

**SCOPE OF WORK  
LORAIN 11F PROJECT  
Multiple Orphan Well Sites  
Lorain County, Eaton Township**

**PROJECT DESCRIPTION**

The Lorain 11F project shall include the following wells:

Wells to be plugged per the individual plugging plan.

<u>Well Name</u>	<u>API Number</u>	<u>County</u>	<u>Township</u>	<u>Latitude</u>	<u>Longitude</u>
Mate Mary #1 & Water Well	34-093-6-0242-00-00	Lorain	Eaton	41.313896	-82.064705
Columbia Mutual Life Insurance #1	34-093-2-0039-00-00	Lorain	Eaton	41.312903	-82.039799
Weil Lewis #1	34-093-2-0753-00-00	Lorain	Eaton	41.312608	-82.039720
Wargo J #1	34-093-2-0032-00-00	Lorain	Eaton	41.293029	-82.049556
Carpenter Yost #1	34-093-2-0446-00-00	Lorain	Eaton	41.307084	-82.054014
Carpenter Art #1	34-093-2-0018-00-00	Lorain	Eaton	41.313059	-82.055414

**PROJECT SCOPE OF WORK:**

This project includes mobilization, access and well site development, drilling or cleaning out of and plugging of six (6) Orphan Wells and one (1) water well, storage and disposal of all materials generated during the plugging of the well, decommissioning, removal, storage and disposal of all casing, tubing, well and production equipment and affiliated lines and restoration of all areas disturbed during this project.

**PROJECT DIRECTIONS:** Coordinates listed are the proposed ingress/egress point for the well site.

**Mata Mary #1**

Lat: 41.314925  
Long: -82.065009

**Columbia Mutual Life Insurance #1:**

Lat: 41.314670  
Long: -82.041177

**Weil Lewis #1:**

Lat: 41.314670  
Long: -82.041177

**Wargo J #1:**

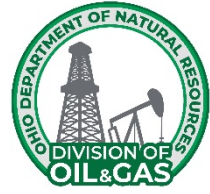
Lat: 41.292932  
Long: -82.050969

**Carpenter Yost #1:**

Lat: 41.314844  
Long: -82.056801

**Carpenter Art #1:**

Lat: 41.314844  
Long: -82.056801



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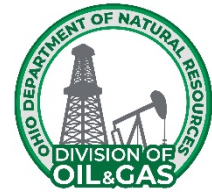
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**GENERAL SCOPE OF WORK**

The Contractor, the Contractor's agents, representatives, and subcontractors shall perform this Plugging Project in accordance with Ohio Revised Code 1509, Ohio Administrative Code Chap. 1501:9-11 and 1501:9-12, the Agreement, and in accordance with the following documents that are attached hereto and made a part hereof:

1. Project Description;
2. General Scope of Work;
3. General Conditions;
4. General Specifications;
5. Sequence of Work;
6. Well Description;
7. Plugging Plan;
8. Detailed Specifications;
9. Quantity Sheet;
10. Drawing Plan Set;
11. Appendix I – Ohio One-Call;
12. & Appendix II – Photolog & Well Records;

Subject to the Contractor's compliance with this Scope of Work, Contractor is solely responsible for and has control over all plugging and reclamation construction means, methods, manners, techniques, sequences, and procedures, for safety precautions and programs in connection with the Plugging Project, and for coordinating all portions of the Plugging Project.



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**GENERAL CONDITIONS**

**PART 1: OHIO DEPARTMENT OF TRANSPORTATION SPECIFICATIONS**

This Lorain 11F Project (Project) references the Ohio Department of Transportation (ODOT) Construction and Material Specifications (ODOT CMS). Any reference to these specifications is to ODOT's most current version of the specifications. The ODOT CMS can be found at <https://www.dot.state.oh.us/Divisions/ConstructionMgt/OnlineDocs/Pages/2023-Online-Spec-Book.aspx>

**PART 2: PRE-SITE MEETING**

The Contractor or Contractor's representative must attend the pre-site meeting. Failure to attend the pre-site meeting is grounds for the Division to reject the Contractor's Offer.

The Ohio Department of Natural Resources, Division of Oil & Gas Resources Management (Division) intends to begin the pre-site meeting on time. At the meeting, the Division will circulate and collect attendance sign-in forms to all contractors present. Only those contractors in attendance throughout the pre-site meeting, including the discussion of the Scope of Work, will be considered present for the pre-site meeting.

**PART 3: MODIFICATIONS TO THE SCOPE OF WORK PRIOR TO AWARD**

The Scope of Work may only be altered by written modification. The Division may issue an Amendment to the Scope of Work and will provide a notification of the Amendment by email to all Department of Administrative Services (DAS) pre-qualified contractors. Each contractor is responsible for logging into OhioBuys and submitting an offer that is responsive to all Amendments issued. All offers submitted prior to an amendment being issued shall become null/void and not consider in the opening. All Amendments shall become part of the Scope of Work.

Any interpretation or clarification of the Scope of Work made by any person other than the Division, or in any manner other than a written Amendment, is not binding and the Contractor cannot rely upon any such interpretation or clarification.

The Contractor cannot, at any time after the award of the Scope of Work be compensated for any issue with the Scope of Work, including alleging insufficient data, incomplete, ambiguous, conflicting, or erroneous language, or incorrectly assumed conditions regarding the nature or character of the work.

**PART 4: PERMIT AND INSPECTION REQUIREMENTS**

The Division will obtain and pay for all building and U.S. Army Corps of Engineers permits unless otherwise specified in the Detailed Specifications. However, the Contractor shall determine and include in his or her Offer Sheet the costs required to obtain and pay for all other requirements by the applicable governmental agencies; including but not limited to, all certificates of inspection/operation, guarantees, licenses, etc. required to complete the work as described within this document. The contractor shall follow all applicable laws and permit requirements and the Division will not be held responsible for damages that result from violation of laws or permits.

## **PART 5: INSTRUCTIONS FOR PREPARING AN OFFER**

A Contractor's offer must be submitted online through **OhioBuys**. (<https://procure.ohio.gov/bidders-and-suppliers>). **All offers submitted prior to an Amendment being issued shall automatically become null/void and not consider in the opening.**

Offers shall include labor, equipment, and material cost plus a proportionate share of the Contractor's overhead costs, other indirect costs, and anticipated profit. An offer must be mathematically and materially balanced. A "mathematically unbalanced offer" is an offer containing lump sum or unit price items that do not include reasonable labor, equipment, and material costs plus a reasonable proportionate share of the Contractor's overhead costs, other indirect costs, and anticipated profit. A mathematically unbalanced offer typically contains token prices (i.e. \$1 prices), front loadings, or prices with large variations from the engineer's estimate. A "materially unbalanced offer" is a mathematically unbalanced offer that will not result in the lowest ultimate cost to the Division.

During the Division's initial review of offers, if the Division finds an offer may be mathematically unbalanced, the Contractor may be required to submit proof of the mathematically unbalanced line items' proposed cost within 24 hours after notification from the Division. At a minimum, a Contractor may be required to submit copies of all material/rental quotes, intended labor costs (hours/rates), and contract agreements with subcontractors to support their offer. If the Contractor fails to submit the required proof, the Contractor's offer shall be deemed withdrawn from consideration. The Division shall evaluate the documentation and may verify quotes with vendors. After a review of the documentation, the Division will reject any offer it determines is mathematically and materially unbalanced.

A Contractor shall maintain an up-to-date schedule on file with the Division that sets forth dates by which the Contractor will plug each well that the Division previously awarded to the Contractor. A Contractor shall update their work schedule as often as necessary to maintain a current schedule with the Division. To be awarded new contracts, the Contractor must be able to complete all previously awarded work within the due dates set in each contract with the Division. Upon request, a Contractor shall provide an up-to-date schedule to the Division that reflects when all awarded work will be completed.

**Please note that a Contractor's offer must be submitted online through OhioBuys.**

1. Refer to the Scope of Work posted in OhioBuys with this solicitation.
2. **Only Contractors who are pre-qualified to offer this service on an existing State Contract beginning with CSP900-922 (DAS Index No. MAC110) may respond to this solicitation.** All CSP900922 Contract Terms & Conditions apply to this solicitation. No additional terms and conditions will be accepted. The Division will reject Offers from any Contractor that is not pre-qualified.
3. Completion of the grid is required and will be considered the response for evaluation. No outside or additional documentation will be considered.
4. Fixed prices will be automatically added to Contractor's proposals when shown. Contractors are not to enter pricing for fixed price items.

5. Confirm that your bid has been successfully imported into OhioBuys for all items before submitting. Incomplete bids and/or attachments will not be evaluated.
6. The most recent bid submitted in OhioBuys will be the bid that is evaluated, all prior bids submitted in the same solicitation will not be evaluated.
7. **The Contractor or Contractor's representative must attend the site meeting.** Failure to attend the site meeting is grounds for the Division to reject the Contractor's Offer.

## **PART 6: DIVISION'S OFFER SELECTION**

Except when the Division rejects an offer, the Division will select the lowest offer submitted to the Division. The Division may reject an offer if any one of the following applies to the Contractor's offer:

- Is not submitted online through **OhioBuys**;
- Fixed reference prices and/or any other imported information is incorrectly and/or not imported into **OhioBuys**;
- Is conditional;
- Is a mathematically unbalanced offer and a materially unbalanced offer;
- Is behind schedule on other projects with the Division; or
- Is not able to schedule this project within the contract due dates.

## **PART 7: WITHDRAWAL OF OFFERS**

At any time prior to the opening of the Offers, a Contractor may submit a written request to the Division, at the location where the Offers are received, to withdraw its offer. The request to withdraw the Offer must be signed by the person who executed the Offer.

## **PART 8: EFFECTIVE DATE AND TERM**

The effective date of this Project is the date of the Letter to Proceed that is sent to the Contractor. The Contractor must start work at the project site within six (6) months of the end of the contract and the Contractor shall continue diligently working toward the completion of the project once work has commenced. The Project must be completed **one (1) year after the effective date** or by June 30, 2027, whichever is sooner. If the Project terminates on June 30, 2027 and the Project is not completed, the Scope of Work may be renewed on the same terms if the Division sends written notice to the Contractor. Failure to complete work by the contract due dates may result in the suspension or termination of the contract and may result in the Division pursuing the Suspension and Termination and/or the Contract Remedies sections defined in the MAC 110 contract.

## **PART 9: TERMINATION AT WILL**

The Division may terminate this Scope of Work without cause. Any payment due to the Contractor at the time of termination by the Division shall be paid to the Contractor on a pro rata basis.

## **PART 10: RELATIONSHIP BETWEEN COMPONENTS OF THE SCOPE OF WORK**

This Scope of Work includes drawings that are duplicates of drawings on file with the Division. The Scope of Work documents are complementary. All sections of the Scope of Work are binding. The titles and headings in the Scope of Work are for reference and in no way affect the interpretation of the provisions of the Scope of Work. Further, if any part of this Scope of Work is found to be unenforceable, no such event will affect the enforceability or applicability of any other part of the Scope of Work.

If a conflict between the drawings and the specifications arises, the Contractor must notify the Division. In the event of a conflict of any provision in the Scope of Work the order of priority within the Scope of Work is as follows: Drawings, Detailed Specifications, General Specifications, Plugging Plan, and Sequence of Work.

## **PART 11: CONTRACTOR'S RESPONSIBILITY FOR SUBCONTRACTORS**

The Contractor is responsible for the conduct of its subcontractors and for persons its subcontractors directly or indirectly employ.

## **PART 12: USE OF DOMESTIC STEEL AND BUY AMERICAN ACT** **(For Federally Funded Projects only)**

For infrastructure projects that utilize federal funds, the contractor and subcontractors shall comply with Executive Order No. 14005 Ensuring the Future Is Made in All of America by All of America's Workers; the Code of Federal Regulations Title 2, Subtitle A, Chapter I, Part 184; U.S.C. 52.225-11 Buy American-Construction Materials under Trade Agreements (Nov 2023) clause; and Buy America Preferences for Infrastructure Projects and the Infrastructure and Jobs Act (Public Law 117-58) Division D, Title IX, Subtitle A, Part I, Buy America Sourcing Requirements. The contractor and subcontractors are required by law to supply domestically produced iron or steel products, manufactured products, and construction materials such as non-ferrous metals (steel, iron, aluminum), plastics, PVC pipe, glass, fiber optic cable, optical fiber, engineered wood, and lumber products for infrastructure on all projects funded in whole or in part with federal funds. The Infrastructure, Investment, and Jobs Act (Public Law 117-58) Division D, Title IX, Subtitle A, Part I, Buy America Sourcing Requirements exempts cement, cementitious materials, aggregates such as stone, sand, gravel, or aggregate binding agents or additives from these requirements.

## **PART 13: STANDARDS**

If the Division identifies a "standard" by reference to manufacturer and/or model number, all offers will be evaluated to ensure that the identified standard is used. The Division will not consider an offer in which a substitution for the standard is offered. After the Letter to Proceed is issued, the Contractor may submit a written proposal for a substitution of a standard.

## **PART 14: SUBSTITUTIONS DURING THE PROJECT**

After the Letter to Proceed is issued, the Contractor may offer substitutions for the standards set forth in the Scope of Work. The decision to allow substitution is solely within the discretion of the Division, which will consider, among other factors, availability, time of delivery, the aesthetic value of the proposed substitution, general differences in the knowledge of the product, service history, quality, efficiency, performance, and architectural, engineering, inspection, testing and administrative expenses. Any changes to the Offer price and/or Scope of Work must be memorialized by a Field Order or Change Order, as applicable. The savings in cost in allowing any substitutions during the Project will be solely to the benefit of the Division.

## **PART 15: QUANTITIES OF WORK**

### **15.1 Unit Price Items**

For items in the Offer that require a unit price, the quantities listed on the Offer Sheet are an approximation and are to be used only for the comparison of offers. The scheduled quantities may be

increased or decreased without invalidating or altering the Offer and will be considered within the Scope of Work.

Payments for unit price items will be made to the Contractor for actual quantities of work performed and materials furnished in accordance with the Scope of Work; however, the Contractor may not exceed the unit quantities shown on the Offer Sheet without prior written approval of the Division through a Field Order. Even if the Contractor determines that additional unit priced quantities (above and beyond the original Offer Sheet quantity) are required to meet plan and/or specification dimensions, the Contractor must not exceed the Offer Sheet quantities without prior written approval of the Division. The Division will not pay for quantities above and beyond the Offer Sheet quantity without prior written approval of the Division.

### **15.2 Lump Sum Items**

For items in the Offer Sheet that require a lump sum price, the Division will not pay for work, materials, or equipment that exceeds the amount provided by the Contractor on the Offer Sheet. The lump sum price on the Offer Sheet must include all work, materials, and equipment necessary to properly complete the Project.

### **15.3 Additional/Contingency Items**

The contingency items set forth in the Offer Sheet are not projected as necessary to complete the Project. Rather, the contingency items will first be used when unforeseen work arises, and the Division determines the contingency item is applicable. To be compensated for contingency items, the Contractor must have a written Field Order from the Division authorizing the contingency item in a specified quantity. Use of contingency items will not require the execution of a Change Order. The Contractor must be prepared to supply all items identified in the contingency specifications for use on this Project.

## **PART 16: OMISSIONS IN THE SCOPE OF WORK**

If the Contractor notices an error or omission in the Scope of Work during performance of the Project, the Contractor shall immediately notify the Division of such omission or error and shall not proceed with the Project until directed by the Division. Any work performed by the Contractor prior to clarification by the Division may not be entitled to compensation.

## **PART 17: INTERPRETATIONS CONCERNING THE SCOPE OF WORK**

During the Project, if a question arises on the Scope of Work, the labor or materials to be supplied, or costs potentially exceeding the Contractor's Offer, such questions must, prior to the work being performed, be submitted to the Division for a determination. A Division determination will be issued in writing and any work performed prior to such a determination will be performed at no cost to the Division. The Division will also begin executing a Change Order, when appropriate.

If the Division receives a written question concerning the Project, the Division will determine if the work must be performed by the Contractor at no increase in price to the Scope of Work. If so, the Division will issue a Field Order setting forth the Division's determination. Each Field Order issued must be signed by the Contractor acknowledging receipt. If the Contractor disagrees with the Division's interpretation in a Field Order, the Contractor may submit a protest by certified mail to the Chief within ten (10) days following the date of issuance of the protested Field Order. However, the Contractor must immediately proceed with the instructions given in the issued Field Order.

If, upon receipt of a written protest of a Field Order, the Division determines that the work referred to in the protest is outside the Scope of Work, the Division will not issue a Field Order and instead will issue a Change Order.

Field Orders, which are interpretations of the requirements of the Scope of Work, may be issued by the Division at any time during the performance of the work. The Contractor, at all times, is required to immediately execute the instructions of all issued Field Orders.

## **PART 18: CHANGES IN THE SCOPE OF WORK**

### **18.1 The Division's Right to Require Change Orders**

The Division may issue a Change Order directing the Contractor to immediately perform extra work that differs from the Scope of Work. The Contractor shall perform the work as directed. The changes in the work will consist of additions, deletions, or other revisions. When the Contractor performs the work, the Offer amount will be adjusted as described within this Scope of Work.

If the Contractor protests the issuance of the Change Order, any such protest has no bearing on any work requirements arising out of the Change Order in that the Contractor must immediately perform the work required in the Change Order so as not to delay the progress of the work at the Project.

### **18.2 Unauthorized Work**

Only work performed under the Scope of Work or work authorized by a Field Order or a Change Order is eligible for compensation. If the Contractor performs any work or purchases any materials without an approved, applicable Field Order or Change Order, such work performed, and purchases made are within the Scope of Work at no additional cost to the Division.

### **18.3 Contractor's May Request Change Orders**

If the Contractor determines that the Scope of Work does not address conditions at the Project, the Contractor may provide written notice to the Division of the conditions and request a Change Order. No oral communications will be acceptable as justification for a Change Order.

### **18.4 Determining Price of a Proposed Change Order**

The following methods will be used to determine the price of a proposed Change Order:

- a. If a Change Order involves items not listed on the Offer Sheet, the Contractor must present the Division with labor and/or material price quotes for the proposed Change Order item(s). The Division may request these quotes either in unit prices or as lump sums; or
- b. If the work involved in the Change Order is not definable, the Division may request the work be performed on a time and material basis and include a maximum amount to be paid for the work. The method will be based on unit prices for both labor and materials agreed to by the Division prior to the Contractor commencing the work.

## **18.5 Disputes Regarding Change Order Prices**

If the Contractor and the Division cannot agree on the cost of the work for a Change Order, using site-specific information including, but not limited to, Division historic public offer information, the Division will determine and set a fair price for the work and materials that are the subject of the Change Order.

## **PART 19: PAY ESTIMATES**

### **19.1 General Information**

Payments issued to the Contractor as the work progresses are not acceptance of any portion of the work not completed in accordance with the Scope of Work nor do such payments relieve the Contractor of liability with respect to any obligation or any expressed or implied warranties or responsibilities for faulty materials or workmanship.

### **19.2 Required Review by the Division**

Prior to the submittal of each payment request, the Contractor and the Division must meet at the Project site to review the Project progress. The Contractor and the Division's Project Representative must mutually agree on quantity and percent of work completed for all offer items prior to submittal of each payment request. No payment request will be approved for work that has not been approved by the Division's Project Representative. Field verification of all lump sum quantities and weight slips for all unit price quantities invoiced must be submitted to the Division's Project Representative for review during the meeting.

The Contractor's payment request must be submitted to the Division via the Orphan Well Program email at [OrphanWellProgram@dnr.ohio.gov](mailto:OrphanWellProgram@dnr.ohio.gov). The payment request must include a form furnished by the Division along with all backup documentation. The Division will confirm in writing that the payment request is accurate.

**For Federally Funded Projects:** The Contractor/Subcontractor shall submit payroll reports with each Payment Request. Payroll reports shall be completed according to Part 3 of the **Davis-Bacon Requirements** included in the Scope of Work.

Payment requests received by the Division containing errors or requesting amounts that cannot be approved will be returned to the Contractor. The Contractor may resubmit a payment request after correcting errors.

### **19.3 Documents to be Submitted for Payment**

Once the Division confirms the payment request is accurate, the contractor may submit an invoice on company letterhead to Ohio Shared Services at [invoices@ohio.gov](mailto:invoices@ohio.gov). Refer to the instruction on the payment request form furnished by the Division for additional submittal details.

With each request for payment the Contractor certifies that:

- a. The request for payment is accurate as to materials and the work completed under the terms and conditions of the Scope of Work and any Change Order, as applicable, including full compliance with all labor provisions; and

- b. All subcontractors and material suppliers have been paid for the work or materials that are applicable to all previous payment requests. As certification, each request for payment, at the Division's request, may need to be accompanied with a properly executed "Waiver of Liens" from all subcontractors and material suppliers to show that all previous payments made by the Division to the Contractor have been applied to fulfill, in full, all of the Contractor's obligations reflected in prior requests for payment.

#### **19.4 Effect of Liens on Payment Requests**

All work, materials, and equipment covered by any request for payment, whether incorporated in the Project or not, will pass to the Division at the time of payment free and clear of all liens, claims, security interests and encumbrances.

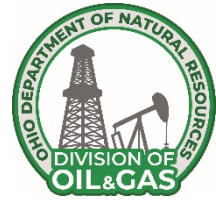
If there is evidence of any lien or claim that is chargeable to the Contractor, the Division will withhold all payments due to the Contractor to secure such lien or claim. If there are any previous liens or claims after payments are made to the Contractor, the Contractor may be required to refund to the Division a sum of money equal to the sum of all monies that the Division may be compelled to pay in discharging any lien or claim as a result of the Contractor's default.

#### **PART 20: RETAINAGE FOR FINAL RESTORATION**

If the Scope of Work requires revegetation of disturbed area, the Division will retain five percent (5%) of the sum of (1) the Offer amount and (2) all approved Change Orders. The five percent (5%) amount retained shall be released once the Division completes a Final Restoration Inspection and determines that vegetation has reached final stabilization. "Final stabilization" means vegetation established in a uniform perennial vegetative cover and meets all requirements listed in the Detailed Specifications under "Site Restoration". "Final stabilization" also means that no large barren areas exist, and the vegetation is of an equal or better condition than before the project started. The Contractor must remove all temporary erosion and sediment controls once final stabilization is achieved.

#### **PART 21: REDUCED GAS EMISSIONS CREDITS**

No one may directly or indirectly use the reduced gas emissions from wells plugged with State of Ohio funds or Infrastructure, Investment and Jobs Act funds, in whole or in part, to monetize, generate, or collect credits to include but not be limited to carbon, methane, or fugitive emissions, or otherwise use the plugging of wells funded with State of Ohio funds or with Infrastructure, Investment and Jobs Act funds to generate income of any type by offsetting their own or another party's gas emissions.



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**GENERAL SPECIFICATIONS**

Unless there is a specific pay item in the Detailed Specifications, the work defined in the General Specification shall be incorporated into other items of work.

**PART 1: HOURS OF WORK**

The Contractor, the Contractor's agents, representatives, and subcontractors shall perform plugging projects during the days of Monday through Friday. Work will not be conducted on weekends or state/national holidays except with Division approval or during emergency situations. A workday is defined as eight (8) hours. However, additional hours may be worked with Division approval or during emergency situations.

**PART 2: EQUIPMENT**

The Contractor equipment shall pass all safety requirements of local, state, and federal agencies. The Ohio Department of Natural Resources, Division of Oil and Gas Resources Management reserves the right to inspect the equipment prior to the Recommendation of Award.

Unless otherwise noted, all equipment and materials required to complete the work described shall be provided by the Contractor.

**PART 3: NOTIFICATIONS**

**3.1 Seven Working Day Notice**

The Contractor, the Contractor's agents, representatives, subcontractors, or independent contractors shall contact the responsible Division Orphan Well Inspector (the "Inspector") no less than seven (7) working days prior to commencement of work. Notice may be written or oral. This notice will allow the appropriate Division staff time to mark the approved access route and any sensitive areas that need to be left undisturbed.

The Contractor, the Contractor's agents, representatives, and sub-contractors shall contact each utility company that has utilities that directly affect plugging activities at the well location(s).

**3.2 Public 48 Hour Notice**

Prior to initiating well plugging operations, the Contractor shall give a minimum of 48-hour notice to the local fire department. Confirmation of this notification shall also be made to the Inspector or the Division Regional Office.

### **3.3 Emergency Notification**

When emergency conditions are encountered, such as a release of hydrogen sulfide gas (H<sub>2</sub>S), natural gas, crude oil, condensate, or brine that threatens human health, safety or the environment, as described in Ohio Administrative Code 1501:9-08-02, the Contractor shall notify the local fire department, the Local Emergency Planning Committee (LEPC) and call the 24/7 incident notification number: 1-844-OH-Call1 (1-844-642-2551) within 30 minutes of the occurrence.

### **3.4 Plugging Completion Notice**

No sooner than three business days after emplacing the uppermost plug, the Division will review the well to determine if any additional plugging work shall be required at that time. If additional work is needed, a Field Order will be issued by the Division. The Field Order shall state what must be completed and what, if any, Change Orders shall be required. If additional work is not needed the contractor shall cut the casing as defined in the Plugging Plan and set the plugged well identification as outlined in these **General Specifications** and Ohio Administrative Code 1501-9-11-10.

## **PART 4: ACCESS AND PRESERVATION OF SITE**

All costs for the adequate access to the well site for the plugging equipment shall be included in the Offer. Unless waived, placement of all tanks and equipment shall be subject to Division's approval. If requested by the Division, access roads will be chained or cabled to prevent unauthorized use.

Special attention shall be given to maintaining trees and other vegetation that have scenic value, provide shade, reduce erosion and runoff, or add to the aesthetics of the area. No trees three (3) inches or larger in diameter shall be removed without the Division's permission. Any alterations to the natural topography required to provide ingress and egress to the well site must be approved by the Division before work begins.

## **PART 5: DAMAGE CAUSED BY CONTRACTOR**

All damage caused by the Contractor's negligence in carrying out of this scope of work to any public or private property of any nature whatsoever, including trees, shrubs, and crops, shall be corrected to Division's satisfaction at the expense of the Contractor. If crops are damaged and the Contractor, landowner, or tenant cannot reach a settlement, the County Cooperative Extension Service shall set a fair price for crop damages and the decision shall be final and binding upon all parties. All subsequent payments due the Contractor shall be withheld until the Contractor provides proof of payment of any such claim.

The Contractor shall be responsible for all costs of repairing or replacing any survey monument that is disturbed or destroyed by the Contractor. The Contractor shall utilize a professional surveyor who is licensed and registered by the State of Ohio to perform the re-establishment of said monuments according to the standards set forth by the governing body or law of said monument. For the purpose of this scope of work, the term survey monument shall apply to any property boundary marker, federal, state or county geodetic benchmark, state, or county right of way monument, FEMA benchmarks or flood elevation markers.

## **PART 6: SAFETY**

### **6.1 Public Safety Coordination Meeting**

The Contractor shall hold a safety meeting with the County EMA, local fire department, Division Emergency Operations staff and Inspector, and other applicable contracting staff prior to

commencement of plugging activities. The meeting shall review 1) the safety of the public during operations, 2) the safety of workers during operations, 3) emergency notifications of events, 4) site set up and layout, 5) general overview of operations, 6) nearest hospital's address and directions.

## **6.2 Daily Safety Meetings**

The Contractor shall hold a daily safety meeting for all personnel on-site prior to the commencement of work. The Contractor shall provide and maintain a sign in/out sheet for all people on location. The Contractor shall immediately report any accidents and/or safety concerns to the Inspector.

This meeting shall be led by the Contractor and is intended to be well specific. At the discretion of the Division, this requirement may be waived for the remaining wells should these wells be part of the same lease\property.

## **6.3 Operational Standards**

The Contractor shall follow the rules established by Occupational Safety and Health Administration (OSHA) Safety and Health Regulations for Construction 29 CFR 1926 and OSHA General Industry 29 CFR 1910 on all onsite project operations.

## **6.4 Excavation and Trenching Requirements**

The Contractor shall follow the notification protocol as specified in Part 3 of the General Specifications before the start of any excavating activities. The Contractor will comply with OSHA Construction Standards for excavation and trenching under 29CFR 1926 Subpart P.

## **6.5 Hazardous Communications Requirements**

The Contractor shall maintain Safety Data Sheets (SDS) for all chemicals stored and/or used. SDS sheets will be stored onsite with the Emergency Response Plan (ERP). A copy of SDS sheets and the ERP will be stored at the project entrance in a container labeled "ERP/SDS". A copy of all SDS will be supplied to the local Fire Department and/or to the Division when requested.

## **6.6 Site Security**

The Contractor shall provide and install protective barriers/fencing around the work area to prevent unauthorized access. Ingress and Egress access must be maintained at all times.

## **6.7 Wind Direction Indicator**

The Contractor shall install a windsock in an open area of the well location where it is visible to all onsite personnel. It shall be constructed of high visibility material and deployed no less than six (6) feet above grade during the plugging operations.

## **6.8 Muster and Smoking Areas**

The Contractor shall mark and assign a primary and a secondary muster area daily upwind of the well location. These are to be determined based on prevailing wind direction, as indicated by the windsock. The Contractor will establish a safe location for a designated smoking area.

## **6.9 Ignition Sources and Parking Areas**

The Contractor shall identify and mark all potential ignition sources within a 50-foot radius of the well. The Contractor shall mitigate or remove as many ignition sources as possible from the working area. The designated parking area will be outside the 50-foot radius from the well.

#### **6.10 Air Monitoring and Worker Safety**

The Contractor shall supply and place a 4-gas monitor at the wellhead. The gas monitor must be calibrated and maintained to monitor Methane (CH<sub>4</sub>), Oxygen (O<sub>2</sub>), Carbon Monoxide (CO) and Hydrogen Sulfide (H<sub>2</sub>S).

Stop work must be followed when any of the levels listed below occur:

- Methane - 1000 parts per million (PPM)/2% Lower Explosive Limit (LEL),
- Oxygen - saturation below 19.5% or above 23%,
- Carbon Monoxide – 50 PPM,
- Hydrogen Sulfide - 10 PPM.

The levels stated above are directly from the Occupational Safety and Health Administration (OSHA) and The National Institute for Occupational Safety and Health (NIOSH) and are standard for air monitoring procedures for safety and work environments. If any of the above levels are alarmed, all personnel will shut down ignition sources and report to the muster area.

Division Emergency Operations personnel or the Inspector has the right to stop work if the actions are unsafe or the actions cause or are likely to cause danger to the workers, public, or the environment.

### **PART 7: MAINTENANCE OF TRAFFIC**

The Contractor shall at all times install, maintain, and operate all traffic and traffic control devices in conformance with the requirements of the "Ohio Manual of Uniform Traffic Control Devices for Streets and Highways," hereinafter called The Ohio Manual.

The Contractor shall notify the appropriate public officials and the Division and shall obtain all required permits prior to any lane closure of a public road.

The Contractor shall maintain ingress/egress to all properties associated with the project at all times during the project unless agreed upon in writing by the Division and the landowner.

#### **7.1 STREET CLEANING**

The Contractor shall be required to provided street cleaning services in order to remove sediment/debris tracked from the construction site/access drive onto private or public roadways during all phases of the Project.

The Contractor shall work diligently to minimize the amount of sediment tracked onto roadway. The Contractor will conduct all construction and ingress/egress operations in conformance with Part 9: Erosion and Sediment Control of the General Specifications. Use of other erosion and sediment control measures to prevent sediment runoff during period of rains and non-working hours.

The Contractor will provide street cleaning, such as sweeping or vacuuming, at locations around the project ingress/egress where plugging operations has caused tracking of sediments onto roadways. Mechanical sweepers shall be vacuum-type or regenerative sweepers. Sweeping speed

will not exceed 6 mph. A minimum of two passes shall be made. Streets must be cleaned daily before the end of the workday. If excess sediments have been tracked onto the streets or if rain is expected, the Division may direct the Contractor to clean the street as often as necessary to keep the street clean at all times.

The Contractor shall be required to remove and dispose of sediments properly. Removal of collected sediment deposits will be disposed on the project site. If sediment deposits cannot be disposed of on-site, an alternative location will be approved by the Division. No offsite disposal will be in or adjacent to a stream and/or floodplain. Sediments to be placed at the project site will be in conjunction with site restoration and should be spread, compacted, covered, and stabilized in accordance with the site restoration line item. **Sediment will not be allowed to flush into stream or drainage way and washing or flushing of sediments into adjacent drainage systems is prohibited.** If sediment has been contaminated, it will be disposed of in accordance with the contaminated material disposal line item.

The cost of this work shall be included in Contract bid prices for items of which this work is a component.

## **PART 8: PROTECTION OF EXISTING UTILITIES**

Before construction begins, the Contractor, acting as an agent for the Division, shall locate all utilities in the vicinity of the work. The Contractor shall be responsible for complying with the regulations pertaining to utilities in the State of Ohio. The Contractor shall assume all risk for all utilities located in the vicinity of the work, whether above or below the surface of the ground. The Contractor shall also be responsible for all damages and assume all expense for direct or indirect injury, caused by his work, to any of the utilities, or any person or property by reason of injury to them, whether such utilities are or are not shown on the drawings, once they have been uncovered by the work. **In compliance with Ohio Revised Code 3781, two working days before digging the Contractor shall contact the Ohio Utility Protection Service (OUPS) and Oil and Gas Producers Underground Protection Service (OGPUPS) using the Ohio811 one call service by calling 811 or by using the i-dig login found on the internet at [OHIO811.org](http://OHIO811.org). The Contractor shall maintain a current OUPS/OGPUPS call ticket during the entire project.**

## **PART 9: EROSION AND SEDIMENT CONTROL**

Temporary erosion control measures are required during the course of this project. These measures may consist of the installation of straw bale dikes, silt fence, filter socks, inlet protection structures, erosion control blankets, energy dissipation, and temporary seeding and mulching.

Once construction begins, the Contractor shall be solely responsible for all construction related to the control of off-site sedimentation. This sediment shall be removed by the Contractor at the Division's direction.

### **9.1 Temporary Measures**

Temporary erosion control structures shown on the Drawing Plan Set, identified with these specifications, or as directed by the Division shall be placed as soon as construction starts and must be maintained during the course of the project. At the direction of the Division, the Contractor shall remove the temporary controls when they are no longer needed or when required permanent control measures have been completed.

If sediment escapes the site, accumulations must be removed at a frequency to minimize further

negative effects, and whenever feasible, prior to the next rain event.

The contractor shall be responsible for revegetation of all areas in which sediment escapes the site. These areas shall be included in the final stabilization of the project and shall be at the cost of the contractor.

## **9.2 Maximum Exposed Areas**

Stabilization measures must be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and except as provided below, must be initiated no more than seven (7) days after the construction activity in that portion of the site has temporarily or permanently ceased.

Where the initiation of stabilization measures by the seventh day after construction activity temporarily or permanently ceased is precluded by snow cover, or frozen ground conditions, stabilization measures must be initiated as soon as practicable.

Where construction activity on a portion of the site is temporarily ceased, and earth-disturbing activities will be resumed within fourteen (14) days, temporary stabilization measures do not have to be initiated on that portion of site.

The Division may limit the area of excavation, borrow and embankment operations in progress commensurate with the Contractor's capability and progress in keeping the finished grading, re-soiling, mulching, seeding and other such permanent control measures current in accordance with the acceptable schedule.

## **9.3 Winterization**

When an incomplete project will be left exposed throughout the winter season, the Contractor shall furnish the Division a plan indicating the control measures to be installed and maintained until the next construction season.

If the winter period falls within the anticipated construction period of the Scope of Work and as indicated in the original approved construction schedule, control structures will be paid for by the Division at the unit prices in the Offer.

If the project is not substantially completed prior to the winter season due to the failure of the Contractor to meet the completion date, these necessary control structures will be installed and maintained by the Contractor at his expense and these items will not be paid for under the terms of the Scope of Work, except those that are permanent facilities to be left in place in accordance with the Drawing Plans Set and Specifications.

## **9.4 Other Controls**

Off-site vehicle tracking of sediments and the generation of dust must be minimized, and any waste must be properly disposed.

## **9.5 Inspections**

The Division Inspector shall conduct inspections to ensure that the control practices are functional and to evaluate whether the erosion and sediment control measures are adequate and properly implemented.

## 9.6 **Enforcement**

The Division shall take appropriate steps to ensure that sedimentation does not leave the project site. The Division shall require the removal of off-site sediment by the Contractor if such sediment resulted from the Contractor's negligence to place and maintain sediment control structures in accordance with the Drawing Plan Set and Specifications.

## **PART 10: SPILL PREVENTION AND REMEDIATION**

The Contractor is expected to prevent and, if necessary, contain and remediate any spills that may occur at the site due to plugging activities. All stationary plugging equipment on well locations that are in tiled farm fields, residential neighborhoods, parks, or in/adjacent to areas determined by the Division to be environmentally sensitive, will be staged on an impermeable liner and berm. **The Contractor will have oil absorbent pads and booms available onsite during the plugging operations.**

## **PART 11: HYDROGEN SULFIDE**

If the well that is being plugged is known to produce hydrogen sulfide (H<sub>2</sub>S), the following considerations must be observed:

- A. The Contractor must provide the appropriate equipment, on-site, to properly detect and abate any H<sub>2</sub>S emitted from the well. If the Contractor does not have the appropriate equipment to properly detect and abate any H<sub>2</sub>S emitted from the well, they will utilize an appropriate party to provide these services.
- B. The Contractor will shut-in the well each night after the plugging operations have ceased, unless otherwise instructed by the Division. The Contractor will continue this process until the plugging operations are complete and there are no further signs of a gas release.

## **PART 12: CASING**

The Division reserves the right to require the removal and or placement of any tubing, casing, or liners deemed necessary to properly plug and abandon the well. If a string of casing that would normally be pulled cannot be removed, the Contractor may be required to log the well and perforate the casing, in accordance with the Division's instructions, so that cement can be circulated behind the casing.

The Contractor shall run an operational string of casing when casing of the well prevents clean out to depth required in the scope of work.

## **PART 13: DEFINITIONS**

### 13.1 **Clean Out**

The process in which the contractor would use a smaller diameter tubular to circulate out material from inside a larger diameter wellbore/tubular. This shall include removing mud-laden fluid, prepared clay, bridge plugs (e.g. brush and stone plugs, surface debris), and wellbore cave-in (e.g. swelling shales, red clays). Equipment needed includes, but is not limited to, tubing, a mud pump, a power swivel/power sub or a tubing swivel, a drill bit with the jets removed and/or a notched collar. *A positive displacement mud pump with the capacity of pumping at least 3 barrels per minute and able to overcome hydrostatic head is required for this process.*

### 13.2 **Drill Out**

The process in which the contractor would use a drill string, associated fittings, and a bit to remove an obstruction from inside of the wellbore or casing. This shall include removing cement, grout, wood plugs, or other materials in which a cleanout operation failed to remove. Equipment needed includes, but is not limited to, a mud pump, power swivel/power sub, drill string (including collars and casing or tubing), cross over subs, bit sub, and drill bit. *A positive displacement mud pump with the capacity of pumping at least 3 barrels per minute and able to overcome hydrostatic head is required for this process.*

### 13.3 **Wash Over**

A process in which the contractor would use an intermediate size working string of casing, usually equipped with a carbide coated collar on the bottom joint, to run down over the smaller well tubular and clean out the annular space between the well tubulars. This process would include utilizing a power swivel or power sub to rotate the working string of casing and a mud pump to circulate fluid down between the working string and the outside of the smaller well tubular to wash out the material in the annular space between the well tubulars. This shall include removing mud-laden fluid, prepared clay, cement, grout, field packers, and surface debris. When needed, a wash over bit shall be attached on the bottom of the larger casing to act as a cutting edge for the material on the backside of the tubular being washed over. *A positive displacement mud pump with the capacity of pumping at least 3 barrels per minute and able to overcome hydrostatic head is required for this process.*

### 13.4 **Milling**

The process in which the contractor shall use a drill string and bit to remove a metal obstruction from inside of the wellbore or casing. Equipment needed includes, but is not limited to, a mud pump, power swivel/power sub, drill string (includes collars and casing or tubing), cross over subs, bit sub, and mill. The mill type would depend on the material encountered. *A positive displacement mud pump with the capacity of pumping at least 3 barrels per minute and able to overcome hydrostatic head is required for this process.*

### 13.5 **Fishing**

The process in which the contractor shall use a specialized tools or fishing tool to eliminate an obstruction from inside of the wellbore or casing. Equipment needed includes, but is not limited to, a fishing tool(s) and fishing string.

