

**PARTICIPATION AGREEMENT**  
**For the Subdivision of King's Landing Unit 12**  
**Subject to Pilot Program for Roller**  
**Compacted Concrete Roadway Improvements**

This PARTICIPATION AGREEMENT ("Agreement") is entered into between the City of Corpus Christi (referred to in this Agreement as "City"), a Texas home-rule municipal corporation, acting by and through its City Manager, or designee, and MPM Development LP, (referred to in this Agreement as "Developer"), a Texas Limited Partnership.

**WHEREAS**, Developer desires to develop and plat the Property designated on **Exhibit 1** of this Agreement, which exhibit is attached to and incorporated in this Agreement by reference, to be known as King's Landing Unit 12 (Unit 12");

**WHEREAS**, as a condition of the Preliminary Plat for King's Landing, the Developer is required to expand, extend, and construct Castle Black Drive as depicted on and following the improvement requirements outlined in **Exhibit 2**, which exhibit is attached to and incorporated in this Agreement by reference;

**WHEREAS**, the Developer is oversizing by constructing Castle Black Drive as a C-3 collector street in lieu of 28' residential local streets;

**WHEREAS**, the Developer desires to utilize Roller Compacted Concrete (referred to in this Agreement as "RCC pavement") for the Roadway Improvements within the King's Landing Subdivision pursuant to the Pilot Program for Roller Compacted Concrete Roadway Improvements Agreement (referred to in this Agreement as "Pilot Program") executed July 25, 2022, as may be amended;

**WHEREAS**, the Developer is willing to warranty Roller Compacted Concrete Roadway Improvement for 10 years;

**WHEREAS**, it is in the best interests of the City to have the public street infrastructure installed by the Developer in conjunction with the final Plat;

**WHEREAS**, Section 212.071 of the Texas Local Government Code authorizes a municipality to make a contract with a developer of a subdivision or land in the municipality to construct public improvements related to the subdivision or land; and

**WHEREAS**, this Agreement is made pursuant to Section 212.071 & 212.072 of the Texas Local Government Code and Article 8, Section 8.4.1, of the Unified Development Code of the City of Corpus Christi.

**NOW, THEREFORE**, in order to provide a coordinated public street construction and improvement project, the City and the Developer agree as follows:

Section 1. RECITALS. The parties agree that the language contained in the preamble of this Agreement is substantive in nature, is incorporated into this Agreement by reference, and has been relied on by both parties in entering and executing this Agreement.

Section 2. ROLLER COMPACTED CONCRETE PAVEMENT. Per this Pilot Program, the City agrees that it will authorize the use of roller compacted concrete pavement (as that term is defined by the RCC Pavement Council) for the King's Landing Unit 12 per the terms of the Pilot Program.

(a) Developer agrees to construct all roadway improvements within Kings Landing Subdivision Unit 12 with roller compacted concrete pavement (RCC pavement), except those portions of the roadways that are cul-de-sacs, in which case traditional rebar-reinforced portland cement concrete pavement shall be utilized in conformance with the City's Unified Development Code and City Design Standards.

(b) For King's Landing Unit 12, Developer shall construct the RCC pavement in accordance with the site-specific geotechnical report as depicted in **Exhibit 3** and engineering plans and specifications as depicted in **Exhibit 2**. Concrete curb and gutter construction shall be constructed to City Design Standards.

(d) Developer will construct collector streets with at least 8 inches thick roller compacted concrete. All residential local streets smaller than a collector street will be constructed with at least 7 inches thick roller compacted concrete.

(e) Prior to installation of the RCC pavement, the Engineer of Record and the Geotechnical Engineer must review and approve all material submittals associated with RCC pavement prepared by the general contractor, and provide reviewed and approved submittal copies to the City.

(f) Prior to installation of the RCC pavement, Developer shall submit the experience record of the RCC pavement operators and installers to the City Engineer for review. All contractors involved with the construction operations of the RCC pavement, including maintenance, repair, and replacement, must have at least five (5) years' experience in the day-to-day installation, field management, and oversight of RCC pavement projects and meet all insurance and indemnification requirements of the City Contract under which the original RCC pavement was constructed, unless modified by mutual agreement. Associated Insurance Certificates shall be submitted to the City prior to beginning work

(g) Prior to installation of RCC pavement, Developer shall obtain approval of construction engineering plans from the City Engineer.

(h) Prior to the acceptance of roadway improvements, the Developer's Engineer of Record must submit record drawings to the City certifying that the RCC pavement was constructed in strict accordance with the approved construction drawings and technical specifications.

The authorization to utilize RCC pavement per this Agreement and the Pilot Program is limited to the King's Landing Subdivision. The City may terminate this Authorization to use RCC pavement at any time for any reason and require future streets within Kings Landing subdivision be constructed with rebar-reinforced portland cement concrete pavement meeting City Design Standards.

Section 3. TERM. This Agreement becomes effective, is binding upon, and inures to the benefit of the City and the Developer from and after the date of the last signatory to this Agreement. Within King's Landing Unit 12, the Developer must complete the Castle Black Drive within 24 calendar months from the date this document is executed by the City. Time is of the essence in the performance of this contract.

Section 4. DEVELOPER PARTICIPATION. Subject to the terms of this Agreement, the Developer will construct Castle Black Drive C-3 collector streets with at least 8-inch thick RCC pavement per **Exhibit 2** and **Exhibit 3**, for and on behalf of the City in accordance with the plans and specifications approved

in advance of construction by the City Engineer on behalf of the City. The parties acknowledge and confirm the total cost estimate for construction of the Roadway Improvements, which estimate is attached to and incorporated in this Agreement as **Exhibit 4** (the "Cost Estimate"). Subject to the limitations set forth below, the Developer shall pay a portion of the construction costs of Castle Black Drive.

Section 5. CITY PARTICIPATION. Notwithstanding any other provision of this Agreement, the total amount that the City shall pay for the City's agreed share of the actual costs of the Castle Black Drive shall not exceed **\$842,210.40**.

Section 6. REIMBURSEMENT. The Developer shall be responsible for the entire up-front expenses of the Roadway Improvements for Castle Black Drive. The City shall reimburse the Developer upon completion of all Roadway Improvements within Kings Landing Unit 12 contingent upon the certificate of acceptance issued by the City Engineer, sworn certification on City form that the Developer has paid all contractors and subcontractors in full, and presentment of the maintenance bond. Such reimbursement will be payable to the Developer at the address in the Notice Section of this Agreement.

Section 7. PERFORMANCE AND PAYMENT BOND.

Before beginning the work that is the subject of this Agreement, Developer shall provide (or cause its Contractor to provide) the City with a performance bond and a payment bond on City's approved Performance and Payment Bond forms, said forms attached hereto and labeled as **Exhibit 5** and **Exhibit 6**, in accordance with and in satisfaction of Section 212.073 of the Texas Local Government Code in the estimated amount of the construction costs for Castle Black Drive, reflecting City as Obligee thereunder. Bonds furnished must meet the requirements of Texas Insurance Code 3503, Texas Government Code 2253, and all other applicable laws and regulations. The amount of the performance and payment bonds shall be the full cost to construct Castle Black Drive to ensure the completion of the project.

Section 8. MAINTENANCE.

(a) During the period of at least 7 years following acceptance of roadway improvements, all maintenance and repairs of the Roadway Improvements in the King's Landing subdivision Unit 12 will be performed entirely and exclusively by Developer. Failure of the Developer to promptly complete all maintenance and repairs of all streets in this subdivision will be a violation and breach of this agreement. The Developer shall complete all such maintenance or repairs of the streets within 120 days after being requested in writing to do so by the City Engineer.

(b) Any deficiencies occurring during the Maintenance Period shall be immediately repaired at Developer's sole expense in accordance with the repair and replacement descriptions below and in accordance with the Pilot Program.

Deficiencies requiring repair shall include:

- 1.Minor Cracks. any crack greater than 1/8-inch and less than 1/4-inch other than cut joints;
- 2.Minor Differential Vertical Separation. any differential vertical separation between RCC pavement panels equal to or less than 1/8-inch across the joint;
- 3.Minor Spalling. any spalling, honeycombing, or other defects less than 2 square feet or less than 1-inch deep;

4. Minor Curb Separation. any separation of RCC pavement from curb and gutter equal to or less than-1/8 inch; and

5. Joint Sealant. any separated, cracked, or missing joint sealants.

(c) Repairs shall include:

1. Minor Cracks. Any crack greater than 1/8-inch and less than 1/4-inch width shall be sealed with a City-approved flowable elastomeric pavement crack sealant (Sikaflex or equal). Minor cracks will not include any differential vertical movement (up-down) greater than 1/8-inch across the joint.

2. Minor Differential Vertical Separation. Any differential vertical separation between RCC pavement panels equal to or less than 1/8-inch across the joint shall be diamond grinded to eliminate differential vertical separation.

3. Minor Spalling. Any surface spalling of areas less than 2 square feet or less than 1-inch deep shall be high-pressure wash prepared to remove all dirt, debris, and loose material, prepared with a bonding agent, and filled with a low-shrink epoxy modified grout.

4. Minor Curb Separation. Any separation of RCC pavement from curb and gutter equal to or less than 1/8-inch shall be sealed with a City-approved flowable elastomeric pavement crack sealant (Sikaflex or equal).

5. Joint Sealant. Any separated, cracked, or missing joint sealants shall be cut out and replaced with new elastomeric joint sealant (Sikaflex or equal) following high-pressure wash joint cleaning.

(d) During the first 7 years following acceptance of RCC pavement roadway improvements, the City will not complete any maintenance or repairs of RCC pavement Roadway Improvements. The City Manager is prohibited from authorizing city staff from making any repairs during the first 7 years following acceptance of RCC pavement roadway improvements.

(e) Developer shall notify the City Engineer prior to repair to allow for inspection and approval of repair work.

(f) The City Engineer will be the final authority in determining deficiencies and level of deficiencies of RCC pavement.

#### Section 9. REPLACEMENT.

(a) During the period of at least 10 years following acceptance of roadway improvements, the Developer shall replace RCC panels with deficiencies identified in this section. All replacement of RCC panels in the Kings Landing subdivision will be performed entirely and exclusively by Developer at Developer's sole expense. The Developer shall complete all such replacement of the street panels within 120 days after being requested in writing to do so by the City Engineer.

(b) Deficiencies requiring replacement shall include:

1. Major Cracks. any panel with a crack across 50% of the length or width of the panel and greater than 1/4-inch at any point in the crack;
2. Major Differential Vertical Separation. any differential vertical separation between panels greater than 1/8-inch;
3. Major Curb Separation. separation of RCC pavement panel from curb and gutter greater than 1/8-inch;
- 4.. Uncontrolled Cracking. a RCC pavement panel with more than one uncontrolled crack; and
5. Major Spalling. any spalling, honeycombing, or other defects greater than 2 square feet or more than 1-inch deep.

(c) Replacements shall include:

1. Major Cracks. Any RCC pavement panel with a crack greater than ¼-inch width across 50% of the length or width of the panel will be replaced with new RCC pavement panel or traditional rebar-reinforced portland cement concrete pavement with sealed perimeter construction joints.
2. Major Differential Vertical Separation. Any differential vertical separation between RCC panels at any location with differential movement (up-down) greater than 1/8-inch across shall be replaced with new RCC pavement panel or traditional rebar-reinforced portland cement concrete pavement with sealed perimeter construction joints.
3. Major Curb Separation. Any RCC pavement panel with separation from curb and gutter more than 1/8-inch shall be replaced with RCC pavement panel or traditional rebar-reinforced portland cement concrete pavement with sealed perimeter construction joints in a manner that keeps the original alignment of the curb and gutter.
4. Uncontrolled Cracking. Any RCC pavement panel with more than one uncontrolled crack will be replaced with new RCC pavement panel or traditional rebar-reinforced portland cement concrete pavement with sealed perimeter construction joints.
5. Major Spalling. Any RCC pavement panel with surface spalling of areas greater than 2 square feet or more than 1-inch deep shall be replaced with RCC pavement panel or traditional rebar-reinforced portland cement concrete pavement with sealed perimeter construction joints.

(d). Saw cut. Any panel being replaced shall be saw cut out to the nearest adjacent contraction or expansion joints and replaced.

(e) RCC Pavement System Failure. In the event of major cracking or major spalling deficiencies of more than 30% of RCC pavement panels on a street within the first 7 years, the City may in its sole determination and discretion require the removal and replacement of all RCC pavement panels within the subject street, both deficient and non-deficient RCC pavement panels, with traditional rebar-reinforced portland cement concrete pavement meeting City specifications. Any such roadway segment replacement will be at the Developer's cost.

(f) Developer shall notify the City Engineer prior to replacement of RCC pavement panels to allow for inspection and approval of replacement work.

(g) The City Engineer will be the final authority in determining deficiencies and level of deficiencies of RCC pavement.

Section 10. WARRANTY. The Developer shall fully warrant the workmanship and construction of the Roadway Improvements within the King Landing Subdivision for a period of 10 years from and after the date of acceptance of the Roadway Improvements by the City Engineer. Upon notice by City of any defects and faults in materials, workmanship and design, Developer shall promptly, but no later than 120 days after notice, correct such defects and/or faults to the satisfaction of the City.

Section 11. CONSTRUCTION. The planned Roadway Improvements shall be constructed in accordance with the Pilot Program, approved Plans, Geotechnical Engineering Reports, and related specifications and industry standard practices.

Section 12. INSPECTIONS.

(a) Throughout construction, the City may conduct periodic inspections and either approve the progress of the Roadway Improvements or promptly notify the Developer of any defect, deficiency, or other non-approved condition in the progress of the Roadway Improvements.

(b) Following completion of the Roadway Improvements, the City may conduct periodic inspections of the Roadway Improvements and will promptly notify the Developer of any defects and faults in materials, workmanship, and design.

(c) The Developer or its representative shall attend quarterly site inspections with the City during the first 3 years of the warranty period to observe the RCC pavement and identify and document any needed repairs or replacements. After the first 3 years of quarterly inspections, inspections shall be every 6 months thereafter until the 10 year of warranty is met. The City will develop an associated Required Repair or Replacement plan following inspection, provided to the Developer for execution. All identified repairs or replacements shall be completed within 120 days of that plan unless the Developer and its approved contractor are delayed by force majeure or other events beyond its control.

**Section 13. INDEMNIFICATION.**

**Developer covenants to fully indemnify, save and hold harmless the City of Corpus Christi, its officers, employees, and agents, (“indemnitees”) against any and all liability, damage, loss, claims, demands, suits, and causes of action of any nature whatsoever asserted against or recovered from indemnitees on account of injury or damage to person including, without limitation on the foregoing, workers’ compensation and death claims, or property loss or damage of any other kind whatsoever, to the extent any injury, damage, or loss may be incident to, arise out of, be caused by, or be in any way connected with, either proximately or remotely, wholly or in part, the construction, installation, existence, operation, use, maintenance, repair, restoration, or removal of the public improvements associated with Roadway Improvements within the Kings Landing Subdivision, including the injury, loss, or damage caused by the contributory negligence of the indemnitees or any of them, regardless of whether the injury, damage, loss, violation, exercise of rights, act, or omission is caused or is claimed to be caused by the contributing or concurrent negligence of indemnitees, or any of them, but not if caused by the sole negligence of indemnitees, or any of them, unmixed with the fault of any other person or entity, and including all expenses of litigation, court costs, and attorney’s fees which arise,**

**or are claimed to arise, out of or in connection with the asserted or recovered incident. This indemnity survives the termination of this Agreement.**

Section 14. DEFAULT. The following events shall constitute default:

- (a). Developer fails to submit plans and specifications for the Roadway Improvements to the City Engineer in advance of construction.
- (b). Developer does not reasonably pursue construction of the Roadway Improvements under the approved plans and specifications.
- (c). Developer fails to complete construction of the Castle Black Drive under the approved plans and specifications within 24 months.
- (d). Developer fails to perform warranty work.
- (e). Either the City or the Developer fails to comply with its duties or obligations under this Agreement.

