECORDS OF BRAZORIA COUNTY, TEXAS
- AFFECTS: 20 FEET WIDE AND TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN (AS TO LOT 50, OF TRACT 1); DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.
- 10 J. ROAD EASEMENT(S) AND APPURTENANCES AS RESERVED IN A DOCUMENT: RESERVED BY: ALLISON-RICHEY GULF COAST HOME COMPANY
- RECORDING DATE: FEBRUARY 27, 1918
- RECORDING NO: VOLUME 145, PAGE 645, OF THE DEED RECORDS OF BRAZORIA COUNTY, TEXAS
- AFFECTS: 20 FEET WIDE AND TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN (AS TO TRACT 2)
- 10 K. ROAD EASEMENT(S) AND APPURTENANCES AS RESERVED IN A DOCUMENT: RESERVED BY: ALLISON-RICHEY GULF COAST HOME COMPANY
- RECORDING DATE: OCTOBER 15, 1920
- RECORDING NO: VOLUME 165, PAGE 67, OF THE DEED RECORDS OF BRAZORIA COUNTY, TEXAS
- AFFECTS: 20 FEET WIDE AND TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN (AS TO LOT 47, OF TRACT 1); DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.
- 10 L. LATERAL OR CANAL EASEMENT(S) AND APPURTENANCES AS GRANTED IN A DOCUMENT: GRANTED TO AMERICAN CANAL COMPANY
- RECORDING DATE: NOVEMBER 22, 1955
- RECORDING NO: VOLUME 639, PAGE 127, OF THE DEED RECORDS OF BRAZORIA COUNTY, TEXAS AND AS AFFECTED BY INSTRUMENT RECORDED IN VOLUME 180 AND 183, PAGE 134, DEED RECORDS OF BRAZORIA COUNTY, TEXAS
- AFFECTS: TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN (AS TO LOTS 25, 33, 34, 36, 38, 39, 41, 43, 45 AND 47 AND OUTLOT 180 AND OUTLOT 195, OF TRACT 1 AND TRACT 2); DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.
- 10 M. LATERAL OR CANAL EASEMENT(S) AND APPURTENANCES AS GRANTED IN A DOCUMENT: GRANTED TO BRAZOS VALLEY RICE COMPANY
- RECORDING DATE: OCTOBER 8, 1962
- RECORDING NO: VOLUME 702, PAGE 667, OF THE DEED RECORDS OF BRAZORIA COUNTY, TEXAS AND INSTRUMENT RECORDED IN VOLUME 839, PAGE 578, DEED RECORDS OF BRAZORIA COUNTY, TEXAS
- AFFECTS: TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN (AS TO LOT 50, OF TRACT 1); DOES AFFECT SUBJECT TRACT (LOT 50), NO DEFINED WIDTH.
- 10 N. DRAINAGE EASEMENT(S) AND APPURTENANCES AS GRANTED IN A DOCUMENT: GRANTED TO BRAZOS RIVER AUTHORITY
- RECORDING DATE: SEPTEMBER 14, 1970
- RECORDING NO: VOLUME 1070, PAGE 46, OF THE DEED RECORDS OF BRAZORIA COUNTY, TEXAS AFFECTS: TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN (AS TO OUTLOTS 174 AND 175, OF TRACT 1); DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.
- 10 O. ROAD AND DRAINAGE EASEMENT(S) AND APPURTENANCES AS REFERENCED IN A DOCUMENT: RECORDING DATE: SEPTEMBER 27, 1973
- RECORDING NO: VOLUME 1177, PAGE 396, OF THE DEED RECORDS OF BRAZORIA COUNTY, TEXAS AFFECTS: REFERENCED IN PARAGRAPHS A AND B, TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN (AS TO LOT 7, OF TRACT 1); DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.
- 10 P. DRAINAGE EASEMENT(S) AND APPURTENANCES AS GRANTED IN A DOCUMENT: GRANTED TO CALVESTON COUNTY WATER AUTHORITY
- RECORDING DATE: AUGUST 24, 1989
- RECORDING NO: VOLUME 584, PAGE 517, DEED RECORDS OF BRAZORIA COUNTY, TEXAS AFFECTS: TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN (AS TO OUTLOT 174 AND 175, OF TRACT 1); DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.
- 10 Q. PIPELINE RIGHT-OF-WAY AND EASEMENT(S) AND APPURTENANCES AS GRANTED IN A DOCUMENT: GRANTED TO: MONUMENT PIPELINE, L.P., A TEXAS LIMITED PARTNERSHIP
- RECORDING DATE: FEBRUARY 6, 2007
- RECORDING NO: UNDER BRAZORIA COUNTY CLERK'S FILE NUMBER(S) 2007007003
- AFFECTS: TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN (AS TO LOT 16, OF TRACT 1); DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.
- 10 R. PIPELINE RIGHT-OF-WAY AND EASEMENT(S) AND APPURTENANCES AS GRANTED IN A DOCUMENT: GRANTED TO: MONUMENT PIPELINE, L.P., A TEXAS LIMITED PARTNERSHIP
- RECORDING DATE: FEBRUARY 6, 2007
- RECORDING NO: UNDER BRAZORIA COUNTY CLERK'S FILE NUMBER(S) 2007007004
- AFFECTS: TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN (AS TO LOTS 24, 32 AND 40, OF TRACT 1); DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.
- 10 S. PIPELINE RIGHT-OF-WAY AND EASEMENT(S) AND APPURTENANCES AS GRANTED IN A DOCUMENT: GRANTED TO: MONUMENT PIPELINE, L.P., A TEXAS LIMITED PARTNERSHIP
- RECORDING DATE: FEBRUARY 6, 2007
- RECORDING NO: UNDER BRAZORIA COUNTY CLERK'S FILE NUMBER(S) 2007007005
- AFFECTS: TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN (AS TO LOT 8, OF TRACT 1); DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.
- 10 T. DRAINAGE EASEMENT(S) AND APPURTENANCES AS GRANTED IN A DOCUMENT: GRANTED TO: BRAZORIA COUNTY MUNICIPAL UTILITY DISTRICT NO. 43
- RECORDING DATE: MARCH 15, 2016
- RECORDING NO: UNDER BRAZORIA COUNTY CLERK'S FILE NUMBER(S) 2016011560
- AFFECTS: TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN (AS TO OUTLOTS 174 AND 175, OF TRACT 1); DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.
- 10 U. DRAINAGE EASEMENT(S) AND APPURTENANCES AS GRANTED IN A DOCUMENT: GRANTED TO: BRAZORIA COUNTY MUNICIPAL UTILITY DISTRICT NO. 43
- RECORDING DATE: JUNE 1, 2016
- RECORDING NO: UNDER BRAZORIA COUNTY CLERK'S FILE NUMBER(S) 2016025269
- AFFECTS: TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN (AS TO LOT 7, OF TRACT 1); DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.
- 10 V. DRAINAGE EASEMENT(S) AND APPURTENANCES AS GRANTED IN A DOCUMENT: GRANTED TO: BRAZORIA COUNTY MUNICIPAL UTILITY DISTRICT NO. 43
- RECORDING DATE: JUNE 6, 2016
- RECORDING NO: UNDER BRAZORIA COUNTY CLERK'S FILE NUMBER(S) 2016021561
- AFFECTS: TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN (AS TO LOTS 5 AND 6, OF TRACT 1); DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.
- JUDGEMENT RECORDED UNDER BRAZORIA COUNTY CLERK'S FILE NO(S) 201605622-IS NOT RELATED TO SAID BOUND NO. 43 EASEMENT
- 10 W. DRAINAGE EASEMENT(S) AND APPURTENANCES AS GRANTED IN A DOCUMENT: GRANTED TO: BRAZORIA COUNTY MUNICIPAL UTILITY DISTRICT NO. 43
- RECORDING DATE: JUNE 6, 2016
- RECORDING NO: UNDER BRAZORIA COUNTY CLERK'S FILE NUMBER(S) 2016025159
- AFFECTS: TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN (AS TO LOT 8, OF TRACT 1); DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.

- 10 X. PIPELINE RIGHT-OF-WAY AND EASEMENT(S) AND APPURTENANCES AS GRANTED IN AN AGREED FINAL JUDGMENT: GRANTED TO: ENTERPRISE GRADE PIPELINE COMPANY, L.L.C.
- RECORDING DATE: OCTOBER 19, 2016
- RECORDING NO: UNDER BRAZORIA COUNTY CLERK'S FILE NUMBER(S) 2016051554 AND INSTRUMENT RECORDED UNDER BRAZORIA COUNTY CLERK'S FILE NO(S) 2016050622
- AFFECTS: TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN (AS TO LOTS 5, 13, 21, 29, 37 AND 45, OF TRACT 1); DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.
- 10 CC. PERMANENT EASEMENT AGREEMENT AS EVIDENCED BY MEMORANDUM OF PERMANENT EASEMENT AGREEMENT EXECUTED BY: WESTBANK BRAY, L.P., A TEXAS LIMITED PARTNERSHIP
- RECORDING DATE: SEPTEMBER 28, 2019
- RECORDING NO: UNDER BRAZORIA COUNTY CLERK'S FILE NO(S) 2019046366 (AS TO TRACT 1); DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.
- 10 CH. PERMANENT EASEMENT AGREEMENT AS EVIDENCED BY MEMORANDUM OF PERMANENT EASEMENT AGREEMENT EXECUTED BY: FOURTY-THREE, LTD., A TEXAS LIMITED PARTNERSHIP
- RECORDING DATE: SEPTEMBER 28, 2019
- RECORDING NO: UNDER BRAZORIA COUNTY CLERK'S FILE NO(S) 2019047623 (AS TO TRACT 1); DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.
- 3). IN ACCORDANCE WITH THE FEDERAL EMERGENCY MANAGEMENT AGENCY, FLOOD INSURANCE RATE MAPS, MAP NO. 48039C030K AND MAP NO. 48039C030K, WITH A REVISED DATE OF DECEMBER 30, 2020, BY GRAPHICAL PLOTTING, THE SUBJECT TRACT LIES WITHIN ZONE "A0" (DEPTH 25) AND ZONE "X" (UNSHADED). ZONE "X" (UNSHADED) IS DEFINED AS AREAS DETERMINED TO BE OUTSIDE 0.2% ANNUAL CHANCE FLOODPLAIN. ZONE "A0" IS DEFINED AS A SPECIAL FLOOD HAZARD AREA WITH FLOOD DEPTHS OF 1 TO 3 FEET (EQUALITY SHEET FLOW OR SLOWING TORMANT). AVERAGE DEPTHS DETERMINED FOR AREAS OF ALLUVIAL FAN FLOODING. VELOCITIES ALSO DETERMINED. THE SPECIAL FLOOD HAZARD AREA IS THE AREA SUBJECT TO FLOODING BY THE 1% ANNUAL CHANCE FLOOD. "LHA DOES NOT WARRANT NOR SUBSCRIBE TO THE ACCURACY OR SCALE OF SAID MAPS."
- 4). MINERAL INTERESTS WERE NOT INVESTIGATED AS A PART OF THIS SURVEY.
- 5). THIS SURVEY DOES NOT DETERMINE THE LOCATION OF WETLANDS, FAULT LINES, OR OTHER ENVIRONMENTAL ISSUES SHOULD THEY EXIST.
- 6). THERE IS NO VISIBLE EVIDENCE OF BURIAL GROUNDS OR MAJOR EARTH WORK AT THE TIME OF THE SURVEY.
- 7). THIS SURVEY IS ISSUED IN CONJUNCTION WITH THE METES AND BOUNDS DESCRIPTION BY LJA SURVEYING, INC. OF THE SAME CERTIFICATION DATE SHOWN HEREON, HEREBY REFERENCED AS PART 2 OF 2. THIS SURVEY IS PART 1 OF 2.

**LAND TITLE SURVEY OF
438.393 ACRES
ALL OF LOTS 5, 6, 7, 8, 13, 14, 15, 16, 21, 22, 23, 24, 29, 30, 31,
32, 33, 34, 35, 36, 37, 38, 39, 40, 42, 43, 44, 45, 46, 47, AND 50
OF SECTION 73 AND LOTS 6 AND 12 OF DIVISION "O"
OF THE ALLISON RICHEY GULF COAST HOME COMPANY
PART OF SUBURBAN GARDENS SUBDIVISION,
VOL. 2, PAGE 91-92, B.C.P.R.
ALL OF OUTLOTS 175 AND 195 AND
PART OF OUTLOTS 174 AND 180
DR. A. LUTHER SUBDIVISION OF MANVEL
AND SURROUNDING ACREAGE PROPERTY
VOL. 1, PAGES 71-72 AND VOL. 3, PAGE 139-140, B.C.P.R.
LOCATED IN THE
H.T. & B. RR CO. SURVEY, SEC 65, A-285,
H.T. & B. RR CO. SURVEY, SEC 73, A-301,
H.T. & B. RR CO. SURVEY, SEC 64 (A.K.A.)
MARY V. O'DONNELL SURVEY, A-483,
AND MARY V. O'DONNELL SURVEY, A-469
BRAZORIA COUNTY, TEXAS**

FEbruary 2021 JOB NO. LJA5001-2791-2101

LJA Surveying, Inc.
3600 W Sam Houston Parkway S Phone 713.963.5200
Suite 175 Fax 713.963.5026
Houston, Texas 77042 T.B.P.E.L.S. Firm No. 10194382



ACREAGE SUMMARY	
TRACT 1:	418.432 ACRES
TRACT 2:	19.961 ACRES
TOTAL AREA:	438.393 ACRES

Exh b t

**METES AND BOUNDS DESCRIPTION
OF
TRACT 1**

EXHIBIT "A"

A 418.318 acre (18,221,949 square feet) tract, being all of Lots 5, 6, 7, 8, 13, 14, 15, 16, 21, 22, 23, 24, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 42, 43, 44, 45, 46, 47 and 50 of the Allison-Richey Gulf Coast Home Company Suburban Gardens Subdivision of Section 73, H.T. & B. Railroad Company Survey, Abstract 301, according to the map or plat thereof, recorded in Volume 2, Page 91 and 92, of the Plat Records of Brazoria County, Texas (B.C.P.R.) and being all of those certain tracts conveyed to Westbank Bayou, LP, called 19.919 acres (Lots 5'6), recorded in Brazoria County Clerk's File Number (B.C.C.F. No.) 2007021508, called 9.929 acres (Lot 8), recorded in B.C.C.F. No. 2007017868 and called 9.972 acres (Lot 16), recorded in B.C.C.F. No. 2007018701 and being all of that certain tract conveyed to Charles L. Sowell called 9.988 acres (Lot 7), recorded in Volume 1177, Page 396, deed records of Brazoria County, Texas (B.C.D.R.), and being all of those certain tracts conveyed to Eastbank Bayou, LP, called 10 acres (Lot 33), recorded in B.C.C.F. No. 2007022032, called 19.944 acres (Lots 42-43), recorded in B.C.C.F. No. 2008004369 and called 10 acres (Lot 47), recorded in B.C.C.F. No. 2006004367 and being all of that certain tract conveyed to Four Forty-Three Annex No. 1, LTD., called 10.00 acres (Lot 50), recorded in B.C.C.F. No. 2006045403 and being a part of that certain tract conveyed to Four Forty-Three Ltd. (called 433.09 acres), recorded in Volume 1048, Page 760, B.C.D.R., with said 18,221,949 square foot tract of land being more particularly described by metes and bounds as follows:

COMMENCING at a 1/2 inch iron rod found at the Northeast corner of said Section 73 and an interior corner of the H.T. & B. Railroad Company Survey, Section 74, Abstract 493, recorded in Volume 2, Page 66, B.C.P.R.) and being at the centerline intersection of 60 foot Pollard Drive (as occupied) (Platted as 40 feet - Volume 2, Page 91 and 92, B.C.P.R.) and 60 foot Del Bello Boulevard (as occupied) (Platted as 50 feet - Volume 2, Page 66, B.C.P.R.), marking the northeast corner of the Michael D. Roland and Marcy D. Roland tract (called 5.46 acres), recorded in B.C.C.F. No. 2004072423 and 2007030104, the northwest corner of the Michael C. Black tract (called 4.00 acres), recorded in B.C.C.F. No. 96-015514 and the Northeast corner of said Section 73;

THENCE S86°50'29" W, along and with the common line of Section 73 and 74 and centerline of said 40 foot platted road, at 658.00 feet pass a point marking the southwest corner of Lot 1 of said Section 74 and the southeast corner of the Mary V O'Donnell Survey, Division "O", Abstract 469, recorded in Volume 2, Page 91 and 92, B.C.P.R., from which a 5/8 inch iron rod bears, S 38°48'33" W, 3.08 feet, continuing along and with the common line of Section 73 and Division "O" and centerline of said 40 foot platted road, a total distance of 1974.26 feet (called 1980.00 feet) to a 5/8 inch iron rod with cap stamped "FMS" set in the north line of Section 73, the north line of a 60 foot American Canal Company Easement, recorded in Volume 638, Page 127, B.C.D.R., the south line of said Division "O", Abstract 469, the south line of the Sylvia Buffy Orndorff and Dustin Aaron Different tract (called 13.93 acres), recorded in B.C.C.F. No. 2015054435, and the centerline of said 40' platted road, marking the northwest corner of the Katherine Ott Miles tract (called 5 acres), recorded in Volume 1459, Page 1, B.C.D.R., the northeast corner of said Eastbank Bayou, LP tract (Lot 33), and being the common corner of Lot 33 and 41 of said Section 73 at the most northerly Northwest corner and POINT OF BEGINNING of herein described tract:

THENCE S03°24'40" E, along and with the common line of said Lot 33 and 41, a distance of 660.58 feet (called 660.00 feet) to a 1/2 inch iron rod with cap stamped "Adams RPLS 3666" found, marking the southeast corner of said Eastbank Bayou, LP tract (Lot 33), the southwest corner of said Miles tract, the northwest corner of said Eastbank Bayou, LP tract (called 19.944 acres), an interior corner of herein described tract and being the common corner of Lots 33, 41, 42 and 34 of said Section 73;

THENCE N86°49'54" E, along and with the common line of Lots 41, 42, 49 and 50 of said Section 73, a distance of 1314.38 feet (called 1320.00 feet) to a 5/8 inch iron rod with cap stamped "FMS" set, marking the southeast corner of the Jane Hetherington Brown and Norman Paul Brown tract (called 5 acres), recorded in B.C.C.F. No. 2014042893, the southwest corner of the Suzanne Renae Scopel tract (called 5 acres), recorded in B.C.C.F. No. 2005013089, the northwest corner of the Jeffery Wayne Scopel tract (called 1.157 acres), recorded in B.C.C.F. No. 2005013109, the northeast corner of said Four Forty-Three Annex No. 1, LTD. Tract (called 10.00 acres) and the most easterly northeast corner of herein described tract and being the common corner of Lots 49, 55, 56 and 50 of said Section 73;

THENCE S03°25'11" E, along and with the common line of Lots 50 and 56 and east line of said Four Forty-Three Annex No. 1, LTD. tract, a distance of 660.67 feet (called 660.00 feet) to a 5/8 inch iron rod with cap stamped "FMS" set, marking the southwest corner of the Douglas Varner Tract (called 1.157 acres), recorded in Volume [91] 906, Page 253, of the official records of Brazoria County, Texas (B.C.O.R.), the northwest corner of the Laura Loterbauer tract (called Minor Plat of 2.50 acres), recorded in B.C.C.F. No. 2018006317, the northeast corner of the Louis Lira tract (called 20 acres), recorded in Volume 1694, Page 653, B.C.D.R. and an angle point for corner of herein described tract and being the common corner of Lots 50, 56, 57 and 51 of said Section 73;

THENCE S86°50'32" W, along and with the common line of Lots 50 and 51, same being the common line of said Four Forty-Three Annex No. 1, LTD. Tract and said Lira tract, a distance of 657.24 feet (called 660.00 feet), to a 5/8 inch iron rod with cap stamped "FMS" set, in the east line of said Eastbank Bayou, LP tract (called 19.944 acres), marking the southwest corner of said Four Forty-Three Annex No. 1, LTD. tract, the northwest corner of said Lira tract, an interior corner of herein described tract and being the common corner of Lots 50, 51, 43 and 42 of said Section 73;

THENCE S03°24'55" E, along and with the common line of Lots 43, 51, 44, 52, 45, 46 and 61 at 1320.21 feet (called 1320.00 feet) pass a point in the centerline of a 40 foot platted road, recorded in Volume 2, page 91 and 92, B.C.P.R. marking the northwest corner of the Coastal Bend Land Investments, LP tract (called 40.0060 acres) (called Lot 61), recorded in B.C.C.F. No. 2006049617 and being the common corner of Lots 44, 52, 61 and 45, continuing for a total distance of 3299.48 feet (called 3300.00 feet) to a 5/8 inch iron rod with cap stamped "FMS" set, marking the southwest corner of the Jose T. Villanueva and Trinidad Villanueva tract (called 5 acres), recorded in B.C.C.F. No. 2004036528, the northwest corner of the Roger Hernandez Gandarillas and Sheila M. Rosario Crespo tract (called 1.000 acre), recorded in B.C.C.F. No. 2015020827, the northeast corner of said Aspect Energy, LLC tract (called 10 acres), the southeast corner of the said Eastbank Bayou, LP tract (called 10 acres) (Lot 47), the most easterly southeast corner of herein described tract and being the common corner of Lots 53, 54, 48 and 47 of said Section 73;

THENCE S86°49'54" W, along and with the common line of Lots 48 and 47, same being the common line of said Eastbank Bayou, LP tract (Lot 47) and said Aspect Energy, LLC tract, a distance of 657.49 feet (called 660.00 feet) to a 1/2 iron rod with cap stamped "Adams RPLS 3666" found in the east line of the said 443.09 acre tract, marking the southwest corner of said Eastbank Bayou, LP tract and the northwest corner of said Aspect Energy, LLC tract, and interior corner of herein described tract and being the common corner of Lots 48, 40, 39 and 47 of said Section 73;

THENCE S03°24'40" E, along and with the common line of Lots 48 and 40, same being the common line of said Aspect Energy, LLC tract and said 443.09 acre tract, a distance of 660.05 feet (called 660.00 feet) to a 5/8 inch iron rod with cap stamped "FMS" set in the centerline of a 40 foot platted road, recorded in Volume 2, Page 91 and 92, B.C.P.R., in the called south line of Section 73 and the north line of the H.T. & B. Railroad Company Survey, Section 64, Abstract 483 and the north line of the Dr. A.A. Luther Subdivision of Manvel, recorded in Volume 1, Page 71 and 72 and Volume 3, Page 139 and 140, B.C.P.R. and the north line of Outlot 181 of said Dr. A.A. Luther Subdivision, marking the northwest corner of the Coastal Bend Land Investments, LP tract (remainder of a called 167.073 acre tract), recorded in B.C.C.F. No. 2004058628, the southwest corner of said Aspect Energy, LLC tract, an angle point in the east line of said 443.09 acre tract and an angle point for corner of herein described tract and being the common corner of Lots 48 and 40 of said Section 73, from which a 5/8 inch iron rod with cap stamped "Base Line" found marking the southeast corner of said Section 73 bears, S 86°50'11" W, 1975.03 feet;

THENCE S86°50'11" W, continuing along and with the common line of said Section 73, Section 64 and the Dr. A.A. Luther Subdivision, same being the common line of said Outlot 181 and Lot 40, and centerline of said 40 foot platted road, a distance of 147.66 feet to a 5/8 inch iron rod with cap stamped "FMS" set in said common line, marking the northeast corner of the Four Forty-Three, LTD. Tract (called 24.00 acres) (Outlot 195), recorded in Volume 1048, Page 760, B.C.D.R. and an interior corner of herein described tract and being the westerly line of a 40 foot platted road, recorded in Volume 1, Page 71 and 72 and Volume 3, Page 139 and 140, B.C.P.R.;

THENCE S19°30'25" W, along and with the easterly line of said Outlot 195 and the westerly line of said 40 foot platted road, at 909.98 feet pass a 1/2 inch iron rod found, marking the southeasterly corner of said Outlot 195 and the northeasterly corner of the Four Forty-Three, LTD. Tract (called 20.00 acres) (North 1/2 of Outlot 180), continuing for a total distance of 1569.69 feet to a 1 inch iron pipe found, marking the southeasterly corner of said 20.00 acre tract, the northeasterly corner of the Beazer Homes Texas, LP tract (called 19.99 acres) (south 1/2 Outlot 180), recorded in B.C.C.F. No. 2016050422 and an angle point in the westerly line of the Beazer Homes Texas, LP tract (called 5.40 acres), recorded in B.C.C.F. No. 2016050422 and the most easterly southeast corner of herein described tract;

THENCE N 70°27'42" W, along and with the common line of said North 1/2 of Outlot 180 and the South 1/2 of Outlot 180, a distance of 1319.95 feet (called 1320.00 feet) to a 1/2 inch iron rod with cap stamped "Adams RPLS 3666" found, in the easterly line of the Four Forty-Three, LTD. Tract (called 46.35 acres) (Outlot 175), marking the common corner of the South 1/2 and North 1/2 of Outlot 180 and an interior corner of herein described tract;

THENCE S19°29'54" W, along and with the common line of said 46.35 acre tract and said 19.99 acre tract, same being the common line of Outlot 180 and 175, a distance of 660.47 feet to a 1/2 inch iron rod with cap stamped "LJA Eng" found, in the north line of a 40 foot platted road, recorded in Volume 1, Page 71 and 72 and Volume 3, Page 139 and 140, B.C.P.R., marking the most westerly northwest corner of said 5.40 acre tract, the southeasterly corner of said 46.35 acre tract and the southwesterly corner of said 19.99 acre tract and an interior corner of herein described tract;

THENCE N 70°26'20" W, along and with the south line of 46.35 acre tract and the north line of said 40 foot platted road, a distance of 1321.08 feet to a 1/2 inch iron rod with cap stamped "Adams RPLS 3666" found, in the easterly line of the Four Forty-Three, LTD. Tract (called 27.7947 acres) (Outlot 174) and the westerly line of said 40 foot platted road, marking the southwesterly corner of said 46.35 acre tract and an interior corner of herein described tract;

THENCE S19°28'54" W, along and with the common line of said 27.7947 acre tract and westerly line of said 40 foot platted road, a distance of 1390.63 feet to a TxDot Brass Disk found in the northwesterly right-of-way (r.o.w.) line of State Highway No. 6 (a.k.a. Morris Avenue) (200' R.O.W.), recorded in B.C.C.F. No. 2013053500, marking the southeasterly corner of said 27.7947 acre tract and the most southerly southeast corner of herein described tract;

THENCE N 70°30'10" W, along the northwesterly r.o.w. line of said State Highway No. 6, a distance of 33.83 feet to a TxDot Brass Disk found, marking the southeasterly corner of the Russell T. Rudy and Randall D. Rudy tract (called 18 acres), recorded in Volume 1408, Page 806, B.C.D.R., the southwesterly corner of said 27.7947 acre tract and the most southerly southwest corner of herein described tract, from which a TxDot Brass Disk found, at the intersection of easterly r.o.w. line of County Road 82 (a.k.a. Iowa Lane) (60' R.O.W. as occupied), recorded in B.C.C.F. No. 2006021816 and the northwesterly r.o.w. line of said State Highway No. 6, marking the southwesterly corner of a 0.217 acre tract, recorded in B.C.C.F. No. 2013053500 bears, N 70°30'10" W, 365.23 feet;

THENCE N 03°19'19" W, along and with the common line of said 27.7947 acre tract and said 18 acre tract, a distance of 2310.10 feet to a 1/2 inch iron rod with cap stamped "Adams RPLS 3666" found, marking the northwest corner of said 27.7947 acre tract and an angle point for corner of herein described tract, from which a 3/4 inch pinched top pipe bears, N 09°17' W, 1.1 feet and from which an iron rod with cap stamped "Kalkomey" found in the easterly r.o.w. line of said County Road 82, marking the northwest corner of said 18 acre tract, bears S 87°00'54" W, 328.14 feet and a 5/8 inch iron rod found in the easterly r.o.w. line of said County Road 82, marking the southwest corner of a called 41.4819 acre tract, recorded in B.C.C.F. No. 2003061748 bears, N 02°13'14" W, 38.07 feet;

THENCE N86°57'38" E, along and with the north line of said 18 acre tract, a distance of 729.52 feet to a 5/8 inch iron rod with cap stamped "FMS" set, at the southwest corner of Section 73 and being in the centerline intersection of two 40 foot platted roads and being the common corner of said Section 73 and the H.T. & B. Railroad Company Survey, Section 72, Abstract 460, marking the southeast corner of the Brazos River Authority tract (called 6.676 acres) (cause no. 54,761A), recorded in Volume 33, Page 154, district clerk records of Brazoria County, Texas (B.C.D.C.R.), the southwest corner of the Brazoria County MUD No. 43 Drainage Easement (called 1.675 acres, recorded in B.C.C.F. No. 2016026159, the southwest corner of said 9.929 acre tract and an interior corner of herein described tract;

THENCE N 03°28'57" W, along and with the common line of said Section 73 and Section 72 and centerline of said 40 foot platted road, at 40.00 feet pass a point marking the southwest corner of a 0.34 acre tract (Parcel 1) out of said called 41.4819 acre tract, continuing for a total distance of 2640.38 feet (called 2640.00 feet) to a 1 inch iron pipe found, marking the northwest corner of a 0.25 acre tract (Parcel 2), the northwest corner of said 19.919 acre tract, the northwest corner of a 3.430 acre drainage easement, recorded in B.C.C.F. No. 2016026156, the northeast corner of said Brazos River Authority tract (called 6.676 acres), the southeast corner of the Brazos River Authority Parcel "D" tract (called 3.18 acres), recorded in Volume 1070, Page 315, B.C.D.R., the southwest corner of the Brazos River Authority Parcel "B" tract (called 0.61 acres), recorded in Volume 1070, Page 318, B.C.D.R., the southwest corner of the Brazoria County Municipal Utility District (M.U.D.) No. 43 Drainage Easement tract (called 1.739 acres), recorded in B.C.C.F. No. 2016011559 and the common corner of Lots 4 and 5, Section 73, from which a 1/2 inch iron rod found in the east r.o.w. line of County Road 82 (a.k.a. Iowa Lane) (60' R.O.W. as occupied), recorded in B.C.C.F. No. 2006021816, marking the southwest corner of the Joan Banneyer tract (called 1.367 acres), recorded in B.C.C.F. No. 2005003981 and the northwest corner of the Sonmar of Scottsdale, LLC tract (called 53.948 acres), bears S 86°37'46" W, 900.42 feet;

THENCE N86°51'03" E, along and with the common line of herein described tract and said Lot 4 and the centerline of a 40 foot platted road, at 657.75 feet (called 660.00 feet) pass a 3/4 inch iron pipe found, marking the northeast corner of said 19.919 acre tract and the southwest corner of the 102929 Brazoria Inc. tract (called 34.90 acres), recorded in B.C.C.F. No. 2005033429 and being the common corner of Lots 4, 12, 13 and 5, and at 1973.99 feet (called 1980.00 feet) pass a 1/4 inch iron pipe found, marking the southeast corner of said 34.90 acre tract and being the common corner of Lots 20, 28, 29 and 21, continuing for a total distance of 2632.44 feet (called 2640.00 feet) to a 5/8 inch iron rod with cap stamped "FMS" found in the west line of a 60 foot American Canal Company Easement, recorded in Volume 638, Page 127, B.C.D.R., marking an interior corner of said remainder of a 433.09 acre tract and an interior corner of herein described tract and being the common corner of Lots 28, 36, 37 and 29 of said Section 73;

THENCE N 03°27'06" W, along and with the common line of Lots 28, 36, 27, 35, 26, 34, 25 and 33 and the west line of said 60 foot American Canal Company Easement, a distance of 2641.03 feet (called 2640.00 feet) to a 5/8 inch iron rod with cap stamped "FMS" found in the north line of Section 73, the north line of a said 60 foot American Canal Company Easement, the south line of the Mary V O'Donnell Survey, Division "O", Abstract 469, recorded in Volume 2, Page 91 and 92, B.C.P.R. the south line of the John and Edith Lebourg tract (called 6.978 acres), recorded in B.C.C.F. No. 98-053061, the north line of the Eastbank Bayou, LP tract (called 19.950 acres), recorded in B.C.C.F. No. 2007022032 and the centerline of said 40 foot platted road, marking the most northerly northwest corner of herein described tract and being the common corner of Lot 25 and 33 of said Section 73, from which a 1/2 inch iron rod found bears, S 82°35" E, 14.3 feet;

THENCE N86°50'29" E, along and with the common line of Section 73, Division "O", the centerline of said 40 foot platted road and the north line of said 60 foot American Canal Company Easement, a distance of 659.60' (called 660.00 feet) to the POINT OF BEGINNING and containing a calculated area of 418.318 acres of land.

EXHIBIT "A"

FIRST TRACT

18.643 ACRES
812,089 SQUARE FEET
H.T.&B. R.R. CO. SURVEY, SECTION 64
ABSTRACT NO. 483
CITY OF MANVEL
BRAZORIA COUNTY, TEXAS

FIELD NOTE DESCRIPTION of a 18.643 acre (812,089 square foot) tract of land located in the H.T.&B. R.R. Co. Survey, Section 64, Abstract Number 483, City of Manvel, Brazoria County, Texas and said 18.643 acre tract of land being all of Tract II, a called 18.643 acre tract described in the deed to Alvin Independent School District recorded under Brazoria County Clerk's File Number (B.C.C.F. No.) 2021066368, and being out of and a part of Outlot 181, Dr. A.A. Luther Subdivision recorded under Volume (Vol.) 1, Pages (Pg.) 71 & 72 of the Brazoria County Plat Records (B.C.P.R.) and the E.C. Pitkin Subdivision recorded under Vol. 3, Pg. 139, B.C.P.R., said 18.643 acre tract being more particularly described by metes and bounds as follows: (The bearings described herein are oriented to the Texas Coordinate System, South Central Zone, NAD 1983.)

BEGINNING in the southerly line of Lot 48, Section 73, Allison Richey Gulf Coast Home Co. Subdivision, recorded under Vol. 2, Pg. 91, B.C.P.R. and being the northwest corner of Restricted Reserve "M", Lakeland Subdivision, Section Two recorded under File No. 2014018651, B.C.P.R. and the northeast corner of said Tract II and the herein described tract, from which a 5/8-inch iron rod with cap stamped "Baseline" found bears, North 85 degrees 14 minutes East, 0.62 feet;

THENCE, South 03 degrees 25 minutes 41 seconds East, along the west line of said Restricted Reserve "M", passing at a distance of 88.02 feet, the southwest corner of said Restricted Reserve "M" and the most westerly northwest corner of Restricted Reserve "H", said Lakeland Subdivision, Section 2, from which a 5/8-inch iron rod with cap stamped "Baseline" bears, South 23 degrees 23 minutes East, 0.32 feet, continuing along the west line of said Restricted Reserve "H", passing at a distance of 612.00 feet, the southwest corner of said Restricted Reserve "H" and the northwest corner of the remainder of a called 5.632 acre tract described in the deed to Lakeland Communities, LP, recorded under B.C.C.F. No. 2013029570, continuing along the west line of said remainder of a called 5.632 acre tract, passing at a distance of 692.00 feet, the southwest corner of said remainder of a called 5.632 acre tract and the northwest corner of Restricted Reserve "E", said Lakeland Subdivision, Section Two, continuing along the west line of said Restricted Reserve "E", a total distance of 1,236.28 feet, to a 5/8-inch iron rod with orange plastic cap stamped "West Belt Surveying Inc" found in the northeasterly line of Lot 20, Block 1, Bluewater Lakes, Section 4, a subdivision recorded under File No. 2018019193, B.C.P.R. and marking the southwest corner of said Restricted Reserve "E" and the southeast corner of said Tract II and the herein described tract;

THENCE, North 70 degrees 28 minutes 49 seconds West, along the northeasterly line of said Block 1, Bluewater Lakes, Section 4, a distance of 1,005.41 feet, to a 5/8-inch iron rod with orange plastic cap stamped "West Belt Surveying Inc" found in the northeasterly line of Lot 6, Block 1, said Bluewater Lakes, Section 4 and the southeasterly line of a 40' wide roadway easement, recorded under Vol. 1, Pgs. 71 & 72, B.C.P.R. and Vol. 3, Pg. 139, B.C.P.R. and marking the southwest corner of said Tract II and the herein described tract, from which a 5/8-inch iron rod with cap found bears, North 70 degrees 29 minutes West, 20.00 feet and a 1/2-inch iron rod found bears, North 70 degrees 29 minutes West, 40.00 feet;

EXHIBIT "A"

THENCE, North 19 degrees 32 minutes 37 seconds East, departing the northeasterly line of said Block 1, Bluewater Lakes, Section 4 and along the southeasterly line of said 40' wide roadway easement, a distance of 917.07 feet, to the southerly of Lot 40, Section 73, aforesaid Allison Richey Gulf Coast Home Co. subdivision and the northwest corner of said Tract II and the herein described tract, from which a 5/8-inch iron rod with cap stamped "Leany" found bears, North 02 degrees 29 minutes West, 0.33 feet;

THENCE, North 86 degrees 34 minutes 43 seconds East, along the southerly line of said Lot 40, Section 73 and aforesaid Lot 48, Section 73, a distance of 567.93 feet, to the POINT OF BEGINNING and containing a computed area of 18.643 acres (812,089 square feet) of land as depicted on the Land Title Survey dated: November 28, 2023, revised: December 4, 2023, prepared by West Belt Surveying, Inc., Project No. S647-0337A.

West Belt Surveying, Inc.
Certified Firm No. 10073800
21020 Park Row
Katy, Texas 77449
(281) 599-8288



Joel D. Walker
Joel D. Walker Date: 12/4/23
Texas Registration No. 5189

Exhibit "B"

Valencia Planned Unit Development

Prepared for:

Hillwood Residential, L.P.

