

## AMENDMENT OF ENCROACHMENT AGREEMENT

STATE OF TEXAS                   §  
   §  
COUNTY OF WILLIAMSON       §

This Amendment of Encroachment Agreement (“Amendment”) is made and entered into by and WHITETHORN PIPELINE COMPANY LLC (hereinafter referred to as “Company”) whose mailing address is c/o Land Department, P.O. Box 4324, Houston, Texas 77210-4324 and physical address is c/o Land Department, 9420 W. Sam Houston Parkway N., Houston, Texas 77064-6317 and CITY OF GEORGETOWN, TEXAS, a home-rule municipal corporation situated in Williamson County, Texas (hereinafter referred to as “City”), upon the following terms and conditions:

### **WITNESSETH:**

WHEREAS, OVERLOOK AT SANGABRIEL LLC (hereinafter referred to as “Landowner”), whose address is 9415 Burnet Rd. Ste. 210, Austin, Texas 78758, owns a certain tract of land located in Williamson County, Texas and more particularly described as follows:

A 100.390-acre tract of land in the Isaac Donagan Survey, Abstract No. 178 in Williamson County, Texas and being a portion of called 100.446-acre tract more particularly described in that certain Genera Warranty Deed recorded in Document Number 2016049481 of the Official Records of Williamson County, Texas (the “Property”);

WHEREAS, Company holds a certain right of way and easement upon, over, under and through the Property, more particularly described in that certain Right-of-Way Agreement from Glenna Mae, L.P. to Enterprise Crude Pipeline LLC dated September 15, 2016, and recorded under Instrument No. 2016086244 in the Official Public Records of Williamson County, Texas (the “Easement”);

WHEREAS, Company owns and operates a pipeline that is located within the Easement and commonly known as the C129/ Midland to Sealy pipeline (the “Pipeline”; the Pipeline together with any related valves, meters, equipment, and other appurtenances, collectively the “Facilities”) that runs through the Property pursuant to the Easement;

WHEREAS, Landowner, pursuant to that certain Encroachment Agreement dated October 21, 2021 and recorded in Document No. 2022007342 of the Official Public Records of Williamson County, Texas, attached to this Amendment as **Exhibit C** and by this reference incorporated within it (the “Encroachment Agreement”), did cause to be constructed one (1) fifty (50) foot wide roadway known as Vista Heights Dr. together with sidewalks, one (1) fifty (50) foot wide roadway known as Red Berry Pass together with sidewalks, two (2) drainage ditches with turn reinforced mats, one (1) forty two (42) inch RCP Storm Sewer Line K, one (1) eight (8) inch Sanitary Line A, one (1) eight (8) inch Sanitary Line F, one (1) eight (8) inch Water Line at Vista Heights Dr. and one (1) eight (8) inch Water Line at Red Berry Pass, one (1) three (3) inch PVC Sudden Link

communication line, one (1) two (2) inch and one (1) three (3) inch PVC Spectrum communication line and three (3) three (3) inch PVC electrical lines, as shown on the plans attached hereto as Exhibit A over/under/across the Pipeline, which encroach upon the Easement (collectively, the “Encroachment”);

WHEREAS, Landowner proposes to dedicate to the City the one (1) fifty (50) foot wide roadway known as Vista Heights Dr. together with sidewalks, the one (1) fifty (50) foot wide roadway known as Red Berry Pass together with sidewalks, the two (2) drainage ditches with turn reinforced mats, the one (1) forty two (42) inch RCP Storm Sewer Line K, the one (1) eight (8) inch Sanitary Line A, the one (1) eight (8) inch Sanitary Line F, the one (1) eight (8) inch Water Line at Vista Heights Dr., and the one (1) eight (8) inch Water Line at Red Berry Pass (the “Improvements”) and to partially assign the Encroachment Agreement, as it applies to the Improvements;

WHEREAS, as a condition of City’s acceptance of the dedication of the Improvements and acceptance of the partial assignment of the Encroachment Agreement, City requires the amendment of the Encroachment Agreement as set forth herein.

NOW, THEREFORE, in consideration of the premises and mutual covenants herein contained and other valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Company and City hereby agree as follows:

1. Recitals: The foregoing Recitals are hereby incorporated into and made part of this Amendment.
2. Assignment: Company hereby acknowledges that Landowner and City have entered into a Partial Assignment of Encroachment Agreement (the “Partial Assignment”) of even date herewith and, by its signature herein, hereby consents to the Partial Assignment. Company and City hereby agree that, as between the Company and the City, and their respective successors and assigns, any provision regarding an Encroachment in the Encroachment Agreement, including any responsibilities and liabilities therefore, shall only apply to the Improvements as defined in the Partial Assignment, unless otherwise set forth herein.
3. Assumption of Risk: Paragraph 2 of the Encroachment Agreement, as applicable to the Improvements, is hereby amended to read as follows:

As to any potential claims against the Company, City assumes all risks for damages, injuries, or loss to either property or persons, which may be incurred by City or its agents, invitees, guests, or licensees present on, or in the vicinity of, the Easement and in any way associated with the Improvements, unless due to the sole gross negligence or willful misconduct of Company. Any maintenance or improvements to or repairs of the Improvements that may become necessary shall be the sole responsibility of City and performed at no cost to Company. City shall keep all portions of the Improvements in good repair. Notwithstanding the foregoing, City reserves the right to seek damages or performance from

Landowner; Landowner's agents, employees, contractors, or consultants; Sudden Link; Sudden Link's agents, employees, contractors, or consultants; Spectrum; Spectrum's agents, employees, contractors, or consultants; Pedernales Electric Cooperative; Pedernales Electric Cooperative's agents, employees, contractors, or consultants; or Company's contractors or consultants, for any damages, injuries, or loss to either property or persons, which may be incurred by City or its agents, invitees, guests, or licensees present on, or in the vicinity of, the Easement and in any way associated with the Encroachment, if due to the negligence of the identified party.

4. Construction Parameters: Paragraph 3 of the Encroachment Agreement, as applicable to the Improvements, is hereby amended to read as follows:

Except in the event of an Emergency, hereinafter defined, Construction activity of any kind, including, but not limited to, equipment movement, materials storage, boring, and digging that take place within the Easement will require 48 hours (two working days) prior notice to Texas One-Call at 811. If available, a Company representative must be present during any of the aforementioned construction activities and City acknowledges that Company's representative shall have full authority to stop any of City's excavation or construction related activities within the Easement if Company's representative, in his/her sole discretion, believes City's activities could result in damage to the Facilities or pose a threat to the environment or public safety. The presence of Company's representative will not relieve City of any liability under this Agreement. Notwithstanding the foregoing, City and Company recognize that the maintenance and operation of public facilities are for the health and safety of the public, and that emergency situations involving the repair and maintenance may require immediate excavation and construction activities (an "Emergency"). Therefore, the City may enter onto the Easement for the purposes of inspecting, removing, and repairing the encroachments in the event of an Emergency, the determination of which shall be the in the reasonable determination of the City. City shall notify Company within 48 hours of such emergency work, including the location and description of work undertaken.

5. Construction Parameters (continued): Paragraph 5 of the Encroachment Agreement, as applicable to the Improvements, is hereby amended to read as follows:

Company has provided City with as-built drawings representing the location of the Pipeline (the "As-Built Drawings") for purposes of developing plans for any work within the Easement, but City shall be responsible for locating the Pipeline prior to any work within the Easement, except in the event of an Emergency. In the event City or Company discovers the location of the Pipeline is not as depicted in the As-Built Drawings, that Party shall immediately notify the other Party of the error. Except in the event of an Emergency, no equipment will be allowed to work over the Pipeline, unless approved by Company's representative.

Excavators must work/dig parallel to the Pipeline, and the buckets must have barred teeth. Any excavation within eighteen (18) inches plus half the diameter of the Pipeline will be done by hand; however, no mechanical excavation should ever be performed less than two (2) feet from the Pipeline. No medium to large vibratory compaction equipment is allowed within minimum ten (10) feet from the pipeline, only walk-behind vibratory rollers/compactors are allowed. City's crossing(s) will be as close to ninety (90) degrees as possible to the Pipeline, but not less than forty-five (45) degrees. Company will require physical verification of Pipeline depth of cover and alignment, at City's expense, prior to work being performed near the Pipeline. The method of physical verification, whether hydro-excavation or other means, shall be coordinated and approved by Company's field representative. If the Pipeline is not at the anticipated alignment or depth, City shall have no obligation to adjust the Encroachment.

6. Driveways and Sidewalks: Paragraph 6 of the Encroachment Agreement is hereby amended to read as follows:

In the event City replaces Vista Heights Dr. during the term of this Agreement, City will maintain a minimum of ten (10) feet of cover between the top of the Pipeline and the top of Vista Heights Dr. and its sidewalks. In the event City replaces Red Berry Pass during the term of this Agreement, City will maintain a minimum of six and five tenths (6.5) feet of cover between the top of the Pipeline and the top of Red Berry Pass and its sidewalks. City shall be responsible for all future damage to the roadway in the event that Company, or its designee, must access the Pipeline and/or associated Easement to perform routine or emergency maintenance. City's replacement of the roadways shall not impede natural overland storm water sheet flow and shall allow for positive drainage sheet flow across Pipeline Easement and no ponding of storm water.

7. Drainage Ditches: Paragraph 7 of the Encroachment Agreement is hereby amended to read as follows:

In the event City replaces the drainage ditch, City will install the drainage ditch in such a way that a minimum depth of cover of three and five tenths (3.5) feet between the top of the Pipeline and the ditch flow line is maintained. City will install turn reinforcement mat along the full length of the ditch crossing the Pipeline Easement and across the ditch from high bank to high bank.

8. Underground Utilities: Paragraph 8 of the Encroachment Agreement, as applicable to the Improvements, is hereby amended to read as follows:

In the event City replaces any underground utilities over the Pipeline, all underground utilities will be installed over the Pipeline via open trench construction and utility shall consist of restrained joints across the full Pipeline easement crossing. In the event City replaces the Storm Sewer Line K, Sanitary Line A, and

Sanitary Line F depicted in **Exhibit A** attached to this Agreement, City will install the Storm Sewer Line K, Sanitary Line A, and Sanitary Line F in such a way that a minimum vertical separation of two and five tenths (2.5) feet between the top of the Pipeline and the bottom of City's utilities is maintained. In the event City replaces the Water Line at Vista Heights Dr. depicted in **Exhibit A** to this Agreement, City will install the Water Line at Vista Heights Dr. in such a way that a minimum vertical separation of six (6) feet between the top of the Pipeline and the bottom of City's utility is maintained. In the event City replaces the Water Line at Red Berry Pass depicted in **Exhibit A** to this Agreement, City will install the Water Line at Red Berry Pass in such a way that a minimum vertical separation of three (3) feet between the top of the Pipeline and the bottom of City's utility is maintained. In the event City replaces any underground utilities over the Pipeline, City's utilities crossing the Company's Pipeline should include warning tape in accordance with the American Public Works Association (APWA) Uniform Color Code, above each utility, twelve (12) inches below ground and shall extend at least twenty (20) feet each direction measured from the crossing point.

9. **Heavy Equipment**: Paragraph 9 of the Encroachment Agreement, as applicable to the Improvements, is hereby amended to read as follows:

Except in the event of an Emergency, Company will require a **minimum of 72 hours written notice** prior to crossing the Pipeline with heavy equipment. Wherever City will cross the Pipeline and/or Easement with heavy equipment, City will place matting or other suitable material over the Pipeline and/or Easement as determined by Company's field representative.

10. **Fill Material**: Paragraph 10 of the Encroachment Agreement is hereby amended to read as follows:

City agrees to clean up and repair all damages to the Easement resulting from City work on or across the Easement and to restore the Easement as close as reasonably practicable to the condition prior to any work undertaken by the City. Any fill material shall be free of organics, roots, metals, rocks, and other foreign debris.

11. **No Interference**: Paragraph 12 of the Encroachment Agreement, as applicable to the Improvements, is hereby amended to read as follows:

City shall at all times conduct all of its activities within the Easement in such a manner as not to significantly interfere with or impede in any manner whatsoever the operation of the Facilities and any related activities of Company. If at any time Company, in its sole discretion, determines that the safety, operation, or maintenance of the Facilities is adversely affected or impeded by the Improvements, Company shall immediately notify City, and City shall promptly take any and all necessary action to protect the Easement and Facilities from such

adverse condition. If City fails to take corrective action within a commercially reasonable period of time, Company has the right to remove all or portions of the Improvements as necessary to protect the Easement and Facilities, and City shall pay for the cost of removing and be responsible for replacing or reinstalling such removed portion of the Improvements and the costs thereof. Company shall not be responsible for any loss, damage, or replacement to the Improvements or any associated equipment and facilities that exist within the Easement that may result from Company's exercising its rights under this Section; and City releases Company from all costs, losses, or damages directly or indirectly arising from Company's removal of any portion of the Improvements in accordance herewith.

12. Indemnification by Landowner: Company hereby acknowledges that the Partial Assignment EXCLUDES the assignment of any duties or obligations of Landowner to defend, indemnify, or hold harmless any of the Indemnified Parties (as defined in the Encroachment Agreement) and hereby agrees to look to Landowner, or its successors or assigns (the "Landowner Parties"), for such duty or obligation to defend, indemnify, or hold harmless Company or any of the Indemnified Parties from and against any and all Claims for bodily or personal injury, in accordance with the Encroachment Agreements. In no event shall the obligations of the Landowner Parties in this Section of the Encroachment Agreement (as amended) be extinguished, cancelled or terminated without the express written consent of Company.

13. Reimbursement: Paragraph 14 of the Encroachment Agreement, as applicable to the Improvements, is hereby amended to read as follows:

If at any time the existence, construction, operation, maintenance, relocation, or removal of the Improvements causes Company to incur any cost that in any manner relates to Company's operation, maintenance, removal, repair, replacement, protection, modification, construction, alteration, relocation, changing the size of, addition to and/or inspection of the Facilities or Easement (individually and collectively, "Easement Operations"), or the cleanup or handling of any spills of petroleum products, City agrees to reimburse Company for any and all such costs that would not have been incurred but for the existence of the Improvements. Any sums claimed by the Company under this Agreement shall be submitted to the City for review, along with all documentation identifying which cost would and would not have been incurred by the Company but for the existence of the Improvements. Any sums the City is required to pay or reimburse under this agreement shall be due no less than the 60th day after Company makes written request to City for same.

14. Removal. Paragraph 16 of the Encroachment Agreement is hereby deleted and shall have no force and effect as applied to the City and/or the Improvements.

15. No Additional Improvements: Paragraph 18 of the Encroachment Agreement, as applicable to the Improvements, is hereby amended to read as follows:

Except for the Improvements, City will not at any time erect, construct, or create any additional buildings, improvements, structures, or obstructions of any kind on, above, or below the surface of the Easement, or change the grade thereof, or cause or permit these things to be done by others, other than temporary improvements or structures necessary in the event of an Emergency, without the express prior written consent of Company, which consent may be withheld in Company's sole discretion. No structures or improvements, including, but not limited to, fences, water wells, septic systems, utility poles, light poles, buildings, houses, barns, garages, patios, swimming pools, or concrete or asphalt slabs, are permitted on the Easement. This Agreement provides only for the Improvements, and any and all future encroachments require Company's prior review and written consent, other than temporary improvements or structures necessary in the event of an Emergency.