Section 15. NOTICE AND CURE.

- (a). In the event of a default by either party under this Agreement, the non-defaulting party shall deliver notice of the default, in writing, to the defaulting party stating, in sufficient detail, the nature of the default and the requirements to cure such default.
- (b). After delivery of the default notice, the defaulting party has 15 days from the delivery of the default notice ("Cure Period") to cure the default.
- (c). In the event the default is not cured by the defaulting party within the Cure Period, then the non-defaulting party may pursue its remedies in this section.
- (d). Should the Developer fail to perform any obligation or duty of this Agreement, the City shall give notice to the Developer, at the address stated in Notice Section of this agreement, of the need to perform the obligation or duty and, should the Developer fail to perform the required obligation or duty within 15 days of receipt of the notice, the City may perform the obligation or duty, charging the cost of such performance to the Developer.
- (e). In the event of an uncured default by the Developer, after the appropriate notice and Cure Period, the City has all its common law remedies and the City may:
  - 1. Terminate this Agreement after the required notice and opportunity to cure the default;
  - 2. Refuse to record a related plat or issue any certificate of occupancy for any structure to be served by the project; and/or
  - 3. Bring Suit to enforce any provision of this agreement including the obligations to repair and replace.
- (f). In the event of an uncured default by the City after the appropriate notice and Cure Period, the Developer has all its remedies at law or in equity for such default.

Section 16. FORCE MAJEURE.

(a). The term “force majeure” as employed in this Agreement means and refers to acts of God; acts of a public enemy; insurrections; riots; epidemics; landslides; earthquakes; fires; hurricanes; explosions; or other causes not reasonably within the control of the party claiming the inability.

(b). If, by reason of force majeure that is not known or reasonably anticipated at the time of this agreement, either party is rendered wholly or partially unable to carry out its obligations under this Agreement, then the party claiming force majeure shall give written notice of the full particulars of the force majeure to the other party within 10 days after the occurrence or waive the right to claim it as a justifiable reason for delay. The obligations of the party giving the required notice, to the extent affected by the force majeure, are suspended during the continuance of the inability claimed but for no longer period, and the party shall endeavor to remove or overcome such inability with all reasonable dispatch.

Section 17. NOTICES.

(a). Any notice or other communication required or permitted to be given under this Agreement must be given to the other party in writing at the following address:

If to the City:

City of Corpus Christi  
Attn: Director, Development Services  
2406 Leopard Street  
Corpus Christi, TX 78401

If to the Developer:

MPM Development, L.P.  
Attn: Moses Mostaghani  
PO Box 331308  
Corpus Christi, TX 78401

with a copy to:

City of Corpus Christi  
Attn: City Engineer  
P. O. Box 9277  
Corpus Christi, TX 78469-9277

(b). Notice must be made by United States Postal Service, First Class mail, certified, return receipt requested, postage prepaid; by a commercial delivery service that provides proof of delivery, delivery prepaid; or by personal delivery.

(c). Either party may change the address for notices by giving notice of the change, in accordance with the provisions of this section, within five business days of the change.

Section 18. PROJECT CONTRACTS. Developer’s contracts with the professional engineer for the preparation of the plans and specifications for the construction of the Roadway Improvements, contracts for testing services, and contracts with the contractor for the construction of the Roadway Improvements must provide that the City is a third-party beneficiary of each contract.

Section 19. DISCLOSURE OF INTEREST. In compliance with Corpus Christi Code Sec. 2-249, the Developer agrees to complete the Disclosure of Interests form attached to this Agreement and incorporated by reference as **Exhibit 7**.

Section 20. CERTIFICATE OF INTERESTED PARTIES. Developer agrees to comply with Texas Government Code section 2252.908 and complete Form 1295 Certificate of Interested Parties as part of this agreement.

Form 1295 requires disclosure of “interested parties” with respect to entities that enter contracts with cities. These interested parties include:

- (1) persons with a “controlling interest” in the entity, which includes:
  - a. an ownership interest or participating interest in a business entity by virtue of units, percentage, shares, stock or otherwise that exceeds 10 percent;
  - b. membership on the board of directors or other governing body of a business entity of which the board or other governing body is composed of not more than 10 members; or
  - c. service as an officer of a business entity that has four or fewer officers, or service as one of the four officers most highly compensated by a business entity that has more than four officers.
- (2) a person who actively participates in facilitating a contract or negotiating the terms of a contract with a governmental entity or state agency, including a broker, intermediary, adviser, or attorney for the business entity.

Form 1295 must be electronically filed with the Texas Ethics Commission at [https://www.ethics.state.tx.us/whatsnew/elf\\_info\\_form1295.htm](https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm). The form must then be printed, signed, notarized and filed with the City. For more information, please review the Texas Ethics Commission Rules at <https://www.ethics.state.tx.us/legal/ch46.html>.

Section 21. CONFLICT OF INTEREST. Developer agrees to comply with Chapter 176 of the Texas Local Government Code and file Form CIQ with the City Secretary’s Office, if required. For more information and to determine if you need to file a Form CIQ, please review the information on the City Secretary’s website at <http://www.cctexas.com/government/city-secretary/conflict-disclosure/index>

Section 22. SEVERABILITY. The provisions of this Agreement are severable and, if any provision of this Agreement is held to be invalid for any reason by a court or agency of competent jurisdiction, the remainder of this Agreement shall not be affected, and this Agreement shall be construed as if the invalid portion had never been contained herein.

Section 23. COOPERATION. The Parties agree to cooperate at all times in good faith to effectuate the purposes and intent of this Agreement.

Section 24. ENTIRE AGREEMENT. Except as otherwise expressly provided herein, this Agreement contains the entire agreement of the Parties regarding the sharing of costs for the Roadway Improvements. It supersedes all prior or contemporaneous understandings or oral or written representations regarding the subject matter hereof.

Section 25. AMENDMENTS. Any amendment of this Agreement must be in writing and shall be effective if signed by the authorized representatives of both Parties.

Section 26. APPLICABLE LAW; VENUE. This Agreement shall be construed in accordance with the laws of the State of Texas. Venue for any action arising hereunder shall be in Nueces County, Texas.

Section 27. AUTHORITY. Each Party represents and warrants that it has the full right, power, and authority to execute this Agreement.

Section 28. INDEPENDENT CONTRACTOR. Developer covenants and agrees that it is an independent contractor, not an officer, agent, servant, or employee of the City. Developer shall have exclusive control of and exclusive right to control the details of the work performed hereunder and all persons performing same, and shall be liable for the acts and omissions of its officers, agents, employees, contractors, subcontractors, and consultants. The doctrine of respondent superior shall not apply between City and Developer, its officers, agents, employees, contractors, subcontractors, and consultants. Nothing herein shall be construed as creating a partnership or joint enterprise between City and Developer.

Section 29. NON-APPROPRIATION. The continuation of this Agreement after the close of any fiscal year of the City, which fiscal year ends on September 30th annually, is subject to appropriations and budget approval specifically covering this Agreement as an expenditure in the said budget. It is within the sole discretion of the City's City Council to determine whether to fund this Agreement. The City does not represent that this budget item will be adopted, as said determination is within the City Council's sole discretion when adopting each budget.

Section 30. WAIVER OF TRIAL BY JURY. City and Developer agree that they have knowingly waived and do hereby waive the right to trial by jury and have instead agreed, in the event of any litigation arising out of or connected to this Contract, to proceed with a trial before the court, unless both parties subsequently agree otherwise in writing.

Section 31. ATTORNEY FEES. In the event that any action is instituted by City to enforce or interpret any of the terms hereof, City shall be entitled to be paid all court costs and expenses, including reasonable attorneys' fees, incurred by City with respect to such action, unless as a part of such action, the court of competent jurisdiction determines that each of the material assertions made by City as a basis for such action were not made in good faith or were frivolous. In the event of an action instituted by or in the name of the Developer under this Agreement or to enforce or interpret any of the terms of this Agreement, City shall be entitled to be paid all court costs and expenses, including attorneys' fees, incurred by City in defense of such action (including with respect to City's counterclaims and cross-claims made in such action), unless as a part of such action the court determines that each of City's material defenses to such action were made in bad faith or were frivolous.

Section 32. NO WAIVER. The failure of the City to insist upon strict adherence to any term of this agreement on any occasion shall not be considered a waiver of any of the City's rights under this agreement or deprive the City of the right thereafter to insist upon strict adherence to that term or any other term of this agreement.

Section 33. PILOT PROGRAM FOR RCC ROADWAY IMPROVEMENTS

Public Improvements shall be designed and constructed in compliance with Pilot Program for Roller Compacted Concrete Roadway Improvements Agreement, as amended. Maintenance and warranty for Public Improvements will be provided in accordance with the Pilot Program for Roller Compacted Concrete Roadway Improvements agreement, as amended. Any conflict between this agreement and the Pilot Program for Roller Compacted Concrete Roadway Improvements agreement, the Pilot Program for Roller Compacted Concrete Roadway Improvements agreement shall control.

**Exhibits Attached and Incorporated by Reference:**

- Exhibit 1 – Plat – King’s Landing Unit 12
- Exhibit 2 – Design Memorandum – King Landing Unit 12
- Exhibit 3 – Geotechnical Report (Specific to Kings Landing Unit 12)
- Exhibit 4 – Cost Estimate
- Exhibit 5 – Performance Bond
- Exhibit 6 – Payment Bond
- Exhibit 7 – Disclosure of Interest

**Incorporated by Reference Only:**

Pilot Program for Roller Compacted Concrete Roadway Improvements Agreement (referred to in this Agreement as “Pilot Program”)

**DEVELOPER:** MPM Development, LP

\_\_\_\_\_  
Moses Mostaghani  
General Partner

\_\_\_\_\_  
Date

**ATTEST:**

\_\_\_\_\_  
Rebecca Huerta  
City Secretary

**CITY OF CORPUS CHRISTI:**

\_\_\_\_\_  
Michael Dice  
Director of Development Services

**APPROVED AS TO LEGAL FORM:**

\_\_\_\_\_  
Buck Brice (Date)  
Deputy City Attorney  
For City Attorney

# EXHIBIT 1

**TXDOT Notes:**

1. A Traffic Impact Analysis (TIA) shall be required for the ultimate 15 year development forecast for the intersections and access locations within 3500 feet of both sides of the subject property line along FM 43. This TIA shall be required during the public improvement stage of this plat, prior to TxDOT Access Permitting for new streets, or City Site-work Permitting.
2. No access locations beyond those identified herein shall be authorized for plats or re-plats without a variance for lots adjacent to State Right-Of-Way. A variance may be granted on a case by case basis when the Owner or their agent provides significant justification of a public need for additional access. Justification shall be provided within a site specific Traffic Engineering Study that will be reviewed during the TxDOT Access Permitting process.

**LEGEND:**

- DE DRAINAGE EASEMENT
- D.R. DEED RECORDS, NUECES CO., TX
- M.R. MAP RECORDS, NUECES CO., TX
- D.R. OFFICIAL RECORDS, NUECES CO., TX
- UE UTILITY EASEMENT



118.126 ACRE TRACT 11, DOC. NO. 2015011169, D.R., SAID  
 118.126 ACRE TRACT BEING A PORTION OF SURVEY 135 ABSTRACT  
 581, SURVEY 137, ABSTRACT 579 AND SURVEY 139, ABSTRACT 577,  
 SAID SURVEYS NAMED CUADRILLA IRRIGATION COMPANY, AND  
 SURVEY 140, A.S. 612, NAMED I. & G.N.R.R., BILL BROWN ET. AL

145.50 AC. TRACT, DOC. NO. 1997034379,  
 D.R., A PORTION OF CUADRILLA IRRIGATION  
 COMPANY SURVEY 137 AND I. AND G.N.R.R.  
 SURVEY 140, V. S. P. 15, M.R., WALTER  
 AND BETTY JO CAMP

20.00 AC. TRACT,  
 DOC. NO. 2005027456,  
 D.R., LONDON IND.  
 SCH. DIST.

25.00 AC. TRACT, DOC. NO.  
 2008018783, D.R., L1SD

BALANCE OF 27.8 AC. TRACT, DOC.  
 NO. 2009067159, D.R., L1SD

LONDON SCHOOL TRACTS,  
 LOT 378, M.R.  
 V. 67, P. 378, M.R.

1.89 AC. TRACT, I.L.D. DOC.  
 NO. 2008017937, D.R., 558.28'

**OWNERS:**

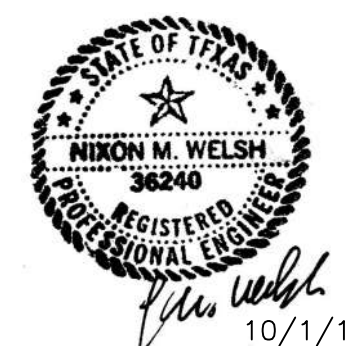
THE WILLIAM EARL HENSCH TRUST, WILLIAM  
 EARL HENSCH, TRUSTEE, 5027 HOLLY ROAD,  
 PASADENA, TX 77503, 713 417-7122

ANNA BELLE HENSCH, 1009 PEERMAN PLACE,  
 CORPUS CHRISTI, TX 78411, 361 444-5800

RETTA MAURINE KASPER, 4805 VELMA,  
 KILLEEN, TX 76542, 254 462-2976

CORPUS CHRISTI COMMUNITY CHURCH, 4833  
 SARATOGA BLVD #259, CORPUS CHRISTI, TX  
 78413, SCOTT MCDONALD 361 420-0022, ALSO  
 JAMES F. DODSON, 4222 FM 665, ROBSTOWN,  
 TX 78380, 361 877-3222

MPM DEVELOPMENT, LP, PO BOX 331308,  
 CORPUS CHRISTI, TX 78463, 774-3632



10/1/19

MA 446.408 ACRE TRACT OF LAND, MORE OR LESS, AND CONSISTING OF:  
 TRACT 1, A 293.041 ACRE TRACT OF LAND DESCRIBED BY DEED, DOC. NO.  
 2019035726, D.R.