### 13.6 **Bail & Grout**

The process the contractor shall use when determined that the wellbore can be bailed of all fluid, and grouted. Equipment needed includes, but is not limited to, tubing, a bailer, and a grout pump. Grout shall be gravity feed to the bottom. This can be done in one application or in stages, depending on the well depth and condition. If the well cannot be bailed completely dry the contractor shall use a siphon string/tremie tube to remove the water from the well during grout application.

## **PART 14: WELL OBSTRUCTION ASSESSMENT**

If an obstruction is encountered in the well bore that prevents the Contractor from reaching total depth, the Contractor will attempt to identify/assess the nature of the obstruction and attempt to remove any obstruction deemed an impediment to the plugging operation. **The Contractor will supply impression blocks as part of their normal rig equipment.**

#### **PART 15: REMOVAL OF AN OBSTRUCTION**

The removal of an unknown obstruction that is encountered during the cleanout of a well may require the use of milling and/or fishing tooling and equipment. The Contractor will include the costs for these services on the appropriate line items in the contingency section of this offer unless these costs are part of a planned procedure. The Division will approve a method for the Contractor to remove the well obstruction. The Division will first utilize contingency specifications and line items to define this work. **The Division will not be responsible for milling or fishing charges that are due to Contractor negligence or Contractor equipment failure.**

#### **PART 16: PLUGGED WELL IDENTIFICATION**

In compliance with Ohio Administrative Code 1501:9-11-10, a steel plate, a minimum of ¼-inch thick, shall be tack welded on top of all plugged wells. The well's permit number and "ODNR" shall be welded on the plate in numbers/letters as large as practical. Letters shall have a minimum relief of 1/8-inch.

#### **PART 17: TOILET FACILITIES**

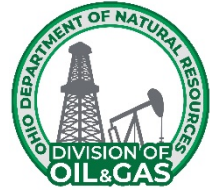
Where there are no readily accessible public toilet facilities, the Contractor will provide a portable field toilet on the location during plugging operations.

#### **PART 18: COMPLETION, GUARANTEES AND WARRANTIES**

Upon completion of the work described in the Project SOW, the Contractor shall request a Final Restoration Inspection be performed by the Division. The Division shall inspect the Project site(s) for completeness and acceptance against the Project SOW, and if the Division determines necessary, develop a list of incomplete and unacceptable work and conditions to be corrected by the Contractor. The Division will reinspect the Project site(s) until the Division determines all work described in the Project SOW is complete and acceptable.

The Contractor warrants (represents) that their work will be conducted in accordance with the standards described in the Project SOW (i.e., the SOW Detailed Drawings and Specifications) and that the Contractor's work be free of defects. Contractor guarantees their work and materials for a Warranty Period of one year, unless otherwise stated as a special provision of the SOW Detailed Specifications. The one-year Warranty Period commences on the date of inspection on the Final Restoration Inspection form that accepted the work.

Should defects develop with the Contractor's work or materials within the Warranty Period, the Contractor shall, upon written notice of the Division, remedy the defects and any associated disturbance at their own expense. If the Contractor, after receiving the Division's notice, does not remedy the defects to the satisfaction of the Division, the Division may proceed against the Contractor as prescribed by the Department of Administrative Services (DAS), Index Number MAC110. All representations, warranties, and guarantees made in the DAS Index Number MAC110 contract and the Project SOW shall survive final payment and termination or completion of this Contract.



**SCOPE OF WORK  
LORAIN 11F PROJECT  
Multiple Orphan Well Sites  
Lorain County, Eaton Townships**

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**SEQUENCE OF WORK**

**General:** Performance of all work shall be coordinated with the Division of Oil and Gas Resources Management (“Division”) Orphan Well Inspector (“Inspector”). The Sequence of Work shall be repeatable for all the project’s wells. **Work ahead of service rig mobilization shall be at the discretion of the Division.** Work shall not be initiated prior to fourteen (14) days ahead of rig mobilization, **unless approved in writing by the Division.** Any work performed shall be done in accordance with all requirements listed in this Scope of Work.

The Sequence of Work for the Orphan Well Project shall be as follows:

**Phase I:**

- 1) Contact the Ohio Utility Protection Service and the Ohio Oil & Gas Producers Underground Protection Service.
- 2) Coordinate with the Orphan Well Inspector and the local authorities for the mobilization of equipment over the roads and bridges to the site as applicable.
- 3) Verify with the Orphan Well Inspector that the pre-construction staking (i.e. Construction Work Limits) has been completed by the Division. **The pre-construction staking must be completed prior to mobilization.**

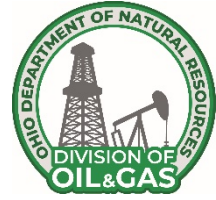
**Phase II:**

- 1) Mobilize all necessary equipment to the site and develop the site access as shown on the **Drawing Plan Set.**
- 2) Implement site safety and secondary containment as described in the **Detailed Specifications.**
- 3) Install perimeter sediment controls as required by the Division.
- 4) Prepare the well for plugging as described in the **Detailed Specifications, “Well Head Control.”**
- 5) Upon successful installation and approval of the wellhead and establishment of well control, the Contractor shall begin to plug the well as described in the **Plugging Plan and Detailed Specifications, “Well Preparation & Plugging.”**

- 6) **No sooner than three (3) business days after placing the uppermost plug, the Division will inspect the well at surface to determine if any additional plugging work shall be required at that time. If additional work is not needed the Contractor shall cut the casing as defined in the Plugging Plan.**
- 7) The Contractor shall set the plugged well identification as outlined in the **General Specifications** and Ohio Administrative Code 1501-9-11-10.

**Phase III:**

- 1) Within three (3) working days after Division has determined the plugging operations are completed, the Contractor shall remove all well and well plugging-related equipment, fluids, and cuttings from the site. The Contractor shall also excavate and remove all contaminated soils present onsite if present.
- 2) Within fourteen (14) days after the completion of the plugging operations, the Contractor shall re-soil as applicable, final grade, disc, fertilize, seed, and mulch all disturbed areas. **If work cannot be complete due to the season or weather conditions, the site shall be winterized per the General Specifications, Part 9 Erosion and Sediment Control and the site restoration shall be scheduled for completion.**
- 3) All reclamation shall be finished to an equal or better condition than what existed prior to construction. The Division shall give the final approval for the restoration of the site.



**SCOPE OF WORK**  
**LORAIN 11F PROJECT**  
**Mary Mate #1 Orphan Well Site**  
**Lorain County, Eaton Township**

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**WELL DESCRIPTION**

This Well Description is for:

**The Mary Mate #1 Orphan well, API # 34-093-6-0242-00-00, Lorain County, Eaton Township**

**Background:** The Mary Mate Orphan Well is located approximately five (5) miles south of the City of Elyria. This well is situated 500 feet south of Royalton Road (S.R.82), on a 1.79-acre residential parcel (#1100096000007) owned by Josef Kocsis III. The address is 38265 Royalton Road, Grafton, Ohio, 44044.

On 9/15/2010, the Division was notified by Columbia Gas Transmission of a gas odor located at 38307 Royalton Road at the Trinity Lutheran Church (previous owner). A Division inspection located a two (2)-inch vent pipe standing approximately eight (8)-feet above grade leaking gas. The well's vent pipe is accessed through the Turkish Community of Cleveland's (current owner) driveway. The well is located approximately twenty feet east of the parking lot. The LEL was measured at 27% at the ground level. A Trustee of the Church was advised of the Orphan well program and was mailed an I & O packet to be completed and returned. A second Division inspection was conducted on 9/10/2024. The base of the vent stack was excavated and a 6.63-inch diameter casing (a possible water well) was found at six (6)-inches below grade with a steel plate sitting on top. A weighted line was lowered into the casing and tagged an obstruction or the bottom of the hole at approximately 60-feet with static fluid level estimated at 15-feet. No gas was observed. A review of the water well records for the area indicated the wells in the area to be of the depths 50-feet to 70-feet deep. A buried vent line was traced back to the west approximately 45-feet to a 10.75-inch casing with a plated dresser sleeve attached which indicated a possibly previously plugged gas well. A weighted line was lowered into a welded collar on the top plate of the dresser sleeve and tagged a soft obstruction at 175-feet. Upon retrieval an examination of the weight did not show any debris or other plugging material attached. The fluid level was estimated at 15-feet. When an inspection light was focused down the top collar, pieces of wood with other debris and leaking gas bubbling through the fluid could be identified. A vertical two (2)-inch line was attached to the dresser sleeve to serve as a direct vent with the excavation backfilled and seeded.

A review of the Division's and other historical records indicated that an Ohio Fuel Gas Co. gas well was previously located on this property. The Mary Mate #1 (API # 34-093-2-0242-00-00) was completed on

3/23/1933 and was a dual completion from the “Clinton sand” and “Ohio shale” horizons. The total depth of the well was reported to be 2,441-feet. There wasn’t any data if the well was “shot” with nitroglycerin or was produced naturally. The reported open flow was 6,606 mcf. There wasn’t any production, transmission or storage equipment associated with this well. There are no production or plugging records for the Mary Mate #1 Orphan well. The Division’s well card list the formations depths as follows:

Formation	Top (ft.)	Bottom (ft.)	Remarks
Berea	38	60	hfw 58-feet
Red rock		145	
shale		675	895 mcf @ 425-feet, blew down to 48 mcf in 20 hrs.
Cinnamon		810	
shale		830	
Cinnamon		915	
shale		1,100	
Niagara ls		2,314	w. @ 1,365’, 2,190’, 2,298’, Salt @ 1,605’- 1645’
Casing shell		2,330	
shale		2,371	
Packer shell		2,392	
shale		2,422	
Clinton		2,440	6,606 mcf natural
		2,441	Total Depth

Casing data for the Mary Mate #1 orphan well is as follows:

- 10-inch O.D. drive pipe set to 38-feet
- 8-inch O.D. casing set to 198-feet
- 6-inch O.D. casing set to 1,420-feet
- 5-inch O.D. casing set to 2,352-feet

Plugging records for the Mary Mate #1 are not available, but a similar vintage well API 34-093-2-0387-00-00 which is located approximately one (1) mile southeast of the Mary Mate #1 show that this well was plugged in 1966 in the following manner:

- 8-inch O.D. casing set to 150-feet; left in hole
- 7-inch O.D. casing set to 1,469-feet; 1,429-feet recovered
- 5-inch O.D. casing set to 2,383-feet; all recovered
- 3.5-inch O.D. casing set to 2,461-feet; 2,370-feet recovered

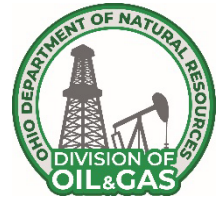
Filled with clay from 2,461-feet to 1,961-feet, precast cement plug at 1,429-feet, clay from 1,429-feet to 1,329-feet, stone bridge 525-feet to 500-feet, clay from 500-feet to 150-feet, precast cement plug at 150-feet, clay from 150-feet to surface.

**For the purposes of this Scope of Work it is assumed that the Mary Mate #1 was drilled to a total depth of 2,441-feet in the “Clinton sand”, that it was completed “open hole” and dually completed**

**in the “Clinton sand” and “Ohio shale” horizons, that it is equipped with 38-feet of ten (10)-inch drive pipe, that it was equipped with 198-feet of eight (8)-inch surface casing , that it has a “soft obstruction” at approximately 175-feet, that it was equipped with 1,420-feet of six (6)-inch casing, that it was equipped with 2,352-feet of five (5)-inch casing and was equipped with 2,474-feet of three (3)-inch tubing, that the well was previously plugged and except for the drive pipe all other casings were recovered after drilling or during plugging, that it was not shot with nitroglycerin, that the well is actively venting natural gas to the atmosphere.**

**Scope of Work:** This project includes the mobilization and access to the site, plugging the orphan well, as well as regrading and revegetation of disturbed areas as described.

**Designated Route:** The Contractor shall utilize Royalton Road (S.R.82) to access the site during all stages of the plugging project. It is the Contractor’s responsibility to contact all Township, County, Municipal and State officials having authority over the roads that are intended to be utilized for this project. The Contractor shall provide written documentation to the Division, of all road use notifications/ approvals prior to mobilizing to the site.



**SCOPE OF WORK  
LORAIN 11F PROJECT  
Mary Mate #1 Orphan Well Site  
Lorain County, Eaton Township**

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**PLUGGING PLAN**

This Plugging Plan is for:

**The Mary Mate Orphan well, API # 34-093-6-0242-00-00, Lorain County, Eaton Township**

For the purposes of this Scope of Work it is assumed that the Mary Mate # 1 well was drilled to a total depth of 2,441-feet in the “Clinton sand”, that it was completed “open hole” and dually produced from both the “Clinton sand” and the “Ohio shale” horizon, that is equipped with 38-feet of ten (10)-inch drive pipe, that it was equipped with 198-feet of eight (8)-inch surface casing, that it has a “soft obstruction” at approximately 175-feet, that it was equipped with 1,420-feet of six (6)-inch casing, that it was equipped with 2,352-feet of five (5)-inch casing, it was equipped with 2,474-feet of three (3)-inch tubing, that the well was previously plugged and except for the drive pipe, the majority of the other casings have been removed during drilling or during abandonment, that it was not shot with nitroglycerin and that the well is actively venting natural gas to the atmosphere.

A review of wells drilled to the “Clinton sand” offsetting the Mary Mate # 1 reported initial rock pressures ranging from 1,110 psi to 630 psi. The lower value may be not indicative of true bottom hole pressures due to fluid loading. The maximum initial formation pressure was used in the calculation of the density of the kill fluid. The Contractor will supply and maintain a dedicated kill fluid consisting of 300 barrels of weighted brine with a minimum density of 10.5 pounds per gallon (ppg) with the sole purpose of killing the well to regain well control when required. The 10.5 ppg brine should generate a hydrostatic bottom hole pressure of 1,331 psi. A mud pump of sufficient size and capacity will be required to be onsite and connected to the diverter lines at all times during the plugging operations as means to pump the well kill fluid as required.

For clean out drill out operation, the Division may require the Contractor to “Mud Up” at the start of the operation. Mud up operations must be performed under the supervision of a certified Mud Engineer, who shall mix the drilling mud and conduct all required mud and fluid checks-

- 1) The Contractor shall give the property owner and local fire authorities a minimum of twenty-four (24) hour notice prior to blowing down the well. The Contractor shall safely relieve any pressure that may be built up on this well prior to commencing plugging operations.
- 2) The Contractor shall visually examine the existing ten (10)-inch casing, to evaluate its condition immediately below grade. If the casing is found to be severely degraded, the Contractor shall remove the incompetent section of casing and install enough new casing, of similar diameter, to bring the top of the existing casing to a suitable working height.

- 3) The Contractor shall then install an appropriately sized and lined temporary cellar around the wellhead to capture all fluids generated during the plugging process. The design and build requirements for the temporary cellar can be found in the **Detailed Specifications**.
- 4) The Contractor shall then install an appropriate wellhead and employ an approved method of well control on the ten (10)-inch drive pipe to ensure there is complete custody of gas and/or fluids generated from the well. **The Contractor shall establish and maintain complete well control throughout the entire plugging process.**
- 5) The Contractor shall clean or drill out any plugging material or other debris in the (ten) 10-inch casing and wellbore to a depth of 165-feet. Milling or fishing equipment, as defined in the **General Specifications**, may be required to reach the approved depth. The Contractor shall install 155-feet of seven (7)-inch O.D. casing with properly spaced centralizers and a guide shoe on the bottom joint of the casing string. Once the well is static, the Contractor shall condition the annulus with a ten (10) barrel bentonite spacer and circulate the annulus until all free crude oil / debris is removed from the wellbore. The Contractor shall cement the casing's annulus from casing seat to surface using an API approved cement system blended with 2% CaCl and mixed at the proper API recommended density. The Contractor shall measure the cement slurry density by mud scale to confirm proper slurry density. The Contractor shall present a written record of the slurry densities to the Division. The Contractor shall wait on the cement for a minimum of eight (8)-hours to obtain the required compressive strength prior to drilling ahead.
- 6) The Contractor shall install the appropriate wellhead and utilize an approved method of well control on the seven (7)-inch casing to facilitate complete well control. The Contractor shall drill any residual cement and the float shoe with a **full diameter drilling bit or the maximum diameter drilling bit available, if constrained by a smaller casing**. The Contractor shall drill / clean out the wellbore to its reported total depth of 2,441-feet or a depth approved by the Division. The Contractor may employ milling, wash over or fishing tools to attain the reported total depth or a depth approved by the Division.
- 7) Once total depth has been reached, the Contractor shall circulate the wellbore with a compatible fluid to load the hole and run a logging suite consisting of Gamma Ray/CCL/VDL Bond & Caliper logs to verify the lithology, casing depth, cement quality and borehole diameter. All cement plug depths and thicknesses will be based on log data.
- 8) All staged cement plugs will be set through a working string of a minimum 1.5-inch inside diameter tubing utilizing a Division approved cement system blended with 2 % CaCl and mixed at the API recommended density for that cement class. **At the discretion of the Division, a minimum of 10 barrels of AquaGel\*\*, cement scavenger and / or an equal approved by the Division shall be pumped immediately ahead of any cement plugs for well conditioning purposes. In addition circulation must be established and all free crude oil shall be circulated from the wellbore prior to setting any plug. \*\* ( a mix ratio of one (1) fifty (50) pound bag of gel per five (5) barrels of the approved fluids).** The Contractor shall verify the correct cement density with a balance beam mud scale.
- 9) The Contractor shall set a 400-foot bottom plug from 2,440-feet to 2,040-feet, to cover the "Clinton sand" and Newburg Dolomite. The Contractor shall wait a minimum of eight (8)-hour for the cement to set and then run their tools into the wellbore to verify the depth to the top of the bottom plug. If the plug level has dropped or it is determined that a competent plug was not achieved then additional staged plugs may be required, at the discretion of the Division.

- 10) The Contractor shall set a 400-foot cement plug from 1,300-feet to 900-feet to isolate the top of the “Big Lime” interval, then wait on cement for a minimum of eight (8)-hours and then run their tools into the wellbore to verify the top of the plug. If the plug has dropped or it is determined that a competent plug wasn’t achieved additional staged cement plugs may be required, at the discretion of the Division.
- 11) The Contractor shall set a 400-foot cement plug from 550-feet to 150-feet to isolate the reported gas flow at 425-feet and cover the eight (8)-inch casing seat. The Contractor shall wait a minimum of eight (8) -hours for the cement to set. Then the Contractor shall run their tools into the wellbore to verify proper plug placement. If the plug has dropped or it is determined that a competent plug wasn’t achieved additional staged plugs may be required, at the discretion of the Division.
- 12) The Contractor shall set a cement plug from 150-feet to surface and wait on the cement plug to set for a minimum of eight hours and then check the cement level at surface and perform any remedial cement work, if necessary.
- 13) No sooner than three (3) business days after placing the uppermost plug, the Division will inspect the well at surface to determine if any additional plugging work shall be required at that time. If additional work is not needed the Contractor shall cut the casing and cement to a depth of 48-inches below surface and the Contractor shall set the plugged well identification as outlined in the General Specifications and Ohio Administrative Code 1501-9-11-10.



**SCOPE OF WORK  
LORAIN 11F PROJECT  
Mate Mary #1 Orphan Well Site  
Lorain County, Columbia Township**

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**WATER WELL PLUGGING PLAN**

This Plugging Plan is for:

**Mate Mary #1 Water Well**

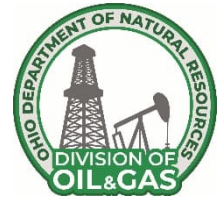
The casing in question on the Mate Mary #1 property was inspected by the Division in September of 2024. The location with the vent stack was excavated to a depth of approximately 18 inches. The vent line was welded to a short section of tubing to keep it vertical, but the vent line ran to the west. A metal detector was used to find a significant signature approximately 45 feet to the west. This location was excavated and a 6.63-inch casing (assumed to be the water well for drilling) was found at a depth of approximately six inches below grade with a plate seated on the top. This was gauged with a weighted line to be approximately 60 feet deep, with fluid level at approximately 15 feet. No gas was observed.

There are numerous domestic water wells within 1,000 feet of the Mate Mary #1 water well. Division records indicate that the primary aquifer in this area is Lower Mississippian and upper Devonian interbedded sandstones and shales. As inspected the well is believed to be approximately 60 feet deep with a depth to groundwater of 15 feet. This well is believed to be completed in the Berea Sandstone.

**For the purposes of this Scope of Work it is assumed that the Mate Mary #1 Water Well was drilled to a depth of approximately 60 feet and is equipped with an unknown amount of 6.63-inch diameter casing and that there is an obstruction at a depth of 20 feet.**

- 1) The Contractor will install an appropriately sized, lined, and liquid tight cellar around the well to capture all fluids generated during the plugging process, as outlined in the **Detailed Specifications**.
- 2) **The cleanout/drillout activities should be conducted using a freshwater system, as outlined in the Detailed Specifications.**
- 3) The Contractor will clean out the 6.63-inch diameter casing and wellbore to a depth of 60 feet or a depth approved by the Division. Drilling, milling and/or fishing equipment, as outlined in the **Detailed Specifications**, may be required to reach the anticipated depth. The final clean out/drill out depth and amount of casing installed will be at the discretion of the Division.
- 4) All cement plugs will be set through a working string of 1.5-inch inside diameter tubing using an approved API cement system blended to the recommended API density, as outlined in the **Detailed Specifications**. The Contractor shall verify the cement slurry weight by a beam balance mud scale. The well must be static prior to setting any cement plug.

- 5) The Contractor will set a cement plug from 60 feet to within forty-eight (48) inches of surface, wait on cement a minimum of eight (8) hours for it to obtain the required compressive strength and then check the cement level and top off with additional cement, if necessary.
- 6) No sooner than three (3) business days after setting this cement plug, the Division will inspect the well at the surface to determine if any remedial plugging work will be required at that time. If additional work is not required, the Contractor will cut off the casing a minimum of forty-eight (48) inches below ground level and tack weld a steel plate on the top of the casing that is inscribed with WW (water well).



**SCOPE OF WORK**  
**LORAIN 11F PROJECT**  
**Columbia Mutual Insurance Co. #1 Orphan Well Site**  
**Lorain County, Eaton Township**

**WELL DESCRIPTION**

This Well Description is for:

**Columbia Mutual Insurance Co. # 1 API # 34-093-2-0039-00-00, Lorain County, Eaton Township**

**Background:** The Columbia Mutual Insurance Co. #1 Orphan well is located approximately 2.8 miles north of the City of Grafton, Ohio. This well is situated 660-feet south of Royalton Road, on a 72.8-acre agricultural parcel (# 1100065000021) owned by Valve Spring Properties LLC. The GPS coordinates for the wellsite is 41.31295, -82.0401.

A Division inspection of the Columbia Mutual Insurance Co. #1 orphan well conducted on 1/17/2023, found it idle in the agricultural field and visibly equipped with 10-inch outside diameter (OD) casing stump and a 12.25-inch fabricated slip over vent cap setting over the ten (10)-inch casing held on by three (3) set bolts. There was an approximately eight (8)-foot long section of two (2)-inch tubing laying along side of the casing which had previously served as a vent stack but had rusted off. There was no tubing or rods visible at the surface in this well. There is no production, transmission or storage equipment associated with this well. This inspection report mentioned “gas was venting” in the rain water puddles surrounding the well.

The Division conducted an UPC inspection on 12/18/2024. The findings were as follows: “the area immediately around the well was excavated to approximately three (3)-feet deep. Gas was bubbling from the soil at several locations within three (3)-feet of the casing. The casing had a slip over vent cap. The vent riser had been ripped off. The cap was removed. The well consists of 10.75-inch OD casing that is full of cement. The top 12-inches was cut off to provide a competent casing wall to weld on a new collar. The collar was welded on. There was enough gas leaking up the casing / cement contact to catch fire and sustain a flame while welding in moderate winds. The vent line was re-attached to the vent slip cap and it was placed over the new collar. The area was backfilled.” Sussequent gas readings were measured at 179 parts per million of hydrogen sulfide.

A search of the historical records and the Division’s database found information that the Columbia Mutual Insurance #1 well commence drilling at this location on 3/12/1934 and reached total depth on 1/26/1935. The total depth was reported to be 2,596-feet and was sufficiently deep enough to target the “Clinton sand”. The well was “shot” with 60 quarts of nitroglycerin and reported an initial production of eight (8)-barrels of oil. The well construction was typical for a Cable Tool drilled well, employing ten (10)-inch drive pipe, eight (8)-inch casing, six (6)-inch casing, five (5)-inch production casing with two (2)-inch tubing. The well card for the Columbia Mutual Insurance Co. #1 well is as follows:

Formation	Top (ft.)	Bottom (ft.)	Remarks
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Quicksand & gravel	0	27	
shale	27	1,105	
Lime	1,105	2,377	Hole full of water 2,331
Salt water		1,535	
Salt sand	1,615	1,645	
Oil bearing sand	2,488	2,507	Very little gas
Total Depth		2,596	

Casing data for the Columbia Mutual Insurance Co. #1 orphan well is as follows:

- 10-inch O.D. drive pipe set to 27-feet, all left in
- 8-inch O.D. casing set to 164-feet, all recovered
- 6-inch O.D. casing set to 1,440-feet; no record of recovered casing
- 5-inch O.D. casing set to 2,385-feet, 1,368-feet recovered

Plugging records for the Columbia Mutual Insurance Co. #1 orphan well show that well was plugged on 11/24/1953 in the following manner:

- 2,596-feet to 2,208-feet filled with clay
- Cement plug at 1,693-feet and clay to 1,643-feet, cement plug at 1,480-feet and clay to 1,380-feet
- 525-feet to 510-feet a rock bridge, seasoned wood plug from 510-feet to 507-feet, stone from 507-feet to 505-feet
- 505-feet to 164-feet filled with clay
- 164-feet a cement plug and filled with clay to the surface

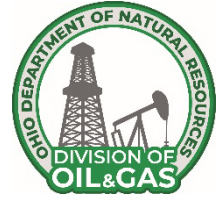
**For the purposes of this Scope of Work it is assumed that the Columbia Mutual Insurance Co. #1 orphan well was drilled to a total depth of 2,596-feet, was drilled sufficiently deep enough to produce out of the “Clinton sand” reservoir, the well was shot with 60 quarts of nitroglycerin, that it was completed open hole, that it is equipped with 27-feet of 10-inch diameter drive pipe, that the well was previously plugged with a combination of clay, stone, seasoned wood plugs and precast cement plugs, that 164-feet of 8-inch diameter casing was recovered when plugged, that it was equipped with 1,440-feet of 6-inch diameter casing, that 1,368-feet of 5-inch casing was removed from the well when plugged and that precast cement plugs were set on the 6-inch and 8-inch casing seats, that it has a rock bridge from 525-feet to 510-feet, that there isn’t any production equipment or transportation lines identified, that the well is leaking gas both on the inside of the 10-inch casing and outside the 10-inch casing.**

**Scope of Work:** This project includes the mobilization and access to the site, plugging the orphan well, as well as regrading and revegetation of all disturbed areas as described.

**Designated Route:** The Contractor shall utilize Royalton to access the site during all stages of the plugging project.

It is the Contractor’s responsibility to contact all Township, County, Municipal and State Officials having authority over the roads that are intended to be utilized for this project. The Contractor shall provide

written documentation to the Division, of all road use notifications / approvals prior to mobilizing equipment to the site.



**SCOPE OF WORK  
LORAIN 11F PROJECT  
Columbia Mutual Insurance Co. # 1 Orphan Well Site  
Lorain County, Eaton Township**

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**PLUGGING PLAN**

This Plugging Plan is for:

**Columbia Mutual Insurance Co. #1, API # 34-093-2-0039-00-00, Lorain County, Eaton Township**

**For the purposes of this Scope of Work it is assumed that the Columbia Mutual Insurance Co. # 1 orphan well was drilled to a total depth of 2,596-feet, was drilled sufficiently deep enough to produce out of the “Clinton sand” reservoir, that it was completed open hole, that it was shot with 60 quarts of nitroglycerin, that it was equipped with 27-feet of 10-inch diameter drive pipe, that it was previously plugged with a combination of clay, stone, seasoned wood plugs and precast cement plugs, that 164-feet of 8-inch diameter casing was recovered when plugged, that it was equipped with 1,440-feet of 6-inch diameter casing, that 1,368-feet of 5-inch casing was removed from the well when plugged and that precast cement plugs were set on the 6-inch and 8-inch casing seats, that it has a rock bridge from 525-feet to 510-feet, that there isn’t any production equipment or transmission lines identified, that the well is leaking gas from both the inside and outside the 10-inch casing.**

**The area is known to have “red rock” shale horizons found from approximately 90-feet to 150-feet. Based on this information, any fluids utilized in this plugging plan should be designed to encourage wellbore stability.**

**A review of wells drilled to the “Clinton sand” offsetting the Columbia Mutual Insurance # 1 well reported initial rock pressures ranging from 850 psi to 1100 psi. The lower value may not be indicative of true formation pressure due to fluid loading in the wellbore. The maximum formation pressure reported was 1,100 psi and was used in the kill fluid density calculation. The Contractor will supply and maintain a dedicated kill fluid consisting of 300 barrels of a weighted brine with a minimum density of 9.5 pounds per gallon (ppg) with the sole purpose of killing the well to regain well control when required. The 9.5 ppg brine should generate a hydrostatic pressure of 1,281 psi at the assumed total depth. A mud pump of sufficient size and capacity will be required to be onsite and connected to the diverter lines at all times during the plugging operations as a means to pump the well kill fluid as required.**

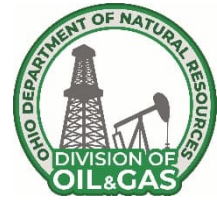
**For clean out drill out operation, the Division may require the Contractor to “Mud Up” at the start of the operation. Mud up operations must be performed under the supervision of a certified Mud Engineer, who shall mix the drilling mud and conduct all required mud and fluid checks-**

- 1) The Contractor will give the property owner and local Safety forces a minimum of 24-hour notice prior to relieving any pressure from the well. The Contractor will then safely relieve any pressure that may be built up on the well prior to commencing plugging operations.**

- 2) The Contractor shall install a 13.375-inch outside diameter drive pipe surrounding the original ten (10)-inch drive pipe. This pipe shall be driven to the point of refusal in competent bedrock, which is estimated to be at a depth of 35-feet. The top of this drive pipe shall extend to a suitable working height above ground level. The Contractor will then install an appropriately sized wellhead and employ an approved method of well control on this 13.375-inch drive pipe to ensure complete control and custody of all fluids and gas generated by this well during plugging operations. **The Contractor will maintain a minimum of 300 barrels of kill fluid with a minimum density of 9.5 ppg and sufficient pumping equipment on location at all times for well control. The Contractor will provide up to 400 barrels of fresh water for use as a circulation fluid.**
- 3) The Contractor will visually examine the existing ten (10)-inch casing, to evaluate its condition immediately below grade. If the casing is found to be severely degraded, the Contractor will remove the incompetent section of casing and install enough new casing, of similar diameter, to bring the top of the existing casing to a suitable working height.
- 4) The Contractor will then install an appropriately sized and lined temporary cellar around the wellhead to capture any fluids generated during the plugging process. The **design and build requirements** for the cellar can be found in the **Detailed Specifications**.
- 5) The Contractor will then clean out / drill out the plugging material in the ten (10)-inch casing with a full wellbore diameter bit to approximately 170-feet. The employment of milling or fishing equipment, as specified in the **Detailed Specifications**, may be required to attain the desired casing point. The Contractor will then install 160-feet of seven (7)-inch O.D. casing with a float shoe on the bottom joint. An appropriate number of bow spring centralizers will be utilized to ensure proper standoff distance between the casing and borehole for zonal isolation. Once the wellbore is static and is conditioned with a ten (10) barrel bentonite flush, the Contractor will cement the annulus from the casing point to surface with an API approved cement blended with 2% Calcium Chloride. The cement slurry will be mixed at the API recommended density, which will be verified by a beam balance mud scale. The Contractor will wait on the cement to set a minimum of eight (8)-hours prior to drilling ahead. The Contractor will then install an appropriate wellhead and utilize an approved method of well control on the seven (7)-inch O.D. casing.
- 6) The Contractor will clean out / drill out and if needed, utilize milling equipment to remove any obstructions in the wellbore, which may be encountered to reach its total depth of 2,596-feet. The Contractor will load the hole with a compatible formation fluid in order to condition the wellbore prior to setting any cement plugs. **The Contractor will, upon reaching the total depth, circulate the wellbore with two (2) hole volumes of a compatible formation fluid with the capacity calculated at the total depth or a depth approved by the Division.**
- 7) All cement slurry plugs will be set through a minimum 1.5-inch I.D. work string utilizing a Division approved cement blended with 2% Calcium Chloride and mixed at the API recommended slurry density. The Contractor will verify the correct slurry density by a balance beam mud scale and submit it in writing to the Division. The well must be in a static condition prior to displacement of any cement slurry. **At the discretion of the Division, a minimum of 10 barrels of AquaGel<sup>\*\*</sup>, cement scavenger and / or an equal approved by the Division shall be pumped immediately ahead of any cement plugs for well conditioning purposes. In addition circulation must be established and all free crude oil shall be circulated from the wellbore prior to setting any plug. <sup>\*\*</sup>( a mix ratio of one (1) fifty (50) pound bag of gel per five (5) barrels of the approved fluids).**
- 8) Once total depth has been reached, the Contractor will set a 400-foot cement plug from 2,550-feet to 2,150-feet to isolate the "Clinton sand" and cover the Newburg Dolomite. The Contractor will wait on the cement slurry to set for a minimum of eight (8)-hours. After waiting eight (8)-hours, the Contractor

will run in the hole with their tools to verify proper plug placement. If the plug level has dropped or a competent plug has not been achieved, additional staged plugs may be required, at the discretion of the Division.

- 9) The Contractor will set a 400-foot cement plug from 1,300-feet to 900-feet to isolate the “Big Lime” interval. The Contractor will wait a minimum of eight (8)-hours for the cement slurry to be set. After eight (8)-hours, the Contractor will run in the hole with their tools to verify proper plug placement. If the plug has dropped or a competent plug was not achieved, additional staged plugs may be required, at the discretion of the Division.
- 10) The Contractor will then set a 400-foot cement plug from 800-feet to 400-feet to isolate the “Ohio shale”. The Contractor will wait on the cement slurry to set for a minimum of eight (8)-hours. After waiting eight (8)-hours, the Contractor will run their tools into the wellbore to verify proper plug placement. If the plug level has dropped or a competent plug was not achieved, additional staged plugs may be required, at the discretion of the Division.
- 11) The Contractor will then set a 400-foot cement plug from 400-feet to surface to isolate the “Ohio shale” and cover the seven (7)-inch casing seat. The Contractor will wait on the cement slurry to set for eight (8)-hours and then check the cement level at surface and top off with additional cement, if necessary.
- 12) No sooner than three (3) business days after placing the uppermost plug, the Division will inspect the well at surface to determine if any additional plugging work will be required at that time. If additional work is not needed the Contractor shall cut off the casing to a depth of 48-inches below the surface and the Contractor shall set the plugged well identification as outlined in the General Specifications and Ohio Administrative Code 1501-9-11-10.



**SCOPE OF WORK**  
**LORAIN 11F PROJECT**  
**Weil Lowis #1 Orphan Well Site**  
**Lorain County, Eaton Township**

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**WELL DESCRIPTION**

This Well Description is for:

**The Weil Lowis #1 Orphan well, API # 34-093-2-0753-00-00, Lorain County, Eaton Township**

**Background:** The Weil Lowis #1 orphan well is located approximately 2.7 miles northeast of the City of Grafton. This well is situated approximately 760 feet south of Royalton Road, on a 72.8-acre agricultural parcel (# 1100065000021) owned by Valve Spring Properties LLC. The well's GPS coordinates are 41.312515, -81.038363.

The Division received a complaint from Linda Dodge of 37165 Royalton Road regarding a “gas” odor after being told by Columbia Gas the odor was coming from a neighboring abandoned well and wasn't in their jurisdiction. A Division Inspector was dispatched on 7/7/2008 to investigate the odor. The Inspector found a section of ten (10)-inch casing sticking above grade approximately 18-inches located in an agricultural field. This casing was actively venting natural gas and was measured at a 56 % LEL. The Inspector explained the situation to Mrs. Dodge and contacted the Landowner to have the well vented to better dissipate the gas odor. On 9/27/2008, the Division was notified that the well was fitted with a steel slip on cap and vented through a two (2)-inch riser pipe. The Landowner was supplied the paperwork for the well to be included into the Idle and Orphan Well Program. During a recent UPC investigation on 12/18/2024, the site was excavated down below grade approximately three (3)-feet and found a slip on steel cap over a ten (10)-inch casing section. The cap was removed revealing a ten (10)-inch collar that was full of plugging clay, pieces of wood and water. A minimal amount of gas migration was observed every few seconds through the water. The area approximately 15 feet west of the casing had standing water and there were bubbles were observed percolating through the standing water. There was no tubing or rods observed at the surface in this well. There is no production, transmission or storage equipment associated with this well.”

A search of the historical records and the Division's database found that a well was drilled at this location in 1956. The Weil Lowis #1 well reached its total depth on 7/1/1956, utilizing a Cable Tool drilling rig and was plugged on 1/10/1963. The well was drilled sufficiently deep enough to produce the “Clinton sand”. The total depth of the well was 2,509-feet with a reported initial production of 146 mcfg and 10 barrels of oil after frac. The well construction was typical for a cable tool drilled well, utilizing ten (10)-inch, eight (8)-inch, six (6)-inch and five (5)-inch casings with the bottom 500-feet of the five (5)-inch production casing reportedly was cemented in the wellbore. There wasn't any detail as to the type of stimulation, but the initial production was reported as “after frac”. **The drilling log states that “red rock” was found in this well from 92-feet to 154-feet. Based on this information, any fluids utilized in this wellbore should be designed to encourage wellbore stability.**

Formation	Top (ft.)	Bottom (ft.)	Remarks
Brn clay	0	18	
Gray Berea	18	92	Water @ 24'
Red shale	92	130	
Gray shale	130	144	
Red shale	144	154	
Gray shale	154	157	
Brn shale	157	300	
Gray shale	300	560	
Brn shale	560	940	
Gray shale	940	1,112	
Lime	1,112	2,364	Salt Water @ 1,630' & 2,250'
Little Lime	2,410	2,417	
"Clinton sand"	2,478	2,497	
Total Depth		2,509	

Casing data for the Weil Lewis #1 (API # 34-093-2-0753-00-00) is as follows:

- 10-inch O.D. casing set to 26-feet
- 8-inch O.D. casing set to 157-feet
- 6-inch O.D. casing set to 1,430-feet
- 5-inch O.D. casing set to 2,509-feet, bottom 500-feet reportedly cemented

Plugging records for the Weil Lewis #1 show that well was plugged on 1/10/1963 in the following manner:

- 10-inch O.D. casing set to 26-feet; the plugging record said it was recovered, but inspection on 12/18/2024 indicated it was present.
- 8-inch O.D. casing set to 157-feet; all recovered
- 6-inch O.D. casing set to 1,430-feet; 1,400-feet recovered
- 5-inch O.D. casing set to 2,509-feet; 1,900-feet recovered

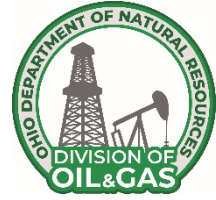
The Weil Lewis #1 was plugged in the following manner: prepared clay from 2,509' to 2,000', a precast cement plug at 1,400' on the six inch casing seat, prepared clay from 1,400' to 1,200', a rock bridge from 900' to 850', prepared clay from 850' to 157', a precast cement plug at 157' on the 8-inch casing seat , prepared clay from 157' to surface.