Prepared by:



**PLANNING &
LANDSCAPE
ARCHITECTURE**

February 2024

I. INTRODUCTION.....	Page 3
II. PROJECT DESCRIPTION	Page 3
1. Land Use / Regulatory Compliance	Page 3
2. Justification	Page 3
3. Single-Family Residential	Page 4
4. Drill Site.....	Page 4
5. Potential School Site	Page 4
6. Parks and Open Space	Page 5
7. Other Land Uses	Page 5
III. ZONING	Page 6
1. Acreage per Land Use Summary	Page 7
2. Single-Family Residential Lot Distribution Table.....	Page 7
3. Commercial Land Uses	Page 8
IV. PARKS	Page 9
V. DEVELOPMENT REGULATIONS	Page 10
1. Architectural Regulations.....	Page 10
2. Street and Circulation System	Page 10
3. Traditional Single-Family	Page 11
4. Single-Family Specialty Product	Page 11
5. Streets.....	Page 13
6. Commercial	Page 14
7. Signage	Page 15
8. Trails	Page 18
9. Utilities	Page 18
10. Other Regulations	Page 19
VI. PHASING / DEVELOPMENT SCHEDULE	Page 19

EXHIBITS

Exhibit A - Area Location Exhibit
 Exhibit B – Project Aerial Exhibit
 Exhibit C – Survey
 Exhibit D - Legal Description
 Exhibit E - Conceptual Land Use Exhibit
 Exhibit F – Conceptual Single-Family Residential Exhibit
 Exhibit G - Conceptual Roadway Exhibit
 Exhibit H - Conceptual Amenities and Open Space Exhibit
 Exhibit I - Phasing Exhibit
 Exhibit J – Conceptual Project Signage Exhibit
 Exhibit K – Conceptual Signage Location Exhibit
 Exhibit L – Single-Family Residential Specialty Product
 Exhibit M – Single-Family Residential Specialty Product
 Exhibit N – Single-Family Residential Specialty Product

I. INTRODUCTION

This application was prepared on behalf of Hillwood Residential, L.P. pursuant to the City of Manvel's zoning ordinance Sec. 77-29 Planned Unit Development District (PUD) district. The purpose of a PUD District is to provide a high level of amenities, encourage a pedestrian friendly environment, and provide flexibility in the development of land subject to the development standards coordinated with the necessary public services and facilities.

The Valencia PUD is primarily a residential project that consists of approximately 457.0 acres of land and is located immediately east of State Highway 288, north of Highway 6, generally south of Del Bello Boulevard, and generally west of Farm-to-Market 1128. The Area Location Map (Exhibit A) located in the Exhibits section of this document illustrates the location of the property.

The property is generally flat with elevations ranging from 44 feet to 60 feet above mean sea level (MSL) and is largely comprised of prairie land and agricultural fields. The property is encumbered by several existing east-west pipeline easements and Chocolate Bayou which runs in a north-south direction on the western portion of the property. The MUD 43 Drainage Easement and a portion of the Brazos River Authority controlled drainage easement, at approximately 125 feet in width, runs north-south along the western property boundary.

Generally, the surrounding land use is a mix of undeveloped acreage to the southwest, some large lot residential to the north, and standard single-family residential developments to the northwest, southeast, and south. The single-family residential developments are Bluewater Lakes to the south, Lakeland to the southeast, and Del Bello Lakes to the west. To the southeast lies Manvel Junior High and Manvel High School located at the intersection of State Highway 6 and McCoy Road. The future location of the Manvel City Center directly abuts the northwestern boundary of a portion of the development, south of Del Bello Boulevard.

The surrounding area can be seen on the Area Location Map and the Project Aerial map (Exhibit A and B).

II. PROJECT DESCRIPTION

1. Compliance with Comprehensive Plan

The Valencia PUD complies with the Manvel Comprehensive Plan by adhering to the development principles outlined in the plan. This is accomplished by encouraging well-planned quality residential and non-residential development; providing open space for recreation and protecting the natural environment; and offering a variety of housing choices (See Conceptual Land Use Plan, Exhibit E). The Valencia PUD has a well-defined network of both vehicular and pedestrian circulation systems that provide connectivity, not only to the project itself, but to existing developments to the south and west as well as to the future Manvel City Center. The diversity of housing types varies from the traditional single-family subdivision to higher density single-family specialty products that ensure residents of all ages and needs can fulfill their housing needs. The development of an internal parks system includes a recreation center, smaller parks, and significant open space areas that will help provide for the City's future open space needs.

2. Justification

The intent of the PUD District is to encourage high quality development in the City by providing additional flexibility to take advantage of special site characteristics, location, and land uses. This document establishes certain development standards that exceed the minimum Manvel

zoning regulation requirements for properties specifically located within the boundaries of the Valencia PUD.

The PUD will meet or exceed the minimum requirements of Manvel's zoning regulations through specific architectural design and engineering standards such as:

- Creating a PUD district which will respond to market conditions and maintain the flexibility necessary to address changes in the future;
- Incorporating unique single-family specialty products that will provide a variety of housing stock to ensure residents of all ages and needs can fulfill their housing requirements;
- Providing parks, amenitized detention areas, and a well-defined trail system; and
- Complying with the amended Major Thoroughfare Plan to provide sufficient connectivity throughout the project for vehicular and pedestrian activity.

3. Single-Family Residential

The traditional single-family residential component that will be found throughout the Valencia PUD will be a collection of individual neighborhoods that take their access from Dogwood Avenue, Charlotte Street and Pollard Boulevard, and/or an internal local street system that provides connections within the neighborhood and to the surrounding areas. The traditional single-family residential neighborhoods will be developed with lot sizes that vary from 50 feet to 70 feet or greater in width to respond to market conditions.

The single-family specialty products will provide unique types of residential development that is less than fifty feet in width that may include front loaded products, rear loaded or alley products, townhome alley products, and/or "zipper" lots (single-family lots with detached garages in alternating depths). The single-family specialty products neighborhoods will be developed with varying lot sizes and product types to respond to market conditions.

4. Drill Site

A 4.0-acre drill site is located on the north side of the future Charlotte Street extension, to the north of Bluewater Lakes Section 2, and to the west of Lakeland Section 2. The drill site will be used as open space area unless or until the mineral rights owners elect to exercise their drilling rights. The size and location of any drilling facility associated with the extraction of oil and gas shall be conceptual until a permit is issued by the City of Manvel in accordance with Chapter 35, of the *City of Manvel Code of Ordinances*. This drill site shall not be calculated towards the parkland dedication requirement. Should the surface owner acquire the mineral rights and elect to remove the drill site, the designated drill site shown on the exhibits to this Valencia PUD may be used as a park or for single-family residential uses (See Section III.2, Single-Family Residential Lot Distribution Table). If the designated drill site is used for a park, that acreage may be applied to the parkland dedication requirements.

5. Potential School Site

The project is located within the Alvin Independent School District. The size and the location of the proposed school site will be coordinated between the developer and the school district. In the event that Alvin Independent School District does not purchase the proposed school site, that site may be used for single-family residential uses (See Section II.2, Single-Family Residential Lot Distribution Table).

6. Parks and Open Space

Parks and open space accounts for approximately 36.6% of the gross acreage within the Valencia PUD. The open space calculation includes private parks, public parks, landscape reserves, pipeline easements, drainage easements, canal easements, trails, natural open space areas, drill sites, lakes/detention areas, and drainage facilities. The Valencia PUD Conceptual Amenities and Open Space Plan (Exhibit H) shows a private recreation center, public parks, lake/detention areas, and open space areas all connected via a pedestrian trail system. The proposed private recreation center, located to the west of Pollard Boulevard, will provide off-street parking and may contain active amenities such as water based recreational activities with commonly associated facilities, an active play area for children, and other passive amenities. In the event that a “splash pad” type amenity is installed, a water recirculation system will also be installed for the purpose of water conservation. The other two parks shown on Exhibit H will be public and have more passive facilities such as play areas for children, trails, picnic tables and benches. One of the lake/detention areas, designated D-03 on Exhibit H, may have active amenity features such as a kayak launch and fishing facilities. All land which is dedicated for the purpose of fulfilling the parkland dedication requirement will be developed with some form of either passive or active amenities. The various private recreation center, public parks, and trails will be developed as the adjacent residential sections are developed.

The pedestrian trail system will be comprised of a hierarchy of trail widths ranging from 12 feet in width to 6 feet in width; all sidewalks located in front of homes will be 5 feet in width.

The lakes within the Valencia PUD will maintain a constant water level while also serving as detention facilities for the project and provide a significant amount of open space. The lake/detention areas will not only enhance the aesthetic quality of the development but will provide numerous opportunities for the enjoyment of the residents.

7. Other Land Uses

The Valencia PUD has five proposed commercial sites located throughout the development; ±4.7 acre and ±2.5 acre commercial sites located at the southeast and southwest corners of Del Bello Boulevard and Pollard Boulevard, a ±2.6 acre commercial site located at the northwest corner of Pollard Boulevard and Dogwood Avenue, a ±1.5 acre commercial site at the southeast corner of Charlotte Street, and a ±10.5 acre site located on the northeast corner of Del Bello Boulevard and Manvel Parkway. It is anticipated that the commercial developments will largely be neighborhood retail in nature.

III. ZONING

1. Proposed Zoning

1. To implement the conceptual master plan as currently proposed, each of the proposed land uses has been assigned a zoning district consistent with the current City of Manvel zoning regulations as shown on the Composition of Land Use Table below. The various land uses will follow the development requirements for their assigned zoning district as described in the Zoning Ordinance, in effect when this PUD is approved, unless otherwise noted in this PUD. Notwithstanding the foregoing, no amendment shall impact the project's vested rights. When there is a conflict between the requirements in the regulations listed below and this PUD Document, this PUD Document will govern.

Land use shall be regulated on a total acreage basis. Each Land Use may be increased or decreased in acreage by up to 10% of the total gross acreage. The percentage land use area change is required to ensure the success of the Valencia PUD by maintaining the flexibility to modify land use sizes in response to changes in economic and market conditions. This will allow Valencia PUD to remain competitive in the real estate market over the life of the project and the ability to adjust as necessary to accommodate specific end users in a timely manner.

The land uses may be relocated within the boundaries of the PUD, as necessary to address economic and market conditions or future modification of roadway and drainage alignments. The Land Use Comparison table below provides a detailed tabulation of each land use within the development as shown on the Conceptual Land Use Exhibit, Exhibit E. All acreages shown below are subject to change as development occurs within the boundaries of the PUD and as allowed by this document.

2. Conversion of Specific Land Uses

- a. The conversion of the Drill Sites, Parkland, and/or Potential School will only be allowed to convert to parkland or single-family residential uses.
- b. Conversion of the Drill Sites and/or Potential School Site will be the only instance in which density may be increased within the development. However, the increase in density shall be limited to the traditional single-family lot products as described in Section III.V.3, Traditional Single-Family.
- c. In the event that the drill sites or school site is converted to single-family residential, this conversion of land use shall not be counted towards the ten percent (10%) of change described in Section III.1.

Type text here

A. Acreage per Land Use Summary

Land Use	Zoning District	Approximate Acreage	% Gross Acreage
Constraints			
Major Thoroughfare & Collector Roadways	PUD-SFR	37.6	
Existing Utility & Canal Easements	PUD-SFR	33.5	
Drainage & Detention	PUD-SFR	81.4	
Chocolate Bayou	PUD-SFR	7.6	
Drill Site	PUD-SFR	4.0	
Subtotal		164.1	36.0%
Community Elements			
Recreation Center & Parks	PUD-SFR	5.6	
Elementary School	PUD-SFR	14.8	
Landscape/Open Space	PUD-SFR	33.9	
Subtotal		54.3	11.7%
Commercial			
Commercial	PUD-LC	21.8	
Subtotal		21.8	4.8%
Single-Family Residential			
Single-Family Residential	PUD-SFR	216.8	
Subtotal		216.8	47.5%
Totals		457.0	100.0%

B. Single-Family Residential Lot Distribution Table

Lot Size	Allowable Percentage of Total Lots	Approximate Acreage
50' X 120' (Typical)	30%	65.0
60' X 120' (Typical)	32%	69.4
70' X 130' (Typical)	10%	21.7
Specialty Product	28%	60.7
Gross Residential Total	100%	216.8

Please refer to the Single-Family Residential Exhibit, Exhibit F, for the proposed location of the various lot products. The locations of the various products shown on the exhibit may be adjusted and/or moved within the boundaries of the PUD as allowed by this document. Refer to Section III.V.3 and Section III.V.4, of this document for a listing of lot sizes and applicable standards for the various single-family residential products, including the single-family specialty product. The 50 foot lots and Specialty Products combined shall not exceed a total of 58% of the total lot count in the project; the 60 foot lots and 70 foot lots may each be increased by an additional 10% of the total lot percentage. Additionally, if the drill site and/or the school site is converted to a residential use (See Section II.4

and II.5), any of the lot sizes shown on the table above may be used provided that the percentage ratio of the various lot sizes shall not be modified.

C. Commercial Land Uses

The proposed five (5) commercial tracts are intended to provide neighborhood-scaled commercial development with retail, service, and office uses. Below is a list of allowed uses within these tracts:

a. Permitted Uses:

- Retail bakeries
- Furniture and home furnishing stores
- Electronics and appliance stores
- Building material, garden equipment and supplies dealers
- Food and beverage stores
- Health and personal care stores
- Clothing and clothing accessories stores
- Sporting goods, hobby, book, and music stores
- General merchandise stores
- Misc. store retailers
- Postal Service
- Finance and insurance
- Real estate
- Lessors of nonresidential buildings (except mini warehouses)
- Consumer good rental
- Professional, scientific, and technical services
- Accounting, tax preparation, bookkeeping and payroll
- Veterinary services
- Management of companies and enterprises
- Administrative and support services
- Educational support services
- Social assistance
- Child day care services
- Arts, entertainment, and recreation
- Fitness and Sports Centers
- Food services and drinking places
- Electronic and precision

equipment repair and maintenance

- Automotive glass replacement shop
- Personal and laundry services

b. Office functions only:

- Any manufacturing or industrial related uses
- Support activities for agriculture and forestry
- Construction of buildings
- Transportation and warehousing
- Commercial and industrial machinery and equipment rental

c. Special Use Permit required:

- Beverage manufacturing
- Information
- Gasoline stations
- Ambulatory health care services
- Hospitals
- Lessors of mini warehouses and self-storage units
- Automotive and equipment rental
- Amusement, gambling, recreation industries
- Recreational goods rental
- Colleges, universities, professional, and business schools
- Nursing and residential care facilities
- Other residential care facilities

c. Special Use Permit required (con't)

- Bed and breakfast
- All other amusement and recreational industries
- Mobile food services
- Drinking places (alcoholic beverages)
- Automotive repairs and maintenance
- Personal and household

- Goods repair and maintenance
- Other personal care services
- Religious organizations
- Civil and social organizations
- Non-store retailers
- Technical and trade schools
- Other schools and instruction
- Accommodations

IV. PARKS

To meet the parks dedication requirement, there shall be a minimum of one acre of parkland dedicated for every 100 proposed single-family residential lots. Based upon the estimated number of 1,100 single-family residential lots, the Valencia PUD will be required to provide approximately ± 11 acres of parkland. In the event that the number of single-family residential lots exceeds the acreage listed above, the requirement of a minimum of one acre of parkland dedicated for every 100 proposed single-family residential lots shall apply. Should the number of lots decrease from the estimated number of 1,100, the requirement of a minimum of one acre of parkland dedicated for every 100 proposed single-family residential lots shall apply.

Parkland Dedication will be credited based on the following criteria:

- Private parks: No more than 50% of the required parkland dedication acreage shall be comprised of private parkland.
- Public parks: Public parkland shall be dedicated to the City of Manvel once the full reimbursement for the public park has been received and maintained by the Homeowners Association. However, to be considered public parkland, the area must be available to all residents of the City of Manvel.
- Trails: No more than 50% of the required parkland dedication acreage may be comprised of trails. To qualify for credit as trails, the following requirements must be met:
 - All-weather hike/bike paths, landscaping and sodding installed according to the construction standards of the city for trails;
 - Have connections to surrounding private parks, public parks, open space, recreation areas, school and/or other trails/sidewalks;
 - Reserves dedicated as parkland acreage for trails shall have an average minimum width of 25 feet.
- Lakes: No more than 35% of the required parkland dedication acreage may be comprised of lakes/detention. To qualify for credit as lakes, the following requirements must be met:
 - Be located adjacent to parkland or open space that is designated for public use;
 - Maintain a constant water surface elevation;
 - Have connections via trails/sidewalks to surrounding private parks, public parks, open space, recreation areas, school and/or other trails/sidewalks;
 - Contain a minimum size of eight acres;
 - Have side slopes not to exceed a five to one (5:1) ratio in the location of any ingress/egress areas for the purpose of fishing or kayak related activities;
 - Must be available to all residents of the City of Manvel.

The proposed parks dedication requirement will be met in the following manner:

Open Space Amenity	Acreage
Recreation Center (Private)	± 2.8 acres

Parks (Public)	±2.8 acres
Lake D-03 (Public)	±3.4 acres (maximum 35% credit)
Trails adjacent to Chocolate Bayou or Lake/detention areas (Public)	±2.0 acres (maximum 50% credit)
Total	±11.0 acres

The acreages and locations of the various parks shown on the above table may be adjusted and/or moved within the boundaries of the PUD as allowed by this document. A well-defined trail system will be constructed throughout the development as depicted on the Conceptual Amenities and Open Space Plan (Exhibit H). The Homeowners Association will be responsible for maintaining all private parks, public parks, open space, trails, and landscaped areas within the PUD.

V. DEVELOPMENT REGULATIONS

Unless otherwise outlined in this document, all City of Manvel regulations, as amended from time to time, shall apply to this PUD. If any provision of a future amended zoning or subdivision regulation imposes a higher standard than that provided for in this PUD document, then the provisions of this PUD document shall control. If any provision of any city regulation not contained in this PUD document imposes a higher standard, that regulation shall control. Notwithstanding the foregoing, no amendment shall impact the project's vested rights. When there is a conflict between the requirements in the development regulations listed below and this PUD Document, this PUD document will govern.

1. Architectural Standards

Residential and Commercial Development Guidelines shall be created to protect the integrity of the residential and commercial development within the PUD. The Commercial Development Guidelines shall comply with the architectural standards listed in Chapter 77-51 of the Manvel Code of Ordinances unless otherwise noted in this document. Below are additional regulations that apply to the architectural standards within the PUD:

- a. Structures located within recreation center or park sites shall follow building material standards and setbacks set forth in the Valencia CCRs.
- b. Structures not enclosed on at least three sides shall not be held to the Commercial Development Guidelines.
 - i. Such structures shall not be required to comply with Commercial setback or exterior building material requirements and shall follow building material standards and setbacks set forth in the Valencia CCRs

2. Street and Circulation System

The Valencia PUD will have sufficient mobility through the construction of several proposed roadways:

- Pollard Boulevard, a 120 foot wide thoroughfare running north-south through the property from its connection to Del Bello Boulevard in the north to its existing location in Bluewater Lakes;
- Del Bello Boulevard, a 120 foot wide thoroughfare that lies along the northern side of the future Manvel City Center. The existing thoroughfare connects to State Highway 288 to the west.
- Dogwood Avenue, an 80 foot collector road that runs east-west just to the south of the future Manvel City Center;
- Charlotte Street, a 80 foot collector road that runs east of Pollard Boulevard in the southern portion of the Valencia PUD. The portion of Charlotte right-of-way located adjacent to C-

- 08 and outside of the Valencia boundary shall only be developed as C-08 is developed;
- Charlotte Street, a 60 foot collector road that runs west of Pollard Boulevard in the southern portion of the Valencia PUD.
- Alleys shall be maintained by the HOA. The City will not be responsible for repairs or maintenance of any alley.

The thoroughfare and circulation plan for Valencia PUD and the surrounding vicinity is illustrated on the Conceptual Roadway Exhibit (Exhibit G). Refer to the Utility agreement and any amended agreements thereafter for applicable regulations and details regarding paving width, sidewalk width, and phasing of these roadways.

3. Traditional Single-Family

Lot Sizes and Standards:

- a. 50' lots:
 - i. Minimum lot size area: 6,000 square feet
 - ii. Minimum width – 50 feet (measured at the front yard setback)
 - iii. Front yard setback – 20 feet minimum
 - iv. Side yard setback – 5 feet minimum
 - v. Corner side yard setback – 10 feet minimum
 - vi. Garage Front yard setback – 25 feet minimum
 - vii. Rear yard setback – 15 feet minimum
 - viii. Building height – 40 feet maximum
- b. 60' lots:
 - i. Minimum lot size area: 7,200 square feet
 - ii. Minimum width – 60 feet (measured at the front building line)
 - iii. Front yard setback – 20 feet minimum
 - iv. Side yard setback – 5 feet minimum
 - v. Corner side yard setback – 10 feet minimum
 - vi. Garage Front yard setback – 25 feet minimum
 - vii. Rear yard setback – 15 feet minimum
 - viii. Building height – 40 feet maximum
- c. 70' lots:
 - i. Minimum lot size area: 8,400 square feet
 - ii. Minimum width – 70 feet (measured at the front yard setback)
 - iii. Front yard setback – 20 feet minimum
 - iv. Side yard setback – 5 feet minimum
 - v. Corner side yard setback – 10 feet minimum
 - vi. Garage Front yard setback – 25 feet minimum
 - vii. Rear yard setback – 15 feet minimum
 - viii. Building height – 40 feet maximum

If the rear property line of a corner parcel abuts the side property line of a neighboring parcel, the street side setback of the corner parcel must be a minimum of 15 feet

4. Single-Family Specialty Product

Please refer to Single-Family Specialty Product Exhibits L, M, & N in this document.
Lot Sizes and Standards:

- a. Front loaded detached lots:
 - i. Minimum width – 42 feet (measured at the front yard setback)
 - ii. Minimum depth – 120 feet
 - iii. Front yard setback – 20 feet minimum
 - iv. Side yard setback – 5 feet minimum
 - v. Corner side yard setback – 10 feet minimum
 - vi. Garage Front yard setback – 25 feet minimum
 - vii. Rear yard setback – 15 feet minimum
 - viii. Building height – 40 feet maximum
- b. Rear loaded (alley) detached lots:
 - i. Minimum width – 35 feet (measured at the front yard setback)
 - ii. Minimum depth – 100 feet
 - iii. Front yard setback – 15 feet minimum
 - iv. Rear yard setback – 10 feet minimum
 - v. Side yard setback – 5 feet minimum
 - vi. Corner side yard setback – 10 feet minimum
 - vii. Alley width – 20 feet
 - viii. Building height – 40 feet maximum
- c. Rear loaded (alley) attached lots:
 - i. Minimum width – 28 feet (measured at the front yard setback)
 - ii. Minimum depth – 90 feet
 - iii. Front yard setback – 15 feet minimum
 - iv. Rear yard setback – 10 feet minimum
 - v. Side yard setback – 5 feet minimum between structures
 - vi. Corner side yard setback – 10 feet minimum
 - vii. Alley width – 20 feet
 - viii. Common walls allowed on one side
 - ix. Building height – 40 feet maximum
- d. Rear loaded (alley) townhome lots:
 - i. Minimum width – 25 feet (measured at the front yard setback)
 - ii. Minimum depth – 90 feet
 - iii. Front yard setback – 15 feet minimum
 - iv. Rear yard setback – 10 feet minimum
 - v. Side yard setback – 5 feet minimum between structures
 - vi. Corner side yard setback – 10 feet minimum
 - vii. Alley width – 20 feet
 - viii. Common walls allowed on both sides
 - ix. Maximum number of attached units: Five
 - x. Minimum number of attached units: Two
 - xi. Only 20% of the units within a townhome development shall be allowed to have two attached units
 - xii. Building height – 40 feet maximum
- e. Zipper lots (single-family detached lots with alternating depth detached garages):
 - i. Minimum width – 25 feet (measured at the front yard setback)
 - ii. Minimum depth – 120 feet
 - iii. Front yard setback – 20 feet minimum
 - iv. Rear yard setback – 10 feet minimum
 - v. Side yard setback – 5 feet minimum
 - vi. Corner side yard setback – 10 feet minimum

- vii. Garage building line – 25 feet minimum
 - viii. If the garage is set to the minimum of 25 feet, then the adjacent lot shall have a minimum setback of 50 feet.
 - ix. Garage side setback – 0 feet with a minimum of 10 feet of separation from structures on the adjacent lot. Garage structures located less than four feet from the lot line shall have a “private four-foot perpetual drainage and maintenance easement” provided on the adjacent property and shown on the final plat.
 - x. Building height – 40 feet maximum
- f. Patio & Zero Lot Line Lots
- i. Minimum width – 50 feet (measured at the front yard setback)
 - ii. Minimum depth – 120 feet
 - iii. Front yard setback – 20 feet minimum
 - iv. Garage front yard setback – 25 feet minimum
 - v. Rear yard setback – 15 feet minimum
 - vi. Side yard setback – 5 feet minimum
 - vii. Corner side yard setback – 10 feet minimum
 - viii. A minimum of 0 feet to 5 feet on one side yard and 5 feet to 10 feet on the other side yard, with an aggregate minimum side yard setback of 10 feet between the two lots.
 - ix. In no case shall units on adjoining lots be separated by less than 10 feet in width
 - x. Patio home structures located less than four feet from the lot line shall have a “private four-foot perpetual drainage and maintenance easement” provided on the adjacent property and shown on the final plat.
 - xi. Building height – 40 feet maximum

If the rear property line of a corner parcel abuts the side property line of a neighboring parcel, the street side setback of the corner parcel must be a minimum of 15 feet.

Where alleys dead-end, a turnaround shall be provided. Waste collection in an alley shall only be provided if approved by the City’s waste haul contractor, otherwise, trash collection shall be taken from the front curb. The Homeowners Association shall enforce no parking and keep the alley clear from obstacles.

5. Streets

In the event that there is a conflict between the Valencia PUD and the Utility Agreement and any amended agreements thereafter, the Utility Agreement shall control. The development will provide points of access as required by Streets, Section 62-104(5) Multiple access points with the following modifications:

- a. Two points of access. There shall be a minimum two points of access from a collector street into a subdivision or subdivision phase, up to a maximum of 75 platted lots. A boulevard may be used as a second point of access to satisfy this requirement only for the parcel designated as C-08, as shown on the Conceptual Land Use Plan, Exhibit E. Section 1 (D-01) and Section 2 (D-02) shall share a boulevard entry and second point of access, but shall be platted separately. All entry points as shown on Exhibit E shall provide sufficient access to address. Section 15 (D-05) shall have one boulevard entry and a second connection via Section 2 (D-02).
- b. Three points of access. There shall be a minimum of three points of access from a collector street in a subdivision or subdivision phase for 76 to 175 platted lots.
- c. Four points of access. There shall be a minimum of four points of access from a collector

street in a subdivision or subdivision phase for 176 platted lots or greater.

- d. Boulevard entries. A boulevard entry may only be considered as two points of access when a third or fourth point of access is triggered under subsections 5.b. and 5.c. above.
- e. Future access: A future point of access to an undeveloped area may be used to qualify as a point of access to satisfy the requirements above.
- f. The only crossings of the existing drainage channel and canal easement along the western boundary of the PUD shall be Del Bello Boulevard, Dogwood Avenue and Charlotte Street. No additional street crossings shall be required.
- g. The parcel designated as C-08 shall only be required to provide one boulevarded point of access to Charlotte street due to existing development to the east and south, proposed detention pond to the west and size of the tract.

6. Commercial

- a. Minimum lot width – 60 feet (measured at the front yard setback)
- b. Minimum lot depth – 100 feet
- c. Front yard setback – 25 feet minimum
- d. Rear yard setback – 10 feet minimum
- e. Side yard setback – 5 feet minimum
- f. Corner side yard setback – 10 feet minimum
- g. Building Height:
 - i. Pad Site - No building may exceed thirty five feet in height.
 - ii. Commercial Anchor Tenant- No building may exceed sixty feet in height
- h. Building Materials:
 - i. All commercial buildings within the proposed commercial tracts must be composed of a minimum of 75% masonry exclusive of windows, doors, or other transparent materials. The calculation shall be based on the total square footage of all facades.
 - ii. The following materials shall meet the masonry requirement:
 - 1. Stone
 - 2. Brick
 - 3. Concrete (including tilt wall)
 - 4. Hollow clay tile
 - 5. Concrete Masonry Unit (CMU)
 - 6. Glass block
 - 7. True Stucco
 - 8. Insulated concrete forms (ICF)
 - i. Non-masonry materials may not exceed 25% of the building's elevation.
 - ii. The following non-masonry materials are permitted. Prior to approval of the use of the below materials, proof must be provided to show that the material and installation process meets ICC and Texas Windstorm standards and as approved by the City's Building Official or City Engineer.
 - 1. Cementitious Fiber
- j. Architectural metal panels to include, but not be limited to: lap-seam metal panels; exposed fastener panels; concealed fastener panels; flat plate metal panels; aluminum composite materials (ACM); metal composite materials (MCM); and/or formed metal panels (r-panels).
- k. Landscape Requirements
 - i. A minimum of 10% of the site (excluding building footprint) shall be landscaped.

- All pervious area shall be counted toward the total landscape area (excluding pavers).
- ii. Landscaping and/or a masonry fence shall screen outside storage areas, including but not limited to, loading docks, garbage collection bins and delivery entrances from adjacent property and public street right-of-way
 - iii. Street Trees
 - 1. A minimum of 1 tree is required for every 50 feet of street frontage.
 - 2. No street tree shall be less than three inch (3") caliper
 - 3. Trees may be grouped or placed at regular intervals so long as the spacing requirements listed above are met.
 - iv. Parking lot landscaping
 - 1. In addition to the Street Trees noted above, a minimum two inch (2") caliper tree shall be provided within or adjacent to the parking area at tree islands that:
 - a. Are at least 9 feet wide;
 - b. Each have a square footage minimum 180 square feet;
 - c. Provides 1 tree island for every 10 parking spaces;
 - d. The tree islands shall be planted with sod and/or other plantings.
 - 2. Shrub planting shall be placed along the perimeter of a parking lot to screen the parking lot. The shrubs shall be maintained at a maximum height of 36 inches. Parking lot shrubs shall be a minimum of 24-inches at the time of planting.
 - 3. At entrance and exits, shrubs shall be no higher than twelve (12) inches in height to comply with sight triangle requirements.

7. Signage

The proposed locations for the project signage can be found in the Conceptual Signage Location Exhibit (Exhibit K). All signage within the development will be in accordance with the Manvel City Sign Ordinance except for the items listed below. When there is a conflict between the requirements in the sign ordinance and this PUD Document, this PUD document will govern.

a. Residential Single-Family Development Signage:

- i. Primary Entry Monument: The overall primary entry monument shall consist of a primary monument sign, an attached sign blade wall, and an optional attached covered structure. The primary monument sign shall not exceed a sign area of 200 square feet. The sign blade wall shall attach the primary monument sign and the attached covered structure. The attached covered structure shall be open on three sides and shall contain roof signage that shall not exceed 200 square feet. The combined sign area of the primary monument sign and structure roof sign shall not exceed 400 square feet. The overall building envelope including the primary monument sign, attached sign structure, and attached covered structure shall be no greater than twenty feet (20') in height, sixty feet (60') in length, and twenty feet (20') in depth. These signs will be placed at the major entry point to the project.
- ii. Secondary Entry Monument: The secondary entry monument building envelope shall be no greater than twenty-five feet (25') in height, forty feet (40') in length, and fifteen feet (15') in depth. A water cistern twenty-five feet (25') in height by fifteen (15') in length shall contain signage on two walls of the water cistern. An ornamental/decorative fence may be provided as part of the overall design of the secondary entry monument and shall not be measured as part of the building envelope. The combined sign area of the tower and secondary monument sign

shall not exceed 400 square feet. These signs will be placed at the secondary entry points to the project.

- iii. Village/Park Entry Monument: Six feet (6') tall with a six-foot by six-foot (6'x6') tower footprint and an attached or isolated sign blade wall with a maximum size of six feet tall by twenty feet in length (6'x20'). The sign area shall not be greater than 64 square feet. These signs will be placed at the entry points to residential subdivisions within the project.
- iv. Model Home Monument: Used to identify different builder model homes to potential home buyers. The monuments shall be a maximum of 60 square feet in size and shall not to exceed five feet (5') in height. These monuments may be installed at model homes at various locations within the development. All model home monuments must be removed when the model home is purchased and used as a private home.
- v. Temporary Construction Signs/For Sale Signs: To be used during construction of the development. These signs recognize builders, architects, engineers, leasing representatives, lenders, and other associated with the project. There shall be one sign per parcel of land and the sign shall have a maximum of 64 square feet in size and not to exceed eight feet (8') in height and eight feet (8') in width per parcel of land. All temporary signs must be removed when the principle building on the applicable building site is occupied.
- vi. Temporary Community Signs: Used to direct potential home buyers to various neighborhoods and/or model homes. These temporary signs may be installed at various locations within the development. In addition, ten (10) offsite signs shall be permitted along these corridors:
 - Four (4) along Pollard Boulevard from State Highway 6;
 - Four (4) along Del Bello Boulevard from State Highway 288 to Pollard Boulevard;
 - Two (2) along State Highway 6 from State Highway 288 to Masters Road.

The Temporary Community Signs shall be a maximum of 128 square feet in size and shall not to exceed ten feet (10') in height. These signs may remain until 30 days following the permanent resident occupancy of the last model home. These signs may be placed within the right-of-way with the condition that they be located a minimum of four feet (4') from the back of curb. If a Temporary Community Sign is not in compliance with the above section, the City has the right to remove said sign at the expense of the developer with a ten (10) business days notification.

b. Commercial Development Signage:

i. Building Mounted Signs

- a. Maximum Sign Area: The total building mounted sign area shall not exceed a total of 2 square feet per linear foot of the façade width or 200 square feet, whichever is less.
- b. Location/Number: Tenants are permitted to have one building mounted sign per building elevation facade, except those on a corner facing two public streets, which may have two (2) signs; one facing each street.
- c. Illumination: Graphic sign bands must be internally illuminated. Internal illumination shall be LED or white neon tubing. All ballasts, transformers, conduits, and other necessary electrical and structural equipment must be

concealed.

i. **Monument Signs**

These signs shall be freestanding, double-sided monument type set perpendicular to the public street right-of-way.

- a. All monument signs shall be located a minimum of 10 feet from the property line.
- b. There shall be a minimum of 100 feet between monument signs.
- c. All monument signs must be perpendicular to the right of way.
- d. **Single Tenant Monument Sign**
 - i. Height - Maximum 6 feet (including base)
 - ii. Length – Maximum 13 feet
 - iii. Sign Area - Maximum of 45 square feet
 - iv. Location/Number: One single tenant monument sign per commercial tract, unless located on a corner; then one located on each public street. Sign shall be constructed perpendicular to the adjacent public street.
 - v. Illumination: Internal illumination shall be LED or white neon tubing

e. **Multi-Tenant Monument Sign**

- i. Height - Maximum 8 feet (including base)
- ii. Length – Maximum 13 feet.
- iii. Sign Area – Maximum of 65 square feet
- iv. Location/Number: One multi-tenant monument sign per commercial tract, unless located on a corner; then one located on each public street. Signs shall be constructed perpendicular to the adjacent public street. If anchor tenant occupies 50,000 SF or more, it may have an additional one single-tenant sign.
- v. If more than one sign is approved, they may not be placed any closer than 110 feet. In no case will there be more than one sign per entrance, unless permitted by Subsection e.iv. above.
- vi. Illumination: Internal illumination shall be LED or white neon tubing per sign specifications.

f. **Electronic Reader Boards**

Electronic Reader Boards/ LED screens are permitted under the following regulations:

- i. LED signs are permitted for on premised signs and/or for tenants within a single development;
- ii. No internal or external illumination of the LED screens will be allowed between the hours of 10pm and 6am;
- iii. Maximum illumination will be the difference between ambient light and full wattage cannot be more than .2 foot-candles at 75 feet;
- iv. Automatic dimmer equipment must be installed and operational; Maximum wattage at 6,500.
- v. Display Time - The message is displayed for a minimum of 15 seconds without changing, flashing, or scrolling;
- vi. Size of the changeable area is no greater than 25 percent of the overall signage area

c. School Signage:

i. **Building Mounted Signs**

- a. **Maximum Sign Area:** The total building mounted sign area shall not exceed a total of 2 square feet per linear foot of the façade width or 200 square feet,

whichever is less.:

- b. Location/Number: Tenants are permitted to have one building fascia sign per building elevation, except those on a corner facing two public streets, which may have two (2) signs; one facing each street.
- c. Illumination: Graphic sign bands must be internally illuminated. Internal illumination shall be LED or white neon tubing. All ballasts, transformers, conduits, and other necessary electrical and structural equipment must be concealed.

ii. Monument Signs

These signs shall be freestanding, double-sided monument type set perpendicular to the public street right-of-way.

- a. All signage shall be located a minimum of 10 feet from the property line.
- b. All signage must be perpendicular to the right of way.
- c. Height - Maximum 6 feet (including base)
- d. Length – Maximum 13 feet
- e. Sign Area - Maximum of 45 square feet
- f. Location/Number: One sign per school site, unless located on a corner; then one located on each public street. Sign shall be constructed perpendicular to the adjacent public street.
- g. Illumination: Internal illumination shall be LED or white neon tubing
- h. Electronic Reader Boards
Electronic Reader Boards/ LED screens are permitted under the following regulations:
 - i. LED signs are permitted for on premised signs;
 - ii. No internal or external illumination of the LED screens will be allowed between the hours of 10pm and 6am;
 - iii. Maximum illumination will be the difference between ambient light and full wattage cannot be more than .2 foot-candles at 75 feet;
 - iv. Automatic dimmer equipment must be installed and operational;
 - v. Maximum wattage at 6,500.
 - vi. Display Time - The message is displayed for a minimum of 15 seconds without changing, flashing, or scrolling;
 - vii. Size of the changeable area is no greater than 25 percent of the overall signage area

8. Trails

The pedestrian pathway system, which is illustrated on the Conceptual Amenities and Open Space Plan (Exhibit H), will use a combination of 12 foot wide and 8 foot wide primary trails, and additional trails of not less than five feet in width to serve the residents of the project and provide multiple pedestrian connections. The trails system will provide easy and safe pedestrian access to public parks, private parks, open space, commercial tracts, single-family residential areas, and the school (if any) located within the project.

9. Utilities

Utilities will be provided by a Municipal Utility District pursuant to a Utility Agreement with the City of Manvel approved at the same time as the Valencia PUD. In the event that there is a conflict between the Valencia PUD and the Utility Agreement and any amended agreements thereafter, the Utility Agreement shall control.