TRACT 2, A 10.08 AC. TRACT OF LAND DESCRIBED BY DEED, DOC. NO.  
 2017010862, D.R., AND

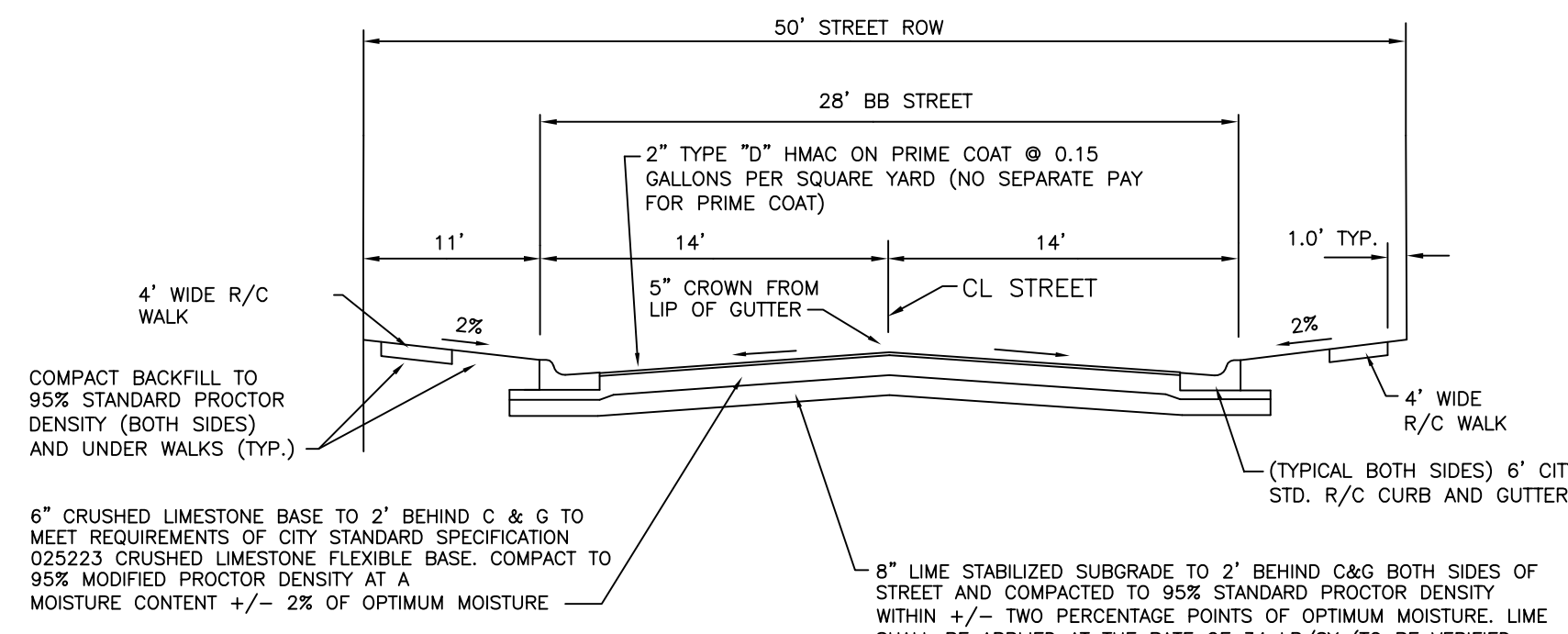
TRACT 3, A 144.570 ACRE TRACT OF LAND, BEING CALLED 144.30 ACRE  
 FIRST TRACT, VOL. 1066, P. 140, D.R.,

THIS DOCUMENT IS RELEASED FOR THE  
 PURPOSE OF INTERIM REVIEW UNDER THE  
 AUTHORITY OF NIXON M. WELSH, P.E. NO.  
 36240 OF BASS AND WELSH ENGINEERING, F  
 52. IT IS NOT TO BE USED FOR  
 CONSTRUCTION OR BIDDING PURPOSES.

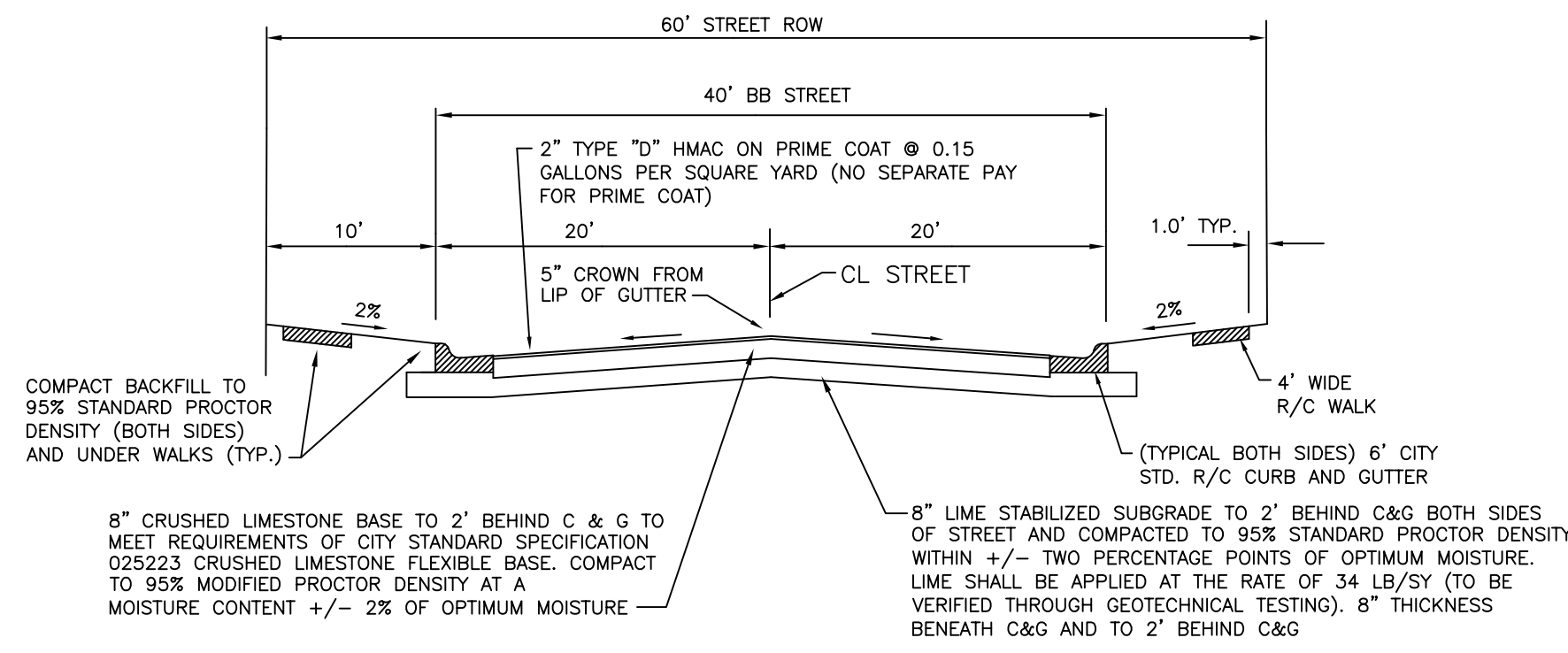
BASS & WELSH ENGINEERING  
 TX SURVEY REG. NO 100027-00, TX ENGINEERING REG. NO.  
 F-52, 3054 S. ALAMEDA STREET, CORPUS CHRISTI, TEXAS 78404

PRELIMINARY PLAT  
 KINGS LANDING\*

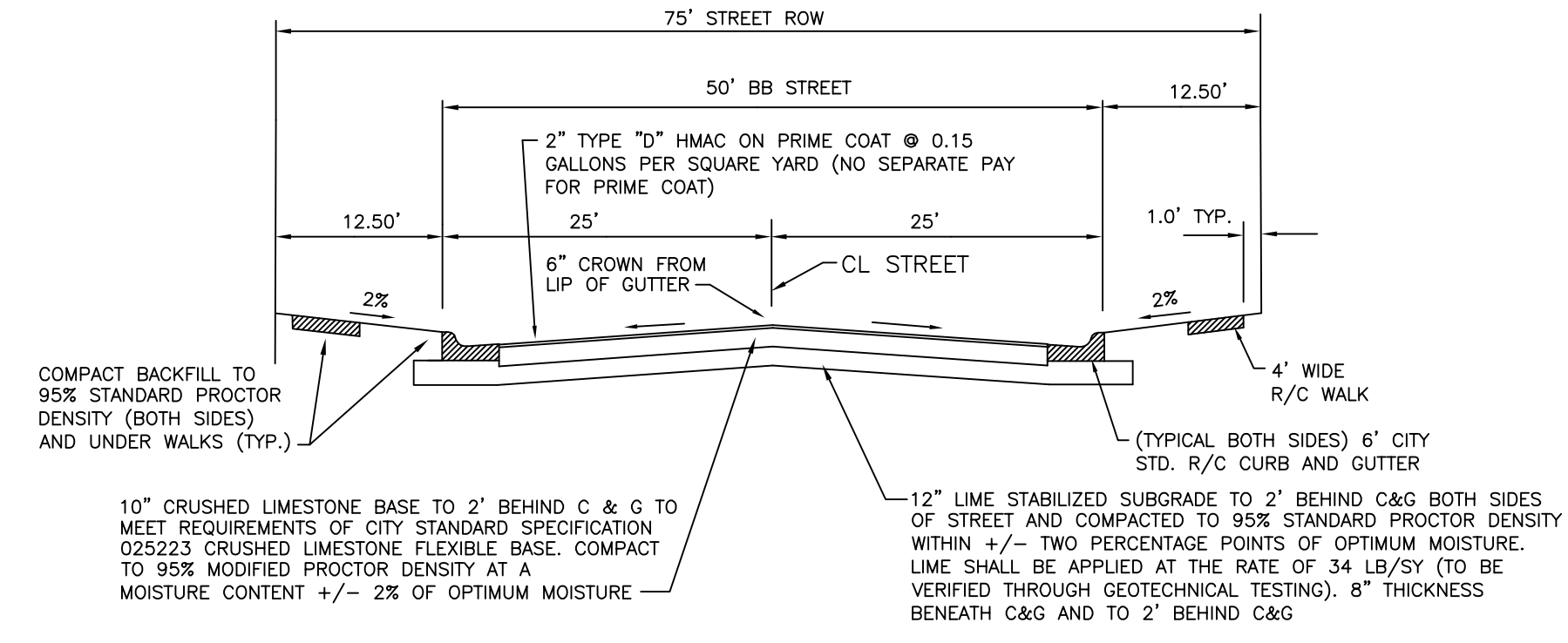
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CHK	SCALE 00: SAME	JOB NO.	18068
	SCALE 00: NONE	SHEET	1 OF 2
	DATE PLOTTED: 10/8/19		



TYPICAL STREET SECTION - 50' ROW  
NTS



TYPICAL STREET SECTION - 60' ROW  
NTS



TYPICAL STREET SECTION - 75' ROW  
NTS

NOTES

1. THE SITE IS OCL, PROPOSED ANNEXATION AND ZONED RS-4.5 AND CN-1.
2. THE RECEIVING WATER FOR THE STORM WATER RUNOFF FROM THIS PROPERTY IS THE OSO CREEK. THE TCEQ HAS NOT CLASSIFIED THE AQUATIC LIFE USE FOR THE OSO CREEK, BUT IT IS RECOGNIZED AS AN ENVIRONMENTALLY SENSITIVE AREA. THE OSO CREEK FLOWS DIRECTLY INTO THE OSO BAY. THE TCEQ HAS CLASSIFIED THE AQUATIC LIFE USE FOR THE OSO BAY AS "EXCEPTIONAL" AND "OYSTER WATERS" AND CATEGORIZED THE RECEIVING WATER AS "CONTACT RECREATION" USE.
3. THE BASIS OF BEARINGS IS THE STATE OF TEXAS LAMBERT GRID, SOUTH ZONE, NAD 1983.
4. THE SUBJECT SITE IS DEPICTED IN FEMA MAP 48355C0505G (10/23/15) AND CONTAINS ZONE AE--FLOODWAY AREAS, ZONE AE AREAS WITH ELEVATIONS BETWEEN 26' AND 27', ZONE X AREAS OF 0.2 PCT ANNUAL CHANCE FLOOD AND ZONE X AREA (NO DESIGNATION).
5. DESCRIPTION OF SITE DRAINAGE: THE ENTIRE SITE WILL DRAIN VIA UNDERGROUND PIPES AND DITCHES TO THE OSO CREEK AS SHOWN.
6. THERE ARE NO KNOWN NATURAL WATER BODIES, JURISDICTIONAL WETLANDS, ENDANGERED SPECIES HABITAT, STATE SUBMERGED LANDS OR CRITICAL DUNES ON THE SITE.
7. A STORM WATER POLLUTION PREVENTION PLAN WILL BE SUBMITTED WITH THE CONSTRUCTION PLANS FOR ANY PROJECT ONE (1) ACRE OR GREATER OR A STORM WATER POLLUTION CONTROL PLAN IF LESS THAN ONE (1) ACRE.
8. LEGAL DESCRIPTION - SEE RIGHT.

NOTES CONTINUED

9. THIS DEVELOPMENT MEETS THE CITY'S MASTER DRAINAGE PLAN. THE INCREASE IN DISCHARGE RATES, VOLUMES, AND DURATIONS OF CONCENTRATED AND NON-CONCENTRATED STORMWATER RUNOFF LEAVING THE PROPOSED DEVELOPMENT DUE TO THE DIVERTED FLOW WILL NOT HAVE AN ADVERSE IMPACT (E.G., SOIL EROSION, SEDIMENTATION, YARD, DWELLING, BUILDING, OR PRIVATE STRUCTURE FLOODING; DURATION OF PONDING WATER; INADEQUATE OVERLAND RELIEF) ON ADJACENT OR DOWNSTREAM PROPERTIES.
10. EACH LOT AREA MUST COMPLY WITH THE APPROPRIATE ZONING DESIGNATION.
11. WATER, WASTEWATER AND PARK FEES SHALL BE PAID PRIOR TO RECORDATION OF THE FINAL PLAT.
12. THE TOTAL PLATTED AREA CONTAINS 446.408 ACRES OF LAND INCLUDING STREET DEDICATIONS.
13. EACH ZONING DISTRICT SHALL CONFORM TO MINIMUM LOT WIDTH (FT.) AND LOT AREA (SF) STANDARDS.
14. THE YARD REQUIREMENT, AS DEPICTED, IS A REQUIREMENT OF THE UNIFIED DEVELOPMENT CODE AND IS SUBJECT TO CHANGE AS THE ZONING MAY CHANGE.
15. STREET CENTER LINES SHALL BE 25' - 25' FOR 50' RIGHTS-OF-WAY, 30' - 30' FOR 60' RIGHTS-OF-WAY AND 37.5' - 37.5' FOR 75' RIGHTS-OF-WAY.
16. CONFORMANCE TO THE VISIBILITY TRIANGLE REQUIREMENTS OF UDC SECTION 4.2.9. TO PREVENT VISION OBSTRUCTIONS AT STREET INTERSECTIONS SHALL BE REQUIRED.
17. ANY ACCESS ONTO FM 43 SHALL HAVE TxDOT APPROVAL.
18. NO DRAINAGE FROM THIS DEVELOPMENT INTO ROW OF FM 43.
19. ALL INSIDE STREET CORNER INTERSECTIONS REQUIRE A RADIUS OF A MINIMUM OF 10' ON LOCAL RESIDENTIAL STREETS, 15' TO 20' ON COLLECTOR/COMMERCIAL/INDUSTRIAL STREETS AND 20' TO 50' ON ARTERIALS. THE RADIUS MAY VARY DEPENDING ON THE CIRCUMSTANCES.
20. RESIDENTIAL DRIVEWAY ACCESS PROHIBITED ONTO IRON THORNE DRIVE, DROOGON STREET, AND CASTLE BLACK ROAD.
21. ALL DRIVEWAYS TO PUBLIC STREETS WITHIN THE SUBDIVISION SHALL CONFORM TO ACCESS MANAGEMENT STANDARDS OUTLINED IN ARTICLE 7 OF THE UDC.
22. DRIVEWAY ACCESS TO FM43 SHALL CONFORM TO ACCESS MANAGEMENT STANDARDS OF TEXAS DEPARTMENT OF TRANSPORTATION.
23. ALL LOTS AT STREET INTERSECTIONS SHALL ADHERE TO VISIBILITY TRIANGLE REQUIREMENTS OF UDC SECTION 4.2.9.

LEGAL DESCRIPTION A 446.408 ACRE TRACT OF LAND, MORE OR LESS, AND CONSISTING OF:

TRACT 1, A 293.041 ACRE TRACT OF LAND DESCRIBED BY DEED, DDC. NO. 2019035726, D.R.

TRACT 2, A 10.08 AC. TRACT OF LAND DESCRIBED BY DEED, DDC. NO. 2017010862, D.R., AND

TRACT 3, A 144.570 ACRE TRACT OF LAND, BEING CALLED 144.30 ACRE FIRST TRACT, VOL. 1066, P. 140, D.R.,

THE ABOVE THREE TRACTS BEING PORTIONS OF ONE OR MORE OF SURVEY 135 ABSTRACT 581, CERTIFICATE 29, SURVEY 137, ABSTRACT 579, CERTIFICATE 31 AND SURVEY 139, ABSTRACT 577, CERTIFICATE 33, SAID SURVEYS NAMED CUADRILLA IRRIGATION COMPANY, NUECES CO., TX



THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERIM REVIEW UNDER THE AUTHORITY OF NIXON M. WELSH, P.E. NO. 36240 OF BASS AND WELSH ENGINEERING, F 52. IT IS NOT TO BE USED FOR CONSTRUCTION OR BIDDING PURPOSES.