**For the purposes of this Scope of Work it is assumed that the Weil Lewis #1 orphan well was drilled to a total depth of 2,509-feet sufficiently deep enough to produce from the "Clinton sand", that is was completed cased hole, that it is equipped with 26-feet of ten (10)-inch drive pipe, it was previously plugged with clay, that it has a precast cement plug on the eight (8)-inch casing seat at 157-feet, that it has a rock bridge from 850-feet to 900-feet, that it has a precast cement plug on the six (6)-inch casing seat at 1,400-feet, that there isn't any production equipment or transportation lines, that the well is leaking gas.**

**Scope of Work:** This project includes the mobilization and access to the site, plugging the orphan well, as well as regrading and revegetation of all disturbed areas as described.

**Designated Route:** The Contractor shall utilize Royalton Road to access the site during all stages of the plugging project.

It is the Contractor's responsibility to contact all Township, County, Municipal and State Officials having authority over the roads that are intended to be utilized for this project. The Contractor shall provide written documentation to the Division, of all road use notifications/approvals prior to mobilizing equipment to the site.



**SCOPE OF WORK  
LORAIN 11F PROJECT  
Louis Weil #1 Orphan Well Site  
Lorain County, Eaton Township**

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**PLUGGING PLAN**

This Plugging Plan is for:

**The Louis Weil # 1 Orphan well, API # 34-093-2-0753-00-00, Lorain County, Eaton Township**

For the purposes of this Scope of Work it is assumed that the Louis Weil # 1 orphan well was drilled to a total depth of 2,509-feet, sufficiently deep enough to produce from the “Clinton sand”, That it was completed cased hole, that it is equipped with 26-feet of ten (10)-inch drive pipe, , it was previously plugged with clay, that it has a precast cement plug on the eight (8)-inch casing seat at 157-feet, that it has a rock bridge from 850-feet to 900-feet, that it has a precast cement plug on the six (6)-inch casing seat at 1,400, that there isn’t any production or transportation lines and the well is leaking gas.

The drilling log states that several “red rock” horizons were found from 92-feet to 154-feet. Based on this information, any fluids utilized in this wellbore should be designed to encourage wellbore stability.

A review of the wells drilled to the “Clinton sand” offsetting the Louis Weil # 1 well reported initial formation pressures ranging from 850 psi to 1,100 psi. The lower value may not be indicative of the true formation pressure due to fluid loading in the wellbore. The maximum formation pressure reported was 1,100 psi and this figure was used in the kill fluid density calculations. The Contractor will supply and maintain a dedicated kil fluid consisting of 300 barrels of a weighted brine with a minimum density of 9.5 pounds per gallon (ppg) with the sole purpose of killing the well to regain well control when required. The 9.5 ppg brine should generate a hydrostatic pressure of 1,238 psi at the assumed total depth. A mud pump of sufficient size and capacity will be required to be onsite and connected to the diverter line at all times during the plugging operation as a means to pump the well kill fluid as required.

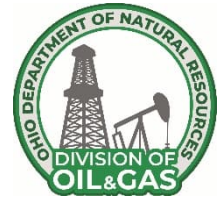
For clean out drill out operation, the Division may require the Contractor to “Mud Up’ at the start of the operation. Mud up operations must be performed under the supervision of a certified Mud Engineer, who shall mix the drilling mud and conduct all required mud and fluid checks-

- 1) The Contractor will give the property owner and local Safety forces a minimum of 24 hours’ notice prior to relieving any pressure on the well. The Contractor will then safely relieve any pressure that may be built up on the well prior to commencing plugging operations.
- 2) The Contractor will install a 13.375-inch outside diameter drive pipe surrounding the original ten (10)-inch drive pipe. This drive pipe shall be driven to refusal of competent bedrock, which is estimated to be at a depth of 35-feet. The top of this drive pipe shall extend to a suitable working height above ground level. The Contractor will then install an appropriately sized wellhead and employ an approved

method of well control on this 13.375-inch drive pipe to ensure complete control and custody of all fluids and gas generated by the well. **The Contractor will maintain a minimum of 300 barrels of an approved well kill fluid with a minimum density of 9.5 ppg with sufficient pumping equipment on location for well control at all times.**

- 3) The Contractor will visually examine the existing ten (10)-inch casing, to evaluate its condition immediately below grade. If the casing is found to be severely degraded, the Contractor will remove the incompetent section of casing and install enough new casing, of similar diameter, to bring the top of the existing casing to a suitable working height.
- 4) The Contractor will then install an appropriately sized and lined temporary cellar around the wellhead to capture any fluids generated during the plugging process. **The design and build requirements can be found in the Detailed Specifications.**
- 5) The Contractor will then clean out / drill out the plugging material in the ten (10)-inch casing with a full bore diameter bit to approximately 170-feet. Milling or fishing equipment, as specified in the **Detailed Specifications**, may be required to attain the desired casing point. The Contractor will then install 160-feet of seven (7)-inch O.D. casing with a guide shoe on the bottom joint. An appropriate number of bow spring centralizers will be utilized to ensure proper standoff distance between the casing and borehole for zonal isolation. Once the wellbore has been conditioned with a ten (10) barrel bentonite spacer and is static, the Contractor will cement the annulus from the casing point to surface with an API recommended cement blended with 2% Calcium Chloride. The slurry will be mixed at the API recommended density, which will be verified by a beam balance mud scale. The Contractor will wait on the cement to set a minimum of eight (8)-hours prior to drilling ahead, then install an appropriate wellhead and utilize an approved method of well control on the seven (7)-inch O.D. casing.
- 6) The Contractor will clean out / drill out and if needed, utilize milling equipment to remove any obstructions in the wellbore, which may be encountered, the hole to its total depth (TD) of 2,554-feet or a depth approved by the Division.
- 7) Once total depth has been reached, the Contractor will load the hole with a formation compatible fluid in order to condition the wellbore prior to setting any cement plugs. **The Contractor will circulate the wellbore with two (2) hole volumes of a compatible formation fluid with the total volume of fluid being calculated at 2,509-feet or a depth approved by the Division for conditioning purposes.**
- 8) All cement plugs will be set through a minimum 1.5-inch I.D. work string utilizing a Division approved cement blended with two (2) % Calcium Chloride and mixed at the API recommended slurry density. The Contractor will verify the correct slurry density by balance beam mud scale and submit it to the Division in writing. **At the discretion of the Division, a minimum of 10 barrels of AquaGel\*\* , cement scavenger and / or an equal approved by the Division shall be pumped immediately ahead of any cement plugs for well conditioning purposes. In addition circulation must be established and all free crude oil shall be circulated from the wellbore prior to setting any plug. \*\* ( a mix ratio of one (1) fifty (50) pound bag of gel per five (5) barrels of the approved fluids).**
- 9) Upon reaching total depth, the Contractor will set a 400-foot cement plug from 2,500-feet to 2,100-feet to cover or isolate the “Clinton sand” and Newburg Dolomite. The Contractor will wait on the cement slurry to set for a minimum of eight (8)-hours. After eight (8)-hours, the Contractor will run in the hole with their tools to verify proper plug placement. If the plug level has dropped or a competent plug has not been achieved, additional staged plugs may be required, at the discretion of the Division.

- 10) The Contractor will set a 400-foot cement plug from 1,300-feet to 900-feet to isolate the “Big lime” interval. The Contractor will wait a minimum of eight (8)-hours for the cement slurry to be set. After eight (8)-hours, the Contractor will run into the wellbore with their tools to verify proper plug placement. If the plug level has dropped or a competent plug was not achieved, additional staged plugs may be required, at the discretion of the Division.
- 11) The Contractor will then set a 400-foot cement plug from 900-feet to 500-feet to isolate the “Ohio shale” interval. The Contractor will wait on the cement slurry to set for a minimum of eight hours. After eight (8)-hours, the Contractor will run in the wellbore with their tools to verify proper plug placement. If the plug level has dropped or it is determined that a competent plug was not achieved, additional staged plugs may be required, at the discretion of the Division.
- 12) The Contractor will set a 400-foot cement plug from 400-feet to surface to isolate the “Ohio shale” interval and cover the seven (7)-inch casing seat. The Contractor will wait on the cement slurry to set a minimum of eight (8)-hours and then check the cement level and top off with additional cement, if necessary.
- 13) No sooner than three (3) business days after the emplacement of the uppermost plug, the Division will inspect the well at surface to determine if any additional plugging work will be required at that time. If additional work is not needed, the Contractor shall cut off the casing to a depth of 48-inches below the surface and the Contractor shall set the plugged well identification as outlined in the General Specifications and Ohio Administrative Code 1501-9-11-10.



## SCOPE OF WORK LORAIN 11F PROJECT

**Wargo J #1 Orphan Well Site  
Lorain County, Eaton Township**

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### WELL DESCRIPTION

This Well Description is for: **the Wargo J #1 orphan well, API # 34-093-2-0032-00-00**

**Background:** The Wargo J #1 orphan well is located approximately 1.2 miles north of the City of Grafton. This well is situated approximately 600-feet east of Durkee Road, on a 22.5-acre parcel (Parcel # 1100078000020) owned by Richard & Jarise Knechtges. The address is 13385 Durkee Road, Grafton, Ohio, 44044.

On 4/14/2010, the Division received a complaint from Richard Knechtges concerning a possible orphan well being located on his property. A Division inspection was conducted on 4/20/2010 with the Landowner. The inspection found the Wargo J #1 well was idle in an agricultural field and visibly equipped with ten (10)-inch drive pipe rising up six (6)-inches above grade. There was fluid in the casing measured at two (2)-feet down from the top of the casing. The composition of the fluid in the casing was not reported. A gas detector measurement indicated 0% LEL. There was no tubing or rods visible at the surface in this well. There wasn't any production, transmission or storage equipment associated with this well.

The Wargo J #1 orphan well was completed on 8/17/1934 by the Wittmer Company. The well was drilled using a cable tool rig and reached a total depth of 2,486-feet, sufficiently deep enough to produce the "Clinton sand". There was a report of a natural show of six (6) barrels of oil and 80 mcf of gas. After being shot the gas flow increased to 248 mcf.

Formation	Top (ft.)	Bottom (ft.)	Remarks
Berea	42	100	
Red rock	100	120	
shale	120	1,114	Water @ 1,326-55, salt 1,590 to 1,685
Little lime	2,395	2,415	gritty
Clinton	2,448	2,473	Oil @ 2,449, gas @ 2,467-68
Total Depth		2,486	

Casing data for the Wargo J #1 is as follows:

- 10-inch O.D. drive pipe set to 42-feet
- 8-inch O.D. casing set to 256-feet
- 6-inch O.D. casing set to 1,415-feet; estimated 1,370-feet recovered
- 5-inch O.D. casing set to 2,370-feet, estimated 2,173-feet recovered

Plugging records for the Wargo J #1 orphan well are not available, but a well of similar vintage (API # 34-093-2-0432-00-00) located approximately 2,800-feet northwest show that well was plugged in 1958 in the following manner:

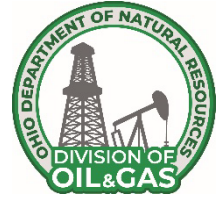
- 10-inch O.D. casing set to 39-feet; left in hole
- 8-inch O.D. casing set to 184-feet; all recovered
- 7-inch O.D. casing set to 1,431-feet; recovered 1,386-feet when drilled
- 5-inch O.D. casing set to 2,340-feet; 2,193-feet recovered
- 3-inch O.D. tubing set to 2,466-feet; all recovered

The well was plugged in the following manner: clay from 2,466' to 1,966', cement plug at 1,966', clay 1,966' to 1,266', rock bridge 520' to 500', wood plug at 500' to 497', clay 497' to 184', cement plug at 184' clay 184'to surface

**For the purposes of this Scope of Work it is assumed that the Wargo J #1 was drilled to a total depth of 2,486-feet in the "Clinton sand", that it was completed open hole, that it is equipped with 42-feet of 10-inch diameter casing, that it was equipped with 256-feet of eight (8)-inch casing, that it was equipped with 1,415-feet of six (6)-inch casing, that it was equipped with 2,370-feet of five (5)-inch casing, that none of the eight, six or five inch casings are reflected at the surface, that it was "shot" with nitroglycerin, that it was previously plugged with clay, cement and wood plugs.**

**Scope of Work:** This project includes the mobilization and access to the site, plugging the orphan well, as well as regrading and revegetation of disturbed areas as described.

**Designated Route:** The Contractor shall utilize Durkee Road to access the site during all stages of the plugging project. It is the Contractor's responsibility to contact all Township, County, Municipal and State officials having authority over the roads that are intended to be utilized for this project. The Contractor shall provide written documentation to the Division, of all road use notifications / approvals prior to mobilizing any equipment to the site.



**SCOPE OF WORK  
LORAIN 11F PROJECT  
J. Wargo #1 Orphan Well Site  
Lorain County, Eaton Township**

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**PLUGGING PLAN**

This Plugging Plan is for:

**The J. Wargo # 1 Orphan well, API #34-093-2-0032-00-00, Lorain County, Eaton Township**

For the purposes of this Scope of Work it is assumed that the J. Wargo # 1 was drilled to a total depth of 2,486-feet in the “Clinton sand”, that it was completed open hole, that it is equipped with 42-feet of ten (10)-inch diameter drive pipe, that it was equipped with 256-feet of eight (8)-inch casing, that it was equipped with 1,415-feet of six (6)-inch casing, that it was equipped with 2,370-feet of five (5)-inch casing, that none of the eight, six or five inch casings are reflected at the surface, that it was “shot” with nitroglycerin, that it was previously plugged with clay, precast cement and wood plugs.

A review of offsetting wells to the J. Wargo # 1 orphan well indicated initial formation pressures from 790 psi to 1,100 psi. The maximum formation pressure reported was 1,100 psi and this pressure was used in the calculation for the weighted brine kill fluid. The Contractor shall supply and maintain a dedicated kill fluid consisting of 350 barrels of a weighted brine with a minimum density of 10.5 pounds per gallon (ppg) with the sole purpose of killing a kick from the well to regain well control when required. The 10.5 ppg brine should generate a bottom hole hydrostatic pressure of 1,356 psi. A mud pump of sufficient size and capacity will be required to be onsite and connected to the diverter lines at all times during the plugging operations as a means to pump the well kill fluid as required.

For clean out drill out operation, the Division may require the Contractor to “Mud Up” at the start of the operation. Mud up operations must be performed under the supervision of a certified Mud Engineer, who shall mix the drilling mud and conduct all required mud and fluid checks-

- 1) The Contractor shall give the Landowner and local Safety authorities a minimum of a twenty-four (24) hour notice prior to blowing down the well or commencing plugging operations. The Contractor shall safely relieve any pressure that may be built up on this well prior to commencing plugging operations.
- 2) The Contractor shall visually examine the existing ten (10)-inch casing, to evaluate its condition immediately below grade. If the casing is found to be severely degraded, the Contractor will remove the incompetent section of casing and install enough new casing, of similar diameter, to bring the top of the existing casing to a suitable working height.
- 3) The Contractor shall then install an appropriately sized and liquid tight temporary cellar around the wellhead to contain any and all fluids generated during the plugging process. The **design and build requirements** for the temporary cellar can be found in the **Detailed Specifications**.
- 4) The Contractor shall then install an appropriate wellhead and an approved method of well control on the ten (10)-inch casing to ensure there is complete control of gas and/or fluids generated from the well.

**The Contractor shall establish and maintain well control throughout the entire plugging process.** The well records for the J. Wargo # 1 indicate a presence of “red rock” zones from 100-feet to 120-feet and the Contractor shall utilize a compatible drilling fluid in order to encourage borehole stability.

- 5) The Contractor shall clean / drill out any plugging material in the ten (10)-inch diameter casing and wellbore to a depth of 150-feet. Additionally, milling and / or fishing equipment , as specified in the **General Specifications**, may also be required to reach the desired depth. The Contractor shall install 140-feet of seven (7)-inch O.D. casing with a float shoe installed on the bottom joint. The Contractor shall install an appropriate number of bow spring centralizers on the casing to ensure proper standoff distance between the casing and borehole. Once the well is static, the Contractor shall cement the annulus from the casing seat to surface with an API recommended cement system blended with 2 percent Calcium Chloride by weight. The cement density shall be verified by a beam balance mud scale. The cement shall be mixed at the recommended API density. Prior to displacing any cement slurry, a ten (10) barrel bentonite spacer shall be pumped ahead to condition the wellbore. The Contractor shall wait on the cement for a minimum of eight (8) hours to attain the required compressive strength (500 psi) prior to drill out.
- 6) The Contractor shall install an appropriate wellhead and utilize an approved method of well control on the seven (7)-inch O.D. casing. The Contractor shall drill out the guide shoe and any residual cement and continue to clean out / drill out the well to its anticipated total depth of 2,486-feet or a depth approved by the Division. Milling, washing over or fishing equipment, as specified in the **General Specifications**, may also be required to reach the required or approved depth.
- 7) All cement plugs shall be set through a working string of 1.5-inch minimum I.D. tubing using an API recommended cement system blended with two (2) percent Calcium Chloride by weight and mixed at the recommended API density. The Contractor shall verify the cement slurry density by a beam balance mud scale and report the slurry densities to the Division in written form. Circulation shall be established and maintained throughout the entire displacement. **At the discretion of the Division, a spacer consisting of a minimum of ten (10) barrels of AquaGel\*\* , a cement scavenger and / or an equal product approved by the Division (complying with API Specifications 13A, Sec.9) shall be displaced immediately ahead of any cement plugs for borehole conditioning. \*\* A mix ratio of one (1) 50 pound bag of gel per five (5) barrels of the approved fluid. Prior to the displacement of the bottom plug, the Contractor shall circulate two (2) hole volumes of a compatible fluid to condition the wellbore. The volumes shall be calculated on the maximum total depth reached.**
- 8) The Contractor shall set a 400-foot bottom plug from 2,486-feet to 2,086-feet to cover or isolate the “Clinton sand” and Newburg Dolomite. The Contractor shall wait on the cement to set for a minimum of eight (8)-hours and then run their tools into the hole to verify proper plug placement. If the plug level has dropped or it is determined that a competent plug was not achieved, additional plugs may be required by the Division.
- 9) The Contractor shall set a 400-foot cement plug from 1,350-feet to 950-feet to cover or isolate the “top of the Big lime” interval. The Contractor shall wait on the cement to set for a minimum of eight (8)-hours. After the wait on cement period has expired the Contractor shall lower their tools into the wellbore to verify proper plug placement. If the plug level has dropped or it is determined that a competent plug was not achieved, additional staged plugs may be required by the Division.
- 10) The Contractor shall set a 400-foot cement plug from 800-feet to 400-feet to isolate various “Ohio shale” horizons. The Contractor shall wait a minimum of eight (8)-hours for the cement to set. After

the wait on cement period has expired, the Contractor shall run in the wellbore with their tools to verify proper plug placement. If the plug has dropped or it is determined that a competent plug was not achieved, additional staged plugs may be required by the Division.

- 11) The Contractor shall set a 400-foot cement plug from 400-feet to within 48-inches of the surface to serve as the surface plug and cover the seven (7)-inch casing seat. The Contractor shall wait on cement to set for a minimum of eight (8)-hours, then check the cement's level and competency then top off, if necessary.
- 12) No sooner than three (3) business days after emplacing the uppermost plug, the Division will inspect the well at surface to determine if any additional plugging work shall be required at that time. If additional work is not required, the Contractor shall cut the casing to a depth of 48-inches below the surface and the Contractor shall attach the plugged well identification to the casing stump as outlined in the General Specifications and Ohio Administrative Code 1501-9-11-10.



**SCOPE OF WORK**  
**LORAIN 11F PROJECT**  
**Carpenter-Yost #1 Orphan Well Site**  
**Lorain County, Eaton Township**

**WELL DESCRIPTION**

This Well Description is for:

**Carpenter-Yost #1, API# 34-093-2-0446-00-00**

**Background:** The Carpenter-Yost #1 is located approximately 840 feet west of Durkee Road and 2,800 feet south of Royalton Road/SR82, on a 73.6-acre agricultural parcel (1100085000065) owned by Springvale Development Company LTD. The property address is Royalton Road, Grafton, 44044. The Carpenter-Yost #1 is situated on the eastern edge of an open farm field, approximately 65 feet west of a tree line. The nearest occupied dwellings are located approximately 700 feet southeast and 720 feet northeast of this well. Access to the well is south directly off Royalton Road onto a gravel access and then 2,100 feet south following a dirt access road and then an additional 1,200 feet south through the farm field. Depending on weather and soil conditions, matting may be needed to access this well and safely conduct plugging activities. There are overhead utilities that may restrict access to the property.

The Carpenter-Yost #1 was brought to the attention of the Division in April of 2023 and subsequent Division inspections found a 10-foot section of 1-inch diameter steel pipe protruding out of the farm field. There was no visible well head or noticeable petroleum vapors, odors or stained soil. In 2024, the area of the riser pipe was excavated to an approximate depth of five (5) feet where the top of an 11-inch diameter steel casing was encountered. There was a square piece of diamond plate welded to the top of this casing and the riser pipe was welded to this plate. The riser pipe was removed, and a weighted line was run into the casing where a solid obstruction was encountered at a depth of 4 feet below the top of casing. Water was encountered in the casing and a petroleum odor was also detected. A temporary vault, consisting of an open top drum, was placed over the well casing, a 10-foot-long steel vent line was attached to the drum and the excavated area was backfilled. There is no production, transmission or storage equipment known to be associated with this well. Eaton Township is not shown to be a Hydrogen Sulfide (H2S) Township as per Division records.

Division records show that the Carpenter-Yost #1 was drilled in 1946 by Ohio Fuel Gas to a depth of 2,582 feet in the Clinton sandstone. These records show the well was deemed dry. The formation information for this well is as follows:

FORMATION	TOP (FT)	BOTTOM (FT)	REMARKS
SOIL	0	11	
SAND	11	55	WATER
SHALE	55	1,121	
LIME	1,121	1,550	SALT WATER
SALT	1,550	1,630	
LIME	1,630	2,170	
LIME SAND	2,170	2,250	SALT WATER
LIME	2,250	2,369	

SHALE	2,369	2,384	
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FORMATION	TOP (FT)	BOTTOM (FT)	REMARKS
SHELL	2,384	2,392	
SHALE	2,392	2,413	WATER AT 1,100' AND 2,160'
SHELL	2,413	2,425	
SHALE	2,425	2,468	
SAND	2,468	2,480	NO OIL, GAS, WATER
SHALE	2,480	2,582	
<b>TOTAL DEPTH</b>		2,582	

Division records show the following casing data for the Carpenter-Yost #1:

- 8.25-inch diameter casing set to 124 feet (all pulled out),
- 6.63-inch diameter casing set to 1,467 feet (1,420 pulled out),
- 5.19-inch diameter tubing set to 2,396 feet (all pulled out).

Although there is no 11-inch diameter casing listed in the casing record for the Carpenter-Yost #1, research shows that large diameter drive pipe was used in other similar era wells in this area and was generally set to a depth of approximately 25 feet.

There are no plugging records for the Carpenter-Yost #1 in the Division database.

The nearest similar era Clinton well with plugging records is API# 34-093-2-0387-00-00 which is located approximately 2,265 feet to the south of the Carpenter-Yost #1. These records show that it was drilled in 1945 by Ohio Fuel Gas to a total depth of 2,461 feet, in the Clinton sandstone. Division records show this well was equipped with the following casing:

- 8.25-inch diameter casing set to 150 feet (left in),
- 6.63-inch diameter casing set to 1,469 feet (1,429 feet pulled out when drilled),
- 5.19-inch diameter tubing set to 2,383 feet (all pulled out when plugged),
- 3.5-inch diameter tubing set to 2,461 (2,370 feet out when plugged).

Plugging records show that this well was plugged in 1966 by Ohio Fuel Gas in the following manner:

- Filled with clay from 2,461 feet to 1,961 feet,
- Cement plug at 1,429 feet,
- Clay from 1,429 feet to 1,329 feet,
- set a stone bridge from 525 feet to 500 feet,
- clay from 500 feet to 150 feet,
- cement plug at 150 feet,
- clay from 150 feet to surface.

Division records show that the Berea Sandstone is the deepest underground source of drinking water (USDW) in this area and therefore precautions must be in place to protect this zone from contamination during both cleanout and plugging activities. According to the well records, the Berea in the Carpenter-Yost #1 was encountered from a depth of 11 feet to 55 feet. **The cleanout/drillout activities down to and through the Berea should be conducted using a freshwater system and a surface casing should be set and cemented to surface to isolate this zone, as specified in the Detailed Specifications.** There should be minimal penetration of the shale below the Berea.

Drilling records for the Carpenter-Yost #1 show that it was drilled in the mid-1900's, presumably using a cable tool rig. These records show the Ohio shale was encountered immediately below the Berea Sandstone, at a depth of 55 feet. Casing records for the Carpenter-Yost #1 show that the 8-inch diameter surface casing was set through the Berea **and** approximately 70 feet into the upper and generally soft portion of this shale interval when it was originally drilled. However, the surface casing was pulled when the Carpenter-Yost #1 was plugged. Some of the offset well records indicate that other sections of soft shale were encountered throughout the Ohio Shale interval, down to the top of the Big Lime which, in the C Mills #1, was encountered at a depth of depth of 1,121 feet. **Due to the reactive nature of these shales to freshwater, a salt-based system should be used during clean out/drill out after the surface casing has been set, as specified in the Detailed Specifications.**

**For the purposes of this Scope of Work it is assumed that the Carpenter-Yost #1 was drilled to an approximate depth of 2,582 feet in the Clinton sandstone, that it is equipped with approximately 25 feet of 11-inch diameter drive pipe and that there is a hard obstruction at a depth of 4 feet. It is also assumed that the Carpenter-Yost #1 was previously plugged, that all of the surface casing, the majority of the intermediate casing and all the production casing were removed from the well prior to plugging, that a 500 foot thick clay plug was set over the Clinton interval, that a cement plug was set on the intermediate casing rip point at 1,420 feet and topped with clay, that a 25 foot thick stone bridge was set at approximately 525 feet and topped with clay, that a cement plug was set on the surface casing seat at 124 feet and topped with clay to surface.**

**Scope of Work:** This project includes the mobilization and access to the site, plugging the orphan well, temporary storage, removal and disposal of all fluid and materials generated from the plugging process, regrading and revegetating all areas disturbed by the plugging process, and the installation of a vault and vent system.

**Designated Route:** The Contractor shall utilize Royalton Road/SR 82 and other authorized routes to access the site during all stages of the plugging project.

It is the Contractor's responsibility to contact all County, Township, State and Municipal Officials having jurisdiction over the roads that are intended to be utilized for this project. The Contractor shall provide written documentation to the Division, of all road use notifications/approvals prior to mobilizing equipment to the site.



**SCOPE OF WORK  
LORAIN 11F PROJECT  
Carpenter-Yost #1 Orphan Well Site  
Lorain County, Eaton Township**

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**PLUGGING PLAN**

This Plugging Plan is for:

**Carpenter-Yost #1, API# 34-093-2-0446-00-00**

For the purposes of this Scope of Work it is assumed that the Carpenter-Yost #1 was drilled to an approximate depth of 2,582 feet in the Clinton sandstone, that it is equipped with approximately 25 feet of 11-inch diameter drive pipe, that there is a hard obstruction at a depth of 4 feet, that any surface casing that may have been installed was removed, that the intermediate casing was severed at a depth of 1,420 feet, leaving 47 feet in the well, that all the production casing was removed from the well prior to it being originally plugged and that wood, cement, prepared clay and/or stone bridge plugs may have been utilized to plug this well to surface. Well data and pictures can be found in the Appendix.

Well records for a well just south of the Carpenter-Yost #1 show that natural gas was encountered in the Ohio shale at a depth of 470 feet. The Contractor should exercise caution during the cleanout and plugging of this well.

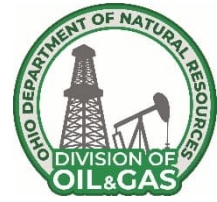
The Contractor will supply and maintain a dedicated kill fluid consisting of 300 barrels of 9.5 pounds per gallon (ppg) weighted brine with the sole purpose of killing the well to regain well control when required.

For any clean out or drill out operation, the Division may require the Contractor to “Mud-Up” at the start of the operation. Mud-Up operations must be performed under the supervision of a certified Mud Engineer, who shall properly mix the drilling mud and conduct all required mud and fluid checks/adjustments.

- 1) The Contractor will remove the temporary vault and vent system and excavate around the well to expose and visually examine the existing 11-inch diameter casing to evaluate its condition immediately below grade. The Contractor will remove the welded diamond plate cover and any visibly damaged casing and install enough new casing, of similar diameter, to bring the top to a suitable working height.
- 2) The Contractor will install an appropriately sized, lined, and liquid tight cellar around the well to capture all fluids generated during the plugging process.
- 3) The Contractor will install an appropriate wellhead and utilize an approved method of well control on the most appropriately sized casing to ensure there is complete custody of gas and/or fluids generated from the well. **The Contractor shall establish and maintain well control throughout the entire plugging process.**

- 4) The Contractor will clean out the plugging material and debris in the 11-inch diameter casing and wellbore to a depth of 130 feet. Drilling, milling and/or fishing equipment, as outlined in the **General Specifications**, may also be required to reach the required depth. **A freshwater system should be used during the cleanout through the setting of surface casing.**
- 5) The Contractor will install 120 feet of 7-inch diameter casing with a float shoe installed on the bottom joint. The Contractor shall cement the casing's annulus to surface using an approved cement, mixed at 15.6 pounds per gallon. The Contractor shall verify cement slurry weight by a beam balance mud scale. The Contractor will wait on cement a minimum of eight (8) hours; after which the Contractor will run their tools into the annulus to verify the depth to the top of the cement.
- 6) **Due to the reactive nature of the Ohio shale to freshwater, a saltwater system should be used during cleanout/drillout after the surface casing has been set. The Contractor shall supply and maintain a minimum of 300 barrels of saltwater on location for use as circulation fluid.**
- 7) The Contractor will drill out the float shoe and any residual cement and continue to clean out the well to its anticipated total depth of 2,582 feet or a depth approved by the Division. Drilling, milling and/or fishing equipment, as outlined in the **General Specifications**, may also be required to clear the obstruction at 1,340 feet and to reach the approved total depth.
- 8) Once the approved total depth is reached and the well is static, the Contractor will load the hole and run a logging suite consisting of Gamma Ray/CCL/Bond/Caliper logs to verify the well's total depth, the bond quality behind the 7-inch diameter casing, lithology, and hole diameter for cementing purposes. The log data will be utilized for cementing calculations.
- 9) All staged cement plugs will be set through a working string of a minimum 1.5-inch inside diameter tubing utilizing a Division approved API cement blended with 2% Calcium Chloride, mixed at 15.6 pounds per gallon. The well shall be in a static condition prior to beginning any cementing activities. **At the discretion of the Division, ten (10) barrels of a cement scavenger such as AQUAGEL, or an equivalent product approved by the Division, shall be pumped immediately ahead of any cement plugs for well conditioning purposes at a mix ratio of fifty (50) pounds of gel per five (5) barrels of approved fluid.** Circulation must be established and all free crude oil shall be circulated from the wellbore prior to setting any cement plug.
- 10) The Contractor will set a 450-foot bottom plug from 2,550 feet to 2,100 feet, as determined by log data, to cover/isolate the Clinton sandstone, wait on cement a minimum of eight (8) hours for it to obtain the required compressive strength and then run their tools into the hole to verify the depth to the top of the plug. If the plug level has dropped or it is determined that a competent plug has not been achieved, additional plugs may be required, at the discretion of the Division.
- 11) The Contractor will set a 500-foot plug from 1,400 feet to 900 feet to cover/isolate the top of the Big Lime section, wait on cement a minimum of eight (8) hours for it to obtain the required compressive strength and then run their tools into the hole to verify the top the plug. If the plug level has dropped or an incompetent plug was achieved, additional plugs may be required by the Division.
- 12) The Contractor will set a 450-foot plug from 900 feet to 450 feet to cover/isolate the Ohio shale section, wait on cement a minimum of eight (8) hours for it to obtain the required compressive strength and then run their tools into the hole to verify the top the plug. If the plug level has dropped or an incompetent plug was achieved, additional plugs may be required by the Division.
- 13) The Contractor will set a cement plug from 450 feet to within forty-eight (48) inches of surface, wait on cement a minimum of eight (8) hours for it to obtain the required compressive strength and then check the cement level and top off with additional cement, if necessary.

- 14) No sooner than three (3) business days after placing the uppermost plug, the Division will inspect the well at the surface to determine if any remedial plugging work will be required at that time. If additional work is not required, the Contractor will cut off the casing a minimum of forty-eight (48) inches below ground level and set the plugged well identification as outlined by the General Specifications and the Ohio Administrative Code 1501-9-11-10.



**SCOPE OF WORK**  
**LORAIN 11F PROJECT**  
**Carpenter Art #1 Orphan Well Site**  
**Lorain County, Eaton Township**

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**WELL DESCRIPTION**

This Well Description is for: **Carpenter Art #1 orphan well API # 34-093-2-0018-00-00.**

**Background:** The Carpenter Art #1 (API 34-093-2-0018-00-00) is located approximately 2.2 miles north of the City of Grafton. This well is situated 1,200-feet south of Royalton Road, on a 73.6-acre agricultural parcel (1100085000065) owned by Springvale Development Company LTD. The street address is 37701 Royalton, Grafton, Ohio 44044. The nearest occupied dwellings are approximately 1,000-feet away to the north and to the east. The well is accessed from Royalton Road on a dirt farm lane.

Division inspections of the Carpenter Art #1 found it idle in an active agricultural field and visibly equipped with a section of 10-inch outside diameter casing extending approximately two (2)-feet above ground level with a 10-inch by 3.5-inch swage welded to the top of the casing. This wellhead configuration was further reduced down to to an one (1)-inch valve and piping which was buried in the ground with its terminus unknown. The one (1)-inch pipe was rusted off and separated from the top of the 3.5-inch swage. This one (1)-inch piping is consistent with a domestic gas supply connection. There was an additional one (1)-inch valve welded to the side of the swage in the closed position. This valve was plugged. The well was reportedly actively leaking natural gas. There were no tubing or rods visible at the surface in this well. There wasn't any production, transmission (other than the previously mentioned one-inch line) or storage equipment associated with this well. An additional inspection was conducted on 10/28/24 with various assessments conducted. A weighted line was lowered into the one (1)-inch line and indicated a fluid level of approximately 30-feet with an obstruction in the well at 375-feet. The weighted line indicated crude oil on the line upon retrieval. A borescope camera was lowered to 15-feet to locate any near surface tubulars of which none were indicated.

The Carpenter Art #1 well is documented in the Division's and other historical databases. The Carpenter Art #1 well was drilled in 1934 by Ohio Fuel Gas Company. The well reached a total depth of 2,554-feet in the Queenston Shale formation. There is no documentation of the well being "shot". The Ohio Fuel Gas maps indicate a "Dry Hole" located approximately at the current location of the Carpenter Art #1 location. The Division's database includes a well card for the Carpenter Art #1 well and it also confirms a "dry hole" at that location upon reaching the total depth of the well. The only mention of a gas show in this wellbore was in the "grit", aka Berea Sandstone per the wellcard. Most likely this reported gas show was actually from the "Ohio shale" section. Due to the wellhead configuration it is assumed that the Operator plugged back the well to the "Ohio shale" and turned the well over to the Landowner for a domestic gas supply.

Formation	Top (ft.)	Bottom (ft.)	Remarks
grit	35	95	Show gas
shale	95	1,090	Red rock 95 - 150
N. Lime	1,090	2,354	Salt 1,595 – 1,650
Clinton	2,460	2,480	
Red rock	2,480	2,554	
T.D.		2,554	

Reported casing data for the Carpenter Art #1 (API # 34-093-2-0018-00-00) is as follows:

- 10-inch O.D. casing set to 34-feet, all in
- 8-inch O.D. casing set to 246-feet, amount of recovery was not given, but borescope investigation did not reveal any casing down to 15-feet
- 6-inch O.D. casing set to 1,423-feet; recovered 1,378-feet

The nearest similar vintage “Clinton” well with plugging records is the Weil Lewis #2 (API # 34-093-2-0754-00-00) show that well was plugged on 6-30-56 in the following manner:

- 10-inch O.D. casing set to 30-feet; left in hole
- 8-inch O.D. casing set to 167-feet; all recovered
- 6-inch O.D. casing set to 1,438-feet; 1,408-feet recovered

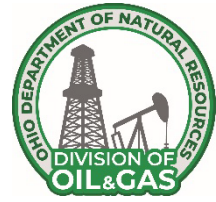
This well was reportedly plugged with rock sediment as follows: filled with rock sediment from 2,517-foot to 1,408-feet. A precast cement plug was set at 1,408-feet, rock sediment from 1,408-feet to 167-feet, precast cement plug at 167-feet, rock sediment to surface.

**For the purposes of this Scope of Work it is assumed that the Carpenter Art #1 was drilled to a total depth of 2,554-feet in the Queenston Shale Formation, that it was deemed a dry hole upon reaching total depth, that it is equipped with 34-feet of 10-inch drive pipe, was equipped with eight (8)-inch casing was set to 246-feet which has been removed, has the six (6)-inch casing rip at 1,378-feet, has a precast cement plug at 1,378-feet, had a show of gas in the “Ohio shale” section, was plugged back to approximately 800-feet and converted to a domestic gas supply well and is actively venting natural gas.**

**Scope of Work:** This project includes mobilization and access to the site, plugging the orphan well, temporary storage, removal, disposal of all fluids from the plugging process as well as regrading and revegetation of disturbed areas as described.

**Designated Route:** The Contractor shall utilize Royalton Road to access the site during all stages of the plugging project.

It is the Contractor’s responsibility to contact all Township, County, Municipal and State Officials having authority over the roads that are intended to be utilized for this project. The Contractor shall provide written documentation to the Division, of all road use notifications / approvals prior to mobilizing equipment to the site.



**SCOPE OF WORK**  
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**PLUGGING PLAN**

This Plugging Plan is for: the Art Carpenter #1 Orphan well, API # 34-093-2-0018-00-00

For the purposes of this Scope of Work it is assumed that the Art Carpenter #1 was drilled to a total depth of 2,554-feet into the Queenston Shale Formation, that it was deemed a dry hole upon reaching total depth, that it is equipped with 34-feet of ten (10)-inch drive pipe, that eight (8)-inch casing was set to 246-feet and had reportedly been removed, that the six (6)-inch casing was “ripped” at 1,378-feet and has a precast cement plug at that depth, had a show of gas in the “Ohio shale” section, and was possibly plugged to approximately 800-feet and converted to a domestic supply well and is currently actively venting natural gas through a broken one (1)-inch pipe.