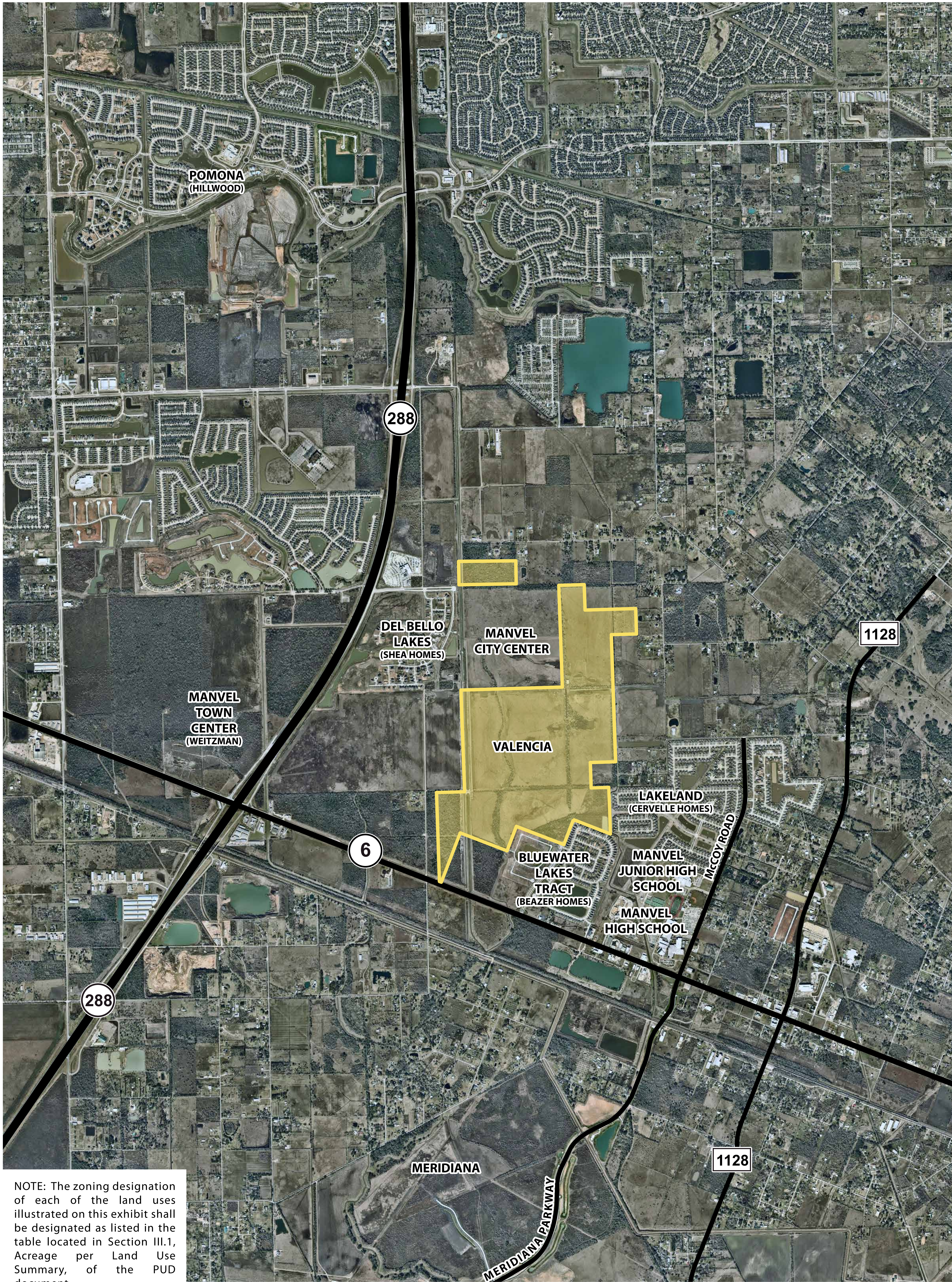
10. Other Regulations

- i. Fencing - Fences in any single-family residential district may not exceed seven (7') feet in height.
- ii. Proximity of structures to pipelines - No residential or commercial structure shall be erected or moved to a location nearer than 30 feet to any existing pipeline, except for low pressure distribution system pipeline as defined in section 62-2 of the Manvel Code of Ordinances.
- iii. Trees –Trees may be planted within right-of-way medians to enhance the overall landscape plan for the development. Trees shall be planted at a minimum spacing of 50 feet and located within the center of the right-of-way median. They may be located within other areas of the right-of-way in a limited manner to address physical or other constraints that exist in various areas throughout the development. In the event that there are utilities located within the future drip line of the tree, a suitable root barrier shall be used.
- iv. Off-street parking areas – Off-street parking areas shall be provided for the use of community occupants and guests at the recreation center site. Twenty-five (25) off-street parking stalls will be provided for the recreation center site.
- v. Paving Material – Permeable pavers, such as Trugrid or a comparable alternative, may be installed around non-residential buildings to fulfill fire code requirements.

V. PHASING / DEVELOPMENT SCHEDULE

The first phase of the project will be south of Del Bello Boulevard and Pollard Boulevard, working from the north to south as the project proceeds, as shown on the Phasing Exhibit (Exhibit I). The location and timing of future phases will be dependent upon market conditions and is subject to change. Commercial development will be driven by market conditions.

The construction of modular voter homes, shall be allowed to be located on the site throughout the duration of the project. A recorded final plat and/or permanent access shall not be required for such uses.



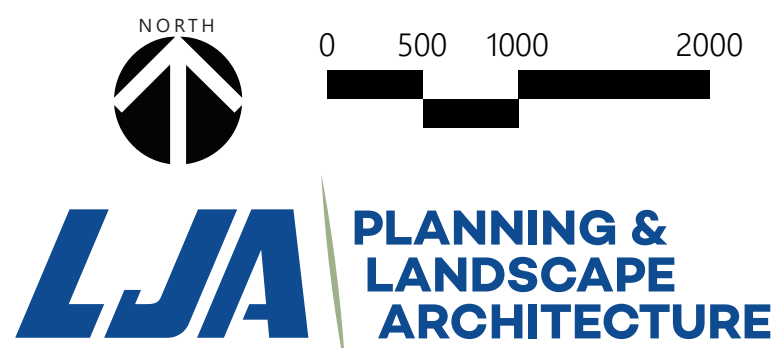
NOTE: The zoning designation of each of the land uses illustrated on this exhibit shall be designated as listed in the table located in Section III.1, Acreage per Land Use Summary, of the PUD document.

Prepared for
**HILLWOOD
RESIDENTIAL**

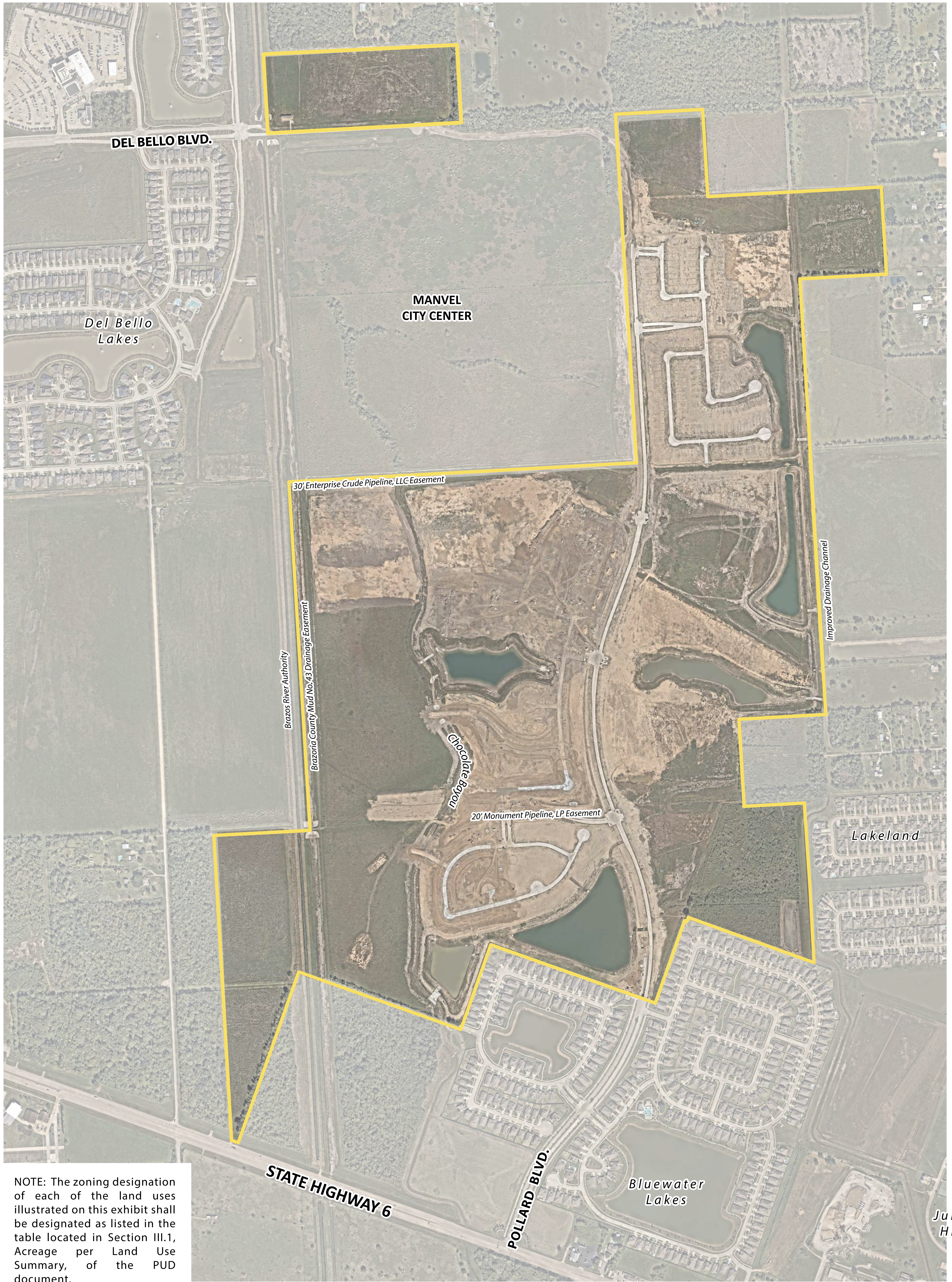
EXHIBIT A
Planned Unit Development
Area Location Exhibit
VALENCIA
±457.0 Acres of Land
Manvel, Texas

Reference Date: 02.27.2024

This exhibit is an illustrative representation for presentation purposes only and should not be used for computation or construction purposes. The information provided within should be considered a graphic representation to aid in determining plan components and relationships and is subject to change without notice. All property boundaries, easements, road alignments, drainage, flood plans, environmental issues and other information shown is approximate and should not be relied upon for any purpose. No warranties, express or implied, concerning the actual design, accuracy, location, and character of the facilities shown on this exhibit are intended.



RELATIONSHIPS | PROCESS | DESIGN



NOTE: The zoning designation of each of the land uses illustrated on this exhibit shall be designated as listed in the table located in Section III.1, Acreage per Land Use Summary, of the PUD document.

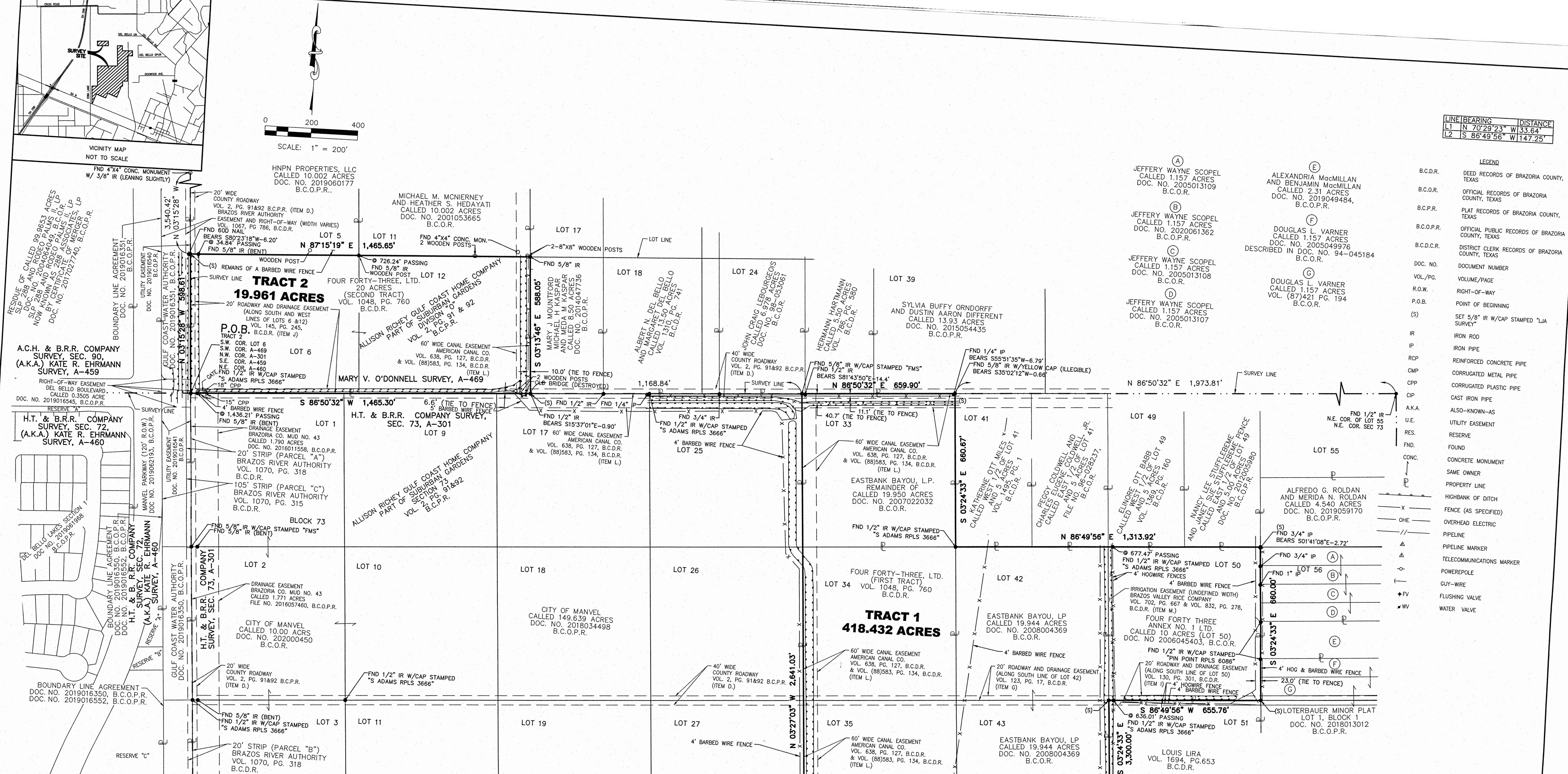
Prepared for
**HILLWOOD
RESIDENTIAL**

© Copyright 2024 LJA Engineering, Inc. Drawings, written material, and design concepts provided is considered property of LJA & shall not be reproduced in part or whole in any form or format without written consent of LJA.

This exhibit is an illustrative representation for presentation purposes only and should not be used for computation or construction purposes. The information provided within should be considered a graphic representation to aid in determining plan components and relationships and is subject to change without notice. All property boundaries, easements, road alignments, drainage, flood plains, environmental issues and other information shown is approximate and should not be relied upon for any purpose. No warranties, express or implied, concerning the actual design, accuracy, location, and character of the facilities shown on this exhibit are intended.

EXHIBIT B
Planned Unit Development
Project Aerial Exhibit
VALENCIA
±457.0 Acres of Land
Manvel, Texas

Reference Date: 02.27.2024



SURVEYOR'S CERTIFICATE

I, KEITH W. MONROE, REGISTERED PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY TO WESTBANK BAYOU, L.P., EASTBANK BAYOU, L.P., CYNTHIA LEE SOWELL WEISINGER, CRISTI SOWELL HARVY, ANDREW WARD SOWELL, AS CO-TRUSTEES OF THE CHARLES L. SOWELL FAMILY TRUST, FOUR FORTY-THREE, LTD., FOUR FORTY-THREE, ANNEX NO. 1, LTD., CHICAGO TILLY & TEXAS, L.L.C. AS AGENT FOR CHICAGO TILLY INSURANCE COMPANY AND HILLWOOD ENTERPRISES, THAT THIS SURVEY SUBSTANTIALLY COMPLIES WITH THE CURRENT TEXAS SOCIETY OF PROFESSIONAL SURVEYORS STANDARDS AND SPECIFICATIONS FOR A CATEGORY 1A CONDITION 2 SURVEY.

THE FIELD WORK WAS COMPLETED FEBRUARY 2014.

THE FIELD WORK WAS COMPLETED FEBRUARY, 2021.

Keith W. Monroe
KEITH W. MONROE, R.P.L.S.
REGISTERED PROFESSIONAL LAND SURVEYOR
TEXAS REGISTRATION NO. 4797
DATED FEBRUARY 26, 2021

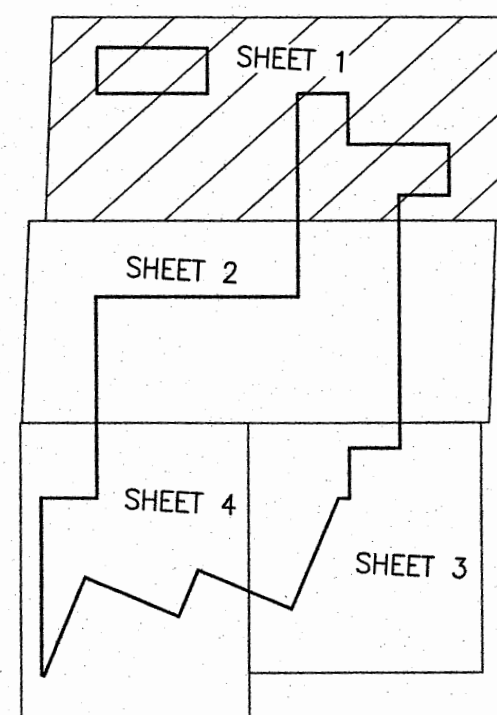


3-19.21

Хвм

REVISED ON MARCH 19, 2021 TO REFLECT UPDATED TITLE COMMITMENT.

EXHIBIT C



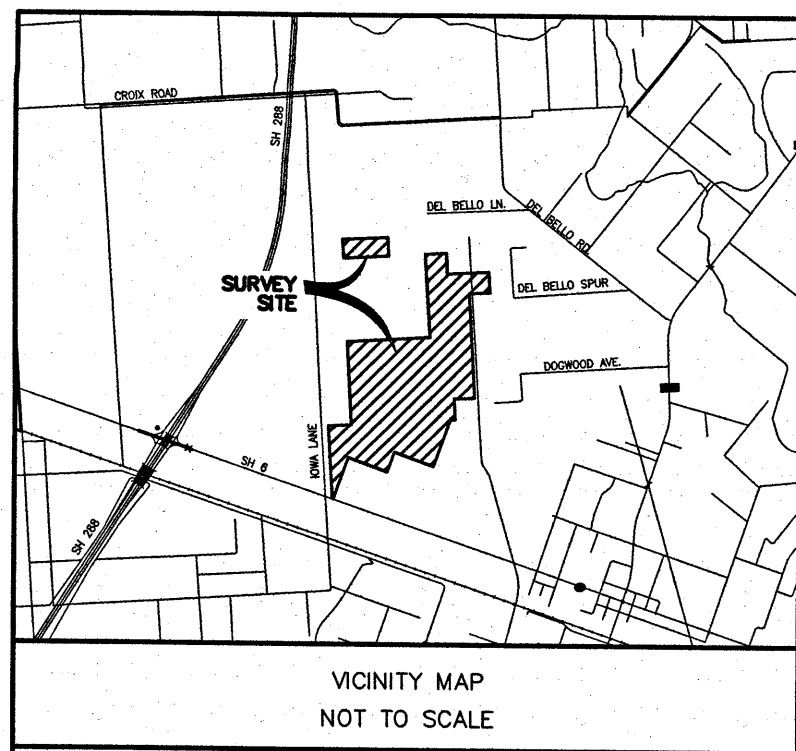
SHEET 1 OF 5

ACREAGE SUMMARY	
TRACT 1:	418.432 ACRES
TRACT 2:	19.961 ACRES
TOTAL AREA:	438.393 ACRES

**LAND TITLE SURVEY OF
438.393 ACRES
ALL OF LOTS 5, 6, 7, 8, 13, 14, 15, 16, 21, 22, 23, 24, 29, 30, 31,
32, 33, 34, 35, 36, 37, 38, 39, 40, 42, 43, 44, 45, 46, 47, AND 50
OF SECTION 73 AND LOTS 6 AND 12 OF DIVISION "O"
OF THE ALLISON RICHEY GULF COAST HOME COMPANY
PART OF SUBURBAN GARDENS SUBDIVISION,
VOL. 2, PAGE 91-92, B.C.P.R.
ALL OF OUTLOTS 175 AND 195 AND
PART OF OUTLOTS 174 AND 180
DR. A. A. LUTHER SUBDIVISION OF MANVEL
AND SURROUNDING ACREAGE PROPERTY
VOL. 1, PAGES 71-72 AND VOL. 3, PAGE 139-140, B.C.P.R.
LOCATED IN THE
H.T. & B. R.R. CO. SURVEY, SEC 65, A-285,
H.T. & B. R.R. CO. SURVEY, SEC 73, A-301,
H.T. & B. R.R. CO. SURVEY, SEC 64 (A.K.A.)
MARY V. O'DONNELL SURVEY, A-483,
AND MARY V. O'DONNELL SURVEY, A-469
BRAZORIA COUNTY, TEXAS**

LJA Surveying, Inc.
3600 W Sam Houston Parkway S
Suite 175
Houston, Texas 77042

LJA
Phone 713.953.5200
Fax 713.953.5026

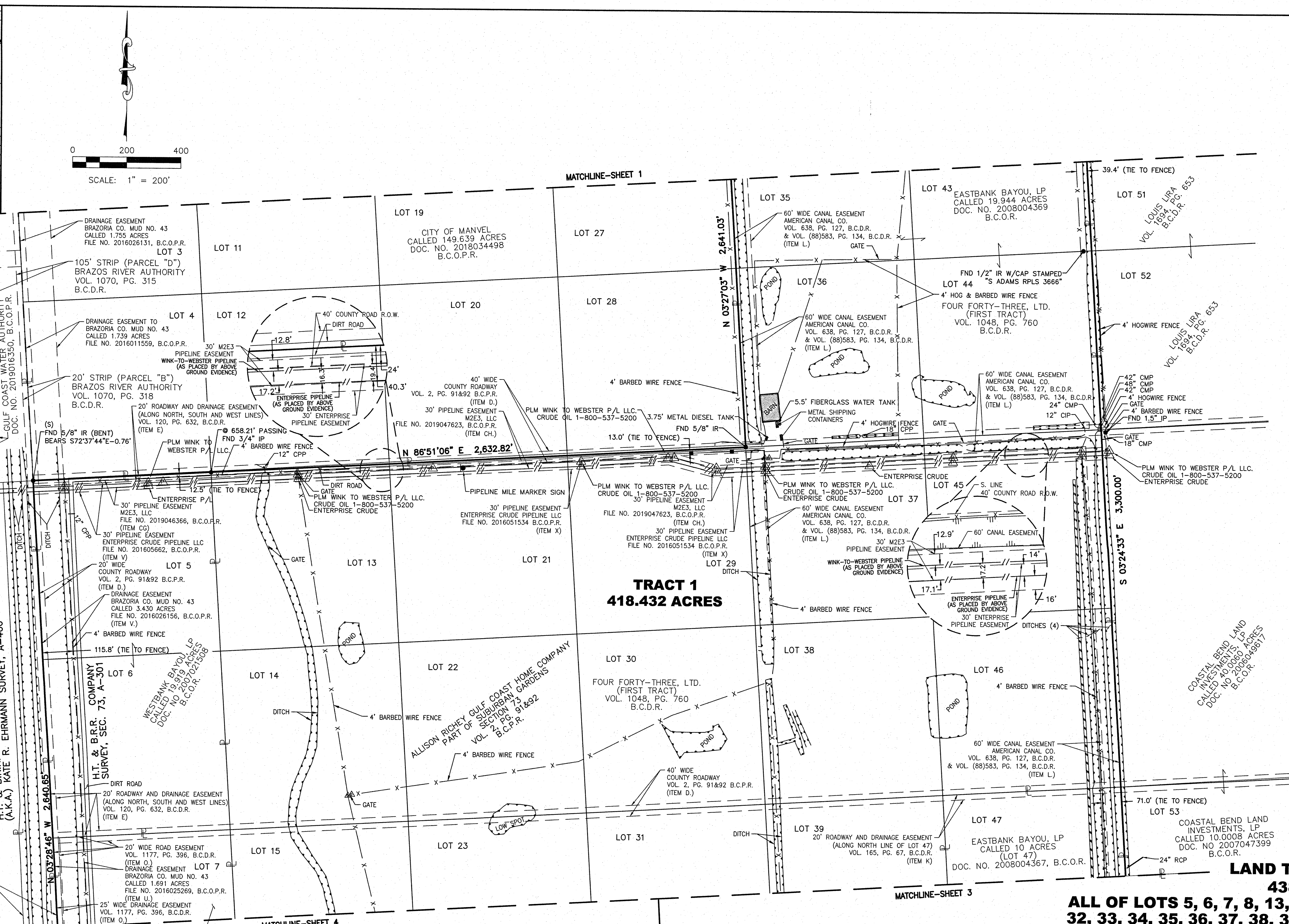


0 200 400
SCALE: 1" = 200'

DOGWOOD AVENUE
(80' R.O.W.)
RIGHT-OF-WAY EASEMENT
DOGWOOD AVENUE
CALLED 0.1722 ACRE
DOC. NO. 2019016545, B.C.O.P.R.
RESERVE "D"
BOUNDARY LINE AGREEMENT
DOC. NO. 2019016350, B.C.O.P.R.
DOC. NO. 2019016552, B.C.O.P.R.
MANVEL PARKWAY
(120' R.O.W.)
SHEA HOMES HOUSTON LLC
CALLED 50.104 ACRES
DOC. NO. 2018049942, B.C.O.P.R.

PLM WINK TO WEBSTER P/L LLC.
CRUDE OIL 1-800-537-5200
ENTERPRISE CRUDE
SONNAR OF SCOTSDALE, LLC
CALLED 35.848 ACRES
DOC. NO. 2009021816, B.C.O.P.R.
H.T. & B.R.R. COMPANY SURVEY, SEC. 72,
(A.K.A.) KATE R. EHRLICH SURVEY, A-460
N 03°28'46" W 2,640.65'

BRAZOS RIVER AUTHORITY
CALLED 6.676 ACRES
(CAUSE NO. 54, 761A)
VOL. 33, PG. 154
B.C.D.R.
CYNTHIA LEE SOWELL WEISINGER,
CRISTI SOWELL HARVEY AND ANDREW WARD SOWELL,
AS CO-TRUSTEES OF CHARLES L. SOWELL FAMILY TRUST
CALLED 9.988 ACRES
DOC. NO. 2016025233 B.C.O.P.R.



LINE	BEARING	DISTANCE
L1	N 70°29'23" W	33.64'
L2	S 86°49'56" W	147.25'

LEGEND	
B.C.D.R.	DEED RECORDS OF BRAZORIA COUNTY, TEXAS
B.C.O.R.	OFFICIAL RECORDS OF BRAZORIA COUNTY, TEXAS
B.C.P.R.	PLAT RECORDS OF BRAZORIA COUNTY, TEXAS
B.C.O.P.R.	OFFICIAL PUBLIC RECORDS OF BRAZORIA COUNTY, TEXAS
B.C.D.C.R.	DISTRICT CLERK RECORDS OF BRAZORIA COUNTY, TEXAS
DOC. NO.	DOCUMENT NUMBER
VOL./PG.	VOLUME/PAGE
R.O.W.	RIGHT-OF-WAY
P.O.B.	POINT OF BEGINNING
(S)	SET 5/8" IR W/CAP STAMPED "LJA SURVEY"
IR	IRON ROD
IP	IRON PIPE
RCP	REINFORCED CONCRETE PIPE
CMP	CORRUGATED METAL PIPE
CPP	CORRUGATED PLASTIC PIPE
CIP	CAST IRON PIPE
A.K.A.	ALSO-KNOWN-AS
U.E.	UTILITY EASEMENT
RES.	RESERVE
FND.	FOUND
CONC.	CONCRETE MONUMENT
↓	SAME OWNER
—	PROPERTY LINE
—	HIGHBANK OF DITCH
—	FENCE (AS SPECIFIED)
—	OVERHEAD ELECTRIC
—	PIPELINE
△	PIPELINE MARKER
△	TELECOMMUNICATIONS MARKER
—	POWERSPOLE
—	GUY-WIRE
—	FLUSHING VALVE
—	WATER VALVE

TRACT 1
418.432 ACRES

LAND TITLE SURVEY OF
438.393 ACRES

ALL OF LOTS 5, 6, 7, 8, 13, 14, 15, 16, 21, 22, 23, 24, 29, 30, 31,
32, 33, 34, 35, 36, 37, 38, 39, 40, 42, 43, 44, 45, 46, 47, AND 50
OF SECTION 73 AND LOTS 6 AND 12 OF DIVISION "O"
OF THE ALLISON RICHEY GULF COAST HOME COMPANY
PART OF SUBURBAN GARDENS SUBDIVISION,
VOL. 2, PAGE 91-92, B.C.P.R.

ALL OF OUTLOTS 175 AND 195 AND
PART OF OUTLOTS 174 AND 180
DR. A. A. LUTHER SUBDIVISION OF MANVEL
AND SURROUNDING ACREAGE PROPERTY
VOL. 1, PAGES 71-72 AND VOL. 3, PAGE 139-140, B.C.P.R.
LOCATED IN THE

H.T. & B. R.R. CO. SURVEY, SEC 65, A-285,
H.T. & B. R.R. CO. SURVEY, SEC 73, A-301,
H.T. & B. R.R. CO. SURVEY, SEC 64 (A.K.A.)
MARY V. O'DONNELL SURVEY, A-483,
AND MARY V. O'DONNELL SURVEY, A-469
BRAZORIA COUNTY, TEXAS

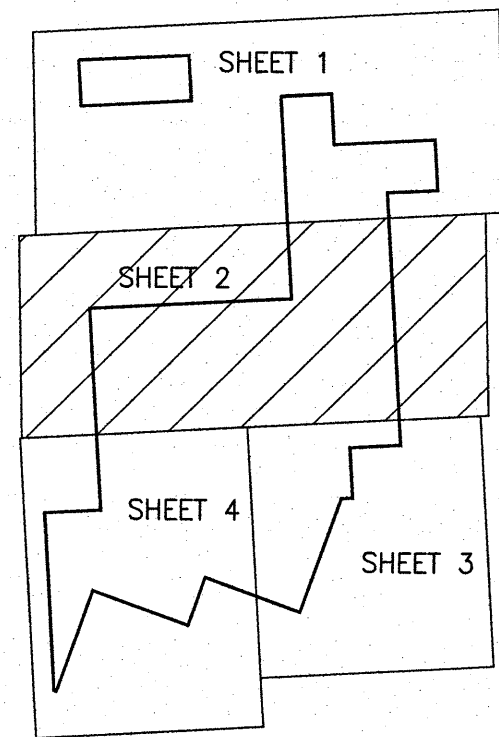
FEBRUARY 2021 JOB NO. LJA001-2791-2101

LJA Surveying, Inc.

3600 W Sam Houston Parkway S
Suite 175
Houston, Texas 77042

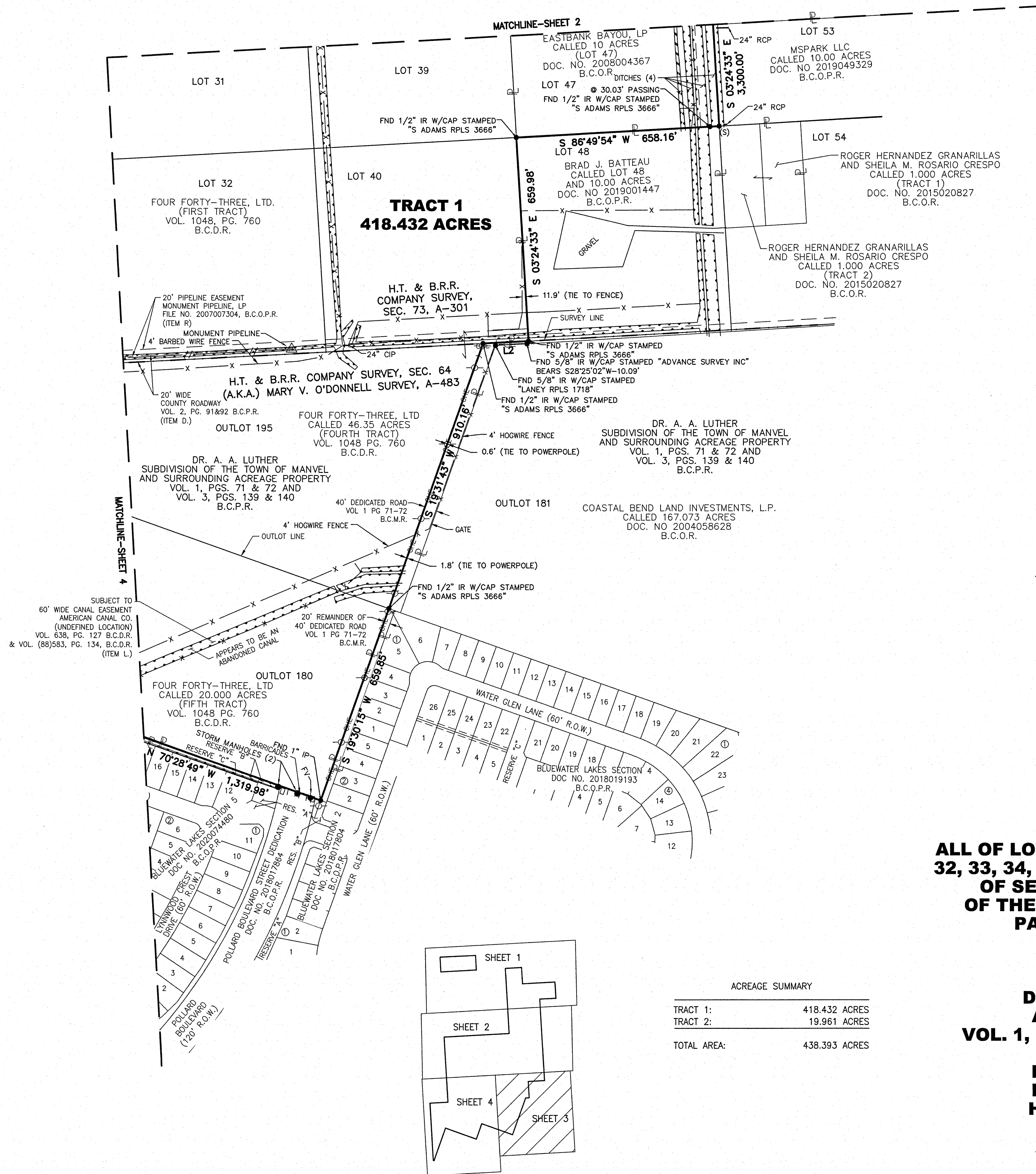
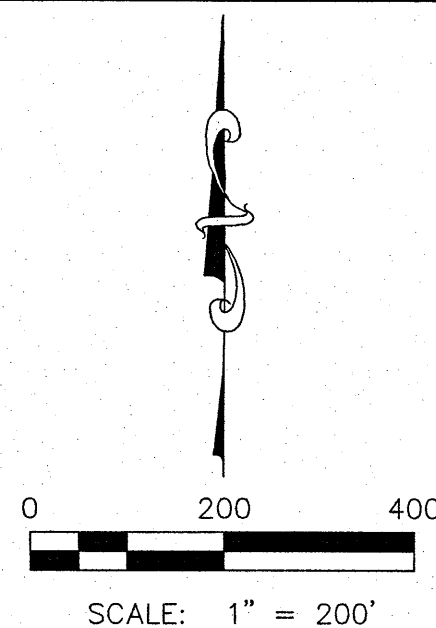
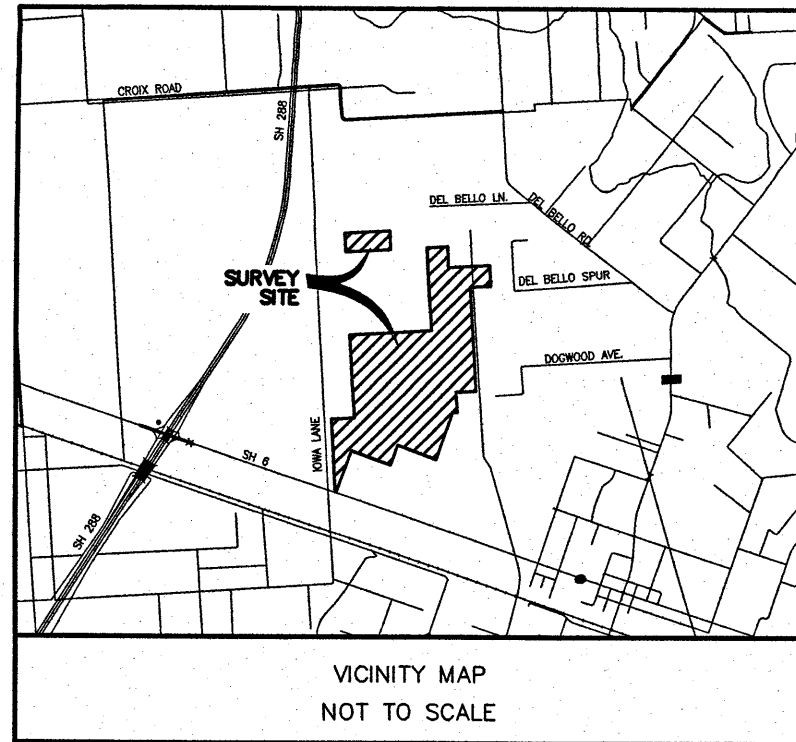
Phone 713.953.5200
Fax 713.953.5026
T.B.P.E.L.S. Firm No. 10194382

EXHIBIT C



MATCHLINE-SHEET 3
MATCHLINE-SHEET 4

ACREAGE SUMMARY	
TRACT 1:	418.432 ACRES
TRACT 2:	19.961 ACRES
TOTAL AREA:	438.393 ACRES



LINE	BEARING	DISTANCE
L1	N 70°29'23" W	133.64'
L2	S 86°49'56" W	147.25'

LEGEND

B.C.D.R.	DEED RECORDS OF BRAZORIA COUNTY, TEXAS
B.C.O.R.	OFFICIAL RECORDS OF BRAZORIA COUNTY, TEXAS
B.C.P.R.	PLAT RECORDS OF BRAZORIA COUNTY, TEXAS
B.C.O.P.R.	OFFICIAL PUBLIC RECORDS OF BRAZORIA COUNTY, TEXAS
B.C.D.C.R.	DISTRICT CLERK RECORDS OF BRAZORIA COUNTY, TEXAS
DOC. NO.	DOCUMENT NUMBER
VOL./PG.	VOLUME/PAGE
R.O.W.	RIGHT-OF-WAY
P.O.B.	POINT OF BEGINNING
(S)	SET 5/8" IR W/CAP STAMPED "LJA SURVEY"
IR	IRON ROD
IP	IRON PIPE
RCP	REINFORCED CONCRETE PIPE
CMP	CORRUGATED METAL PIPE
CPP	CORRUGATED PLASTIC PIPE
CIP	CAST IRON PIPE
A.K.A.	ALSO-KNOWN-AS
U.E.	UTILITY EASEMENT
RES.	RESERVE
FND.	FOUND
CONC.	CONCRETE MONUMENT
↓	SAME OWNER
—	PROPERTY LINE
—+—	HIGHBANK OF DITCH
—X—	FENCE (AS SPECIFIED)
—OHE—	OVERHEAD ELECTRIC
—//—	PIPELINE
△	PIPELINE MARKER
△	TELECOMMUNICATIONS MARKER
—O—	POWDERPOLE
—G—	GUY-WIRE
+FV	FLUSHING VALVE
WV	WATER VALVE

LAND TITLE SURVEY OF
438.393 ACRES
ALL OF LOTS 5, 6, 7, 8, 13, 14, 15, 16, 21, 22, 23, 24, 29, 30, 31,
32, 33, 34, 35, 36, 37, 38, 39, 40, 42, 43, 44, 45, 46, 47, AND 50
OF SECTION 73 AND LOTS 6 AND 12 OF DIVISION "O"
OF THE ALLISON RICHEY GULF COAST HOME COMPANY
PART OF SUBURBAN GARDENS SUBDIVISION,
VOL. 2, PAGE 91-92, B.C.P.R.
ALL OF OUTLOTS 175 AND 195 AND
PART OF OUTLOTS 174 AND 180
DR. A. A. LUTHER SUBDIVISION OF MANVEL
AND SURROUNDING ACREAGE PROPERTY
VOL. 1, PAGES 71-72 AND VOL. 3, PAGE 139-140, B.C.P.R.
LOCATED IN THE
H.T. & B. R.R. CO. SURVEY, SEC 65, A-285,
H.T. & B. R.R. CO. SURVEY, SEC 73, A-301,
H.T. & B. R.R. CO. SURVEY, SEC 64 (A.K.A.)
MARY V. O'DONNELL SURVEY, A-483,
AND MARY V. O'DONNELL SURVEY, A-469
BRAZORIA COUNTY, TEXAS

FEBRUARY 2021 JOB NO. LJA5001-2791-2101

LJA Surveying, Inc.