16. Termination: Paragraph 19 of the Encroachment Agreement, as applicable to the Improvements, is hereby amended to read as follows:

If City is in breach of any terms or conditions set forth in this Agreement, Company, at its option, may terminate this Agreement upon one-hundred eighty days' (180) days written notice to City and Landowner unless such breach has been cured prior to the expiration of such one-hundred eighty- (180-) day period. In the event of such termination, at the expiration of the one hundred eighty- (180-) day period, Company may, at its option, remove the Improvements at its own expense. The failure by Company to exercise this termination option as to any particular breach shall not constitute a waiver of Company's future right to exercise this termination option as to the same or any future breach.

17. Legal Costs. Paragraph 20 of the Encroachment Agreement is hereby deleted and shall have no force and effect as applied to the City and/or the Improvements.

18. Governance and Venue: Paragraph 22 of the Encroachment Agreement, as applicable to the Improvements, is hereby amended to read as follows:

This Agreement shall be governed by, and interpreted and construed in accordance with, the laws of the State of Texas, without regard to any of its principles of conflicts of laws that would make applicable the laws of any other jurisdiction. **EACH PARTY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN RESPECT OF ANY SUIT, ACTION OR PROCEEDING RELATED TO THIS AGREEMENT.**

19. Governance and Venue. This Amendment shall be governed by, and interpreted and construed in accordance with, the laws of the State of Texas, without regard to any of its principles of conflicts of laws that would make applicable the laws of any other jurisdiction. **EACH PARTY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE**

**LAW, ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN RESPECT OF ANY SUIT, ACTION OR PROCEEDING RELATED TO THIS AMENDMENT.**

20. Construction: If any term, covenant or condition of this Amendment is deemed invalid, illegal, or incapable of being enforced by any rule of law or public policy, all other terms, covenants or conditions of this Amendment shall remain in full force and effect. Upon such determination, the parties shall negotiate in good faith to modify this Amendment so as to give effect to the original intent of the parties, as closely as possible and in an acceptable manner to the end that the transactions contemplated hereby are fulfilled to the maximum extent possible.

21. Amendment: This Amendment shall not be amended or modified in any manner, including the conduct of the parties, except by written instrument duly signed by Company and City or their respective heirs, successors or assigns.

22. Successors and Assigns. This Amendment shall be binding upon and inure to the benefit of the Company and City and their respective heirs, legal representatives, successors and assigns.

23. Entire Agreement: This Amendment, including any exhibits hereto, constitute the entire agreement between Company and City with respect to the Improvements and supersedes and replaces any prior agreement, whether written or oral, between the Parties with respect thereto.

24. Counterparts: This Amendment may be executed in any number of counterparts, all of which taken together shall constitute one and the same instrument and any of the parties hereto may execute this Amendment by signing any such counterpart. Delivery of an executed copy of this Amendment by facsimile, e-mail or other electronic means shall be effective as delivery of an original executed counterpart of this Agreement and shall be binding on the parties hereto and thereto. Any party delivering an executed counterpart of this Amendment by electronic means shall also physically deliver original executed counterparts of this Amendment in the manner and quantity as requested by Company or Company's counsel, but the failure to physically deliver such original executed counterparts shall not affect the validity, enforceability, and binding effect of this Amendment.

25. Notices: Any notice required by or permitted under this Amendment must be in writing. Any such notice will be deemed to be delivered (whether actually received or not) when deposited with the United States Postal Service, postage prepaid, certified mail, return receipt requested, and addressed to the intended recipient at the address shown in the opening paragraph of this Amendment. Notice may also be given by regular mail, personal delivery, courier delivery, or other commercially reasonable means and will be effective when actually received. Any address for notice may be changed by written notice delivered to the other parties as provided herein.

***REMAINDER OF PAGE LEFT BLANK***

***SIGNATURES CONTAINED ON NEXT PAGE***



IN WITNESS WHEREOF, we have hereunto set our hands on the day and year below.

(COMPANY)

Whitethorn Pipeline Company LLC

By: \_\_\_\_\_

John F. Sanchez

Agent and Attorney-in-Fact

Date: \_\_\_\_\_

(CITY)

CITY OF GEORGETOWN, TEXAS

By: \_\_\_\_\_

Josh Schroeder, Mayor

Date: \_\_\_\_\_

Approved as to Form:

By: \_\_\_\_\_

Skye Masson, City Attorney

## ACKNOWLEDGEMENTS

STATE OF TEXAS               §  
COUNTY OF HARRIS     §

This instrument was acknowledged before me on this \_\_\_\_ day of \_\_\_\_\_, 20\_\_, by John F. Sanchez, Agent and Attorney-in-Fact for Whitethorn Pipeline Company LLC, on behalf of such limited liability company as authorized by its Board of Directors.

(seal)

Notary Public

My Commission Expires: \_\_\_\_\_

STATE OF TEXAS                     §  
COUNTY OF WILLIAMSON       §

This instrument was acknowledged before me on this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_, by \_\_\_\_\_, as \_\_\_\_\_ of \_\_\_\_\_, on behalf of such \_\_\_\_\_.

(seal)

Notary Public

My Commission Expires: \_\_\_\_\_

**Prepared By/Return To:**

City of Georgetown  
Attn: Real Estate Services  
P.O. Box 409  
Georgetown, TX 78627

## **EXHIBIT C**

## ENCROACHMENT AGREEMENT

STATE OF TEXAS                   §  
  §  
COUNTY OF WILLIAMSON       §

This Encroachment Agreement ("Agreement") is made and entered into by and between Whitethorn Pipeline Company LLC (hereinafter referred to as "Company") whose mailing address is c/o Land Department, P.O. Box 4324, Houston, Texas 77210-4324 and physical address is c/o Land Department, 9420 W. Sam Houston Parkway N., Houston, Texas 77064-6317, and OVERLOOK AT SANGABRIEL LLC (hereinafter referred to as "Landowner"), whose address is 9415 Burnet Rd. Ste. 210, Austin, Texas 78758, upon the following terms and conditions:

### WITNESSETH:

WHEREAS, Landowner owns a certain tract of land located in Williamson County, Texas and more particularly described as follows:

BEING A 100.390 ACRES TRACT SITUATED IN THE ISAAC DONAGAN SURVEY, ABSTRACT NUMBER 178, WILLIAMSON COUNTY, TEXAS AND BEING A PORTION OF CALLED 100.446 ACRES TRACT AS DESCRIBED IN A GENERAL WARRANTY DEED AS RECORDED IN DOCUMENT NO. 2016049481 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS. (the "Property");

WHEREAS, Company holds a certain right of way and easement upon, over, under and through the Property, more particularly described in that certain Right-of-Way Agreement from Glenna Mae, L.P. to Enterprise Crude Pipeline LLC dated September 15, 2016, and recorded under Instrument No. 2016086244 in the Official Public Records of Williamson County, Texas. (the "Easement");

WHEREAS, Company owns and operates a pipeline that is located within the Easement and commonly known as the C129/ Midland to Sealy pipeline (the "Pipeline"; the Pipeline together with any related valves, meters, equipment, and other appurtenances, collectively the "Facilities") that runs through the Property pursuant to the Easement;

WHEREAS, Landowner desires to construct one (1) fifty (50) foot wide roadway known as Vista Heights Dr. together with sidewalks, one (1) fifty (50) foot wide roadway known as Red Berry Pass together with sidewalks, two (2) drainage ditches with turf reinforced mats, one (1) forty two (42) inch RCP Storm Sewer Line K, one (1) eight (8) inch Sanitary Line A, one (1) eight (8) inch Sanitary Line F, one (1) eight (8) inch Water Line at Vista Heights Dr. and one (1) eight (8) inch Water Line at Red Berry Pass, one (1) three (3) inch PVC Sudden Link communication line, one (1) two (2) inch and one (1) three (3) inch PVC Spectrum communication line and three (3) three (3) inch PVC electrical lines as shown on the plans



attached hereto as Exhibit A over/under/across the Pipeline, which will encroach on the Easement (the "Encroachment");

WHEREAS, Landowner desires to obtain Company's consent to encroach on the Easement and Facilities; and

WHEREAS, Company, subject to the terms and conditions hereinafter stated, is willing to permit the Encroachment.

NOW, THEREFORE, in consideration of the premises and mutual covenants herein contained and other valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Company hereby agrees to accommodate the Encroachment, subject to the following terms and conditions, and Company and Landowner hereby agree as follows:

1. Recitals: The foregoing Recitals are hereby incorporated into and made part of this Agreement.

2. Assumption of Risk: Landowner assumes all risks for damages, injuries, or loss to either property or persons, which may be incurred by Landowner or its agents, invitees, guests, or licensees present on, or in the vicinity of, the Easement and in any way associated with the Encroachment. Any maintenance or improvements to or repairs of the Encroachment that may become necessary shall be the sole responsibility, and performed at the sole cost and expense, of Landowner. Landowner shall keep all portions of the Encroachment in good repair.

3. Construction Parameters: Construction activity of any kind, including, but not limited to, equipment movement, materials storage, boring, and digging that take place within the Easement will require 48 hours (two working days) prior notice to Texas One-Call at 811. A Company representative must be present during any of the aforementioned construction activities and Landowner acknowledges that Company's representative shall have full authority to stop any of Landowner's excavation or construction related activities within the Easement if Company's representative, in his/her commercially reasonable discretion, believes Landowner's activities violate this Agreement or could result in damage to the Facilities or pose a threat to the environment or public safety. The presence of Company's representative will not relieve Landowner of any liability under this Agreement.

4. The following language must be conspicuously displayed on all drawings depicting the Pipeline(s):

**WARNING!**

**HIGH PRESSURE PIPELINE(S)**

Excavation and/or Construction Prohibited without Prior Written Permission From  
Enterprise Products Operating LLC

5. Construction Parameters (continued): No equipment will be allowed to work over the Pipeline, unless approved by Company's representative. Excavators must work/dig



parallel to the Pipeline, and the buckets must have barred teeth, no detachable implements will be allowed. Any excavation within eighteen (18) inches plus half the diameter of the Pipeline will be done by hand; however, no mechanical excavation should ever be performed less than two (2) feet from the Pipeline. All mechanical digging equipment approved to work within the Pipeline Easement shall have the teeth removed or barred with a plate welded across the teeth. No detachable implements will be allowed without safety locks. No medium to large vibratory compaction equipment is allowed within minimum ten (10) feet from the Pipeline; only walk-behind vibratory rollers/compactors are allowed. Landowner's crossing(s) will be as close to ninety (90) degrees as possible to the Pipeline, but not less than forty-five (45) degrees. Company will require physical verification of Pipeline depth of cover and alignment, at Landowner's expense, prior to work being performed near the Pipeline. The method of physical verification, whether hydro-excavation or other means, shall be coordinated and approved by Company's field representative. If the Pipeline is not at the anticipated alignment or depth, Landowner shall adjust the Encroachment accordingly at no expense to Company. A minimum of three (3) feet of stable soil cover must be maintained over the Pipeline.

6. Driveways and Sidewalks: Landowner will maintain a minimum of ten (10) feet of cover between the top of the Pipeline and the top of **Vista Heights Dr.** and its sidewalks. Landowner will maintain a minimum of six and five tenths (6.5) feet of cover between the top of the Pipeline and the top of **Red Berry Pass** and its sidewalks. Landowner shall be responsible for all future damage to the roadway in the event that Company, or its designee, must access the Pipeline and/or associated Easement to perform routine or emergency maintenance. Landowner's placement of the roadways shall not impede natural overland storm water sheet flow and shall allow for positive drainage sheet flow across Pipeline Easement and no ponding of storm water.

7. Drainage Ditches: Landowner will install the **drainage ditch** in such a way that a minimum depth of cover of three and five tenths (3.5) feet between the top of the Pipeline and the ditch flow line is maintained. Landowner will install turf reinforcement mat along the full length of the ditch crossing the Pipeline Easement and across the ditch from high bank to high bank. No excavation will be permitted within the Pipeline Easement

8. Underground Utilities: All underground utilities will be installed over the Pipeline via open trench construction and utility shall consist of restrained joints across the full Pipeline easement crossing. Landowner will install the **Storm Sewer Line K, Sanitary Line A and Sanitary Line F** in such a way that a minimum vertical separation of two and five tenths (2.5) feet between the top of the Pipeline and the bottom of Landowner's utilities is maintained. Landowner will install the **Water Line at Vista Heights Dr.** in such a way that a minimum vertical separation of six (6) feet between the top of the Pipeline and the bottom of Landowner's utility is maintained. Landowner will install the **Water Line at Red Berry Pass** in such a way that a minimum vertical separation of three (3) feet between the top of the Pipeline and the bottom of Landowner's utility is maintained. Landowner will install electrical and communication utilities in such a way that a minimum vertical separation of six (6) feet between the top of the Pipeline and the bottom of Landowner's utility is maintained. Landowner's



Landowner's electrical and communication lines shall be encased in a six (6) inch envelope of red concrete having twenty five hundred (2,500) psi concrete strength for the full width of Pipeline Easement. Landowner's utilities crossing Company's Pipeline should include warning tape in accordance with the American Public Works Association (APWA) Uniform Color Code, above each utility, twelve (12) inches below ground and shall extend at least twenty (20) feet each direction measured from the crossing point.

9. Heavy Equipment: Company will require a **minimum of 72 hours written notice** prior to crossing the Pipeline with heavy equipment. Wherever Landowner will cross the Pipeline and/or Easement with heavy equipment, Landowner will place minimum eight (8) inch thick timber mats over the Pipeline and/or Easement as determined by Company's field representative. Landowner shall maintain a minimum three (3) feet of stable soil cover above the Pipeline at locations where construction activities require crossing over the Pipeline with heavy construction equipment.

10. Fill Material: Areas on the natural grade to be filled shall be stripped and shall be free of roots, trash, and other foreign debris. Fill material shall be obtained from excavation areas, borrow pits, or other approved sources. These materials shall be free of organics, roots, metals, rocks, and other foreign debris. Placement of fill shall not impede natural overland storm water sheet flow. The fill shall be placed in a manner that allows for positive drainage sheet flow across Pipeline Easement and no ponding of storm water.

11. Landscaping: Large landscaping is not permitted on the Easement, including, but not limited to, trees, shrubs, and large landscaping with a mature untrimmed height greater than eighteen (18) inches. Company reserves the right to trim canopy of any trees or other vegetation adjacent to the Easement to prevent overhang onto the Easement.

12. No Interference: Landowner shall at all times conduct all of its activities within the Easement in such a manner as not to interfere with or impede in any manner whatsoever the operation of the Facilities and any related activities of Company. If at any time Company, in its commercially reasonable discretion, determines that the safety, operation, or maintenance of the Facilities is adversely affected by the Encroachment, Company may notify Landowner of this determination and include a detailed description of the manner of the adverse effect. After Landowner's receipt of such notice, Company and Landowner shall cooperate in good faith to implement a solution to minimize or eliminate the adverse effect while allowing Landowner's Encroachment to remain undisturbed. In the event that Company and Landowner are unable to agree on a corrective action within 30 days after Company's delivery of the notice, Company may take any and all necessary action to protect the Easement and Facilities from such adverse condition. In accordance with Section 14, Landowner shall promptly reimburse Company for its reasonable costs incurred in protecting or modifying the Facilities from, or to eliminate, such adverse condition.