BASS & WELSH ENGINEERING TX SURVEY REG. NO 100027-00, TX ENGINEERING REG. NO. F-52, 3054 S. ALAMEDA STREET, CORPUS CHRISTI, TEXAS 78404			
PRELIMINARY PLAT OF KINGS LANDING, CORPUS CHRISTI, NUECES COUNTY, TX			
DWN	PLOT SCALE: 1" = 250'	COM. NO.	PREL SH2
CHK: N. WELSH	SCALE (H): SAME	JOB NO.	18068
	SCALE (V): NONE	DATE PLOTTED	10/8/19
			SHEET 2 OF 2

# EXHIBIT 2

**ROADWAY AND WATERLINE IMPROVEMENTS TO  
SERVE KINGS LANDING UNIT 12**

**DESIGN MEMORANDUM**

**SEPTEMBER 2025**

**PRELIMINARY  
NOT FOR CONSTRUCTION  
FOR INFORMATION  
PURPOSES ONLY  
GABRIEL HINOJOSA, P.E. 106057  
September 24, 2025**

**Prepared by: Gabriel Hinojosa, P.E.**

**J&J ENGINEERING**  
CIVIL • WINDSTORM • CONSULTING  
E-19879

# **Table of Contents**

## **EXECUTIVE SUMMARY**

**SECTION I Introduction**

**SECTION II Proposed Improvements**

**SECTION III Roadway Alignment**

**SECTION IV Waterline Alignment**

**SECTION V Roadway Design**

**SECTION VI Utility Design**

**SECTION VII Work Plan**

**SECTION VIII Construction Requirements**

## **EXHIBITS:**

- A. Site Location
- B. Master Plan Map
- C. Development Exhibit

## **Executive Summary**

The following is the Executive Summary for the plan submission for the Kings Landing Unit 12 Roadway and Waterline Improvements. This project involves the construction of a section of Castle Black Rd., a Master Plan collector street and a 12" water grid main.

There is a proposed single family residential development located approximately 1 mile north of FM 43 (See Exhibit A). Currently there is one section of the collector constructed with Unit 11. Our intention is to continue Castle Black Rd. per the master plan east through the proposed development to eventually intersect County Road 33.

The proposed development includes approximately 33 acres of single-family residential homes with approximately 196 lots.

The design of the roadway will follow criteria established by the Infrastructure Design Manual. Streets shall be designed for a 30-year life in accordance with the American Association of State Highway Transportation Officials (AASHTO) Guide for Design of Pavement Structures ("the AASHTO Design Guide") 1993 Edition and supplements unless a later edition of the AASHTO Design Guide is required by the Design Standards under the latest edition of the Infrastructure Design Manual and supplements. (Ordinance 030023, 12/10/2013).

The proposed extension of Castle Black Rd. will be within a 75' right-of way and contain a 50-foot back of curb to back of curb concrete road section. It will also contain 4' sidewalks on both sides.

Along roadway, a water line needs to be installed to serve the proposed development. The proposed waterline will start at a stub-out on Castle Black Rd. at the end of Unit 11. The total length for the 12-inch waterline installation is 1,140 linear feet. Fire hydrants shall be installed on the 12-inch waterline at every 600 feet. The water line design will follow criteria established by the IDM. Material for the water line will be PVC (Class 150 and DR 18) and the pipe shall meet the requirements of AWWA-C900. Pipe embedment and trench backfill will conform to applicable City of Corpus Christi standards.

## **SECTION I - Introduction**

### **A. Purpose**

The purpose of this project is to construct a section of Castle Black Rd. and waterline to serve a proposed development. The proposed roadway infrastructure includes a concrete street section, drainage infrastructure, waterlines, sanitary sewer and sidewalks.

There is a proposed development for a tract of land, project name Kings Landing Unit 12, 1 mile north of FM 43. Currently there is a section of Castle Black constructed from Unit 11. This section is approximately 1,140 linear feet.

There currently is an adopted Roadway Master Plan for this area (Exhibit B: City of Corpus Christi Roadway Master Plan, London, Service Area 15). As part of the master plan there is a proposed collector section. As part of the proposed improvements, a segment of the collector will be constructed. The collector section will begin at the end of Unit 13 and extend east approximately 1,140 feet.

The proposed waterline will start at a stub-out on Castle Black Rd. at the east end of Unit 13 Blvd from a previously constructed 12" waterline along the proposed section of the collector. The total length for the 12-inch waterline installation is 1,140 linear feet. Fire hydrants shall be installed on the 12-inch waterline at every 600 feet. The water line design will follow criteria established by the IDM.

The proposed improvements as part of this project will provide vehicular, water and sanitary sewer connectivity to future sections of Castle Black Rd. to the east including intersection at County Road 33.

## **SECTION II – Proposed Improvements**

### **A. Castle Black Roadway**

1. 75' Right of Way
2. 50' Back to Back Concrete Pavement Section
  - 8" Thick Concrete Pavement
  - 12" Lime/Cement Stabilized subgrade
  -
3. Drainage Infrastructure
4. 4' wide Sidewalk sections

### **B. Water**

1. 12-inch diameter PVC  
All proposed PVC water lines will be installed according to City of Corpus Christi Water Standard depths.
2. Fittings  
Fittings shall be either cast iron or ductile iron and shall conform to A.N.S.I. A21.10 and A.W.W.A. C-110 and C-153, Latest Edition.

## **SECTION III - Roadway Alignment**

A topographic survey will be conducted to identify existing conditions, utilities, and other possible obstructions. The proposed section will begin at the east end of Unit 13 and continue east along the same bearing for approximately 1,140 feet.

## **SECTION V – Water Line Alignment**

### **A. Locations and Alignment for Proposed Water Lines**

The proposed waterline will start at a stub-out on Castle Black Rd. at the east end of Unit 13 Blvd from a previously constructed 12" waterline and will extend from that point east. This line will be installed inside the right of way on the south side of Castle Black Road.

### **B. Crossings**

The future 12-inch waterline will cross the following:

#### Utilities

- a. Sewer (Sanitary Sewer):  
A preliminary investigation indicates that there will be a crossing of proposed sewer lines, which will be designed per TCEQ & City Standards.

We do not anticipate the following crossings:

- b. Electrical:  
There are overhead electrical lines at various locations along the proposed force main route. To the best of our knowledge, all electrical lines are above ground and will not interfere with the installation of the proposed water main.
- c. Telephone and Fiberoptics:  
It does not appear that there will be any crossing of telephone or fiberoptic lines.
- d. Petroleum and Other Petrochemical Lines:  
A preliminary investigation indicates that there should not be any crossing of existing petroleum or petrochemical lines.

## **SECTION IV – Roadway Design**

### **A. Pavement Design**

1. The design of the roadway will follow criteria established by the Infrastructure Design Manual. Streets shall be designed for a 30-year life in accordance with the American Association of State Highway Transportation Officials (AASHTO) Guide for Design of Pavement Structures (“the AASHTO Design Guide”) 1993 Edition and supplements unless a later edition of the AASHTO Design Guide is required by the Design Standards under the latest edition of the Infrastructure Design Manual and supplements. (Ordinance 030023, 12/10/2013).
2. A Geotechnical Report has been conducted for this area.

## **SECTION VII – Design Flow for Sanitary Sewer and Water**

### **A. Design Flow for Water Line**

1. Service Area  
The proposed sanitary sewer system is designed to serve approximately 33 acres of land that includes multi-family, single-family, schools and commercial. There will be approximately 140 lots for the entire proposed development.
2. Design Flow  
The updated design flow from the proposed development was calculated as follows:

350 GPD/LOT AVG. DAILY  
Total Lots= 196  
Total Average Daily= 68,600 GPD

Therefore, the expected water demand for the proposed development is calculated to be **68,600 GPD**

## SECTION V – Work Plan

### A. Surveys and Plan Preparation

1. Datum:  
All work on this project (surveys, plans) will be on the Texas State Plane Coordinate System, NAD 83, South Zone (City Standard Datum).
2. Ground Surveys:  
Ground elevations and validation of general land features shall be made to determine trench depths, utility locations and other obstructions. Specific areas of concern such as major channels and street crossings will require more than the normal surveys to identify topographic variations and other sub-surface structures.
3. Drawings  
Drawings will be completed in accordance with the City of Corpus Christi's Standards, properly coordinated with the project specifications and other details and arranged in such a fashion as to allow the Contractor to accurately estimate the cost of the project and construct it.

All drawings will be produced electronically using a computer aided drafting design (CADD) package.

Horizontal and Vertical Scale: The scale recommended and utilized on this project shall be 1"= 40' horizontal, 1" = 4' vertical.

All plan and profile sheets will be arranged as to read from left to right with the project beginning at Mapache Pass.

Where possible, plan views will be oriented with the north to either the top or left of the sheet.

## **SECTION VI – Construction Requirements**

### **A. Disposal Of Excess Site Excavation Material**

All excess excavation material shall be disposed of by the Contractor. Provisions shall be provided in the Contract Documents to direct the Contractor in proper disposal of contaminated soil.

### **B. Restoration**

Fields and ditches shall be seeded or sodded to prevent erosion. All driveways and pavements shall be repaired.

### **C. Storm Water Pollution Prevention Plan**

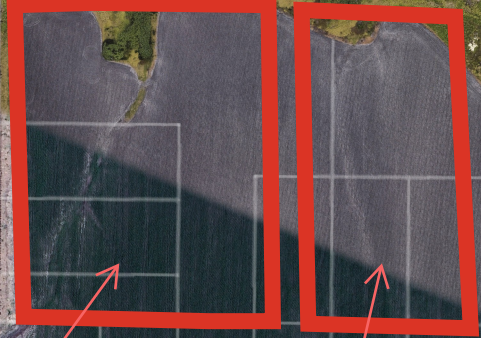
A storm water pollution prevention plan shall be incorporated into the Contractor's work plan to minimize pollution entering the storm sewers along the project (including open drainage ditches). Specific emphasis shall be made near street intersections and large drainage facilities where access to and from the work area shall be critical.

### **D. Erosion Control**

There are no specific areas where the gravity main installation shall cause erosion of property. Therefore, no specific erosion control measures are recommended beyond the City Standard Stormwater Pollution Prevention Plan.

# KINGS LANDING DEVELOPMENT

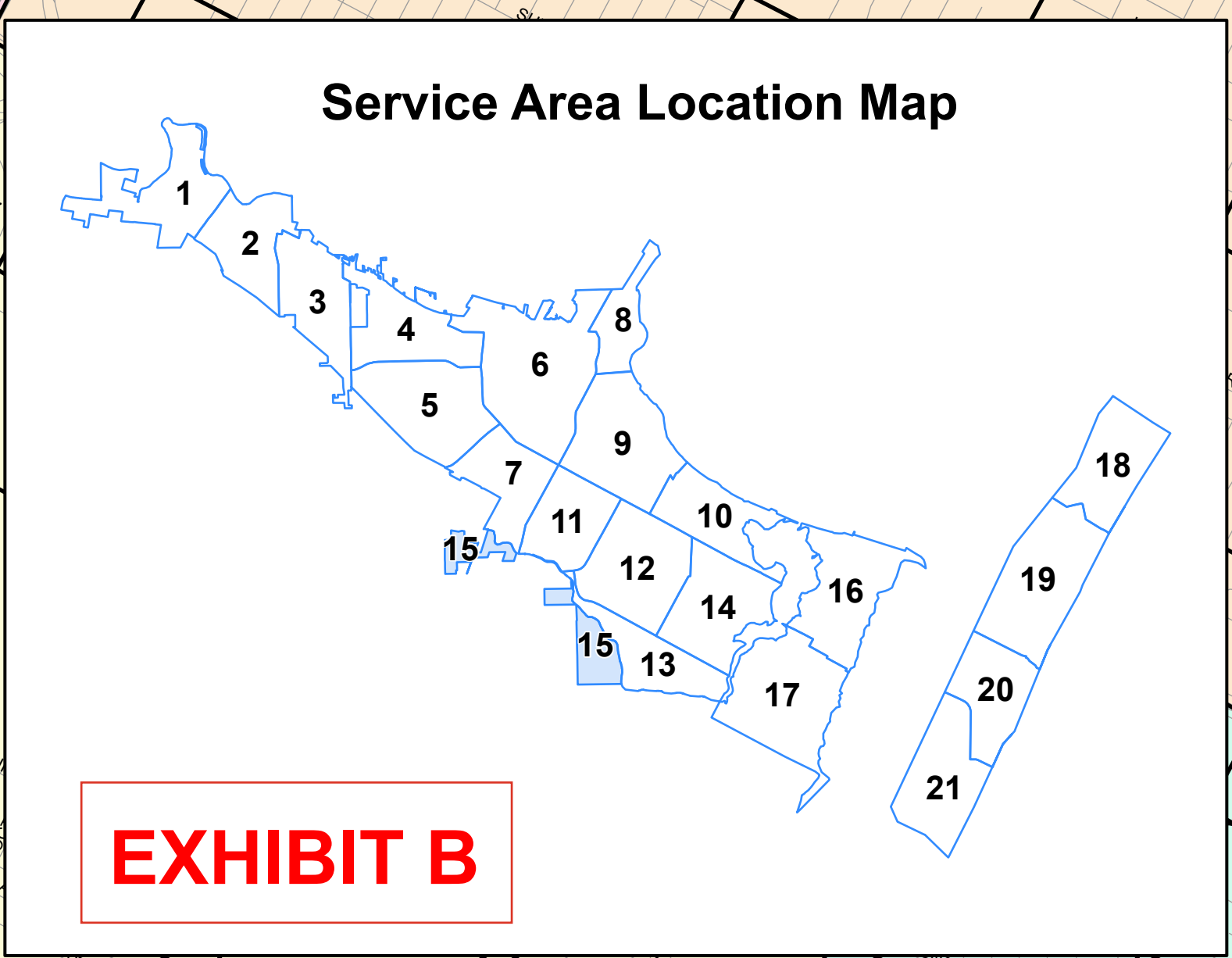
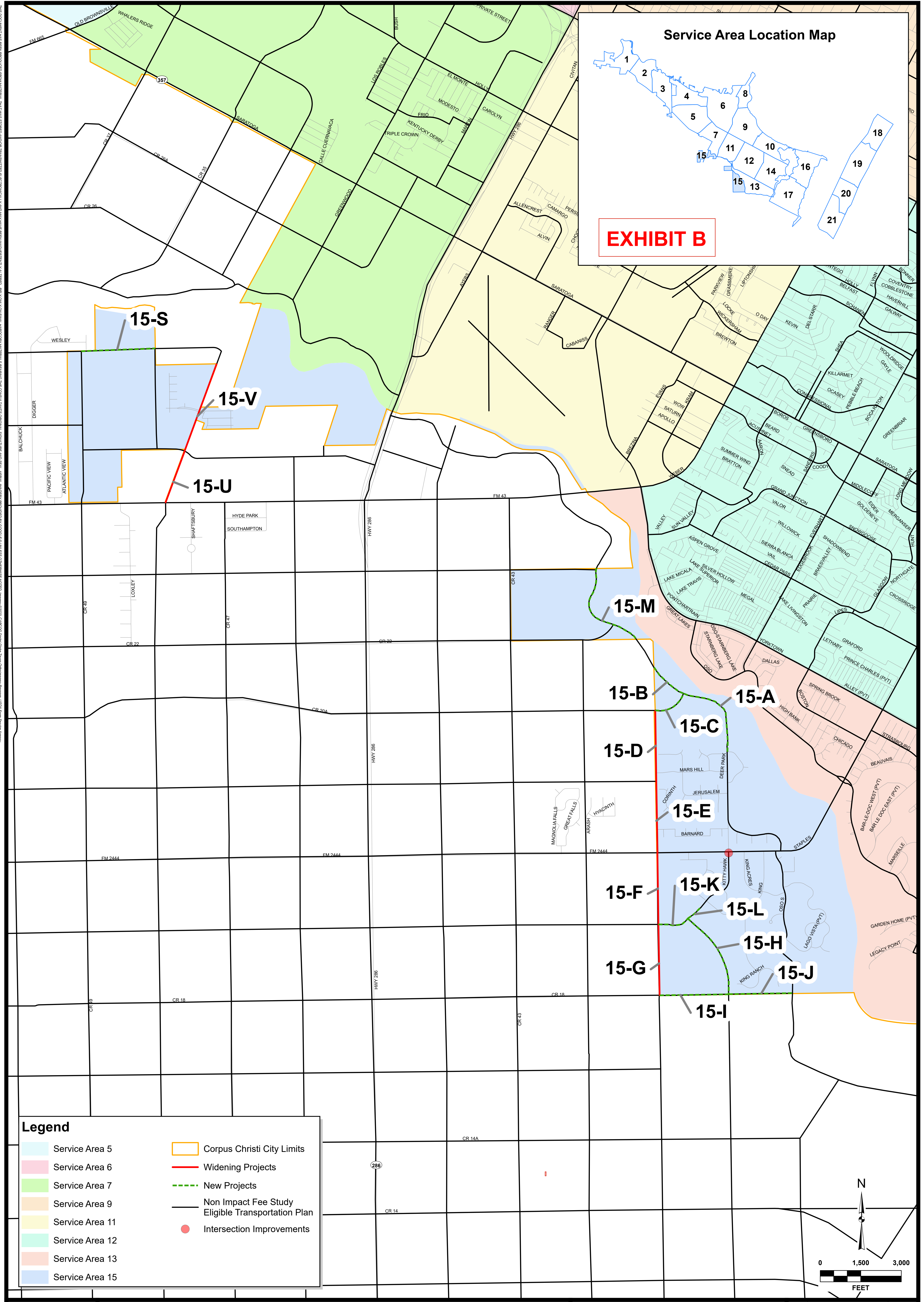
EXHIBIT A