3600 W Sam Houston Parkway S
Suite 175
Houston, Texas 77042

Phone 713.953.5200
Fax 713.953.5026
T.B.P.E.L.S. Firm No. 10194382

ACREAGE SUMMARY

TRACT 1:	418.432 ACRES
TRACT 2:	19.961 ACRES
TOTAL AREA:	438.393 ACRES

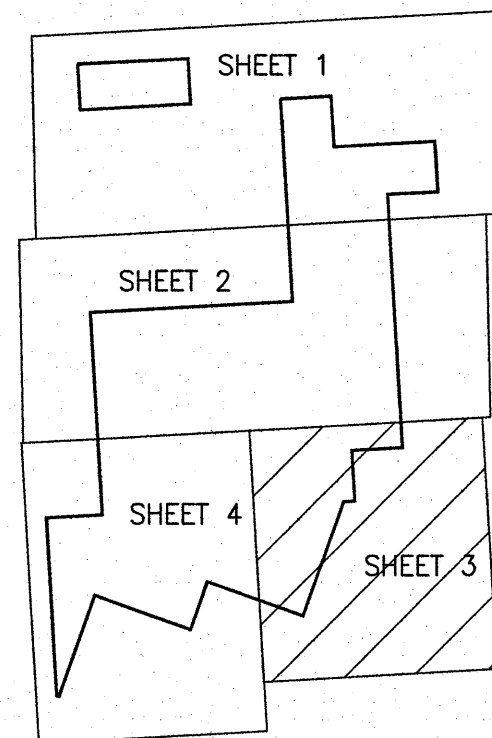


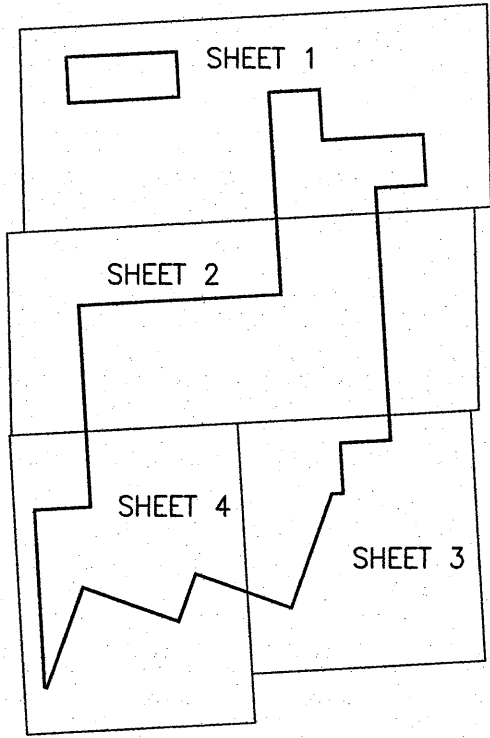
EXHIBIT C

NOTES:

- 1) ALL BEARINGS REFERENCED TO THE TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE, NAD 83, 1993 ADJ.
- 2) THIS SURVEY WAS PREPARED FROM INFORMATION PROVIDED BY CHICAGO TITLE OF TEXAS, LLC, AS AGENT FOR CHICAGO TITLE INSURANCE COMPANY, OF NO. CTH-COM-CIT20731337, HAVING AN EFFECTIVE DATE OF MARCH 3, 2021, AND AN ISSUED DATE MARCH 10, 2021. THE SURVEYOR DID NOT ABSTRACT THE SUBJECT TRACT.
- THE FOLLOWING ITEMS IN SCHEDULE B, ARE AS FOLLOWS:
- 10 D. ACCORDING TO THE PLAT RECORDED IN VOLUME 2, PAGE 91 AND 92 OF THE PLAT RECORDS OF BRAZORIA COUNTY, TEXAS; PUBLIC ROAD EASEMENT ALONG THE NORTH PROPERTY LINE. (AS TO LOTS 5, 7, 13, 15, 19, 21, 23, 29, 31, 33, 34, 35, 37, 39, 43, 45 AND 47 AND OUTLOTS 174, 175 AND 195, OF TRACT 1)
PUBLIC ROAD EASEMENT ALONG THE SOUTH PROPERTY LINE. (AS TO LOTS 6, 8, 14, 16, 22, 24, 30, 32, 34, 36, 38, 40, 42, 44, 46 AND 50, OF TRACT 1 AND TRACT 2)
PUBLIC ROAD EASEMENT ALONG THE WEST PROPERTY LINE. (LOTS 5, 6, 7 AND 8, OF TRACT 1 AND LOT 6, OF TRACT 2). DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.
- 10 E. ROADWAY AND DRAINAGE EASEMENT(S) AND APPURTENANCES AS RESERVED IN A DOCUMENT: RESERVED BY: ALLISON-RICHEY GULF COAST HOME COMPANY
RECORDING DATE: JULY 30, 1913
RECORDING NO:VOLUME 120, PAGE 632, OF THE DEED RECORDS OF BRAZORIA, COUNTY, TEXAS
AFFECTS: 20 FEET WIDE AND TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN.(AS TO LOTS 5 AND 6, OF TRACT 1). DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.
- 10 F. ROADWAY AND DRAINAGE EASEMENT(S) AND APPURTENANCES AS RESERVED IN A DOCUMENT: RESERVED BY: ALLISON-RICHEY GULF COAST HOME COMPANY
RECORDING DATE: OCTOBER 9, 1913
RECORDING NO:VOLUME 122, PAGE 523, OF THE DEED RECORDS OF BRAZORIA, COUNTY, TEXAS
AFFECTS: 20 FEET WIDE AND TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN.(AS TO LOT 16, OF TRACT 1). DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.
- 10 G. ROADWAY AND DRAINAGE EASEMENT(S) AND APPURTENANCES AS RESERVED IN A DOCUMENT: RESERVED BY: ALLISON-RICHEY GULF COAST HOME COMPANY
RECORDING DATE: AUGUST 15, 1913
RECORDING NO:VOLUME 123, PAGE 17, OF THE DEED RECORDS OF BRAZORIA, COUNTY, TEXAS
AFFECTS: 20 FEET WIDE AND TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN.(AS TO LOT 42, OF TRACT 1). DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.
- 10 H. ROADWAY AND DRAINAGE EASEMENT(S) AND APPURTENANCES AS RESERVED IN A DOCUMENT: RESERVED BY: ALLISON-RICHEY GULF COAST HOME CORPORATION
RECORDING DATE: NOVEMBER 19, 1914
RECORDING NO:VOLUME 129, PAGE 337, OF THE DEED RECORDS OF BRAZORIA, COUNTY, TEXAS
AFFECTS: 20 FEET WIDE AND TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN. (AS TO LOTS 7 AND 8, OF TRACT 1). DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.
- 10 I. ROADWAY AND DRAINAGE EASEMENT(S) AND APPURTENANCES AS RESERVED IN A DOCUMENT: RESERVED BY: ALLISON-RICHEY GULF COAST HOME CORPORATION
RECORDING DATE: JUNE 25, 1914
RECORDING NO:VOLUME 130, PAGE 301, OF THE DEED RECORDS OF BRAZORIA, COUNTY, TEXAS
AFFECTS: 20 FEET WIDE AND TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN. (AS TO LOT 50, OF TRACT 1). DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.
- 10 J. ROAD EASEMENT(S) AND APPURTENANCES AS RESERVED IN A DOCUMENT:
RESERVED BY: ALLISON-RICHEY GULF COAST HOME COMPANY RECORDING DATE: FEBRUARY 27, 1918
RECORDING NO:VOLUME 145, PAGE 245, OF THE DEED RECORDS OF BRAZORIA, COUNTY, TEXAS
AFFECTS: 20 FEET WIDE AND TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN. (AS TO TRACT 2)
- 10 K. ROAD EASEMENT(S) AND APPURTENANCES AS RESERVED IN A DOCUMENT:
RESERVED BY: ALLISON-RICHEY GULF COAST HOME COMPANY RECORDING DATE: OCTOBER 15, 1920
RECORDING NO:VOLUME 165, PAGE 67, OF THE DEED RECORDS OF BRAZORIA, COUNTY, TEXAS
AFFECTS: 20 FEET WIDE AND TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN. (AS TO LOT 47, OF TRACT 1). DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.
- 10 L. LATERAL OR CANAL EASEMENT(S) AND APPURTENANCES AS GRANTED IN A DOCUMENT: GRANTED TO:AMERICAN CANAL COMPANY
RECORDING DATE: NOVEMBER 22, 1955
RECORDING NO:VOLUME 638, PAGE 127, OF THE DEED RECORDS OF BRAZORIA, COUNTY, TEXAS AND AS AFFECTED BY INSTRUMENT RECORDED IN VOLUME (88) 583, PAGE 134, DEED RECORDS BRAZORIA COUNTY, TEXAS
AFFECTS: TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN. (AS TO LOTS 25, 33, 34, 35, 36, 37, 45, 46 AND 47 AND OUTLOT 180 AND OUTLOT 195, OF TRACT 1 AND TRACT 2). DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.
- 10 M. LATERAL OR CANAL EASEMENT(S) AND APPURTENANCES AS GRANTED IN A DOCUMENT: GRANTED TO:BRAZOS VALLEY RICE COMPANY
RECORDING DATE: OCTOBER 8, 1962
RECORDING NO:VOLUME 702, PAGE 667, OF THE DEED RECORDS OF BRAZORIA, COUNTY, TEXAS AND AND INSTRUMENT RECORDED IN VOLUME 822, PAGE 278, DEED RECORDS BRAZORIA COUNTY, TEXAS
AFFECTS: TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN. (AS TO LOT 50, OF TRACT 1). DOES AFFECT SUBJECT TRACT(LOT 50), NO DEFINED WIDTH.
- 10 N. DRAINAGE EASEMENT(S) AND APPURTENANCES AS GRANTED IN A DOCUMENT: GRANTED TO: BRAZOS RIVER AUTHORITY
RECORDING DATE: SEPTEMBER 24, 1970
RECORDING NO:VOLUME 1070, PAGE 46, OF THE DEED RECORDS OF BRAZORIA, COUNTY, TEXAS AFFECTS:TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN. (AS TO QUOTLOTS 174 AND 175, OF TRACT 1). DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.
- 10 O. ROAD AND DRAINAGE EASEMENT(S) AND APPURTENANCES AS REFERENCED IN A DOCUMENT: RECORDING DATE: SEPTEMBER 27, 1973
RECORDING NO:VOLUME 1177, PAGE 396, OF THE DEED RECORDS OF BRAZORIA, COUNTY, TEXAS AFFECTS:REFERENCED IN PARAGRAPHS A. AND B. TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN. (AS TO LOT 7, OF TRACT 1). DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.
- 10 P. DRAINAGE EASEMENT(S) AND APPURTENANCES AS GRANTED IN A DOCUMENT: GRANTED TO: GALVESTON COUNTY WATER AUTHORITY
RECORDING DATE: AUGUST 24, 1988
RECORDING NO:IN VOLUME (88) 584, PAGE 517, DEED RECORDS BRAZORIA COUNTY, TEXAS AFFECTS: TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN. (AS TO OUTLOT 174 AND 175, OF TRACT 1). DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.
- 10 Q. PIPELINE RIGHT-OF-WAY AND EASEMENT(S) AND APPURTENANCES AS GRANTED IN A DOCUMENT:
GRANTED TO: MONUMENT PIPELINE, LP, A TEXAS LIMITED PARTNERSHIP RECORDING DATE: FEBRUARY 6, 2007
RECORDING NO:UNDER BRAZORIA COUNTY CLERK'S FILE NUMBER(S) 2007007303
AFFECTS: TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN. (AS TO LOT 16, OF TRACT 1). DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.
- 10 R. PIPELINE RIGHT-OF-WAY AND EASEMENT(S) AND APPURTENANCES AS GRANTED IN A DOCUMENT:
GRANTED TO: MONUMENT PIPELINE, LP, A TEXAS LIMITED PARTNERSHIP RECORDING DATE: FEBRUARY 6, 2007
RECORDING NO:UNDER BRAZORIA COUNTY CLERK'S FILE NUMBER(S) 2007007304
AFFECTS: TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN. (AS TO LOTS 24, 32 AND 40, OF TRACT 1). DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.
- 10 S. PIPELINE RIGHT-OF-WAY AND EASEMENT(S) AND APPURTENANCES AS GRANTED IN A DOCUMENT:
GRANTED TO: MONUMENT PIPELINE, LP, A TEXAS LIMITED PARTNERSHIP RECORDING DATE: FEBRUARY 6, 2007
RECORDING NO:UNDER BRAZORIA COUNTY CLERK'S FILE NUMBER(S) 2007007305
AFFECTS: TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN. (AS TO LOT 8, OF TRACT 1). DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.
- 10 T. DRAINAGE EASEMENT(S) AND APPURTENANCES AS GRANTED IN A DOCUMENT:
GRANTED TO: BRAZORIA COUNTY MUNICIPAL UTILITY DISTRICT NO. 43 RECORDING DATE: MARCH 15, 2016
RECORDING NO:UNDER BRAZORIA COUNTY CLERK'S FILE NUMBER(S) 2016011560
AFFECTS: TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN. (AS TO OUTLOTS 174 AND 175, OF TRACT 1). DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.
- 10 U. DRAINAGE EASEMENT(S) AND APPURTENANCES AS GRANTED IN A DOCUMENT:
GRANTED TO: BRAZORIA COUNTY MUNICIPAL UTILITY DISTRICT NO. 43 RECORDING DATE: JUNE 1, 2016
RECORDING NO:UNDER BRAZORIA COUNTY CLERK'S FILE NUMBER(S) 2016025269
AFFECTS: TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN. (AS TO LOT 7, OF TRACT 1). DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.
- 10 V. DRAINAGE EASEMENT(S) AND APPURTENANCES AS GRANTED IN A DOCUMENT:
GRANTED TO: BRAZORIA COUNTY MUNICIPAL UTILITY DISTRICT NO. 43 RECORDING DATE: JUNE 6, 2016
RECORDING NO:UNDER BRAZORIA COUNTY CLERK'S FILE NUMBER(S) 2016026156
AFFECTS: TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN. (AS TO LOTS 5 AND 6, OF TRACT 1). DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.
JUDGEMENT RECORDED UNDER BRAZORIA COUNTY CLERK'S FILE NO(S). 2016056622-IS NOT RELATED TO SAID BCMUD NO. 43 EASEMENT
- 10 W. DRAINAGE EASEMENT(S) AND APPURTENANCES AS GRANTED IN A DOCUMENT:
GRANTED TO: BRAZORIA COUNTY MUNICIPAL UTILITY DISTRICT NO. 43 RECORDING DATE: JUNE 6, 2016
RECORDING NO:UNDER BRAZORIA COUNTY CLERK'S FILE NUMBER(S) 2016026159
AFFECTS: TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN. (AS TO LOT 8, OF TRACT 1). DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.

- 10 X. PIPELINE RIGHT-OF-WAY AND EASEMENT(S) AND APPURTENANCES AS GRANTED IN AN AGREED FINAL JUDGMENT: GRANTED TO: ENTERPRISE CRUDE PIPELINECOMPANY LLC
RECORDING DATE: OCTOBER 19, 2016
RECORDING NO:UNDER BRAZORIA COUNTY CLERK'S FILE NUMBER(S) 2016051534 AND INSTRIMENT RECORDED UNDER BRAZORIA COUNTY CLERK'S FILE NO(S). 2016056622
AFFECTS: TRAVERSING A PORTION OF THE SUBJECT PROPERTY AND BEING MORE PARTICULARLY LOCATED AND DEFINED THEREIN. (AS TO LOTS 5, 13, 21, 29, 37 AND 45, OF TRACT 1). DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.
- 10 CG. PERMANENT EASEMENT AGREEMENT AS EVIDENCED BY MEMORANDUM OF PERMANENT EASEMENT AGREEMENT EXECUTED BY: WESTBANK BAYOU, L.P., A TEXAS LIMITED PARTNERSHIP
RECORDING DATE: SEPTEMBER 26, 2019
RECORDING NO.: UNDER BRAZORIA COUNTY CLERK'S FILE NO(S). 2019046366. (AS TO TRACT 1). DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.
- 10 CH. PERMANENT EASEMENT AGREEMENT AS EVIDENCED BY MEMORANDUM OF PERMANENT EASEMENT AGREEMENT EXECUTED BY:FOUR FORTY-THREE, LTD., A TEXAS LIMITED PARTNERSHIP
RECORDING DATE: SEPTEMBER 26, 2019
RECORDING NO.: UNDER BRAZORIA COUNTY CLERK'S FILE NO(S). 2019047623. (AS TO TRACT 1). DOES AFFECT SUBJECT TRACT AND SHOWN HEREON.
- 3) IN ACCORDANCE WITH THE FEDERAL EMERGENCY MANAGEMENT AGENCY, FLOOD INSURANCE RATE MAPS, MAP NO. 48039C0130K, AND MAP NO. 48039C0110K, WITH A REVISED DATE OF DECEMBER 30, 2020, BY GRAPHICAL PLOTTING, THE SUBJECT TRACT LIES WITHIN ZONE "AO" (DEPTH 2') AND ZONE "X"(UNSHADED). ZONE "X"(UNSHADED) IS DEFINED AS AREAS DETERMINED TO BE OUTSIDE 0.2% ANNUAL CHANCE FLOODPLAIN. ZONE "AO" IS DEFINED AS A SPECIAL FLOOD HAZARD AREA WITH FLOOD DEPTHS OF 1 TO 3 FEET (USUALLY SHEET FLOW ON SLOPING TERRAIN); AVERAGE DEPTHS DETERMINED. FOR AREAS OF ALLUVIAL FAN FLOODING, VELOCITIES ALSO DETERMINED. THE SPECIAL FLOOD HAZARD AREA IS THE AREA SUBJECT TO FLOODING BY THE 1% ANNUAL CHANCE FLOOD. "LJA DOES NOT WARRANT NOR SUBSCRIBE TO THE ACCURACY OR SCALE OF SAID MAPS."
- 4) MINERAL INTERESTS WERE NOT INVESTIGATED AS A PART OF THIS SURVEY.
- 5) THIS SURVEY DOES NOT DETERMINE THE LOCATION OF WETLANDS, FAULT LINES, OR OTHER ENVIRONMENTAL ISSUES SHOULD THEY EXIST.
- 6) THERE IS NO VISIBLE EVIDENCE OF BURIAL GROUNDS OR MAJOR EARTH WORK AT THE TIME OF THE SURVEY.
- 7) THIS SURVEY IS ISSUED IN CONJUNCTION WITH THE METES AND BOUNDS DESCRIPTION BY LJA SURVEYING, INC. OF THE SAME CERTIFICATION DATE SHOWN HEREON, HEREBY REFERENCED AS PART 2 OF 2. THIS SURVEY IS PART 1 OF 2.

EXHIBIT C



ACREAGE SUMMARY	
TRACT 1:	418.432 ACRES
TRACT 2:	19.961 ACRES
TOTAL AREA:	438.393 ACRES

**LAND TITLE SURVEY OF
438.393 ACRES
ALL OF LOTS 5, 6, 7, 8, 13, 14, 15, 16, 21, 22, 23, 24, 29, 30, 31,
32, 33, 34, 35, 36, 37, 38, 39, 40, 42, 43, 44, 45, 46, 47, AND 50
OF SECTION 73 AND LOTS 6 AND 12 OF DIVISION "O"
OF THE ALLISON RICHEY GULF COAST HOME COMPANY
PART OF SUBURBAN GARDENS SUBDIVISION,
VOL. 2, PAGE 91-92, B.C.P.R.
ALL OF OUTLOTS 175 AND 195 AND
PART OF OUTLOTS 174 AND 180
DR. A. A. LUTHER SUBDIVISION OF MANVEL
AND SURROUNDING ACREAGE PROPERTY
VOL. 1, PAGES 71-72 AND VOL. 3, PAGE 139-140, B.C.P.R.
LOCATED IN THE
H.T. & B. RR CO. SURVEY, SEC 65, A-285,
H.T. & B. RR CO. SURVEY, SEC 73, A-301,
H.T. & B. RR CO. SURVEY, SEC 64 (A.K.A.)
MARY V. O'DONNELL SURVEY , A-483,
AND MARY V. O'DONNELL SURVEY, A-469
BRAZORIA COUNTY, TEXAS**

FEBRUARY 2021 JOB NO. LJA001-2791-2101

LJA Surveying, Inc.
3600 W Sam Houston Parkway S Phone 713.953.5200
Suite 175 Fax 713.953.5026
Houston, Texas 77042 T.B.P.E.L.S. Firm No. 10194382

EXHIBIT D

METES AND BOUNDS DESCRIPTION
OF
TRACT 1

A 418.318 acre (18,221,949 square feet) tract, being all of Lots 5, 6, 7, 8, 13, 14, 15, 16, 21, 22, 23, 24, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 42, 43, 44, 45, 46, 47 and 50 of the Allison-Richey Gulf Coast Home Company Suburban Gardens Subdivision of Section 73, H.T. & B. Railroad Company Survey, Abstract 301, according to the map or plat thereof, recorded in Volume 2, Page 91 and 92, of the Plat Records of Brazoria County, Texas (B.C.P.R.) and being all of those certain tracts conveyed to Westbank Bayou, LP, called 19.919 acres (Lots 5-6), recorded in Brazoria County Clerk's File Number (B.C.C.F. No.) 2007021508, called 9.929 acres (Lot 8), recorded in B.C.C.F. No. 2007017868 and called 9.972 acres (Lot 16), recorded in B.C.C.F. No. 2007018701 and being all of that certain tract conveyed to Charles L. Sowell called 9.988 acres (Lot 7), recorded in Volume 1177, Page 396, deed records of Brazoria County, Texas (B.C.D.R.), and being all of those certain tracts conveyed to Eastbank Bayou, LP, called 10 acres (Lot 33), recorded in B.C.C.F. No. 2007022032, called 19.944 acres (Lots 42-43), recorded in B.C.C.F. No. 2008004369 and called 10 acres (Lot 47), recorded in B.C.C.F. No. 2008004367 and being all of that certain tract conveyed to Four Forty-Three Annex No. 1, LTD., called 10.00 acres (Lot 50), recorded in B.C.C.F. No. 2006045403 and being a part of that certain tract conveyed to Four Forty-Three Ltd. (called 433.09 acres), recorded in Volume 1048, Page 760, B.C.D.R., with said 18,221,949 square foot tract of land being more particularly described by metes and bounds as follows:

COMMENCING at a 1/2 inch iron rod found at the Northeast corner of said Section 73 and an interior corner of the H.T. & B. Railroad Company Survey, Section 74, Abstract 493, recorded in Volume 2, Page 66, B.C.P.R.) and being at the centerline intersection of 60 foot Pollard Drive (as occupied) (Platted as 40 feet - Volume 2, Page 91 and 92, B.C.P.R.) and 60 foot Del Bello Boulevard (as occupied)(Platted as 50 feet - Volume 2, Page 66, B.C.P.R.), marking the northeast corner of the Michael D. Roland and Marcy D. Roland tract (called 5.46 acres), recorded in B.C.C.F. No. 2004072423 and 2007030104, the northwest corner of the Michael C. Black tract (called 4.00 acres), recorded in B.C.C.F. No. 96-015514 and the Northeast corner of said Section 73;

THENCE S 86°50'29" W, along and with the common line of Section 73 and 74 and centerline of said 40 foot platted road, at 658.00 feet pass a point marking the southwest corner of Lot 1 of said Section 74 and the southeast corner of the Mary V O'Donnell Survey, Division "O", Abstract 469, recorded in Volume 2, Page 91 and 92, B.C.P.R., from which a 5/8 inch iron rod bears, S 38°48'33" W, 3.08 feet, continuing along and with the common line of Section 73 and Division "O" and centerline of said 40 foot platted road, a total distance of 1974.26 feet (called 1980.00 feet) to a 5/8 inch iron rod with cap stamped "FMS" set in the north line of Section 73, the north line of a 60 foot American Canal Company Easement, recorded in Volume 638, Page 127, B.C.D.R., the south line of said Division "O", Abstract 469, the south line of the Sylvia Buffy Orndorff and Dustin Aaron Different tract (called 13.93 acres), recorded in B.C.C.F. No. 2015054435, and the centerline of said 40' platted road, marking the northwest corner of the Katherine Ott Miles tract (called 5 acres), recorded in Volume 1459, Page 1, B.C.D.R., the northeast corner of said Eastbank Bayou, LP tract (Lot 33), and being the common corner of Lot 33 and 41 of said Section 73 at the most northerly Northwest corner and **POINT OF BEGINNING** of herein described tract:

THENCE S 03°24'40" E, along and with the common line of said Lot 33 and 41, a distance of 660.58 feet (called 660.00 feet) to a 1/2 inch iron rod with cap stamped "Adams RPLS 3666" found, marking the southeast corner of said Eastbank Bayou, LP tract (Lot 33), the southwest corner of said Miles tract, the northwest corner of said Eastbank Bayou, LP tract (called 19.944 acres), an interior corner of herein described tract and being the common corner of Lots 33, 41, 42 and 34 of said Section 73;

THENCE N 86°49'54" E, along and with the common line of Lots 41, 42, 49 and 50 of said Section 73, a distance of 1314.38 feet (called 1320.00 feet) to a 5/8 inch iron rod with cap stamped "FMS" set, marking the southeast corner of the Jane Hetherington Brown and Norman Paul Brown tract (called 5 acres), recorded in B.C.C.F. No. 2014042893, the southwest corner of the Suzanne Renae Scopel tract (called 5 acres), recorded in B.C.C.F. No. 2005013089, the northwest corner of the Jeffery Wayne Scopel tract (called 1.157 acres), recorded in B.C.C.F. No. 2005013109, the northeast corner of said Four Forty-Three Annex No. 1, LTD. Tract (called 10.00 acres) and the most easterly northeast corner of herein described tract and being the common corner of Lots 49, 55, 56 and 50 of said Section 73;

THENCE S 03°25'11" E, along and with the common line of Lots 50 and 56 and east line of said Four Forty-Three Annex No. 1, LTD. tract, a distance of 660.67 feet (called 660.00 feet) to a 5/8 inch iron rod with cap stamped "FMS" set, marking the southwest corner of the Douglas Varner Tract (called 1.157 acres), recorded in Volume (91) 906, Page 253, of the official records of Brazoria County, Texas (B.C.O.R.), the northwest corner of the Laura Loterbauer tract (called Minor Plat of 2.50 acres), recorded in B.C.C.F. No. 2018006317, the northeast corner of the Louis Lira tract (called 20 acres), recorded in Volume 1694, Page 653, B.C.D.R. and an angle point for corner of herein described tract and being the common corner of Lots 50, 56, 57 and 51 of said Section 73;

THENCE S 86°50'32" W, along and with the common line of Lots 50 and 51, same being the common line of said Four Forty-Three Annex No. 1, LTD. Tract and said Lira tract, a distance of 657.24 feet (called 660.00 feet), to a 5/8 inch iron rod with cap stamped "FMS" set, in the east line of said Eastbank Bayou, LP tract (called 19.944 acres), marking the southwest corner of said Four Forty-Three Annex No. 1, LTD. tract, the northwest corner of said Lira tract, an interior corner of herein described tract and being the common corner of Lots 50, 51, 43 and 42 of said Section 73;

THENCE S 03°24'55" E, along and with the common line of Lots 43, 51, 44, 52, 45, 46 and 61 at 1320.21 feet (called 1320.00 feet) pass a point in the centerline of a 40 foot platted road, recorded in Volume 2, page 91 and 92, B.C.P.R. marking the northwest corner of the Coastal Bend Land Investments, LP tract (called 40.0060 acres)(called Lot 61), recorded in B.C.C.F. No. 2006049617 and being the common corner of Lots 44, 52, 61 and 45, continuing for a total distance of 3299.48 feet (called 3300.00 feet) to a 5/8 inch iron rod with cap stamped "FMS" set, marking the southwest corner of the Jose T. Villanueva and Trinidad Villanueva tract (called 5 acres), recorded in B.C.C.F. No. 2004036528, the northwest corner of the Roger Hernandez Gandarillas and Sheila M. Rosario Crespo tract (called 1.000 acre), recorded in B.C.C.F. No. 2015020827, the northeast corner of said Aspect Energy, LLC tract (called 10 acres), the southeast corner of the said Eastbank Bayou, LP tract (called 10 acres)(Lot 47), the most easterly southeast corner of herein described tract and being the common corner of Lots 53, 54, 48 and 47 of said Section 73;

THENCE S 86°49'54" W, along and with the common line of Lots 48 and 47, same being the common line of said Eastbank Bayou, LP tract (Lot 47) and said Aspect Energy, LLC tract, a distance of 657.49 feet (called 660.00 feet) to a 1/2 iron rod with cap stamped "Adams RPLS 3666" found in the east line of the of said 443.09 acre tract, marking the southwest corner of said Eastbank Bayou, LP tract and the northwest corner of said Aspect Energy, LLC tract, and interior corner of herein described tract and being the common corner of Lots 48, 40, 39 and 47 of said Section 73;

THENCE S 03°24'40" E, along and with the common line of Lots 48 and 40, same being the common line of said Aspect Energy, LLC tract and said 443.09 acre tract, a distance of 660.05 feet (called 660.00 feet) to a 5/8 inch iron rod with cap stamped "FMS" set in the centerline of a 40 foot platted road, recorded in Volume 2, Page 91 and 92, B.C.P.R., in the called south line of Section 73 and the north line of the H.T. & B. Railroad Company Survey, Section 64, Abstract 483 and the north line of the Dr. A.A. Luther Subdivision of Manvel, recorded in Volume 1, Page 71 and 72 and Volume 3, Page 139 and 140, B.C.P.R. and the north line of Outlot 181 of said Dr. A.A. Luther Subdivision, marking the northwest corner of the Coastal Bend Land Investments, LP tract (remainder of a called 167.073 acre tract), recorded in B.C.C.F. No. 2004058628, the southwest corner of said Aspect Energy, LLC tract, an angle point in the east line of said 443.09 acre tract and an angle point for corner of herein described tract and being the common corner of Lots 48 and 40 of said Section 73, from which a 5/8 inch iron rod with cap stamped "Base Line" found marking the southeast corner of said Section 73 bears, S 86°50'11" W, 1975.03 feet;

THENCE S 86°50'11" W, continuing along and with the common line of said Section 73, Section 64 and the Dr. A.A. Luther Subdivision, same being the common line of said Outlot 181 and Lot 40, and centerline of said 40 foot platted road, a distance of 147.66 feet to a 5/8 inch iron rod with cap stamped "FMS" set in said common line, marking the northeast corner of the Four Forty-Three, LTD. Tract (called 24.00 acres)(Outlot 195), recorded in Volume 1048, Page 760, B.C.D.R. and an interior corner of herein described tract and being the westerly line of a 40 foot platted road, recorded in Volume 1, Page 71 and 72 and Volume 3, Page 139 and 140, B.C.P.R.;

THENCE S 19°30'25" W, along and with the easterly line of said Outlot 195 and the westerly line of said 40 foot platted road, at 909.98 feet pass a 1/2 inch iron rod found, marking the southeasterly corner of said Outlot 195 and the northeasterly corner of the Four Forty-Three, LTD. Tract (called 20.00 acres)(North ½ of Outlot 180), continuing for a total distance of 1569.69 feet to a 1 inch iron pipe found, marking the southeasterly corner of said 20.00 acre tract, the northeasterly corner of the Beazer Homes Texas, LP tract (called 19.99 acres)(south ½ Outlot 180), recorded in B.C.C.F. No. 2016050422 and an angle point in the westerly line of the Beazer Homes Texas, LP tract (called 5.40 acres), recorded in B.C.C.F. No. 2016050422 and the most easterly southeast corner of herein described tract;

THENCE N 70°27'42" W, along and with the common line of said North ½ of Outlot 180 and the South ½ of Outlot 180, a distance of 1319.95 feet (called 1320.00 feet) to a 1/2 inch iron rod with cap stamped "Adams RPLS 3666" found, in the easterly line of the Four Forty-Three, LTD. Tract (called 46.35 acres)(Outlot 175), marking the common corner of the South ½ and North ½ of Outlot 180 and an interior corner of herein described tract;

THENCE S 19°29'54" W, along and with the common line of said 46.35 acre tract and said 19.99 acre tract, same being the common line of Outlot 180 and 175, a distance of 660.47 feet to a 1/2 inch iron rod with cap stamped "LJA Eng" found, in the north line of a 40 foot platted road, recorded in Volume 1, Page 71 and 72 and Volume 3, Page 139 and 140, B.C.P.R., marking the most westerly northwest corner of said 5.40 acre tract, the southeasterly corner of said 46.35 acre tract and the southwesterly corner of said 19.99 acre tract and an interior corner of herein described tract;

THENCE N 70°26'20" W, along and with the south line of 46.35 acre tract and the north line of said 40 foot platted road, a distance of 1321.08 feet to a 1/2 inch iron rod with cap stamped "Adams RPLS 3666" found, in the easterly line of the Four Forty-Three, LTD. Tract (called 27.7947 acres)(Outlot 174) and the westerly line of said 40 foot platted road, marking the southwesterly corner of said 46.35 acre tract and an interior corner of herein described tract;

THENCE S 19°28'54" W, along and with the common line of said 27.7947 acre tract and westerly line of said 40 foot platted road, a distance of 1390.63 feet to a TxDot Brass Disk found in the northwesterly right-of-way (r.o.w.) line of State Highway No. 6 (a.k.a. Morris Avenue)(200' R.O.W.), recorded in B.C.C.F. No. 2013053500, marking the southeasterly corner of said 27.7947 acre tract and the most southerly southeast corner of herein described tract;

THENCE N 70°30'10" W, along the northwesterly r.o.w. line of said State Highway No. 6, a distance of 33.83 feet to a TxDot Brass Disk found, marking the southeasterly corner of the Russell T. Rudy and Randall D. Rudy tract (called 18 acres), recorded in Volume 1408, Page 806, B.C.D.R., the southwesterly corner of said 27.7947 acre tract and the most southerly southwest corner of herein described tract, from which a TxDot Brass Disk found, at the intersection of easterly r.o.w. line of County Road 82 (a.k.a. Iowa Lane)(60' R.O.W. as occupied), recorded in B.C.C.F. No. 2006021816 and the northwesterly r.o.w. line of said State Highway No. 6, marking the southwesterly corner of a 0.217 acre tract, recorded in B.C.C.F. No. 2013053500 bears, N 70°30'10" W, 365.23 feet;

THENCE N 03°19'19" W, along and with the common line of said 27.7947 acre tract and said 18 acre tract, a distance of 2310.10 feet to a 1/2 inch iron rod with cap stamped "Adams RPLS 3666" found, marking the northwest corner of said 27.7947 acre tract and an angle point for corner of herein described tract, from which a 3/4 inch pinched top pipe bears, N 09°17' W, 1.1 feet and from which an iron rod with cap stamped "Kalkomey" found in the easterly r.o.w. line of said County Road 82, marking the northwest corner of said 18 acre tract, bears S 87°00'54" W, 328.14 feet and a 5/8 inch iron rod found in the easterly r.o.w. line of said County Road 82, marking the southwest corner of a called 41.4819 acre tract, recorded in B.C.C.F. No. 2003061748 bears, N 02°13'14" W, 38.07 feet;

THENCE N 86°57'38" E, along and with the north line of said 18 acre tract, a distance of 729.52 feet to a 5/8 inch iron rod with cap stamped "FMS" set, at the southwest corner of Section 73 and being in the centerline intersection of two 40 foot platted roads and being the common corner of said Section 73 and the H.T. & B. Railroad Company Survey, Section 72, Abstract 460, marking the southeast corner of the Brazos River Authority tract (called 6.676 acres)(cause no. 54,761A), recorded in Volume 33, Page 154, district clerk records of Brazoria County, Texas (B.C.D.C.R.), the southwest corner of the Brazoria County MUD No. 43 Drainage Easement (called 1.675 acres, recorded in B.C.C.F. No. 2016026159, the southwest corner of said 9.929 acre tract and an interior corner of herein described tract;

THENCE N 03°28'57" W, along and with the common line of said Section 73 and Section 72 and centerline of said 40 foot platted road, at 40.00 feet pass a point marking the southwest corner of a 0.34 acre tract (Parcel 1) out of said called 41.4819 acre tract, continuing for a total distance of 2640.38 feet (called 2640.00 feet) to a 1 inch iron pipe found, marking the northwest corner of a 0.25 acre tract (Parcel 2), the northwest corner of said 19.919 acre tract, the northwest corner of a 3.430 acre drainage easement, recorded in B.C.C.F. No. 2016026156, the northeast corner of said Brazos River Authority tract (called 6.676 acres), the southeast corner of the Brazos River Authority Parcel "D" tract (called 3.18 acres), recorded in Volume 1070, Page 315, B.C.D.R., the southwest corner of the Brazos River Authority Parcel "B" tract (called 0.61 acres), recorded in Volume 1070, Page 318, B.C.D.R., the southwest corner of the Brazoria County Municipal Utility District (M.U.D.) No. 43 Drainage Easement tract (called 1.739 acres), recorded in B.C.C.F. No. 2016011559 and the common corner of Lots 4 and 5, Section 73, from which a 1/2 inch iron rod found in the east r.o.w. line of County Road 82 (a.k.a. Iowa Lane)(60' R.O.W. as occupied), recorded in B.C.C.F. No. 2006021816, marking the southwest corner of the Joan Banneyer tract (called 1.367 acres), recorded in B.C.C.F. No. 2005003981 and the northwest corner of the Sonmar of Scottsdale, LLC tract (called 53.948 acres), bears S 86°37'46" W, 900.42 feet;

THENCE N 86°51'03" E, along and with the common line of herein described tract and said lot 4 and the centerline of a 40 foot platted road, at 657.75 feet (called 660.00 feet) pass a 3/4 inch iron pipe found, marking the northeast corner of said 19.919 acre tract and the southwest corner of the 102929 Brazoria Inc. tract (called 34.90 acres), recorded in B.C.C.F. No. 2005033429 and being the common corner of Lots 4, 12, 13 and 5, and at 1973.99 feet (called 1980.00 feet) pass a 1/4 inch iron pipe found, marking the southeast corner of said 34.90 acre tract and being the common corner of Lots 20, 28, 29 and 21, continuing for a total distance of 2632.44 feet (called 2640.00 feet) to a 5/8 inch iron rod with cap stamped "FMS" found in the west line of a 60 foot American Canal Company Easement, recorded in Volume 638, Page 127, B.C.D.R., marking an interior corner of said remainder of a 433.09 acre tract and an interior corner of herein described tract and being the common corner of Lots 28, 36, 37 and 29 of said Section 73;

THENCE N 03°27'06" W, along and with the common line of Lots 28, 36, 27, 35, 26, 34, 25 and 33 and the west line of said 60 foot American Canal Company Easement, a distance of 2641.03 feet (called 2640.00 feet) to a 5/8 inch iron rod with cap stamped "FMS" found in the north line of Section 73, the north line of a said 60 foot American Canal Company Easement, the south line of the Mary V O'Donnell Survey, Division "O", Abstract 469, recorded in Volume 2, Page 91 and 92, B.C.P.R. the south line of the John and Edith Lebourgeois tract (called 6.978 acres), recorded in B.C.C.F. No. 98-053061, the north line of the Eastbank Bayou, LP tract (called 19.950 acres), recorded in B.C.C.F. No. 2007022032 and the centerline of said 40 foot platted road, marking the most northerly northwest corner of herein described tract and being the common corner of Lot 25 and 33 of said Section 73, from which a 1/2 inch iron rod found bears, S 82°35" E, 14.3 feet;

THENCE N 86°50'29" E, along and with the common line of Section 73, Division "O", the centerline of said 40 foot platted road and the north line of said 60 foot American Canal Company Easement, a distance of 659.60' (called 660.00 feet) to the **POINT OF BEGINNING** and containing a calculated area of 418.318 acres of land.