13. **INDEMNIFICATION**

**(A) GENERAL INDEMNITY: EXCEPT WITH RESPECT TO CLAIMS RELATING TO BODILY**



INJURY OR DEATH OF AN EMPLOYEE (AS DEFINED IN THE NEXT PARAGRAPH), LANDOWNER AGREES TO AND SHALL DEFEND, INDEMNIFY AND HOLD HARMLESS (COLLECTIVELY "INDEMNIFY") COMPANY, ITS AFFILIATES, PARTNERS, MEMBERS, DIRECTORS, OFFICERS, AGENTS, AND EMPLOYEES (COLLECTIVELY THE "INDEMNIFIED PARTIES" OR INDIVIDUALLY AN "INDEMNIFIED PARTY") FROM AND AGAINST ANY AND ALL CLAIMS, LOSSES, DAMAGES, DEMANDS, INJURIES, JUDGMENTS, CAUSES OF ACTION, SUITS, AND LIABILITY OF EVERY KIND, INCLUDING, BUT NOT LIMITED TO, ALL EXPENSES OF LITIGATION, COURT COSTS AND ATTORNEY'S FEES (COLLECTIVELY "CLAIMS"), FOR BODILY OR PERSONAL INJURIES, INCLUDING, BUT NOT LIMITED TO, DEATH, TO ANY PERSON OR DAMAGES TO OR DESTRUCTION OF PROPERTY, INCLUDING, BUT NOT LIMITED TO, THE LOSS OF USE THEREOF, ACTUALLY OR ALLEGEDLY CAUSED BY, CONTRIBUTED TO OR ARISING OUT OF, IN WHOLE OR IN PART, THE CONSTRUCTION, OPERATION, MAINTENANCE, OR REPAIR OF THE ENCROACHMENT, INCLUDING, BUT NOT LIMITED TO, CLAIMS CAUSED BY, CONTRIBUTED TO OR ARISING OUT OF, IN WHOLE OR IN PART, THE NEGLIGENCE, GROSS NEGLIGENCE, BREACH OF WARRANTY, BREACH OF CONTRACT, VIOLATION OF ANY STATUTE, RULE OR REGULATION OR OTHER ACT OR OMISSION BY LANDOWNER OR ITS RESPECTIVE AGENTS, CONTRACTORS OR EMPLOYEES, OR ANY OTHER PARTY FOR WHOSE ACTS LANDOWNER IS LIABLE ("LANDOWNER PARTY"), AND INCLUDING, BUT NOT LIMITED TO, ALL EXPENSES OF LITIGATION, COURT COSTS AND ATTORNEY'S FEES INCURRED BY THE INDEMNIFIED PARTIES IN DEFENSE OF SUCH CLAIMS. NOTWITHSTANDING THE FOREGOING, IF SUBCHAPTER C OF CHAPTER 151 OF THE TEXAS INSURANCE CODE APPLIES TO THIS AGREEMENT, THIS INDEMNITY PROVISION SHALL NOT APPLY TO THE EXTENT THAT IT REQUIRES LANDOWNER TO INDEMNIFY AN INDEMNIFIED PARTY AGAINST A CLAIM CAUSED BY THE NEGLIGENCE OR FAULT, THE BREACH OR VIOLATION OF A STATUTE, ORDINANCE, GOVERNMENTAL REGULATION, STANDARD, OR RULE, OR THE BREACH OF CONTRACT OF THE INDEMNIFIED PARTY, ITS AGENT OR EMPLOYEE, OR ANY THIRD PARTY UNDER THE CONTROL OR SUPERVISION OF THE INDEMNIFIED PARTY, OTHER THAN LANDOWNER OR ITS AGENTS, EMPLOYEES OR CONTRACTORS OF ANY TIER.

(B) INDEMNITY FOR EMPLOYEE CLAIMS: LANDOWNER AGREES TO AND SHALL INDEMNIFY THE INDEMNIFIED PARTIES FROM AND AGAINST ANY AND ALL CLAIMS FOR BODILY INJURY OR DEATH OF ANY EMPLOYEE OF LANDOWNER OR ANY LANDOWNER PARTY OR THEIR RESPECTIVE AGENTS OR EMPLOYEES (COLLECTIVELY "EMPLOYEE" FOR THE PURPOSE OF THIS SECTION), ACTUALLY OR ALLEGEDLY CAUSED BY, CONTRIBUTED TO OR ARISING OUT OF, IN WHOLE OR IN PART, THE CONSTRUCTION, OPERATION, MAINTENANCE, OR REPAIR OF THE ENCROACHMENT, INCLUDING, BUT NOT LIMITED TO, CLAIMS DUE TO NEGLIGENCE, GROSS NEGLIGENCE, BREACH OF WARRANTY, BREACH OF CONTRACT, VIOLATION OF ANY STATUTE, RULE OR REGULATION OR OTHER ACT OR OMISSION BY LANDOWNER OR ANY LANDOWNER PARTY OR THEIR RESPECTIVE AGENTS OR EMPLOYEES OR ANY OTHER PARTY FOR WHOSE ACTS LANDOWNER IS LIABLE.

14. Reimbursement: If at any time the construction, operation, maintenance, relocation, or removal of the Encroachment in a manner that violates the terms of this Agreement, causes Company to incur any cost that in any manner relates to Company's operation, maintenance, removal, repair, replacement, protection, modification, construction,





alteration, relocation, changing the size of, addition to and/or inspection of the Facilities or Easement, or the cleanup or handling of any spills of petroleum products (individually and collectively, "Easement Operations"), Landowner agrees to reimburse Company for any and all such costs that would not have been incurred but for Landowner's violation of the terms of this Agreement. . In a manner consistent with the indemnity obligations specified in Section 13, Landowner hereby releases Company from and agrees that Company will not be held liable for any damages to the Encroachment arising from Easement Operations. Any sums Landowner is required to pay or reimburse to Company under this Agreement shall accrue interest at the lesser of the maximum legal rate or 18% per annum, beginning the 30th day after Company makes written demand to Landowner for same, until paid in full.

15. Insurance: Landowner shall maintain (and require its contractors to maintain, during the course of work on the Encroachment) insurance of the type, in the amount and under the terms set forth in Exhibit B attached hereto and made a part thereof. Certificates of Insurance on all policies shall be furnished to Company prior to (but not more than 30 days prior to) the time work on the Encroachment is commenced. Company shall be entitled to request and receive copies of all applicable policies and endorsements.

16. Removal: In the event that Company determines that the conduct of any Easement Operations requires interference with or removal or relocation of any portion of the Encroachment, Company shall notify Landowner of this determination and include a detailed description of the interference, removal, or relocation. After Landowner's receipt of such notice, Company and Landowner shall cooperate in good faith to implement a solution to minimize the interference with the Encroachment or to permit the efficient relocation and continuous operation of the Encroachment during the conduct of the Easement Operations. In the event that Company and Landowner are unable to agree on a course of action within 30 days after Company's delivery of the notice, Company has the right to remove all or portions of the Encroachment as necessary in Company's discretion in its exercise of the rights granted to it under the Easement. Should Company need to remove any portion of the Encroachment within the Easement in order to conduct Easement Operations, Landowner shall pay for the cost of removing and replacing or reinstalling such removed portion of the Encroachment. Company shall not be responsible for any loss, damage, or replacement to the Encroachment or any associated equipment and facilities that exist within the Easement; and Landowner releases Company from all costs, losses, or damages directly or indirectly arising from Company's removal of any portion of the Encroachment.

17. No Waiver: The existence of the Encroachment does not constitute a waiver of Company's express rights under the Easement or any other rights which Company may have express or implied by law or equity.

18. No Additional Improvements: Except for the Encroachment, Landowner will not at any time erect, construct, or create any additional buildings, improvements, structures, or obstructions of any kind on, above, or below the surface of the Easement, or change the grade thereof, or cause or permit these things to be done by others, without the express prior written consent of Company, which consent may be withheld in Company's sole discretion. No



structures or improvements, including, but not limited to, fences, water wells, septic systems, utility poles, light poles, buildings, houses, barns, garages, patios, swimming pools, or concrete or asphalt slabs, are permitted on the Easement. This Agreement provides only for the Encroachment, and any and all future encroachments require Company's prior review and written consent.

19. Termination: If Landowner is in breach of any terms or conditions set forth in this Agreement, Company, at its option, may terminate this Agreement upon thirty (30) days written notice to Landowner unless such breach has been cured prior to the expiration of such thirty (30) day period. In the event of such termination, Landowner shall immediately remove all of the Encroachment situated on the Easement, or if Landowner fails to remove all of the Encroachment, Company may, at its option, remove the Encroachment at Landowner's cost and expense and without any liability whatsoever. The failure by Company to exercise this termination option as to any particular breach shall not constitute a waiver of Company's future right to exercise this termination option as to the same or any future breach.

20. Legal Costs: In the event that Landowner breaches any of the terms, covenants, or provisions of this Agreement, and Company retains counsel and/or commences litigation to enforce any provisions of this Agreement and prevails, the cost of attorneys' fees and the attendant costs and expenses will be payable to Company by Landowner upon demand.

21. Runs with the Land: The terms, covenants and conditions of this Agreement constitute covenants running with the land and shall be binding upon and inure to the benefit of Company and Landowner, their heirs, legal representatives, successors and assigns.

22. Governance and Venue: This Agreement shall be governed by, and interpreted and construed in accordance with, the laws of the State of Texas, without regard to any of its principles of conflicts of laws that would make applicable the laws of any other jurisdiction. Exclusive venue for any suit, action, or proceeding brought by either party in connection with this Agreement shall be in the state and federal courts located in Harris County, Texas. The parties each hereby irrevocably and unconditionally waive, to the fullest extent they may legally and effectively do so, any objection they may now or hereafter have to the laying of venue of any suit, action, or proceeding arising out of or relating to this Agreement or the transactions contemplated hereby in the state and federal courts situated in Harris County, Texas. **EACH PARTY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN RESPECT OF ANY SUIT, ACTION OR PROCEEDING RELATED TO THIS AGREEMENT.**

23. Construction: If any term, covenant or condition of this Agreement is deemed invalid, illegal, or incapable of being enforced by any rule of law or public policy, all other terms, covenants or conditions of this Agreement shall remain in full force and effect. Upon such determination, the parties shall negotiate in good faith to modify this Agreement so as to give effect to the original intent of the parties, as closely as possible and in an acceptable manner to the end that the transactions contemplated hereby are fulfilled to the maximum extent possible.



24. Amendment: This Agreement shall not be amended or modified in any manner, including the conduct of the parties, except by written instrument duly signed by Company and Landowner or their respective heirs, successors or assigns.

25. Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of the Company and Landowner and their respective heirs, legal representatives, successors and assigns.

26. Entire Agreement: This Agreement, including any exhibits hereto, constitute the entire agreement between Company and Landowner with respect to the Encroachment and supersedes and replaces any prior agreement, whether written or oral, between the Parties with respect thereto.

27. Counterparts: This Agreement may be executed in any number of counterparts, all of which taken together shall constitute one and the same instrument and any of the parties hereto may execute this Agreement by signing any such counterpart. Delivery of an executed copy of this Agreement by facsimile, e-mail or other electronic means shall be effective as delivery of an original executed counterpart of this Agreement and shall be binding on the parties hereto and thereto. Any party delivering an executed counterpart of this Agreement by electronic means shall also physically deliver original executed counterparts of this Agreement in the manner and quantity as requested by Company or Company's counsel, but the failure to physically deliver such original executed counterparts shall not affect the validity, enforceability, and binding effect of this Agreement.

28. Notices: Any notice required by or permitted under this Agreement must be in writing. Any such notice will be deemed to be delivered (whether actually received or not) when deposited with the United States Postal Service, postage prepaid, certified mail, return receipt requested, and addressed to the intended recipient at the address shown in the opening paragraph of this Agreement. Notice may also be given by regular mail, personal delivery, courier delivery, or other commercially reasonable means and will be effective when actually received. Any address for notice may be changed by written notice delivered to the other parties as provided herein.

***REMAINDER OF PAGE LEFT BLANK***

***SIGNATURES CONTAINED ON NEXT PAGE***

A handwritten signature in black ink, appearing to be a stylized 'S' or 'J' followed by a horizontal line.

IN WITNESS WHEREOF, we have hereunto set our hands on the day and year below.

(COMPANY)

Whitethorn Pipeline Company LLC

By: Paul D. Lair

Paul D. Lair

Agent and Attorney-in-Fact

Date: October 21, 2021

(LANDOWNER)

OVERLOOK AT SANGABRIEL LLC

By: Sathish Babu Chakka

Name: SATHISH BABU CHAKKA

Title: Manager

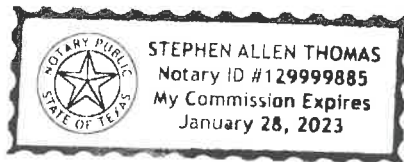
Date: 10/15/2024

## ACKNOWLEDGEMENTS

STATE OF TEXAS       §  
                                  §  
COUNTY OF HARRIS   §

This instrument was acknowledged before me on this \_\_\_\_ day of \_\_\_\_\_, 2021, by Paul D. Lair, Agent and Attorney-in-Fact for Whitethorn Pipeline Company LLC, on behalf of such limited liability company.

(seal)



Stephen Allen Thomas  
Notary Public

My Commission Expires: 1-28-23

STATE OF Texas       §  
                                  §  
COUNTY OF Williamson §

This instrument was acknowledged before me on this 15<sup>th</sup> day of October, 2021, by Sathish Babu Chakka as Manager of OVERLOOK AT SANGABRIEL LLC, on behalf of such limited liability company.

(seal)



Jenna Cox  
Notary Public

My Commission Expires: 5/31/23

### Prepared By/Return To:

Whitethorn Pipeline Company LLC  
c/o C. Lair – Land Department  
P.O. Box 4324  
Houston, Texas 77210-4324

4901 HIGHWAY 29 GEORGETOWN, TEXAS  
GEORGETOWN, TEXAS

## PROJECT NAME: COLE ESTATES SUBDIVISION

**COLE ESTATES**  
**PROJECT ADDRESS:** 4901 HIGHWAY 29  
GEORGETOWN, TEXAS  
**OWNERS:** OVERLOOK AT SANGRAEBRIEL, LLC  
4126 REMINGTON ROAD  
CEDAR PARK, TX 78613

**PROJECT ENGINEER:** JAMES W. GRIFFITH, P.E., RPLS  
**PROJECT SURVEYOR:** 4000 SENDERO SPRINGS DRIVE  
ROUND ROCK, TEXAS 78686  
(512) 626-0023 PHONE  
(512) 258-6275 FAX  
CONTACT: JAMES W. GRIFFITH

LEGAL DESCRIPTION: BEING A 100.390 ACRES TRACT SITUATED IN THE ISAAC DONAJAN SURVEY, ABSTRACT NUMBER 176, WILLAMSON COUNTY, TEXAS, AND AS DESCRIBED IN A SANGARELLA DEED FROM CLENNA WAE L.P., TO OVERLOOK AT SANGARELL LLC, AS RECORDED ON JUNE 21 2016 IN DOCUMENT NO. 2016056048 OF THE OFFICIAL PUBLIC RECORDS OF WILLAMSON COUNTY TEXAS.