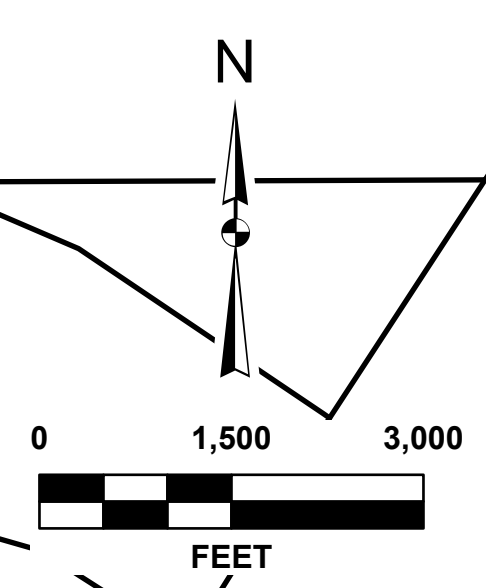
UNIT 13

UNIT 12





Legend	
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PLAT NO.	--
JOB NO.	12383-00
DATE	Aug 2023
DESIGNER	JC
CHECKED	HS DRAWN EH
SHEET	1.0

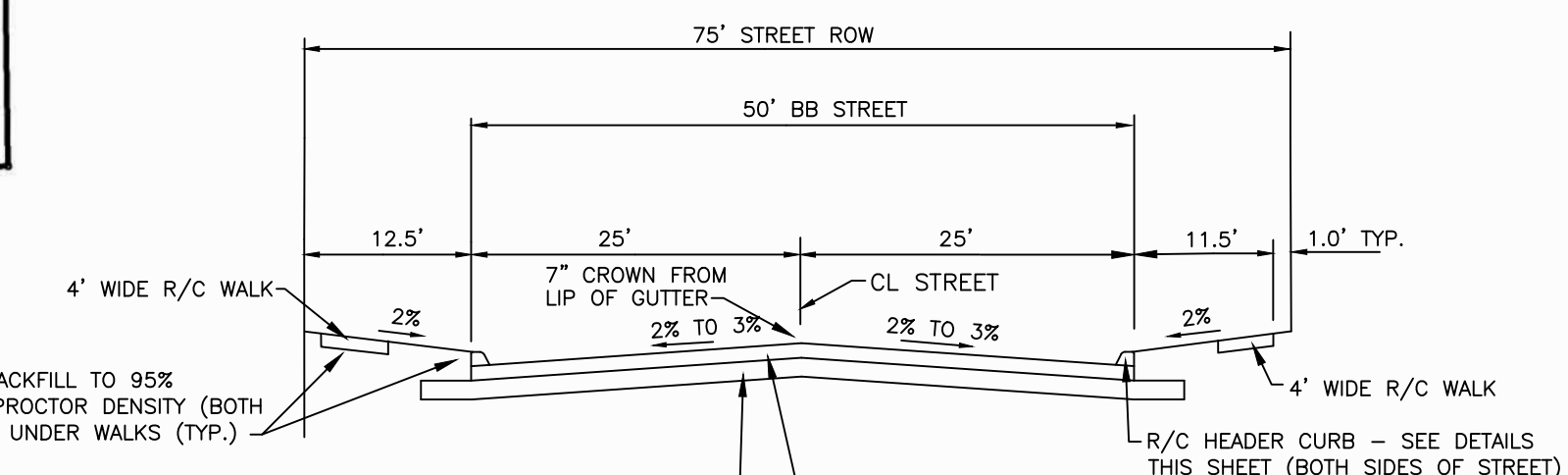
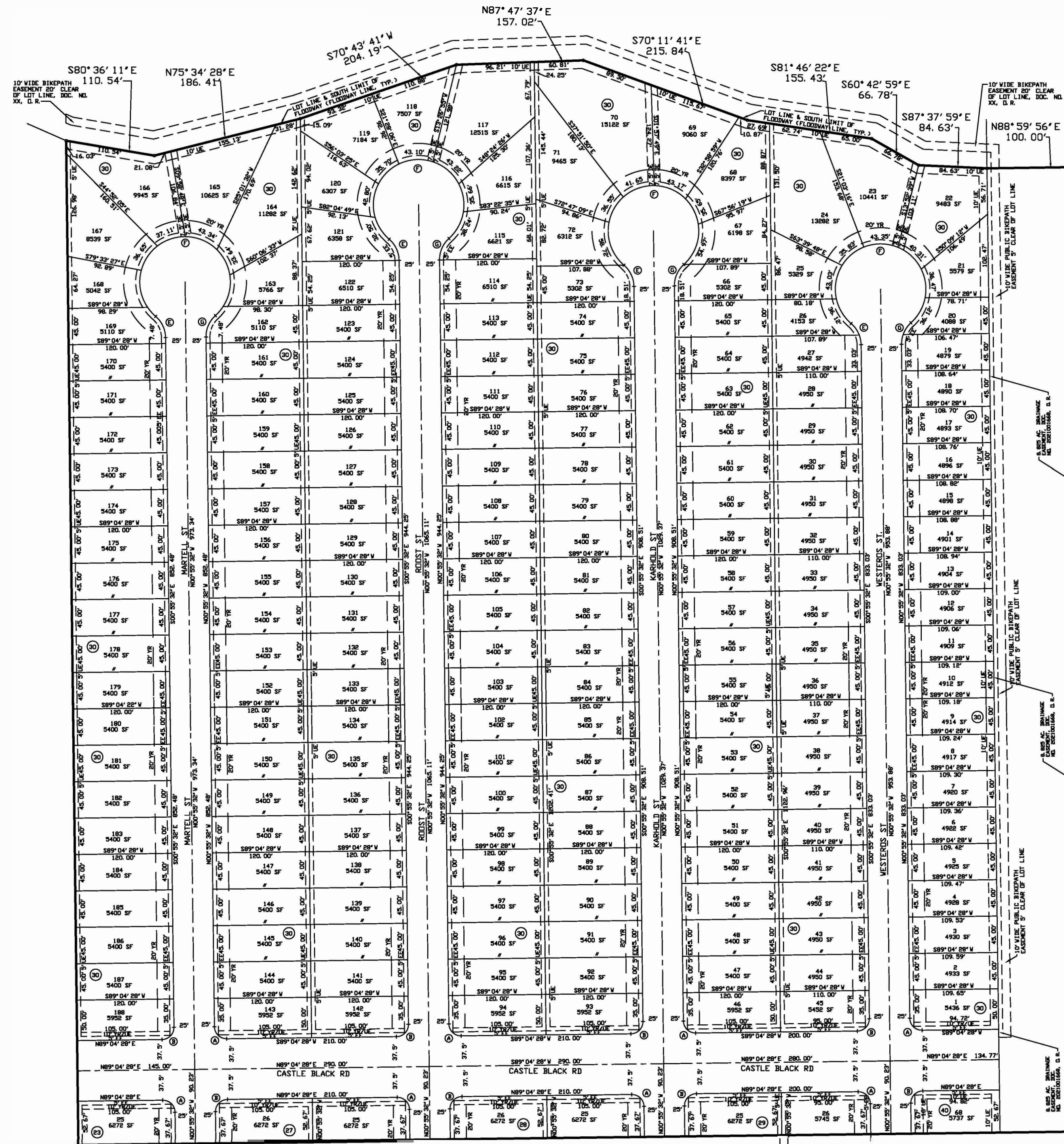
## LONDON (SERVICE AREA 15)

CORPUS CHRISTI, TEXAS  
 IMPACT FEE STUDY

**Pape-Dawson  
 ENGINEERS**

807 N UPPER BROADWAY, STE 103 | CORPUS CHRISTI, TX 78401 | 210.375.9000  
 TEXAS ENGINEERING FIRM #470

NO.	REVISION	DATE



COMPACT BACKFILL TO 95% STANDARD PROCTOR DENSITY (BOTH SIDES) AND UNDER WALKS (TYP.)

PROPOSED 12" LIME/PORLAND CEMENT STABILIZED NATURAL SITE MATERIAL TO 2' BACK OF CURB BOTH SIDES OF STREET; PERFORMED IN ACCORDANCE WITH TxDOT ITEMS 260 AND 275. SUBGRADE TREATED WITH LIME SHALL ACHIEVE A PH OF 12.4 OR GREATER. A LIME SERIES TEST SHALL BE PERFORMED AT THE TIME OF CONSTRUCTION AFTER THE PAVEMENT SUBGRADE SOILS ARE ESTABLISHED TO DETERMINE THE LIME REQUIREMENT. SULFATE TESTING SHALL ALSO BE CONDUCTED BEFORE PLACEMENT OF LIME TO EVALUATE THE POTENTIAL FOR SULFATE INDUCED HEAVE FROM THE LIME STABILIZATION. THE ORGANIC CONTENT OF THE SUBGRADE SHALL NOT EXCEED 3%. ONCE THE MIN. 24 HOUR MELLOWING PERIOD FOR LIME IS COMPLETE, THE LIME STABILIZED SUBGRADE SHALL PROMPTLY BE CEMENT STABILIZED WITH 5% PORTLAND CEMENT PER TxDOT ITEM 275. COMPACT THE LIME/CEMENT STABILIZED MIXTURE TO 95% MODIFIED PROCTOR (ASTM-D1557) DENSITY WITHIN TWO PERCENTAGE POINTS OF OPTIMUM MOISTURE CONTENT

PROPOSED 8" THICK RCCP (ROLLER COMPACTED PORTLAND CEMENT CONCRETE PAVING) COMPACTED TO A MINIMUM DRY DENSITY OF AT LEAST 98% MODIFIED PROCTOR DENSITY (ASTM D-1557) WITHIN 2% OF OPTIMUM MOISTURE CONTENT

TYPICAL RCCP STREET SECTION - 75' ROW  
NTS

REVISION NO.	DATE	BY	DESCRIPTION

**KINGS LANDING UNIT 12  
CORPUS CHRISTI, TX  
DEVELOPMENT EXHIBIT**



**TEC ENGINEERING**  
CIVIL-WINDSTORM-CONSULTING  
F-19879  
6837 SIR MOSES  
CORPUS CHRISTI, TX 78414

# EXHIBIT 3

**GEOTECHNICAL ENGINEERING REPORT**

**Proposed King's Landing Unit 12  
Various Streets  
Corpus Christi, Texas**

**PSI Project No. 03123584-1**

**PREPARED FOR:**

**MPM Development, LP  
P.O. Box 331308  
Corpus Christi, TX 78463**

**BY:**

**PROFESSIONAL SERVICE INDUSTRIES, INC.  
810 S. Padre Island Dr.  
Corpus Christi, Texas 78416  
Phone: (361) 854-4801**





Professional Service Industries, Inc.  
810 S. Padre Island Drive  
Corpus Christi, Texas 78416  
Office (361) 854-4801

**MPM Development, LP**  
P.O. Box 331308  
Corpus Christi, TX 78463

Attn: Mr. Moses Mostaghasi

**RE: GEOTECHNICAL ENGINEERING REPORT  
PROPOSED KING'S LANDING UNIT 12  
VARIOUS STREETS  
CORPUS CHRISTI, TEXAS  
PSI Project No. 03123584-1**

Mr. Mostaghasi:

Professional Service Industries, Inc. (PSI), an Intertek company, is pleased to submit this Geotechnical Engineering Report for the referenced project. This report includes the results from the field and laboratory investigation along with recommendations for use in preparation of the appropriate design and construction documents for this project.

PSI appreciates the opportunity to provide this Geotechnical Engineering Report and looks forward to continuing participation during the design and construction phases of this project. PSI also has great interest in providing materials testing and inspection services during the construction of this project and will be glad to meet with you to further discuss how we can be of assistance as the project advances.

If there are questions pertaining to this report, or if PSI may be of further service, please contact us at your convenience.

Respectfully submitted,

**PROFESSIONAL SERVICE INDUSTRIES, INC.**

*Texas Board of Professional Engineers Certificate of Registration # F003307*

Philip L. Johnson, P.E.  
Principal Consultant  
Senior Geotechnical Engineer



Dexter Bacon, P.E.  
Chief Engineer



Corpus Christi, Texas

## 1.0 PROJECT INFORMATION

### 1.1 PROJECT AUTHORIZATION

Professional Service Industries, Inc. (PSI), an Intertek company, has completed a field exploration and geotechnical evaluation for the proposed King's Landing Unit 12 project. Mr. Moses Mostaghasi representing MPM Development, authorized PSI's services on 6/26/2025 by signing PSI Proposal No. 384964. PSI's proposal contained a proposed scope of work, lump sum fee, and PSI's General Conditions.

### 1.2 PROJECT DESCRIPTION

Based on information provided by the Client, PSI's review of a site plan entitled Public Improvements to King's Landing, and prepared by Bass and Welch Engineering, and the results of this geotechnical investigation, a summary of our understanding of the proposed project is provided in the following General Project Description table.

**TABLE 1.1: GENERAL PROJECT DESCRIPTION**

Project Items	<b>New streets for a new King's Landing Unit 12 residential development</b>
Existing Grade Change within Building Pad Area	Relatively Flat
Existing Grade Change within Project Site Area	± 3 feet (estimated from Google Earth)
Finished Floor Elevation	Not Provided
Pavement for Parking and Drives	RCC Pavement

The geotechnical recommendations presented in this report are based on the available project information, structure locations, and the subsurface materials encountered during the field investigation. If the noted information or assumptions are incorrect, please inform PSI so that the recommendations presented in this report can be amended, as necessary. PSI will not be responsible for the implementation of provided recommendations if not notified of changes in the project.

### 1.3 PURPOSE AND SCOPE OF SERVICES

The purpose of this study is to evaluate the subsurface conditions at the site and develop geotechnical engineering recommendations and guidelines for use in preparing the design and other related construction documents for the proposed project. The scope of services included drilling soil borings, performing laboratory testing, and preparing this geotechnical engineering report.