EXHIBIT D

FIRST TRACT

18.643 ACRES
812,089 SQUARE FEET
H.T.&B. R.R. CO. SURVEY, SECTION 64
ABSTRACT NO. 483
CITY OF MANVEL
BRAZORIA COUNTY, TEXAS

FIELD NOTE DESCRIPTION of a 18.643 acre (812,089 square foot) tract of land located in the H.T.&B. R.R. Co. Survey, Section 64, Abstract Number 483, City of Manvel, Brazoria County, Texas and said 18.643 acre tract of land being all of Tract II, a called 18.643 acre tract described in the deed to Alvin Independent School District recorded under Brazoria County Clerk's File Number (B.C.C.F. No.) 2021066368, and being out of and a part of Outlot 181, Dr. A.A. Luther Subdivision recorded under Volume (Vol.) 1, Pages (Pg.) 71 & 72 of the Brazoria County Plat Records (B.C.P.R.) and the E.C. Pitkin Subdivision recorded under Vol. 3, Pg. 139, B.C.P.R., said 18.643 acre tract being more particularly described by metes and bounds as follows: (The bearings described herein are oriented to the Texas Coordinate System, South Central Zone, NAD 1983.)

BEGINNING in the southerly line of Lot 48, Section 73, Allison Richey Gulf Coast Home Co. Subdivision, recorded under Vol. 2, Pg. 91, B.C.P.R. and being the northwest corner of Restricted Reserve "M", Lakeland Subdivision, Section Two recorded under File No. 2014018651, B.C.P.R. and the northeast corner of said Tract II and the herein described tract, from which a 5/8-inch iron rod with cap stamped "Baseline" found bears, North 85 degrees 14 minutes East, 0.62 feet;

THENCE, South 03 degrees 25 minutes 41 seconds East, along the west line of said Restricted Reserve "M", passing at a distance of 88.02 feet, the southwest corner of said Restricted Reserve "M" and the most westerly northwest corner of Restricted Reserve "H", said Lakeland Subdivision, Section 2, from which a 5/8-inch iron rod with cap stamped "Baseline" bears, South 23 degrees 23 minutes East, 0.32 feet, continuing along the west line of said Restricted Reserve "H", passing at a distance of 612.00 feet, the southwest corner of said Restricted Reserve "H" and the northwest corner of the remainder of a called 5.632 acre tract described in the deed to Lakeland Communities, LP, recorded under B.C.C.F. No. 2013029570, continuing along the west line of said remainder of a called 5.632 acre tract, passing at a distance of 692.00 feet, the southwest corner of said remainder of a called 5.632 acre tract and the northwest corner of Restricted Reserve "E", said Lakeland Subdivision, Section Two, continuing along the west line of said Restricted Reserve "E", a total distance of 1,236.28 feet, to a 5/8-inch iron rod with orange plastic cap stamped "West Belt Surveying Inc" found in the northeasterly line of Lot 20, Block 1, Bluewater Lakes, Section 4, a subdivision recorded under File No. 2018019193, B.C.P.R. and marking the southwest corner of said Restricted Reserve "E" and the southeast corner of said Tract II and the herein described tract;

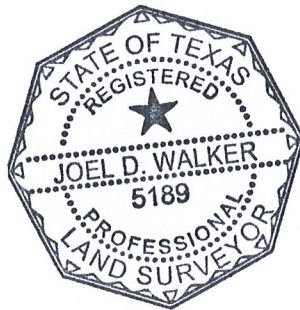
THENCE, North 70 degrees 28 minutes 49 seconds West, along the northeasterly line of said Block 1, Bluewater Lakes, Section 4, a distance of 1,005.41 feet, to a 5/8-inch iron rod with orange plastic cap stamped "West Belt Surveying Inc" found in the northeasterly line of Lot 6, Block 1, said Bluewater Lakes, Section 4 and the southeasterly line of a 40' wide roadway easement, recorded under Vol. 1, Pgs. 71 & 72, B.C.P.R. and Vol. 3, Pg. 139, B.C.P.R. and marking the southwest corner of said Tract II and the herein described tract, from which a 5/8-inch iron rod with cap found bears, North 70 degrees 29 minutes West, 20.00 feet and a 1/2-inch iron rod found bears, North 70 degrees 29 minutes West, 40.00 feet;

EXHIBIT D

THENCE, North 19 degrees 32 minutes 37 seconds East, departing the northeasterly line of said Block 1, Bluewater Lakes, Section 4 and along the southeasterly line of said 40' wide roadway easement, a distance of 917.07 feet, to the southerly of Lot 40, Section 73, aforesaid Allison Richey Gulf Coast Home Co. subdivision and the northwest corner of said Tract II and the herein described tract, from which a 5/8-inch iron rod with cap stamped "Leany" found bears, North 02 degrees 29 minutes West, 0.33 feet;

THENCE, North 86 degrees 34 minutes 43 seconds East, along the southerly line of said Lot 40, Section 73 and aforesaid Lot 48, Section 73, a distance of 567.93 feet, to the POINT OF BEGINNING and containing a computed area of 18.643 acres (812,089 square feet) of land as depicted on the Land Title Survey dated: November 28, 2023, revised: December 4, 2023, prepared by West Belt Surveying, Inc., Project No. S647-0337A.

West Belt Surveying, Inc.
Certified Firm No. 10073800
21020 Park Row
Katy, Texas 77449
(281) 599-8288



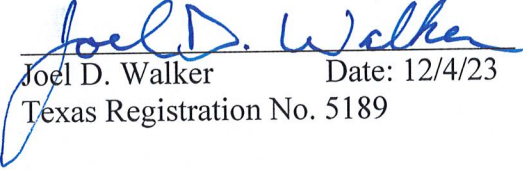

Joel D. Walker Date: 12/4/23
Texas Registration No. 5189

EXHIBIT D

Exhibit B

Legal Description of Drill Site

[Attached]

August 19, 2021
Job No. LJAS001-2791-2104

DESCRIPTION OF
4.000 ACRES
DRILL SITE

Being 4.000 acres of land located in the H.T.& B. R.R. Company Survey, Section 64, (A.K.A.) Mary V. O'Donnell Survey, Abstract 483, Brazoria County, Texas, and also being a portion of Outlot 195 of the Dr. A. A. Luther Subdivision of Manvel and Surrounding Acreage Property, according to the plat recorded in Volume 1, Pages 71-72, and Volume 3, Pages 139-140 of the Plat Records of Brazoria County, Texas (B.C.P.R.), and a portion of that certain tract conveyed to Four Forty Three, Ltd. (described as Fourth Tract) by instrument of record in Volume 1048, Page 760, of the Deed Records of said Brazoria County, Texas (B.C.D.R.), said 4.000 acres being more particularly described as follows (all bearings referenced to the Texas Coordinate System, South Central Zone, NAD 83, 1993 adjustment);

COMMENCING for reference at a 1/2-inch iron rod with cap stamped, "S ADAMS RPLS 3666" found for the southeast corner of said Fourth Tract and said Outlot 195, same being the northeast corner of that certain called 20.000 acre tract, conveyed to Four Forty Three, Ltd. (described as Fifth Tract) by instrument of record in Volume 1048, Page 760, B.C.D.R. and Outlot 180 of said Dr. A. A. Luther Subdivision, same being on the northwesterly line of a called 40 foot wide-right-of-way as shown on said Dr. A. A. Luther Subdivision;

Thence, North 19° 31' 43" East, along the east line of said Fourth tract and said Outlot 195, same being a northwesterly line of said 40 foot wide right-of-way, 454.12 feet to the southeast corner and the POINT OF BEGINNING of the herein described tract;

Thence, South 89°45'12" West, departing said common line, 467.08 feet to a point for corner, the beginning of a curve;

EXHIBIT D

4.000 Acres

August 19, 2021
Job No. LJAS001-2791-2104

Thence, 78.42 feet along the arc of a non-tangent curve to the left, having a radius of 1,860.00 feet, a central angle of $02^{\circ} 24' 56''$, and a chord which bears North $21^{\circ} 46' 51''$ West, 78.41 feet to a point for corner;

Thence, North $22^{\circ} 59' 19''$ West, 225.66 feet to a point for corner, the beginning of a curve;

Thence, 49.74 feet along the arc of a tangent curve to the right, having a radius of 30.00 feet, a central angle of $95^{\circ} 00' 00''$, and a chord which bears North $24^{\circ} 30' 41''$ East, 44.24 feet to a point for corner, the beginning of a compound curve;

Thence, 324.76 feet along the arc of a non-tangent curve to the right, having a radius of 472.48 feet, a central angle of $39^{\circ} 22' 55''$, and a chord which bears North $89^{\circ} 47' 18''$ East, 318.40 feet to a point for corner;

Thence, South $70^{\circ} 28' 17''$ East, 340.27 feet to a point for corner on the northwesterly right of way line of the aforementioned 40 foot wide-right-of-way, same being the southeasterly line of the aforementioned Fourth Tract and the aforementioned Outlot 195, from which a 1/2-inch iron rod with cap stamped "S ADAMS RPLS 3666" found for the northwest corner of said 40 foot wide right-of-way, same being the northeast corner of said Fourth Tract, and said Outlot 195, said point lying on the south line of Lot 40 of the Allison Richey Gulf Coast Home Company Part of Suburban Gardens Subdivision, Section 73, according to the plat recorded in Volume 2, Pages 91-92, B.C.P.R. and that certain tract conveyed to Four Forty Three, Ltd. (described as First Tract) by instrument of record in Volume 1048, Page 760, B.C.D.R., same being the north line of the aforementioned Mary V. O'Donnell Survey bears North $19^{\circ} 31' 43''$ East, 237.23 feet;

EXHIBIT D

4.000 Acres

August 19, 2021
Job No. LJA001-2791-2104

Thence, South 19° 31' 43" West, along the southeasterly line of said Fourth Tract and said Outlot 195, same being the northwesterly line of said 40 foot wide right-of-way, 218.81 feet to the POINT OF BEGINNING and containing 4.000 acres of land.

Corner monuments were not set at the Client's request.



LJA Surveying, Inc.

LEGEND

B.C.O.P.R. OFFICIAL PUBLIC RECORDS OF BRAZORIA COUNTY, TEXAS

B.C.O.R. OFFICIAL RECORDS OF BRAZORIA COUNTY, TEXAS

B.C.P.R. PLAT RECORDS OF BRAZORIA COUNTY, TEXAS

B.C.D.R. DEED RECORDS OF BRAZORIA COUNTY, TEXAS

P.O.C. POINT OF COMMENCING

P.O.B. POINT OF BEGINNING

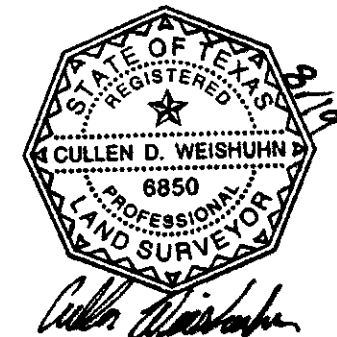
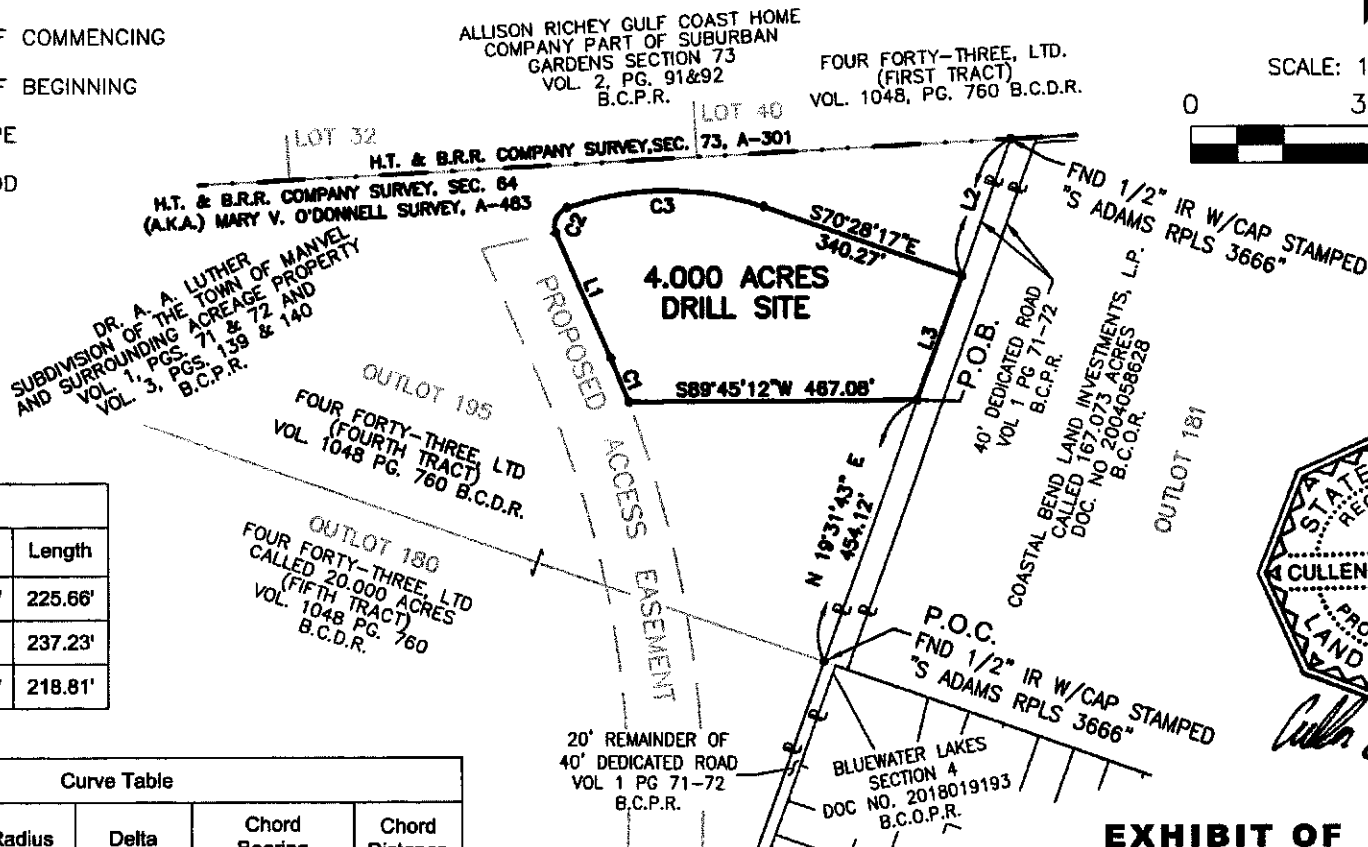
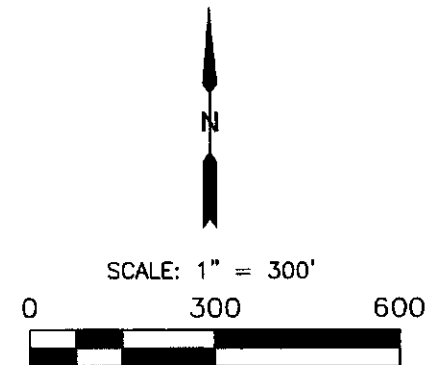
I.P. IRON PIPE

I.R. IRON ROD

VOL. VOLUME

PG. PAGE

EXHIBIT D



Line Table		
Line #	Direction	Length
L1	N22° 59' 19"W	225.66'
L2	N19° 31' 43"E	237.23'
L3	S19° 31' 43"W	218.81'

Curve Table					
Curve #	Arc Length	Radius	Delta	Chord Bearing	Chord Distance
C1	78.42'	1,860.00	2°24'56"	N21° 46' 51"W	78.41'
C2	49.74'	30.00	95°00'00"	N24° 30' 41"E	44.24'
C3	324.76'	472.48	39°22'55"	N89° 47' 18"E	318.40'

**EXHIBIT OF
4.000 ACRES
DRILL SITE
IN THE
H.T. & B.R.R. COMPANY SURVEY, SEC. 64
(A.K.A.) MARY V. O'DONNELL SURVEY, A-483
BRAZORIA COUNTY, TEXAS**

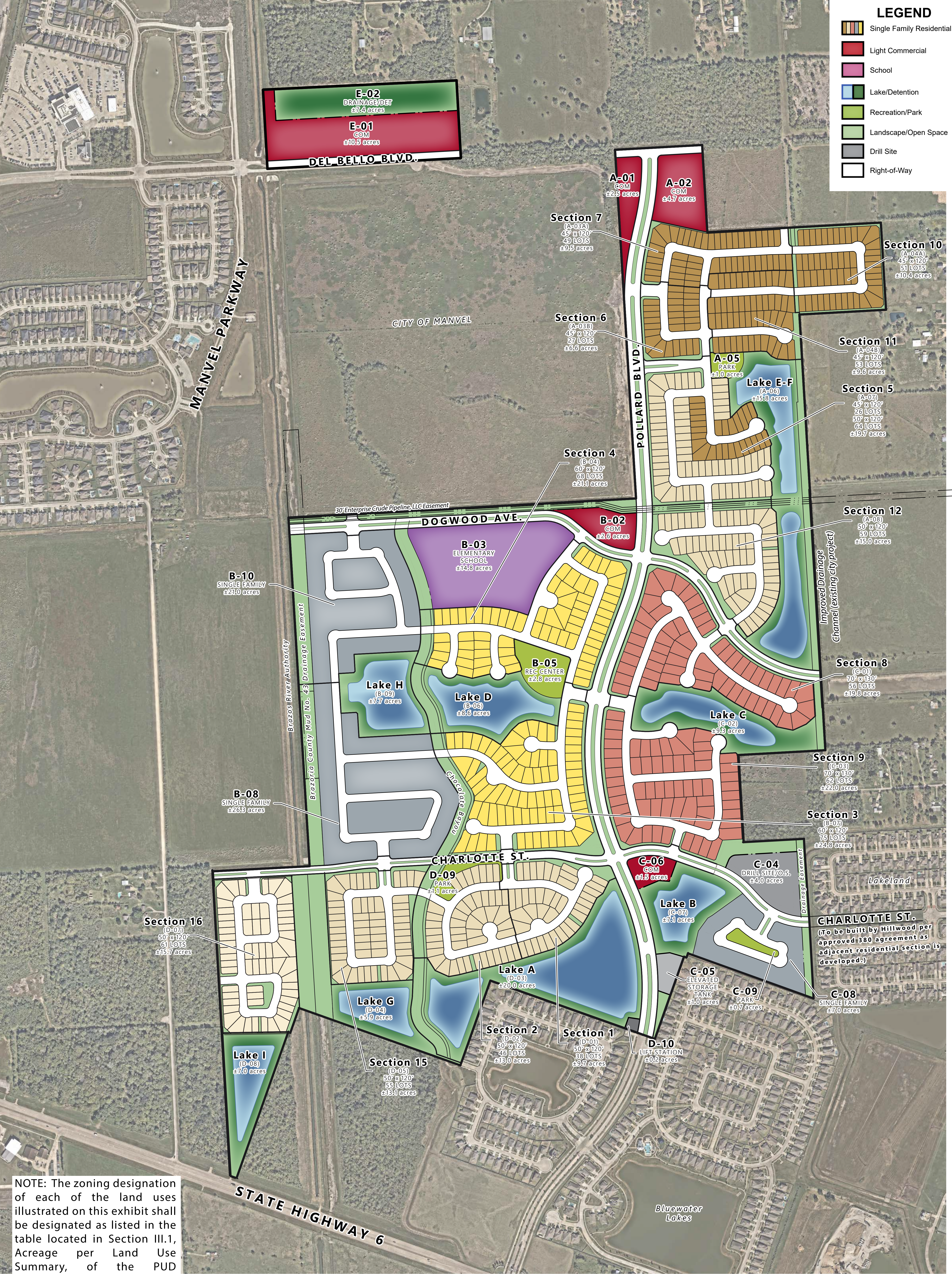
NOTES:

- ALL BEARINGS ARE REFERENCED TO THE TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE, NAD 83, 1993 ADJ.
- CORNER MONUMENTS WERE NOT SET AT THE CLIENT'S REQUEST.

AUGUST 2021 JOB NO. LJA001-2791-2104

LJA Surveying, Inc.

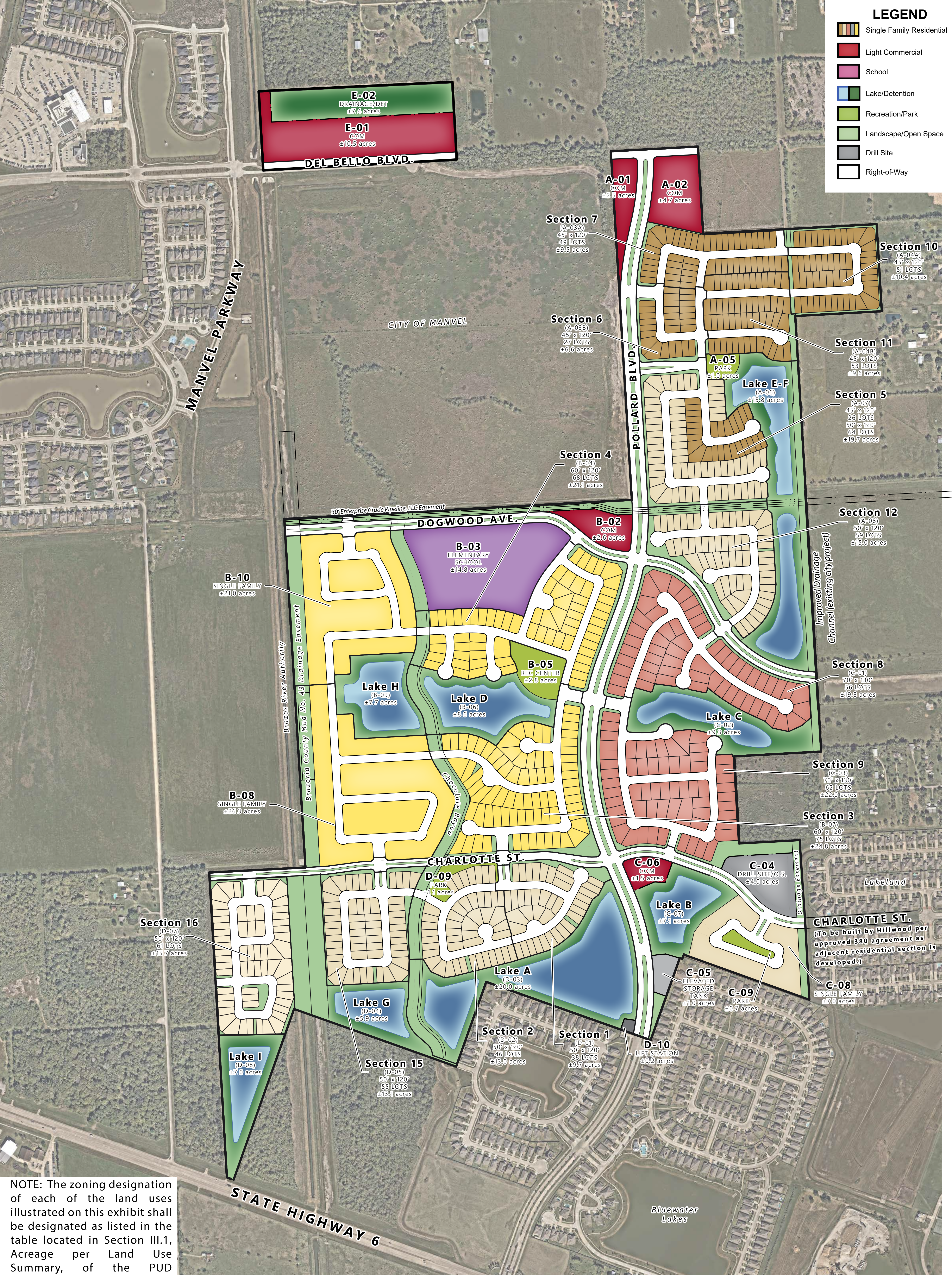
3600 W Sam Houston Parkway S Phone 713.953.5200
Suite 175 Fax 713.953.5026
Houston, Texas 77042 T.B.P.L.S. Firm No. 10194382



Prepared for
**HILLWOOD
RESIDENTIAL**

EXHIBIT E
Planned Unit Development
Conceptual Land Use Exhibit
VALENCIA
±457.0 Acres of Land
Manvel, Texas

Reference Date: 02.27.2024



Prepared for
**HILLWOOD
RESIDENTIAL**

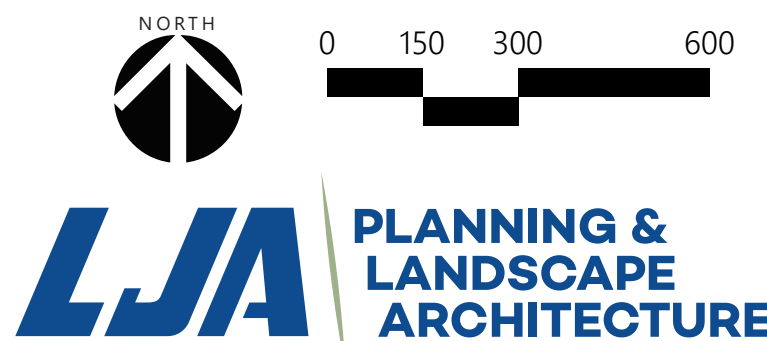
EXHIBIT F

Planned Unit Development
Single Family Residential Exhibit

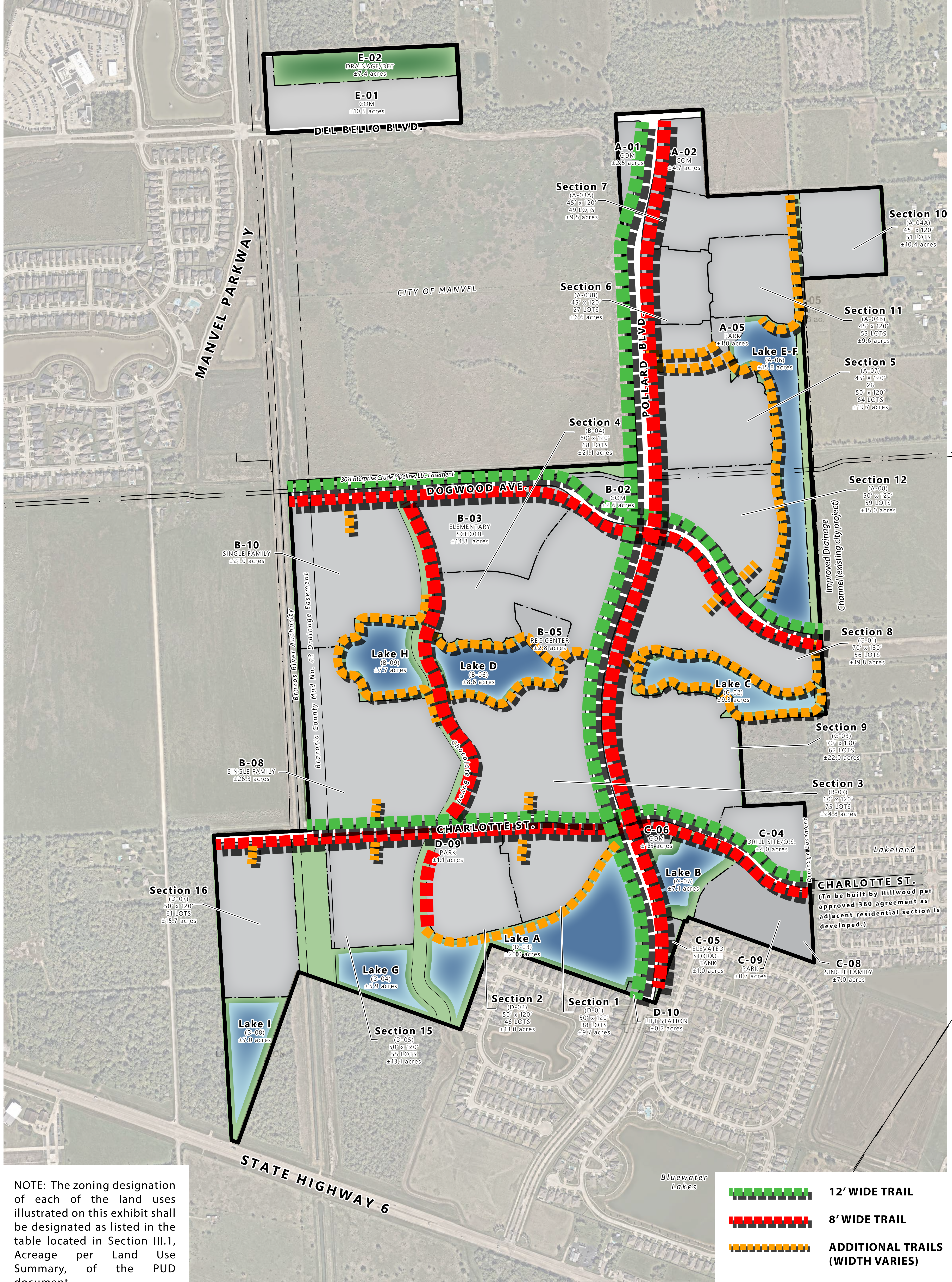
VALENCIA

±457.0 Acres of Land
Manvel, Texas

Reference Date: 02.27.2024



RELATIONSHIPS | PROCESS | DESIGN



NOTE: The zoning designation of each of the land uses illustrated on this exhibit shall be designated as listed in the table located in Section III.1, Acreage per Land Use Summary, of the PUD document.

Prepared for
**HILLWOOD
RESIDENTIAL**

EXHIBIT H
Planned Unit Development
Conceptual Amenities and Open Space Exhibit
VALENCIA
±457.0 Acres of Land
Manvel, Texas

Reference Date: 02.27.2024



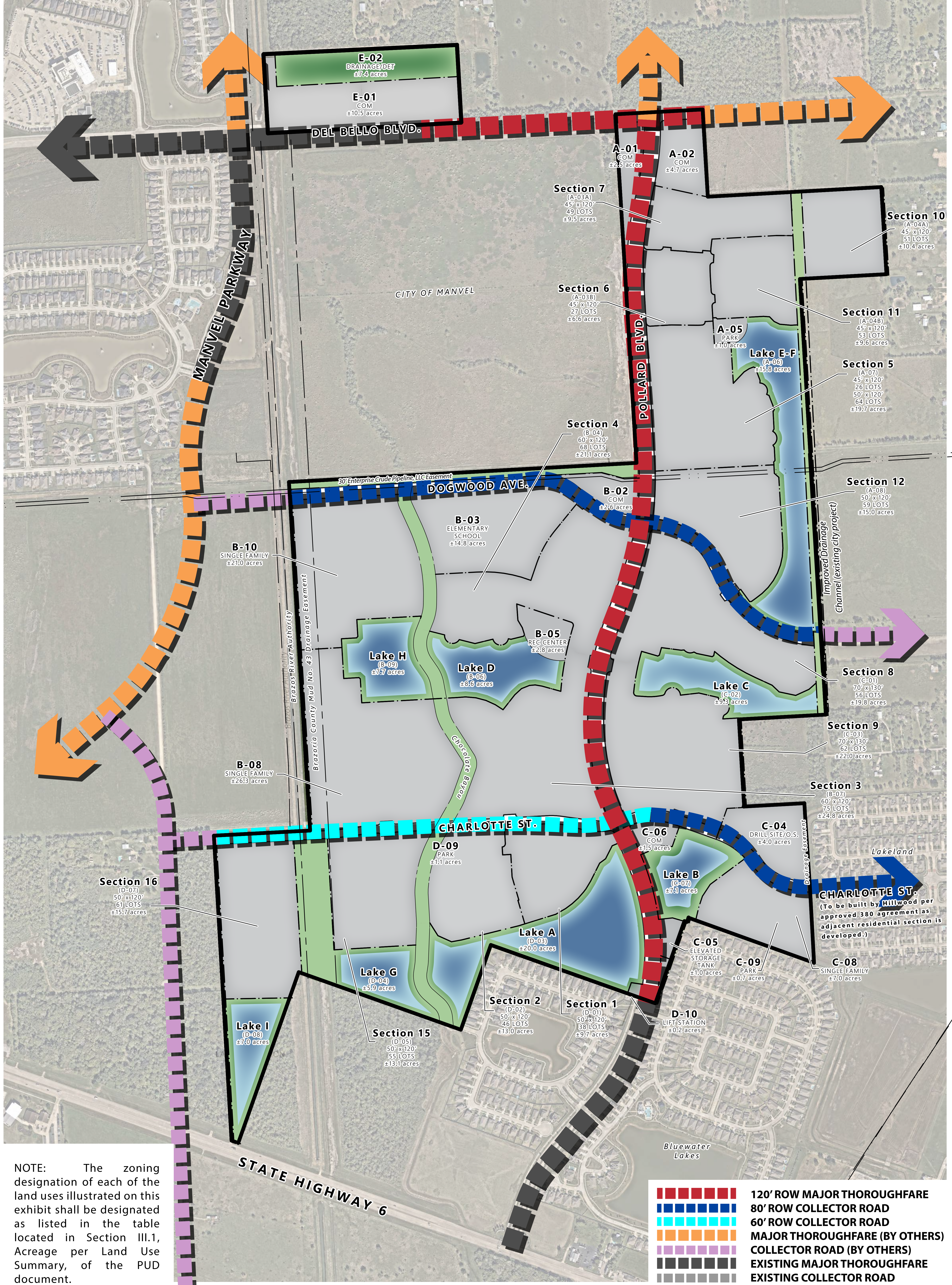
0 150 300 600



**PLANNING &
LANDSCAPE
ARCHITECTURE**

RELATIONSHIPS | PROCESS | DESIGN

This exhibit is an illustrative representation for presentation purposes only and should not be used for computation or construction purposes. The information provided within should be considered a graphic representation to aid in determining plan components and relationships and is subject to change without notice. All property boundaries, easements, road alignments, drainage, flood plans, environmental issues and other information shown is approximate and should not be relied upon for any purpose. No warranties, express or implied, concerning the actual design, accuracy, location, and character of the facilities shown on this exhibit are intended.