FLOODPLAIN: THERE ARE AREAS WITHIN THE BOUNDARIES OF THIS SUBDIVISION IN THE 100-YEAR FLOODPLAIN AS DEFINED BY FIRM MAP NUMBERS 48491C040F AND 48491C048S, EFFECTIVE DATES OF DECEMBER 20, 2019 AND SEPTEMBER 26, 2008.

**WATERSHED STATUS: A PORTION OF THIS PROPERTY IS OVER THE EDWARDS AQUIFER**

**PROJECT USE:** SINGLE FAMILY, MULTIFAMILY, COMMERCIAL

ZORING: RS, MF-1,C-1

IS THE MAXIMUM IMPERVIOUS COVERAGE ALLOWED FOR RESIDENTIAL LOTS IS AS FOLLOWS:

PER RESIDENTIAL ZONING LOT IS 62.8% (FULL RS ZONING DISTRICT - 45% IC)
PER MF-1 ZONING LOT IS 52.3% (FULL MF-1 ZONING DISTRICT -50%)

THE MAXIMUM IMPERVIOUS COVERAGE ALLOWED FOR NON-RESIDENTIAL LOTS IS AS FOLLOWS:

PER C-1 ZONING LOT IS 62.4% (FULL C-1 ZONING DISTRICT - 60.5%)

MALBX K1034S

COMMUNAL MAILBOX KIOSKS RACING A PUBLIC STREET SHALL BE PROVIDED DIRECT PEDESTRIAN ACCESS FROM THE PUBLIC SIDEWALK, BE SET BACK FROM THE PUBLIC SIDEWALK SO AS NOT TO IMPED E THE WALKWAY, AND PROVIDE EITHER TWO FULL-IN PARKING SPACES OR A TEMPORARY LOADING ZONE THAT ACCOMMODATELY ACCOMMODATES TWO VEHICLES. THE RIGHT-OF-WAY FOR THE ADJACENT PUBLIC STREET SHALL BE SIZED APPROPRIATELY FOR SUCH FEATURES.

Notes:

1. These plans were prepared, sealed, signed and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence or non-concurrence with the project, the engineer's seal and signature are hereby approved subject to the City, State and Federal Specifications and Details Manual and all other applicable City, State and Federal Specifications.
2. This project is subject to all City Standard Specifications and Details in effect at the time of submittal of the project to the City.

Additional notes for properties 'located over the Edwards Aquifer Recharge Zone':

1. The property subject to this application is subject to the Water Quality Regulations of the City of Georgetown.
2. A Geologic Assessment, in accordance with the City of Georgetown Water Quality Regulations, was completed on August 6, 2014. Any springs and streams as identified in the Geologic Assessment are shown herein.

SUBMITTAL DATE

**CERTIFICATION:**  
THIS PLAN IS COMPLETE, ACCURATE AND IN COMPLIANCE WITH CITY OF  
CONNECTIONS LAND DEVELOPMENT CODE

SUBMITTED FOR APPROVAL BY:

James W. Griffith  
JAMES W. GRIFFITH, P.E.  
7120/20 DATE

David Munk  
DAVID MUNK, P.E., UTILITY ENGINEER  
CITY OF GEORGETOWN, TEXAS  
CONTINGENT ON P&Z APPROVAL  
DATE 7/7/20

DATE	PLANNING DIRECTION	DATE
	CITY OF GEORGETOWN, TLEAC	

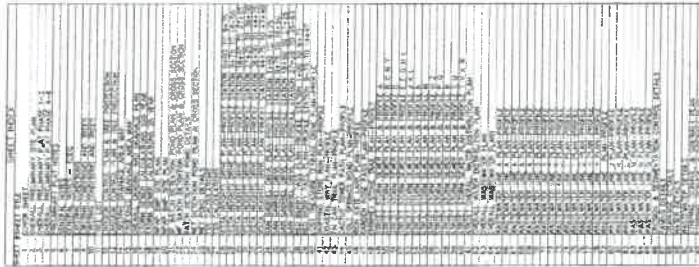
2019-04-CON

1-882

**GRIFFITH CONSULTING**  
ENGINEERING SURVEYING PLANNING,  
ENGR. FIRM # F-10052  
SURVEY FIRM # 101599-00  
JAMES W. GRIFFITH  
4000 SENDERO SPRINGS  
ROUND ROCK, TEXAS 78681  
EMAIL: [jwg@griffithconsulting.net](mailto:jwg@griffithconsulting.net)  
(512) 626-0023

COVER SHEET

COVER SHEET



**Note:**  
These plans are accompanied by full Drainage Report. Information cited within the plan sheets is drawn from that Drainage Report.

Notes:



LEGAL DESCRIPTION:  
BEING A 100.36 ACRES TRACT SITUATED IN THE ISAAC DONAGAN SURVEY, ABSTRACT NUMBER 178, WILLIAMSON COUNTY, TEXAS, AND HAS BEEN DESCRIBED IN A SPECIAL WARRANTY DEED FROM GLENNA MAE, L.P. TO OVERLOOK AT SANGABRIEL LLC, AS RECORDED ON JUNE 21, 2018 IN DOCUMENT NO. 2018050058 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS.

— CRITICAL ENVIRONMENTAL  
FEATURE BUFFER ZONE

OVERLOOK AT SANGAREL, LLC  
345-HERI BUEL CHAMPA  
4-28 BELMONT CHAMPA  
CREAT PARK, TX 78013

JAMES W. GRETTEN

SANITARY CONSULTING  
4000 SUNDOWN DR  
FARMERS ROCK, TEXAS 78841  
PHONE (312) 628-0023  
jgretten@aol.com

SEPTEMBER 16, 2019

YOUR ADDRESS

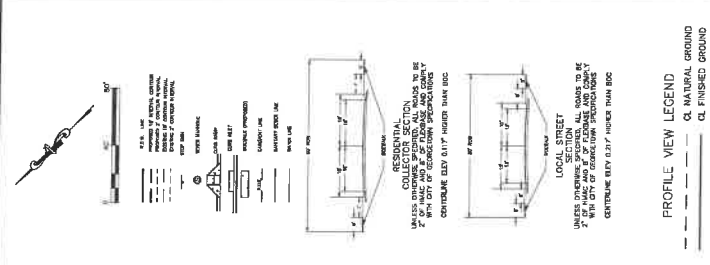
2019-64-CON



GRIFITH CONSULTING  
ENGINEERING SURVEYING PLANNING  
SURVEY FIRM # 101699-00  
4000 SHERBO SPRINGS  
ROUND ROCK, TEXAS 78661  
(512) 626-0023  
EMAIL: jwg@griffith.com

DESIGNED BY	PROJECT
CHECKED BY	DATE
APPROVED BY	DATE

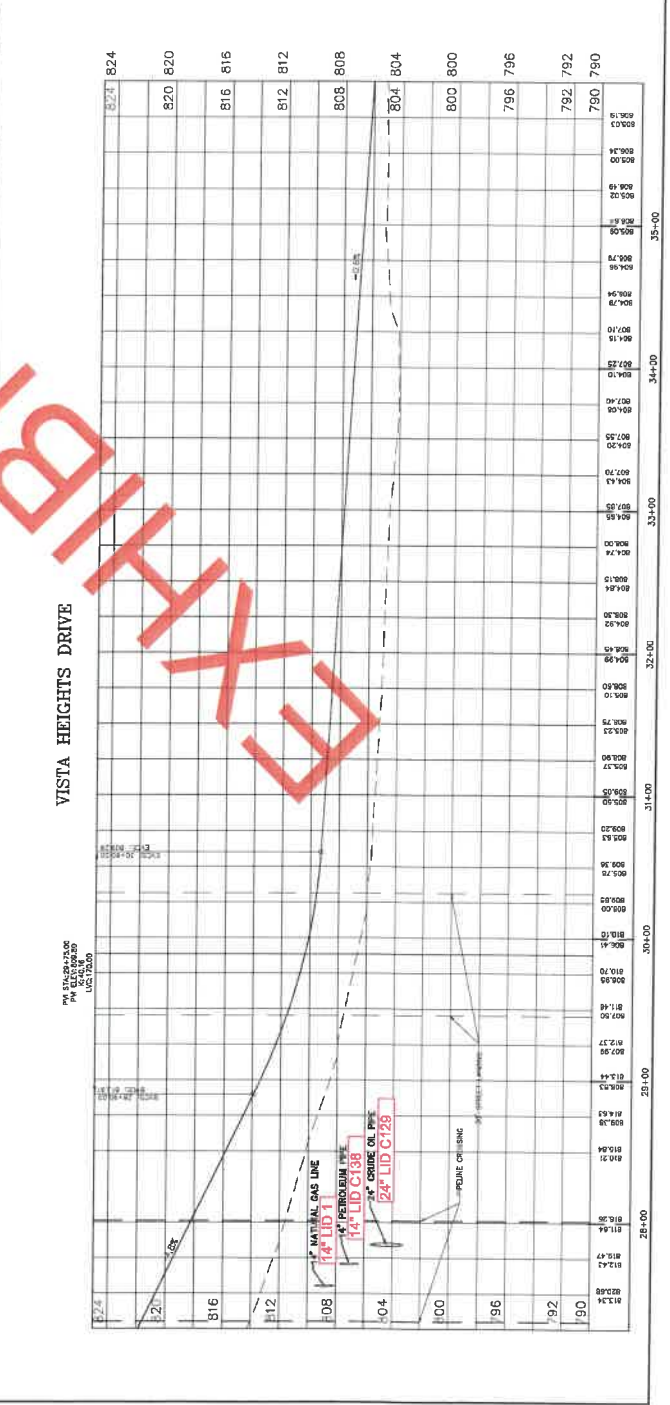
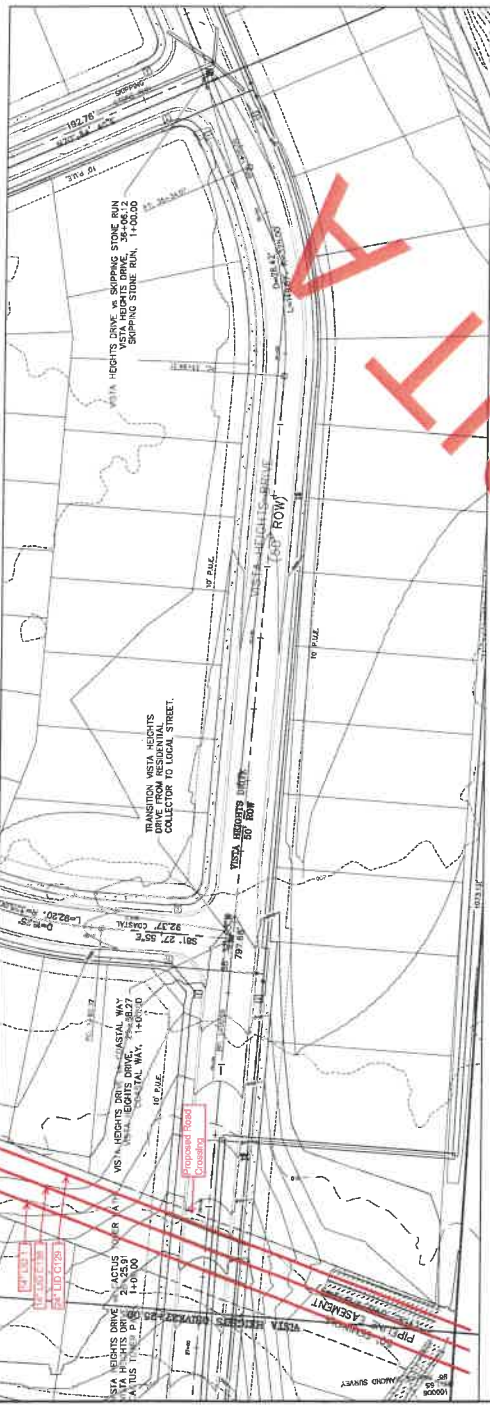
COLE ESTATES  
4901 HIGHWAY 29  
GEORGETOWN, TX 78617  
VISTA HEIGHTS DRIVE PLAN-PROFILE  
STATION 27+25 TO 36+00



**811**  
Know what's below.  
Call before you dig.

**PROFILES BAND LEGEND**  
 2" 12"  
 4" 20"

THESE ARE 3 PRELIMINARY CROSSINGS OF THE DRIVE IN A 50' SEGMENT. BEFORE ANY ACTIVITY TAKE PLACE IN THE EASEMENT, THE CONTRACTOR SHALL LOCATE THE EXACT LOCATION OF ALL EXISTING UTILITIES. LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES FROM ANY AND ALL DAMAGES WHICH MIGHT OCCUR. FROM ANY AND ALL DAMAGES WHICH MIGHT OCCUR. FROM ANY AND ALL DAMAGES WHICH MIGHT OCCUR.