A review of the wells drilled to the “Clinton sand” which offset the Art Carpenter #1 orphan well reportedly had initial “rock pressures” ranging from 1,110 psi to 630 psi. The lower value may not be indicative of the true initial “rock pressures” due to fluid loading. The average initial “rock pressure” of all offsetting wells evaluated is 953 psi. The Contractor will supply and maintain a dedicated kill fluid consisting of 300 barrels of brine with a minimum density of 9.5 pounds per gallon (ppg) with the sole purpose of killing the to regain well control when required. The 9.5 ppg brine should generate a bottom hole hydrostatic pressure of approximately 1,236 psi. A mud pump of sufficient size and capacity will be required to be onsite and connected to both the kill fluid supply and the diverter lines at all times during the plugging operations as a means to pump the kill fluid as required.

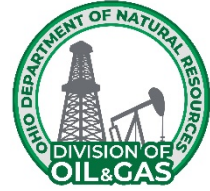
For clean out drill out operation, the Division may require the Contractor to “Mud Up” at the start of the operation. Mud up operations must be performed under the supervision of a certified Mud Engineer, who shall mix the drilling mud and conduct all required mud and fluid checks-

- 1) The Contractor shall give the Landowner and local Safety forces a minimum of a twenty-four-hour notice prior to relieving any pressure on the well. The Contractor will safely relieve any pressure that may be built up on the well. This well has corroded and broken connections and is currently venting natural gas to the atmosphere.
- 2) The Contractor shall visually examine the existing ten (10)-inch casing, to evaluate its condition immediately below grade. If the casing is found to be severely degraded, the Contractor will remove the incompetent section of casing and install enough new casing, of similar diameter, to bring the top of the existing casing to a suitable working height.

- 3) The Contractor shall then install an appropriately sized and lined temporary cellar around the wellhead to capture any fluids generated during the plugging process. The cellar's **Design and Build** requirements can be found in the **Detailed Specifications**.
- 4) The Contractor shall install an appropriate wellhead and utilize an approved method of well control on the ten (10)-inch casing to ensure there is control and custody of gas and/or fluids generated from the well. **The Contractor shall establish and maintain well control throughout the entire plugging process** and maintain a dedicated supply of 300 barrels of 9.5 ppg brine on location for well control. **The drilling log reports that "red rock" was found in this well from 95-feet to 150-feet. Based on this information the Contractor shall utilize a compatible drilling fluid that will encourage wellbore stability. The Contractor shall provide up to 400 barrels of fresh water on location for use as a circulation fluid.**
- 5) The Contractor shall clean out / drill out any plugging material encountered in the ten (10)-inch casing with a full borehole bit to approximately 170-feet. Milling and / or fishing equipment, as defined in the **General Specifications**, may be required to reach the required casing point. The Contractor shall install 160-feet of seven (7)-inch casing equipped with a float shoe on the bottom joint. An appropriate number of bow spring centralizers will be utilized to ensure the proper standoff distance between the casing and the borehole to allow for zonal isolation. Once the borehole is conditioned with a ten (10) barrel bentonite spacer and is static, the Contractor shall cement the annulus from approximately 160-feet to surface with an API approved cement system blended with 2% Calcium Chloride. The slurry shall be mixed at the recommended API density and verified with a beam balance mud scale. The Contractor shall wait on the cement to set for a minimum of eight (8)-hours prior to commencing drill out.
- 6) The Contractor shall install an appropriate wellhead and utilize a Division approved method of well control on the seven (7)-inch casing to ensure there is complete control and custody of all gases and / or fluids generated from the well. The Contractor shall drill out the float shoe and residual cement and continue to drill out / clean out the well to its anticipated total depth of 2,554-feet or a depth approved by the Division. Milling and / or fishing operations, as defined in the **General Specifications**, may be required to reach the required total depth. Once the total depth or a depth approved by the Division is reached, the **Contractor shall circulate the wellbore with a compatible formation fluid in the amount of two hole volumes of an approved fluid.** All cement plugs will be set through a "working string" of tubing with a minimum I.D. of 1.5-inches. The Contractor will set the plugs using a Division approved cement system blended with 2% Calcium Chloride and mixed to the API recommended density. **At the discretion of the Division, a minimum of 10 barrels of AquaGel\*\* , cement scavenger and / or an equal approved by the Division shall be pumped immediately ahead of any cement plugs for well conditioning purposes. In addition circulation must be established and all free crude oil shall be circulated from the wellbore prior to setting any plug. \*\* ( a mix ratio of one (1) fifty (50) pound bag of gel per five (5) barrels of the approved fluids).** The Contractor shall verify the correct cement density with a balance beam mud scale.
- 7) The Contractor shall set a 400-foot continuous cement plug from 2,480-feet to 2,080-feet to isolate and cover the "Clinton sand" and Newberg Dolomite. The Contractor shall wait on the cement to set for a minimum of eight (8) hours and then run their tools into the wellbore to verify proper plug placement. If the plug level of the plug has dropped or a competent plug wasn't achieved, additional staged plugs may be required at the discretion of the Division.
- 8) The Contractor shall set a 400-foot continuous cement plug from 1,200-feet to 800-feet to isolate the top of the "Big Lime" section. The Contractor shall wait a minimum of eight (8) hours and then run their tools into the wellbore to verify proper plug placement. If the plug has fallen or it is determined

that a competent plug wasn't achieved, additional staged plugs may be required, at the discretion of the Division.

- 9) The Contractor shall set a continuous cement plug from 800-feet to 400-feet to isolate the "Ohio shale" section and wait on the cement to set for a minimum of eight (8) hours. After the wait on cement period has expired, the Contractor shall run their tools into the wellbore to verify proper plug placement. If the plug has dropped or a competent plug wasn't achieved, additional staged plugs may be required at the discretion of the Division.
- 10) The Contractor shall set a 400-foot continuous cement plug from 400-feet to within 40-inches of the surface to cover the seven (7)-inch casing seat and isolate the "Ohio shale". The Contractor shall wait on the cement to set for eight (8) hours. After the wait on cement period has expired, the Contractor shall check the cement and top off, if necessary.
- 11) No sooner than three (3) business days after placing the uppermost plug, the Division shall inspect the well at surface to determine if any additional plugging work will be required at that time. If additional work is not needed the Contractor shall cut the casing to a depth of 48-inches below the surface and the Contractor shall set the plugged well identification as outlined in the General Specifications and Ohio Administrative Code 1501-9-11-10.



**SCOPE OF WORK  
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**DETAILED SPECIFICATIONS**

The Contractor is reminded to review the Scope of Work documents carefully. Coordination, permission, or direction of the Division may be required for use of individual Detailed Specification line items. The Division shall only pay for quantities of items that are correctly installed and completed in accordance with the Detailed Specifications and Drawing Plan Set. The Division shall not guarantee payment of any work completed without or prior to following the conditions described herein of each line item.

**MOBILIZATION**

- A. Description: This work shall consist of the development of access and the mobilization of the Contractor's forces and equipment necessary for performing the required work under the Scope of Work for the well site.

This item shall include the transportation of personnel, equipment, and supplies to and from each site as well as the maintenance of all onsite access roads.

As part of this line item, the Contractor shall also include any maintenance of traffic required within the road right-of-way per Part 7 of the General Specifications.

Also, the Contractor shall be responsible for cleaning mud and dirt associated with construction from all roadway surfaces (public and private) as per Part 7.1 of the General Specification for the duration of the Project and as directed by the Division.

- B. Execution: No additional compensation shall be made to the Contractor for remobilization after his equipment has been removed from the site. If applicable, this shall include remobilization of equipment if removed due to winterization of the project.

Any damage to the road, drives, and/or culverts caused by the mobilization shall be repaired by the Contractor at the Contractor's expense. All repairs shall be done equal to or better to that which existed prior to construction activities.

Crop/Vegetation removal shall be considered incidental to "**Mobilization**".

- C. Measurement: Measurement for payment will be considered and measured as a unit satisfactorily completed and accepted by the Division. **Mobilization of equipment between wells shall be considered incidental to this line item for wells using a common entrance.**

**If any portion of the item is non-performed to the satisfaction of the Division (i.e., the mud and dirt are not cleaned from the roadway, the proper signage is not used as detailed) this is**

**considered unsatisfactory and shall be cause for the rejection of payment of this item.**

- D. Payment: The cost of this work shall be included in the lump sum price for "**Mobilization.**"

## **CLEARING & GRUBBING**

- A. Description: This item covers the removal of the vegetation within the limits shown on the Drawing Plan Set to provide adequate space to maneuver equipment to complete the proposed work at each well.
- B. Execution: The Contractor shall only clear enough of the site within the limits shown on the Drawing Plan Set to provide adequate space to maneuver equipment to complete the proposed work. The Division shall exercise control over clearing and shall designate all trees, plants, shrubs, abandoned material, trash, etc., to be removed or to remain. This work shall also include the preservation from injury or defacement of all trees designated to remain.

If the Contractor clears and/or grubs beyond the construction work limits, whether knowingly or accidentally, the Contractor shall replant and/or otherwise restore all areas outside of the limits to a condition equal to or better than what existed prior to beginning work. This shall be no at no additional expense to the Division.

**All tree disturbance (trimming and/or removal) activities shall be coordinated with the Division** as these trees may provide suitable roosting, foraging, or traveling habitat for Threatened & Endangered species. To prevent adverse impacts to Threatened & Endangered species, clearing of trees with a DBH (Diameter at Breast Height) greater than 3inches, **shall not take place between April 1<sup>st</sup> and September 30<sup>th</sup>.**

All marketable trees over ten (10) inches in diameter at 4.5 feet off the ground shall **be cut into firewood logs of twenty (20) inch lengths** and stacked for the landowner at a location on the project site as directed by the Division. The Contractor shall be responsible for the repair/reconstruction of the log piles, at the discretion of the Division, up to the final acceptance of the project.

**All suitable debris cleared shall be chipped by mechanical methods and the mulch shall be stockpiled/spread onsite in the locations designated by the Division's Representative.**

All stumps shall be grubbed, and holes graded out for positive drainage. Approved resoil shall be used if the area can't be properly graded.

All logs and stumps not suitable for chipping shall be hauled off site. Proper disposal is the Contractor's responsibility. If necessary, logs/vegetation shall be hauled to an authorized OEPA landfill.

Burning of debris materials shall not be permitted on-site.

- C. Measurement: Measurement for payment will be considered and measured as a unit satisfactorily completed and accepted by the Division. This measurement shall be for the entire project as one unit.
- D. Payment: Payment shall be made at the contract lump sum price per "**Clearing & Grubbing.**"

## SITE SAFETY

- A. Description: The work will include the installation and implementation of safety procedures for the plugging of the orphan well as described herein.
- B. Definitions & Installation: It is the Contractor's responsibility to properly maintain all of the latter mentioned throughout the duration of the project. Any damages shall be repaired or replaced at no additional cost to the Division. Site safety measures shall be removed prior to the demobilization of the Contractor's workforces.

**Any release of materials into or onto the ground or surface waters outside of the primary and/or secondary containment shall follow the Ohio One-Call System as described in Appendix I, "One Call". The Ohio One-Call System shall be contacted at 1-844-OHCALL1 within 30-minutes of becoming aware of the occurrence.**

1. Notification: Due to the close proximity of the wells to residences, buildings and the potential safety issues involved with the plugging procedure, the contractor or contractor's representative will contact the residents two weeks prior to the commencement of plugging activities to notify them of the potential safety issues.
2. Hydrogen Sulfide (H<sub>2</sub>S): The Contractor must provide the appropriate equipment, on-site, to properly detect and abate any H<sub>2</sub>S emitted from the well. All personnel on location must have and wear H<sub>2</sub>S monitor and/or 4-gas monitor. **Per 29 CFR 1910.1000, Air Contaminants, Table Z-2 the permissible exposure limits (PEL) ceiling standard for H<sub>2</sub>S is 20 ppm.** The contractor shall be required to have the H<sub>2</sub>S safety team on site the first day the well is opened. They may be dismissed once the site is cleared by the safety team, but if permissible exposure limits (PEL) are exceeded, the Contractor will be required to recall the H<sub>2</sub>S safety team on site until the geological zone of interest is covered with cement and no further H<sub>2</sub>S issues are at surface. The H<sub>2</sub>S safety team may be released at this point, but personal monitors and the rig monitor are still required. The H<sub>2</sub>S safety team will be paid for on a per date rate per item **H<sub>2</sub>S Safety Team**. The H<sub>2</sub>S safety team shall be qualified employees of the Contractor or subcontractors.

Once detection of permissible exposure limits (PEL) are exceeded, the Contractor will not continue plugging operations until the safety team has developed and implemented a plan that is compliant with Occupational Safety and Health Administration (OSHA) regulations. The plan shall be approved by the Division prior to implementation.

A H<sub>2</sub>S release of 20 ppm for 10 minutes or more in working areas OR a release resulting in injury or death of a person is a REPORTABLE INCIDENT. Call 1-844-OHCALL1 (1-844-642-2551) within 30 minutes after becoming aware of the occurrence.

3. Temporary Construction Fence & Posts: The temporary construction fencing shall be composite, orange mesh with a minimum overall height of four (4) feet. Fence posts are to be steel five (5) feet t-posts. Fence materials shall meet the ODOT Construction and Materials Specifications (CMS) Item 710.11.

The posts shall be driven or set in holes to a minimum depth of one (1) foot and at intervals not to exceed ten (10) feet. The fence shall be stretched and securely fastened to each post using metal or plastic ties.

Fencing shall be placed around the entire work area. The Contractor shall work in conjunction with the Division for placement of the temporary fence. All fence shall be removed at the completion of the project.

4. Identifications, Markings & Plugs: All conduits capable of allowing methane migration (i.e. ventilation pipes, storm/water drains) into the lower level of an inhabited dwelling shall be identified and capped by the Contractor.

Any potential ignition sources within a fifty (50) foot radius shall be identified and marked by the Contractor.

All identifications, marking and plugs shall be inspected and approved by the Division prior to commencing with any well plugging activities.

5. Storm Inlet Protection: The Contractor shall protect the storm inlet indicated on the Drawing Plan Set. The Contractor shall notify the local municipality a minimum of 7 calendar days prior beginning work on the storm inlet. The contractor shall **use a liner with a minimum 20-mil thickness** to cover the inlet weighted down along each edge to keep a good seal on the great. An Absorbent Boom shall be place around the covered inlet. Anytime work is being done on the well the cover shall be in place. During rain events and/or non-working hours the covers shall be removed. **Upon completion of the Project, the materials shall be removed from the site and properly disposed of by the contractor.**
6. Air Movers (Industrial Fans): Air Movers (Industrial Fans): The Contractor will also be required to have onsite industrial fans or air movers **at all times** in the event natural gas is detected and found to be settling at ground level and not properly dissipating from the site (unless otherwise approved in writing from the Division).
7. Air Monitoring: The Contractor will set up a wireless monitoring system (up to 4 channels) to monitor for Methane (CH<sub>4</sub>), Lower Explosive Limit (LEL), Oxygen Saturation (O<sub>2</sub>%), Carbon Monoxide (CO), and Hydrogen Sulfide (H<sub>2</sub>S) around the plugging operation and the interior of the building nearest the well. The Contractor will be required to provide **two (2)** wireless monitor systems. The first monitor shall be placed within five (5) feet from the well outside of the building and the second monitor shall be placed in a location designated by the Division. The Contractor shall work with the Division to ensure the proper placement of these monitors. During plugging operation, the Contractor will provide these monitors on a 24-hour basis to ensure building occupant, onsite workers, and over all public safety. Air monitoring will be conducted in this manner on a daily basis until the plugs have been set and it is determined that there is no further gas migration/release detected.
8. Temporary Shut-In: The Contractor will shut-in the well each night after the plugging operations have ceased, unless otherwise instructed by the Division. The Contractor will continue this process until the plugging operations are complete and there are no further signs of a gas release.
9. Power/Utility Lines Safety: Utility lines cross over the access route which will require warning signs to insure awareness.
10. Emergency Response Plan: The Contractor will assemble an Emergency Response Plan (ERP) with all contact information, emergency preventative measures, and **contingency plans for Hydrogen Sulfide (H<sub>2</sub>S) release** and for any well-related issues that may occur. ERPs shall be submitted to the Division via email to [DOGRM.EMNOTIFY@dnr.ohio.gov](mailto:DOGRM.EMNOTIFY@dnr.ohio.gov) for approval prior

to beginning work.

The Contractor will be responsible for maintaining this ERP on site during the plugging operations. A copy of the ERP along with the SDS sheets will be stored at the project entrance in a container labeled “ERP/SDS”. Ingress/Egress for evacuation and/or public safety will be discussed in the safety meeting to be held on location by the Contractor with local responders and Division personnel. These routes will be listed in the ERP. The Division will review with the Contractor prior to the start of plugging operations.

Well Name	Safety Measures Required
<b>Mate Mary #1, Columbia Mutual Life Insurance #1, Weil Lewis #1, Wargo J #1, Carpenter Yost #1, Carpenter Art #1</b>	Temporary Construction Fence & Posts; Identifications, Markings & Plugs; Air Movers; Air Monitoring; Overhead Utilities; Temporary Shut-In; Emergency Response Plan
<b>Mate Mary #1, Wargo J #1</b>	Notification
<b>Columbia Mutual Life Insurance #1</b>	Hydrogen Sulfide (H <sub>2</sub> S)
<b>Mate Mary #1</b>	Storm Inlet Protection

- C. Measurement: Measurement for payment will be considered and measured as a unit satisfactorily completed and accepted by the Division.
- D. Payment: Payment for this work, including labor, installation, materials and removal shall be made at the lump sum price for "Site Safety."

**ROAD MATS**

- A. Description: This item shall consist of the transportation, delivery, installation, and removal of road mats as described. The placement of road mats within the limits of construction shall be at the discretion of the Division. This item shall be utilized to protect the existing utilities, driveways, roadway, curbs, sidewalks and lawn space that will be traversed within the construction work limits. This item shall also include all work required to move between wells included in this contract, that require road mats as shown on the Drawing Plan Set.
- B. Material: Road matting shall be non-permeable, composite mats. Non-permeable, composite mats shall be a minimum of four (4) inches thick with a minimum surface dimension of seven (7) feet wide and thirteen (13) feet long. Non-permeable, composite mats and associated components (i.e. ramps, berms, and fittings) shall be installed per the manufacturer’s recommendations.

**All materials delivered to the site must be in a shape to be able to cover the area properly and still have the strength and integrity to complete the required work. The Division may reject any mats determined to be damaged beyond useful life or remove square footage as measured from each individual mat.**

- C. Execution: Mats shall be kept clean throughout the project. If it is determined by the Division, the mats do not meet this requirement the Contractor shall have any sediment or mud removed immediately.
- D. Measurement: Measurement for payment for the road mats shall be made by actual field

measurements of quantities satisfactorily installed at the site. Each road mat shall be measured for a square foot installed.

Road mats shall be utilized for the duration required to plug the well at each site. Only one measurement and payment shall be made for "Road Mats" upon completion of the well site.

**For circumstances in which the Division extends the projected completion date (i.e. well obstructions, required milling operations, etc.), the contractor shall also provide a cost for "Road Mats" as a dollar amount per mat per day under "Contingency Specifications" within the original Offer. Additional payment will be evaluated and determined by the Division.**

- E. Payment: The cost of this work shall be included in the unit price per square foot for "Road Mats."

### **TIMBER MATS**

- A. Description: This item shall consist of the transportation, delivery, installation, and removal of road mats as described. The placement of road mats within the limits of construction shall be at the discretion of the Division and/or as shown on the Drawing Plan Set in order to enhance the subgrade conditions and/or for overtop utility crossings.
- B. Material: Timber matting shall be composed of dense hardwood, shall be a minimum of six (6) inches thick, four (4) feet wide, and sixteen (16) feet long, and shall have a minimum of 1-1/4-inch diameter lift bolts installed at each end and through the width of the mat. The size required will vary depending on the use, see details on the drawing plan sets for variations on these sizes.

**All materials delivered to the site must be in a shape to be able to cover the area properly and still have the strength and integrity to complete the required work. The Division may reject any mats determined to be damaged beyond useful life. The following grade descriptions for used mats shall be used by the Division to determine if the materials are acceptable.**

1. **GRADE A** - Visually, Grade A mats look like new mats. The timbers are still square and in excellent condition and all the mat bolts are in place and fully intact. Mats must have all bolts and timbers fully intact. Mats are less than 9 months old. Very minimal wear, no chunks out of timbers missing.
2. **GRADE B** - Essentially, Grade B mats are less pretty versions of Grade A mats. They have no structural faults; they just look a bit worn. Edges of timbers are still square, and timbers are also sound and free of rot. If one or two of the bolts are bent, they qualify as Grade B mats. These mats might also be stained, but the discoloration is not enough to affect the durability of the mat. Typically, 10-18 months of age/usage makes the mat fall into a B grade. **(All mats used to bridge over anything shall be Grade B or better.)**
3. **GRADE C** - Grade C mats are not quite up to the challenges that Grade A and B mats can handle, but they still have life left in them. Grade C Mats can have a missing or pulled rod on one end of the mat. The mat still has structural integrity inside 2' from each end though. Timbers may be broken within 2' of either end but no timbers are broken inside of the 2' of each end. No hanging timbers allowed in C grade mats. As you can imagine, these are not going to be the picture-perfect image of timber mats. They might be missing numerous bolts, incurred excessive repairs, or be slightly varied in shape. Grade C mats are less expensive, but they also have a shorter life expectancy. **Any mat meeting the Grade C rating shall be**

**measured for square footage of acceptable usable area.**

- C. Measurement: Measurement for payment for the road mats shall be made by actual field measurements of quantities satisfactorily installed at the site. Each road mat shall be measured for a square foot installed.
- D. Payment: The cost of this work shall be included in the unit price per square foot for "**Timber Mats.**"

## **SECONDARY CONTAINMENT**

- A. Description: This item shall include all labor and materials required for the installation, maintenance, and deconstruction of the secondary containment. Onsite materials and equipment required to be stored within the secondary containment shall be as follows: containers that store liquid brine, oilfield waste, and/or fuels as well as any required pumps. In determining the method, design, and capacity for secondary containment, the Contractor shall address the typical failure mode, and the most likely quantity of brine or other oil field waste substance that would be discharged.
- B. Materials: The Contractor shall supply catchment basins or diversion structures to intercept and contain discharges of brine or other oilfield waste substances during the project. Materials shall consist of impermeable containers or liners made of a material that is compatible with the waste stored or used within the containment. Containment materials shall be impervious and have supporting documentation of the permeability, chemical compatibility, and other applicable QA/QC standards, is acceptable. **Use of a liner shall at a minimum be a 20-mil thickness.**

Materials shall be durable enough to support the weight of heavy equipment used for the plugging operations. Materials shall have sufficient strength and thickness to maintain the integrity of the container or liner. The container or liner shall be designed, constructed, and maintained so that the physical and chemical characteristics of the container or liner are not adversely affected by the waste and the container or liner is resistant to physical, chemical and other failure during transportation, handling, installation and use.

Liner walls shall consist of metal, wood, concrete, plastic, or approved equal. Wall materials shall be designed, constructed, and maintained to withstand the overtopping and sliding forces of secondary containment filled to capacity.

The Division shall determine the merit of the proposed materials compatibility, impermeability, integrity, and durability in determining if the material is sufficient for the project.

- C. Installation: Secondary containment shall be installed prior to any drilling or liquid storage at the project site. **Secondary containment shall extend at least one foot horizontally beyond the primary containment and provide at least one foot in depth capacity or provide a minimum volume equal to 25% of the primary storage capacity.**

Upon request of the Division, the Contractor shall provide calculations in tabular format of the containment providing both the secondary containment capacity and the on-site material storage. The Division can require that sections of a secondary containment be removed for inspection and sampling if a spill occurs during the project.

Installation of the containers or liners, including seams and pipe penetrations, shall be in accordance

with the manufacturer's recommendations. All seams and non-seam area of the container or liner shall be inspected by the Division for defects, holes, and blisters.

Care shall be taken when operating equipment on or near the container or liner to prevent any damage to the secondary containment. If damage occurs, it shall be repaired by the Contractor at his/her expense prior to continuing the project.

The Contractor shall retain all ownership and responsibility for the secondary containment. All secondary containment shall be removed from the site and retained by the Contractor at the conclusion of the project.

- D. Measurement: Secondary containment, which includes all materials, labor, and equipment necessary to provide the required secondary containment, will be considered and measured as a unit satisfactorily completed and accepted by the Division. Secondary containment shall not be considered complete until all secondary containment has been removed from the site at the completion of the project.
- E. Payment: Payment for this work shall include all material, labor, and equipment necessary to complete the work and be made at the lump sum price for "**Secondary Containment.**"

## **SILT FENCE**

- A. General: This item covers construction of the silt fences and/or straw bale dikes. The Division shall designate utilization of silt fence, straw bale dikes or a combination of both at locations selected for placement.

The placement of silt fence and straw bale dikes within the limits of construction shall be at the discretion of the Division.

During the life of the project, the Contractor shall maintain these silt and erosion-control structures. Accumulated silt shall be removed when it, in the Division's opinion, may damage or reduce the effectiveness of the structure.

- B. Straw Bale Dikes

- 1. Materials: Straw bale dikes shall be constructed with twine-bound square straw or hay bales, staked to remain in place.
- 2. Installation and Execution: The location of the dikes shall be as directed by the Division, at the time of construction. When the usefulness of the dikes has ended, they shall be removed and disposed. Dikes may remain in place upon completion of the project only when permitted by the Division.

- C. Silt Fence

- 1. Materials

- a. The silt fence fabric shall conform to the ODOT Item 712.09, Type C. The silt fence shall be installed in accordance with all manufacturers' instructions.

The fabric shall be free of any treatment that might significantly alter its physical

properties. During shipment and storage, the fabric shall be wrapped in a heavy-duty protective covering to protect it from direct sunlight, dirt, and other debris.

The manufacturer shall submit certified test data to cover each shipment of material.

- b. The silt fence used shall be a prefabricated silt fence with fabric already attached to posts or shall be assembled in the field according to the following installation guidelines.

The fabric shall be a pervious sheet composed of a strong, rot-proof polymeric yard or fiber oriented into a stable network, which retains its relative structure during handling, placement, and long-term service. It shall have excellent resistance to deterioration from ambient temperatures, acid, and alkaline conditions, and shall be indestructible to microorganisms and insects. The material shall be resistant to deterioration by ultraviolet light and protected until placement as recommended by the manufacturer such that no deterioration occurs. During shipment and storage, the rolls of fabric shall be protected against deterioration from the sun, mud, dirt, dust, and other harmful conditions at all times until their use.

2. Installation Guidelines for Silt Fence: Silt fence shall be installed in the following manner.

- a. First, a small toe-in trench shall be dug along the line where the silt fence is to be placed. The trench shall be a minimum of 6-inch deep and 6-inch wide. The excavated material shall be placed on the front or uphill side of the trench to facilitate backfilling later.
- b. Next, fence posts shall be driven into the back or downstream side of the trench. The posts shall be driven so that at least one-third (1/3) of the height of the post is in the ground. When installing a prefabricated silt fence with fabric attached to the posts, the posts shall be driven so that at least 6-inch of fabric shall be buried in the ground. Most prefabricated silt fences have posts spaced approximately 6 feet – 8 feet apart, which is usually adequate. If there is a low spot where most sediment tends to collect, the prefabricated silt fences can be backed up with bale backup. Posts shall be hardwood with sufficient strength to support a full load of deposited sediment.
- c. Finally, the trench shall be backfilled with the excavated material and tamped so that at least 6-inch of the fabric is securely toed into the ground to prevent under-mining.
- d. The silt fences shall be maintained throughout construction. The Contractor shall conduct regular inspections and after all heavy rains. Damaged fences must be repaired immediately.
- e. At the completion of construction and upon establishment of suitable vegetation as determined by the Division, all silt fence structures shall be removed. Areas disturbed by the removal operation including temporary access roads shall be revegetated. In general, this operation shall consist of regrading, re-fertilizing, reseeding, and mulching.

D. Measurement: Measurement for payment for the above-described work shall be made by actual field measurements of quantities satisfactorily installed and completed. When using silt fence with bale backup the measurement shall be the length of the silt fence installed, plus the length of the straw bale dike installed.

E. Payment for Silt Fence and Straw Bale Dikes: Payment for this item shall be made at the unit price per linear foot of "**Silt Fence**." The Division shall only pay for quantities of items that are completed.

## No. 57 STONE

- A. Description: This work covers the quality, material placement and requirements as a top course stone for the access drives as shown in the Drawing Plan Set. This material shall be placed within the current limits of the landowner's drive.
- B. Materials: The materials shall consist of sound and durable rock, gravel or stone of the proper gradation meeting ODOT specifications. The material shall be free from cracks, seams, and other defects, which tend to increase deterioration from natural causes. It shall be highly resistant to weathering and disintegration under freezing and thawing and wetting and drying as evidenced by laboratory tests and/or service records. The Division at any time during the project may reject any materials, at the source or job site, not meeting the requirements of these specifications.

Acceptability of material will be determined by laboratory tests, visual inspection and/or service records as required by the Division. Service records will include documentation to show the material has performed satisfactory on similar structures.

- C. Installation: Upon delivery of the material to the site the Contractor shall install the material in place as shown on the Drawing Plan Set.
- D. Measurement: The material shall be measured for payment by the ton (2,000 pounds) for material acceptably placed in the work as determined by certified scale weight tickets.

All material wasted or used by the Contractor for other purposes and any material not placed in the work in accordance with the requirements of the work order and these specifications and drawings shall be measured and not included for payment by weight. A conversion factor of 1.5 ton per cubic yard of No. 57 Stone shall be used if necessary.

- E. Payment: Payment for this work as specified above shall be made based on the unit price per ton for "**No. 57 Stone.**"

## TREE AND SHRUB REPLACEMENT

- A. Description: This work shall cover all operations incidental to the replacement of trees and shrubs within the (project) areas. The work shall include all equipment, labor, and materials to replace the tree/shrub material required to be removed to complete the project. This work shall be completed within **fourteen (14) days** of the completion of the construction activities. The Contractor may request in writing to the Division an extension for site restoration. Requests shall only be granted based on season or weather conditions.
- B. Materials: The materials to be used for tree and shrub replacement shall conform to the applicable requirements of these specifications. For each tree and shrub cut down or damaged due to unavoidable work near the tree that tree and shrub shall be replaced at the direction of the Division. The Division at any time during the project may reject any materials, at the source or job site, not meeting the requirements of these specifications.
1. Planting Soil: Backfill all tree pits with approved planting soil in accordance with ODOT CMS 661.09 and details. Place twelve (12) inches of approved planting soil in accordance with ODOT CMS 661.09 and details in all shrub planting beds.

Planting soil shall be included in this line item.

2. Landscape Species:

ACER macrophyllum (Silver Maple) 2" caliper Balled and Burlapped (B&B)  
Or similar readily available species.

All plants shall be healthy, of normal growth, well rooted, free from disease and insects. Quality and size of plant material shall conform to ANSI Z60.1: "American Standards for Nursery Stock", current edition. Plants shall be in a healthy and vigorous condition, free of dead or broken branches, scars that are not completely healed, frost cracks, disfiguring knots, broken or abraded bark, redundant leaders or branches, or aberrations of any kind. Plants shall not have multiple leaders unless otherwise noted.

Balled and Burlapped, (B&B), plants shall be dug with a firm root ball of natural earth, of a size proportion to the plant's size, as measured by caliper, height or spread. B&B plants shall be handled only by the rootball, not by the trunk or branches. Container plants shall have been established for a minimum of one full growing season in their containers before installation. Container plants shall be handled only by the container. Any plants damaged after delivery by improper handling or care will be rejected and must be removed offsite and replaced.

Plants shall be protected from drying out during shipping with tarpaulins or other coverings. Plants shall be protected from drying out after delivery by planting immediately. If this is not possible, plants shall be stored in a location protected from sun and wind and the rootballs shall be covered with mulch or earth and watered frequently to keep moist until planting.

Anti-desiccant/anti-transpirant shall be in liquid form and comply with ASTM specification E-96, (such as "Wilt-Proof" or other approved equal). Wood dressing shall be Cabot tree paint or approved equivalent.

3. Mulching Material: Mulch shall be double shredded mulch at all planting beds. Mulch color shall be natural and not dyed. Contractor shall submit mulch samples to the Division for approval prior to installation.
4. Fertilizer: Commercial fertilizer shall be a complete, slow-release fertilizer meeting applicable state laws and shall analyze 5-10-5 or 10-20-10. Analysis of fertilizer shall be as follows, 5-10-5 for example; 5 percent total nitrogen, 10 percent available phosphoric acid, and 5 percent total potash.
5. Tree Bracing: Tree bracing shall be flexible, biodegradable ties. All tree stakes shall be 2"x2"x30" hardwood.

C. Installation:

1. Start of Work. Tree and shrub replacement shall begin as soon as possible after the completion of construction. The Contractor may request in writing to the Division an extension for site restoration. Requests shall only be granted based on **season or weather conditions**.

The contractor shall maintain and preserve all trees and shrubs not being removed. This shall include protection of the root zone from compaction or disturbance.

The general contractor shall submit a planting schedule with projected dates for preparation of plant beds, installation and seeding. The general and landscape contractor shall coordinate their work to allow sufficient time for the landscape contractor to perform their work during the optimal seasonal conditions. In the event that the project is delayed or significant areas are not ready to allow plantings to be installed during correct weather or soil moisture conditions or with sufficient time to allow the plants to become established before fall and winter, the Division reserves the right to delay planting until the following season.

2. Area Preparation of Soil. The planting soil shall be used as backfill for tree and shrub planting. This soil shall also be placed in the bottom of the root pit and tamped firmly to avoid settlement. Fill soil around the ball of the plant and water thoroughly. Prepare a raised earth basin as wide as the planting pit around each plant. Water again immediately after planting by filling the basin around each plant with water, taking care not to disturb the backfill. Water to the extent necessary to ensure that there are no air pockets around the rootball and that the rootball and backfill are thoroughly saturated. Normal planting times are as follows:

Deciduous trees and shrubs -	October 15 to December 1 March 1 to May 15
Evergreen trees and shrubs -	September 1 to November 10 March 1 to May 15

Deciduous trees and shrubs can be planted later than December 1 providing that the ground is not frozen and with approval of the Division.

3. Mulching. Provide a minimum of three (3) foot diameter, two (2) inch thick of mulch bed around each individual tree.
4. Fertilizer. Fertilizer to be added at the following rates.  
Trees: – ½ lb. of actual nitrogen per 500 S.F tree pit area  
Shrubs: - ½ lb. of actual nitrogen per 100 S.F. of bed area  
Groundcovers/Perennials: - ¼ lb. of actual nitrogen per 100 S.F. of bed area

5. Tree Preparation/Bracing. Install loose fittings ties that will not girdle the trunk. Ensure that the tie will allow trunk movement and growth.

Apply a pre-emergent herbicide, pendimethalin or approved similar to tree, shrub, and groundcover areas in accordance with manufacturer's written recommendations. **DO NOT APPLY TO SEEDED OR WETLAND AREAS.**

Remove all sales tags, strings, straps, wire, rope, or other materials that may inhibit plant growth both above and below the surface of the soil.

Remove any broken, suckering, diseased, crisscrossed branches back to live leader or side lateral with a flush cut.

All trees shall be braced and mulched as per details and these specifications at the time of installation.

The contractor shall be responsible to properly water all plant material immediately upon planting.

6. Maintenance and Repairs. The Contractor shall, during construction and prior to acceptance,

properly care for all plantings.

- D. Maintenance Period. The permanent planting of trees and shrubs shall be deemed to be acceptable if the species that were planted in accordance with the approved plans are established and maintained for one (1) "growing season" as defined below and meet the following standards:
1. Growing Season: All landscaping shall be guaranteed for a period of one (1) summer growing season after planting. Planting material installed in the Fall shall be in full count and thrifty condition on the next succeeding September 15 at which time replacement shall be determined and scheduled for installation during the planting period of October 15 - December 1 of that same season. Planting material install in the Spring shall be in full count and thrifty condition on the next succeeding May 15 at which time replacements shall be determined and scheduled for installation prior to June 1 of the same season. All plants installed in the summer shall be guaranteed for one (1) full summer and shall be in full count and thrifty condition the next succeeding September 15.
  2. Severe Decline of a Tree or Shrub: shall be defined as the death of a major leader or 50 percent of the crown of a tree or shrub or dieback of a plant to the ground, even if that plant is still alive.
- E. Measurement: Measurement for payment of site restoration, which includes all plant material, digging, installation costs including topsoil, mulch, bracing, fertilization, including removal of all staking at the end of the warranty period shall be incidental to this line item.
- F. Payment: Payment for this work, which includes all plant material, digging, installation costs including topsoil, mulch, bracing, fertilization, including removal of all staking at the end of the warranty period shall be made at the unit price per each for "**Tree and Shrub Replacement.**"

## H<sub>2</sub>S SAFETY TEAM

- A. Description: The work will include the installation and implementation of safety procedures for the plugging of the orphan well as described herein that is known to have, is emitting H<sub>2</sub>S gas in excess of permissible exposure limits (PEL), or is in a H<sub>2</sub>S township **Per 29 CFR 1910.1000, Air Contaminants, Table Z-2 the permissible exposure limits (PEL) ceiling standard for H<sub>2</sub>S is 20 ppm.** This shall also include any labor, equipment, materials, and time needed to implement these safety procedures. The H<sub>2</sub>S safety team shall be qualified employees of the Contractor or subcontractors including no less than two employees available for 24/7 coverage of the monitoring equipment. The personnel shall be available for no more than 12-hour shifts (Shifts include active and on call service) and shall be on site while work is being completed.
- B. Execution: The Contractor must provide the appropriate equipment, on-site, to properly detect and abate any H<sub>2</sub>S emitted from the well. All personnel on location must have and wear H<sub>2</sub>S monitor and/or 4-gas monitor. If permissible exposure limits (PEL) are exceeded, the Contractor will be required to have an H<sub>2</sub>S safety team on site until the geological zone of interest is covered with cement and no further H<sub>2</sub>S issues are at the surface while the well is vented for a minimum of 8 hours. The H<sub>2</sub>S safety team may be released at this point, but personal monitors and the rig monitor are still required. The safety team shall be called back as needed.

Once the contractor is on site and well is ready to be opened or detection of permissible exposure limits (PEL) are exceeded, the Contractor will not continue plugging operations until the safety team has developed and implemented a H<sub>2</sub>S safety plan that is compliant with Occupational Safety

and Health Administration (OSHA) and The National Institute for Occupational Safety and Health (NIOSH) regulations. The plan shall be approved by the Division.

Along with any other measures required to be compliant with regulations and to implement the approved H<sub>2</sub>S safety plan, the Safety Team at minimum shall supply, train, and utilize the following:

1. Supply & use exhaust and ventilation systems,
2. Train and educate workers about hazards and controls,
3. Test (monitor) the air 24/7 with the ability to receive real-time notifications of site conditions through email, website, and phone/text alerts to receive real-time alerting of events and alarms,
4. Establish, train, and use proper rescue and first aid procedures,
5. Supply, train, and use respiratory and other personal protective equipment, &
6. Establish, train, and implement an H<sub>2</sub>S Emergency Response Plan for the site including Emergency Medical Technicians (EMTs) ready to respond to the 24/7 monitoring unless otherwise contacted by the Safety Team.