NOTE: The zoning designation of each of the land uses illustrated on this exhibit shall be designated as listed in the table located in Section III.1, Acreage per Land Use Summary, of the PUD document.

Prepared for
**HILLWOOD
RESIDENTIAL**

© Copyright 2024 LJA Engineering, Inc. Drawings, written material, and design concepts provided are the property of LJA and shall not be reproduced in part or whole in any form or format without written consent of LJA.

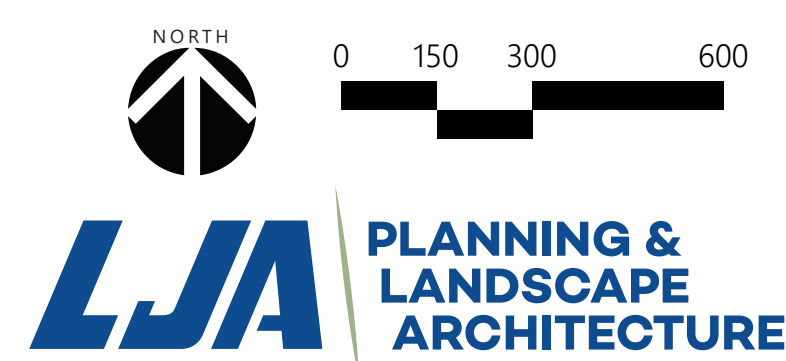
EXHIBIT G

Planned Unit Development
Conceptual Roadway Exhibit

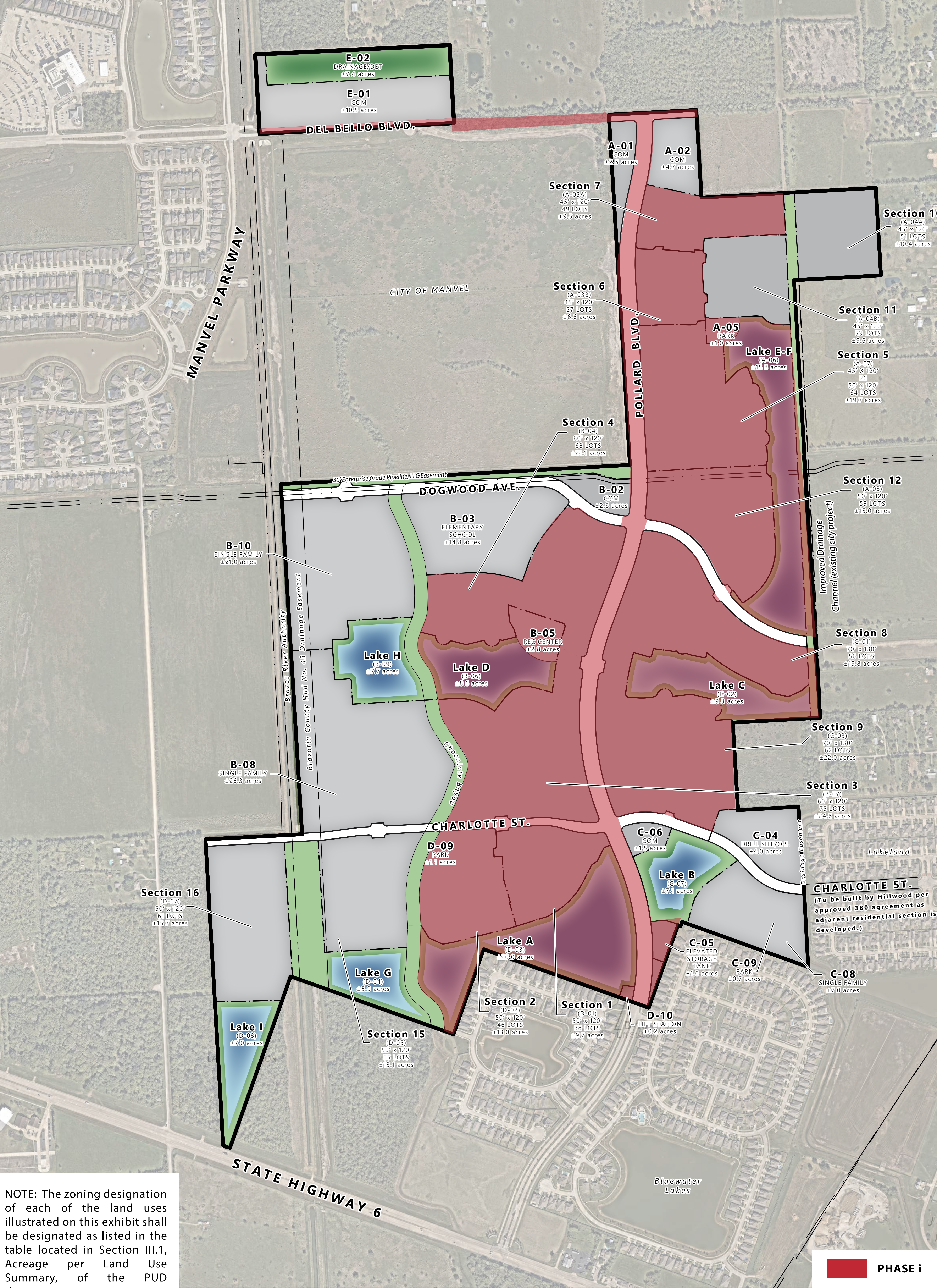
VALENCIA

±457.0 Acres of Land
Manvel, Texas

Reference Date: 02.27.2024



RELATIONSHIPS | PROCESS | DESIGN



NOTE: The zoning designation of each of the land uses illustrated on this exhibit shall be designated as listed in the table located in Section III.1, Acreage per Land Use Summary, of the PUD document.

Prepared for
**HILLWOOD
RESIDENTIAL**

© Copyright 2024 LJA Engineering, Inc. Drawings, written material, and design concepts provided is considered property of LJA & shall not be reproduced in part or whole in any form or format without written consent of LJA.
This exhibit is an illustrative representation for presentation purposes only and should not be used for computation or construction purposes. The information provided within should be considered a graphic representation to aid in determining plan components and relationships and is subject to change without notice. All property boundaries, easements, road alignments, drainage, flood plans, environmental issues and other information shown is approximate and should not be relied upon for any purpose. No warranties, express or implied, concerning the actual design, accuracy, location, and character of the facilities shown on this exhibit are intended.

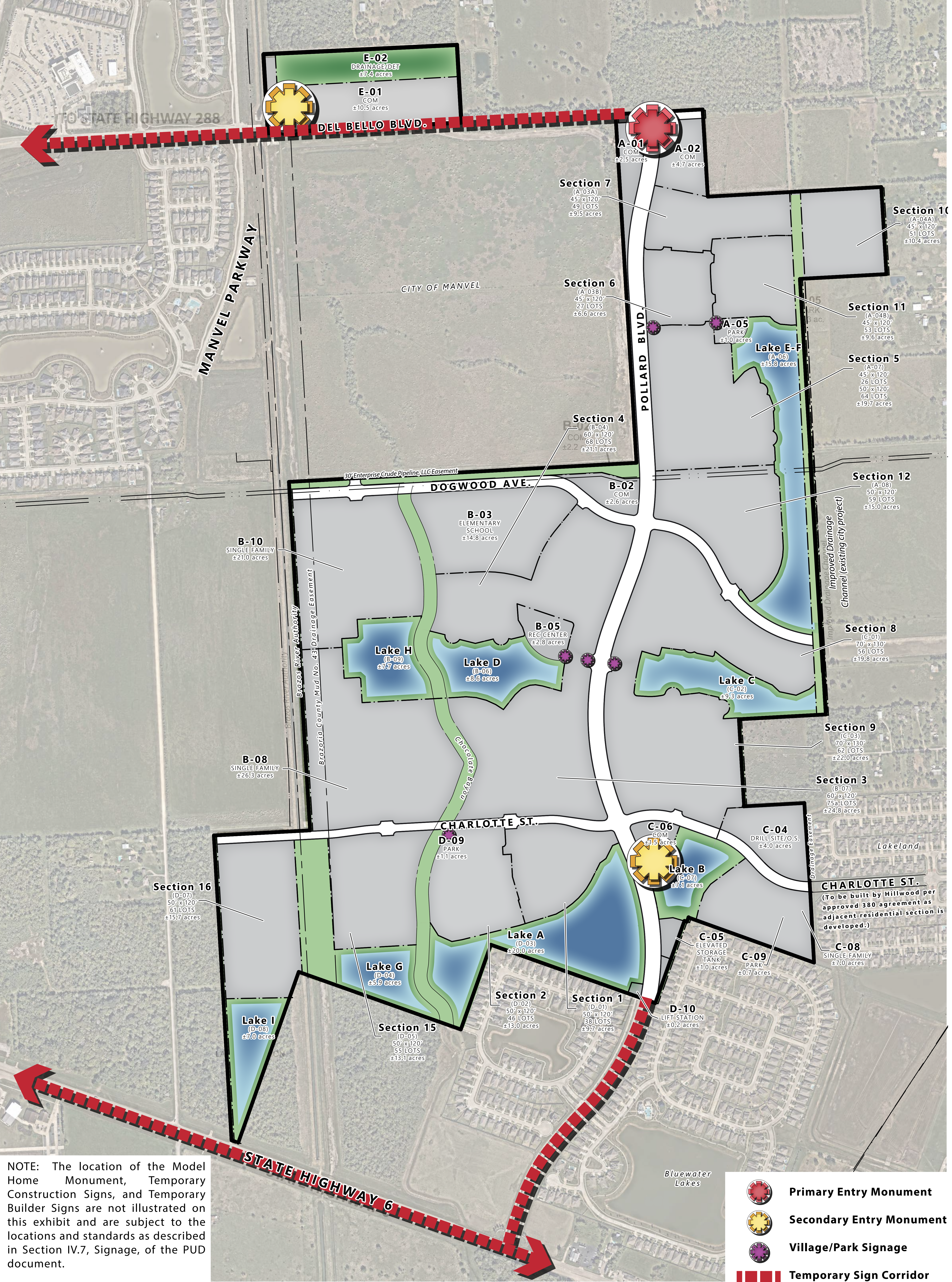
EXHIBIT I

Planned Unit Development
Phasing Exhibit
VALENCIA
±457.0 Acres of Land
Manvel, Texas

Reference Date: 02.27.2024



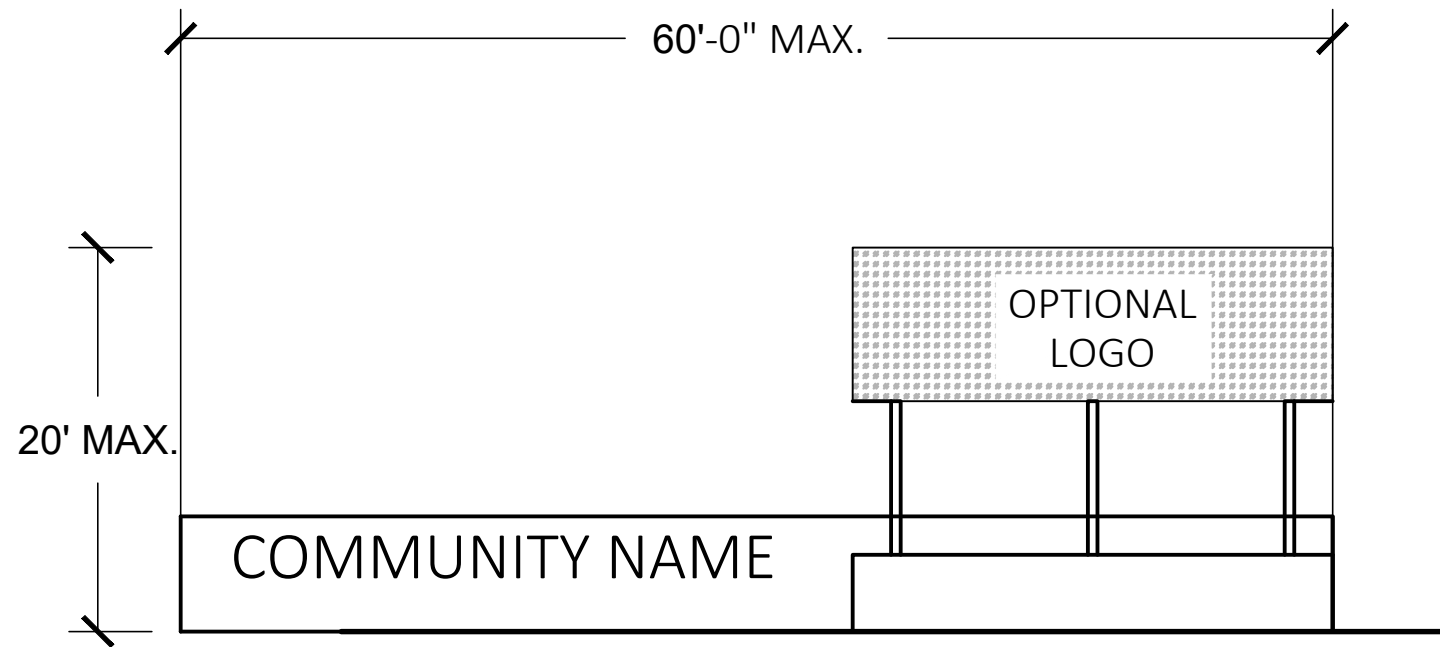
RELATIONSHIPS | PROCESS | DESIGN



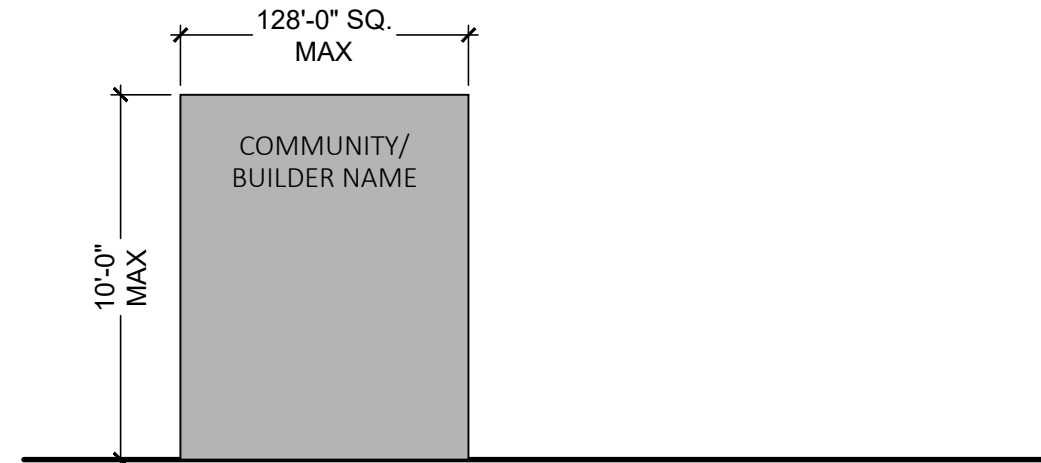
NOTE: The location of the Model Home Monument, Temporary Construction Signs, and Temporary Builder Signs are not illustrated on this exhibit and are subject to the locations and standards as described in Section IV.7, Signage, of the PUD document.

Prepared for
**HILLWOOD
RESIDENTIAL**

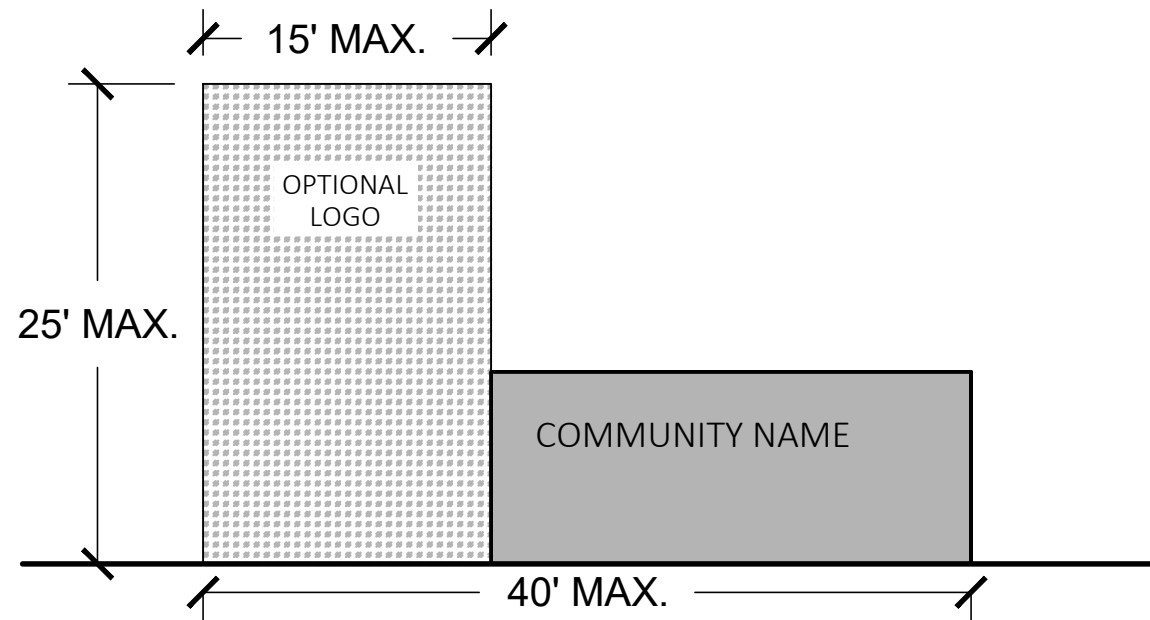
EXHIBIT J
Planned Unit Development
Conceptual Project Signage Exhibit
VALENCIA
±457.0 Acres of Land
Manvel, Texas



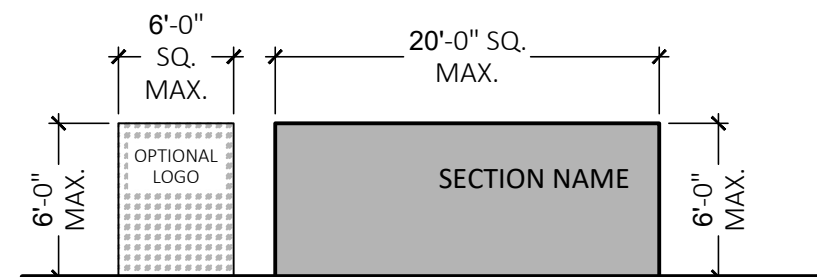
PRIMARY ENTRY MONUMENTS



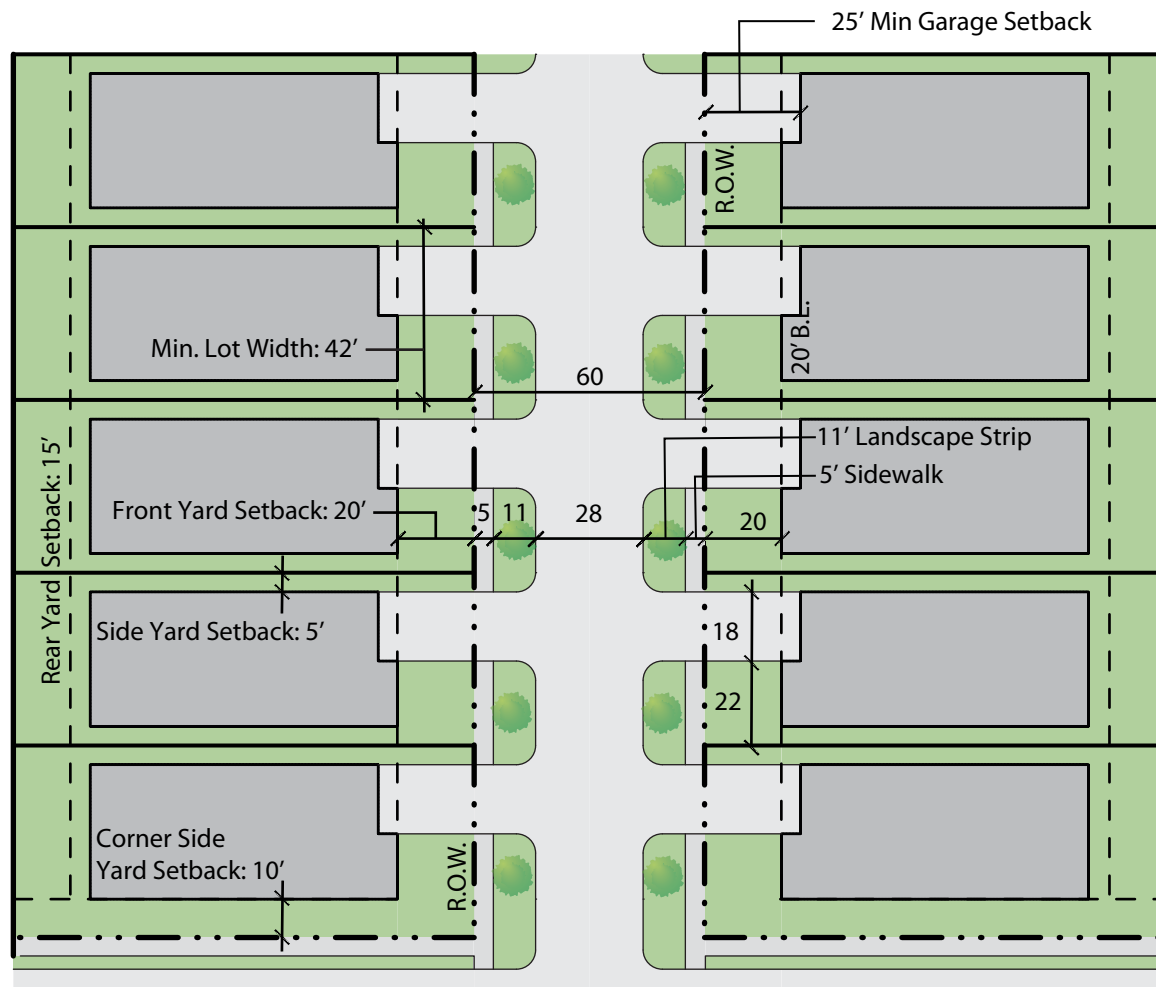
TEMPORARY COMMUNITY SIGNAGE



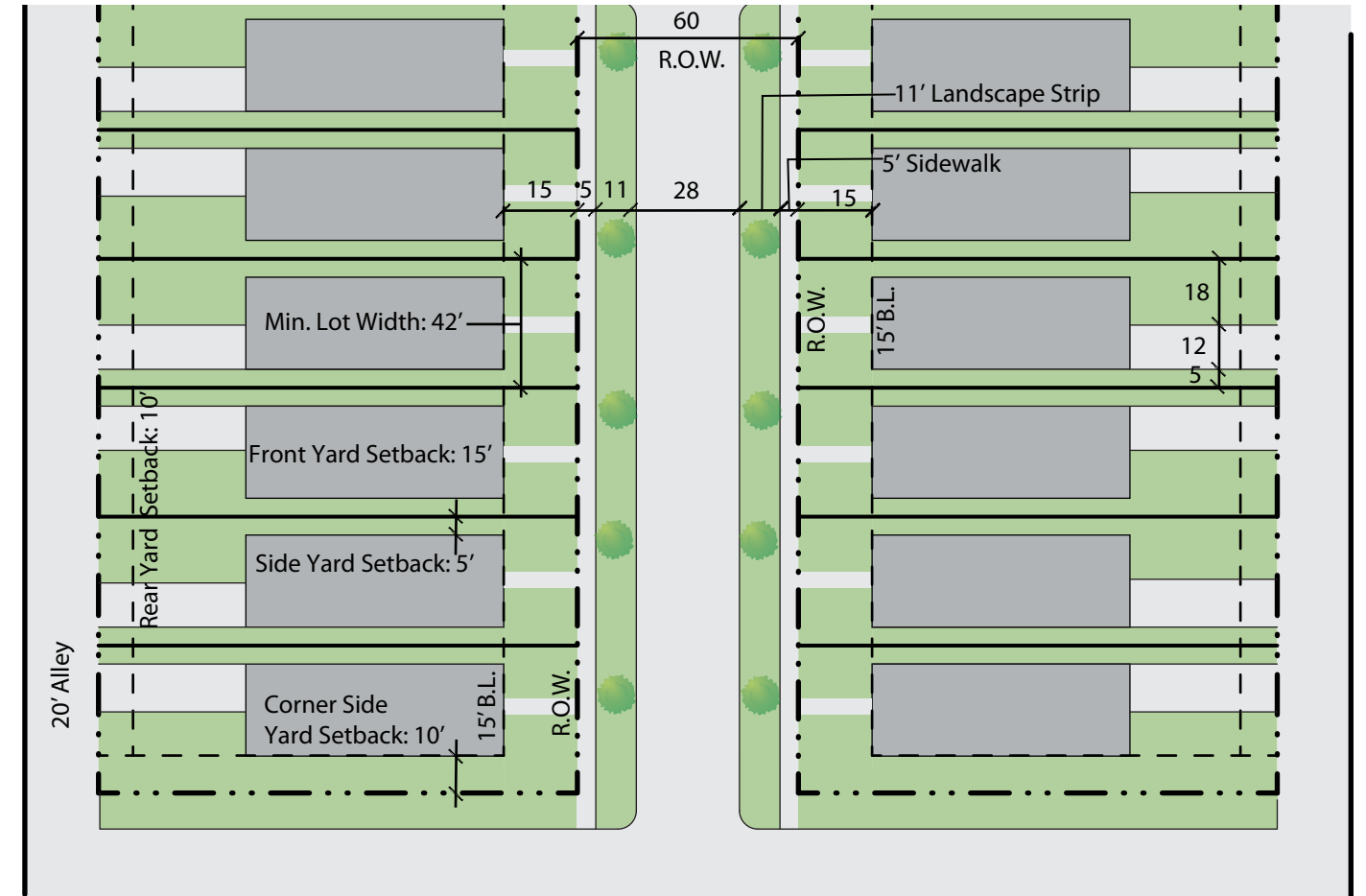
SECONDARY ENTRY MONUMENTS



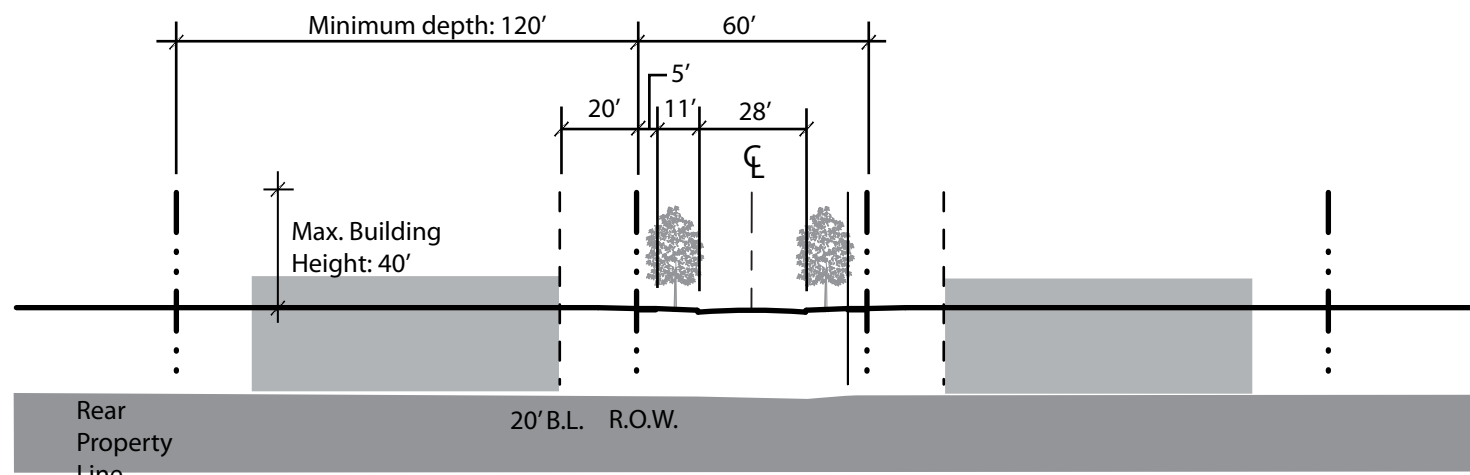
VILLAGE/PARK ENTRY MONUMENTS



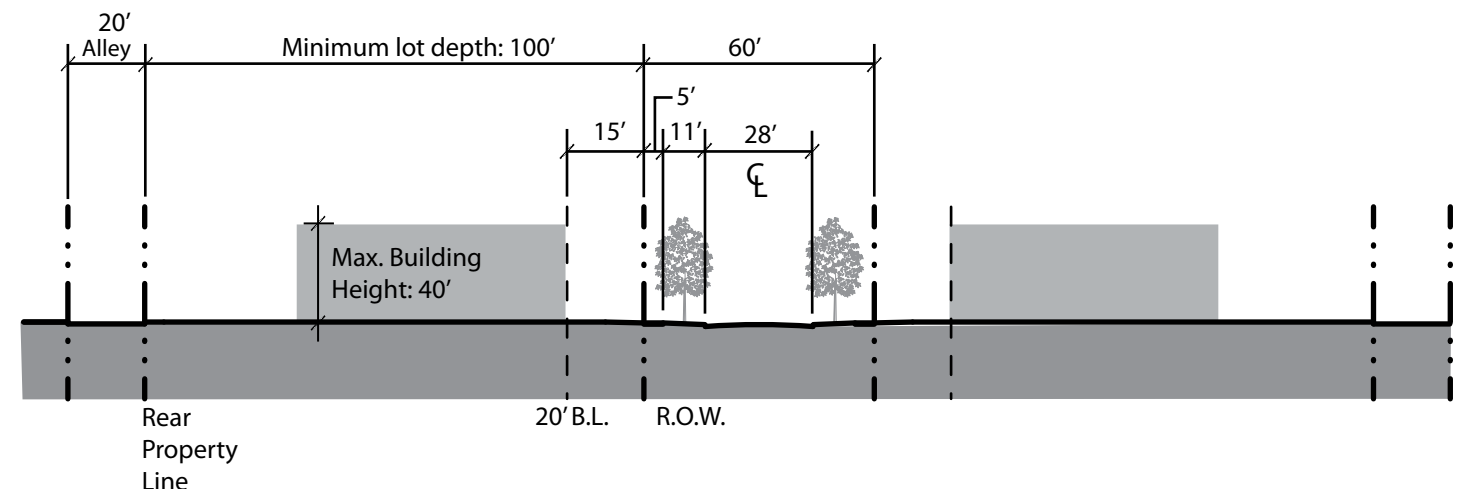
1. Plan Front Load 42' Product - 60' R.O.W.



2. Plan 35' Alley Product - 60' R.O.W.



1. Section Front Load 42' Product - 60' R.O.W.



2. Section 35' Alley Product - 60' R.O.W.

Prepared for

HILLWOOD RESIDENTIAL

© Copyright 2024 LJA Engineering, Inc. Drawings, written material, and design concepts provided is considered property of LJA & shall not be reproduced in part or whole in any form or format without written consent of LJA.

This exhibit is an illustrative representation for presentation purposes only and should not be used for computation or construction purposes. The information provided within should be considered a graphic representation to aid in determining plan components and relationships and is subject to change without notice. All property boundaries, easements, road alignments, drainage, flood plains, environmental issues and other information shown is approximate and should not be relied upon for any purpose. No warranties, express or implied, concerning the actual design, accuracy, location, and character of the facilities shown on this exhibit are intended.

EXHIBIT L Planned Unit Development Specialty Product Exhibits for Front Load and Alley Products

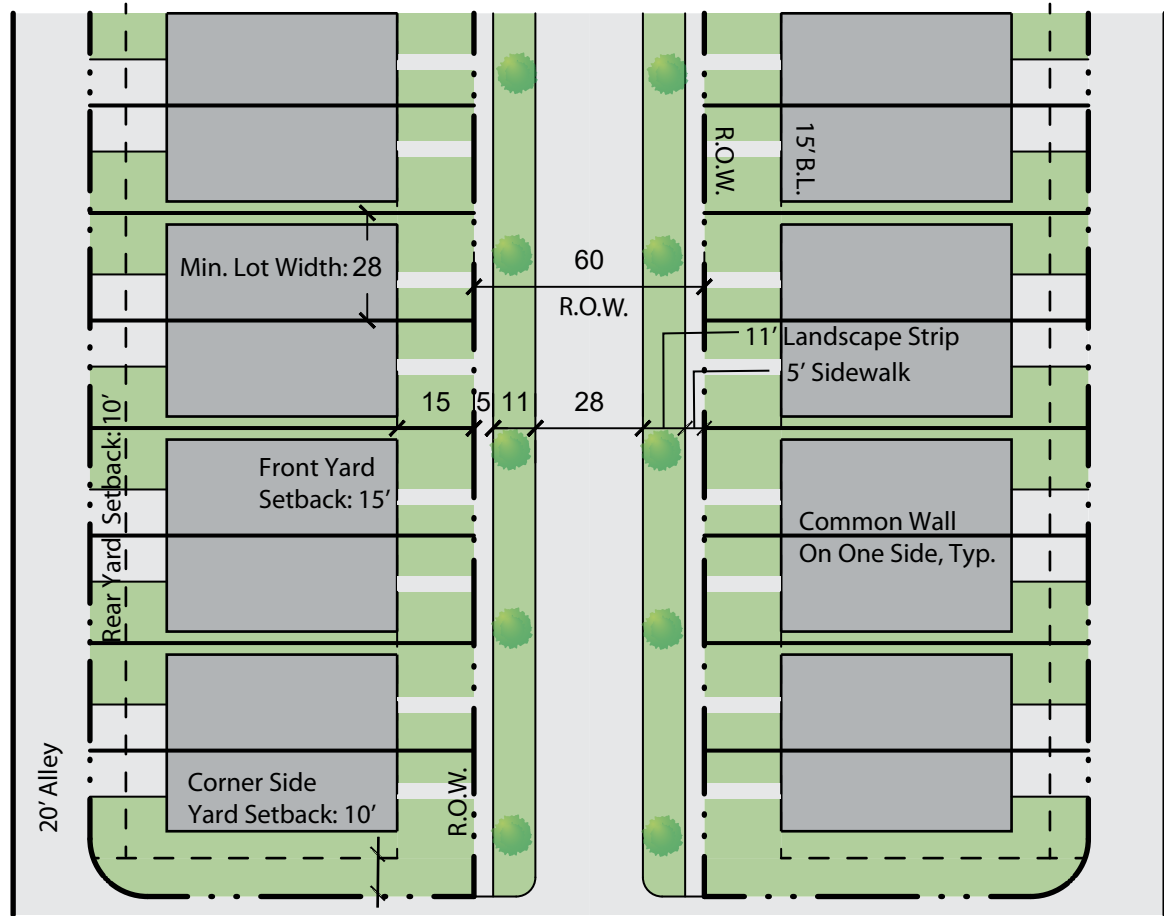
VALENCIA

±458.4 Acres of Land
Manvel, Texas

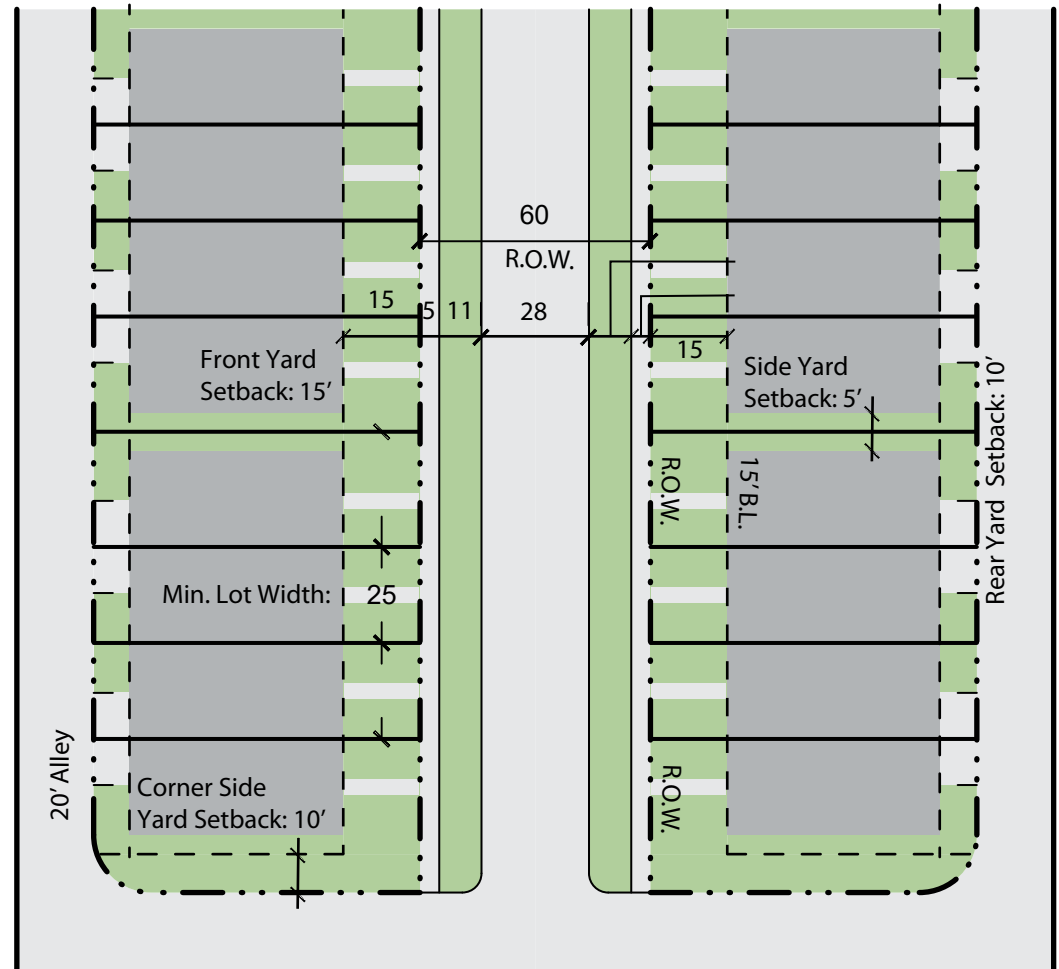
Reference Date: 02.27.2024



RELATIONSHIPS | PROCESS | DESIGN

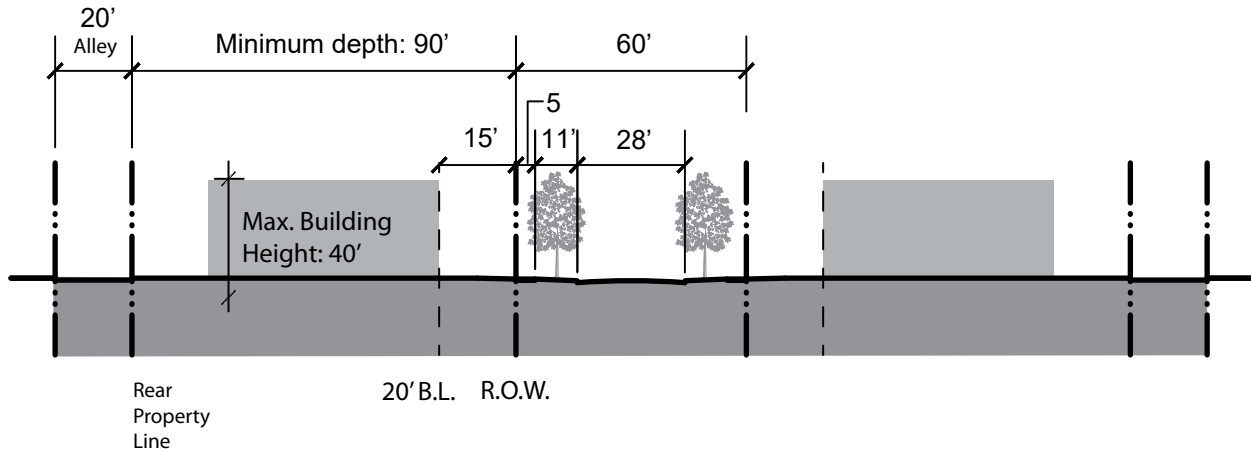


3. Plan: Rear Load 28' Attached Product - 60' R.O.W.

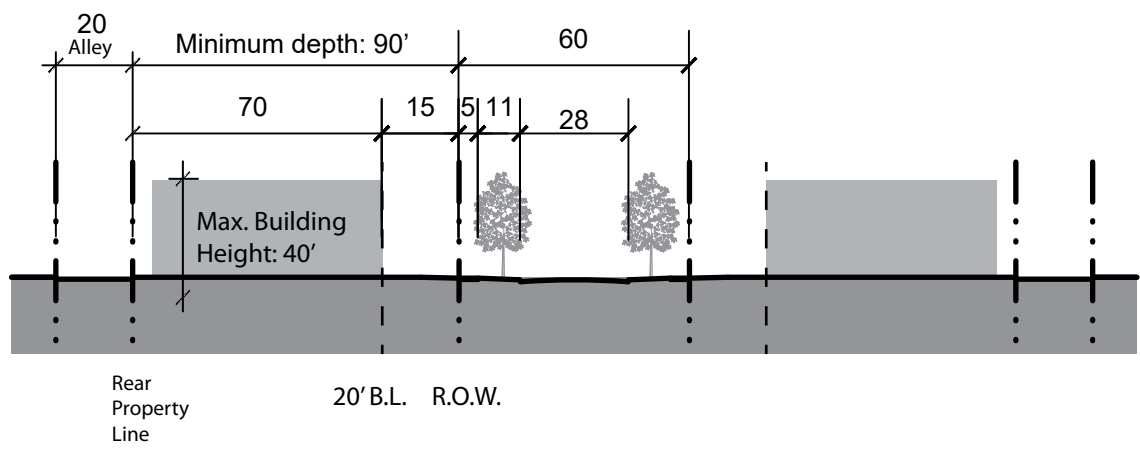


4. Plan: Rear Load 25' Townhome Product - 60' R.O.W.

Note:
 Max. Number of Attached Units: 5
 Min. Number of Attached Units: 2



3 Section: Rear Load 28' Attached Product - 60' R.O.W.



4. Section: Rear Load 25' Townhome Product - 60' R.O.W.

Prepared for

HILLWOOD RESIDENTIAL

© Copyright 2024 LJA Engineering, Inc. Drawings, written material, and design concepts provided is considered property of LJA & shall not be reproduced in part or whole in any form or format without written consent of LJA.