2018-84-CO-82  
35-00  
34-00  
33-00  
32-00  
31-00  
30-00  
29-00  
28-00









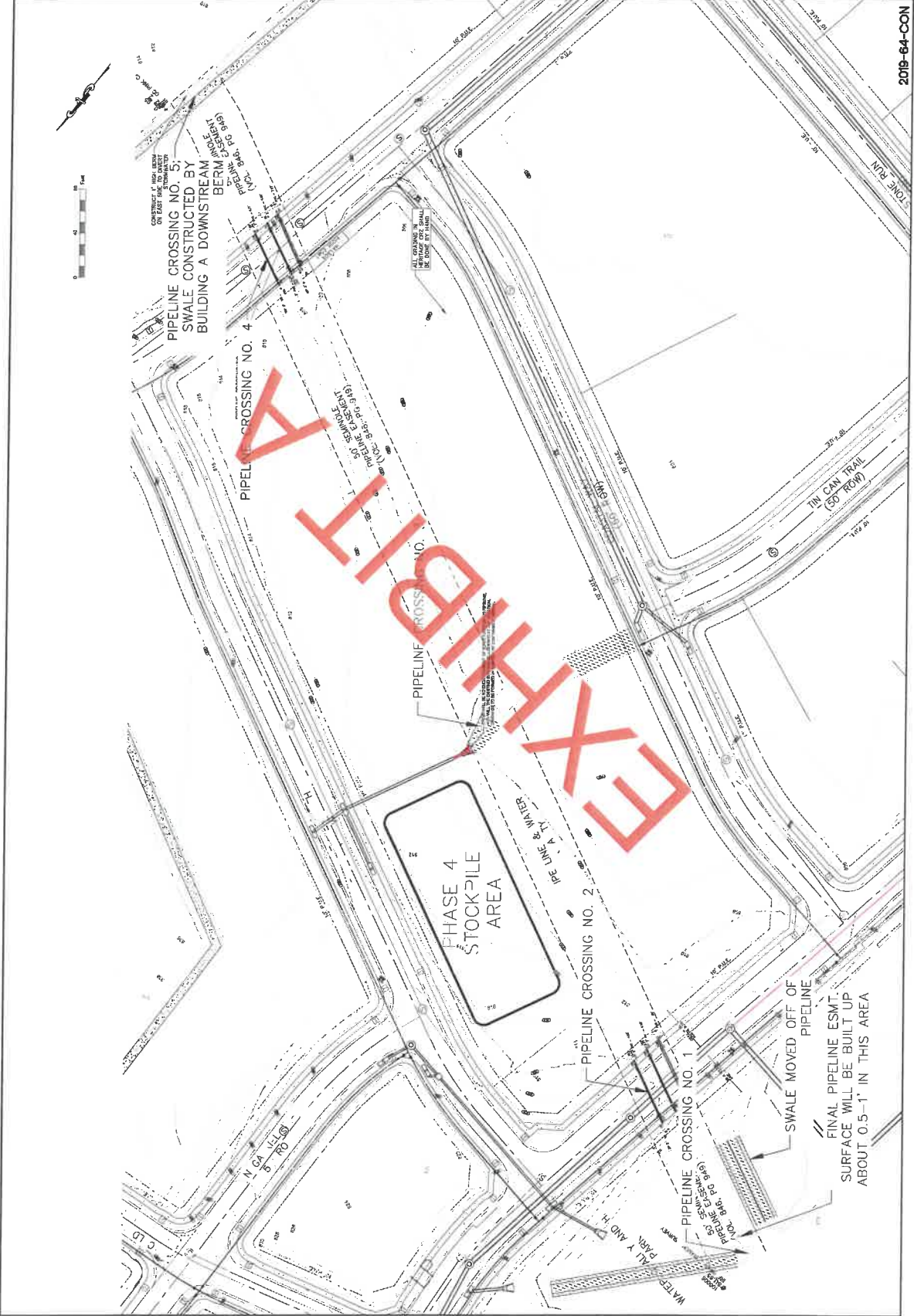
ENGINEERING SURVEYING PLANNING,  
SURVEY FIRM # F-10052  
JAMES W. GRIFFITH  
4000 SENDERO SPRINGS  
ROUND ROCK, TEXAS 78661  
(512) 628-0023  
EMAIL: jw@jcgons.net

NO.	REV.	DATE	DESCRIPTION
1	1	12/23	ISSUED FOR PERMITTING
2	1	12/23	ISSUED FOR PERMITTING
3	1	12/23	ISSUED FOR PERMITTING
4	1	12/23	ISSUED FOR PERMITTING
5	1	12/23	ISSUED FOR PERMITTING
6	1	12/23	ISSUED FOR PERMITTING
7	1	12/23	ISSUED FOR PERMITTING
8	1	12/23	ISSUED FOR PERMITTING
9	1	12/23	ISSUED FOR PERMITTING
10	1	12/23	ISSUED FOR PERMITTING

COLE ESTATES  
4901 HIGHWAY 29  
GEORGETOWN, TEXAS 78617  
OVERALL GRADING AND  
DRAINAGE PLAN

2019-64-CON

16 of 92



PIPELINE CROSSING NO. 5:  
SWALE CONSTRUCTED BY  
BUILDING A DOWNSTREAM  
BERM

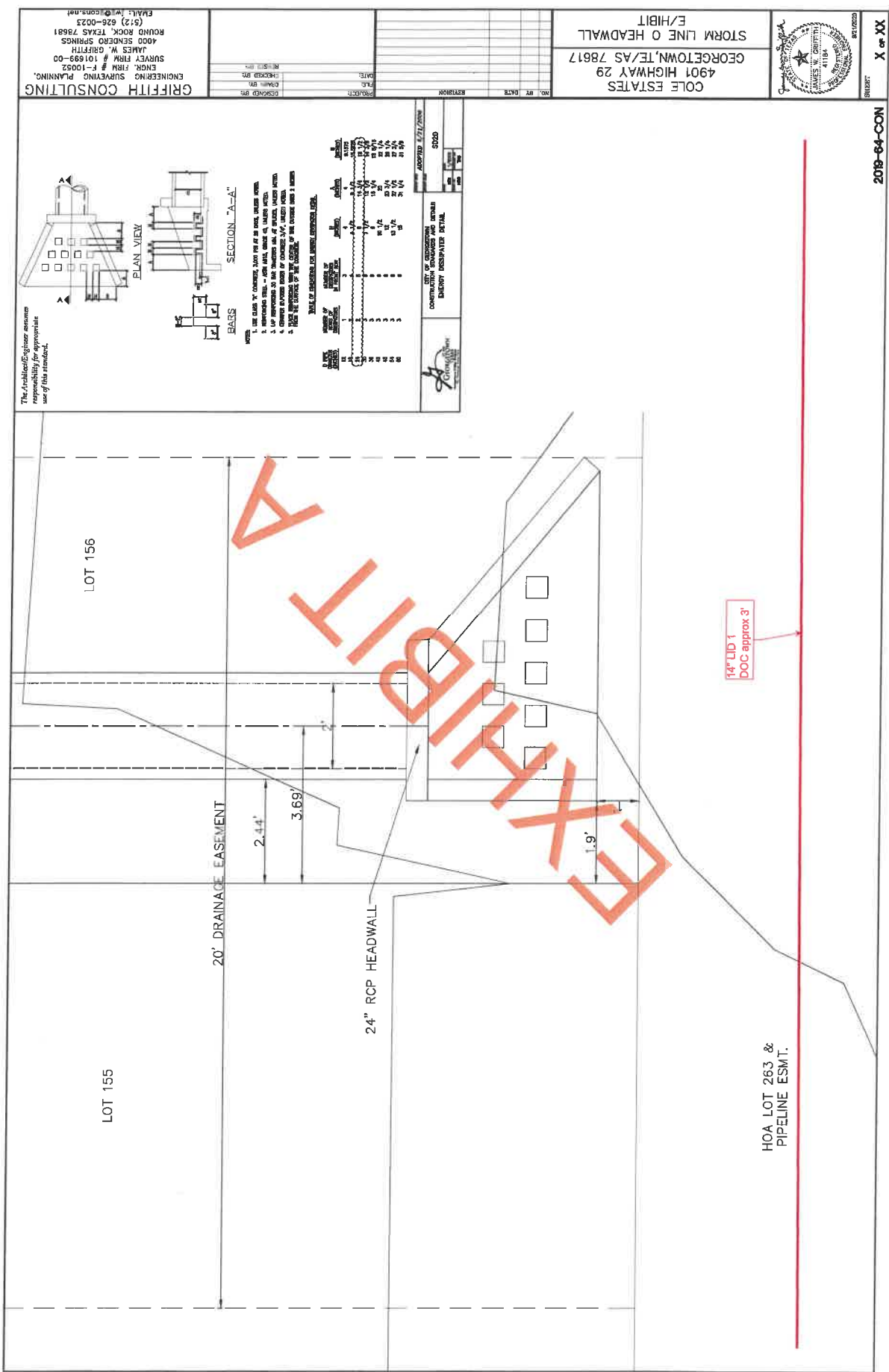
PIPELINE CROSSING NO. 4

PIPELINE CROSSING NO. 2

PHASE 4  
STOCKPILE  
AREA

PIPELINE CROSSING NO. 1

SWALE MOVED OFF OF  
PIPELINE  
FINAL PIPELINE ESMT  
SURFACE WILL BE BUILT UP  
ABOUT 0.5'-1' IN THIS AREA



The Architect/Engineer assumes responsibility for appropriate use of this standard.

**PLAN VIEW**

**SECTION "A-A"**

**NOTES:**

- SEE PLAN FOR EASEMENT, DRAINAGE, AND OTHER NOTES.
- ALL DIMENSIONS ARE IN FEET AND INCHES.
- ALL DIMENSIONS TO THE CENTERLINE OF THE ROAD, UNLESS NOTED.
- ALL DIMENSIONS TO THE CENTERLINE OF THE ROAD, UNLESS NOTED.
- ALL DIMENSIONS TO THE CENTERLINE OF THE ROAD, UNLESS NOTED.

**TABLE OF PROPOSED FOR EASEMENT, DRAINAGE, AND OTHER NOTES.**

NO.	DESCRIPTION	DATE	BY	CHKD
1	PROPOSED FOR EASEMENT, DRAINAGE, AND OTHER NOTES.	1/1/2020	JAMES W. GRIFFITH	JAMES W. GRIFFITH

**GRIFITH CONSULTING**  
ENGINEERING SURVEYING PLANNING  
JAMES W. GRIFFITH  
SURVEY FIRM # F-101699-00  
4000 SENDERO SPRINGS  
ROUND ROCK, TEXAS 78681  
(512) 626-0025  
EMAIL: jwg@jwgconsulting.net

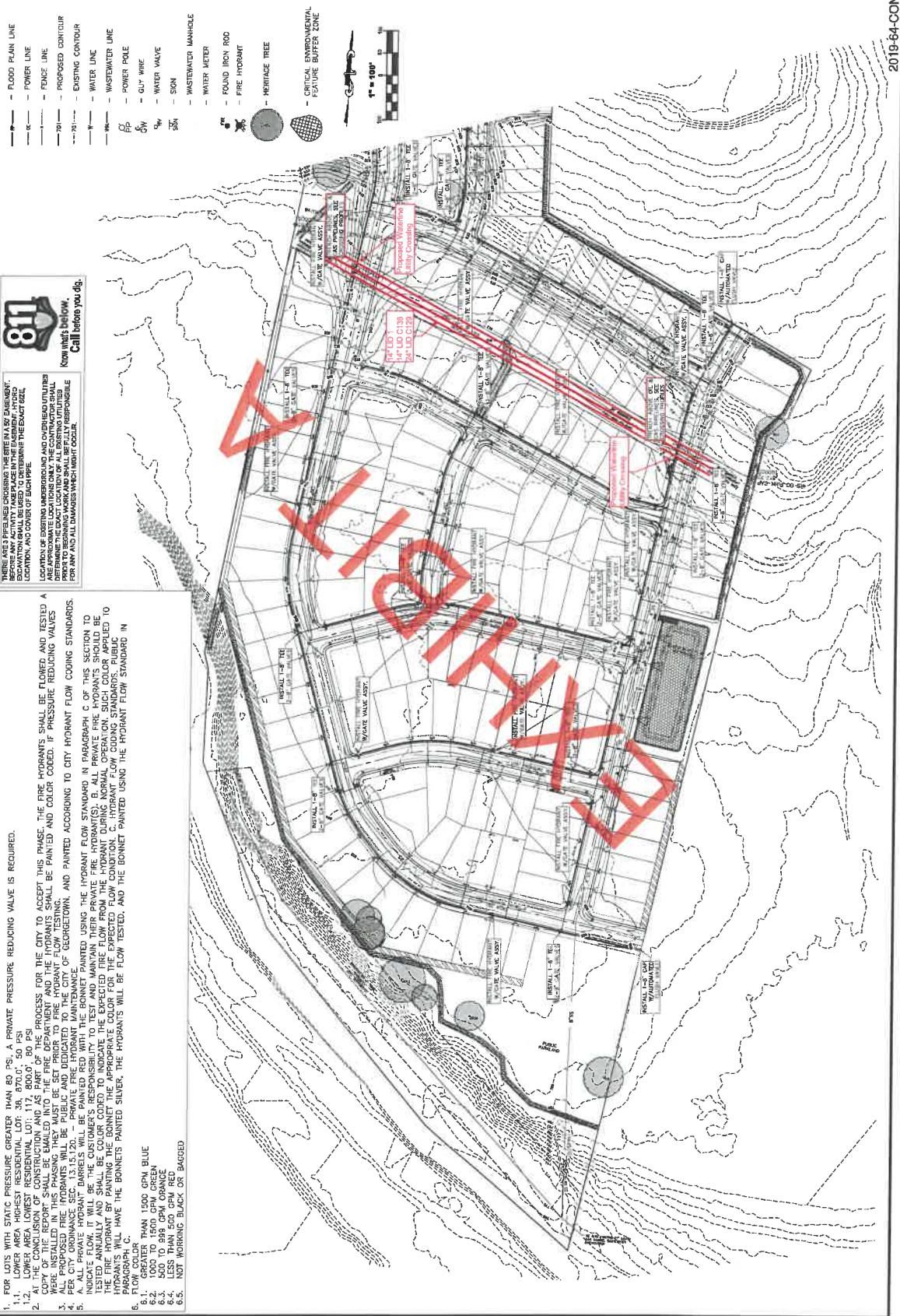
COLE ESTATES  
4901 HIGHWAY 29  
GEORGETOWN, TEXAS 78617  
STORM LINE O HEADWALL  
E/HIBIT



2019-64-CON

14" LID 1  
DOC approx 3'

HOA LOT 263 &  
PIPELINE ESMT.



**811**

Know what's below.  
Call before you dig.

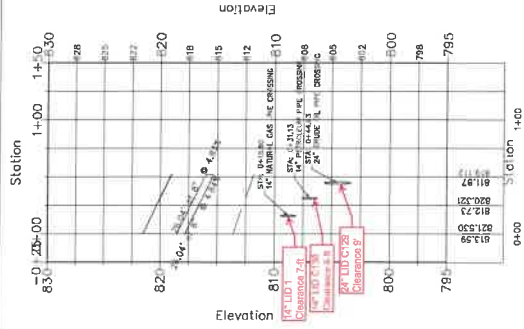
THERE ARE 3 PIPELINES CROSSING THE SITE IN A "Y" DENSIFICATION. BEFORE ANY ACTIVITY TAKE PLACE IN THE EASEMENT, HYDRO EXCAVATION SHALL BE USED TO DETERMINE THE EXACT SIZE, LOCATION, AND COVER OF EACH PIPE.

LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES SHALL BE DETERMINED BY UTILITY LOCATORS ONLY. THE CONTRACTOR SHALL DETERMINE THE LOCATION OF ALL UTILITIES. THE CONTRACTOR SHALL PRIOR TO BEGINNING WORK AND SHALL BE RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.