This report briefly outlines the available project information, describes the site and subsurface conditions, and presents the recommendations regarding the following:



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Corpus Christi, Texas

- General site development and subgrade preparation recommendations;
- Estimated potential soil movements associated with collapsing, shrinking and swelling soils and methods to reduce these movements to acceptable levels;
- Recommendations for site excavation, fill compaction, and the use of on-site and imported fill material under pavements;
- Recommendations for the design and construction considerations for roller compacted concrete (RCC) pavement for the proposed streets; and
- Utility design and construction considerations.

The scope of services for this geotechnical exploration did not include an environmental, mold nor detailed seismic/fault assessment for determining the presence or absence of wetlands, or hazardous or toxic materials in the soil, bedrock, surface water, groundwater, or air on or below, or around this site. Statements in this report or on the boring logs regarding odors, colors, and unusual or suspicious items or conditions are strictly for informational purposes.



Corpus Christi, Texas

## 2.0 SITE AND SUBSURFACE CONDITIONS

### 2.1 SITE DESCRIPTION

The following table provides a generalized description of the existing site conditions based on visual observations during the field activities, as well as other available information.

**TABLE 2.1: SITE DESCRIPTION**

<b>Site Location</b>	CR 49 and FM 43, Corpus Christi, Nueces County, Texas
<b>Site History</b>	Farm Land, New Residential Construction
<b>Existing Site Ground Cover</b>	Grass, weeds
<b>Existing Grade/Elevation Changes</b>	± 3 feet (estimated from Google Earth)
<b>Site Boundaries/Neighboring Development</b>	North: Undeveloped Cultivated Fields East: London School South: Weber Road West: Residential Subdivision
<b>Ground Surface Soil Support Capability</b>	Good enough for construction vehicles when dry; Poor when wet

### 2.2 FIELD EXPLORATION

Field exploration for the project consisted of drilling a total of 18 borings. The boring design element, boring labels, approximate depths and drilling footage are provided in the following table.

**TABLE 2.2: FIELD EXPLORATION SUMMARY**

<b>Design Element</b>	<b>Number of Borings</b>	<b>Boring Depth (ft)</b>	<b>Drilling Footage (feet)</b>
<b>Pavement</b>	16	10	130
<b>Pavement/Utilities</b>	2	20	40
<b>TOTAL:</b>	<b>18</b>		<b>170</b>

The boring locations were selected by PSI personnel and located in the field using a recreational-grade GPS system. Elevations of the ground surface at the boring locations were not provided and should be surveyed by others prior to construction. The references to elevations of various subsurface strata are based on depths below existing grade at the time of drilling. The approximate boring locations are depicted on the Boring Location Plan provided in the Appendix.



Corpus Christi, Texas

**TABLE 2.3: FIELD EXPLORATION DESCRIPTION**

<b>Drilling Equipment</b>	Truck-Mounted Drilling Rig
<b>Drilling Method</b>	Continuous Flight Augers
<b>Drilling Procedure</b>	Applicable ASTM and PSI Safety Manual
<b>Field Testing</b>	Hand Penetrometer, Standard Penetration Test (ASTM D1586)
<b>Sampling Procedure</b>	ASTM D1587/1586
<b>Sampling Frequency</b>	Continuously to a Depth of 10 Feet and at 5-foot Intervals Thereafter
<b>Frequency of Groundwater Level Measurements</b>	During and After Drilling
<b>Boring Backfill Procedures</b>	Soil Cuttings

During field activities, the encountered subsurface conditions were observed, logged, and visually classified (in general accordance with ASTM D2487). Field notes were maintained to summarize soil types and descriptions, water levels, changes in subsurface conditions, and drilling conditions.

### 2.3 LABORATORY TESTING PROGRAM

PSI supplemented the field exploration with a laboratory testing program to determine additional engineering characteristics of the subsurface soils encountered. The laboratory testing program included:

**TABLE 2.4: LABORATORY TESTING PROGRAM**

<b>Laboratory Test</b>	<b>Procedure Specification</b>
<b>Visual Classification</b>	ASTM D2488
<b>Moisture Content</b>	ASTM D2216
<b>Atterberg Limits</b>	ASTM D4318
<b>Material Finer than No. 200 Sieve</b>	ASTM D1140

The laboratory testing program was conducted in general accordance with applicable ASTM Test Methods. The results of the laboratory tests are provided on the Boring Logs in the Appendix. Portions of samples not altered or consumed by laboratory testing will be discarded 60 days from the date shown on this report.

### 2.4 SITE GEOLOGY

As shown on the Geologic Atlas of Texas, Corpus Christi Sheet, reprinted in 1975, the site is located in an area where the **Beaumont Formation (Qb)** is present at or near the ground surface. The Beaumont



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Formation consists mostly of clay and sand intermixed with gravel. The Beaumont Formation thickness varies from 3 to 10 meters to over 100 meters toward the southeast.

## 2.5 SUBSURFACE CONDITIONS

The results of the field and laboratory investigation have been used to generalize a subsurface profile at the project site. The following subsurface descriptions provide a highlighted generalization of the major subsurface stratification features and material characteristics.

**TABLE 2.5: GENERALIZED SOIL PROFILE**

Stratum	Top (ft)	Bot. (ft)	Soil Type	LL (%)	PI	% Passing #200 Sieve	PP (Avg)
1	0	20	Fat Clay	75	43	88	2.3

Where: LL= Liquid limit (%)  
 PI = Plasticity Index  
 PP – Hand Penetrometer (tsf)

The boring logs included in the Appendix should be reviewed for specific information at individual boring locations. The boring logs include soil descriptions, stratifications, locations of the samples, and field and laboratory test data. The descriptions provided on the logs only represent the conditions at that actual boring location; the stratifications represent the approximate boundaries between subsurface materials. The actual transitions between strata may be more gradual and less distinct. Variations will occur and should be expected across the site.

### 2.5.1 GROUNDWATER INFORMATION

Water level measurements were performed during drilling and after completion of drilling. Specific information concerning groundwater is noted on each boring log presented in the Appendix of this report. Groundwater **was not** encountered during the field investigation of this site. Groundwater levels fluctuate seasonally as a function of rainfall, proximity to creeks, rivers and lakes, the infiltration rate of the soil, seasonal and climatic variations and land usage. In relatively pervious soils, such as sandy soils, the indicated depths are a relatively reliable indicator of groundwater levels. In relatively impervious soils, water levels observed in the borings may not provide a reliable indication of groundwater elevations, even after several days. If a detailed water level evaluation is required, observation wells or piezometers can be installed at the site to monitor water levels.

The groundwater levels presented in this report were measured at the time of PSI field activities. The contractor should determine the actual groundwater levels at the site before construction activities.

## 3.0 GEOTECHNICAL EVALUATION AND RECOMMENDATIONS



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### 3.1 GEOTECHNICAL DISCUSSION

The following design recommendations have been developed based on the previously described project characteristics and subsurface conditions encountered. If there are changes in the project criteria, PSI should be retained to determine if modifications in the recommendations will be required. The findings of such a review would be presented in a supplemental report. Once final design plans and specifications are available, a general review by PSI is recommended to observe that the conditions assumed in the project description are correct and to verify that the earthwork and foundation recommendations are properly interpreted and implemented within the construction documents.

### 3.2 POTENTIAL VERTICAL MOVEMENT OF EXPANSIVE SOILS

The soils encountered at the soil boring locations exhibit a **high** potential for volumetric changes, due to fluctuations in soil moisture content. PSI has conducted laboratory testing on the soils to estimate the expansive soil potential with soil moisture variations. These soil moisture variations are based on historical climate change data for a particular site. Determining the soil potential for shrinking and swelling, combined with historical climate variation, aids the engineer in quantifying the soil movement potential of the soils supporting the floor slab and shallow foundations. Shrink/swell movement procedures using two soil modeling systems, the Post Tensioning Institute's (PTI) "Design of Post-Tensioned Slabs-on-Ground, 3rd Edition" and Texas Department of Transportation (TxDOT) method TEX-124-E, were utilized to approximate the Potential Vertical Movement (PVM) for this location.

#### 3.2.1 SHRINK/SWELL MOVEMENT (PVM) ESTIMATE

Based on laboratory testing results and the TEX-124-E and the PTI methods, the potential vertical movement (PVM) within the proposed project area is estimated to be approximately **4 inches**.

It is not possible to accurately quantify actual soil moisture changes and resulting shrink/swell movements. The PVM (*often referred to as PVR*) and referenced structural movements values provided should not be considered absolute values that could occur in the field, but approximate values based on industry standard practice and experience. Extreme soil moisture variations could occur due to unusual drought severity, leaking water or sewer lines, , perched groundwater infiltration, or seasonal springs. Also, soil desiccation from trees located adjacent to or previously underneath the building, downspouts directing roof discharge under the foundation, poor drainage or irrigation line breaks could lead to moisture content changes greater than accounted for from normal climate variations and result in excessive foundation movements.

The unknown factors previously mentioned cannot be determined at the time of the geotechnical study. Therefore, estimated shrink/swell movements are calculated only in consideration of historical climate data related to soil moisture variations. Movements in excess of these assumed variations should be anticipated and regular maintenance should be provided to address these issues throughout the life of the structure.



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### **3.3 UTILITY EXCAVATION AND LATERAL EARTH PRESSURE CONSIDERATIONS**

New utility lines may be installed below the pavement. The pipe designer should account for sustained loads due to the soil overburden pressures and potential surcharge loads that may be applied to the pipe. The load due to the soil overburden pressures can be estimated using the total and effective unit weights of the soil and depths of each layer of soil. A total unit weight of 110 pcf or buoyant weight of 64 pcf may be assumed for on-site clayey material. In addition, hydrostatic pressures and/or surcharge loads, if present, should also be accounted for in the design.

Unbalanced thrust forces could also be developed in the pipeline due to changes in direction, cross-sectional areas, or if the pipe is terminated. These forces may cause joints to disengage if not adequately restrained. To resist movement and overstressing the pipe, suitable buttressing should be provided. In general, thrust blocks and/or concrete encasement are common methods of providing reaction for the thrust restraint design. For design of thrust blocks and similar other thrust restraints may be designed in consideration of an allowable passive resistance of **1,200 psf**.

Unbalanced forces produced by grade and alignment changes can be resisted by friction on the pipe. The frictional resisting force can be computed by multiplying the pressure produced by the combined weight of the pipe, contained water, and soil overburden by a coefficient of friction between the pipe and underlying bedding material. Based upon the recommended pipe installation and bedding, the unfactored coefficient of friction is anticipated to be approximately 0.3.

The Occupational Safety and Health Administration (OSHA) Safety and Health Standards (29 CFR Part 1926, Revised October 1989), require that excavations be constructed in accordance with the current OSHA guidelines. Furthermore, the State of Texas requires that detailed plans and specifications meeting OSHA standards be prepared for trench and excavation retention systems used during construction.

Most soils at this site consist primarily of clays that would be classified as OSHA Type "B" soils requiring a temporary excavation slope no steeper than 1H:1V. However, any soils below the groundwater table would be classified as Type "C" soils requiring temporary slopes no steeper than 1 ½ H: 1V.

Groundwater was not encountered in the test borings during our field exploration. We recommend that the contractor perform an investigation to establish groundwater levels prior to construction to evaluate sloping and dewatering requirements prior to construction.

### **3.4 DISCUSSION OF BEDDING AND BACKFILL MATERIALS**

Typically, the bedding and initial backfill around a buried pipeline is designed to support and protect the pipe. Secondary backfill is then placed over the initial backfill and pipe to help protect the pipe, reestablish the ground surface at the trench, and provide support to structures overlying the trench.

Generally, the bedding and initial backfill materials for piping consist of a graded gravel. The existing soils at the pipe bearing levels should be removed to a minimum depth of six (6) inches below the bottom of the pipe and replaced with gravel bedding. The bedding material should embed the lower quadrant or to the midpoint of the pipe at a minimum and should be compacted in maximum compacted thickness of eight (8) inches with mechanical hand compaction equipment. The initial backfill should extend from the



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surface of the bedding to a point one (1) foot above the top of the pipe and should be compacted in maximum compacted thickness of eight (8) inches with mechanical hand compaction equipment.

The secondary backfill may consist of material excavated from the trench. The secondary backfill should be free of debris and should not contain stones greater than three (3) inches in diameter. The secondary backfill should be placed at moisture contents between optimum and plus four (+4) percentage points of optimum and compacted to at least 95 percent of the maximum dry density as determined by ASTM D698. Each lift should be placed with a maximum compacted thickness of six (6) inches. Care should be taken during backfill compaction to prevent structural damage to the pipe.

### 3.5 EXCAVATION AND SHORING CONSIDERATIONS

Lateral earth pressures from the soils will be applied to the trench shoring. Additionally, hydrostatic pressures and any equipment loads, and other surcharges should be considered for trench shoring design. The follow table should be utilized for the design of the allowable temporary slopes and trench shoring.

**TABLE 3.1: EXCAVATION AND SHORING DATA**

Material Type	OSHA Soil Type	At-Rest Condition, Ko
Fat and Lean Clay (CH and CL)	"B"	0.60
Fat and Lean Clay below GWT (CH and CL), Clayey Sands (SC)	"C"	0.60

A lateral earth pressure of  $120 \text{ pcf} \cdot \text{Ko} \cdot \text{depth}(\text{ft})$  should be used to evaluate lateral earth pressures applied to the shoring in a rectangular distribution. These values do not consider hydrostatic pressures. We recommend that the hydrostatic pressure be added to the lateral earth pressure in a triangular distribution of  $62.4 \text{ pcf} \cdot (X)$  for that portion of the shoring below the groundwater table.

### 3.6 SITE SEISMIC DESIGN RECOMMENDATIONS

For the purposes of seismic design, based on the encountered site conditions and local geology, PSI interpreted the subsurface conditions to satisfy the **Site Class D** criteria for use at this site as defined by the International Building Code (IBC). The site class is based on the subsurface conditions encountered at the soil borings, the results of field and laboratory testing, experience with similar projects in this area, and considering the site prepared as recommended herein. The table below provides recommended seismic parameters for the project based on the 2018 edition of the IBC.

**TABLE 3.2: RECOMMENDED DESIGN SEISMIC PARAMETERS**

Seismic Parameter	IBC 2018
0.2 sec ( $S_s$ )	0.064g



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1.0 sec ( $S_1$ )	0.033g
Site Coefficient 0.2sec, $F_a$	1.6
Site Coefficient 1.0 sec, $F_v$	2.4
0.2 sec ( $S_{DS}$ )	0.068g
1.0 sec ( $S_{D1}$ )	0.053g

## 4.0 PAVEMENT DESIGN RECOMMENDATIONS

### 4.1 PAVEMENT DESIGN PARAMETERS

PSI understands that Roller Compacted Concrete pavements are being considered for this project. Pavement design recommendations based on the City of Corpus Christi IDM pavement design requirements for the various planned street types as outlined in Table 4.1 below are provided. In addition, PSI utilized the "AASHTO Guide for Design of Pavement Structures" published by the American Association of State Highway and Transportation Officials to evaluate the pavement thickness recommendations in this report. This method of design considers pavement performance, traffic, roadbed soil, pavement materials, environment, drainage and reliability. Each of these items is incorporated into the design methodology. PSI is available to provide laboratory testing and engineering evaluation to refine the site-specific design parameters and sections, upon request. Details regarding the basis for this design are presented in the table below.