This exhibit is an illustrative representation for presentation purposes only and should not be used for computation or construction purposes. The information provided within should be considered a graphic representation to aid in determining plan components and relationships and is subject to change without notice. All property boundaries, easements, road alignments, drainage, flood plains, environmental issues and other information shown is approximate and should not be relied upon for any purpose. No warranties, express or implied, concerning the actual design, accuracy, location, and character of the facilities shown on this exhibit are intended.

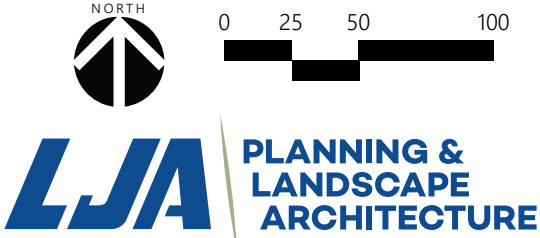
EXHIBIT M

Planned Unit Development

Specialty Product Exhibits for Rear Load Attached and Townhome Products

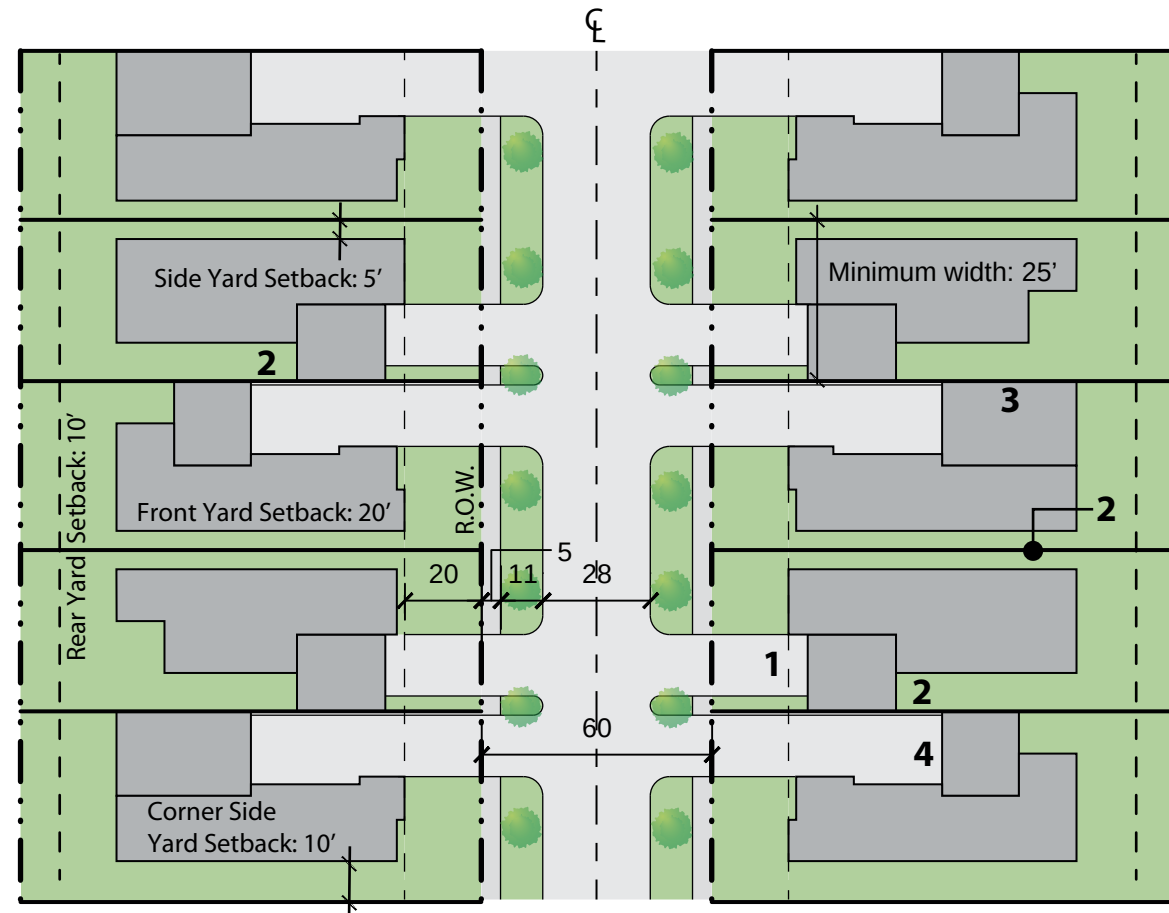
VALENCIA

±458.4 Acres of Land
 Manvel, Texas

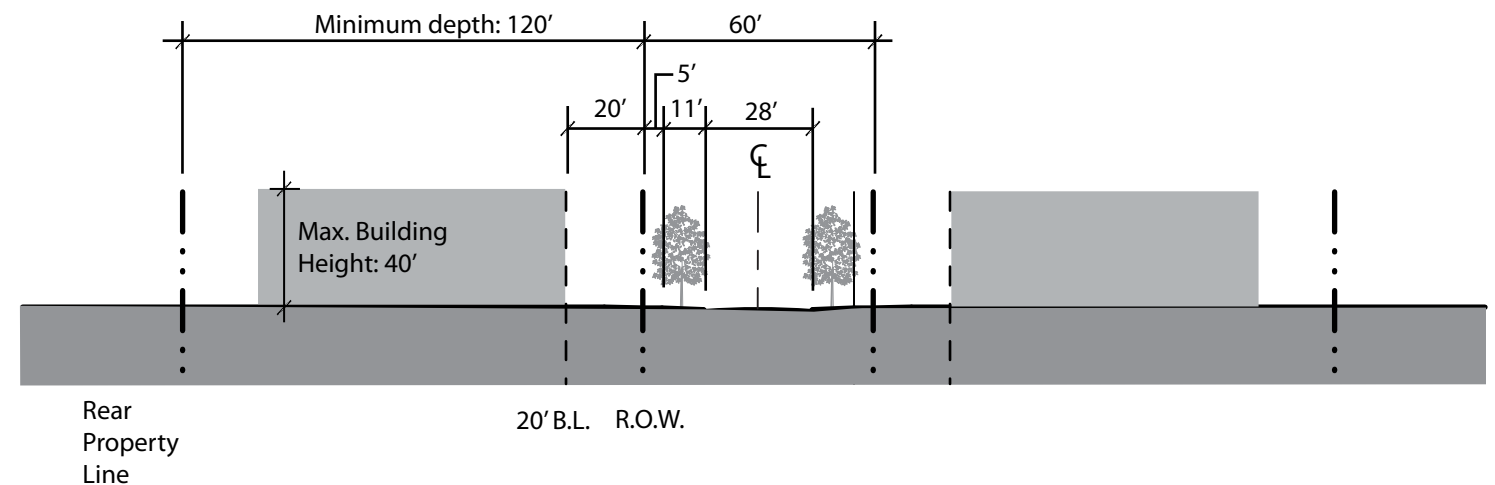
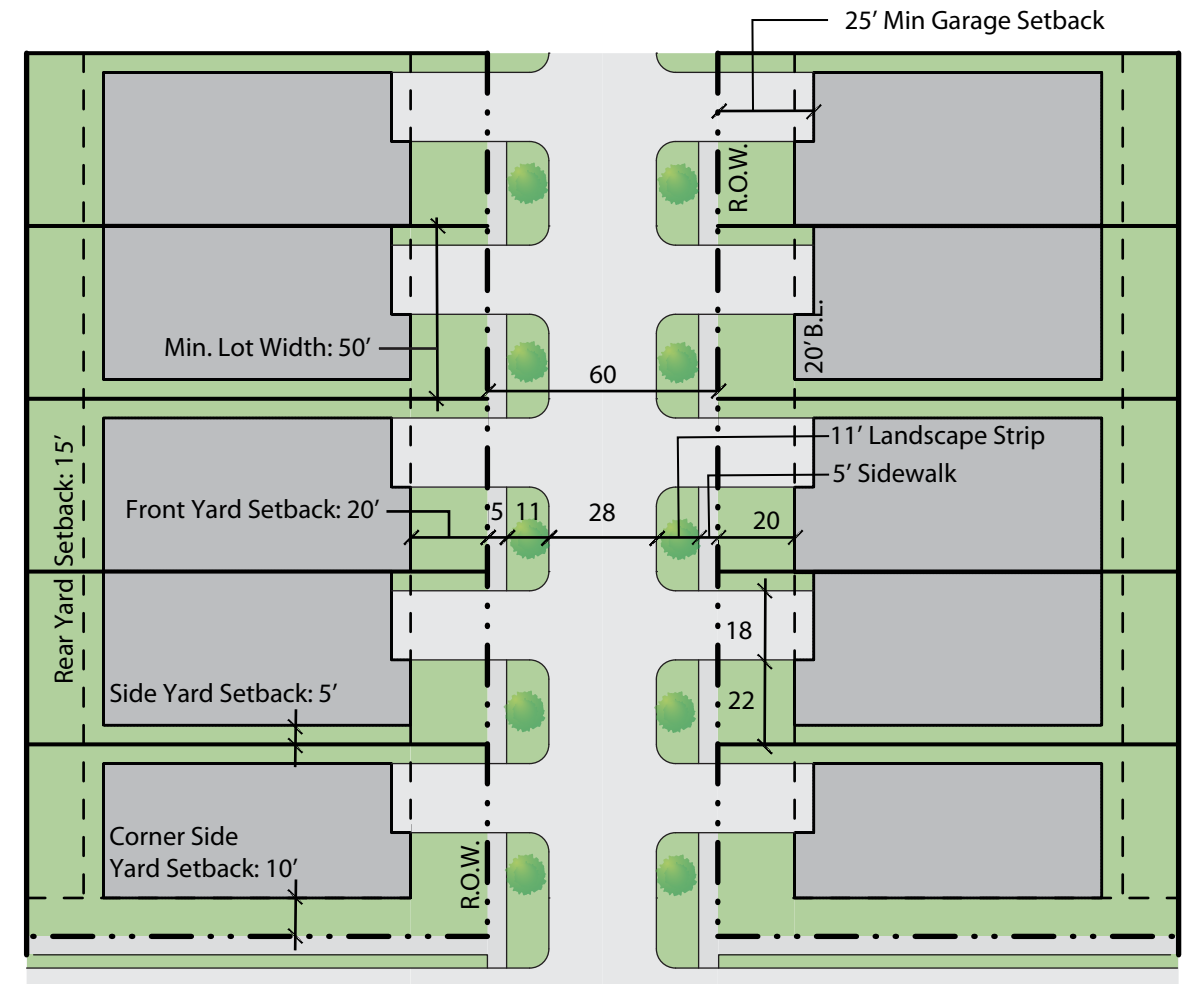
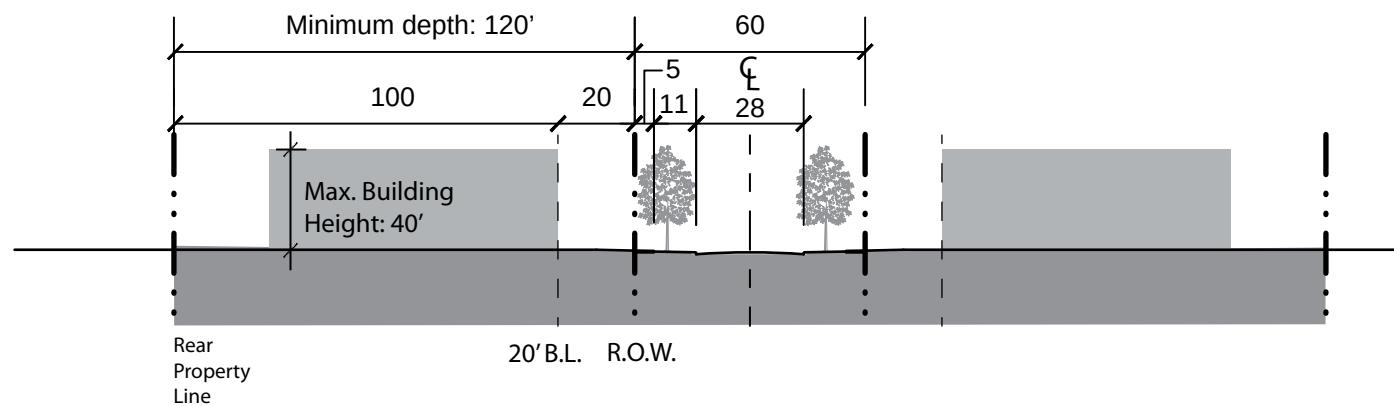


RELATIONSHIPS | PROCESS | DESIGN

Reference Date: 02.27.2024



1. 25' Min Garage Setback
2. 10' Min. Building separation
3. Zero Lot line at garage, typ.
4. 50' Setback



Prepared for

HILLWOOD RESIDENTIAL

© Copyright 2024 LJA Engineering, Inc. Drawings, written material, and design concepts provided is considered property of LJA & shall not be reproduced in part or whole in any form or format without written consent of LJA.

This exhibit is an illustrative representation for presentation purposes only and should not be used for computation or construction purposes. The information provided within should be considered a graphic representation to aid in determining plan components and relationships and is subject to change without notice. All property boundaries, easements, road alignments, drainage, floodplains, environmental issues and other information shown is approximate and should not be relied upon for any purpose. No warranties, express or implied, concerning the actual design, accuracy, location, and character of the facilities shown on this exhibit are intended.

EXHIBIT N

Planned Unit Development

Specialty Product Exhibits for Zipper Lot and Patio/Zero Lot Line Products

VALENCIA

±458.4 Acres of Land
Manvel, Texas

6. Section: Patio & Zero Lot Line Product - 60' R.O.W.

Reference Date: 02.27.2024



LJA PLANNING &
LANDSCAPE
ARCHITECTURE

RELATIONSHIPS | PROCESS | DESIGN



MANVEL CITY COUNCIL DATA SHEET

MEETING DATE: April 1, 2024

TOPIC: Subdivision variance request for an approximate 0.9445-acre tract of land generally located 475 feet southwest from the southwest corner of Patterson Road and Chocolate Bayou Road (PID 711015) seeking to vary the requirements of Chapter 62, Sections 62-108(a)(4, 5, and 11), lot dimensions, residential lots not served by public water and sewer, and a flag or key shaped lot.

BACKGROUND: The property owner has reached out to the City of Manvel for the purpose of building a single-family residence at this location. This lot is approximately 0.9445 acres, has a 20-foot front frontage from Patterson Road, and is a flag lot. For these reasons, this Variance has been requested for the non-conforming lot portions of this property.

Analysis: This Variance application is requesting Variances from three sections of the Subdivision Ordinance. These sections have been included below with analysis.

Subdivision requirements and proposed Variances.

Sec. 62-108(4) Lot dimensions shall be a minimum of 120 feet in width at the right-of-way line and of a depth to provide an area of not less than one acre or 43,560 square feet.

Proposed Variance: The proposed Variance requests that a minimum of 20-foot width be provided where 120 feet is required, and to have a .93-acre tract where one acre is required. The construction of a single-family home will require a 30-foot dedication of right-of-way for Patterson Road, that is currently shown on the survey as a road easement.

Sec. 62-108(5) Residential lots not served by a public sewer system shall be not less than 120 feet in width at the building setback line and shall have an area of not less than one acre or 43,560 square feet.

Proposed Variance: This Variance is to allow a residential lot served by septic and well that will be less than one-acre in size. Although this property is under one acre, if these Variances are approved, well and septic can still serve this property.

Sec. 62-108(11) Flag or key-shaped lots are not allowed.

Proposed Variance: This parcel does not have the required minimum 120 width required at the right-of-way line, and only has 20 feet in width. This means that this parcel is considered a flag or key shaped lot, as it goes from a narrow width at the right-of-way line and afterwards the largest portion of the lot is behind adjoining lots (See Lot, flag-shaped or key shaped definition).

Lot, flag-shaped or key-shaped means a lot with frontage on and access to the public or private street right-of-way, which is provided by a narrow driveway(s), access easement(s), or other parcel of land, referred to as the "staff" of such flag lot, and the largest portion of the lot is situated behind adjoining lots which front on a public or private street.

In order to approve a Variance, the City Council must consider criteria found in Sec. 62-5, when considering varying from the minimum standards and requirements of the City.

Sec. 62-5. – Variance – Criteria for Approval

(a) The rules and regulations provided herein or incorporated hereby are the minimum standards and requirements of the city. Variances from this chapter are not anticipated, and there is no entitlement to a variance, except in extreme and unusual circumstances, variances from the technical terms of this chapter may be requested. A variance from any such rule or regulation may be granted by the city council, only upon a good and sufficient showing by the applicant that:

- 
- (1) There are special circumstances or conditions affecting the property in question;
 - (2) Enforcement of the provisions of this chapter will deprive the applicant of a substantial property right; and
 - (3) If a variance is granted it will not be materially detrimental to the public welfare or injurious to other property or property rights in the vicinity.

Analysis of Variance Criteria: The property owner has purchased a property that was in a flag lot configuration. This lot was purchased prior to confirming whether this property satisfied the minimum requirements for development.

Criteria (1): There are special circumstances or conditions affecting the property in question.

Analysis (1): This property was purchased in its current configuration but was not formally platted prior to this purchase. This property was configured in this manner when the current property owner purchased this property. There are no special circumstances or conditions affecting the property in question, other than the lot being previously configured in a way that does not satisfy the minimum standards of the city.

Criteria (2): Enforcement of the provisions of this chapter will deprive the applicant of

a substantial property right.

Analysis (2): This property is currently in a configuration that would not allow the development of a single-family home that satisfies the minimum lot requirements for the City. If this Variance were not approved, the property owner would have to obtain more property from adjacent property owners to satisfy the minimum lot width requirements and create a conforming residential lot. This means that if the adjacent property owners were unwilling to sell additional property, this property could not be utilized for a single-family residence.

Criteria (3): If a variance is granted it will not be materially detrimental to the public welfare or injurious to other property or property rights in the vicinity.

Analysis (3): If these Variances are granted, it would not be materially detrimental to the public, as a home could be built to the minimum requirements of the City.

STAFF RECOMMENDATION: The City staff is not recommending approval of this variance request to Chapter 62, Sections 62-108(a)(4, 5, and 11), lot dimensions, residential lots not served by public water and sewer less than one acre, and a flag or key shaped lot as this property was previously created in a non-conforming configuration.



ATTACHMENTS: Application Form, Vicinity, Aerial Map, Major Thoroughfare Plan Map, Photograph of Frontage, and Survey and metes and bounds.

FUNDING ISSUES

- ☒ **Not applicable**
- ☐ **Not budgeted**
- ☐ **Full amount already budgeted**
- ☐ **Funds to be transferred from Acct.#**

SUBMITTING STAFF MEMBER

Evan DuVall
Zoning Administrator

FINANCE DIRECTOR APPROVAL _____

CITY MANAGER APPROVAL _____

CITY OF MANVEL

<http://www.cityofmanvel.com>

PO Box 187
Manvel, Texas 77578

Phone: (281) 489-0630
Fax: (281) 489-0634

Subdivision Variance Application

Applicant Information

Applicant (if not owner): _____

Phone: _____ e-mail: _____

Owner: Ardsley and Mary Antonette Ringor

Owner Address: 8 Mira Loma Dr. City Manvel State Tx Zip 77578

Phone: 805 861 0261 e-mail: marygringor@gmail.com

Property Information

Site Address: Patterson Rd Manvel Texas 77578

Legal description (from deed): Samuel Patterson
(Property must be legally subdivided or be lot of record)

Brazoria County Identification Number: 711015

Description of Subdivision Variance Request

Section 62-108 (a) (4&5) Lot size requirement
(11) prohibition of flag shaped lot

Detailed Explanation of Subdivision Variance Request

Please answer, on a separate sheet of paper if necessary, the following questions:

- o What are the special circumstances or conditions affecting the land involved such that the strict application of the provisions of the subdivision code would require a variance to the city's subdivision ordinance?

L shaped and less than an acre. The land was
purchased as-is. The shaped and size is not self-created
by current owners.

o How is the variance necessary for the preservation and enjoyment of a substantial property right of the applicant?

The land was purchased to build a primary residence

o Describe how the granting of the variance will not be detrimental to the public health, safety or welfare, or injurious to other property in the area.

As mentioned, the area will be developed as a primary home, similar to adjacent properties.

o Describe how the granting of the variance will not have the effect of preventing the orderly subdivision of other land in the area in accordance with the provisions of the subdivision ordinance.

The land has its own right of way. In some way, once we develop the area it will be more maintained, currently it is empty and is just being use for junk/storage.

Applicant Authorization

I authorize the City of Manvel to conduct any site visits necessary to evaluate this subdivision variance application.

I hereby state that I have prepared this application and that, to the best of my knowledge, the information contained herein is complete, accurate, and a true representation of the subdivision variance request. I further attest that I have the authority to submit this application and agree to comply with any and all conditions of subdivision variance approval. I agree to provide any additional information requested by the City of Manvel as they deem necessary for the processing of this application.

Mringor
Applicant Signature

3/20/24
Date

Submit variance request material to the Permit Department, City of Manvel, 20025 Highway 6 Manvel, Texas 77578 with the plat application. Failure to pay the required application fees or provide the information, drawings, or attachments in the form as requested by the City shall automatically mark the application as 'incomplete' and such application shall not be placed on the agenda for consideration until all information, fees, drawings, or attachments are deemed to be complete and in proper form by city staff.



Ringor's Residence PID: 711015



PID: 711015



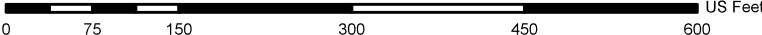
Parcels



City of Manvel ETJ

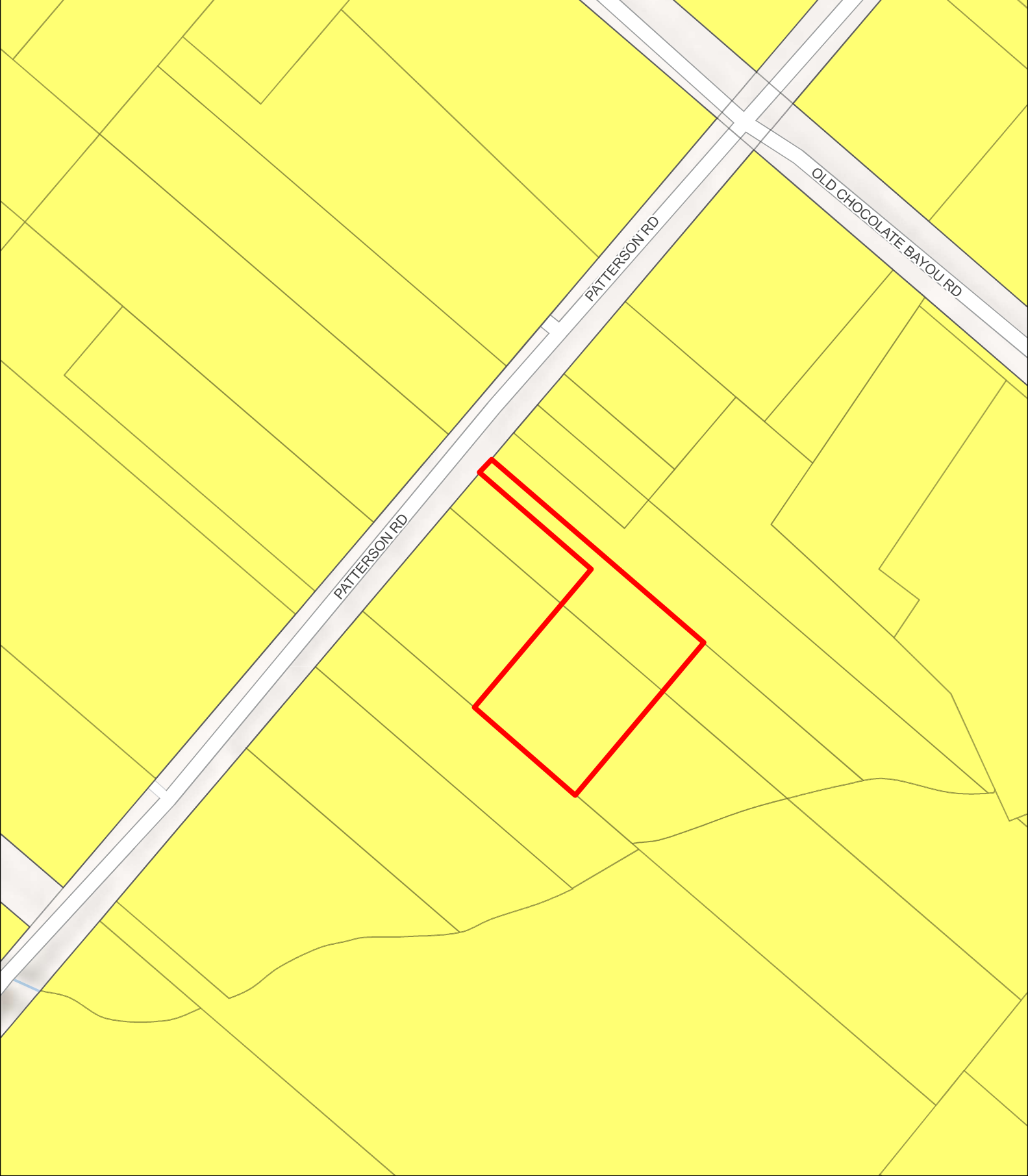


City of Manvel City Limits



Date: March 2024
Reference: 2024021
Data Source: City of Manvel,
Brazoria County Open Data

This map is made available for reference purposes only and should not be substituted for a survey product. The City of Manvel will not accept liability of any kind in conjunction with its use.



Ringor's Residence PID: 711015



PID: 711015



City of Manvel City Limits



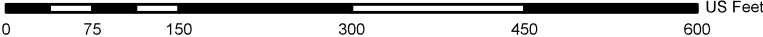
Parcels



Open Single-Family Residential District



City of Manvel ETJ



This map is made available for reference purposes only and should not be substituted for a survey product. The City of Manvel will not accept liability of any kind in conjunction with its use.



Date: March 2024
Reference: 2024021
Data Source: City of Manvel,
Brazoria County Open Data



Ringor's Residence PID: 711015



This map is made available for reference purposes only and should not be substituted for a survey product. The City of Manvel will not accept liability of any kind in conjunction with its use.

- Proposed Collector (80' ROW)
- Parkway (120' ROW)
- Proposed Parkway (120' ROW)
- PID: 711015
- Parcels
- City of Manvel ETJ
- City of Manvel City Limits

0 75 150 300 450 600 US Feet



Date: March 2024
Reference: 2024021
Data Source: City of Manvel,
Brazoria County Open Data



H. N. LITTLE
SURVEY
ABSTRACT 319

MARCUS SAMUEL HOLMES
C.F. NO. 2007057550
O.R.B.C.

PATTERSON ROAD
(60' WIDE)

REMAINDER OF
BRIAN FURNACE
C.F. NO. 2023016958
O.R.B.C.

MELINDA DEEL
& DAVID DEEL
C.F. NO. 2016004416
O.R.B.C.

FRANKIE L. WISNOSKI
& PEGGY L. WISNOSKI
C.F. NO. 2009016980
O.R.B.C.

LOT 3
SAMUEL PATTERSON
SUBDIVISION
VOL. 3, PG. 152
P.R.B.C.

0.9445 ACRES
(41,141 SQ. FT.)
(VACANT)

FRANKIE L. WISNOSKI
& PEGGY L. WISNOSKI
C.F. NO. 2009016980
O.R.B.C.

DESCRIPTION OF A TRACT OF LAND CONTAINING
0.9445 ACRES (41,141 SQUARE FEET) SITUATED
IN THE H. N. LITTLE SURVEY, ABSTRACT 319
BRAZORIA COUNTY, TEXAS

BEING A TRACT OF LAND CONTAINING 0.9445 ACRES (41,141 SQUARE FEET),
SITUATED IN THE H. N. LITTLE SURVEY, ABSTRACT 319, BRAZORIA COUNTY,
TEXAS, BEING ALL OF A TRACT OF LAND CONVEYED UNTO BRIAN FURNACE BY
DEED AS RECORDED UNDER COUNTY CLERK'S FILE NO. 2023016958 OF THE
OFFICIAL RECORDS OF BRAZORIA COUNTY, TEXAS, BEING OUT OF LOT 3, OF
SAMUEL PATTERSON SUBDIVISION, A SUBDIVISION IN BRAZORIA COUNTY,
TEXAS, ACCORDING TO THE MAP OR PLAT THEREOF RECORDED IN VOLUME 3,
PAGE 152, OF THE PLAT RECORDS OF BRAZORIA COUNTY, TEXAS. SAID
0.9445-ACRE TRACT BEING MORE PARTICULARLY DESCRIBED BY METES AND
BOUNDS AS FOLLOWS:

BEGINNING AT THE NORTH CORNER OF SAID TRACT HEREIN DESCRIBED, BEING
IN THE MARGINS OF PATTERSON ROAD (60 FEET WIDE), BEING LOCATED SOUTH
41°44'00" WEST, A DISTANCE OF 232.60 FEET FROM THE NORTH CORNER OF
SAID LOT 3;

THENCE SOUTH 47°55'09" EAST, AT 36.60 FEET PASSING A POINT ONLINE FOR
REFERENCE AT A DISTANCE OF 36.60 FEET (FROM WHICH A FOUND 5/8-INCH
IRON ROD BEARS NORTH 25°48' EAST, A DISTANCE OF 0.7 FEET), AND
CONTINUE FOR A TOTAL DISTANCE OF 356.66 FEET TO A FOUND 5/8-INCH
IRON ROD FOR THE SOUTHEAST CORNER OF SAID TRACT HEREIN DESCRIBED;

THENCE SOUTH 41°44'00" WEST, A DISTANCE OF 230.65 FEET TO A FOUND
5/8-INCH IRON ROD FOR THE SOUTH CORNER OF SAID TRACT HEREIN
DESCRIBED;

THENCE NORTH 47°55'09" WEST, A DISTANCE OF 154.94 FEET TO A FOUND
5/8-INCH IRON ROD FOR THE SOUTHWEST CORNER OF SAID TRACT HEREIN
DESCRIBED;

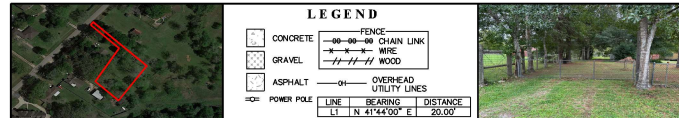
THENCE NORTH 38°12'00" EAST, A DISTANCE OF 211.13 FEET TO A FOUND
5/8-INCH IRON ROD FOR AN INTERIOR CORNER OF SAID TRACT HEREIN
DESCRIBED;

THENCE NORTH 47°55'09" WEST, PASS A 2-INCH METAL POST ONLINE FOR
REFERENCE AT A DISTANCE OF 151.30 FEET AND CONTINUE FOR A TOTAL
DISTANCE OF 188.70 FEET TO A POINT IN THE MARGINS OF SAID PATTERSON
ROAD FOR THE NORTHWEST CORNER OF SAID TRACT HEREIN DESCRIBED;

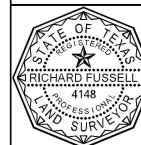
THENCE NORTH 41°44'00" EAST, WITHIN THE MARGINS OF SAID PATTERSON
ROAD, A DISTANCE OF 20.00 FEET TO THE POINT OF BEGINNING AND
CONTAINING 0.9445 ACRES (41,141 SQUARE FEET), MORE OR LESS.

NOTES:

1. ALL BEARINGS SHOWN HEREON ARE REFERENCED TO A PRIOR DEED CONVEYED UNTO BRIAN FURNACE, RECORDED IN COUNTY CLERK'S FILE NO. 2023016958 OF THE OFFICIAL RECORDS OF BRAZORIA COUNTY, TEXAS. POINTS (A) AND (B) WERE HELD FOR HORIZONTAL CONTROL.
2. THIS SURVEY WAS COMPLETED WITHOUT THE BENEFIT OF INFORMATION CONTAINED IN A TITLE REPORT PER THE REQUEST OF THE BUYER. SURVEYOR HAS NOT INDEPENDENTLY ABSTRACTED SUBJECT PROPERTY.
3. THIS SURVEY IS LIMITED TO ANYSLEY VALENCIA RINGOR AND MARY ANTONETTE GONZALEZ RINGOR FOR THIS TRANSACTION ONLY. IT IS NOT TRANSFERABLE TO ADDITIONAL INSTITUTIONS OR SUBSEQUENT OWNERS.
4. ALL EASEMENTS AND BUILDING LINES SHOWN ARE PER THE RECORDED PLAT UNLESS OTHERWISE NOTED.
5. THERE ARE NO NATURAL DRAINAGE COURSES ON SUBJECT PROPERTY.



LEGAL DESCRIPTION: A TRACT OF LAND CONTAINING 0.9445 ACRES (41,141 SQUARE FEET) SITUATED IN THE H. N. LITTLE SURVEY, ABSTRACT 319, BRAZORIA COUNTY, TEXAS. SAID TRACT BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS.