For days that the site is idle for weekends, holidays, or any other day that the Division agrees work cannot take place, the H<sub>2</sub>S Safety Team shall be on standby and the cost associated with those days shall be paid at the unit price per day for "**H<sub>2</sub>S Safety Team Standby**". Any days that work could have been completed and was not due to the Contractor shall be at the Contractor's expense.

- C. Measurement: Measurement for payment will be considered and measured as a unit satisfactorily completed and accepted by the Division.
- D. Payment: Payment for this work, including labor, equipment, materials, and time shall be made at the unit price per day for "**H<sub>2</sub>S Safety Team**" or "**H<sub>2</sub>S Safety Team Standby**".

### **CONDUCTOR CASING (13.375")**

- A. Description: This item covers all labor, equipment, and material required to set the conductor in order to begin the plugging procedure.
- B. Materials: The conductor shall be a 13.375-inch diameter casing conforming to a 61 pound per foot minimum STC (Short Thread and Coupling) or an approved equal material specifications. The contractor shall supply the proper ranges and pup joints to complete the lengths required during installation.
- Pipe shall be new pipe or used pipe that has been tested and drifted. The contractor shall supply documentation for pipe that has been tested and drifted. The Division shall approve used pipe based on documentation and inspection of the pipe. The bottom joint shall be equipped with a drive shoe.
- C. Installation and Execution: The conductor shall set to a depth as detailed in the **Plugging Plan** and **Quantity Sheet**. This quantity is for estimating purposes only. All conductors shall be driven in place.
- D. Measurement: Measurement for payment for the conductor work shall be made by actual field measurements of quantities satisfactorily installed and completed per linear foot of conductor set.
- E. Payment: Payment for this item shall be made at the unit price per linear foot of "**Conductor Casing (13.375")**".

## **SURFACE CASING (7.00")**

- A. Description: This item covers all labor, equipment, and material required to set the surface casing for the plugging of the orphan well.
- B. Materials: The surface casing shall be a 7.00-inch diameter casing conforming to a 23 pound per foot STC (Short Thread and Coupling) or an approved equal material specifications. The contractor shall supply the proper ranges and pup joints to complete the lengths required during installation.

Pipe shall be new pipe or used pipe that has been tested and drifted. The contractor shall supply documentation for pipe that has been tested and drifted. The Division shall approve used pipe based on documentation and inspection of the pipe.

A 10-foot-long joint of casing, equipped with a guide shoe on the bottom and a float collar on the top, will be placed on the bottom of the casing string. This shall be incidental to this line item.

- C. Installation and Execution: The surface casing shall set to a depth as detailed in the **Plugging Plan and Quantity Sheet**. This quantity is for estimating purposes only. Drilling shall be completed with an appropriately sized drilling bit. All surface casing shall be drilled with freshwater and set in place. The Division shall not be responsible for additional materials if an alternative method or drill bit is proposed for use.

Centralizers shall be used when setting surface casing. At minimum, both the bottom and top joint of the surface casing shall be equipped with centralizers. The Division reserves the right to adjust centralizer locations and quantities as needed.

- D. Measurement: Measurement for payment for the surface casing work shall be made by actual field measurements of quantities satisfactorily installed and completed per linear foot of surface casing set.
- E. Payment: Payment for this item shall be made at the unit price per linear foot of "**Surface Casing (7.00")**".

## **WELL HEAD CONTROL**

- A. Description: This work consists of all labor, equipment, and material necessary to excavate and evaluate existing casing(s) and establish control of the well. This item shall include the installation of a wellhead control device/flow diverter on the most appropriate well casing as described in the plugging plans.
- B. Execution: The Contractor is responsible for installing, according to best management practices, a wellhead control device/flow diverter on the well casing. Excavation of the existing casing(s) shall be the responsibility of the Contractor. A four (4) foot minimum excavation/evaluation of the existing casing(s) shall be completed. Casing(s) requiring excavation depths exceeding four (4) feet shall be discussed with the Division prior to starting work. All excavations shall be in accordance with OSHA Construction Standards for excavation and trenching under 29CFR 1926 Subpart P.

The casing shall be free from any damages or defects. If required, the casing shall be cut and cleaned of any dirt, oils, and debris prior to welding extensions and/or installation of the diverter.

**The Contractor shall supply a cellar with a cement base around the wellhead.** This cellar shall be set around the well and extended up to working elevation, as the depressed area around the well head will be modified to establish workable base. This cellar shall be made of steel, concrete, or polyethylene pipe. **The cellar shall be a minimum of 48 inches in diameter. This work shall include a six (6) inch minimum of Approved Cement as specified or Portland Cement in the cellar base with a three (3) inch minimum port near the well. The port shall extend up to within three (3) inches of the well at working height and be used to monitor and contain any gas/oil escaping around the back side of the casing.**

Once a well head control device is installed, all fluids, gases and solids generated by the plugging process shall be diverted into a tank. This tank shall be set a minimum of twenty (20) feet from the well. The Contractor shall also maintain an adequate supply of well kill fluid at the well for possible well control emergencies, which shall be paid under the line item **"Well Kill Fluid."** The injection point for the kill line will be a minimum of twenty (20) feet from the well.

For the duration of this project the following wellhead control will be utilized. The wellhead control device/flow diverter assembly will have two 4.5-inch diameter discharge ports. The diverter lines running from both 4.5-inch diameter discharge ports on the wellhead assembly to the above ground steel tank will consist of two (2) – 4.5-inch diameter steel lines. Both diverter lines will have two inline valves (rated minimum 1,000 psi) for control of flow. Lines will discharge into the tank at a downward angle or at an angle that will reduce fluids from splashing or spraying out of the tank if a sustained blow is encountered while drilling out the plugged wells. These lines will be a fixed connection (i.e. hammer union, flanges) to the steel pit with equipment that is capable of withstanding the possible pressures encountered. One of the 4.5-inch diverter lines will be equipped with a 2-inch diameter port and valve that will serve as the kill line access. This port and valve will be installed between the wellhead and the 4.5-inch inline valve.

No well operations shall begin until a satisfactory inspection of the prepared well has been completed by the Division.

- C. Measurement: Measurement for payment shall be made by field inspection of units satisfactorily completed and accepted by the Division.
- D. Payment: Payment for the above-described work, which includes all labor, materials, equipment necessary for the well head control shall be made at the cost proposal lump sum price for **"Well Head Control."**

### **WELL HEAD CONTROL (Columbia Mutual Life Insurance #1)**

- A. Description: This work consists of all labor, equipment, and material necessary to establish and maintain control of the well. This item shall include the installation of a wellhead control device on the most appropriate well casing.
- B. Materials: Due to the known presence of Hydrogen Sulfide (H<sub>2</sub>S) gas the following well control devices shall be utilized to obtain and maintain well control in a safe manner.

1. **Blowout Preventer (BOP)**: A BOP of adequate size and pressure rating shall be used to maintain well control including H<sub>2</sub>S gas until plugging operation no longer require its use.
  2. **Gas Buster**: A gas buster that will adequately remove free or entrained air from fluids circulated in the well bore shall be applied to the well bore until plugging operations no longer require its use.
  3. **Flare Stack**: A flare stack shall be connected to the gas buster to burn all gases removed. The stack shall be at a minimum 15 feet tall or 5 feet taller than any structure within a relevant area of the well, whichever is higher. The stack shall be placed upright and firmly secured to the ground. The flare stack shall be placed a distance away from any structures, utilities, or wood lines, etc. that would otherwise cause the potential to damage or ignite them.
- C. **Execution**: The Contractor is responsible for installing, according to best management practices, the wellhead control devices on the well casing. The Contractor shall maintain well head control and devices for the duration of the plugging project. The gas buster and flare stack shall be applied as soon as drilling is initiated to include the setting of surface casing. Once the surface casing is set, the BOP shall be added.

**The Contractor shall supply a cellar with a cement base around the wellhead of the Columbia Mutual Life Insurance #1 well.** This cellar shall be set around the well and extended up to working elevation, as the depressed area around the well head will be modified to establish workable base. This cellar shall be made of steel, concrete, or polyethylene pipe. **The cellar shall be a minimum of 48 inches in diameter. This work shall include a six (6) inch minimum of Approved Cement as specified or Portland Cement in the cellar base with a three (3) inch minimum port near the well. The port shall extend up to within three (3) inches of the well at working height and be used to monitor and contain any gas/oil escaping around the back side of the casing.**

If existing casing is discovered, the Division shall make the determination for the overall exposed depth of casing and casing extensions. If utilized, the casing shall be free from any damages or defects. If required, the casing shall be cut and cleaned of any dirt, oils, and debris prior to welding extensions and/or installation of the well control devices. At the discretion of the Division, further investigation of the well may be required in order to determine the adequacy of casing. This shall be paid for under line item "**Logging**".

Once the well head control devices are installed, all gases shall be diverted to the flare stacks and all fluids and solids generated by the plugging process will be diverted into a tank. This tank will be set a minimum of twenty (20) feet from the well. The Contractor shall also maintain an adequate supply of well control fluid and alternative well control fluid at the well for possible well control emergencies, which shall be paid under the line item "**Well Kill Fluid**". The Contractor will install a two (2) inch diameter (minimum) kill line on the well. The injection point for the kill line will be a minimum of twenty (20) feet from the well.

No well operations shall begin until a satisfactory inspection of the prepared well has been completed by the Division.

- D. **Measurement**: Measurement for payment shall be made by field inspection of units satisfactorily completed and accepted by the Division.
- E. **Payment**: Payment for the above-described work, which includes all labor, materials, equipment necessary for the well head control shall be made at the lump sum price for "**Well Head Control**".

(H<sub>2</sub>S)."

### **WELL KILL FLUID**

- A. **Description:** The work covered by this section shall consist of furnishing all labor, equipment, and material necessary to provide and use weighted brine as a "kill" fluid for the drilling and plugging process of the well.
- B. **Requirements:** The Contractor shall provide a weighted brine of sufficient density to kill the well and regain well control in the event of a sustained and/or uncontrolled wellbore kick (a rapid influx of formation fluids and/or gases into the wellbore).

Sufficient density shall be defined as dense enough to exert hydrostatic pressure greater than the anticipated formation pressure but less than the anticipated formation fracture pressure.

**The Division will require the minimum amount of weighted brine kill fluid be maintained at each well site throughout the plugging project for the sole purpose of killing the well to regain well control when required, as listed in the table below.**

Well Name	Fluid Volume (barrels)	Kill Fluid Weight (pounds per gallon)
<b>Mate Mary #1</b>	<b>300</b>	<b>10.5</b>
<b>Columbia Mutual Life Insurance #1</b>	<b>300</b>	<b>9.5</b>
<b>Weil Lewis #1</b>	<b>300</b>	<b>9.5</b>
<b>Wargo J #1</b>	<b>350</b>	<b>10.5</b>
<b>Carpenter Yost #1</b>	<b>300</b>	<b>9.5</b>
<b>Carpenter Art #1</b>	<b>300</b>	<b>9.5</b>

**A mud pump of sufficient size/capacity shall be required to be onsite at all times during plugging operations as means to pump well kill fluid when required.**

- C. **Measurement:** Measurement for payment for the above-described work shall be made by the actual quantity of barrels (bbls) of weighted brine used as a kill fluid for the orphan well as approved by the Division. The Division will at a minimum pay for the quantity required to be maintained on site.
- D. **Payment:** Payment for the above work shall be made at the unit price per barrel (bbls) for "Well Kill Fluid."

### **LOGGING**

- A. **Description:** This work consists of all labor, equipment, and material necessary to determine the total depth of the well and the casing, if a packer is present (along with its depth and thickness), determine bond quality behind the casing and the free point of the casing. The Log should also confirm zones of gas production and formation tops for cementing purposes.
- B. **Execution:** The contractor shall complete the logging of the well bore, casing, tubing, packer,

and/or cement to the depth of the existing well bore, casing, tubing, packer, and/or cement. The methods of logging to be used shall include but not be limited to **gamma ray (GR), casing collar locator (CCL), temperature, bond, and caliper log**. Prior to use, the Contractor shall propose the method of logging and shall be approved by the Division.

**A copy of the completed Log must be submitted to the Division via email at [OrphanWellProgram@dnr.state.oh.us](mailto:OrphanWellProgram@dnr.state.oh.us).**

- C. Measurement: Measurement for payment shall be made by field inspection of units satisfactorily completed and accepted by the Division. **A copy of the log shall be provided with the invoice as backup documentation.**
- D. Payment: Payment for the above-described work, which includes all labor, materials, equipment necessary for the investigation of the well shall be included at the per unit price per each for "Logging."

## **WELL PREPARATION & PLUGGING**

- A. Description: This work consists of all labor, equipment, and material necessary to prepare the well for plugging and complete all required plugs. This shall include cleanout, drillout, and washover of the well bore to the total depth of the well based on the well description(s) and plugging plan(s), circulating the well bore prior to each plug, setting all required plugs, and verification of each plug depth.
- B. Execution: The Contractor shall supply all equipment needed to complete the well preparation in an efficient manner that will be approved by the Division. This shall include but not be limited to the rig, drill pipe, collars, mud pump (See General Specifications, Part 13 for minimum requirements), circulating fluid, cementing equipment, mix water, and associated equipment.

Cable tool/spudding rigs shall not be permitted for use unless otherwise authorized by the Division as described under the General Conditions, Part 13 "Substitution During the Project".

Once well head control has been established, the Contractor will cleanout, drillout and/or washover and then circulate the well bore prior to setting any casing or well plugs. The Contractor shall be responsible for having a minimum of two (2) hole volumes of fluid available for circulation.

The Contractor shall identify the diameter of the well bore below the surface casing and cleanout or drillout with a full-size bit to total depth. **In addition to the full-sized bit, the Contractor shall also supply a bore brush and/or casing scraper at the appropriate size to fully clean out any casing remaining per the plugging plan.** In any case where an obstruction is encountered and total depth cannot be achieved, the Contractor shall immediately notify the Division. The Contractor shall propose a plan to assess the nature of the obstruction that shall be approved by the Division. Additional work associated with removal of the obstruction shall be described and paid for under the Contingency Specifications and as listed on the Quantity Sheet and agreed upon by the Division.

The Contractor shall trip out or up into the nearest competent cased string and secure all tools at the end of each workday or when work shall be paused for an extended time. Any tools left in the hole during such paused work time shall be at the Contractor's own risk. Any tools or tubing that are lost due to the Contractor's failure to complete the task of tripping out during paused work times shall be at their own expense as well as any work required to then prepare the hole to continue the plugging process (this shall include but not be limited to shooting, fishing, over drilling, lost or damaged tools, etc.). The tripping out of the tools during paused work times shall be incidental to this line item.

**Formations within the well bore known to be producing H<sub>2</sub>S gas will not be circulated prior to setting a plug.**

Prior to setting any plugs the Contractor shall remove all free crude oil by **circulating the wellbore two-hole volumes or until the well is static; a minimum of ten (10) barrels of gel is required to be run ahead of each cement plug that may come into contact with open hole formation at the discretion of the Division. A minimum of four (4) sacks of bentonite gel per ten (10) barrels of freshwater shall be required if requested.** This work shall be considered incidental to this line item. No additional payment shall be made for circumstances where the Contractor does not have the appropriate material on location.

Lost Circulation Material (LCM) may be used to aid in obtaining circulation, as approved by the Division. **Lost Circulation Material (LCM) shall NOT be used when tubing smaller than 1.5 inch inside diameter will be utilized. Circulation must be established prior to conducting cementing procedures.** LCM shall be available at the site during the completion of this line item "**Well Preparation & Plugging.**" The Contractor shall provide up to five (5) sacks of LCM per well for use (e.g. cotton seed hulls, bentonite gel/polymer, cellophane flake) incidental to this line item). Additional need for use of LCM shall be per the "Lost Circulation Material" specification included in the Contingency Specification.

**The well shall be in a static condition prior to beginning any cementing activities.**

The Contractor shall set all plugs as described in the **Plugging Plan** to the depths described with the materials described. This shall include setting the bottom plug, intermediate plugs, and the surface plug. All plugs shall be allowed to set for the periods described in the **Plugging Plan**.

The Contractor shall be required to tag all cement tops unless otherwise approved by the Division. Tagging with a sinker bar and depth meter is recommended. Confirmation of cement tops shall be considered incidental to this line item.

**If a plug has dropped or is determined to not be a competent plug, then drill out of the plug or additional staged plugs may be required at the discretion of the Division as a part of this line item. The Division reserves the right to adjust the Plugging Plan during the plugging process based on site conditions.**

- C. Measurement: Measurement for payment shall be made by field inspection of units satisfactorily

completed and accepted by the Division.

- D. Payment: Payment for the above-described work, which includes all labor, materials, equipment necessary for the well preparation and plugging shall be made at the lump sum price for "**Well Preparation & Plugging.**"

## **TUBING**

- A. Description: This item covers all labor, equipment, and material required to supply tubing at the site for the purposes of placement of cement and spacers.
- B. Materials: The Contractor shall supply a 1.5-inch inside diameter (ID) or larger tubing in a condition that will allow for the pumping of cement for the purposes of plugging the well. A mud anchor and/or perforations on the bottom joint of the tubing is recommended. Any issues caused due to running tubing open ended shall be the Contractor's responsibility.

**For this project the Contractor shall supply up to 2,600 feet of 1.5-inch ID or larger tubing to all the project wells.**

- C. Installation: The Contractor will install and remove the tubing as necessary in order to complete the **Plugging Plan**. The Contractor shall maintain ownership at the conclusion of the project of all tubing that was brought to the site for these purposes.
- D. Measurement: Measurement for payment of the above-described work shall be made by actual field measurements per linear foot of tubing delivered to the site.

**Tubing shall be measured as one use for the duration of the project.**

- E. Payment: Payment for this item shall be made at the lump sum price for "**Tubing.**"

## **APPROVED CEMENT**

- A. Description: This item shall cover all labor, materials, and equipment necessary to plug the well as specified in the **Plugging Plan**.
- B. Materials: Cement materials shall be approved prior to placement. The cement must conform to the following options:
- a. API Class "A"
  - b. API Class "L"
  - c. ASTM C150 Type 1
  - d. ASTM C595 Type 1L

(Note: These are the only material options that will be approved, any other materials may be submitted to the Division for review but will **not** be approved for this project)

The cement shall contain 2% Calcium Chloride, properly blended, **only if directed** by the Division in advance of placing the cement. **Coordinate with the Division prior to ordering cement.**

The cement shall not contain bentonite or extenders which delay set time or decrease the overall compressive strength unless otherwise noted.

Additives (e.g. cotton seed hulls, cellophane flake, etc.) used for the purposes of lost circulation zones shall be considered incidental to this line item.

Water used for cementing shall be free of any impurities that will adversely affect set time and compressive strength.

- C. **Installation:** The Contractor shall notify the Division at least 24 hours in advance of placing the cement, including notification of the type of cement being used for approval.

**Additional wait times may be required for the type of cement used. This wait time shall be incidental to this line item. Upon approval of the type of cement the Division shall inform the Contractor of the required wait times for each staged plug.**

Preparation of the well bore, including the running of gel flush ahead, shall be completed per line item **“Well Preparation & Plugging”** prior to placement of the cement.

The cement slurry shall be mixed at the API recommendation, between 15.4 and 15.8 pounds per gallon.

The Cement shall be placed to the depths and intervals described in **Plugging Plan**. **Once a cement plug is set, the Contractor shall be prepared to wait for a minimum of (8) hours for the cement to set.**

It is the Contractor’s responsibility to provide a mud scale for weighing the cement slurry.

When using API Class “L” cement or ASTM C595 Type 1L cement, all the following conditions apply:

- Mill test information must be provided to the applicable Division inspector prior to utilization of API Class L cement or ASTM C595 Type 1L cement. The mill test information must be of a representative sample of the mixture of cement proposed to be used to plug the well. A person is not required to provide the mill test information if the Division already has the mill test information of the mixture of cement for a batch.
- Performance data shall be provided in compliance with Ohio Administrative Code 1501:9-11-07 prior to usage. To determine if Ohio Administrative Code 1501:9-11-07 is met, test results shall include at a minimum slurry density, composition, compressive strength, free fluids, thickening time, curing pressure, and curing temperature. The data also shall include percent limestone and percent pozzolan material.
- For blended cement containing limestone and pozzolanic material, the combination of the materials shall not exceed fifty per cent by volume.
- A sample of at least 20lbs representative of the of cement mixture proposed to be used in a well must be provided to the Division at the request of the Division.
- A person using API Class L cement or ASTM C595 Type 1L cement shall leave the plugged well in a manner that will allow for further inspection past the contract requirement of three days after the completion of the uppermost plug unless the applicable Division inspector determines that the contract requirement of three days is sufficient.

- D. **Setting:** Setting times shall be completed as described in the **Plugging Plan**. For the surface plug

any void space between the top of the cement and the top of the casing shall be filled to achieve a level cement line with the top of the casing. This shall be done at no additional cost to the Division.

The cement must develop a minimum compressive strength of 500 PSI after 24 hours at well bore temperatures. The Division reserves the right to collect test cylinders throughout the duration of the cementing process.

- E. Measurement: Measurement for payment shall be based on the actual quantity of sacks of cement acceptably placed and shall be verified with delivery tickets. A sack shall be considered to be 94 pounds prior to mixing.
- F. Payment: The above-described work shall be paid for at the unit price per sack for "**Approved Cement.**"

### **CEMENT MIXING & PUMPING**

- A. Description: This item shall cover all labor, materials, and equipment necessary to mix and pump cement as specified in the **Plugging Plan**.
- B. Execution: Cementing equipment required on site to mix and pump casing cement and cement plugs shall be provided until each individual casing cementing or plug cementing is completed. This shall include but not be limited to pump truck, mud pump, and associated equipment.
- C. Measurement: Measurement for payment shall be for each trip to the project site in order to complete the plug(s) as described in the **Plugging Plan**. Payment for staged plugs shall be measured as one unit.
- D. Payment: Payment for the above-described work, which includes all labor, materials, equipment necessary for the mixing & pumping of cement into the well shall be made at the unit price per each for "**Cement Mixing & Pumping.**"

### **FLUID DISPOSAL**

- A. Description: This item shall consist of removing and disposing of the fluid generated from the well plugging process. Fluids to be removed shall be at the discretion of the Division and shall be injected at an approved Class II disposal well as provided by the Contractor prior to removal from the site.
- B. Material: Materials will be defined below as described for the purposes of this scope of work.

Contaminated Fluids: Contaminated fluid will be considered as all fluids used in the circulation of the well bore, fluids utilized as a "kill" substance and/or fluids generated from the well. The Division reserves the right to deem a fluid "contaminated" at its discretion.

Contaminated fluids are further defined as water that contains quantifiable concentrations of oil, natural gas(es), condensate, brine, plugging products, or other oil field waste substances.

Freshwaters: Water that has not been classified as a contaminated fluid and has been stored in an uncontaminated container shall be visually inspected for oil sheen, and field tested for pH and chlorides. The chloride concentration shall be less than 250 mg/L and the pH shall be within a range of 6.5-8.5 standard units (SU). If a water is deemed as freshwater based on these inspections and tests, the Contractor may discharge freshwater into or onto the land in an appropriate manner.

Freshwater disposal shall not be paid for under this line item "**Fluid Disposal.**"

- C. Off-Site Disposal: Fluids designated as "contaminated" shall be hauled to an appropriate Class II disposal well. Proof of disposal from the disposal well shall be furnished within three (3) days of acceptance to the Division.

No additional compensation shall be made for onsite fluid storage. If contaminated fluids remain onsite, proper containment shall be established meeting all requirements as described in line item "**Secondary Containment**" at no additional cost to the Division. Onsite storage time shall not exceed 72 hours after plugging activities have been completed.

- D. Measurement: Measurement for payment shall be verified based on documentation proof of a quantity of disposal from the disposal well utilized. Documentation required shall include driver's haul tickets, fluid disposal tickets and a copy of the paid invoice from the Class II disposal well (dollar amounts may be redacted from the invoice copy).
- E. Payment: Payment shall be made at the unit price per barrel for "**Fluid Disposal.**"

## **CONTAMINATED MATERIAL DISPOSAL**

- A. Description: This item shall consist of removing contaminated soils and cuttings from the site for off-site disposal. Soils and cuttings to be removed shall be at the discretion of the Division and shall be disposed of at an approved EPA licensed landfill as provided by the Contractor prior to removal from the site.

- B. Material:

Contaminated Soils/Cuttings: Contaminated soils and cuttings are defined as soils or cuttings in which oil, gas, condensate, brine, plugging products, or oil field waste substances have been released in or on the land.

The Contractor will excavate and properly dispose of all soils from the location that are visibly impacted with oilfield contaminants. The Contractor shall solidify any residual fluid associated with these soils with Portland Cement, prior to removal as a part of this line item. Prior to solidification of contaminated materials, the contractor shall use due diligence to remove fluids from the contaminated materials. Fluids removed from the contaminated materials shall be disposed of per line item "**Fluid Disposal.**"

Soils deemed "contaminated" as a result of Contractor negligence during the plugging process will be removed and disposed of at the Contractor's expense. Disposal procedures will conform to all requirements stated within this line item.

- C. Off-Site Disposal: Soils designated as "contaminated" shall be hauled to an appropriate licensed landfill. Copies of truck weight tickets from the landfills shall be furnished within 3 days of acceptance to the Division.

Contaminated soils shall be loaded and hauled away as they are excavated.

No additional compensation shall be made for onsite contaminated soil storage. If excavated soils remain onsite, proper containment shall be established meeting all requirements as described in line item "**Secondary Containment**" at no additional cost to the Division. Onsite storage time shall

not exceed 72 hours after plugging activities have been completed.

- D. Measurement: Measurement for payment shall be verified based on quantities disposed at the approved EPA licensed landfill. Documentation required shall include driver's haul tickets, certified scale tickets and a copy of the paid invoice from the landfill/waste facility (dollar amounts may be redacted from the invoice copy).
- E. Payment: Payment shall be made at the unit price per ton for "**Contaminated Material Disposal.**"

### **SALVAGE MATERIAL DISPOSAL**

- A. Description: This item shall consist of preparing, removing, and salvaging all materials from the site that have a salvage value as shown on the Drawing Plan Set or as required by the Division. All items to be salvaged shall include all surface equipment, well casing, and production equipment. Salvage items shall also include any hydrocarbon materials (oil, condensate, etc.) that have a marketable value. Salvage items shall be stored onsite within the construction project limits until removed for salvage.
- B. Off-Site Disposal: Prior to removal from the site the Contractor shall supply in writing to the Division an inventory of all materials to be salvaged. On behalf of the Division, the Contractor shall salvage materials inventoried. Once materials have been salvaged the Contractor shall reimburse the Division for the salvage value per line item "**Salvage Material Reimbursement.**"

At the request of the Division, surface equipment deemed as reusable shall be forfeited directly to the Division's onsite representative. This shall include but not be limited to swages, wellheads, fittings, appurtenances, etc. At no time shall salvageable material become property of the Contractor.

Prior to disposal of any salvage materials from the project site, **the Division will complete a radiological assessment** of salvage materials that have been provided on an inventory to the Division.

**The Division shall be given a minimum of two (2) working days notice to complete the assessment.** Salvage materials staged on the project site shall be staged on a pipe rack where determined applicable by the Division. Salvage materials shall be on an impervious liner that will collect any residual fluids or scale.

Any materials which exceed 50 micro- Roentgen per hour ( $\mu\text{R/hr}$ ) or deemed by Division staff to be radioactive shall not be considered for "Salvage Material Disposal"; instead this material shall be considered "Radioactive Material Disposal" and be disposed of per ton at a negotiated change order rate agreed upon by the Division or at a rate originally agreed upon on the Offer Sheet.

Prior to disposal of any salvage materials the Contractor shall prepare, including cleaning, the salvage materials for lawful salvage.

All salvageable material shall be cleaned onsite. The final product shall be non-hazardous and, in a condition, to not cause offsite pollution/contamination during transport and/or

disposal. Any downtime associated with proper decommissioning shall be considered incidental to this line item.

- C. Execution: The Contractor shall include in this line item any expense incurred with the removal and the salvaging.
- D. Measurement: Measurement for payment shall be made by field inspection of units satisfactorily completed and accepted by the Division.
- E. Payment: Payment shall be made at the lump sum price for "**Salvage Material Disposal.**"

### **APPROVED RESOIL**

- A. Description: This work shall consist of furnishing all labor, material, and equipment necessary for the hauling, spreading, and grading of the resoil material for the replacement of the removed contaminated soils. This work shall also include shaping for positive drainage and matching the surrounding contours.
- B. Material: Material shall be a good quality resoil and **not** include rocks, stones, and objectionable material over three (3) inches in any one dimension. All resoil that will compose the top eighteen (18) inches of resoil at the ground surface shall be topsoil. Topsoil shall be defined as during excavation having a brown matrix color, less than 50% clay content, and enough organic materials to be generally suitable for vegetative growth.
- C. Installation: Care shall be taken to keep heavy equipment off the surface material after it has been spread. If the resoiling material becomes compacted, the Contractor shall disc the material to a depth of four (4) inches at the Contractor's expense.
- D. Measurement: The material shall be measured for payment by the ton (2,000 pounds) for material acceptably placed in the work as determined by certified scale weight tickets.

All material wasted or used by the Contractor for other purposes and any material not placed in the work in accordance with the requirements of the work order and these specifications and drawings shall be measured and not included for payment by weight. A conversion factor of 1.3 ton per cubic yard of resoil shall be used if necessary.

- E. Payment: Payment for this work shall be made at the unit price per ton for "**Approved Resoil.**"

### **SITE RESTORATION**

- A. Description: This work shall cover all operations incidental to the establishment of grasses within the areas disturbed by the Contractor, including the furnishing and sowing of seed; and furnishing and applying of mulch materials, all in accordance with these specifications. Additionally, this work shall include, but not be limited to, repair of grounds and vegetation, including landscaping amenities, ornamental shrubs and trees damaged in any manner during the work operations. All areas shall be properly graded to a smooth final grade with topsoil and blended into adjoining areas at the most moderate slope possible. Seedbed preparation through the use of scarifying equipment is also required. All site restoration work is to be completed within **fourteen (14) days** of the completion of the construction activities. The Contractor may request in writing to the Division an

extension for site restoration. Requests shall only be granted based on season or weather conditions.

**The Contractor shall contract with each of the landowner's individual landscapers to finish this work on the properties affected. (If the landowner does not have a landscaper the contractor will be responsible to locate a professional landscaper to complete the work.)**

**The area within the fields shall only use Temporary Ground Cover materials.**

A. Materials: The materials to be used for restoration shall conform to the applicable requirements of these specifications.

1. Lime: Pelletized lime shall be applied at a maximum rate of 400 pounds per acre. Rates may be adjusted by the Division at the time of application.
2. Fertilizer: Fertilizer shall be commercial grade (19-19-19) and shall be applied at a rate up to a maximum of 20-lbs/1000 sq. ft. Rates may be adjusted by the Division at the time of application.
3. Seed: The varieties of grass seed to be furnished to the project shall bear a tag on each bag of each species showing the lot number, grower's name, percent of purity, percent of germination, and weed content. Tags shall be provided to the Division.

All seeds shall be free from noxious weeds and under no condition shall the total weed content of any lot of seed or seed mixture exceed one-half of one percent by weight.

No seed shall be utilized which has a mix date older than one year. The Division reserves the right to test, reject, or approve all seed after delivery to the project.

Species Composition: Yard seed shall be applied at a rate of 10 lbs/1000 sq. ft. and shall conform to the following seed mixture ratio:

98/85 Kentucky Bluegrass	50%
Perennial Ryegrass	50%

All areas not designated as yard, farm field, or wetland shall use the following seed mix, and shall be sown at the indicated rate. This mixture is listed by recommended planting season and for existing site conditions, and/or intended use. Further information may be found in the Agronomy Guide, Bulletin 472, Cooperative Extension Service, The Ohio State University.

<u>GENERAL SEED MIX</u>	<u>lbs/acre</u>
Orchardgrass ( <i>Dactylis glomerata</i> )	15.0
98/85 Kentucky Bluegrass	12.0
Timothy ( <i>Phleum pratense</i> )	12.0
Birdsfoot Trefoil ( <i>Lotus sp.</i> )	9.0
Red Clover ( <i>Trifolium pratense</i> )	8.0
White Clover ( <i>Trifolium repens</i> )	7.0
Annual Ryegrass ( <i>Lolium multiflorum</i> )	8.5
Perennial Ryegrass ( <i>Lolium perenne</i> )	3.5
Total lbs/acre	75

Other types of seed may be substituted if requested by the property owner(s). If such substitutions are made, they are to be made at no additional cost to the Division.

4. Mulching Material: All mulch material shall be free from mature seed-bearing stalks or roots or prohibited or noxious weeds. Any type of hay is not acceptable. Mulch shall include baled wheat straw or oat straw. It shall be dry and reasonably free of weeds, stalks, or other foreign material.
5. **Temporary Ground Cover: All crop field areas shall be seeded with Cereal Rye at a rate of 150 lbs/acre. The seed shall be broadcast over the entire disturbed area as a temporary ground cover until the next growing season. Areas of Temporary Ground Cover shall not include lime, fertilizer, or mulching requirements.**

For all required materials listed above, the Division reserves the right to request receipts, material specifications and/or weight tickets for verification.

C. Installation:

1. Start of Work: Site restoration work shall begin as soon as possible after the completion of construction. Final site restoration operations shall be completed within fourteen (14) working days of the final construction activities. The Contractor may request in writing to the Division an extension for site restoration. Requests shall only be granted based on **season or weather conditions**.
2. Area Preparation of Soil: Spread and grade available topsoil uniformly over all disturbed areas. All areas to be seeded shall be loosened by discing, harrowing, or other approved methods immediately prior to seeding. The soil shall be loosened to a depth of approximately three inches.

Hand raking shall be required in all areas where machines do not obtain the results desired by the Division.

Following tilling of the soil, the seedbed shall be allowed to firm up.

Final prepared surface shall have a smooth final grade and be appropriate for a residential yard, free from rocks, large dirt clumps and any other foreign debris.

Immediately following area preparation for seeding, materials shall be applied in the following order:

- Lime, as applicable
- Fertilizer, as applicable
- Seed, after broadcasting or otherwise applying the seed, the surface of the seedbed shall be loosely disturbed by hand raking, dragging, and/or cultipacking.

Lime, fertilizer and/or seed shall be sown by approved methods that provide for uniform distribution of the mixes as specified above.

3. Mulching: Apply the equivalent of 100 pounds per 1,000 square feet of clean straw mulch. Mulch shall not be applied in areas requiring Temporary Ground Cover.

Apply mulch to the sown area within 24 hours of seeding at the rate per square feet as specified above and spread to a uniform depth.

The straw shall be placed in a moist condition or shall be moistened immediately after

placement.

4. Maintenance and Repairs: The Contractor shall, during construction and prior to acceptance, properly care for all areas mulched and perform all mulching operations necessary to provide protection and establish growth of the seeded areas. Mulch that becomes displaced shall be reapplied at once, together with any necessary reseeding, all at no expense to the Division.

No additional payment shall be made for acts of God, i.e. fire, flood, drought, etc.

- D. Maintenance Period: The permanent planting of trees, shrubs, perennials, annuals, grasses and legumes, etc. shall be deemed to be acceptable if the species that were planted in accordance with the approved plans are established and maintained for one (1) "growing season" as defined below and meeting the following standards:

3. Growing Season: All landscaping shall be guaranteed for a period of one (1) summer growing season after planting. Planting material installed in the Fall shall be in full count and thrifty condition on the next succeeding September 15 at which time replacement shall be determined and scheduled for installation during the planting period of October 15 - December 1 of that same season. Planting material installed in the Spring shall be in full count and thrifty condition on the next succeeding May 15 at which time replacements shall be determined and scheduled for installation prior to June 1 of the same season. All plants installed in the summer shall be guaranteed for one (1) full summer and shall be in full count and thrifty condition the next succeeding September 15.
4. Acceptable Lawn/Turf Areas: A series of four (4) random line transects are to be laid out within the project boundaries. A string one hundred (100) feet long having one (1) foot graduation, shall be placed along the transect line. The person conducting the transect will then walk along the line counting only the markers which are in actual contact with the vegetation. The number of count points are to be recorded as subtotals. When the four transects are completed, the average of the four transects subtotals is then equal to the percent of vegetative cover for the project.
  - a) Residential Lawns: At least one hundred percent (100%) of the land affected shall be judged to be of good quality, and "good" is defined as an area that has at least ninety percent (90%) cover.
    - i. All land affected and having less than ninety percent (90%) cover shall be judged poor and deemed unacceptable; and
    - ii. All areas judged to be good must have species diversity requirements of those recommended for planting.
  - b) Farm & Field Turf: At least ninety percent (90%) of the land affected shall be judged to be of good quality, and "good" is defined as an area that has at least seventy-five percent (75%) cover.
    - i. The remaining ten percent (10%) of the land affected shall be judged to be of fair quality, and "fair" is defined as an area that has at least fifty percent (50%) cover but less than seventy-five percent (75%) cover;
    - ii. All land affected and having less than fifty percent (50%) cover shall be judged poor and deemed unacceptable; and

iii. All areas judged to be good or fair must have species diversity requirements of those recommended for planting.

- E. Measurement: Measurement for payment of site restoration, which includes seedbed preparation, lime, fertilizer as applicable, seeding, mulching, shall be considered and measured as a unit satisfactorily completed and accepted by the Division.
- F. Payment: Payment for this work, which includes seedbed preparation, liming, fertilizing, seeding, mulching, etc., and general cleanup shall be made at the lump sum price for "**Site Restoration.**"

## **DEMobilIZATION**

- A. Description: This work shall consist of the demobilization of all personnel, plugging related equipment and materials as well as the cleanup of all areas upon completing all other work required under the scope of work for the well site.
- B. Execution: Any damage to the road, drives, and/or culverts caused by the demobilization shall be repaired by the Contractor at the Contractor's expense. All repairs shall be done equal to or better to that which existed prior to construction activities.

This item shall also include the continued and proper use of any maintenance of traffic required within the road right-of-way per Part 7 of the General Specifications.

Also, the Contractor shall be responsible for cleaning mud and dirt associated with construction from all roadway surfaces (public and private) as per Part 7.1 of the General Specification for the duration of the Project and as directed by the Division.

- C. Measurement: Measurement for payment will be considered and measured as a unit satisfactorily completed and accepted by the Division. **Demobilization of equipment from the well site to well site for this project shall be considered incidental to this line item.**

**If any portion of the item is non-performed (i.e., the mud and dirt are not cleaned from the roadway, damaged items not restored to the satisfaction of the Division, etc.) this is considered unsatisfactory and shall be cause for the rejection of payment of this item.**

- D. Payment: The cost of this work shall be included in the lump sum price for "**Demobilization.**"

## **VAULT**

- A. Description: This work shall include all material, labor, and equipment necessary for the excavation and installation of a modified precast ODOT Catch Basin 2-3 per ODOT Standard Construction Drawing Number: CB-1.2 with a modified specific frame, cover, and top assembly as shown on the Drawing Plan Set. The catch basin shall be modified to be open ended on the bottom of the basin. In addition, all fittings, joint seal, steps, connection of the vent pipes to the vault, and aggregate base in the bottom of vault shall be considered as incidental items to the completion of work detailed in this specification.
- B. Materials:
1. Vault: The vault shall be a modified ODOT approved Catch Basin 2-3 per ODOT Standard

Construction Drawing Number: CB-1.2 of precast concrete modular construction as shown on the Drawing Plan Set. Materials shall conform to those referenced in 2016 ODOT CMS Item 611.02 and 706.13. The following is a link to the current ODOT precast concrete producers certified in accordance with specifications.