1. FOR LOTS WITH STATIC PRESSURE REDUCING VALVE HAVING 80 PSI, A PRIVATE PRESSURE REDUCING VALVE IS REQUIRED.
- 1.1. LOWER AREA HIGHEST RESIDENTIAL LOT 39, 976.0' x 50' PSI
2. AT THE CONCLUSION OF CONSTRUCTION AND AS PART OF THE INSPECTION PROCESS, FOR THE CITY TO ACCEPT THIS PHASE, THE FIRE HYDRANTS SHALL BE FLOWED AND TESTED A COPY OF THE REPORT SHALL BE EMAILED INTO THE FIRE DEPARTMENT AND THE HYDRANTS SHALL BE PAINTED AND COLOR CODED IF PRESSURE REDUCING VALVES ARE INSTALLED ON ANY OF THE LOTS.
3. ALL PROPOSED FIRE HYDRANTS WILL BE PUBLISHED FOR PUBLIC COMMENT AND PAINTED ACCORDING TO CITY HYDRANT FLOW CODING STANDARDS.
4. PER CITY ORDINANCE SEC. 13.15.120 - "PRIVATE FIRE HYDRANT MAINTENANCE", INDICATE YEAR IT WILL BE PAINTED RED WITH THE BONNET PAINTED USING THE HYDRANT FLOW STANDARD IN PARAGRAPH C OF THIS SECTION TO THE NEXT FLOW TESTING. AFTER FLOW TESTING, THE FIRE HYDRANTS SHOULD BE TESTED ANNUALLY AND SHALL BE COLOR CODED TO INDICATE THE EXPECTED FIRE FLOW FROM THE HYDRANT DURING NORMAL OPERATIONS. THE FIRE HYDRANTS SHALL BE PAINTED USING THE HYDRANT FLOW CODING STANDARDS, PUBLIC PARAGRAPH B.
5. THE BONNET HAVE THE BONNETS PAINTED SILVER, THE HYDRANTS WILL BE FLOW TESTED, AND THE BONNET PAINTED USING THE HYDRANT FLOW STANDARD IN PARAGRAPH C.
- 6.1. LOW-COLOR THAN 1500 GPM BLUE
- 6.2. 1000 TO 1500 GPM GREEN
- 6.3. 500 TO 999 GPM ORANGE
- 6.4. 250 TO 499 GPM YELLOW
- 6.5. NOT WORKING BLACK OR BAGGED



Western Water Line Crossing PROFILE



Eastern Water Line Crossing PROFILE



PROFILE VIEW LEGEND  
--- CL NATURAL GROUND  
--- CL FINISHED GROUND

HORIZONTAL SCALE: 1\"/>

GRIFFITH CONSULTING  
ENGINEERING SURVEYING PLANNING  
JAMES W. GRIFFITH  
SURVEY FIRM # 101599-00  
4000 SENDERO SPRINGS  
ROUND ROCK, TEXAS 78681  
(912) 626-0023  
EMAIL: jwg@griffithconsulting.com

DATE	9/1/21
BY	WJG
CHECKED BY	WJG
APPROVED BY	WJG
PROJECT NO.	2019-64-CON
DRAWN BY	WJG
REVISION	NOT RELEASED TO AGENCY PROJECT, STATE USE

COLE ESTATES  
4901 HIGHWAY 29  
GEORGETOWN, TEXAS 78617  
WATER PROFILE OVER PIPELINES

2019-64-CON  
SHEET  
X OF XX

THESE ARE PRELIMINARY ENGINEERING. THE LOCATION OF EXISTING AND PROPOSED UTILITIES SHOWN HEREON IS BASED ON RECORD DRAWINGS, FIELD SURVEY, AND OTHER AVAILABLE INFORMATION. THE ENGINEER HAS NOT CONDUCTED A FIELD SURVEY TO VERIFY THE LOCATION OF ALL UTILITIES. THE USER SHALL BE RESPONSIBLE FOR ANY AND ALL DAMAGES INCURRED BY ANY AND ALL UTILITIES LOCATED HEREON.



- FLOOD PLAIN LINE
- POWER LINE
- FENCE LINE
- PROPOSED CONTOUR
- EXISTING CONTOUR
- WATER LINE
- WASTEWATER LINE
- POWER POLE
- GUY WIRE
- WATER VALVE
- SIGN
- WASTEWATER MANHOLE
- WATER METER
- FOUND IRON ROD
- FIRE HYDRANT
- HERITAGE TREE
- CRITICAL ENVIRONMENTAL FAILURE BUFFER ZONE

ENGINEERING SUBSURVEY PLANNING, GRIFFITH CONSULTING  
SURVEY FIRM # 101699-00  
JAMES W. GRIFFITH  
4900 SENECA SPRINGS  
ROUND ROCK, TEXAS 78681  
(512) 626-0023  
EMAIL: JWG@GRIFFITHCONSULTING.COM

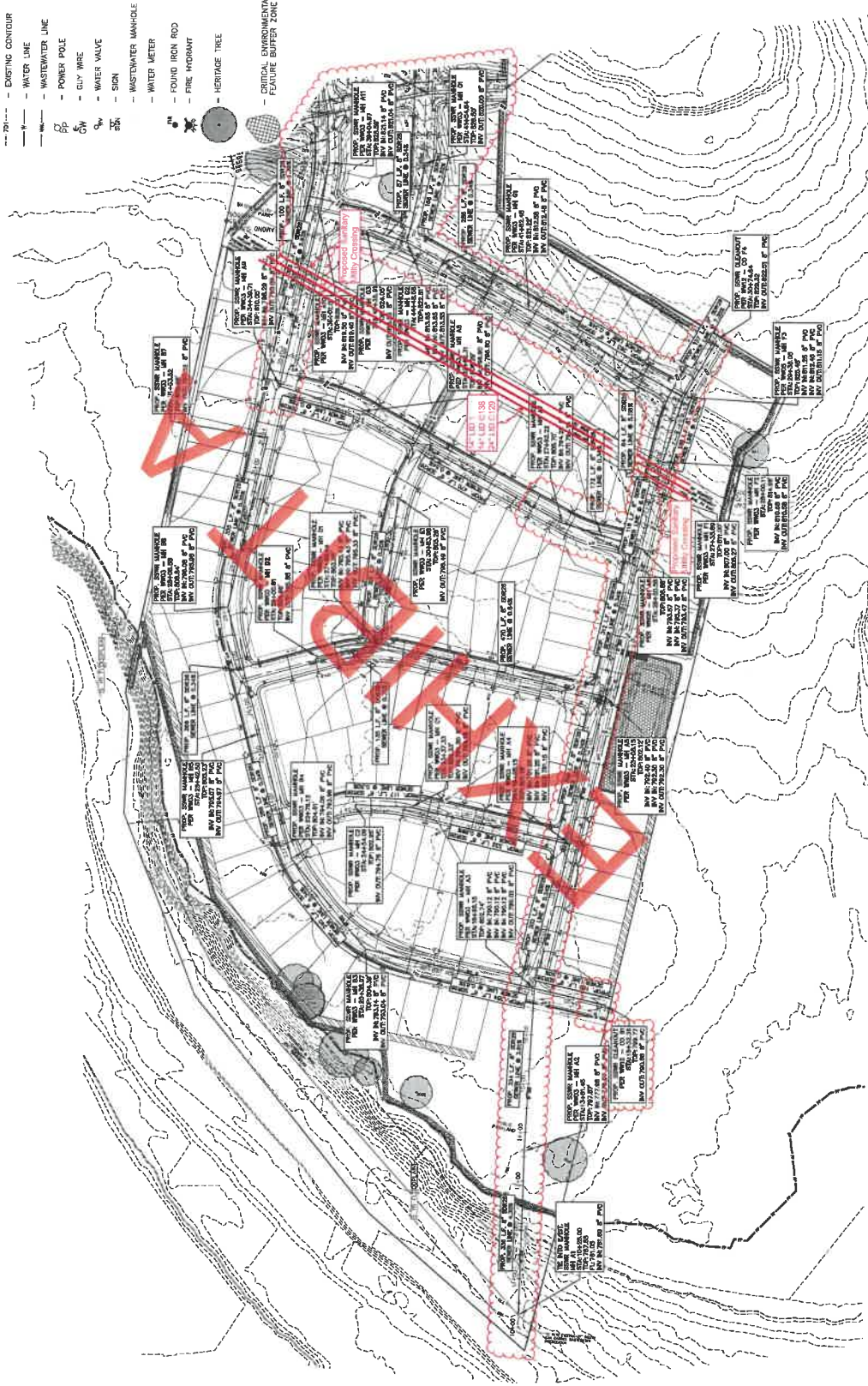
NO.	BY	DATE	REVISION
1	JWG	05/21	REVISED TO SHOW PROPOSED UTILITIES, EXISTING UTILITIES, AND EXISTING CONTOUR

COLE ESTATES  
4901 HIGHWAY 29  
GEORGETOWN, TX 78617  
OVERALL WASTEWATER PLAN

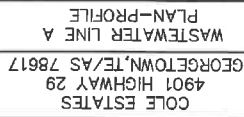


SHEET 64 OF 83

2019-64-CON

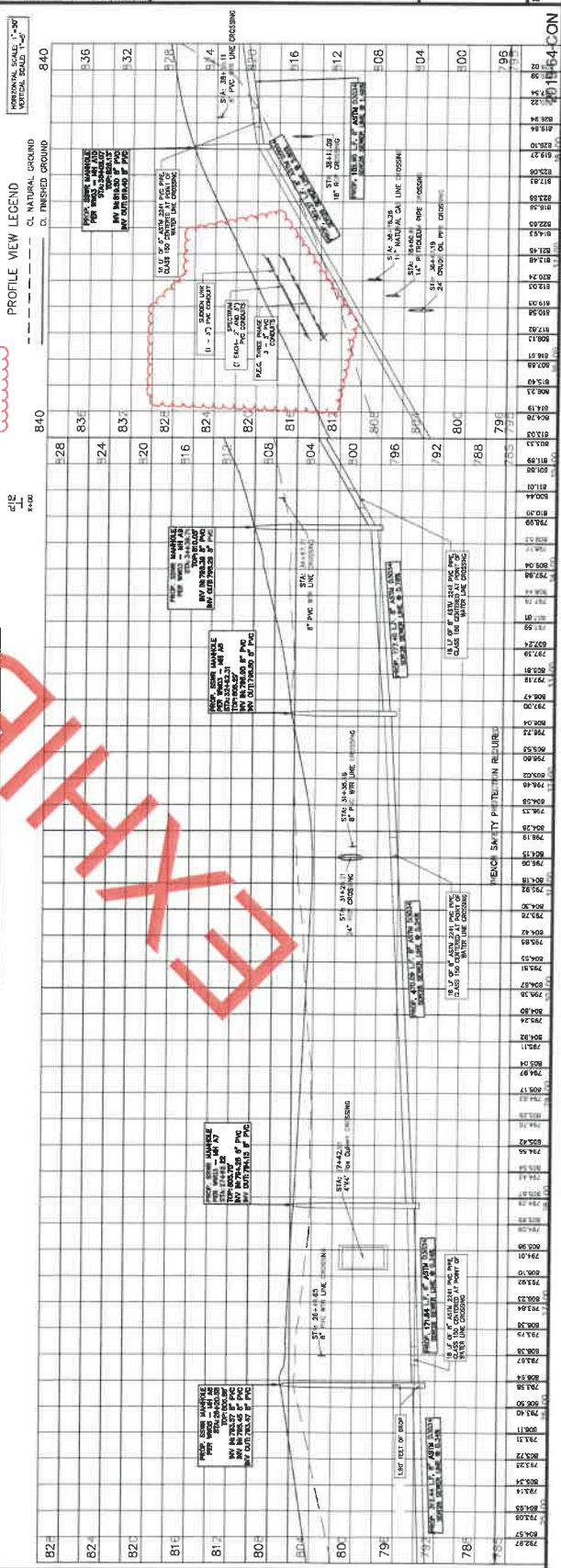




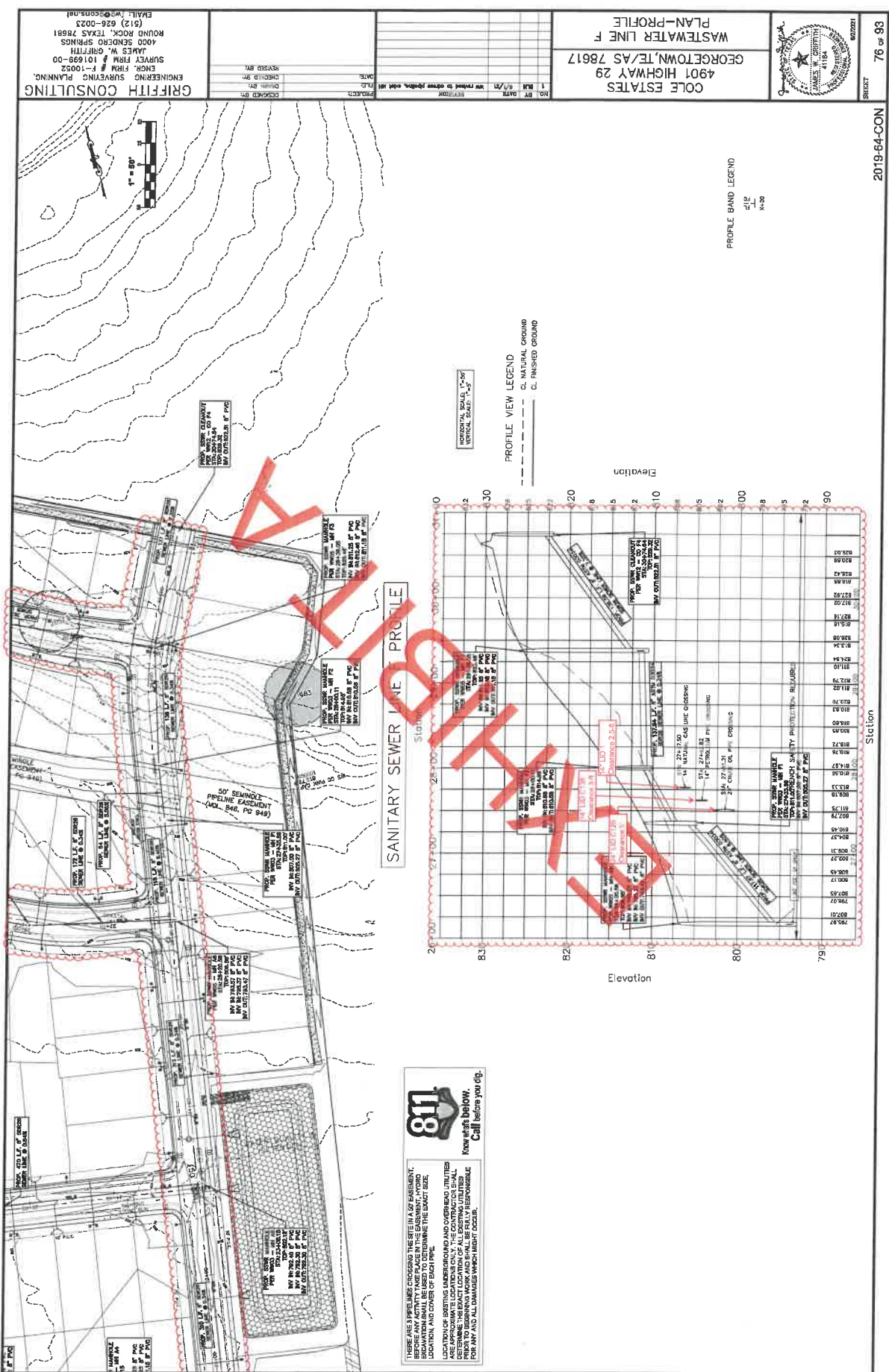


DATE	RECEIVED BY
CHECKED BY	RECEIVED BY
RECEIVED BY	

REMOVE ANY ADJACENT TAKE PLACES IN THE BASEMENT. HYDRO  
EXCAVATION SHALL BE USED TO DETERMINE THE EXACT SIZE,  
LOCATION, AND COVER OF EACH PIPE.  
LOCATION OF EXISTING UNDERGROUND OVERHEAD UTILITIES  
AND THE EXACT LOCATION OF ALL EXISTING UTILITIES  
PRIOR TO BEGINNING WORK AND SHALL BE FULLY RESPONSIBLE  
FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR.