**TABLE 4.1: PAVEMENT DESIGN PARAMETERS AND ASSUMPTIONS**

<b>Reliability, percent</b>	70 for Residential Street 75 for Local Residential Collector 80 for Minor Residential Collector (C1) 90 for Secondary Collector Street (C2)
<b>Design Life</b>	30 Years
<b>Initial Serviceability Index</b>	4.5
<b>Terminal Serviceability Index</b>	2.5
<b>Traffic Load</b>	Residential Street: 50,000 ESALs Local Residential Collector: 200,000 ESALs Minor Residential Collector (C1): 1,200,000 ESALs Secondary Collector Street (C2): 2,000,000 ESALs
<b>Standard Deviation</b>	0.39
<b>Concrete Compressive Strength</b>	4,000 psi



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<b>Estimated Subgrade California Bearing Ratio (CBR)</b>	2.0 for high plasticity clay subgrade
<b>Estimated Subgrade Modulus of Subgrade Reaction, k in pci</b>	200 for lime/cement stabilized subgrade

Pavements supported on expansive soils will be subject to PVM previously presented (approximately 4 inches  $\pm$  ½ inch). These soil movements typically occur to some degree over the life of the pavement. Consequently, pavements can be expected to crack and require periodic maintenance. The pavement section thickness of approximately 15 to 16 inches would reduce the anticipated PVR to approximately 2 ½ inches. It is our opinion that this magnitude of PVR can be primarily resisted considering a concrete or RCC pavement section.

During the paving life, maintenance to seal surface cracks within concrete pavement and to reseal joints within concrete pavement should be undertaken to achieve the desired paving life. Perimeter drainage should be controlled to prevent or retard influx of surface water from areas surrounding the paving. Water penetration leads to paving degradation. Water penetration into subgrade materials, sometimes due to irrigation or surface water infiltration, leads to pre-mature paving degradation. Curbs should be used in conjunction with concrete paving to reduce potential for infiltration of moisture into the subgrade. Clay type compacted materials (12-25) or flowable fill should be placed on top of the base and beneath the sidewalk so that a path for moisture infiltration under the curb and into the pavement section is mitigated.

The City of Corpus Christi requires the base and subgrade to be extended beneath the curb and gutter and to 2 feet behind the Curb. In accordance with City Standard Spec 025612 (Concrete Curb and Gutter) there is a requirement for compaction behind the Curb within 48 hours of removing forms.

Material specifications, construction considerations, and thickness section requirements are presented in following sections.

The presented recommended pavement sections are based on the field and laboratory test results for the project, City of Corpus Christi pavement design practice, design assumptions presented herein and previous experience with similar projects. The project Civil Engineer should verify that the design values are appropriate for the expected traffic and design life of the project. PSI should be notified in writing if the assumptions or design parameters are incorrect or require modification.

## **4.2 PAVEMENT SECTION RECOMMENDATIONS**

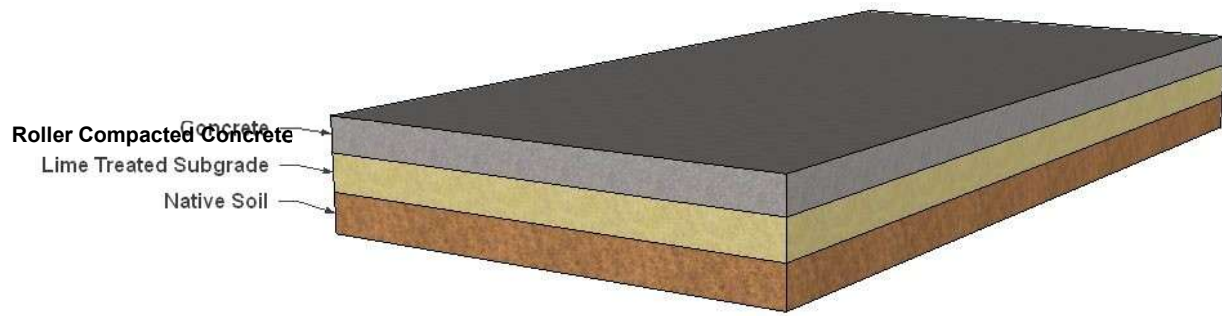
PSI anticipated that the roadways will be used primarily by typical residential traffic primarily consisting of passenger vehicles, pickup trucks, school buses, delivery vehicles, and garbage trucks. PSI is providing thickness sections based on experience with similar facilities constructed on similar soil conditions for the design traffic loading anticipated.

### **4.2.1 ROLLER COMPACTED CONCRETE PAVEMENT**

Thickness recommendations for roller compacted concrete (RCC) pavement are provided below.



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**FIGURE 4.1: ROLLER COMPACTED CONCRETE PAVEMENT TYPICAL SECTION****TABLE 4.2: ROLLER COMPACTED CONCRETE PAVEMENT DESIGN THICKNESS**

Material	Thickness (in)			
	Residential Street	Local Residential Collector	Minor Residential Collector (C1)	Secondary Collector (C2)
RCC Pavements	7.0	7.0	7.0	8.0
Lime/Cement Treated Subgrade	8	8	12	12

The AASHTO design calculation spreadsheets for these various street classifications are included in the Appendix.

#### 4.2.2 GENERAL PAVEMENT DESIGN AND CONSTRUCTION RECOMMENDATIONS

Roller compacted concrete pavement should be constructed in general accordance with TxDOT Special Specification 3016, Roller Compacted Concrete (included in the Appendix). Recommendations based upon the TxDOT specification are presented in the following table.

**TABLE 4.3: PAVEMENT PROFILE DESIGN AND CONSTRUCTION RECOMMENDATIONS**

Minimum Undercut Depth	6 inches or as needed to remove roots
Reuse Excavated Soils	Free of roots and debris and meet material requirements of intended use
Undercut Extent	2 feet beyond back of curb
Exposed Subgrade Treatment	Proof-roll with rubber-tired vehicle weighing at least 20 tons. A representative of the Geotechnical Engineer should be present during proof-roll.



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Proof-Rolled Pumping and Rutting Areas	Excavate to firmer materials and replace with compacted general or select fill under direction of a representative of the Geotechnical Engineer
General Fill	Materials free of roots, debris, and other deleterious materials with a maximum rock size of 4 inches with a CBR greater than 3. This will be confirmed by CMT.
Minimum General Fill Thickness	As required to achieve grade
Maximum General Fill Loose Lift Thickness	9 Inches
Lime/Cement Treatment	Performed in general accordance with TxDOT Item 260. Subgrade treated with lime should achieve a pH of 12.4 or greater. A lime series test should be performed at the time of construction after the pavement subgrade soils are established to determine the lime requirement. For estimating purposes, use 3% lime by dry weight. Sulfate testing should also be conducted before placement of lime to evaluate the potential for sulfate induced heave from the lime stabilization. The organic content of the subgrade should not exceed 1%. Once the min. 24 hour mellowing period for lime is complete, the lime stabilized subgrade should be cement stabilized with 5% cement per TxDOT Item 275.
RCC Mix Design	Proposed RCC Mix Design should be reviewed by City of Portland and PSI prior to construction. A trial batch is required to ensure workability and compressive strength.
Concrete Compressive Strength (28 days)	Minimum 4,000 psi
Concrete Cement and Aggregates	Cement: TxDOT Item 421. Aggregates: RCC Combined Aggregates Gradation for RCC Surface Course. Materials Passing the No. 40 Sieve should have a Plasticity Index of less than 4.



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Quality Control of RCC Pavements	<p>The RCC should be compacted to a min. dry density of at least 95% of the Modified Proctor (ASTM D-1557) maximum dry density within 2% of optimum moisture content.</p> <p>Molding compressive strength: Per ASTM C1435, 1 set of 4 of cylinders for 2@7 days, 2@28 days compression testing for every 1,500 cy of RCC with a minimum of 2 sets per day.</p>
Placement of RCC Pavements	The concrete batch plant should be within 30 minutes from point of placement. Production of RCC must be adequate to mitigate the potential of unplanned cold joints. The pavement should be placed and compacted as required by TxDOT Special Specification 3016.
Compaction Testing of RCC Pavements	ASTM C1040 - In-Place Density of Unhardened and Hardened Concrete, Including Roller Compacted Concrete, By Nuclear Methods. Single Lift and a minimum of 2 tests per day or per 500 CY. Testing should be completed within 30 minutes after rolling.
RCC Crack Control	<p>Transverse Joints: Maximum 15-foot intervals. Joints should be saw blade width to a depth of at least ¼ the pavement thickness and filled and sealed with approved joint sealants and fillers.</p> <p>Expansion and Control Joints: As required. Filled and sealed with approved joint sealants and fillers.</p>

**TABLE 4.4: COMPACTION AND TESTING RECOMMENDATIONS FOR PAVEMENT AREAS**

Location	Material	Test Method for Density Determination	Percent Compaction	Optimum Moisture Content	Testing Frequency
<b>Pavement Areas</b>	Scarified Onsite Soil (Subgrade)	ASTM D698	≥ 95%	0 to +4%	1 per 7,500 SF; min. 3 tests
	General Fill (Onsite Material)	ASTM D698	≥ 95%	0 to +4%	1 per 10,000 SF; min. 3 per lift
	RCC Pavement	ASTM D1557	≥ 95%	---	Single Lift 1 per 500 CY or
	RCC Pavement	ASTM 1170	≥ 98%		Single Lift 1 per 500 CY



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## 5.0 CONSTRUCTION CONSIDERATIONS

PSI should be retained to provide observation and testing of construction activities involved in the earthwork, pavements and related activities of this project. PSI cannot accept any responsibility for any conditions which deviate from those described in this report, nor for the performance of the pavements if not engaged to also provide construction observation and materials testing for this project. The PSI geotechnical engineer of record should be retained to provide continuing geotechnical consulting services and construction document review, even if periodic on-call testing is contracted with PSI Construction Services.

### 5.1 INITIAL SITE PREPARATION CONSIDERATIONS

#### 5.1.1 SUBGRADE PREPARATION FOR SITE WORK OUTSIDE PAVEMENT AREAS

Grade adjustments outside of the pavement areas can be made using select or general fill materials. The clean excavated onsite soils may also be reused in areas not sensitive to movement.

**TABLE 5.1: SUBGRADE PREPARATION FOR NON-STRUCTURAL - GENERAL FILL**

Minimum Undercut Depth	6 inches or as needed to remove roots, organic and/or deleterious materials
Exposed Subgrade Treatment	Proof-roll with rubber-tired vehicle weighing at least 20 tons. A representative of the Geotechnical Engineer should be present during proof-roll.
Proof-Rolled Pumping and Rutting Areas	Excavate to firmer materials and replace with compacted general or select fill under direction of a representative of the Geotechnical Engineer
General Fill Type	Clean material free of roots, debris and other deleterious material with a maximum particle size of 4 inches
Maximum General Fill Loose Lift Thickness	8 inches

**TABLE 5.2: FILL COMPACTION RECOMMENDATIONS OUTSIDE OF PAVEMENT AREAS**

Location	Material	Test Method for Density Determination	Percent Compaction	Optimum Moisture Content	Testing Frequency
Outside of Pavement Areas	General Fill	ASTM D698	≥ 95%	0 to +4%	1 per 10,000



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SF; min. 3 per lift
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## 5.2 MOISTURE SENSITIVE SOILS/WEATHER RELATED CONCERNS

The soils encountered are sensitive to disturbances caused by construction traffic and changes in moisture content. During wet weather periods, increases in the moisture content of the soil can cause significant reduction in the soil strength and support capabilities. In addition, soils which become wet may be slow to dry and thus significantly retard the progress of grading and compaction activities. It will, therefore, be advantageous to perform earthwork, foundation, and construction activities during dry weather.

## 5.3 SULFATES EVALUATION

As indicated previously, the pavement subgrade soils and imported embankment fills should be regularly screened for sulfates during construction. When soluble sulfates are detected above 500 ppm TxDOT Guidelines for Treatment of Sulfate Rich Soils shall be followed. TxDOT has identified mitigation procedures of sulfate bearing soils into three categories, Traditional Treatment, Modified Treatment, and an Alternative Treatment.

The Contractor shall follow the mitigation procedures outlined above when high sulfate concentrations (above 3000 ppm) are encountered along the alignment. The amount of mellowing time and moisture content required shall be determined during the mix design process using Tex-145-E, Part II as outlined in TxDOT Guidelines. Furthermore, the sulfate content and the treatment shall be verified in the field in accordance with project Quality Assurance Procedures and TxDOT specifications.

## 5.4 EXCAVATION OBSERVATIONS

The excavations should be observed by a representative of PSI prior to concrete placement to assess that the materials are consistent with the materials discussed in this report. This is especially important to identify the condition and acceptability of the exposed subgrades under the pavements. Soft or loose soil zones encountered at the bottom of the beam excavations should be removed to the level of competent soils as directed by the Geotechnical Engineer. Cavities formed as a result of excavation of soft or loose soil zones should be backfilled with compacted select fill or lean concrete.

After opening, excavations should be observed, and concrete placed as quickly as possible to avoid exposure to wetting and drying. Surface run-off water should be drained away from the excavations and not be allowed to pond. If excavations must be left open an extended period, they should be protected to reduce evaporation or entry of moisture.

## 5.5 DRAINAGE CONSIDERATIONS

Water should not be allowed to collect in or adjacent to excavations or on prepared subgrades within the construction area either during or after construction. Proper drainage around grade supported sidewalks and flatwork is also important to reduce potential movements. Excavated areas should be sloped toward one corner to facilitate removal of collected rainwater, groundwater, or surface runoff.



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## 5.6 EXCAVATIONS AND TRENCHES

Excavation equipment capabilities and field conditions may vary. Geologic processes are erratic and large variations can occur in small vertical and/or lateral distances. Details regarding "means and methods" to accomplish the work (such as excavation equipment and technique selection) are the sole responsibility of the project contractor. The comments contained in this report are based on small diameter borehole observations. The performance of large excavations may differ.

The Occupational Safety and Health Administration (OSHA) Safety and Health Standards (29 CFR Part 1926, Revised October 1989), require that excavations be constructed in accordance with the current OSHA guidelines. Furthermore, the State of Texas requires that detailed plans and specifications meeting OSHA standards be prepared for trench and excavation retention systems used during construction. PSI understands that these regulations are being strictly enforced, and if they are not closely followed, the owner and the contractor could be liable for substantial penalties.

The contractor is solely responsible for designing and constructing stable, temporary excavations and should shore, slope, or bench the sides of the excavations as required to maintain stability of both the excavation sides and bottom. The contractor's "responsible person", as defined in 29 CFR Part 1926, should evaluate the soil exposed in the excavations as part of the contractor's safety procedures. In no case should slope height, slope inclination, or excavation depth, including utility trench excavation depth, exceed those specified in local, state, and Federal safety regulations.

PSI is providing this information solely as a service to the client. PSI does not assume responsibility for construction site safety or the contractor's or other parties' compliance with local, state, and Federal safety or other regulations. A trench safety plan was outside the scope of this project.



## 6.0 REPORT LIMITATIONS

The recommendations submitted in this report are based on the available subsurface information obtained by PSI and design details furnished by the client for the proposed project. If there are revisions to the plans for this project, or if deviations from the subsurface conditions noted in this report are encountered during construction, PSI should be notified immediately to determine if changes in the foundation recommendations are required. If PSI is not notified of such changes, PSI will not be responsible for the impact of those changes on the project.

The Geotechnical Engineer warrants that the findings, recommendations, specifications, or professional advice contained herein have been made in accordance with generally accepted professional Geotechnical Engineering practices in the local area. No other warranties are implied or expressed. This report may not be copied without the expressed written permission of PSI.