<https://www.dot.state.oh.us/Divisions/ConstructionMgt/Materials/Pages/CertifiedSuppliers.aspx>

2. Frame, Cover, & Concrete Top: Frame and cover shall meet all standards of ODOT Standard Construction Drawing Number: MH-1.2 and 2016 ODOT CMS Item 711.14. Frame and cover shall state "GAS WELL" on the cover. The concrete top shall be sized to fit the Catch Basin 2-3 sidewalls.
3. Joint Seal: Joint seal for vent pipes shall be a resilient seal between the precast vault sections and flexible gasket joints per 2016 ODOT CMS Item 706.11.
4. Base: The aggregate bedding material shall conform to granular material 2016 ODOT CMS Item 304 aggregate base. This work shall be incidental to this line item.
5. Backfill: The concrete backfill shall be placed around the vault as dry Quikrete placed as shown on the vault detail on the Drawing Plan Set.

C. Installation:

1. The vault shall be installed as shown on the Drawing Plan Set. The trench for the vault shall be excavated to the elevations shown on the Construction Plan Set. **The Contractor shall excavate and maintain the sides of the trenches as required by OSHA. No person shall be permitted to enter the trench unless OSHA required standards are constructed for the trenches.** No additional payment shall be made for excavation of material beyond the depth and width as shown on the Construction Plan Set. Any dewatering required to keep the trench dry during construction shall be performed by the Contractor.
2. Clean surface of vault pipe openings and exterior side of vent pipes of all foreign material. Place the vent pipes as detailed in the Drawing Plan Set. Install or have precast rubber gaskets on the vault. Complete a watertight seal per ASTM C923 for all vent pipes with the rubber gasket.
3. Fill the base grade with 2016 ODOT CMS Item 304 in a level manner to the dimensions define in the Drawing Plan Set. **This work and material shall be considered incidental to this line item.**
4. No backfilling shall be permitted without visual inspection and approval of the Division. The backfill for the vault shall be dry Quikrete or approved equal placed to fill around the vault. Any remaining area not filled by the quantity shown on the detail shall be backfilled by materials excavated from around the vault and shall be compacted with on-site equipment with the exception of the topsoil.
5. A minimum eight (8) inches of topsoil shall be removed and stockpiled during construction. Topsoil shall be utilized at trench backfill completion and shall not be compacted. Trench settlement shall be corrected by the Contractor to maintain existing grade outside the trench.

D. Measurement: Measurement for payment shall be made by field inspection of quantities satisfactorily installed.

- E. Payment: Payment for this work shall be made at the unit price per each for "Vault."

## **VENT PIPE**

- A. Description. This work shall include all material, labor, and equipment necessary for the excavation and installation of a two (2) inch diameter galvanized steel vent pipe. In addition, all pipe fittings shall be considered as incidental items to the completion of work detailed in this specification. Work and materials associated with the Vent Support as Detailed on the Drawing Plan Set shall be considered incidental to this line item.
- B. Materials (Vent Pipe):
1. Vent Pipe & Fittings: All pipe and associated fittings shall be schedule 40 galvanized steel.
  2. Monitoring Plug: Monitoring plug shall be made of brass and shall be ¾-inch in diameter.
  3. Insect and Rodent Vent Screen: The screen shall be made of either stainless steel or galvanized steel.
  4. Backfill: Backfill vent pipe trench with compacted earth from excavation, up to within three (3) feet of the vault.
- C. Installation. The vent pipe shall be installed according to the details on the Drawing Plan Set. The pipe and fittings shall be connected and installed in accordance with manufacturer's instructions.

The trench for the vent pipe shall be excavated to the elevations shown on the Drawing Plan Set. **The Contractor shall excavate and maintain the sides of the trench as required by OSHA. No person shall be permitted to enter the trench as is designed on the Drawing Plan Set.** No additional payment shall be made for excavation of material beyond the depth and width as shown on the Drawing Plan Set.

Any dewatering required to keep the trench dry during construction shall be performed by the Contractor.

No backfilling shall be permitted without visual inspection and approval of the Division. **Backfill shall be placed in six (6) inch maximum lifts and compacted by a minimum of three (3) passes of a vibratory plate compactor capable exerting a minimum of 2,000 lbs. of centrifugal force.** The loose lifts shall be compacted to the satisfaction of the Division. All materials excavated and replaced with the exception of the topsoil shall be compacted.

All topsoil shall be removed and stockpiled during construction. Topsoil shall be utilized at trench backfill completion and shall not be compacted. Trench settlement shall be corrected by the Contractor to maintain existing grade outside the trench.

As an equal the contractor may choose to bore the vent pipe in place rather than trench the vent pipe in place. All dimensions and grades shall be maintained as planned if boring is chosen by the contractor. The Division shall be given written notice with boring locations supplied prior to the start of work. The Division will approve the boring locations. This work shall be completed within the approved work limits. Any additional costs associated with boring shall be incorporated into this line item **"Vent Pipe."**

- D. Measurement. Measurement for payment for the vent pipe shall be made by actual field measurements of quantities satisfactorily installed and completed per linear foot of vent pipe.
- E. Payment. Payment for all the work specified above shall be made at the unit price per linear foot for **"Vent Pipe."**

**DETAILED SPECIFICATIONS**  
**FIXED PRICE ITEMS**  
(Values set by the Division.)

**SALVAGE MATERIAL REIMBURSEMENT**

- A. Description: This item shall consist of reimbursing the Division for all materials removed from the site for salvage including all surface equipment, well casing, tubing, production equipment, and marketable hydrocarbons.
- B. Reimbursement: The Contractor shall supply salvage receipts to the Division for materials inventoried and removed from the site for salvage. The Division shall use these receipts as deduction of payment that will be represented on the Offer for this line item for this project.
- C. Measurement: Measurement shall be made by salvage receipts amounts.
- D. Payment: Deduction shall be entered as an amount for "**Salvage Material Reimbursement.**"

**CROP DAMAGE**

- A. Description: This work covers the payment to the owner of the crops on the property for the crop damages/lost yields required to complete the project. The owner of the crop may be the property owner or a tenant of the property owner, either way it must be verified with the landowner who the owner of the crop is prior to making the payment.
- B. Execution: The contractor will verify with the property owner the owner of the crop on each property. The owner of the crop shall receive a payment for the damages associated with plugging the wells. If it is verified that the crops are all the same owner, one payment for all the wells on that property may be paid to the owner of those crops.

The Contractor shall directly pay the owner of the crop. The Contractor shall pay the balance of money due to the crop owner prior to the request of final payment from the Division. Receipt of payment (i.e., landowner waiver) from the landowner shall be furnished to the Division. Final payment will not be made to the Contractor without receipt.

- C. Measurement: Crop damage shall be measured on a per acre bases. Areas for crop damage have been predetermined by the Division according to the construction work limits as shown on the Drawing Plan Set. Any crop damage that occurs outside of these limits shall be paid for by the Contractor.
- D. Payment: Payment for this work as specified above shall be made based on the unit price per acre for "**Crop Damage.**" For corn crops the damages shall be based on a prime farmland yield of **192.7** bushels per acre of corn crop at a market value of **\$4.65** per bushel or **\$897** per acre. For soybean crops the damages shall be based on a prime farmland yield of **53.9** bushels per acre of soybean crop at a market value of **\$9.54** per bushel or **\$515** per acre. Other crops will be paid as determined by the Division. The value per acre is a set value not to be changed by the Contractor.

## CONTINGENCY SPECIFICATIONS

**CONTINGENCY SPECIFICATIONS WILL ONLY BE DIRECTED VIA A FIELD ORDER FROM THE DIVISION. THE FIELD ORDER WILL DEFINE THE QUANTITY APPROVED. CONTINGENCY SPECIFICATION USE WILL BE DETERMINED BASED ON-SITE CONDITIONS THAT ARE DETERMINED BY THE DIVISION.**

### ADDITIONAL CIRCULATION FLUID

- A. Description: This work shall consist of furnishing all labor, equipment, and material necessary to provide additional circulation fluid for the drilling and plugging process for the well.
- B. Requirements: The Contractor shall receive prior approval from the Division before bringing additional circulation fluid onsite. The fluid type shall be as listed below and based on the requirements of the original plugging plan.

Freshwater: Freshwater brought to location shall be free of oil sheen, and field tested for pH and chlorides. The chloride concentration shall be less than 250 mg/L and the pH shall be within a range of 6.5-8.5 standard units (SU).

Brine: A mixture composed of water and dissolved salts at a required density defined in the Plugging plan. Prior to supplying additional brine to location for use as a circulation fluid, the Contractor shall confirm the required density.

Fluid type, characteristics and quantities shall be confirmed with the Division prior to bringing onsite.

- C. Measurement: Measurement for payment for the above-described work shall be made by the actual quantity of barrels (bbls) used to successfully plug and/or drill the orphan as approved by the Division.
- D. Payment: Payment for the above work shall be made at the unit price per barrel (bbls) for **“Additional Circulation Fluid (Brine) and Additional Circulation Fluid (Freshwater).”**

### FISHING

- A. Description: This work consists of all labor, equipment, and material necessary to remove and/or clear the well bore as needed in order to reach total depth by the means of fishing the obstruction in the well bore.
- B. Execution: The Contractor shall supply the equipment needed to complete the fishing in an efficient manner that will be approved by the Division. This shall include but not be limited to the rig, impression blocks, and associated equipment. **This shall not include the fishing tools required to complete this work. The Division will develop a negotiated change order to deliver and use the appropriate fishing tools required based on the unforeseen conditions.** Appropriate fishing tools shall be provided for the circumstances encountered.

- C. Measurement: Measurement for payment shall be made by field inspection of the actual quantity of hours in which the drilling rig and other fishing equipment were diligently operating in a manner to remove the obstruction.
- D. Payment: Payment for the above-described work, which includes all labor, materials, equipment necessary for the obstruction removal shall be made at the unit price per hour for "**Fishing**".

## **MAGNET**

- A. Description: This work consists of all labor, equipment, and material necessary to supply a magnet and the required subs as the fishing tool.
- B. Execution: The Contractor shall supply all equipment needed for a magnet fishing tool to be used for fishing out the well bore to the depth of the current obstruction and extracting it. This shall include but not be limited to the rig, subs, and associated equipment. Appropriate tools shall be provided for the circumstances encountered. The work to complete the fishing shall be per line item "**Fishing**".
- C. Measurement: Measurement for payment shall be made by the delivery of the magnet to extract the obstruction as satisfactorily completed and accepted by the Division.
- D. Payment: Payment for the above-described work, which includes all labor, materials, equipment necessary to supply the magnet to extract the obstruction shall be made at the per unit price per each for "**Magnet**".

## **MILLING/DRILLOUT**

- A. Description: This work consists of all labor, equipment, and material necessary to remove an obstruction from inside the wellbore or casing as needed in order to reach a required depth by means of milling/drilling.

This work may include removing metal, cement, grout, wood plugs, failed cement plugs and/or other materials in which typical cleanout operations failed to remove.

- B. Execution: The Contractor shall supply the equipment needed to complete the work in an efficient manner that will be approved by the Division. This shall include but not be limited to the rig, a mud pump, power swivel/power sub, drill string (including collars and casing or tubing) and associated equipment.

**This shall not include the bits required to complete this work. The Division will develop a negotiated change order to deliver and use the appropriate bit(s) required based on the unforeseen conditions.** Bit types shall be based on the type of material encountered. Bits shall be factory made unless otherwise approved in writing by the Division.

- C. Measurement: Measurement for payment shall be made by field inspection of the actual quantity of hours in which the drilling rig and equipment were diligently operating in a manner to remove the obstruction.
- D. Payment: Payment for the above-described work, which includes all labor, materials, equipment necessary for the obstruction removal shall be made at the unit price per hour for

## "Milling/Drillout".

### LOGGING

- A. Description: This work consists of all labor, equipment, and material necessary to determine the total depth of the well and the casing, if a packer is present (along with its depth and thickness), determine bond quality behind the casing and the free point of the casing. The Log should also confirm zones of gas production and formation tops for cementing purposes.
- B. Execution: The contractor shall complete the logging of the well bore, casing, tubing, packer, and/or cement to the depth of the existing well bore, casing, tubing, packer, and/or cement. The methods of logging to be used shall include but not be limited to **gamma ray (GR), casing collar locator (CCL), temperature, bond, and caliper log**. Prior to use, the Contractor shall propose the method of logging and shall be approved by the Division.

**A copy of the completed Log must be submitted to the Division via email at [OrphanWellProgram@dnr.state.oh.us](mailto:OrphanWellProgram@dnr.state.oh.us).**

- C. Measurement: Measurement for payment shall be made by field inspection of units satisfactorily completed and accepted by the Division.
- D. Payment: Payment for the above-described work, which includes all labor, materials, equipment necessary for the investigation of the well shall be included at the per unit price per each for **"Logging."**

### LOST CIRCULATION MATERIALS

- A. Description: This work shall include furnishing all labor, materials, equipment, and supplies necessary to expose portions of the well bore to lost circulation materials (LCM) as determined necessary. Lost circulation materials shall be implemented to aid in obtaining well bore circulation prior to any cementing operations.
- B. Materials: Lost circulation materials shall be selected by the Contractor based on site conditions encountered and proposed to the Division for approval.
- C. Measurement: Measurement for payment shall be based on the actual quantity of sacks of lost circulation materials satisfactorily placed and shall be verified with delivery tickets. For estimating purposes, it has been assumed that one (1) sack is equal to fifty (50) pounds.
- D. Payment: Payment for all the above-described work shall be made at the unit price per sack for **"Lost Circulation Materials"**.

### DRILLING MUD

- A. Description: The work covered by this section shall consist of furnishing all labor, equipment, and material necessary to provide and use a water-based drilling mud for the drilling and plugging process of the well.
- B. Materials: Based on the onsite conditions the Contractor shall propose a water-based drilling mud

for approval from the Division. Once a material is approved the Division will require a minimum quantity be maintained at the site during the plugging project based on circumstances encountered.

- C. Measurement: Measurement for payment for the above-described work shall be made by the actual quantity of sacks (50 lbs) of additives for the water-based drilling mud used to successfully plug the orphan well.
- D. Payment: Payment for the above work shall be made at the unit price per sack for "Drilling Mud."

### **HYDROGEN SULFIDE SCAVENGER**

- A. Description: The work covered by this section shall consist of furnishing all labor, equipment, and material necessary to provide and use a hydrogen sulfide scavenger for the drilling and plugging process of the well.
- B. Materials: The Contractor shall provide Sulfa-Clear or an approved equal. The Sulfa-Clear shall be applied at a rate to eliminate the presence of Hydrogen Sulfide (H<sub>2</sub>S) at the surface and shall not be less than seven (7) percent concentration with the applicable well bore fluid.
- C. Execution: The Contractor shall be prepared to apply the hydrogen sulfide scavenger at any time during the drilling and plugging operation. When Hydrogen Sulfide (H<sub>2</sub>S) is encountered the Contractor shall apply the hydrogen sulfide scavenger. If the hydrogen sulfide scavenger is applied during drilling operations the Contractor shall continue to monitor the presence of H<sub>2</sub>S and apply additional hydrogen sulfide scavenger as needed in order to complete the plugging.

Once total depth has been reached an additional batch of hydrogen sulfide scavenger will be applied to the total depth of the well bore prior to setting of any plugs. Once this total depth application has been applied the Contractor shall wait a minimum of 24 hours to commence work on the well bore.

- D. Measurement: Measurement for payment for the above-described work shall be made by the actual quantity of gallons of hydrogen sulfide scavenger used to successfully plug and/or drill the orphan well.
- E. Payment: Payment for the above work shall be made at the unit price per gallons for "**Hydrogen Sulfide Scavenger**".

### **H<sub>2</sub>S SAFETY TEAM**

- A. Description: The work will include the installation and implementation of safety procedures for the plugging of the orphan well as described herein that is known to have, is emitting H<sub>2</sub>S gas in excess of permissible exposure limits (PEL), or is in a H<sub>2</sub>S township **Per 29 CFR 1910.1000, Air Contaminants, Table Z-2 the permissible exposure limits (PEL) ceiling standard for H<sub>2</sub>S is 20 ppm**. This shall also include any labor, equipment, materials, and time needed to implement these safety procedures. The H<sub>2</sub>S safety team shall be qualified employees of the Contractor or subcontractors including no less than two employees available for 24/7 coverage of the monitoring equipment. The personnel shall be available for no more than 12-hour shifts (Shifts include active and on call service) and shall be on site while work is being completed.
- B. Execution: The Contractor must provide the appropriate equipment, on-site, to properly detect and abate any H<sub>2</sub>S emitted from the well. All personnel on location must have and wear H<sub>2</sub>S monitor

and/or 4-gas monitor. If permissible exposure limits (PEL) are exceeded, the Contractor will be required to have an H<sub>2</sub>S safety team on site until the geological zone of interest is covered with cement and no further H<sub>2</sub>S issues are at the surface while the well is vented for a minimum of 8 hours. The H<sub>2</sub>S safety team may be released at this point, but personal monitors and the rig monitor are still required. The safety team shall be called back as needed.

Once the contractor is on site and well is ready to be opened or detection of permissible exposure limits (PEL) are exceeded, the Contractor will not continue plugging operations until the safety team has developed and implemented a H<sub>2</sub>S safety plan that is compliant with Occupational Safety and Health Administration (OSHA) and The National Institute for Occupational Safety and Health (NIOSH) regulations. The plan shall be approved by the Division.

Along with any other measures required to be compliant with regulations and to implement the approved H<sub>2</sub>S safety plan, the Safety Team at minimum shall supply, train, and utilize the following:

7. Supply & use exhaust and ventilation systems,
8. Train and educate workers about hazards and controls,
9. Test (monitor) the air 24/7 with the ability to receive real-time notifications of site conditions through email, website, and phone/text alerts to receive real-time alerting of events and alarms,
10. Establish, train, and use proper rescue and first aid procedures,
11. Supply, train, and use respiratory and other personal protective equipment, &
12. Establish, train, and implement an H<sub>2</sub>S Emergency Response Plan for the site including Emergency Medical Technicians (EMTs) ready to respond to the 24/7 monitoring unless otherwise contacted by the Safety Team.

For days that the site is idle for weekends, holidays, or any other day that the Division agrees work cannot take place, the H<sub>2</sub>S Safety Team shall be on standby and the cost associated with those days shall be paid at the unit price per day for "**H<sub>2</sub>S Safety Team Standby**". Any days that work could have been completed and was not due to the Contractor shall be at the Contractor's expense.

- C. Measurement: Measurement for payment will be considered and measured as a unit satisfactorily completed and accepted by the Division.
- D. Payment: Payment for this work, including labor, equipment, materials, and time shall be made at the unit price per day for "**H<sub>2</sub>S Safety Team**" or "**H<sub>2</sub>S Safety Team Standby**".

## **DOWNHOLE VIDEOGRAPHY**

- A. Description: This work consists of all labor, equipment, and material necessary to video record the well bore in order to assess a well bore obstruction.
- B. Execution: The Contractor shall supply all equipment needed and complete the videography recording of the well bore to the depth of the current obstruction. The Contractor shall supply the Division with an electronic copy of the videography recorded in a format viewable in readily available current software.
- C. Measurement: Measurement for payment shall be made by the delivery of an acceptable video and photos to the Division of the current obstruction. Measurement shall be per obstruction, not per video or photo.

- D. Payment: Payment for the above-described work, which includes all labor, materials, equipment necessary for the video recording of the current obstruction made at the per unit price per each for "**Downhole Videography**".

## **ASPHALT PAVEMENT**

- A. Description: This work shall include furnishing all labor, materials, equipment, and supplies necessary to construct the asphalt pavement, as required per Division inspection, once all equipment has been removed from the site during the final site restoration. This work shall also include furnishing all labor, materials, equipment, and supplies necessary to cut and remove the existing asphalt pavement and unsuitable base material.

This work shall only include pavement that is located within the limits approved by the Division to complete the project as shown on the Drawing Plan Set. Any damage caused by the Contractor by working outside of the limits set shall be repaired at the Contractor's expense and conform to this line item.

- B. Materials:

1. Asphalt. Asphalt shall be Bituminous materials and mixes and shall conform to ODOT Standard Specifications Items 441 Asphalt Concrete, Intermediate Course, (Type 2), 448 and 441 Asphalt Concrete, Surface Course, (Type 1), PG 64-22. Material shall be furnished from an ODOT approved source. Proof of current ODOT approval and aggregate samples may be required. The asphalt shall be rolled until smooth and match the grade and width of the existing pavement to the satisfaction of the Division.
2. Base. Dependent upon the condition of the encountered subgrade, No. 304 Aggregate base, a minimum of three (3) inches thick, shall be installed prior to the placement of asphalt at the discretion of the Division. All No. 304 Aggregate base placed shall be compacted by a minimum of three (3) passes of a vibratory plate compactor capable of exerting a minimum of 2,000 pounds of centrifugal force.
3. Surface Preparation. The areas between the existing subgrade and proposed asphalt shall be properly prepared as shown on the Drawing Plan Set conforming to ODOT Standard Specifications Items 408 Bituminous Prime Coat (0.25 gallons/square yard) and 407 Tack Coat (0.075 gallons/square yard).
4. Sealer. The joints between the existing and proposed asphalt will be sealed with a crack seal that conforms to ODOT Standard Specifications Item 423 Crack Seal (Type 1) and then the proposed asphalt coated with an asphalt sealer (1.5 gallons/square yard). Asphalt sealer shall be as manufactured by Black Jack, Drive Maxx 700, or an approved equal.

- C. Installation: The Division shall be notified at least 24 hours in advance of placing asphalt.

1. Excavation. Upon field evaluation of the existing asphalt pavement, within the limits of construction, by the Division, the Contractor shall excavate a minimum of three (3) inches below the existing grade of the pavement designated by the Division for removal. **All existing asphalt shall be removed by means of saw cutting based on Division inspection. All removal and disposal shall be considered incidental to this line item.**

2. Stone Base. The No. 304 Aggregate Base shall be placed within the limits of the excavation and compacted at the discretion on the division.
3. Asphalt. The sub-base shall be inspected and approved by the Division prior to commencing with the asphalt.

Before placing the asphalt, all surfaces which will be in contact with the asphalt shall be thoroughly cleaned and the space occupied by the asphalt shall be free from all silt, dirt, shavings, rust, and other debris.

Asphalt shall not be deposited in water.

4. Hot Applied Joint Sealer. The Contractor shall seal the joints between the existing and constructed asphalt and shall ensure the seal has a smooth finish.

D. Construction Methods:

1. The Contractor shall compact the pavement subgrade using a vibrating plate compactor as field conditions require per the Division. Sub-grade compaction shall be incidental to this line item.
2. Aggregate Base (ODOT Item 304 Aggregate Base) shall be placed and compacted using a vibrating plate compactor. The placement of the base material shall be approved by the Division prior to placement of the asphalt pavement. Compacted No. 304 aggregate shall be incidental to this line item.
3. The Contractor shall apply the Bituminous Prime Coat (ODOT Item 408) at the rate of 0.25 gallons per square yard with a pressure distributor or approved pressure spray method.

When the prime coat has become tacky but not dry and hard, ODOT Item 441 Asphalt Concrete Intermediate Course, (Type 2), 448, shall be placed. The asphalt shall be compacted per ODOT Item 401.

The Contractor shall apply the tack coat (ODOT Item 407) at the rate of 0.075 gallons per square yard with a pressure distributor or approved pressure spray method.

When the tack coat has become tacky but not dry and hard, ODOT Item 441 Asphalt Concrete Surface Course, (Type 1), PG 64-22, shall be placed. The asphalt shall be compacted per ODOT Item 401.

The completed surface shall match the grades and slopes of the adjacent existing surfacing and be free of offsets, depressions, raised places, and all other irregular surfaces.

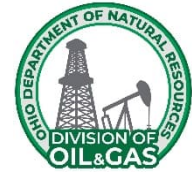
The Contractor shall apply ODOT Item 423, Crack Seal, (Type 1), to the existing saw cuts.

The Contractor shall apply asphalt sealer at 1.5 gallons per square yard to the top of the asphalt pavement.

4. In the event the progress and scheduling of the work is such that the asphalt pavement replacement would occur in the winter months, during adverse cold weather, and/or during such times the asphalt plants are not in operation, then the final pavement replacement shall be postponed until favorable weather occurs in the spring and the asphalt and concrete plants resume normal operations. No bituminous concrete shall be laid when the temperature is below

40° F except by written permission of the Chief. "Cold Mix" asphalt is specifically prohibited.

5. Pavement shall not be placed when the temperature is such that the pavement placed will freeze before it has had adequate time to set.
  6. The Contractor shall be responsible for replacement of pavement that has been placed and which has been damaged by inclement weather conditions without additional compensation.
  7. The joints between the replaced and existing sections of pavement shall be sealed with ODOT Item 705.04 Hot Applied Joint Sealer in a way that creates a smooth transition and completely seals the gap to the satisfaction of the Division
- E. Measurement: Measurement for payment for the asphalt pavement shall be made by actual field measurements of quantities satisfactorily installed at the site. The asphalt pavement shall be measured per square foot installed.
- F. Payment: Payment for all the above-described work shall be made at the unit price per square foot for "**Asphalt Pavement**".



**SCOPE OF WORK  
LORAIN 11F PROJECT  
Multiple Orphan Well Sites  
Lorain County, Eaton Township**

**APPENDIX I – OHIO ONE-CALL**

THE FOLLOWING <u>ARE REPORTABLE</u> INCIDENTS: <i>(OAC 1501:9-8-02)</i>		
TYPE OF INCIDENT <small>(All Incident types associated with production operation or other activity regulated under Chapter 1509)</small>	QUANTITY <small>(GAL, BBL, PPM)</small> <b>NOTE: 1 Barrel = 42 US Gallons</b>	ADDITIONAL FACTORS
Release of Gas	<u>Any</u> amount	Resulting from a Blow out; <u>OR</u> Uncontrolled Pop-off Valve (in Urban Area); <u>OR</u> Any gas release that is a threat to public safety
Release of Hydrogen Sulfide(H <sub>2</sub> S) Gas (within the Working Area)	Exceeding 20 ppm (Sustained airborne concentration); For duration > 10 min	<u>OR</u> any H <sub>2</sub> S release resulting in injury or death of person
Fire / Explosion	N/A	In which a reporting person has called an emergency responder (9-1-1 or Fire Dept)
Release of Oil, Condensate, or Materials Saturated with Oil or Condensate	> 210 US gallons in any 24-hr period (Estimated)	<u>AND</u> the release is OUTSIDE secondary containment & into the environment
Release of Oil, Condensate, or Materials Saturated with Oil or Condensate	> 25 US gallons in any 24-hr period (Estimated); <u>AND</u> the release is outside secondary containment and into the environment	In an urban area; <u>OR</u> In an Emergency Management Zone of a surface water public drinking supply; <u>OR</u> In a 5-year time of travel with a groundwater-based public drinking supply; <u>OR</u> In a 100-year flood hazard area as delineated on the federal emergency management agency's (FEMA) national flood insurance rate map
Release of Refined Oil Products <i>(EX: oil-based drilling fluid, petroleum distillate, spent or unused paraffin solvent, gasoline, fuel oil, diesel fuel, or lubricants)</i>	> 25 US gallons in any 24-hr period	<u>AND</u> the release is OUTSIDE secondary containment & into the environment
Release of Oil, Condensate, or Materials Saturated with Oil or Condensate; <u>OR</u> Refined Oil Products	<u>Any</u> amount	That enters waters of the state in an amount that causes a film or sheen on the surface of the water
Release of Brine or Semi-Solid Waste <i>(EX: drilling mud, sludge, or tank bottom sediments)</i>	> 42 US gallons in any 24-hr period	<u>AND</u> the release is OUTSIDE secondary containment & into the environment
	> 42 US gallons	<u>AND</u> is operated by a person to whom a registration certificate has been issued (ORC 1509.222), or to whom a resolution has been issued (ORC 1509.226)

Release of Brine from a Vehicle, Vessel, Railcar, or Container		<u>AND</u> enters the environment
Release of Hazardous Substance (HS)/ Extremely Hazardous Substance (EHS); <u>OR</u> Mixture or Solution including a HS or EHS	<p>An amount Equal to or &gt; than applicable reportable quantities listed in 40CFR tables; in any 24-hr period</p> <p>If the amount of one or more HS or EHS released is in an <u>unknown</u> mixture or solution, notify when the total amount of the mixture or solution released is <u>equal to or &gt; than</u> the reportable quantity for the HS or EHS with the <u>lowest</u> reportable quantity</p>	<p>List available at:  <a href="http://oilandgas.ohiodnr.gov/portals/oilgas/pdf/emergency/list_of_lists.pdf">http://oilandgas.ohiodnr.gov/portals/oilgas/pdf/emergency/list_of_lists.pdf</a></p> <p><i>Code of Federal Regulations (C.F.R.) References:</i>  HS- <i>Appendix A 40 CFR Part 302.4</i>  EHS- <i>Appendix A 40 CFR Part 355</i></p>

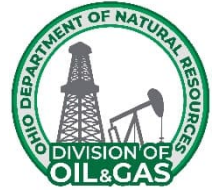
**THE FOLLOWING ARE NOT REPORTABLE INCIDENTS:** (OAC 1501:9-8-02 (A)(7))

1. Controlled flaring or controlled burns authorized under Chapter 1509. of the Revised Code or under 1501:9 of the Administrative Code or authorized by the terms and conditions of a permit issued under Chapter 1509. of the Revised Code;
2. Properly functioning emission control devices authorized pursuant to Revised Code Section 3704.03;
3. Subsurface detonation of perforation-guns;
4. Seismic shots;
5. Controlled blasting for well site construction

**Date Last Edited & Printed: 9/27/2018**



# verdantas



**SCOPE OF WORK  
LORAIN 11F PROJECT  
Multiple Orphan Well Sites  
Lorain County, Eaton Township**

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**APPENDIX II – PHOTOLOG & WELL RECORDS**

**Mate Mary #1**



**View looking north of well head and vent pipe. Well was further east than initially thought.**



**View of original vent location, well located further east near the location of the blue arrow.**



**View of ingress/egress, well located out of photo to the right. Note overhead utility lines.**

# Well Card

26822 -9-36

B-0060-9-36 GEOLOGICAL SURVEY OF OHIO 60242 OIL AND GAS WELL LOG

State Ohio County Lorain Township Eaton Quadrangle Oberlin

Lot 96 Quarter \_\_\_\_\_ Tract \_\_\_\_\_ Section \_\_\_\_\_ NW \_\_\_\_\_ NE \_\_\_\_\_ SW \_\_\_\_\_

Measured 1410 Feet From W Line And 877 Feet From S Cont Line Of LOT 96  
1400' WL & 500' NL of Lot 96- from Pepper Map

Land Owner Mary Mate Well No. 1 Date Started \_\_\_\_\_

Operator O. E. G. Well No. 5710 Date Completed 3-23-33

Elevation Bar S. L. P-769.4-g Total Depth 2441 Plugged Back \_\_\_\_\_

Formation Drilled To Clinton Producing Form. Clinton, sh. Init. Prod. Nat. 6,606 M.

Shot or Acid Record \_\_\_\_\_ Prod. A. S. or Acid \_\_\_\_\_

Init. Rock Press. 1025 #1s Abandoned \_\_\_\_\_

Formation	Top	Bottom	Remarks	Formation	Top	Bottom	Remarks
surface	0	4		sl.		2320	
black muck		38		1st shell		2330	
Berea		60	hfw 58'	sl.		2352	brkn
r.r.		145		Little Lime		2361	
sh.		340	blk.	sl.		2371	blue
sh.		490	gray 895M at 25, b.d. to 48M in 20 hrs.				
sh.		635	blk.	Packer shell		2392	
sh.		675	gray	sl.		2422	blue
Cinn.		810		Clinton		2440	6,606 M.
sh.		830	gray			2441	T.D.
Cinn.		915					
sh.		1100					
Niagara ls.		2314	w. 1365, 2190 & Nwbg 2190-2220	2298, Salt 1605-45		Slate 1785-1845;	over

**Columbia Mutual Life Insurance #1**



**View looking northwest of well location and entrance to field in the upper right corner of image.**



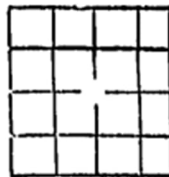
**View of well and vent disconnected from the well. Well is currently venting to the atmosphere.**

Well Record

WELL RECORD

Owner of Well *Dougherty + D. Haffner* Address *Medina O. + Wooster O*  
 County *Lorain* Township *Eaton* Section *76* Qr. Section.....  
 No. Well *I* Farm *Columbus Mutual Sigs* Elev..... Oil, Gas or  
 Dry Hole *Oil*  
 Drilling Commenced *Mar 12-1934* Drilling Completed *Jan 26-1935*  
 Name of Drilling Contractor *Clyde J. Dougherty* Address *47th Court St. Medina O*

FORMATION RECORD

Name of Formation	From	To		
<i>Quick Sand + Gravel</i>	<i>Top-</i>	<i>27 ft.</i>	 <p>Locate by Section or 1/4 Section lines.</p>	
<i>Shale</i>	<i>27 ft</i>	<i>1105 "</i>		
<i>Lime</i>	<i>1105</i>	<i>2377 "</i>		
<i>Salt-water</i>	<i>1535</i>	<i>ft.</i>	<p>Description and Remarks:</p>	
<i>Salt-sand</i>	<i>1615 -</i>	<i>1645</i>		<i>Very little gas</i>
<i>Hole full of water</i>	<i>2331 ft.</i>			<i>2488 - 2507.</i>
<i>Oil Bearing sand</i>	<i>2488</i>	<i>2507</i>		
<i>Total Depth</i>		<i>2596. ft.</i>		



**Weil Lewis #1**



**View looking north of Weil Lewis #1 vent pipe and approximate location of well. Blue arrow is the approximate location of the Columbia Mutual Life Insurance #1.**



**View looking east of vent line and well location of the Weil Lewis #1.**

# Well Record

State of Ohio  
DEPARTMENT OF INDUSTRIAL RELATIONS  
Division of Mines

## WELL RECORD

Type of well: Dry, gas, oil, combination oil and gas, brine or artificial brine well. *Oil*

Company <i>E. C. McManamy</i>	Casing and Tubing	Used in Drilling	Left in Well	Packers
Address <i>831 Sandusky St</i>				Kind of
No. well <i>1</i> Elev. <i>108</i> Acres <i>108</i>	<i>16</i>			Packers
Farm <i>Louis N. side</i>				
County <i>Lorain</i> Twp. <i>Easton</i>	<i>13</i>			
Sec. <i>Lot 76 &amp; 65</i> Tr. <i>Or.</i>				
Drilling Commenced <i>June 1956</i>	<i>10</i>	<i>26 ft</i>	<i>26 ft</i>	Size of
Drilling Completed <i>July 1956</i>				
Date Shot <i>From To</i>	<i>8-1/4</i>	<i>157</i>	<i>157</i>	
With	<i>6-5/8</i>	<i>1430</i>	<i>30</i>	Depth
Open flow <i>10ths</i> Water in <i>inch</i>	<i>5-3/16</i>	<i>2509</i>	<i>2509</i>	Set
<i>10ths</i> Merc. in <i>inch</i>				
Volume <i>146,000</i> Cu. Ft.	<i>3</i>			Perf.
Rock Pressure <i>lbs.</i> hrs.				top
Oil <i>10 bbls</i> bbls. 1st 24 hrs.	<i>2</i>		<i>2509</i>	Perf.
Fresh Water <i>24</i> Feet				bottom
Salt Water <i>1630</i> Feet <i>2250</i> Feet	<i>Lipsse Used</i>			Perf.
				top

Mudding Record

Casing Cemented *500 ft* Size *5 1/2* No. Feet Date

Coal was encountered at *none* Feet Inches Feet Inches

Name of Formation	Color	Hard or Soft	Top	Bottom	Oil, gas or Water	Depth Found	Remarks
<i>Clay</i>	<i>brown</i>	<i>Soft</i>	<i>0</i>	<i>18</i>			
<i>Bed</i>	<i>gray</i>	<i>Hard</i>	<i>18</i>	<i>92</i>			
<i>Shale</i>	<i>Red</i>	<i>Soft</i>	<i>92</i>	<i>130</i>			
<i>Gray</i>		<i>Soft</i>	<i>130</i>	<i>144</i>			
<i>Shale</i>	<i>Red</i>	<i>Soft</i>	<i>144</i>	<i>154</i>			
<i>Shale</i>	<i>Gray</i>	<i>Soft</i>	<i>154</i>	<i>157</i>			
<i>Shale</i>	<i>Brown</i>	<i>Soft</i>	<i>157</i>	<i>300</i>			
<i>Shale</i>	<i>Gray</i>	<i>Soft</i>	<i>300</i>	<i>560</i>			
<i>Shale</i>	<i>Brown</i>	<i>Soft</i>	<i>560</i>	<i>940</i>			
<i>Lime</i>		<i>Hard</i>					
<i>Shale</i>	<i>Gray</i>	<i>Soft</i>	<i>940</i>	<i>1112</i>			
<i>Lime</i>		<i>Hard</i>	<i>1112</i>	<i>2364</i>			
<i>New Berg</i>	<i>Brown</i>	<i>Hard</i>	<i>2165</i>	<i>2180</i>			
<i>Little Lick</i>			<i>2410</i>	<i>2417</i>			
<i>Ghinton Sand</i>			<i>2478</i>	<i>2497</i>			
<i>Total</i>				<i>2509</i>			



Date 1/10/65  
 Owner or operator of well Buckeye Supply Co.  
Box 1231  
 P. O. Address Zanesville, Ohio  
 No. of well 1 Section L-65 Dry  Gas  Oil  Other   
 Township Eston County Lorain  
 On farm known as Lewis Well  
 Date of permit to drill 6-12-56  
 When drilled June 1956 to July 1956  
 Total depth 2509 Top of sand 2478

	Top	Bottom
Fresh water strata		
Depth of coal		
" " "		
" " "		
First covern sand		
Cambridge lime		
Mackelburg 50' sand		
Second covern sand		
Salt sand		
Waxton sand		
Big line of W. Va.		
Kemper sand		
Big Injun sand		
Squaw sand		
Berea sand	18	82
Gordon sand		
Big Line	1112	2384
Oriskany		
1st water		
Salt		
2nd water		
Snowberg	2165	2180
Clinton sand	2478	2497
Medina formation		
Trenton		
St. Peter		

Form 567-JH

Manner in which well was plugged, give description in detail: Filled with  
Clay 2509' to 2000'  
Cement plug at 1400'  
Clay 1400' to 1200'  
Hook bridge 900' to 860'  
Clay 850' to 167'  
Cement plug at 167'  
Clay 167' to the surface



CASING RECORD		
24'	10" DP	out
157'	8"	out
1430'	6 5/8"	out 1400'
2509'	5 3/16"	out 1900'

Date of abandonment 1-10-65  
*[Signature]*  
 Signature of Inspector

**Wargo J #1**



**View looking west of well casing location.**



**View of casing and liquid within casing.**



**View looking east, well is located below blue arrow.**

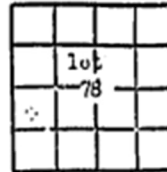
Well Record

WELL RECORD

Owner of Well..... The Wittmer Company, Inc. Address 2007 First Nat'l Bk. Bldg., Pgh. Pa.  
 County..... Lorain Township..... Eaton Section..... Lot 78 Qr. Section.....  
 No. Well..... Farm..... JULIUS WARRER Elev..... Oil, Gas or Dry Hole..... Light show Oil & Gas  
 Drilling Commenced..... 7-18-34 Drilling Completed..... 8-17-34  
 Name of Drilling Contractor..... F. A. Peebles Address..... Elyria, Ohio.