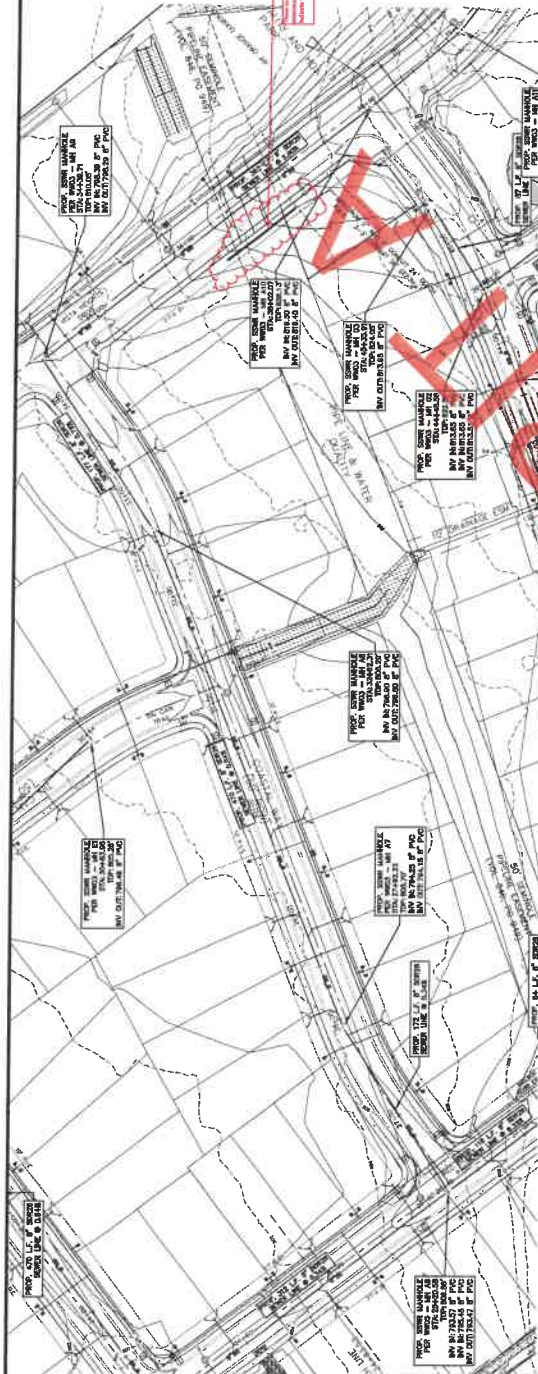


GRIFITH CONSULTING  
ENGINEERING SURVEYING PLANNING  
SURVEY FIRM # 10189-00  
JAMES W. GRIFFITH  
4000 SENDERO SPRINGS  
ROUND ROCK, TEXAS 78681  
(512) 626-0023  
EMAIL: JWG@GCONS.NET

NO.	BY	DATE	REVISION
1	BY	DATE	NOT PERMITTED TO BE USED FOR ANY OTHER PROJECT
2	BY	DATE	NOT PERMITTED TO BE USED FOR ANY OTHER PROJECT
3	BY	DATE	NOT PERMITTED TO BE USED FOR ANY OTHER PROJECT
4	BY	DATE	NOT PERMITTED TO BE USED FOR ANY OTHER PROJECT
5	BY	DATE	NOT PERMITTED TO BE USED FOR ANY OTHER PROJECT
6	BY	DATE	NOT PERMITTED TO BE USED FOR ANY OTHER PROJECT
7	BY	DATE	NOT PERMITTED TO BE USED FOR ANY OTHER PROJECT
8	BY	DATE	NOT PERMITTED TO BE USED FOR ANY OTHER PROJECT
9	BY	DATE	NOT PERMITTED TO BE USED FOR ANY OTHER PROJECT
10	BY	DATE	NOT PERMITTED TO BE USED FOR ANY OTHER PROJECT

COLE ESTATES  
4901 HIGHWAY 29  
GEORGETOWN, TX 78617  
WASTEWATER LINE F  
PLAN-PROFILE



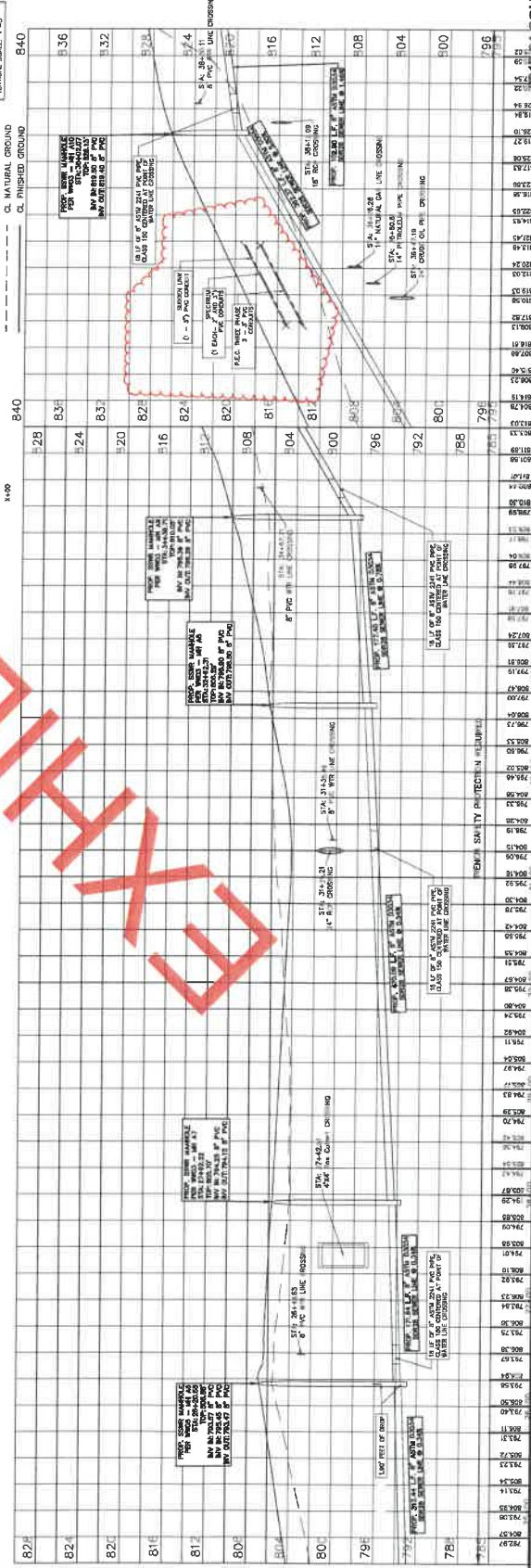


SANITARY SEWER LINE A PROFILE

PROFILE BAND LEGEND

PROFILE VIEW LEGEND

LEGEND



GRIFITH CONSULTING  
ENGINEERING SURVEYING PLANNING  
SURVEY FIRM # F-10052  
JAMES W. GRIFFITH  
4000 SENDERO SPRINGS  
ROUND ROCK, TEXAS 78681  
(512) 826-0023  
E-MAIL: JWG@griffith.net

NO.	DATE	BY	REVISION
1	04/27/20	JWG	REVISED TO SHOW PROPOSED LINE
2	05/11/20	JWG	REVISED TO SHOW PROPOSED LINE
3	05/11/20	JWG	REVISED TO SHOW PROPOSED LINE
4	05/11/20	JWG	REVISED TO SHOW PROPOSED LINE
5	05/11/20	JWG	REVISED TO SHOW PROPOSED LINE
6	05/11/20	JWG	REVISED TO SHOW PROPOSED LINE
7	05/11/20	JWG	REVISED TO SHOW PROPOSED LINE
8	05/11/20	JWG	REVISED TO SHOW PROPOSED LINE
9	05/11/20	JWG	REVISED TO SHOW PROPOSED LINE
10	05/11/20	JWG	REVISED TO SHOW PROPOSED LINE

COLE ESTATES  
4901 HIGHWAY 29  
GEORGETOWN, TEXAS 78617  
WASTEWATER LINE A  
PLAN-PROFILE



67 OF 92





## Standard Material Certification for Conformance and Delivery - PP5-Heavy Duty™

"Blanketing Nature With Nature"

### To Whom it May Concern:

This document has been drafted to certify Western Excelsior manufactures the Rolled Erosion Control Product (RECP) marketed as PP5-Heavy Duty. Each blanket is subjected to Western Excelsior's Quality Assurance Program and is manufactured to the specifications listed in document number WE\_EXCEL\_PP5HD\_SPEC. Further, Western Excelsior utilizes industry standardized test procedures to develop performance references for PP5-Heavy Duty. Document number WE\_EXCEL\_PP5HD\_PERF presents the industry standardized testing and results. Installation instructions are provided in document numbers WE\_EXCEL\_PP5HD\_SII and WE\_EXCEL\_PP5HD\_CII for hillslope and channel installations, respectively. A copy of document number WE\_EXCEL\_PP5HD\_SPEC is attached; all other documentation may be obtained by calling Western Excelsior Technical Services at 1-866-540-9810, at [www.westernexcelsior.com](http://www.westernexcelsior.com) or by email at [wexcotech@westernexcelsior.com](mailto:wexcotech@westernexcelsior.com).

Since most Western Excelsior products are sold to distributors and stocked, Western Excelsior is typically unable to certify material type or quantity delivered to the project/project site. However, space is provided below for distributor/contractor certification of materials delivered to the project/project site.

Regards,

A handwritten signature in black ink, appearing to read "Chad M. Lipscomb".

Chad M. Lipscomb, PE (CO), CPESC  
Director, Technical Services  
Western Excelsior Corporation  
[chad@westernexcelsior.com](mailto:chad@westernexcelsior.com)  
866-540-9810

### Standard Material Delivery Certification

Material Provided by (Distributor/Contractor): \_\_\_\_\_

Material Provided to (Contractor/Project): \_\_\_\_\_

Project Name / Project Number: \_\_\_\_\_

Rolls/Square Yards Provided: \_\_\_\_\_

Specification #: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Title: \_\_\_\_\_



"Blanketing Nature With Nature"

Chad Lipscomb, PE (CO), CPESC  
Director, Technical Services  
Western Excelsior Corporation  
4609 E. Boonville-New Harmony Rd.  
Evansville, IN 47725  
(970) 682-4594 Direct (Voice/Text)  
chad@westernexcelsior.com

Effective: 6/27/2017

RE: Certificate of Conformance: PP5-Heavy Duty™

To Whom it May Concern:

This letter is to certify that Western Excelsior manufactures the Rolled Erosion Control Product (RECP) marketed as PP5-Heavy Duty. Each roll is subjected to Western Excelsior's Quality Assurance Program and is manufactured to the specifications listed in document number WE\_EXCEL\_PP5HD\_SPEC. Further, Western Excelsior utilizes industry standardized test procedures to develop performance references for PP5-Heavy Duty. Document number WE\_EXCEL\_PP5HD\_PERF presents the industry standardized testing and results. Installation instructions are provided in document numbers WE\_EXCEL\_PP5HD\_SII and WE\_EXCEL\_PP5HD\_CII for hillslope and channel installations, respectively. A copy of document number WE\_EXCEL\_PP5HD\_SPEC is attached; all other documentation may be obtained by calling Western Excelsior Technical Services at 1-866-540-9810, at [www.westernexcelsior.com](http://www.westernexcelsior.com) or by email at [wexcotech@westernexcelsior.com](mailto:wexcotech@westernexcelsior.com).

Regards,

Chad M. Lipscomb, PE (CO), CPESC  
Director, Technical Services  
Western Excelsior Corporation



# Material Properties and Dimensions

## PP5-HEAVY DUTY™



## Specifications

Western Excelsior manufactures a full line of Rolled Erosion Control Products (RECPs). PP5-Heavy Duty™ is a fully synthetic, UV stable Turf Reinforcement Mat (TRM) manufactured by weaving continuous, synthetic thread elements by way of a proprietary (patent pending) process to form a lofty, three-dimensional pattern. PP5-Heavy Duty is resistant to environmental and climatic conditions and provides high strength, durability and turf reinforcement performance.

Each roll of PP5-Heavy Duty is made in the USA and manufactured under Western Excelsior's Quality Assurance Program to ensure a consistent distribution of strands and consistent thickness. PP5-Heavy Duty is constructed of UV stabilized, high strength synthetic yarns to be incorporated into turf and/or the soil matrix. For typical applications, the expected design life of PP5-Heavy Duty is twenty-five years, however, may be less or indefinite. Typical manufactured properties are provided in Table 1 and product characteristics are provided in Table 2.

Table 1- Specified Expected Values

Tested Property	Test Method	Value
Tensile Strength (MD) x (TD)*	ASTM D6818	2500 lb/ft (36 kN/m) x 2250 lb/ft (33 kN/m)
Elongation (MD) x (TD)	ASTM D6818	25 % x 20 %
Tensile Strength @15% Strain	ASTM D6818	2250 lb/ft (44 kN/m) - (MD &TD)
Initial Tangent Modulus (MD)	ASTM D6818	8.0 kip/ft (9.7 kN/m)
Initial Tangent Modulus (TD)	ASTM D6818	13.0 kip/ft (15.8 kN/m)
Mass Per Unit Area	ASTM D6566	9.2 oz/yd <sup>2</sup> (312 g/m <sup>2</sup> )
Thickness	ASTM D6525	0.30 in (8 mm)
Light Penetration	ASTM D6567	30 % open
Water Absorption	ASTM D1117	N/A %
Porosity	Computed	96 %
UV Stability	ASTM G154 / D4355 / D7238	100% (500hr) / 90% (3000hr)

\*Value specified as Minimum Average Roll Value (MARV)

Table 2 - Netting

PP5-Heavy Duty is a woven product, thus no netting is utilized in the construction of the material.

PP5-Heavy Duty is available in multiple roll sizes ranging in width from 8.0 ft to 12.0 ft. and 112.5 ft to 180 ft in length. Standard roll sizes are 100 square yards, measuring 8.0 ft wide by 112.5 ft long. Custom roll sizes are available upon request. Large rolls may require a cardboard core. PP5-Heavy Duty is manufactured in the USA with 100% of component materials derived from domestic sources.

The information contained herein may represent product index data, performance ratings, bench scale testing or other material utility quantifications. Each representation may have unique utility and limitations. Every effort has been made to ensure accuracy, however, no warranty is claimed and no liability shall be assumed by Western Excelsior Corporation (WEC) or its affiliates regarding the completeness, accuracy or fitness of these values for any particular application or interpretation. While testing methods are provided for reference, values shown may be derived from interpolation or adjustment to be representative of intended use. For further information, please feel free to contact WEC.





# Design Data and Test Results

PP5-HEAVY DUTY



## Specifications

A variety of test methods are utilized to determine performance and conformance values for Rolled Erosion Control Products (RECPs). Information within this document is presented to provide conformance values and recommended design values. Test results obtained for the PP5-Heavy Duty Turf Reinforcement Mat (TRM) and general design values are presented in Tables 1-4. For specific information detailing testing protocols, results and application of design values, refer to document number WE\_EXCEL\_PERF\_GEN.