SURVEYOR CERTIFICATE:
I, RICHARD FUSSELL, LICENSED LAND SURVEYOR, NO. 4148, DO HEREBY CERTIFY THAT I AM THE SURVEYOR OF THE ABOVE DESCRIBED TRACT OF LAND, AND THAT THIS PLAT REPRESENTS THE BOUNDARY SURVEY CONDUCTED UNDER MY SUPERVISION ON OCTOBER 16, 2023, AND THAT THIS PLAT SUBSTANTIALLY COMPLES WITH THE CURRENT STANDARDS AS ADOPTED BY THE TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, AND THAT THERE ARE NO ENCUMBRANCES OR PROJECTIONS EXCEPT AS SHOWN.

CLIENT:
TBD
ADDRESS:
5327 PATTERSON ROAD
www.survey1inc.com
survey1@survey1inc.com
FIELD CREW: JF
TECH: WS
DRAFTER: JB
FINAL CHECK: JF
DATE: 11-08-23
Firm Registration No. 100758-00
P.O. Box 2543 | Allen, TX 77012 | (281)393-1382

**DESCRIPTION OF A TRACT OF LAND CONTAINING
0.9445 ACRES (41,141 SQUARE FEET) SITUATED
IN THE H. N. LITTLE SURVEY, ABSTRACT 319
BRAZORIA COUNTY, TEXAS**

Being a tract of land containing 0.9445 acres (41,141 square feet), situated in the H. N. Little Survey, Abstract 319, Brazoria County, Texas, being all of a tract of land conveyed unto Brian Furnace by deed as recorded under County Clerk's File No. 2023016958 of the Official Records of Brazoria County, Texas, being out of Lot 3, of Samuel Patterson Subdivision, a subdivision in Brazoria County, Texas, according to the map or plat thereof recorded in Volume 3, Page 152, of the Plat Records of Brazoria County, Texas. Said 0.9445-acre tract being more particularly described by metes and bounds as follows:

BEGINNING at the north corner of said tract herein described, being in the margins of Patterson Road (60 feet wide), being located South 41°44'00" West, a distance of 232.60 feet from the north corner of said Lot 3;

THENCE South 47°55'09" East, at 36.60 feet passing a point online for reference at a distance of 36.60 feet (from which a found 5/8-inch iron rod bears North 25°48' East, a distance of 0.7 feet), and continue for a total distance of 356.66 feet to a found 5/8-inch iron rod for the southeast corner of said tract herein described;

THENCE South 41°44'00" West, a distance of 230.65 feet to a found 5/8-inch iron rod for the south corner of said tract herein described;

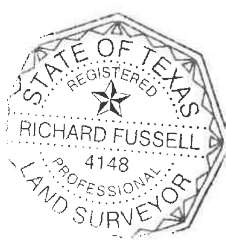
THENCE North 47°55'09" West, a distance of 154.94 feet to a found 5/8-inch iron rod for the southwest corner of said tract herein described;

THENCE North 38°12'00" East, a distance of 211.13 feet to a found 5/8-inch iron rod for an interior corner of said tract herein described;

THENCE North 47°55'09" West, pass a 2-inch metal post online for reference at a distance of 151.30 feet and continue for a total distance of 188.70 feet to a point in the margins of said Patterson Road for the northwest corner of said tract herein described;

THENCE North 41°44'00" East, within the margins of said Patterson Road, a distance of 20.00 feet to the POINT OF BEGINNING and containing 0.9445 acres (41,141 square feet), more or less.

Note: This metes and bounds description is referenced to a survey drawing prepared by Survey 1, Inc. (Firm Registration No. 100758-00) dated Nov. 08, 2023, job number 10-129172-23.





MANVEL CITY COUNCIL DATA SHEET

MEETING DATE: April 1, 2024

TOPIC: Subdivision variance request for an approximately 0.2311-tract of land located at 9706 Soto Street (PID 702290) seeking to vary the requirements of Chapter 62, Section 62-116(a), structures near pipelines.

BACKGROUND: This property is located at 9706 Soto Street, and currently has a single-family residence. An application was submitted to the city on January 26, 2024 to install a 20' x 16' patio cover in the rear-yard of this residence. This patio cover was located approximately 33' feet from the rear-property line and was subsequently approved due to the setbacks found for single-family accessory structures within the Meridiana Development. This permit was subsequently issued, and inspections began on this structure as it continued through the process. The pier, building frame, and electrical rough inspections were completed and approved. On February 22, 2024 a foundation inspection occurred, it was discovered that there was a 50-foot building line on the plat that applied to accessory structures as well as the main structure due to an adjacent pipeline. The structure has mostly been completed and has only the foundation and final inspections remaining.

The contractor has applied for this Variance to leave the existing structure in place at the current location at 33 feet from the property line, or roughly a 41 feet from the pipeline. Approval of this Variance would be a nine (9) foot encroachment into this building line setback (See Section 62-116).

Sec. 62-116 – Proximity of structures to pipelines.

- (a) No residential, commercial, or industrial structure, other than structures necessary to operate the pipeline, shall be erected or moved to a location nearer than 50 feet to any pipeline, except for low pressure distribution system pipeline as defined in [section 62-2](#), Definitions.

Analysis: This Variance application is requesting Variances from three sections of the Subdivision Ordinance. These sections have been included below with analysis.

Subdivision requirements and proposed Variances.

Proposed Variance: The proposed variance would allow the currently construction patio cover to be completed at its current location, roughly thirty-three feet from the rear property line and forty-one feet from a pipeline.

Sec. 62-5. – Variance – Criteria for Approval

(a) The rules and regulations provided herein or incorporated hereby are the minimum standards and requirements of the city. Variances from this chapter are not anticipated, and there is no entitlement to a variance, except in extreme and unusual circumstances, variances from the technical terms of this chapter may be requested. A variance from any such rule or regulation may be granted by the city council, only upon a good and sufficient showing by the applicant that:

- (1) There are special circumstances or conditions affecting the property in question;
- (2) Enforcement of the provisions of this chapter will deprive the applicant of a substantial property right; and
- (3) If a variance is granted it will not be materially detrimental to the public welfare or injurious to other property or property rights in the vicinity.



Criteria (1): There are special circumstances or conditions affecting the property in question.

Analysis (1): This property is unique as it has a building line that applies to both permanent structures and to accessories structures in relation to pipelines. During the application process, the contractor and the city approved a plan that encroached into this rear building line. This mistake was discovered toward the end of the project and has brought this Variance into consideration before City Council.

Criteria (2): Enforcement of the provisions of this chapter will deprive the applicant of a substantial property right.

Analysis (2): The property owner has had this patio cover under construction from at least February, and if this Variance isn't approved this structure will have to be moved behind the required building line. Currently a substantial investment has occurred at the current location of this patio cover and there isn't much to gain by relocated this patio cover behind the building line.

Criteria (3): If a variance is granted it will not be materially detrimental to the public welfare or injurious to other property or property rights in the vicinity.

Analysis (3): This accessory structure in its current location will be detrimental to the

public and will not create a hazard.

STAFF RECOMMENDATION: The City staff is recommending conditional approval of this variance request to Chapter 62, Sections 62-116 structures near pipelines as it will not be detrimental to the public.

Recommended conditions of approval.

1. This Variance is only for the 20' x 16' patio cover as approved in permit #24-000152.
2. No other permanent structures can encroach into this required building line setback.

ATTACHMENTS: Application Form, Vicinity, Aerial Map, Survey, and Subdivision DA

FUNDING ISSUES



- ☒ **Not applicable**
☐ **Not budgeted**
☐ **Full amount already budgeted**
☐ **Funds to be transferred from Acct.#**

SUBMITTING STAFF MEMBER

Evan DuVall
Zoning Administrator

FINANCE DIRECTOR APPROVAL _____

CITY MANAGER APPROVAL _____

CITY OF MANVEL

<http://www.cityofmanvel.com>

PO Box 187
Manvel, Texas 77578

Phone: (281) 489-0630
Fax: (281) 489-0634

Subdivision Variance Application

Applicant Information

Applicant (if not owner): TBC Outdoor Living Corp.
Phone: 281-899-8744 e-mail: tsalazar@tbc-outdoor.com
Owner: Tyler Salazar
Owner Address: 2115 n houston City Pearland State tx Zip 77581
Phone: 281-889-8744 e-mail: office@tbc-outdoor.com

Property Information

Site Address: 9706 Soto st, Manvel, texas
Legal description (from deed): Lot 53, Block 1, Meridiana Section 39A
(Property must be legally subdivided or be lot of record)
Brazoria County Identification Number: 2021080365

Description of Subdivision Variance Request

Free-standing gable cover to protrude into 50' build line

Detailed Explanation of Subdivision Variance Request

Please answer, on a separate sheet of paper if necessary, the following questions:

- What are the special circumstances or conditions affecting the land involved such that the strict application of the provisions of the subdivision code would require a variance to the city's subdivision ordinance?

For this particular lot, the 50' build line that protrudes through it deems the majority of the backyard unusable. The proposed freestanding cover is in line with the back of the house and would need a variance.

- o How is the variance necessary for the preservation and enjoyment of a substantial property right of the applicant?

For this particular lot, the 50' build line that protrudes through it deems the majority of the backyard unusable. Not having the variance would limit the use of the majority of the property owners yard.

- o Describe how the granting of the variance will not be detrimental to the public health, safety or welfare, or injurious to other property in the area.

The granting of the variance would not be detrimental to the overall public health, safety, or welfare, or injurious to other property in the area because the structure is in the property owners fenced/gated backyard. Also it does not limit pipeline accessibility.

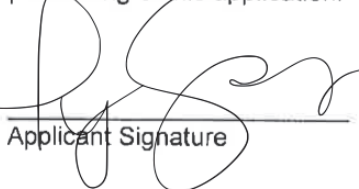
- o Describe how the granting of the variance will not have the effect of preventing the orderly subdivision of other land in the area in accordance with the provisions of the subdivision ordinance.

Granting the variance would not effect preventing orderly subdivison in the area because nothing essential is being taken away or given up. More is being deducted by not granting the variance since it would not allow the homeowner use of the majority of their backyard.

Applicant Authorization

I authorize the City of Manvel to conduct any site visits necessary to evaluate this subdivision variance application.

I hereby state that I have prepared this application and that, to the best of my knowledge, the information contained herein is complete, accurate, and a true representation of the subdivision variance request. I further attest that I have the authority to submit this application and agree to comply with any and all conditions of subdivision variance approval. I agree to provide any additional information requested by the City of Manvel as they deem necessary for the processing of this application.


Applicant Signature

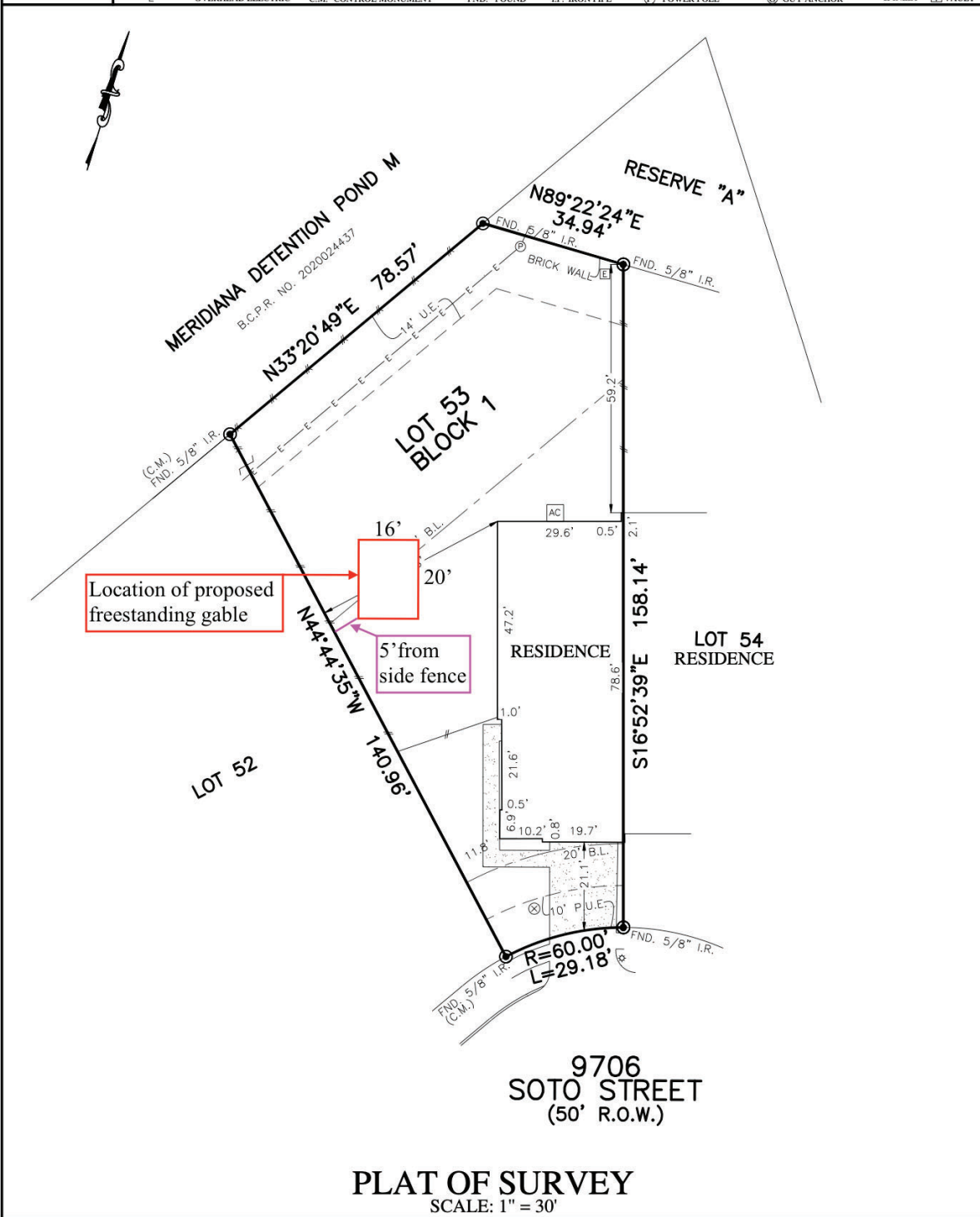
3/12/24

Date

Submit variance request material to the Permit Department, City of Manvel, 20025 Highway 6 Manvel, Texas 77578 with the plat application. Failure to pay the required application fees or provide the information, drawings, or attachments in the form as requested by the City shall automatically mark the application as 'incomplete' and such application shall not be placed on the agenda for consideration until all information, fees, drawings, or attachments are deemed to be complete and in proper form by city staff.



FLATWORK	B.L. BUILDING LINE	T.O.F. TOP OF FORM	U.V.E. UNOBSTRUCTED VISIBILITY EASEMENT	MANHOLE
PROPERTY LINE	B.L.(FL) FRONT LOAD BUILDING LINE	U.E. UTILITY EASEMENT	MAC.C.E. MAINTENANCE & ACCESS EASEMENT	GRATE DRAIN
BUILDING LINE	B.L.(SI) SWING IN BUILDING LINE	W.L.E. WATER LINE EASEMENT	ACC.E. ACCESS EASEMENT	PAD MOUNTED TRANSFORMER
EASEMENT	B.L.(3C) 3 CAR BUILDING LINE	STM.S.E. STORM SEWER EASEMENT	A.E. AERIAL EASEMENT	ELECTRIC BOX
WOODEN FENCE	C.B.L. GARAGE BUILDING LINE	S.S.E. SANITARY SEWER EASEMENT	D.E. DRAINAGE EASEMENT	FIBER OPTIC
WROUGHT IRON FENCE	(B.G.) BUILDER GUIDELINES	R.O.W. RIGHT-OF-WAY	E.E. ELECTRIC EASEMENT	TELEPHONE PEDESTAL
CHAIN LINK FENCE	F.F. FINISHED FLOOR	P.A.E. PERMANENT ACCESS EASEMENT	WATER VALVE	GAS METER
OVERHEAD ELECTRIC	EXT. EXTENDED	P.U.E. PUBLIC UTILITY EASEMENT	FIRE HYDRANT	CABLE PEDESTAL
	PROP. PROPOSED	PVT. PRIVATE	MONUMENT	WATER METER
	C.M. CONTROL MONUMENT	FND. FOUND	I.P. IRON PIPE	POWER POLE
				GUY ANCHOR



NOTES:
1. ALL BEARINGS SHOWN HEREON ARE BASED ON THE RECORDED PLAT.
2. ALLPOINTS LAND SURVEY, INC. IS NOT LIABLE FOR ANY DAMAGES DUE TO INFORMATION NOT PROVIDED TO SURVEYOR OR BUILDER PLACING ANY IMPROVEMENTS WITHIN A BUILDING LINE OR EASEMENT.
3. ALL SET RODS ARE 5/8" I.R. WITH CAP MARKED "ALLPOINTS SURVEY"
4. SUBJECT TO APPLICABLE RESTRICTIVE COVENANTS LISTED IN ITEM 1, SCHEDULE "B" OF TITLE COMMITMENT ISSUED BY OLD REPUBLIC NATIONAL TITLE INSURANCE Co. UNDER G.F. No NT07-20231150.
5. ALL FOUND IRON RODS ARE CAPPED WITH PLASTIC CAPS MARKED "EHRA" UNLESS OTHERWISE NOTED
6. SHORT FORM BLANKET EASEMENT PER INST. NO. 2021064960

FOR: EDWARD MATTHEW FERGUSON
AND BRANDY BEAM FERGUSON
BY: DM
ADDRESS: 9706 SOTO STREET
ALLPOINTS JOB#: CH290642
G.F.: NT07-20231150
JOB:
FLOOD ZONE: X
COMMUNITY PANEL:
48039C0110K
EFFECTIVE DATE: 12/30/2020
LOMR: DATE:

LOT 53, BLOCK 1,
MERIDIANA, SECTION 39A,
INST. NO. 2021080365, OFFICIAL RECORDS,
BRAZORIA COUNTY, TEXAS
I HEREBY CERTIFY THAT THIS PLAT REPRESENTS THE
RESULTS OF A SURVEY MADE ON THE GROUND, ON THE 24TH
DAY OF AUGUST, 2023.
Henry M. Santos







9706 Soto St.

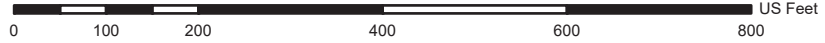


This map is made available for reference purposes only and should not be substituted for a survey product. The City of Manvel will not accept liability of any kind in conjunction with its use.

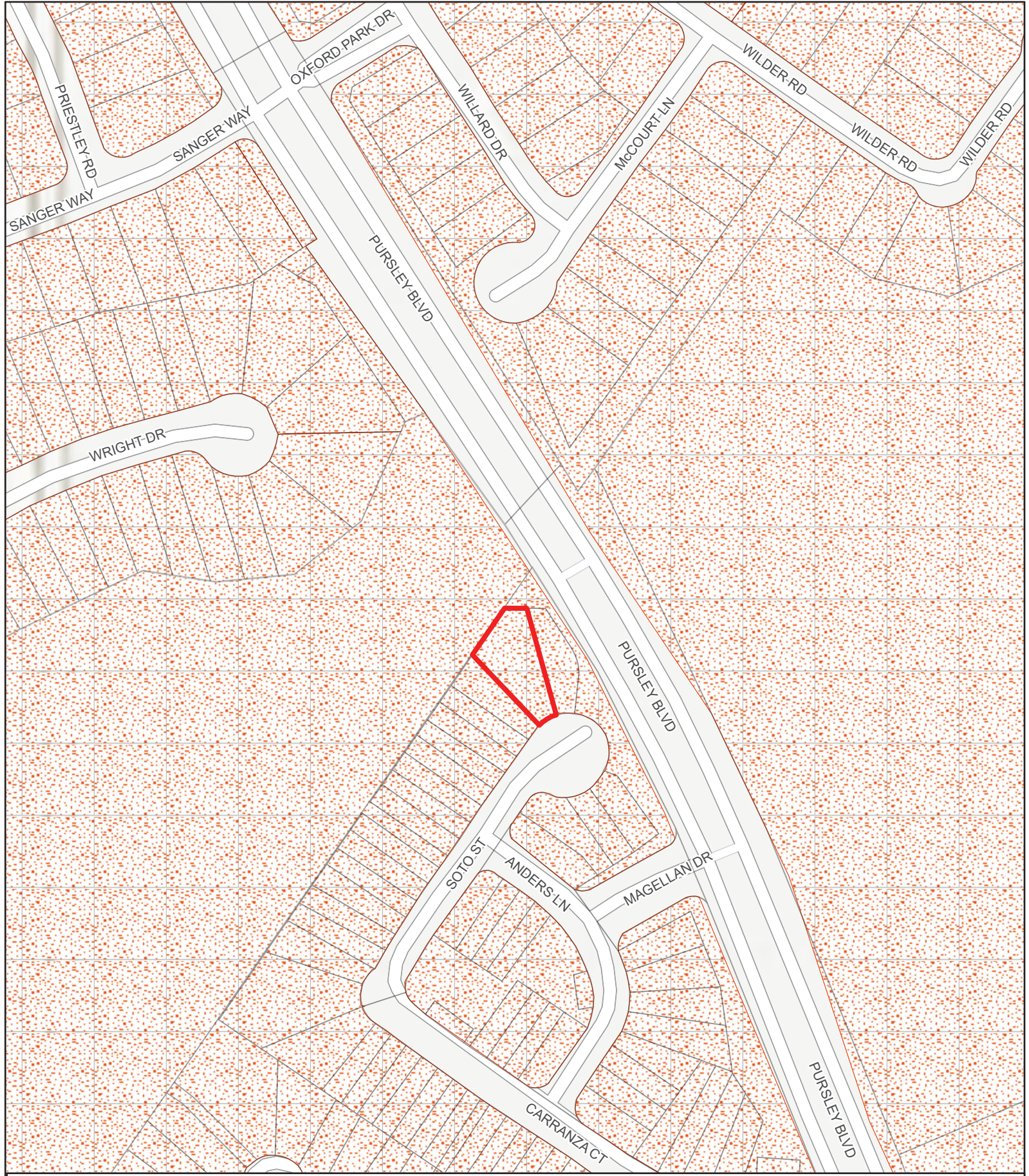
 9706 Soto St.

 City of Manvel ETJ

 City of Manvel City Limits



Date: March 2024
Reference: 2024024
Data Source: City of Manvel,
Brazoria County Open Data

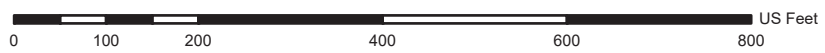


9706 Soto St.



This map is made available for reference purposes only and should not be substituted for a survey product. The City of Manvel will not accept liability of any kind in conjunction with its use.

- 9706 Soto St.
- Open - Planned Unit Development
- City of Manvel ETJ
- City of Manvel City Limits



Date: March 2024
Reference: 2024024
Data Source: City of Manvel,
Brazoria County Open Data

DEVELOPMENT AGREEMENT (FOR VARIANCE)

STATE OF TEXAS §
 §
COUNTY OF BRAZORIA §

This Development Agreement executed as of the ____ day of _____, 2024, is by and between the City of Manvel, Texas, (“City”) and TBC Outdoor Living Corp., applicant, on behalf of the property owner, Ferguson Edward Mathew & Brandy Beam of certain hereinafter described property located within the City of Manvel, (together known as “Developer”), all collectively referred to as the “Parties.” This Agreement is in regard to the reduction of pipeline setback to forty-one (41) feet of an approximate 0.2311-acre tract of land located at 9706 Soto Street.

WHEREAS, Developer wishes to complete an 16’ by 20’ patio cover under within the fifty-foot rear building line area of this property; and

WHEREAS, this request reduces the rear-building line for this 16’ x 20’ patio cover to thirty-three (33) feet, an encroachment to building lines required by Sec. 62-116 proximity of structures to pipelines for only this accessory structure;

NOW THEREFORE, for and in consideration of the premises and mutual obligations, covenants, and benefits hereinafter set forth, if said variance is granted by the city council, the Parties agree to the conditions, as follows:

1. PROJECT

1.01 Location. The property that is the subject of this agreement is located at 9706 Soto Street and is all the property legally described as: an approximate 0.2311-acre tract being all of lot 53, Block 1, Meridiana Section 39A according to the map or plat thereof recorded in Brazoria County Clerk’s File# 2021080365. The Property is more fully described and depicted in the proposed survey with patio cover location attached as Exhibit “A”, attached hereto.

2. CITY APPROVAL

2.01 Pursuant to its authority under Section 62-5 of the city code, the city agrees to allow the Developer to vary the requirements of Section 62-116 of the city’s subdivision ordinance, with conditions.

2.02 Conditions: The required conditions are as follows:

- (i) This Agreement is only for the 16’ x 20’ patio cover as approved in permit #24-000152; or
- (ii) No other permanent structures can encroach into this required building line setback.

2.03 City shall record this agreement with the Brazoria County Clerk and the Developer shall be responsible for the cost of recordation.

3. DEVELOPER COVENANTS

3.01 The Developer agrees to following:

(i) Developer agrees to pay the cost of recordation of this agreement within thirty (30) days of invoice by the city.

4. MISCELLANEOUS

4.01 Assignment. This Agreement evidencing said variance, with conditions, shall run with the land and shall bind and benefit the respective Parties and their legal successors in interest.

4.02 Amendment or Modification. Except as otherwise provided in this Agreement, this Agreement shall be subject to change, amendment or modification only in writing, and by the signatures and mutual consent of the Parties.

4.03. Parties in Interest. This Agreement shall be for the sole and exclusive benefit of the Parties hereto and shall not be construed to confer any rights upon any third party. Developer shall not be a third-party beneficiary to any contract the city has with any other party for the engineering, design, or construction of said improvements.

4.04. Remedies Not Exclusive. The rights and remedies contained in this Agreement shall not be exclusive, but shall be cumulative of all rights and remedies now or hereinafter existing, by law or in equity.

4.05. Waiver. The failure of any party to insist in any one or more instances on the performance of any of the terms, covenants or conditions of this Agreement, or to exercise any of its rights, shall not be construed as a waiver or relinquishment of such term, covenant, or condition, or right with respect to further performance.

4.06. Entire Agreement. This Agreement constitutes the entire agreement between the Parties related to the subject matter of this Agreement and supersedes any and all prior agreements, whether oral or written, dealing with the subject matter of this Agreement.

4.07. Venue. This Agreement shall be performable and enforceable in Brazoria County, Texas, and shall be construed in accordance with the laws of the State of Texas.

4.08. Severability. If any term or provision of this Agreement is held to be invalid, void or unenforceable by a court of competent jurisdiction, the remainder of the terms and provisions of this Agreement shall remain in full force and effect and shall not in any way be invalidated, impaired or affected.

4.09. Notices. Any notice provided or permitted to be given under this Agreement must be in writing and may be served by (i) depositing the same in the United States mail, addressed to the party to be notified, postage prepaid, registered or certified mail, return receipt

Executed on this the _____ day of _____, 20__.

CITY OF MANVEL:

Dan Davis, Mayor

ATTEST:

Tammy Bell, City Secretary

THE STATE OF TEXAS §

COUNTY OF BRAZORIA §

This instrument was acknowledged before me on the ____ day of _____, 20__, by Dan Davis, as Mayor of the City of Manvel, Texas, on behalf of said City of Manvel.

Notary, State of Texas

(NOTARY SEAL)

Ferguson Edward Mathew & Brandy Beam:

By: _____
Name:

THE STATE OF TEXAS §

COUNTY OF BRAZORIA §

This instrument was acknowledged before me on the ____ day of _____,
20__, by _____, as property owner.

Notary, State of Texas

(NOTARY SEAL)

Anitha Madhu:

By: _____
Name: Anitha Madhu

THE STATE OF TEXAS §

COUNTY OF BRAZORIA §

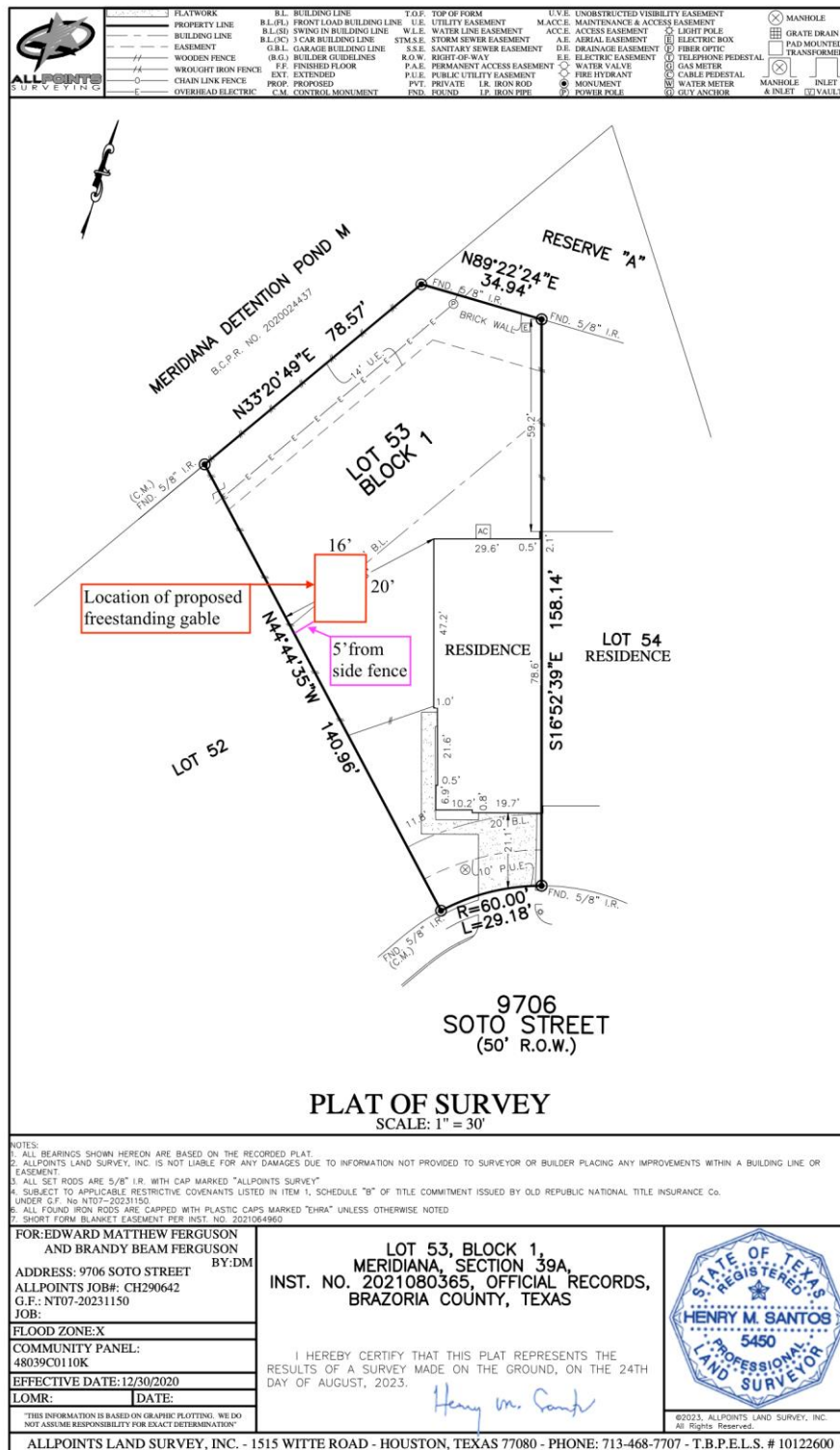
This instrument was acknowledged before me on the ____ day of _____,
20__, by _____, as property owner.

Notary, State of Texas

(NOTARY SEAL)

Exhibit A

An approximate 0.2311-acre tract being all of Lot 53, Block 1, Meridiana Section 39A according to the map or plat thereof recorded in Brazoria County Clerk's File# 2021080365.



ORDINANCE NO. 2024-O-18

AN ORDINANCE AMENDING ORDINANCE NO. 2023-O-32 AMENDING THE CITY FISCAL YEAR 2024 BUDGET ENDING SEPTEMBER 30, 2024, BY AMENDING THE GENERAL FUND BUDGET TO FUND THE INSTALLATION OF THE FLOCK CAMERAS ON ALL ENTRY POINTS OF THE CITY. DIRECTING THE BUDGET OFFICER TO FILE OR CAUSE TO BE FILED A COPY OF THE AMENDED BUDGET WITH THE CITY SECRETARY AND WITH THE OFFICE OF THE BRAZORIA COUNTY CLERK AND PROVIDING THIS ORDINANCE SHALL BECOME EFFECTIVE FROM AND AFTER ITS PASSAGE AND ADOPTION.

WHEREAS, by Ordinance No. 2023-O-32, the City Council of the City of Manvel, Texas, adopted its original budget for Fiscal Year ending September 2024; and

WHEREAS, by Ordinance 2023-O-39, 2023-O-41, 2024-O-04, 2024-O-07, 2024-O-11, 2024-O-14, and 2024-O-16 the City Council of the City of Manvel, Texas, amended the budget for the Fiscal Year ending September 2024; and

WHEREAS, Texas Local Government Code §102.010 provides that a municipality may make changes in the budget for municipal purposes; and

WHEREAS, the General Fund budget amendment is needed to fund the installation of Flock Cameras on all entry points of the City.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MANVEL, TEXAS:

SECTION 1: That the facts and matters set forth in the preamble of this Ordinance are hereby found to be true and correct. The City Council deems the purpose for this budget amendment is a municipal purpose.

SECTION 2: That the budget for the Fiscal Year ending September 30, 2024, of the City of Manvel, Texas, is hereby amended as;

GENERAL FUND

Line Item	Description	Current	Increase	Decrease	Amended
10.09.4999	Transfer In-Fund Balance	\$1,264,149.03	\$100,000.00		\$1,364,149.03
10.90.5458	Maintenance Agreements	\$175,000.00	\$100,000.00		\$275,000.00

SECTION 3: That this Ordinance shall be finally passed and adopted on the date of its introduction and shall become effective from and after its passage and adoption.

PASSED, APPROVED, AND ADOPTED this _____ day of _____, 2024.

Dan Davis, Mayor

ATTEST:

Tammy Bell, City Secretary



CITY COUNCIL DATA SHEET

MEETING DATE: April 1, 2024

Regular Agenda

TOPIC:

Budget Amendments for installation of Flock Cameras on all entry points of the City.

BACKGROUND:

We will be transferring from the Fund Balance to install Flock Cameras on all entry points of the City.

RECOMMENDATION:

Staff recommends approval of the budget transfer.

ATTACHMENTS:

FUNDING ISSUES

☐ Not applicable
☒ Not budgeted
☐ Full amount already budgeted
☐ Funds to be transferred

SUBMITTING STAFF MEMBER
Rosa Donaire

FINANCE DIRECTOR APPROVAL ☒

CITY MANAGER APPROVAL: ☒

RESOLUTION NO. 2024-R-11

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MANVEL
SUPPORTING MANVEL POLICE DEPARTMENT'S PARTICIPATION IN THE
EXPLORER CLUB PROGRAM.**

WHEREAS, the Manvel Police Department seeks to participate in the Explorer Club program operated and maintained by the Learning for Life, a District of Columbia nonprofit corporation; and

WHEREAS, Learning for Life provides the support services necessary to help participating organizations succeed in their use of the program; and

WHEREAS, Learning for Life provides program resources and year-round training techniques and methods for selecting quality leaders; and

WHEREAS, the City's responsibilities of the program include providing and screening sponsors, providing adequate facilities for the participants to meet, participation in an Open House, and evaluation of the Learning for Life representatives; and

WHEREAS, the City Council of the City of Manvel wishes to indicate support of the Manvel Police Department's participation in the Explorer Club program and authorize use of city resources for participation in said program; and

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF MANVEL, TEXAS:

SECTION 1: The facts and matters set forth in the preamble of this Resolution are hereby found to be true and correct.

SECTION 2: The City Council of the City of Manvel hereby supports the Manvel Police Department's participation in the Explorer Club program and authorizes use of city resources for participation in said program.

SECTION 3: The City Council of the City of Manvel hereby approves the annual Memorandum of Understanding, attached as Exhibit A. The city manager is authorized to execute the agreement annually, upon approval as to form by the city attorney.

SECTION 4: That it is hereby officially found and determined that the meeting at which this Resolution is passed is open to the public as required by law and the public notice of the time, place, and purpose of said meeting was given as required.

PASSED AND APPROVED this _____th day of _____, 2024.

Dan Davis, Mayor

ATTEST:

Tammy Bell, City Secretary

APPROVED AS TO FORM:

Bobby Gervais, City Attorney

Check One:

Explorer Club ☐

Explorer Post ☐

Renewal Post/Club No. _____

Council _____ District _____

Annual Memorandum of Understanding

_____ has read and understands the following conditions for participating in this program operated and maintained by Learning for Life, a District of Columbia nonprofit corporation ("Learning for Life"), and desires to enter into this agreement regarding participation in this program. The responsibilities of the organization include:

Explorer Clubs only:

- Screening and selecting at least two adults, including a sponsor and associate sponsor, to work directly with the Explorer Club participants.

Explorer Posts only:

- Screening and selecting at least four adults, including committee chairman, two committee members, and an advisor, who will work directly with the post officers.

Explorer Clubs and Explorer Posts:

- Ensuring that all participating adults complete the required Exploring Youth Protection training. The training is available at www.exploring.org.
- Providing adequate facilities for the participants to meet on a regular schedule with a time and place reserved.
- Participating in a program planning meeting and Open House.
- Participating in at least one evaluation with Learning for Life representatives each year.

Note: Adults may serve in multiple posts and clubs.

Exploring is part of Learning for Life's education resource program. Learning for Life provides the support service necessary to help the participating organizations succeed in their use of the program.

These services include year-round training techniques and methods for selecting quality leaders; program resources; and primary general liability insurance to cover the participating organization, its board of directors and/or trustees, and its officers and employees in their official and individual capacities against personal liability judgments arising from official Learning for Life activities.

This Annual Memorandum of Understanding shall remain in effect through the registration expiration of the post or club. Either organization may discontinue the program at any time upon written notice to the other organization.

Date: _____

Signature of executive officer or designee

Signature of Exploring representative

(Print name)

(Print name)