FORMATION RECORD

Name of Formation	From	To	Description and Remarks:
Clay		42	
Berea	42	100	
Red Rock	100	120	
Shale	120	600	
Cinnamon	600	678	
Grey shale	678	685	
Cinnamon	685	935	
Grey slate	935	1114	
Lime	1114	1326	Water at 1326-1355
Salt & Lime	1326	1685	
Lime	1685	1820	
Lime broken	1820	1990	
Lime	1990	2266	Water at 2160
Newburg Sand	2266	2318	Water 2290
Lime	2318	2354	Bottom of lime
Slate & snell	2354	2375	
Lime	2375	2390	
Slate	2390	2395	
Lime gritty	2395	2415	
Slate	2415	2428	
Clinton Sand	2428	2455	Oil 2449 Good sand, grey
Slate	2455	2461	
Clinton Sand	2461	2473	Gas 2467-2468 Good sand grey hard
Red shale	2473	2478	
Grey slate	2478	2486	
Total Depth	2486		Steel Line Measurement



Locate by Section or 1/4 Section lines.

**Carpenter Yost #1**



**2024 photo of the Carpenter-Yost #1 showing the 1-inch diameter tubing welded to the diamond plate covering the 11-inch diameter casing.**



**2024 photo of the Carpenter-Yost #1 showing the completed vault and vent system installed over the well.**

# Well Record

B-0060-9-65

GEOLOGICAL SURVEY OF OHIO

20446 446 446  
**OIL AND GAS WELL LOG**

State Ohio  
 County Lorain Township Eaton Quadrangle Oberlin  
 Lot 85 Quarter \_\_\_\_\_ Tract \_\_\_\_\_ Section \_\_\_\_\_ NW \_\_\_\_\_ NE \_\_\_\_\_ SW \_\_\_\_\_  
 Measured 500 Feet From S Line And 900 Feet From E Line Of Lot 85  
SW part of twp. 500' S1 & 900' E1 of Lot 85 - from Pepper Map  
 Land Owner Carpenter - Yost Well No. 1 Date Started 9-19-16  
 Operator O. F. G. Well No. 8261 Date Completed 10-22-46  
 Elevation Bar S. L. P-785.3-G Total Depth 2582 Plugged Back \_\_\_\_\_  
 Formation Drilled To sh. Producing Form. \_\_\_\_\_ Init. Prod. Nat. Dry  
 Shot or Acid Record \_\_\_\_\_ Prod. A. S. or Acid \_\_\_\_\_  
 Init. Rock Press. \_\_\_\_\_ Abandoned \_\_\_\_\_

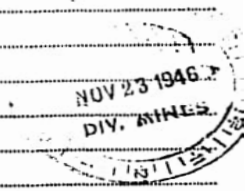
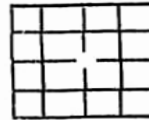
Formation	Top	Bottom	Remarks	Formation	Top	Bottom	Remarks
soil	0	11		Salt	1550	1630	
sd.	11	55	water	Lime	1630	2170	
sh.	55	60		Lime sd.	2170	2250	Salt water
sh.	60	90		Lime	2250	2369	
sh.	90	125		Sh.	2369	2384	
sh.	125	155		shell	2384	2392	
sh.	155	250		sh.	2392	2413	
sh.	250	465		shell	2413	2425	
sh.	465	555		sh.	2425	2468	
sh.	555	700		sd.	2468	2480	no Oil, gas, water
sh.	700	735					
sh.	735	930		sh.	2480	2582	
sh.	930	1121				2582	T.D.
Lime	1121	1550	Salt water				

## WELL RECORD

Owner of Well..... The Ohio Fuel Gas Company..... Address..... 99 N. Front St.  
 Columbus, Ohio  
 County..... Lorain..... Township..... Eaton..... Lot..... 85..... Qr. Section.....  
 No. Well 1-8261 Farm..... Carpenter-Yost..... Elev. 785.3-0 Dry Hole Dry Hole  
 Drilling Commenced..... September 19, 1946..... Drilling Completed..... October 22, 1946  
 Name of Drilling Contractor..... L. E. Phillips..... Address..... Box 21, Medina, Ohio

### FORMATION RECORD

Name of Formation	From	To	
Top Soil	0	11	
Sand	11	55	Water
Shale	55	60	Locate by Section or 1/4 Section lines.
Shale	60	90	Description and Remarks:
Shale	90	125	
Shale	125	155	
Shale	155	250	
Shale	250	465	
Shale	465	555	
Shale	555	700	
Shale	700	735	
Shale	735	930	
Shale	930	1121	
Lime	1121	1550	Salt water
Salt	1550	1630	
Lime	1630	2170	
Lime Sand	2170	2250	Salt water
Lime	2250	2369	
Shale	2369	2384	
Shell	2384	2392	
Shale	2392	2413	
Shell	2413	2425	
Shale	2425	2468	
Sand	2468	2480	No gas, oil, or water found
Shale	2480	2582	
Total Depth		2582	



## Carpenter Art #1



View of well casing and valve, note valve is broken and well is venting to the atmosphere.



**View looking north of well and agricultural fields. Blue arrow indicates approximate location of ingress/egress to well location.**

# Well Record

B-0060-9-10

GEOLOGICAL SURVEY OF OHIO

9466

18

20018

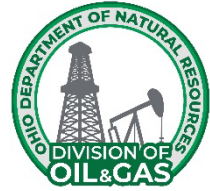
## OIL AND GAS WELL LOG

State Ohio  
 County Lorain Township Eaton Quadrangle Cheerlin  
 Lot 85 Quarter \_\_\_\_\_ Tract \_\_\_\_\_ Section \_\_\_\_\_ NW \_\_\_\_\_ NE \_\_\_\_\_ SW \_\_\_\_\_  
 Measured 492 Feet From E Line And 600 Feet From N Line Of \_\_\_\_\_  
1160' NL & 1000' WL of Lot 85 - from Pepper Map  
 Land Owner Art. Carpenter Well No. 1 Date Started May 10, 1934  
 Operator O. F. G. Co. Well No. 5803 Date Completed 6-18-34  
 Elevation Bar S. L. 779.4 Total Depth 2554 Plugged Back \_\_\_\_\_  
 Formation Drilled To red rock Producing Form. grit Init. Prod. Nat. show gas. Dry  
 Shot or Acid Record \_\_\_\_\_ Prod. A. S. or Acid \_\_\_\_\_  
 Init. Rock Press. \_\_\_\_\_ Abandoned \_\_\_\_\_

Formation	Top	Bottom	Remarks	Formation	Top	Bottom	Remarks
soil	0	35					
grit	35	95	show gas				
red	95	150					
sh.	150	1090	cinn. 550-650, 680-920, 1070-1090				
N. Lime	1090	2354	salt 1595 - 1650				
Shell	2361	2371					
Shell	2391	2401					
Shell	2411	2432					
1st Clinton ss.	2460	2469					
2nd Clinton ss.	2475	2480					
red rock	2480	2554					
		2554	T.D.				
			Shales occupy	breaks in record below Lime.			



**SCOPE OF WORK  
LORAIN #11F PROJECT  
Multiple Orphan Well Sites  
Lorain County, Eaton Township**



**APPENDIX III: DAVIS-BACON WAGE DETERMINATION**

**State**

Ohio

**Counties**

Adams, Allen, Ashland, Ashtabula, Athens, Auglaize, Belmont, Brown, Butler, Carroll, Champaign, Clark, Clermont, Clinton, Columbiana, Coshocton, Crawford, Cuyahoga, Darke, Defiance, Delaware, Erie, Fairfield, Fayette, Franklin, Fulton, Gallia, Geauga, Greene, Guernsey, Hamilton, Hancock, Hardin, Harrison, Henry, Highland, Hocking, Holmes, Huron, Jackson, Jefferson, Knox, Lake, Lawrence, Licking, Logan, Lorain, Lucas, Madison, Mahoning, Marion, Medina, Meigs, Mercer, Miami, Monroe, Montgomery, Morgan, Morrow, Muskingum, Noble, Ottawa, Paulding, Perry, Pickaway, Pike, Portage, Preble, Putnam, Richland, Ross, Sandusky, Scioto, Seneca, Shelby, Stark, Summit, Trumbull, Tuscarawas, Union, Van Wert, Vinton, Warren, Washington, Wayne, Williams, Wood, Wyandot

**Document**

"General Decision Number: OH20260001 01/02/2026

Superseded General Decision Number: OH20250001

State: Ohio

Construction Types: Heavy and Highway

Counties: Ohio Statewide.

Heavy and Highway Construction Projects

Modification Number	Publication Date
0	01/02/2026

BROH0001-001 06/01/2024

DEFIANCE, FULTON (Excluding Fulton, Amboy & Swan Creek Townships), HENRY (Excluding Monroe, Bartlow, Liberty, Washington, Richfield, Marion, Damascus & Townships & that part of Harrison Township outside corporate limits of city of Napoleon), PAULDING, PUTNAM and WILLIAMS COUNTIES

	Rates	Fringes
Bricklayer, Stonemason.....	\$ 33.39	20.06

---

BROH0001-004 06/01/2023

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 32.40	19.30

---

BROH0003-002 06/01/2024

FULTON (Townships of Amboy, Swan Creek & Fulton), HENRY (Townships of Washington, Damascus, Richfield, Bartlow, Liberty, Harrison, Monroe, & Marion), LUCAS and WOOD (Townships of Perrysburg, Ross, Lake, Troy, Freedom, Montgomery, Webster, Center, Portage, Middleton, Plain, Liberty, Henry, Washington, Weston, Milton, Jackson & Grand Rapids) COUNTIES

	Rates	Fringes
Bricklayer, Stonemason.....	\$ 33.39	20.06

---

BROH0005-003 06/01/2020

CUYAHOGA, LORAIN & MEDINA (Hinckley, Granger, Brunswick, Liverpool, Montville, York, Homer, Harrisville, Chatham, Litchfield & Spencer Townships and the city of Medina)

	Rates	Fringes
BRICKLAYER		
BRICKLAYERS; CAULKERS;		
CLEANERS; POINTERS; &		
STONEMASONS.....	\$ 36.64	17.13
SANDBLASTERS.....	\$ 36.39	17.13
SEWER BRICKLAYERS & STACK		
BUILDERS.....	\$ 36.64	17.13
SWING SCAFFOLDS.....	\$ 37.14	17.13

---

BROH0006-005 06/01/2024

CARROLL, COLUMBIANA (Knox, Butler, West & Hanover Townships), STARK & TUSCARAWAS

	Rates	Fringes
Bricklayer, Stonemason.....	\$ 33.39	20.06
-----		
BROH0007-002 06/01/2024		

LAWRENCE

	Rates	Fringes
Bricklayer, Stonemason.....	\$ 33.39	20.06
-----		
BROH0007-005 06/01/2023		

PORTAGE & SUMMIT

	Rates	Fringes
BRICKLAYER.....	\$ 32.40	19.30
-----		
BROH0007-010 06/01/2024		

PORTAGE & SUMMIT

	Rates	Fringes
MASON - STONE.....	\$ 33.39	20.06
-----		
BROH0008-001 06/01/2024		

COLUMBIANA (Salem, Perry, Fairfield, Center, Elk Run, Middleton, & Unity Townships and the city of New Waterford), MAHONING & TRUMBULL

	Rates	Fringes
BRICKLAYER.....	\$ 33.39	20.06
-----		
BROH0009-002 06/01/2024		

BELMONT & MONROE COUNTIES and the Townships of Warren & Mt. Pleasant and the Village of Dillonvale in JEFFERSON COUNTY

	Rates	Fringes
Bricklayer, Stonemason.....	\$ 33.39	20.06

Refractory.....\$ 31.45 19.01

-----  
BROH0010-002 06/01/2024

COLUMBIANA (St. Clair, Madison, Wayne, Franklin, Washington, Yellow Creek & Liverpool Townships) & JEFFERSON (Brush Creek & Saline Townships)

Rates Fringes

Bricklayer, Stonemason.....\$ 33.39 20.06

-----  
BROH0014-002 06/01/2024

HARRISON & JEFFERSON (Except Mt. Pleasant, Warren, Brush Creek, Saline & Salineville Townships & the Village of Dillonvale)

Rates Fringes

Bricklayer, Stonemason.....\$ 33.39 20.06

-----  
BROH0016-002 06/01/2023

ASHTABULA, GEAUGA, and LAKE COUNTIES

Rates Fringes

Bricklayer, Stonemason.....\$ 32.40 19.30

-----  
BROH0018-002 06/01/2024

BROWN, BUTLER, CLERMONT, HAMILTON, PREBLE (Gasper, Dixon, Israel, Lanier, Somers & Gratis Townships) & WARREN COUNTIES:

Rates Fringes

Bricklayer, Stonemason.....\$ 33.39 20.06

-----  
BROH0022-004 06/01/2024

CHAMPAIGN, CLARK, CLINTON, DARKE, GREENE, HIGHLAND, LOGAN, MIAMI, MONTGOMERY, PREBLE (Jackson, Monroe, Harrison, Twin, Jefferson & Washington Townships) and SHELBY COUNTIES

	Rates	Fringes
Bricklayer, Stonemason.....	\$ 33.39	20.06
-----		
BROH0032-001 06/01/2024		

GALLIA & MEIGS

	Rates	Fringes
Bricklayer, Stonemason.....	\$ 33.39	20.06
-----		
BROH0035-002 06/01/2024		

ALLEN, AUGLAIZE, MERCER and VAN WERT COUNTIES

	Rates	Fringes
Bricklayer, Stonemason.....	\$ 33.39	20.06
-----		
BROH0039-002 06/01/2024		

ADAMS & SCIOTO

	Rates	Fringes
Bricklayer, Stonemason.....	\$ 33.39	20.06
-----		
BROH0040-003 06/01/2024		

ASHLAND, CRAWFORD, HARDIN, HOLMES, MARION, MORROW, RICHLAND,  
WAYNE and WYANDOT (Except Crawford, Ridge, Richland & Tymochtee  
Townships) COUNTIES

	Rates	Fringes
Bricklayer, Stonemason.....	\$ 33.39	20.06

FOOTNOTE: Layout Man and Sawman rate: \$1.00 per hour above  
journeyman rate.  
Free standing stack work ground level to top of stack;  
Sandblasting and laying of carbon masonry material in swing  
stage and/or scaffold; Ramming and spading of plastics and  
gunniting: \$1.50 per hour above journeyman rate.  
""Hot"" work: \$2.50 above journeyman rate.

-----

BROH0044-002 06/01/2024

	Rates	Fringes
Bricklayer, Stonemason COSHOCOTON, FAIRFIELD, GUERNSEY, HOCKING, KNOX, KICKING, MORGAN, MUSKINGUM, NOBLE (Beaver, Buffalo, Seneca & Wayne Townships) & PERRY COUNTIES:.....	\$ 33.39	20.06

BROH0045-002 06/01/2023

FAYETTE, JACKSON, PIKE, ROSS and VINTON COUNTIES

	Rates	Fringes
Bricklayer, Stonemason.....	\$ 35.39	17.47

BROH0046-002 06/01/2024

ERIE, HANCOCK, HURON, OTTAWA, SANDUSKY, SENECA, WOOD (Perry & Bloom Townships) and WYANDOT (Tymochtee, Crawford, Ridge & Richland Townships) COUNTIES & the Islands of Lake Erie north of Sandusky

	Rates	Fringes
Bricklayer, Stonemason.....	\$ 33.39	20.06

FOOTNOTE: Layout Man and Sawman rate: \$1.00 per hour above journeyman rate.  
Free standing stack work ground level to top of stack;  
Sandblasting and laying of carbon masonry material in swing stage and/or scaffold; Ramming and spading of plastics and gunniting: \$1.50 per hour above journeyman rate.  
"Hot" work: \$2.50 above journeyman rate.

BROH0052-001 06/01/2024

ATHENS COUNTY

Rates	Fringes
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Bricklayer, Stonemason.....\$ 33.39 20.06

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BROH0052-003 06/01/2024

NOBLE (Brookfield, Noble, Center, Sharon, Olive, Enoch, Stock,  
Jackson, Jefferson & Elk Townships) and WASHINGTON COUNTIES

Rates Fringes

Bricklayer, Stonemason.....\$ 33.39 20.06

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BROH0055-003 06/01/2024

DELAWARE, FRANKLIN, MADISON, PICKAWAY and UNION COUNTIES

Rates Fringes

Bricklayer, Stonemason.....\$ 33.39 20.06

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CARP0002-024 05/01/2025

BROWN, BUTLER, CHAMPAIGN, CLARK, CLERMONT, CLINTON, DARKE,  
GREENE, HAMILTON, LOGAN, MIAMI, MONTGOMERY, PREBLE, SHELBY &  
WARREN

Rates Fringes

Carpenter & Piledrivermen.....\$ 35.94 23.59  
Diver.....\$ 40.58 9.69

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CARP0171-001 05/01/2025

MAHONING & TRUMBULL

Rates Fringes

CARPENTER.....\$ 33.19 25.02

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CARP0171-002 05/01/2025

BELMONT, COLUMBIANA, HARRISON, JEFFERSON & MONROE

Rates Fringes

CARPENTER.....\$ 32.50 26.19

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CARP0200-002 05/01/2025

ADAMS, ATHENS, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, GALLIA,  
GUERNSEY, HIGHLAND, HOCKING, JACKSON, LAWRENCE, LICKING,  
MADISON, MARION, MEIGS, MORGAN, MUSKINGUM, NOBLE, PERRY,  
PICKAWAY, PIKE, ROSS, SCIOTO, UNION, VINTON and WASHINGTON  
COUNTIES

	Rates	Fringes
CARPENTER.....	\$ 35.94	23.59
Diver.....	\$ 39.41	10.40
PILEDRIVERMAN.....	\$ 35.94	23.59

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CARP0285-001 05/01/2025

CARROLL, STARK, TUSCARAWAS and WAYNE

	Rates	Fringes
CARPENTER.....	\$ 34.07	24.28

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CARP0285-002 05/01/2025

COSHOCTON, HOLMES, KNOX & MORROW

	Rates	Fringes
CARPENTER.....	\$ 33.38	24.69

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CARP0285-008 05/01/2025

MEDINA, PORTAGE & SUMMIT

	Rates	Fringes
CARPENTER.....	\$ 37.18	25.07

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CARP0351-005 05/01/2025

LUCAS & WOOD

	Rates	Fringes
CARPENTER.....	\$ 35.44	27.56

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CARP0351-006 05/01/2025

	Rates	Fringes
CARPENTER		
DEFIANCE, FULTON, HANCOCK,		
HENRY, PAULDING & WILLIAMS		
COUNTIES.....	\$ 32.05	26.13

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CARP0372-002 05/01/2025

	Rates	Fringes
ALLEN, AUGLAIZE, HARDIN, MERCER, PUTNAM & VAN WERT		
CARPENTER.....	\$ 31.80	26.33

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CARP0435-005 05/01/2025

	Rates	Fringes
ASHTABULA, CUYAHOGA, GEAUGA & LAKE		
CARPENTER.....	\$ 38.57	24.64

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CARP0735-001 05/01/2025

	Rates	Fringes
ASHLAND, HURON & RICHLAND		
CARPENTER.....	\$ 34.67	23.57

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CARP0735-002 05/01/2025

	Rates	Fringes
LORAIN		
CARPENTER.....	\$ 38.42	24.01

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CARP0735-004 05/01/2025

	Rates	Fringes
ERIE		
CARPENTER.....	\$ 36.71	24.14

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CARP0744-001 05/01/2025

CRAWFORD, OTTAWA, SANDUSKY, SENECA & WYANDOT

	Rates	Fringes
CARPENTER.....	\$ 33.74	27.05

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CARP1090-002 05/01/2025

ALLEN, AUGLAIZE, HARDIN, MERCER, PUTNAM, VAN WERT & WYANDOT

	Rates	Fringes
Piledrivermen & Diver's Tender...	\$ 35.94	28.39

DIVERS - \$250.00 per day

CARP1090-003 05/01/2025

BELMONT, HARRISON, & MONROE

	Rates	Fringes
Diver, Wet.....	\$ 58.52	24.91
Piledrivermen; Diver, Dry.....	\$ 39.01	24.91

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CARP1090-004 05/01/2025

CARROLL, STARK, TUSCARAWAS & WAYNE

	Rates	Fringes
Diver, Wet.....	\$ 49.82	25.40
Piledrivermen; Diver, Dry.....	\$ 33.21	25.40

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CARP1090-005 05/01/2025

ASHLAND, ASHTABULA, CUYAHOGA, ERIE, GEAUGA, HURON, LAKE, LORAIN, MEDINA, PORTAGE, RICHLAND & SUMMIT

	Rates	Fringes
Diver, Wet.....	\$ 54.51	27.50
Piledrivermen; Diver, Dry.....	\$ 36.34	27.50

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CARP1090-006 05/01/2025

COSHOCTON, HOLMES, KNOX & MORROW

	Rates	Fringes
Diver, Wet.....	\$ 54.36	22.54
Piledrivermen; Diver, Dry.....	\$ 36.24	22.54

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CARP1090-007 05/01/2025

MAHONING & TRUMBULL

	Rates	Fringes
Diver, Wet.....	\$ 50.85	24.82
Piledrivermen; Diver, Dry.....	\$ 33.90	24.82

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CARP1090-008 05/01/2025

COLUMBIANA & JEFFERSON

	Rates	Fringes
PILEDRIVERMAN.....	\$ 39.01	24.91

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CARP1090-009 05/01/2025

CRAWFORD, DEFIANCE, FULTON, HANCOCK, HENRY, LUCAS, OTTAWA,  
PAULDING, SANDUSKY, SENECA, WILLIAMS & WOOD

	Rates	Fringes
Piledrivermen & Diver's Tender...	\$ 37.98	28.63

DIVERS - \$250.00 per day

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ELEC0008-002 05/27/2024

DEFIANCE, FULTON, HANCOCK, HENRY, LUCAS, OTTAWA, PAULDING,  
PUTNAM, SANDUSKY, SENECA, WILLIAMS & WOOD

	Rates	Fringes
CABLE SPLICER.....	\$ 38.98	18.96
ELECTRICIAN.....	\$ 48.40	4.5%+23.06

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ELEC0032-003 06/01/2025

ALLEN, AUGLAIZE, HARDIN, LOGAN, MERCER, SHELBY, VAN WERT &  
WYANDOT (Crawford, Jackson, Marseilles, Mifflin, Ridgeland,  
Ridge & Salem Townships)

	Rates	Fringes
ELECTRICIAN.....	\$ 39.17	23.60

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ELEC0038-002 04/28/2025

CUYAHOGA, GEAUGA (Bainbridge, Chester & Russell Townships) &  
LORAIN (Columbia Township)

	Rates	Fringes
ELECTRICIAN Excluding Sound & Communications Work.....	\$ 46.63	24.92

FOOTNOTES;

- a. 6 Paid Holidays: New Year's Day; Memorial Day; July 4th;  
Labor Day; Thanksgiving Day; & Christmas Day
- b. 1 week's paid vacation for 1 year's service; 2 weeks' paid  
vacation for 2 or more years' service

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ELEC0038-008 04/28/2025

CUYAHOGA, GEAUGA (Bainbridge, Chester & Russell Townships) &  
LORAIN (Columbia Township)

	Rates	Fringes
Sound & Communication Technician Communications Technician...	\$ 34.30	14.95
Installer Technician.....	\$ 33.05	14.91

FOOTNOTES;

- a. 6 Paid Holidays: New Year's Day; Memorial Day; July 4th;  
Labor Day; Thanksgiving Day; & Christmas Day
- b. 1 week's paid vacation for 1 year's service; 2 weeks' paid  
vacation for 2 or more years' service

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ELEC0064-003 11/30/2025

COLUMBIANA (Butler, Fairfield, Perry, Salem & Unity Townships)  
MAHONING (Austintown, Beaver, Berlin, Boardman, Canfield,  
Ellsworth, Coitsville, Goshen, Green, Jackson, Poland,  
Springfield & Youngstown Townships), & TRUMBULL (Hubbard &  
Liberty Townships)

	Rates	Fringes
ELECTRICIAN.....	\$ 41.49	21.81

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ELEC0071-005 01/06/2025

ASHTABULA, CUYAHOGA, GEAUGA, LAKE & LORAIN

	Rates	Fringes
LINE CONSTRUCTION: Equipment Operator		
DOT/Traffic Signal & Highway Lighting Projects...\$ 39.97		27%+8.00
Municipal Power/Transit Projects.....\$ 49.46		27%+8.25
LINE CONSTRUCTION: Groundman		
DOT/Traffic Signal & Highway Lighting Projects...\$ 31.10		27%+8.00
Municipal Power/Transit Projects.....\$ 38.47		27%+8.25
LINE CONSTRUCTION: Linemen/Cable Splicer		
DOT/Traffic Signal & Highway Lighting Projects...\$ 43.89		27%+8.00
Municipal Power/Transit Projects.....\$ 54.96		27%+8.25

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ELEC0071-010 01/06/2025

Statewide

	Rates	Fringes
Line Construction		
Equipment Operator.....\$ 40.44		4%+16.09
Groundman.....\$ 29.07		4%+13.81

Lineman & Cable Splicers.....\$ 46.02 4%+17.20

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ELEC0082-002 12/02/2024

CLINTON, DARKE, GREENE, MIAMI, MONTGOMERY, PREBLE & WARREN  
(Wayne, Clear Creek & Franklin Townships)

	Rates	Fringes
ELECTRICIAN.....	\$ 38.00	22.49

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ELEC0082-006 11/25/2024

CLINTON, DARKE, GREENE, MIAMI, MONTGOMERY, PREBLE & WARREN  
(Wayne, Clear Creek & Franklin Townships)

	Rates	Fringes
Sound & Communication Technician		
Cable Puller.....	\$ 13.85	5.30
Installer/Technician.....	\$ 27.70	15.71

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ELEC0129-003 02/24/2025

LORAIN (Except Columbia Township) & MEDINA (Litchfield &  
Liverpool Townships)

	Rates	Fringes
ELECTRICIAN.....	\$ 42.95	18.81

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ELEC0129-004 02/24/2025

ERIE & HURON (Lyme, Ridgefield, Norwalk, Townsend, Wakeman,  
Sherman, Peru, Bronson, Hartland, Clarksfield, Norwich,  
Greenfield, Fairfield, Fitchville & New London Townships)

	Rates	Fringes
ELECTRICIAN.....	\$ 42.95	18.81

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ELEC0141-003 06/02/2025

BELMONT COUNTY

	Rates	Fringes
CABLE SPLICER.....	\$ 42.94	27.74
ELECTRICIAN.....	\$ 39.25	31.23

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ELEC0212-003 11/26/2018

BROWN, CLERMONT & HAMILTON

	Rates	Fringes
Sound & Communication Technician.....	\$ 24.35	10.99

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ELEC0212-005 06/02/2025

BROWN, CLERMONT, and HAMILTON COUNTIES

	Rates	Fringes
ELECTRICIAN.....	\$ 38.05	22.97

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ELEC0245-001 08/26/2024

ALLEN, HARDIN, VAN WERT & WYANDOT (Crawford, Jackson,  
Marseilles, Mifflin, Richland, Ridge & Salem Townships)

	Rates	Fringes
Line Construction		
Equipment Operator.....	\$ 32.95	28%+7.85
Groundman Truck Driver.....	\$ 20.59	28%+7.85
Lineman.....	\$ 47.07	28%+7.85

FOOTNOTE: a. Half day's Paid Holiday: The last 4 hours of  
the workday prior to Christmas or New Year's Day

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ELEC0245-003 01/01/2025

DEFIANCE, FULTON, HANCOCK, HENRY, HURON, LUCAS, OTTAWA,  
PAULDING, PUTNAM, SANDUSKY, SENECA, WILLIAMS, and WOOD COUNTIES

Rates	Fringes
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Line Construction		
Cable Splicer.....	\$ 53.90	8.10+28%
Groundman/Truck Driver.....	\$ 20.51	8.10+28%
Heli-arc Welding.....	\$ 47.17	8.10+28%
Lineman.....	\$ 46.87	8.10+28%
Operator - Class 1.....	\$ 37.50	8.10+28%
Operator - Class 2.....	\$ 32.81	8.10+28%
Traffic Signal & Lighting		
Technician.....	\$ 42.18	8.10+28%

FOOTNOTE: a. 6 Observed Holidays: New Year's Day; Memorial Day; Independence Day; Labor Day; Thanksgiving Day; & Christmas Day. Employees who work on a holiday shall be paid at a rate of double their applicable classified straight-time rates for the work performed on such holiday.

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 ELEC0245-004 01/01/2025

ERIE COUNTY

	Rates	Fringes
Line Construction		
Cable Splicer.....	\$ 53.90	28%+8.10
Groundman/Truck Driver.....	\$ 20.51	28%+8.10
Lineman.....	\$ 46.87	28%+8.10
Operator - Class 1.....	\$ 37.50	28%+8.10
Operator - Class 2.....	\$ 32.81	28%+8.10

FOOTNOTE: a. 6 Observed Holidays: New Year's Day; Memorial Day; Independence Day; Labor Day; Thanksgiving Day; & Christmas Day. Employees who work on a holiday shall be paid at a rate of double their applicable classified straight-time rates for the work performed on such holiday.

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 ELEC0246-001 10/28/2024

Carroll, Columbiana, Harrison and Jefferson Counties in Ohio; Brooke and Hancock Counties in West Virginia.

	Rates	Fringes
ELECTRICIAN.....	\$ 44.00	30.38%+24.31

FOOTNOTE: a. 1 1/2 Paid Holidays: The last scheduled workday prior to Christmas & 4 hours on Good Friday.

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ELEC0306-005 05/27/2024

MEDINA (Brunswick, Chatham, Granger, Guilford, Harrisville, Hinckley, Homer, Lafayette, Medina, Montville, Sharon, Spencer, Wadsworth, Westfield & York Townships), PORTAGE (Atwater, Aurora, Brimfield, Deerfield, Franklin, Mantua, Randolph, Ravenna, Rootstown, Shalersville, Streetsboro & Suffield Townships), SUMMIT & WAYNE (Baughman, Canaan, Chester, Chippewa, Congress, Green, Milton, & Wayne Townships)

	Rates	Fringes
CABLE SPLICER.....	\$ 46.81	20.95
ELECTRICIAN.....	\$ 42.55	20.95

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ELEC0317-002 06/02/2025

GALLIA & LAWRENCE

	Rates	Fringes
CABLE SPLICER.....	\$ 32.68	18.13
ELECTRICIAN.....	\$ 41.15	29.35

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ELEC0540-005 06/30/2025

CARROLL (Northern half, including Fox, Harrison, Rose & Washington Townships), COLUMBIANA (Knox Township), HOLMES, MAHONING (Smith Township), STARK, TUSCARAWAS (North of Auburn, Clay, Rush & York Townships), and WAYNE (South of Baughman, Chester, Green & Wayne Townships) COUNTIES

	Rates	Fringes
ELECTRICIAN.....	\$ 39.86	29.19

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ELEC0573-003 06/01/2025

ASHTABULA (Colebrook, Wayne, Williamsfield, Orwell & Windsor Townships), GEAUGA (Auburn, Middlefield, Parkman & Troy Townships), MAHONING (Milton Township), PORTAGE (Charlestown, Edinburg, Freedom, Hiram, Nelson, Palmyra, Paris & Windham

Townships), and TRUMBULL (Except Liberty & Hubbard Townships)

	Rates	Fringes
ELECTRICIAN.....	\$ 42.20	23.37
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ELEC0575-001 05/29/2023		

ADAMS, FAYETTE, HIGHLAND, HOCKING, JACKSON (Bloomfield, Franklin, Hamilton, Jefferson, Lick, Madison, Scioto, Coal, Jackson, Liberty, Milton & Washington Townships), PICKAWAY (Deer Creek, Perry, Pickaway, Salt Creek & Wayne Townships), PIKE (Beaver, Benton, Jackson, Mifflin, Pebble, PeePee, Perry, Seal, Camp Creek, Newton, Scioto, Sunfish, Union & Marion Townships), ROSS, SCIOTO & VINTON (Clinton, Eagle, Elk, Harrison, Jackson, Richland & Swan Townships)

	Rates	Fringes
ELECTRICIAN.....	\$ 37.00	22.26
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ELEC0648-001 09/01/2025		

BUTLER and WARREN COUNTIES (Deerfield, Hamilton, Harlan, Massie, Salem, Turtle Creek, Union & Washington Townships)

	Rates	Fringes
CABLE SPLICER.....	\$ 30.50	18.23
ELECTRICIAN.....	\$ 38.00	24.162
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ELEC0673-004 05/26/2025		

ASHTABULA (Excluding Orwell, Colebrook, Williamsfield, Wayne & Windsor Townships), GEAUGA (Burton, Chardon, Claridon, Hambden, Huntsburg, Montville, Munson, Newbury & Thompson Townships) and LAKE COUNTIES

	Rates	Fringes
CABLE SPLICER.....	\$ 33.81	21.47
ELECTRICIAN.....	\$ 41.17	24.58
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ELEC0683-002 06/02/2025		

CHAMPAIGN, CLARK, DELAWARE, FAIRFIELD, FRANKLIN, MADISON,  
 PICKAWAY (Circleville, Darby, Harrison, Jackson, Madison,  
 Monroe, Muhlenberg, Scioto, Walnut & Washington Townships), and  
 UNION COUNTIES

	Rates	Fringes
CABLE SPLICER.....	\$ 44.00	26.40
ELECTRICIAN.....	\$ 43.00	26.37

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 ELEC0688-003 05/30/2022

ASHLAND, CRAWFORD, HURON (Richmond, New Haven, Ripley &  
 Greenwich Townships), KNOX (Liberty, Clinton, Union, Howard,  
 Monroe, Middleberry, Morris, Wayne, Berlin, Pike, Brown &  
 Jefferson Townships), MARION, MORROW, RICHLAND and WYANDOT  
 (Sycamore, Crane, Eden, Pitt, Antrim & Tymochtee Townships)  
 COUNTIES

	Rates	Fringes
ELECTRICIAN.....	\$ 32.30	21.83

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 ELEC0972-002 06/01/2024

ATHENS, MEIGS, MONROE, MORGAN, NOBLE, VINTON (Brown, Knox,  
 Madison, Vinton & Wilkesville Townships), and WASHINGTON  
 COUNTIES

	Rates	Fringes
CABLE SPLICER.....	\$ 40.25	33.33
ELECTRICIAN.....	\$ 40.00	33.32

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 ELEC1105-001 05/27/2024

COSHOCTON, GUERNSEY, KNOX (Jackson, Clay, Morgan, Miller,  
 Milford, Hilliar, Butler, Harrison, Pleasant & College  
 Townships), LICKING, MUSKINGUM, PERRY, and TUSCARAWAS (Auburn,  
 York, Clay, Jefferson, Rush, Oxford, Washington, Salem, Perry &  
 Bucks Townships) COUNTIES

	Rates	Fringes
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ELECTRICIAN.....\$ 39.60 24.41

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 ENGI0018-003 05/01/2024

ASHTABULA, CUYAHOGA, ERIE, GEAUGA, LAKE, LORAIN, MEDINA,  
 PORTAGE, and SUMMIT COUNTIES

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
GROUP 1.....	\$ 45.63	16.41
GROUP 2.....	\$ 45.53	16.41
GROUP 3.....	\$ 44.49	16.41
GROUP 4.....	\$ 43.27	16.41
GROUP 5.....	\$ 37.98	16.41
GROUP 6.....	\$ 46.63	16.41
GROUP 7.....	\$ 46.63	16.41

OPERATING ENGINEER CLASSIFICATIONS

GROUP 1 - Air Compressor on Steel Erection; Barrier Moving Machine; Boiler Operator on Compressor or Generator when mounted on a Rig; Cableway; Combination Concrete Mixer & Tower; Concrete Plant (over 4 yd. Capacity); Concrete Pump; Crane (All Types, Including Boom Truck, Cherry Picker); Crane-Compact, Track or Rubber over 4,000 lbs. capacity; Cranes-Self Erecting, Stationary, Track or Truck (All Configurations); Derrick; Dragline; Dredge (Dipper, Clam or Suction); Elevating Grader or Euclid Loader; Floating Equipment (All Types); Gradall; Helicopter Crew (Operator-Hoist or Winch); Hoe (all types); Hoisting Engine on Shaft or Tunnel Work; Hydraulic Gantry (Lifting System); Industrial-Type Tractor; Jet Engine Dryer (D8 or D9) Diesel Tractor; Locomotive (Standard Gauge); Maintenance Operator Class A; Mixer, Paving (Single or Double Drum); Mucking Machine; Multiple Scraper; Piledriving Machine (All Types); Power Shovel; Prentice Loader; Quad 9 (Double Pusher); Rail Tamper (with auto lifting & aligning device); Refrigerating Machine (Freezer Operation); Rotary Drill, on Caisson work; Rough Terrain Fork Lift with Winch/Hoist; Side-Boom; Slip-Form Paver; Tower Derrick; Tree Shredder; Trench Machine (Over 24" wide); Truck Mounted Concrete Pump; Tug Boat; Tunnel Machine and/or Mining Machine; Wheel Excavator; and Asphalt Plant Engineer (Cleveland District Only).

GROUP 2 - Asphalt Paver; Automatic Subgrader Machine, Self-Propelled (CMI Type); Bobcat Type and/or Skid Steer Loader with Hoe Attachment Greater than 7,000 lbs.; Boring Machine More than 48"; Bulldozer; Endloader; Horizontal Directional Drill (Over 50,000 ft lbs thrust); Hydro Milling Machine; Kolman-type Loader (production type-Dirt); Lead Greaseman; Lighting & Traffic Signal Installation Equipment (includes all groups or classifications); Material Transfer Equipment (Shuttle Buggy) Asphalt; Pettibone-Rail Equipment; Power Grader; Power Scraper; Push Cat; Rotomill (all), Grinders & Planers of All types; Trench Machine (24" wide & under); Vermeer type Concrete Saw; and Maintenance Operators (Portage and Summit Counties Only).

GROUP 3 - A-Frame; Air Compressor on Tunnel Work (low pressure); Asphalt Plant Engineer (Portage and Summit Counties Only); Bobcat-type and/or Skid Steer Loader with or without Attachments; Highway Drills (all types); Locomotive (narrow gauge); Material Hoist/Elevator; Mixer, Concrete (more than one bag capacity); Mixer, one bag capacity (Side Loader); Power Boiler (Over 15 lbs. Pressure) Pump Operator installing & operating Well Points; Pump (4" & over discharge); Roller, Asphalt; Rotovator (lime soil stabilizer); Switch & Tie Tampers (without lifting & aligning device); Utility Operator (Small equipment); Welding Machines; and Railroad Tie Inserter/Remover; Articulating/straight bed end dumps if assigned (minus \$4.00 per hour).

GROUP 4 - Backfiller; Ballast Re-locator; Bars, Joint & Mesh Installing Machine; Batch Plant; Boring Machine Operator (48" or less); Bull Floats; Burlap & Curing Machine; Concrete Plant (capacity 4 yd. & under); Concrete Saw (Multiple); Conveyor (Highway); Crusher; Deckhand; Farm-type Tractor with attachments (highway); Finishing Machine; Fireperson, Floating Equipment (all types); Forklift; Form Trencher; Hydro Hammer except masonry; Hydro Seeder; Pavement Breaker; Plant Mixer; Post Driver; Post Hole Digger (Power Auger); Power Brush Burner; Power Form Handling Equipment; Road Widening Trencher; Roller (Brick, Grade & Macadam); Self-Propelled Power Spreader; Self-Propelled Power Subgrader; Steam Fireperson; Tractor (Pulling Sheepfoot, Roller or Grader); and Vibratory Compactor with Integral Power.