Table 1 - Bench Scale Testing / NTPEP

Test Method	Condition	Result
ASTM D7101 Bench Scale Rainfall and Rainsplash Test	2 in per hour	N/A
	4 in per hour	N/A
	6 in per hour	N/A
ASTM D7207 Bench Scale Shear Resistance Test	N/A	0.5 in (12 mm)
ASTM D7322 Bench Scale Vegetation Establishment Test	Top Soil, Fescue, 21 Day Incubation	N/A
NTPEP Report Number	N/A	

Table 3 - Recommended Design Values\*

Design Value	Unvegetated	Vegetated
Typical RUSLE Cover Factor (C Factor)**	N/A	N/A
Maximum Slope Gradient (RUSLE)	N/A	N/A
Max Allowable Velocity (0.5 in (12mm) soil loss)***	N/A	20.0 ft/s (6.1 m/s)
Max Allowable Shear Stress (0.5 in (12mm) soil loss)***	N/A	12.0 psf (575 PA)
CFveg/CFTRM	N/A	0.26

\*\*C Factor value compliant with ASTM D6459. \*\*\* Shear Stress and Velocity values compliant with ASTM D6460.

Table 2 - Texas Transportation Institute (TTI) Results

Class	Test Condition	Result
A	< 3H:1 Clay Slope Test	N/A
B	< 3H:1 Sand Slope Test	N/A
C	> 3H:1 Clay Slope Test	N/A
D	> 3H:1 Sand Slope Test	N/A
E	2 psf Partially Vegetated Channel Test	N/A
F	4 psf Partially Vegetated Channel Test	N/A
G	6 psf Partially Vegetated Channel Test	N/A
H	8 psf Partially Vegetated Channel Test	N/A

Table 4 - HEC-15 Resistance to Flow Values

Design Value	Unvegetated
Manning's n @ Tau lower	0.026
Manning's n @ Tau mid	0.026
Manning's n @ Tau upper	0.026

\*Recommended Design Values are based on results of standardized industry full-scale testing and may not be applicable for all field conditions. For most accurate computation of field performance, consult Excel Erosion Design (EED) at [www.westernexcelsior.com](http://www.westernexcelsior.com).

The information contained herein may represent product index data, performance ratings, bench scale testing or other material utility quantifications. Each representation may have unique utility and limitations. Every effort has been made to ensure accuracy, however, no warranty is claimed and no liability shall be assumed by Western Excelsior Corporation (WEC) or its affiliates regarding the completeness, accuracy or fitness of these values for any particular application or interpretation. While testing methods are provided for reference, values shown may be derived from interpolation or adjustment to be representative of intended use. For further information, please feel free to contact WEC.



Prepare site to design profile and grade. Remove debris, rocks, clods, etc.. Ground surface should be smooth prior to installation to ensure blanket remains in contact with slope.

Seeding of site should be conducted to design requirements or to follow local or state seeding requirements as necessary.

At a minimum, 6 in. long by 1 in. crown, 11 gauge staples are to be used to secure the blanket to the ground surface. Installation in rocky, sandy or other loose soil may require longer staples.

Excavate a trench along the top of the channel side slopes and the upstream terminal end of the channel to secure the edges of the blanket. The trench should run along the length and width of the installation, be 6 in. wide and 6 in. deep. Staple blanket along bottom of trench, fill with compacted soil, overlap blanket towards toe of slope and secure with row of staples (shown in Figures A, E and F).

Roll blanket down slope from anchor trench. Staple body of blanket following the pattern shown in Figure D. Leave end of blanket unstapled to allow for overlap shown in Figure B. Place downstream blanket underneath upstream blanket to form shingle pattern. Staple seam as shown in Figure E. Secure downstream blanket with stapling pattern shown in Figure D. Stapling pattern shown in Figure D reflects minimum staples to be used. More staples may be required to ensure blanket is sufficiently secured to resist mowers and foot traffic and to ensure blanket is in contact with soil surface over the entire area of blanket. Further, critical points require additional staples. Critical points are identified in Figure G.

Overlap adjacent blankets as shown in Figure C and repeat Step 5. Secure toe of slope using stapling pattern shown in Figure E. Secure edges of installation by stapling at 1.0' intervals along the terminal edge, as shown in Figure E.

## Product Application/Equivalency Specifications

1. Consist of woven synthetic yarns to form a high strength, interlocking three-dimensional matrix.
2. Sufficient tensile strength, thickness and coverage to maintain integrity during installation and ensure material performance. Provide permanent turf reinforcement with longevity greater than three years, immune from moisture damage or chemical conditions within the soil.
3. Listing within AASHTO NIIPE database.
4. Meet ECTC specification for category 5C product.

## Product Application/Equivalency Specifications

PP5-Heavy Duty is produced by Western Excelsior and consists of a permanent Rolled Erosion Control Product (RECP) comprised of UV stable synthetic yarns continuously woven into a three-dimensional profile. PP5-Heavy Duty is designed and manufactured to provide immediate erosion control and permanent structural reinforcement and is comprised of physical properties sufficient to provide the intended longevity and performance. Additionally, PP5-Heavy Duty is constructed to yield a high tensile strength, high durability material. Product specifications may be found on document WWE\_EXCEL\_PP5D\_SPECS and performance information may be found on document WWE\_EXCEL\_PP5D\_PERF. All documents are available from Western Excelsior Technical Support or [www.westernexcelsior.com](http://www.westernexcelsior.com). Additional to above, equivalent products to PP5-Heavy Duty must meet identical criteria as PP5-Heavy Duty as follows:



6.5 ft. Blanket

10 ft. 10 ft. 10 ft. 10 ft. 10 ft. 0.5 ft.

X - Denotes Staple Location

**Figure F - Profile View**

The diagram shows a yellow ground surface profile with a green line representing a proposed structure. Labels include 'Critical Point' at the start and end of the structure, 'Ground Surface' for the yellow area, and 'Terminal End' at the junction of the structure and the ground surface.

### Figure G - Critical Point Securing





## Channel Installation Instructions PP5-Heavy Duty™

### Step 1 - Site Preparation

Prepare site to design profile and grade. Remove debris, rocks, clods, etc.. Ground surface should be smooth prior to installation to ensure blanket remains in contact with slope.

### Step 2 - Seeding

Seeding of site should be conducted to design requirements or to follow local or state seeding requirements as necessary.

### Step 3 - Staple Selection

At a minimum, 6 in. long by 1 in. crown, 11 gauge staples are to be used to secure the blanket to the ground surface. Installation in rocky, sandy or other loose soil may require longer staples.

### Step 4 - Excavate Anchor Trench and Secure Blanket

Excavate a trench along the top of the channel side slopes and the upstream terminal end of the channel to secure the edges of the blanket. The trench should run along the length and width of the installation, be 6 in. wide and 6 in. deep. Staple blanket along bottom of trench, fill with compacted soil, overlap blanket towards toe of slope and secure with row of staples (shown in Figures A, E and F).

### Step 5 - Secure Body of Blanket

Roll blanket down slope from anchor trench. Staple body of blanket following the pattern shown in Figure D. Leave end of blanket unstapled to allow for overlap shown in Figure B. Place downstream blanket underneath upstream blanket to form shingle pattern. Staple seam as shown in Figure E. Secure downstream blanket with stapling pattern shown in Figure D. Stapling pattern shown in Figure D reflects minimum staples to be used. More staples may be required to ensure blanket is sufficiently secured to resist mowers and foot traffic and to ensure blanket is in contact with soil surface over the entire area of blanket. Further, critical points require additional staples. Critical points are identified in Figure G.

### Step 6 - Continue Along Slope - Complete Installation

Overlap adjacent blankets as shown in Figure C and repeat Step 5. Secure toe of slope using stapling pattern shown in Figure E. Secure edges of installation by stapling at 1.0' intervals along the terminal edge, as shown in Figure E.

\* Drawings Not to Scale

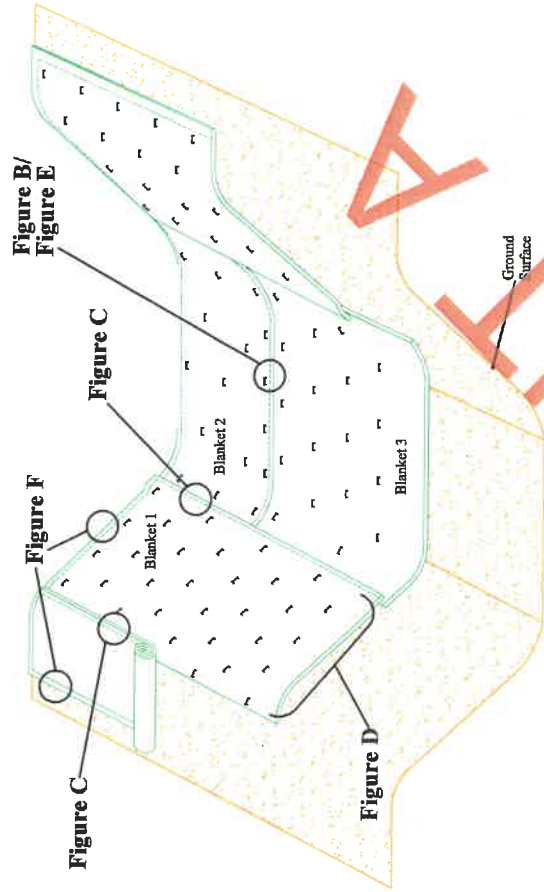


Figure A

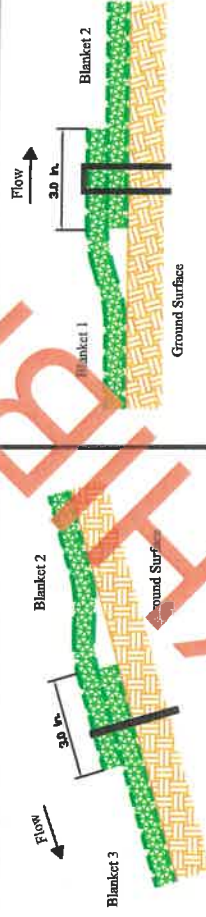


Figure B - Profile

Figure C - Cross Section View

### Product Application/Equivalency Specifications

PP5-Heavy Duty is produced by Western Excelsior and consists of a permanent Rolled Erosion Control Product (RECP) comprised of UV stable synthetic yarns continuously woven into a three-dimensional profile. PP5-Heavy Duty is designed and manufactured to provide immediate erosion control and permanent turf reinforcement and is comprised of physical properties sufficient to provide the intended longevity and performance. Additionally, PP5-Heavy Duty is constructed to yield a high tensile strength, high durability material. Product specifications may be found on document WE\_EXCEL\_PP5HD\_SPEC and performance information may be found on document WE\_EXCEL\_PP5HD\_PERF. All documents are available from Western Excelsior Technical Support or [www.westernexcelsior.com](http://www.westernexcelsior.com). Additional to above, equivalent products to PP5-Heavy Duty must meet identical criteria as PP5-Heavy Duty as follows:

1. Consist of woven synthetic yarns to form a high strength, interlocking three-dimensional matrix.
2. Sufficient tensile strength, thickness and coverage to maintain integrity during installation and ensure material performance. Provide permanent turf reinforcement with longevity greater than three years, immune from moisture damage or chemical conditions within the soil.
3. Listing within AASHTO NTPEP database.
4. Meet ECTC specification for category 5C product.

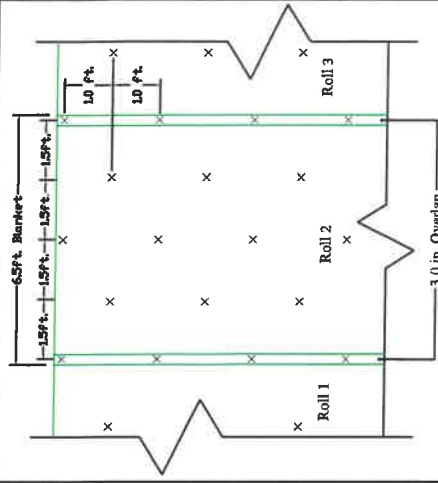


Figure D - Plan View

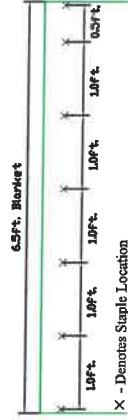


Figure E - Plan View

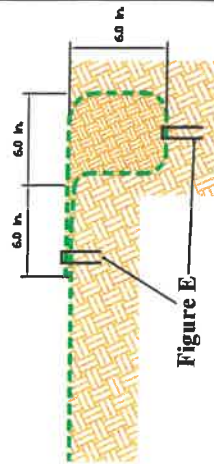


Figure F - Profile View

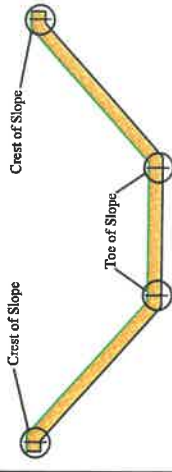


Figure G - Critical Point Securing



## EXHIBIT "B"

### Insurance Requirements

- A. Landowner agrees to procure and maintain, and shall require all Contractors to procure and maintain, insurance coverages in the kinds and amounts, and with deductibles reasonably acceptable as set forth below:
- (i) Worker's Compensation Insurance, including occupational disease coverage, in accordance with the benefits afforded by the statutory worker's compensation acts applicable to the state, territory or district of hire, supervision or place of accident.
  - (ii) Employer's Liability Insurance in an amount not less than \$1,000,000 each accident, \$1,000,000 disease each employee and \$1,000,000 disease policy limit.
  - (iii) Commercial General Liability Insurance with a single limit of liability for bodily injury or property damage of \$1,000,000 per occurrence (\$2,000,000 Aggregate) on ISO Coverage Form CG 00 01 (or equivalent), such coverage to include products/completed operations liability, premises/operations, independent contractors, broad form bodily injury and property damage, personal injury, explosion, blanket contractual liability and sudden and accidental pollution liability.
  - (iv) Business Automobile Liability Insurance covering all owned, non-owned, leased, rented, and hired motor vehicles, including coverage for loading and unloading, used in the performance of this Agreement, with limits of not less than \$1,000,000 combined single limit.
  - (v) Excess Liability Insurance with limits of not less than \$5,000,000 per occurrence and in the aggregate providing additional limits of insurance to the coverage described in subsections ii, iii and iv above.
- B. All required insurance shall:
- (i) except Worker's Compensation or Employer's Liability insurance, name Enterprise, its directors, employees, agents and representatives (collectively, the "Enterprise Indemnified Parties") as an additional insured;
  - (ii) not contain exclusions for claims arising out of the negligence of any Enterprise Indemnified Parties as an additional insured; and
  - (iii) be endorsed as primary and non-contributing to any other insurance policies carried by Enterprise with respect to Landowner's operations.
- C. Except where prohibited by law, all policies of insurance pertaining to this Agreement which are procured, held or maintained by Landowner or any Contractor, whether required by this Agreement or not, shall be endorsed to provide that the underwriters or insurers waive any and all rights of subrogation against the Enterprise Indemnified Parties.
- D. Landowner shall:
- (i) simultaneously with its execution of this Agreement, provide to Enterprise Certificates of Insurance for itself and each of its Contractors on a standard ACORD form signed by an authorized representative evidencing the coverages, limits, endorsements and extensions required herein for Enterprise and each entity required to be named as an additional insured herein; and
  - (ii) deliver, or require to be delivered, to Enterprise a renewal certificate not less than ten (10) days before policy expiration.
- 