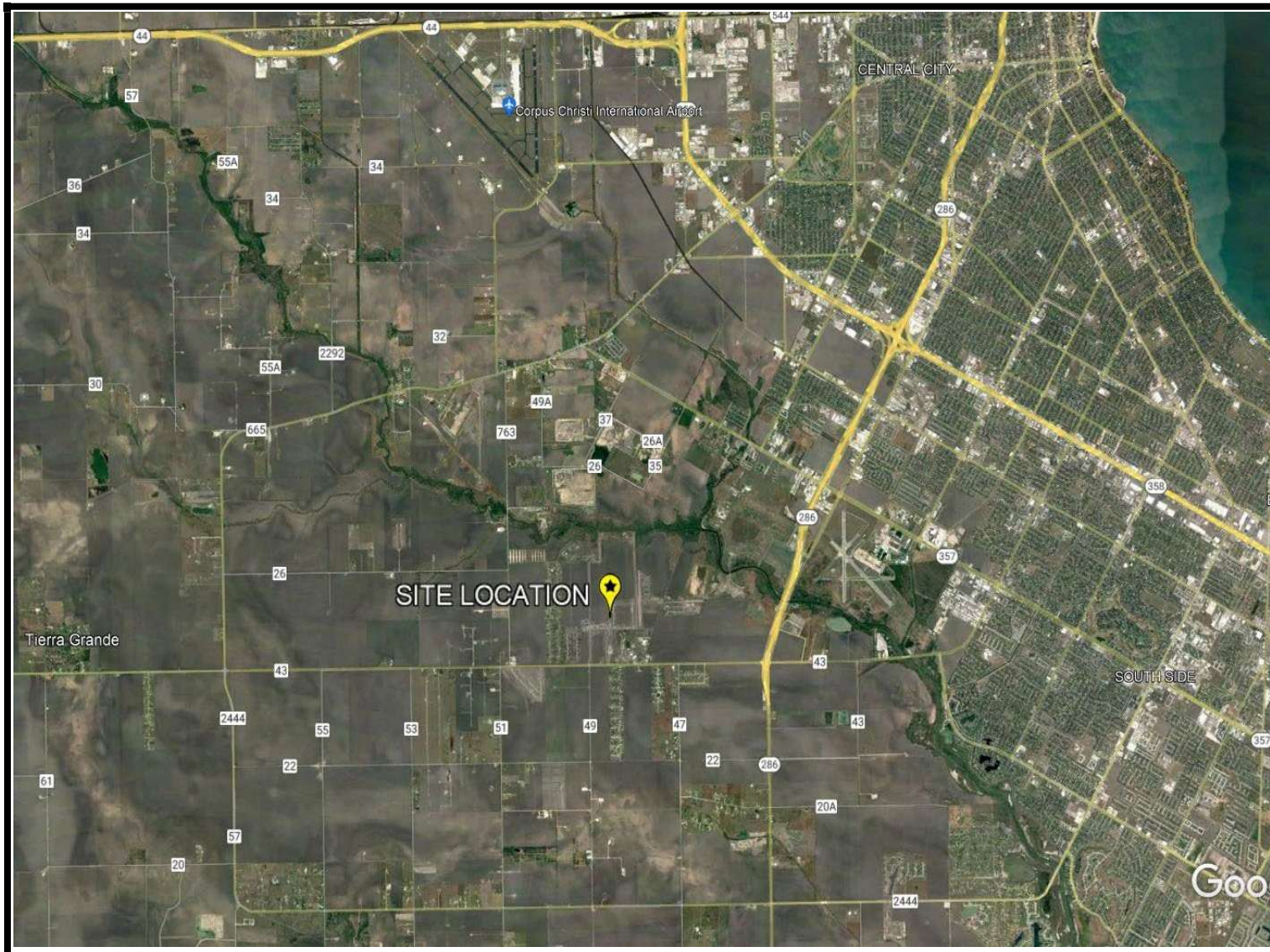
After the plans and specifications are more complete, the Geotechnical Engineer should be retained and provided the opportunity to review the final design plans and specifications to check that the engineering recommendations have been properly incorporated in the design documents. At this time, it may be necessary to submit supplementary recommendations. If PSI is not retained to perform these functions, PSI will not be responsible for the impact of those conditions on the project.

This report has been prepared for the exclusive use of MPM Homes, Inc. for specific application to the proposed King's Landing Unit 9 in Corpus Christi, Texas.



## APPENDIX





# EXHIBIT 4

9/8/2025
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**Kings Landing Unit 12 - Cost**  
**Oversize Castle Black Dr. (Residential to C-3 Collector)**

<b>Cost of Oversized Street</b>					
ITEM	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
1	8" PCCP/ RRCP TO LIP OF GUTTER	6332	SY	\$ 95.00	\$ 601,540.00
2	12" LIME STABILIZED SUBGRADE TO 2'BC	6839	SY	\$ 45.00	\$ 307,755.00
3	12" PORTLAND CEMENT STABILIZED SUBGRADE TO 2'BC	6839	SY	\$ 35.00	\$ 239,365.00
4	EXCAVATION TO 2' BC	6839	SY	\$ 4.00	\$ 27,356.00
					<b>\$ 1,176,016.00</b>

<b>Cost of Residential Street</b>					
ITEM	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
1	7" PCCP/RCCP TO LIP OF GUTTER	3546	SY	\$ 72.00	\$ 255,312.00
2	8" LIME STABILIZED SUBGRADE TO 2'BC	4053	SY	\$ 28.00	\$ 113,484.00
3	8" PORTLAND CEMENT STABILIZED SUBGRADE TO 2'BC	4053	SY	\$ 22.00	\$ 89,166.00
4	EXCAVATION TO 2' BC	4053	SY	\$ 4.00	\$ 16,212.00
					<b>\$ 474,174.00</b>

CITY PORTION EQUALS DIFFERENCE IN CONSTRUCTION COST	\$	701,842.00
11% ENGINEERING, SURVERYING, & TESTING	\$	77,202.62
7% CONTINGENCY	\$	49,128.94
2% BOND	\$	14,036.84
<b>TOTAL AMOUNT REIMBURSABLE</b>	<b>\$</b>	<b>842,210.40</b>

# EXHIBIT 5

**PERFORMANCE BOND**

**BOND NO.** \_\_\_\_\_

<p><b>Developer as Principal</b> Name: Mailing address (<i>principal place of business</i>):</p>	<p><b>Surety</b> Name: Mailing address (<i>principal place of business</i>):  Physical address (<i>principal place of business</i>):</p>
<p><b>City as Obligee</b> Name: City of Corpus Christi Mailing address (<i>principal place of business</i>): City of Corpus Christi Attn: Director, Development Services Department 2406 Leopard Street Corpus Christi, Texas 78401</p>	<p>Surety is a corporation organized and existing under the laws of the state of: _____  <i>By submitting this Bond, Surety affirms its authority to do business in the State of Texas and its license to execute bonds in the State of Texas.</i></p>
<p><b>Contract</b> Title of Agreement:  For Subdivision:  Award Date of the Contract: Total Project Cost/Bond Sum:</p>	<p>Telephone (<i>main number</i>):  Telephone (<i>for notice of claim</i>):</p>
<p><b>Bond</b>  Date of Bond:  <i>(Date of Bond cannot be earlier than Award Date of the Contract)</i></p>	<p>Local Agent for Surety Name: Address:  Telephone: E-Mail Address:  <b><i>The address of the surety company to which any notice of claim should be sent may be obtained from the Texas Dept. of Insurance by calling the following toll-free number: 1-800-252-3439</i></b></p>

***Surety and Developer, intending to be legally bound and obligated to Obligee do each cause this Performance Bond to be duly executed on its behalf by its authorized officer, agent or representative. The Principal and Surety bind themselves, and their heirs, administrators, executors, successors and assigns, jointly and severally to this bond. The condition of this obligation is such that if the Developer as Principal faithfully performs the Work required by the Contract, then this obligation shall be null and void; otherwise the obligation is to remain in full force and effect. The Contract between Obligee and Developer is incorporated by reference into this Statutory Performance Bond, pursuant to Chapter 2253 of the Texas Government Code. Provisions of the bond shall be pursuant to the terms and provisions of Texas Insurance Code 3503, Texas Government Code 2253, and all other applicable laws and regulations., and all liabilities on this bond shall be determined in accordance with the provisions of said Chapters to the same extent as if it were copied at length herein.***

***If Developer does not faithfully construct and complete said Work under its contract with Obligee, and Obligee invokes its contractual rights and declares Developer in default, Surety shall promptly remedy the default, and at Obligee's sole option, Surety shall:***

- 1. Within a reasonable time (but not later than 30 days after Surety receives written notice of Developer's default), with written notice to Obligee, step into and assume the role, all rights and all obligations of the defaulting Developer under the Contract. Upon assumption of this role, Surety directly shall contract with a Completion Contractor hired/engaged by Surety to complete the Work. The selection of the Completion Contractor must be approved in writing by Obligee. Surety shall be responsible for any and all costs incurred, up to the Bond Sum, to complete the Work; or***
- 2. In the event Surety fails to contract with a Completion Contractor within 90 days of receipt of Obligee's written notice of Default, Obligee may, at Obligee's sole discretion, select a Completion Contractor in accordance with Texas law to complete the Work. In this event, Surety shall pay Obligee any and all costs, up to the Bond Sum, for Obligee's selected Completion Contractor to complete the Work; or***
- 3. At Obligee's sole discretion, Surety shall pay Obligee the estimated amount for Obligee to execute a Project Completion Contract with a Completion Contractor, selected by Obligee in accordance with Texas Law, solely to complete the Work. Surety shall pay Obligee any and all costs, up to the Bond Sum, for Obligee-selected Completion Contractor to complete the Work.***

***The obligations of the parties under this Bond shall be performable in Nueces County, Texas. If legal action, such as civil litigation, is necessary in connection with this Bond, venue shall lie exclusively in Nueces County, Texas.***

<b>Developer as Principal</b> Signature: _____ Name: _____ Title: _____ Email Address: _____	<b>Surety</b> Signature: _____ Name: _____ Title: _____ Email Address: _____ <i>(Attach Power of Attorney and place surety seal below)</i>
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**END OF SECTION**

# EXHIBIT 6

**PAYMENT BOND**

**BOND NO.** \_\_\_\_\_

<p><b>Developer as Principal</b> Name: Mailing address (<i>principal place of business</i>):</p>	<p><b>Surety</b> Name: Mailing address (<i>principal place of business</i>):  Physical address (<i>principal place of business</i>):</p>
<p><b>City</b> Name: City of Corpus Christi, Texas Mailing address (<i>principal place of business</i>): City of Corpus Christi Attn: Director, Development Services Department 2406 Leopard Street Corpus Christi, Texas 78401</p>	<p>Surety is a corporation organized and existing under the laws of the state of: _____  <i>By submitting this Bond, Surety affirms its authority to do business in the State of Texas and its license to execute bonds in the State of Texas.</i></p>
<p><b>Contract</b> Title of Agreement:  For Subdivision:  Award Date of the Contract: Total Project Cost/Bond Sum:</p>	<p>Telephone (<i>main number</i>):  Telephone (<i>for notice of claim</i>):</p>
<p><b>Bond</b> Date of Bond: <i>(Date of Bond cannot be earlier than Award Date of Contract)</i></p>	<p>Local Agent for Surety Name: Address:  Telephone: E-Mail Address:  <b><i>The address of the surety company to which any notice of claim should be sent may be obtained from the Texas Dept. of Insurance by calling the following toll-free number: 1-800-252-3439</i></b></p>

***Surety and Developer, intending to be legally bound and obligated to City, do each cause this Payment Bond to be duly executed on its behalf by its authorized officer, agent or representative. The Principal and Surety bind themselves, and their heirs, administrators, executors, successors and assigns, jointly and severally to this bond. The condition of this obligation is such that if the Developer as Principal pays all claimants providing labor or materials to him or to a Subcontractor in the prosecution of the Work required by the Contract then this obligation shall be null and void; otherwise the obligation is to remain in full force and effect. Provisions of the bond shall be pursuant to the terms and provisions of Chapter 2253 and Chapter 2269 of the Texas Government Code as amended and all liabilities on this bond shall be determined in accordance with the provisions of said Chapter to the same extent as if it were copied at length herein. This Bond is made and entered into solely for the protection of all claimants supplying labor and material in the prosecution of the Work provided for in said Contract, and all such claimants shall have a direct right of action under the Bond as provided in Chapter 2253, Texas Government Code. The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the Work to be performed under the Contract shall in any wise affect its obligation on this Bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the Work to be performed under the Contract.***

***Venue shall lie exclusively in Nueces County, Texas for any legal action.***

<p><b>Developer as Principal</b></p> <p>Signature: _____</p> <p>Name: _____</p> <p>Title: _____</p> <p>Email Address: _____</p>	<p><b>Surety</b></p> <p>Signature: _____</p> <p>Name: _____</p> <p>Title: _____</p> <p>Email Address: _____</p> <p><i>(Attach Power of Attorney and place surety seal below)</i></p>
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**END OF SECTION**

# EXHIBIT 7



CITY OF CORPUS CHRISTI
DISCLOSURE OF INTEREST

Corpus Christi Code § 2-349, as amended, requires all persons or firms seeking to do business with the City to provide the following information. Every question must be answered. If the question is not applicable, answer with "NA". See next page for Filing Requirements, Certification and Definitions.

COMPANY NAME: MPM Development, LP

STREET ADDRESS: 2301 Airline Rd Ste 209 P.O. BOX: 331308

CITY: Corpus Christi STATE: Texas ZIP: 78463

FIRM IS: 1. Corporation [ ] 2. Partnership [X] 3. Sole Owner [ ]
4. Association [ ] 5. Other [ ]

If additional space is necessary, please use the reverse side of this page or attach separate sheet.

1. State the names of each "employee" of the City of Corpus Christi having an "ownership interest" constituting 3% or more of the ownership in the above named "firm."

Table with 2 columns: Name, Job Title and City Department (if known). Includes three blank rows for entry.

2. State the names of each "official" of the City of Corpus Christi having an "ownership interest" constituting 3% or more of the ownership in the above named "firm."

Table with 2 columns: Name, Title. Includes three blank rows for entry.

3. State the names of each "board member" of the City of Corpus Christi having an "ownership interest" constituting 3% or more of the ownership in the above named "firm."

Table with 2 columns: Name, Board, Commission or Committee. Includes one row with 'Mossa (Moses) Mostaghasi' and 'Capital Improvement Advisory Commity' and two blank rows.

4. State the names of each employee or officer of a "consultant" for the City of Corpus Christi who worked on any matter related to the subject of this contract and has an "ownership interest" constituting 3% or more of the ownership in the above named "firm."

Table with 2 columns: Name, Consultant. Includes three blank rows for entry.

## FILING REQUIREMENTS

If a person who requests official action on a matter knows that the requested action will confer an economic benefit on any City official or employee that is distinguishable from the effect that the action will have on members of the public in general or a substantial segment thereof, you shall disclose that fact in a signed writing to the City official, employee or body that has been requested to act in the matter, unless the interest of the City official or employee in the matter is apparent. The disclosure shall also be made in a signed writing filed with the City Secretary. [Ethics Ordinance Section 2-349 (d)].

## CERTIFICATION

I certify that all information provided is true and correct as of the date of this statement, that I have not knowingly withheld disclosure of any information requested, and that supplemental statements will be promptly submitted to the City of Corpus Christi, Texas, as changes occur.

Certifying Person: Mossa (Moses) Mostaghani Title: General Partner

Signature of Certifying Person:  Date: \_\_\_\_\_

## DEFINITIONS

- a. "Board member." A member of any board, commission, or committee of the city, including the board of any corporation created by the city.
- b. "Economic benefit". An action that is likely to affect an economic interest if it is likely to have an effect on that interest that is distinguishable from its effect on members of the public in general or a substantial segment thereof.
- c. "Employee." Any person employed by the city, whether under civil service or not, including part-time employees and employees of any corporation created by the city.
- d. "Firm." Any entity operated for economic gain, whether professional, industrial or commercial, and whether established to produce or deal with a product or service, including but not limited to, entities operated in the form of sole proprietorship, as self-employed person, partnership, corporation, joint stock company, joint venture, receivership or trust, and entities which for purposes of taxation are treated as non-profit organizations.
- e. "Official." The Mayor, members of the City Council, City Manager, Deputy City Manager, Assistant City Managers, Department and Division Heads, and Municipal Court Judges of the City of Corpus Christi, Texas.
- f. "Ownership Interest." Legal or equitable interest, whether actually or constructively held, in a firm, including when such interest is held through an agent, trust, estate, or holding entity. "Constructively held" refers to holdings or control established through voting trusts, proxies, or special terms of venture or partnership agreements.
- g. "Consultant." Any person or firm, such as engineers and architects, hired by the City of Corpus Christi for the purpose of professional consultation and recommendation.