GROUP 5 - Compressor (Portable, Sewer, Heavy & Highway); Drum Fireperson (Asphalt Plant); Generator; Masonry Fork Lift;

Inboard-Outboard Motor Boat Launch; Oil Heater (asphalt plant); Oiler/Helper; Power Driven Heater; Power Sweeper & Scrubber; Pump (under 4" discharge); Signalperson; Tire Repairperson; VAC/ALLS; Cranes - Compact, track or rubber under 4,000 pound capacity; fueling and greasing; and Chainmen.

GROUP 6 - Master Mechanic & Boom from 150 to 180.

GROUP 7 - Boom from 180 and over.

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 ENGI0018-004 05/01/2024

ADAMS, ALLEN, ASHLAND, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COSHOCTON, CRAWFORD, DARKE, DEFIANCE, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, HURON, JACKSON, JEFFERSON, KNOX, LAWRENCE, LICKING, LOGAN, LUCAS, MADISON, MARION, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PREBLE, PUTNAM, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN, WASHINGTON, WAYNE, WILLIAMS, WOOD, and YANDOT COUNTIES

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
GROUP 1.....	\$ 44.14	16.41
GROUP 2.....	\$ 44.02	16.41
GROUP 3.....	\$ 42.98	16.41
GROUP 4.....	\$ 41.80	16.41
GROUP 5.....	\$ 36.34	16.41
GROUP 6.....	\$ 45.14	16.41
GROUP 7.....	\$ 45.14	16.41

OPERATING ENGINEER CLASSIFICATIONS

GROUP 1 - Air Compressor on Steel Erection; Barrier Moving Machine; Boiler Operator on Compressor or Generator when mounted on a Rig; Cableway; Combination Concrete Mixer & Tower; Concrete Plant (over 4 yd. Capacity); Concrete Pump; Crane (All Types, Including Boom Truck, Cherry Picker); Crane-Compact, Track or Rubber over 4,000 lbs. capacity; Cranes-Self Erecting, Stationary, Track or Truck (All

Configurations); Derrick; Dragline; Dredge (Dipper, Clam or Suction); Elevating Grader or Euclid Loader; Floating Equipment (All Types); Gradall; Helicopter Crew (Operator-Hoist or Winch); Hoe (all types); Hoisting Engine on Shaft or Tunnel Work; Hydraulic Gantry (Lifting System); Industrial-Type Tractor; Jet Engine Dryer (D8 or D9) Diesel Tractor; Locomotive (Standard Gauge); Maintenance Operator Class A; Mixer, Paving (Single or Double Drum); Mucking Machine; Multiple Scraper; Piledriving Machine (All Types); Power Shovel; Prentice Loader; Quad 9 (Double Pusher); Rail Tamper (with auto lifting & aligning device); Refrigerating Machine (Freezer Operation); Rotary Drill, on Caisson work; Rough Terrain Fork Lift with Winch/Hoist; Side-Boom; Slip-Form Paver; Tower Derrick; Tree Shredder; Trench Machine (Over 24" wide); Truck Mounted Concrete Pump; Tug Boat; Tunnel Machine and/or Mining Machine; and Wheel Excavator.

GROUP 2 - Asphalt Paver; Automatic Subgrader Machine, Self-Propelled (CMI Type); Bobcat Type and/or Skid Steer Loader with Hoe Attachment Greater than 7,000 lbs.; Boring Machine More than 48"; Bulldozer; Endloader; Hydro Milling Machine; Horizontal Directional Drill (over 50,000 ft. lbs. thrust); Kolman-type Loader (production type-Dirt); Lead Greaseman; Lighting & Traffic Signal Installation Equipment (includes all groups or classifications); Material Transfer Equipment (Shuttle Buggy) Asphalt; Pettibone-Rail Equipment; Power Grader; Power Scraper; Push Cat; Rotomill (all), Grinders & Planers of All types; Trench Machine (24" wide & under); and Vermeer type Concrete Saw.

GROUP 3 - A-Frame; Air Compressor on Tunnel Work (low pressure); Asphalt Plant Engineer; Bobcat-type and/or Skid Steer Loader with or without Attachments; Highway Drills (all types); Locomotive (narrow gauge); Material Hoist/Elevator; Mixer, Concrete (more than one bag capacity); Mixer, one bag capacity (Side Loader); Power Boiler (Over 15 lbs. Pressure) Pump Operator installing & operating Well Points; Pump (4" & over discharge); Railroad Tie Inserter/Remover; Roller, Asphalt; Rotovator (lime soil stabilizer); Switch & Tie Tampers (without lifting & aligning device); Utility Operator (Small equipment); and Welding Machines; Articulating/straight bed end dumps if assigned (minus \$4.00 per hour).

GROUP 4 - Backfiller; Ballast Re-locator; Bars, Joint & Mesh Installing Machine; Batch Plant; Boring Machine Operator (48" or less); Bull Floats; Burlap & Curing Machine;

Concrete Plant (capacity 4 yd. & under); Concrete Saw (Multiple); Conveyor (Highway); Crusher; Deckhand; Farm-type Tractor with attachments (highway); Finishing Machine; Fireperson, Floating Equipment (all types); Fork Lift; Form Trencher; Hydro Hammer expect masonry; Hydro Seeder; Pavement Breaker; Plant Mixer; Post Driver; Post Hole Digger (Power Auger); Power Brush Burner; Power Form Handling Equipment; Road Widening Trencher; Roller (Brick, Grade & Macadam); Self-Propelled Power Spreader; Self-Propelled Power Subgrader; Steam Fireperson; Tractor (Pulling Sheepfoot, Roller or Grader); and Vibratory Compactor with Integral Power.

GROUP 5 - Compressor (Portable, Sewer, Heavy & Highway); Drum Fireperson (Asphalt Plant); Generator; Masonary Forklift; Inboard-Outboard Motor Boat Launch; Oil Heater (asphalt plant); Oiler/Helper; Power Driven Heater; Power Sweeper & Scrubber; Pump (under 4" discharge); Signalperson; Tire Repairperson; VAC/ALLS; Cranes - Compact, track or rubber under 4,000 pound capacity; fueling and greasing; and Chainmen.

GROUP 6 - Master Mechanic & Boom from 150 to 180.

GROUP 7 - Boom from 180 and over.

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 ENGI0066-023 06/01/2023

COLUMBIANA, MAHONING & TRUMBULL COUNTIES

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
ASBESTOS; HAZARDOUS/TOXIC WASTE PROJECTS		
GROUP 1 - A & B.....	\$ 44.63	24.30
ASBESTOS; HAZARDOUS/TOXIC WASTE PROJECTS		
GROUP 2 - A & B.....	\$ 44.30	24.30
ASBESTOS; HAZARDOUS/TOXIC WASTE PROJECTS		
GROUP 3 - A & B.....	\$ 38.47	24.30
ASBESTOS; HAZARDOUS/TOXIC WASTE PROJECTS		
GROUP 4 - A & B.....	\$ 34.52	24.30
ASBESTOS; HAZARDOUS/TOXIC WASTE PROJECTS		

GROUP 5 - A & B.....	\$ 31.13	24.30
HAZARDOUS/TOXIC WASTE PROJECTS		
GROUP 1 - C & D.....	\$ 40.91	24.30
HAZARDOUS/TOXIC WASTE PROJECTS		
GROUP 2 - C & D.....	\$ 40.61	24.30
HAZARDOUS/TOXIC WASTE PROJECTS		
GROUP 3 - C & D.....	\$ 35.27	24.30
HAZARDOUS/TOXIC WASTE PROJECTS		
GROUP 4 - C & D.....	\$ 31.65	24.30
HAZARDOUS/TOXIC WASTE PROJECTS		
GROUP 5 - C & D.....	\$ 28.53	24.30
ALL OTHER WORK		
GROUP 1.....	\$ 37.19	24.30
ALL OTHER WORK		
GROUP 2.....	\$ 36.92	24.30
ALL OTHER WORK		
GROUP 3.....	\$ 32.06	24.30
ALL OTHER WORK		
GROUP 4.....	\$ 28.77	24.30
ALL OTHER WORK		
GROUP 5.....	\$ 25.94	24.30

GROUP 1 - Rig, Pile Driver or Caisson Type; & Rig, Pile Hydraulic Unit Attached

GROUP 2 - Asphalt Heater Planer; Backfiller with Drag Attachment; Backhoe; Backhoe with Shear attached; Backhoe-Rear Pivotal Swing; Batch Plant-Central Mix Concrete; Batch Plant, Portable concrete; Berm Builder-Automatic; Boat Derrick; Boat-Tug; Boring Machine Attached to Tractor; Bullclam; Bulldozer; C.M.I. Road Builder & Similar Type; Cable Placer & Layer; Carrier-Straddle; Carryall-Scraper or Scoop; Chicago Boom; Compactor with Blade Attached; Concrete Saw (Vermeer or similar type); Concrete Spreader Finisher; Combination, Bidwell Machine; Crane; Crane-Electric Overhead; Crane-Rough Terrain; Crane-Side Boom; Crane-Truck; Crane-Tower; Derrick-Boom; Derrick-Car; Digger-Wheel (Not trencher or road widener); Double Nine; Drag Line; Dredge; Drill-Kenny or Similar Type; Easy Pour Median Barrier Machine (or similar type); Electromatic; Frankie Pile; Gradall; Grader; Gurry; Self-Propelled; Heavy Equipment Robotics Operator/Mechanic; Hoist-Monorail;

Hoist-Stationary & Mobile Tractor; Hoist, 2 or 3 drum;  
Horizontal Directional Drill Operator; Jackall; Jumbo  
Machine; Kocal & Kuhlman; Land-Seagoing Vehicle; Loader,  
Elevating; Loader, Front End; Loader, Skid Steer;  
Locomotive; Mechanic/Welder; Metro Chip Harvester with  
Boom; Mucking Machine; Paver-Asphalt Finishing Machine;  
Paver-Road Concrete; Paver-Slip Form (C.M.I. or similar);  
Place Crete Machine with Boom; Post Driver (Carrier  
mounted); Power Driven Hydraulic Pump & Jack (When used in  
Slip Form or Lift Slab Construction); Pump Crete Machine;  
Regulator-Ballast; Hydraulic Power Unit not attached to Rig  
for Pile Drillings; Rigs-Drilling; Roto Mill or similar  
Full Lane (8' Wide & Over); Roto Mill or similar type  
(Under 8'); Shovel; Slip Form Curb Machine; Speedwing;  
Spikemaster; Stonecrusher; Tie Puller & Loader; Tie Tamper;  
Tractor-Double Boom; Tractor with Attachments; Truck-Boom;  
Truck-Tire; Trench Machine; Tunnel Machine (Mark 21 Java  
or similar); & Whirley (or similar type)

GROUP 3 - Asphalt Plant; Bending Machine (Pipeline or similar  
type); Boring machine, Motor Driven; Chip Harvester  
without Boom; Cleaning Machine, Pipeline Type; Coating  
Machine, Pipeline Type; Compactor; Concrete Belt Placer;  
Concrete Finisher; Concrete Planer or Asphalt; Concrete  
Spreader; Elevator; Fork Lift (Home building only); Fork  
lift & Lulls; Fork Lift Walk Behind (Hoisting over 1 buck  
high); Form Line Machine; Grease Truck operator; Grout  
Pump; Gunnite Machine; Horizontal Directional Drill  
Locator; Single Drum Hoist with or without Tower; Huck  
Bolting Machine; Hydraulic Scaffold (Hoisting building  
materials); Paving Breaker (Self-propelled or Ridden);  
Pipe Dream; Pot Fireperson (Power Agitated); Refrigeration  
Plant; Road Widener; Roller; Sasgen Derrick; Seeding  
Machine; Soil Stabilizer (Pump type); Spray Cure Machine,  
Self-Propelled; Straw Blower Machine; Sub-Grader; Tube  
Finisher or Broom C.M.I. or similar type; & Tugger Hoist

GROUP 4 - Air Curtain Destructor & Similar Type; Batch  
Plant-Job Related; Boiler Operator; Compressor; Conveyor;  
Curb Builder, self-propelled; Drill Wagon; Generator Set;  
Generator-Steam; Heater-Portable Power; Hydraulic  
Manipulator Crane; Jack-Hydraulic Power driven;  
Jack-Hydraulic (Railroad); Ladavator; Minor Machine  
Operator; Mixer-Concrete; Mulching Machine; Pin Puller;  
Power Broom; Pulverizer; Pump; Road Finishing Machine (Pull  
Type); Saw-Concrete-Self-Propelled (Highway Work); Signal  
Person; Spray Cure Machine-Motor Powered; Stump Cutter;  
Tractor; Trencher Form; Water Blaster; Steam Jenny;

Syphon; Vibrator-Gasoline; & Welding Machine

GROUP 5 - Brakeperson; Fireperson; & Oiler

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IRON0017-002 05/01/2024

ASHTABULA (North of Route 6, starting at the Geauga County Line, proceeding east to State Route 45), CUYAHOGA, ERIE (Eastern 2/3), GEAUGA, HURON (East of a line drawn from the north border through Monroeville & Willard), LAKE, LORAIN, MEDINA (North of Old Rte. #224), PORTAGE (West of a line from Middlefield to Shalersville to Deerfield), and SUMMIT (North of Old Rte. #224, including city limits of Barberton) COUNTIES

	Rates	Fringes
IRONWORKER		
Ornamental, Reinforcing, & Structural.....	\$ 36.83	29.01

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IRON0017-010 05/01/2024

ASHTABULA (Eastern part from Lake Erie on the north to route #322 on the south to include Conneaut, Kingsville, Sheffield, Denmark, Dorset, Cherry Valley, Wayne, Monroe, Pierpont, Richmond, Andover & Williamsfield Townships)

	Rates	Fringes
IRONWORKER		
Structural, including metal building erection & Reinforcing.....	\$ 36.83	29.01

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IRON0044-001 06/01/2025

ADAMS (Western Part), BROWN, BUTLER (Southern Part), CLERMONT, CLINTON (South of a line drawn from Blanchester to Lynchburg), HAMILTON, HIGHLAND (Excluding eastern one-fifth & portion of county inside lines drawn from Marshall to Lynchburg from the northern county line through E. Monroe to Marshall) and WARREN (South of a line drawn from Blanchester through Morrow to the west county line) COUNTIES

	Rates	Fringes
IRONWORKER, REINFORCING.....	\$ 38.27	23.90

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IRON0044-002 06/01/2025

CLINTON (South of a line drawn from Blanchester to Lynchburg),  
HAMILTON, HIGHLAND (Excluding eastern one-fifth & portion of  
county inside lines drawn from Marshall to Lynchburg from the  
northern county line through E. Monroe to Marshall) & WARREN  
(South of a line drawn from Blanchester through Morrow to the  
west county line)

	Rates	Fringes
IRONWORKER		
Fence Erector.....	\$ 35.88	23.90
Ornamental; Structural.....	\$ 37.77	23.90

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IRON0055-003 07/01/2024

CRAWFORD (Area Between lines drawn from where Hwy #598 & #30  
meet through N. Liberty to the northern border & from said Hwy  
junction point due west to the border), DEFIANCE (S. of a line  
drawn from where Rte. #66 meets the northern line through  
Independence to the eastern county border), ERIE (Western 1/3),  
FULTON, HANCOCK, HARDIN (North of a line drawn from Maysville  
to a point 4 miles south of the northern line on the eastern  
line), HENRY, HURON (West of a line drawn from the northern  
border through Monroeville & Willard), LUCAS, OTTAWA, PUTNAM  
(East of a line drawn from the northern border down through  
Miller City to where #696 meets the southern border), SANDUSKY,  
SENECA, WILLIAMS (East of a line drawn from Pioneer through  
Stryker to the southern border), WOOD & WYANDOT (North of Rte.  
#30)

	Rates	Fringes
IRONWORKER		
Fence Erector.....	\$ 26.40	24.62
Flat Road Mesh.....	\$ 29.77	21.30
Tunnels & Caissons Under Pressure.....	\$ 29.77	21.30
All Other Work.....	\$ 35.50	29.20

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IRON0147-002 06/01/2025

ALLEN (Northern half), DEFIANCE (Northern part, excluding south of a line drawn from where Rte. #66 meets the northern line through Independence to the eastern county border), MERCER (Northern half), PAULDING, PUTNAM (Western part, excluding east of a line drawn from the northern border down through Miller City to where #696 meets the southern border), VAN WERT, and WILLIAMS (Western part, excluding east of a line drawn from Pioneer through Stryker to the southern border) COUNTIES

	Rates	Fringes
IRONWORKER.....	\$ 38.00	26.39
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IRON0172-002 06/01/2025		

CHAMPAIGN (Eastern one-third), CLARK (Eastern one-fourth), COSHOCTON (West of a line beginning at the northwestern county line going through Walhonding & Tunnel Hill to the southern county line), CRAWFORD (South of Rte. #30), DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, HARDIN (Excluding a line drawn from Roundhead to Maysville), HIGHLAND (Eastern one-fifth), HOCKING, JACKSON (Northern half), KNOX, LICKING, LOGAN (Eastern one-third), MADISON, MARION, MORROW, MUSKINGUM (West of a line starting at Adams Mill going to Adamsville & going from Adamsville through Blue Rock to the southern border), PERRY, PICKAWAY, PIKE (Northern half), ROSS, UNION, VINTON and WYANDOT (South of Rte. #30) COUNTIES

	Rates	Fringes
IRONWORKER.....	\$ 40.87	23.15
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IRON0207-004 06/01/2025		

ASHTABULA (Southern part starting at the Geauga County line), COLUMBIANA (E. of a line from Damascus to Highlandtown), MAHONING (N. of Old Route #224), PORTAGE (E. of a line from Middlefield to Shalersville to Deerfield) & TRUMBULL

	Rates	Fringes
IRONWORKER		
Layout; Sheeter.....	\$ 37.26	28.16
Ornamental; Reinforcing;		

Structural.....\$ 36.26 28.16

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IRON0290-002 06/01/2025

ALLEN (Southern half), AUGLAIZE, BUTLER (North of a line drawn from east to the west county line going through Oxford, Darrtown & Woodsdale), CHAMPAIGN (Excluding east of a line drawn from Catawla to the point where #68 intersects the northern county line), CLARK (Western two-thirds), CLINTON (Excluding south of a line drawn from Blanchester to Lynchburg), DARKE, GREENE, HIGHLAND (Inside lines drawn from Marshall to Lynchburg & from the northern county line through East Monroe to Marshall), LOGAN (West of a line drawn from West Liberty to where the northern county line meets the western county line of Hardin), MERCER (Southern half), MIAMI, MONTGOMERY, PREBLE, SHELBY & WARREN (Excluding south of a line drawn from Blanchester through Morrow to the western county line) COUNTIES

Rates Fringes

IRONWORKER.....\$ 37.39 25.35

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IRON0549-003 12/01/2022

BELMONT, GUERNSEY, HARRISON, JEFFERSON, MONROE & MUSKINGUM (Excluding portion west of a line starting at Adams Mill going to Adamsville and going from Adamsville through Blue Rock to the south border)

Rates Fringes

IRONWORKER.....\$ 35.19 25.66

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IRON0550-004 05/01/2024

ASHLAND, CARROLL, COLUMBIANA (W. of a line from Damascus to Highlandtown), COSHOCTON (E. of a line beginning at NW Co. line going through Walhonding & Tunnel Hill to the South Co. line), HOLMES, HURON (S. of Old Rte. #224), MAHONING (S. of Old Rte. #224), MEDINA (S. of Old Rte. #224), PORTAGE (S. of Old Rte. #224), RICHLAND, STARK, SUMMIT (S. of Old Rte. #224, Excluding city limits of Barberton), TUSCARAWAS, & WAYNE

Rates Fringes

Ironworkers:Structural,  
Ornamental and Reinforcing.....\$ 34.70 22.88

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IRON0769-004 06/01/2025

ADAMS (Eastern Half), GALLIA, JACKSON (Southern Half), LAWRENCE  
& SCIOTO

	Rates	Fringes
IRONWORKER.....	\$ 39.70	29.59

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IRON0787-003 06/01/2025

ATHENS, MEIGS, MORGAN, NOBLE, and WASHINGTON COUNTIES

	Rates	Fringes
IRONWORKER.....	\$ 36.10	24.65

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LABO0265-008 05/01/2024

	Rates	Fringes
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LABORER

ASHTABULA, ERIE, HURON, LORAIN, LUCAS, MAHONING, MEDINA, OTTAWA, PORTAGE, SANDUSKY, STARK, SUMMIT, TRUMBULL & WOOD COUNTIES		
GROUP 1.....	\$ 35.95	14.45
GROUP 2.....	\$ 36.12	14.45
GROUP 3.....	\$ 36.45	14.45
GROUP 4.....	\$ 36.90	14.45
CUYAHOGA AND GEAUGA COUNTIES ONLY: SEWAGE PLANTS, WASTE PLANTS, WATER TREATMENT FACILITIES, PUMPING STATIONS, & ETHANOL PLANTS		
CONSTRUCTION.....	\$ 38.56	14.45
CUYAHOGA, GEAUGA & LAKE COUNTIES		
GROUP 1.....	\$ 37.18	14.45
GROUP 2.....	\$ 37.35	14.45
GROUP 3.....	\$ 37.68	14.45

GROUP 4.....	\$ 38.13	14.45
REMAINING COUNTIES OF OHIO		
GROUP 1.....	\$ 35.52	14.45
GROUP 2.....	\$ 35.69	14.45
GROUP 3.....	\$ 36.02	14.45
GROUP 4.....	\$ 36.47	14.45

LABORER CLASSIFICATIONS

GROUP 1 - Asphalt Laborer; Carpenter Tender; Concrete Curing Applicator; Dump Man (Batch Truck); Guardrail and Fence Installer; Joint Setter; Laborer (Construction); Landscape Laborer; Mesh Handlers & Placer; Right-of-way Laborer; Riprap Laborer & Grouter; Scaffold Erector; Seal Coating; Surface Treatment or Road Mix Laborer; Sign Installer; Slurry Seal; Utility Man; Bridge Man; Handyman; Waterproofing Laborer; Flagperson; Hazardous Waste (level D); Diver Tender; Zone Person & Traffic Control

GROUP 2 - Asphalt Raker; Concrete Puddler; Kettle Man Pipeline); Machine Driven Tools (Gas, Electric, Air); Mason Tender; Brick Paver; Mortar Mixer; Power Buggy or Power Wheelbarrow; Paint Striper; Sheeting & Shoring Man; Surface Grinder Man; Plastic Fusing Machine Operator; Pug Mill Operator; & Vacuum Devices (wet or dry); Rodding Machine Operator; Diver; Screwman or Paver; Screed Person; Water Blast, Hand Held Wand; Pumps 4" & Under (Gas, Air or Electric) & Hazardous Waste (level C); Air Track and Wagon Drill; Bottom Person; Cofferdam (below 25 ft. deep); Concrete Saw Person; Cutting with Burning Torch; Form Setter; Hand Spiker (Railroad); Pipelayer; Tunnel Laborer (without air) & Caisson; Underground Person (working in Sewer and Waterline, Cleaning, Repairing & Reconditioning); Sandblaster Nozzle Person; & Hazardous Waste (level B)

GROUP 3 - Blaster; Mucker; Powder Person; Top Lander; Wrencher (Mechanical Joints & Utility Pipeline); Yarner; Hazardous Waste (level A); Concrete Specialist; Concrete Crew in Tunnels (With Air-pressurized - \$1.00 premium); Curb Setter & Cutter; Grade Checker; Utility Pipeline Tapper; Waterline; and Caulker

GROUP 4 - Miner (With Air-pressurized - \$1.00 premium); & Guniting Nozzle Person

TUNNEL LABORER WITH AIR-PRESSURIZED ADD \$1.00 TO BASE RATE

SIGNAL PERSON WILL RECEIVE THE RATE EQUAL TO THE RATE PAID

THE LABORER CLASSIFICATION FOR WHICH HE OR SHE IS SIGNALING.

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PAIN0006-002 05/01/2023

ASHTABULA, CUYAHOGA, GEAUGA, LAKE, LORAIN, PORTAGE (N. of the East-West Turnpike) & SUMMIT (N. of the East-West Turnpike)

	Rates	Fringes
PAINTER		
COMMERCIAL NEW WORK; REMODELING; & RENOVATIONS		
GROUP 1.....	\$ 30.75	18.95
GROUP 2.....	\$ 31.15	18.95
GROUP 3.....	\$ 31.45	18.95
GROUP 4.....	\$ 37.01	18.95
COMMERCIAL REPAINT		
GROUP 1.....	\$ 29.25	18.95
GROUP 2.....	\$ 29.65	18.95
GROUP 3.....	\$ 29.95	18.95

PAINTER CLASSIFICATIONS - COMMERCIAL NEW WORK; REMODELING; & RENOVATIONS

GROUP 1 - Brush; & Roller

GROUP 2 - Sandblasting & Buffing

GROUP 3 - Spray Painting; Closed Steel Above 55 feet; Bridges & Open Structural Steel; Tanks - Water Towers; Bridge Painters; Bridge Riggers; Containment Builders

GROUP 4 - Bridge Blaster

PAINTER CLASSIFICATIONS - COMMERCIAL REPAINT

GROUP 1 - Brush; & Roller

GROUP 2 - Sandblasting & Buffing

GROUP 3 - Spray Painting

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PAIN0007-002 07/01/2025

FULTON, HENRY, LUCAS, OTTAWA (Excluding Allen, Bay, Bono,

Catawba Island, Clay Center, Curtice, Danbury, Eagle Beach, Elliston, Elmore, Erie, Fishback, Gem Beach & Genova) & WOOD

	Rates	Fringes
PAINTER		
NEW COMMERCIAL WORK		
GROUP 1.....	\$ 33.66	23.88
GROUP 2.....	\$ 34.66	23.88
GROUP 3.....	\$ 34.66	23.88
GROUP 4.....	\$ 34.66	23.88
GROUP 5.....	\$ 34.66	23.88
GROUP 6.....	\$ 34.66	23.88
GROUP 7.....	\$ 34.66	23.88
GROUP 8.....	\$ 34.66	23.88
GROUP 9.....	\$ 34.66	23.88

REPAINT IS 90% OF JR

PAINTER CLASSIFICATIONS

GROUP 1 - Brush; Spray & Sandblasting Pot Tender

GROUP 2 - Refineries & Refinery Tanks; Surfaces 30 ft. or over where material is applied to or labor performed on above ground level (exterior), floor level (interior)

GROUP 3 - Swing Stage & Chair

GROUP 4 - Lead Abatement

GROUP 5 - All Methods of Spray

GROUP 6 - Solvent-Based Catalized Epoxy Materials of 2 or More Component Materials, to include Solvent-Based Conversion Varnish (excluding water based)

GROUP 7 - Spray Solvent Based Material; Sand & Abrasive Blasting

GROUP 8 - Towers; Tanks; Bridges; Stacks Over 30 Feet

GROUP 9 - Epoxy Spray (excluding water based)

BUTLER COUNTY

	Rates	Fringes
PAINTER		
GROUP 1.....	\$ 21.95	10.20
GROUP 2.....	\$ 25.30	10.20
GROUP 3.....	\$ 25.80	10.20
GROUP 4.....	\$ 26.05	10.20
GROUP 5.....	\$ 26.30	10.20

PAINTER CLASSIFICATIONS

GROUP 1: Bridge Equipment Tender; Bridge/Containment Builder

GROUP 2: Brush & Roller

GROUP 3: Spray

GROUP 4: Sandblasting; & Waterblasting

GROUP 5: Elevated Tanks; Steeplejack Work; Bridge; & Lead Abatement

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PAIN0012-010 05/01/2019

BROWN, CLERMONT, CLINTON, HAMILTON & WARREN

	Rates	Fringes
PAINTER		
HEAVY & HIGHWAY BRIDGES- GUARDRAILS-LIGHTPOLES- STRIPING		
Bridge Equipment Tender and Containment Builder....	\$ 21.95	10.20
Bridges when highest point of clearance is 60 feet or more; & Lead Abatement Projects.....	\$ 26.30	10.20
Brush & Roller.....	\$ 25.30	10.20
Sandblasting & Hopper Tender; Water Blasting.....	\$ 26.05	10.20
Spray.....	\$ 25.80	10.20

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PAIN0093-001 12/01/2024

ATHENS, GUERNSEY, HOCKING, MONROE, MORGAN, NOBLE and  
WASHINGTON COUNTIES

	Rates	Fringes
PAINTER		
Bridges; Locks; Dams; Tension Towers; & Energized Substations.....	\$ 36.44	24.46
Power Generating Facilities..	\$ 33.29	24.46

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PAIN0249-002 05/01/2025

CLARK, DARKE, GREENE, MIAMI, MONTGOMERY & PREBLE

	Rates	Fringes
PAINTER		
GROUP 1 - Brush & Roller....	\$ 29.15	13.97
GROUP 2 - Swing, Scaffold Bridges; Structural Steel; Open Acid Tank; High Tension Electrical Equipment; & Hot Pipes.....	\$ 33.09	13.97
GROUP 3 - Spray; Sandblast; Steamclean; Lead Abatement.....	\$ 29.90	13.97
GROUP 4 - Steeplejack Work..	\$ 30.10	13.97
GROUP 5 - Coal Tar.....	\$ 30.65	13.97
GROUP 6 - Bridge Equipment Tender & or Containment Builder.....	\$ 37.86	13.97
GROUP 7 - Tanks, Stacks & Towers.....	\$ 33.86	13.97
GROUP 8 - Bridge Blaster, Rigger.....	\$ 40.86	13.97

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PAIN0356-002 09/01/2009

KNOX, LICKING, MUSKINGUM, and PERRY

	Rates	Fringes
PAINTER		
Bridge Equipment Tenders and Containment Builders....	\$ 27.93	7.25

Bridges; Blasters; and Riggers.....	\$ 34.60	7.25
Brush and Roller.....	\$ 20.93	7.25
Sandblasting; Steam Cleaning; Waterblasting; and Hazardous Work.....	\$ 25.82	7.25
Spray.....	\$ 21.40	7.25
Structural Steel and Swing Stage.....	\$ 25.42	7.25
Tanks; Stacks; and Towers...	\$ 28.63	7.25

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PAIN0438-002 12/01/2023

BELMONT, HARRISON and JEFFERSON COUNTIES

	Rates	Fringes
PAINTER		
Bridges, Locks, Dams, Tension Towers & Energized Substations.....	\$ 36.09	19.49
Power Generating Facilities..	\$ 32.94	19.49

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PAIN0476-001 06/01/2025

COLUMBIANA, MAHONING, and TRUMBULL COUNTIES

	Rates	Fringes
PAINTER		
GROUP 1.....	\$ 30.64	18.36
GROUP 2.....	\$ 40.27	18.36
GROUP 3.....	\$ 40.27	18.36
GROUP 4.....	\$ 31.14	18.36
GROUP 5.....	\$ 31.29	18.36
GROUP 6.....	\$ 35.27	18.36
GROUP 7.....	\$ 32.64	18.36

PAINTER CLASSIFICATIONS:

GROUP 1: Painters, Brush & Roller

GROUP 2: Bridges

GROUP 3: Structural Steel

GROUP 4: Spray, Except Bar Joist/Deck

GROUP 5: Epoxy/Mastic; Spray- Bar Joist/Deck; Working Above 50 Feet; and Swingstages

GROUP 6: Tanks; Sandblasting

GROUP 7: Towers; Stacks

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PAIN0555-002 01/01/2025

ADAMS, HIGHLAND, JACKSON, PIKE & SCIOTO

	Rates	Fringes
PAINTER		
GROUP 1.....	\$ 33.32	21.54
GROUP 2.....	\$ 35.02	21.54
GROUP 3.....	\$ 36.72	21.54
GROUP 4.....	\$ 40.03	21.54

PAINTER CLASSIFICATIONS

GROUP 1 - Containment Builder

GROUP 2 - Brush; Roller; Power Tools, Under 40 feet

GROUP 3 - Sand Blasting; Spray; Steam Cleaning; Pressure Washing; Epoxy & Two Component Materials; Lead Abatement; Hazardous Waste; Toxic Materials; Bulk & Storage Tanks of 25,000 Gallon Capacity or More; Elevated Tanks

GROUP 4 - Stacks; Bridges

---

PAIN0639-001 05/01/2011

	Rates	Fringes
Sign Painter & Erector.....	\$ 20.61	3.50+a+b+c

FOOTNOTES: a. 7 Paid Holidays: New Year's Day; Memorial Day; July 4th; Labor Day; Thanksgiving Day; Christmas Day & 1 Floating Day

b. Vacation Pay: After 1 year's service - 5 days' paid vacation; After 2, but less than 10 years' service - 10 days' paid vacation; After 10, but less than 20 years' service - 15 days' paid vacation; After 20 years' service - 20 days' paid vacation

c. Funeral leave up to 3 days maximum paid leave for death of mother, father, brother, sister, spouse, child, mother-in-law, father-in-law, grandparent and inlaw provided employee attends funeral

---

PAIN0788-002 06/01/2024

ASHLAND, CRAWFORD, ERIE, HANCOCK, HURON, MARION, MORROW, OTTAWA (Allen, Bay, Bono, Catawba Island, Clay Center, Curtice, Danbury, Eagle Beach, Elliston, Elmore, Erie, Fishback, Gem Beach & Genoa), RICHLAND, SANDUSKY, SENECA & WYANDOT

	Rates	Fringes
PAINTER		
Brush & Roller.....	\$ 29.13	17.52
Structural Steel.....	\$ 30.73	17.52

WINTER REPAINT: Between December 1 to March 31 - 90%JR

\$.50 PER HOUR SHALL BE ADDED TO THE RATE OF PAY FOR THE CLASSIFICATION OF WORK:

While working swingstage, boatswain chair, needle beam and horizontal cable. While operating sprayguns, sandblasting, cobblasting and high pressure waterblasting (4000psi).

\$1.00 PER HOUR SHALL BE ADDED TO THE RATE OF PAY FOR THE CLASSIFICATION OF WORK:

For the application of catalized epoxy, including latex epoxy that is deemed hazardous, lead abatement, or for work or material where special precautions beyond normal work duties must be taken. For working on stacks, tanks, and towers over 40 feet in height.

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PAIN0813-005 12/01/2008

GALLIA, LAWRENCE, MEIGS & VINTON

	Rates	Fringes
PAINTER		
Base Rate.....	\$ 24.83	10.00
Bridges, Locks, Dams &		

Tension Towers.....\$ 27.83 10.00

---

PAIN0841-001 07/01/2025

MEDINA, PORTAGE (South of and including Ohio Turnpike), and  
SUMMIT (South of and including Ohio Turnpike) COUNTIES

	Rates	Fringes
Painters:		
GROUP 1.....	\$ 31.93	18.15
GROUP 2.....	\$ 32.58	18.15
GROUP 3.....	\$ 32.68	18.15
GROUP 4.....	\$ 32.78	18.15
GROUP 5.....	\$ 33.18	18.15
GROUP 6.....	\$ 38.60	18.15
GROUP 7.....	\$ 33.18	18.15

PAINTER CLASSIFICATIONS:

GROUP 1 - Brush, Roller & Paperhanger

GROUP 2 - Epoxy Application

GROUP 3 - Swing Scaffold, Bosum Chair, & Window Jack

GROUP 4 - Spray Gun Operator of Any & All Coatings

GROUP 5 - Sandblast, Painting of Standpipes, etc. from  
Scaffolds, Bridge Work and/or Open Structural Steel,  
Standpipes and/or Water Towers

GROUP 6 - Public & Commerce Transportation, Steel or  
Galvanized, Bridges, Tunnels & Related Support Items  
(concrete)

GROUP 7 - Synthetic Exterior, Drywall Finisher and/or Taper,  
Drywall Finisher and Follow-up Man Using Automatic Tools

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PAIN0841-002 07/01/2025

CARROLL, COSHOCTON, HOLMES, STARK, TUSCARAWAS & WAYNE

	Rates	Fringes
PAINTER		

Bridges; Towers, Poles & Stacks; Sandblasting Steel; Structural Steel & Metalizing.....	\$ 33.18	18.15
Brush & Roller.....	\$ 31.93	18.15
Spray; Tank Interior & Exterior.....	\$ 32.78	18.15

-----  
PAIN1020-002 07/01/2025

ALLEN, AUGLAIZE, CHAMPAIGN, DEFIANCE, HARDIN, LOGAN, MERCER,  
PAULDING, PUTNAM, SHELBY, VAN WERT, and WILLIAMS COUNTIES

	Rates	Fringes
PAINTER		
Brush & Roller.....	\$ 27.59	18.54
Drywall Finishing & Taping..	\$ 28.34	18.54
Lead Abatement.....	\$ 29.34	18.54
Spray, Sandblasting Pressure Cleaning, & Refinery.....	\$ 28.34	18.54
Swing Stage, Chair, Spiders, & Cherry Pickers...	\$ 27.84	18.54
Wallcoverings.....	\$ 28.34	18.54

All surfaces 40 ft. or over where material is applied to or  
labor performed on, above ground level (exterior), floor  
level (interior) - \$.50 premium

Applying Coal Tar Products - \$1.00 premium

-----  
PAIN1275-002 05/01/2025

DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, MADISON, PICKAWAY, ROSS  
& UNION

	Rates	Fringes
PAINTER		
Bridges.....	\$ 37.26	15.16
Brush; Roller.....	\$ 30.20	15.16
Sandblasting; Steamcleaning; Waterblasting (3500 PSI or		

Over) & Hazardous Work.....	\$ 32.35	15.16
Spray.....	\$ 32.15	15.16
Stacks; Tanks; & Towers.....	\$ 34.46	15.16
Structural Steel & Swing Stage.....	\$ 30.50	15.16

-----  
 PLAS0109-001 06/01/2025

MEDINA, PORTAGE, STARK, and SUMMIT COUNTIES

	Rates	Fringes
PLASTERER.....	\$ 33.00	23.83

-----  
 PLAS0109-003 06/01/2025

CARROLL, HOLMES, TUSCARAWAS, and WAYNE COUNTIES

	Rates	Fringes
PLASTERER.....	\$ 33.00	23.83

-----  
 PLAS0132-002 07/01/2025

BROWN, BUTLER, CLERMONT, HAMILTON, HIGHLAND, WARREN COUNTIES

	Rates	Fringes
PLASTERER.....	\$ 31.35	17.65

-----  
 PLAS0404-002 05/01/2018

ASHTABULA, CUYAHOGA, GEAUGA, AND LAKE COUNTIES

	Rates	Fringes
PLASTERER.....	\$ 29.63	17.11

-----  
 PLAS0404-003 05/01/2018

LORAIN COUNTY

	Rates	Fringes
PLASTERER.....	\$ 28.86	17.11

-----  
 PLAS0526-022 05/01/2018

COLUMBIANA, MAHONING, and TRUMBULL COUNTIES

	Rates	Fringes
PLASTERER.....	\$ 28.86	17.11
-----		
PLAS0526-023 05/01/2018		

BELMONT, HARRISON, and JEFFERSON COUNTIES

	Rates	Fringes
PLASTERER.....	\$ 28.21	17.11
-----		
PLAS0886-001 07/01/2025		

FULTON, HANCOCK, HENRY, LUCAS, PUTNAM, and WOOD COUNTIES

	Rates	Fringes
PLASTERER.....	\$ 36.65	25.60
-----		
PLAS0886-003 07/01/2025		

DEFIANCE, ERIE, HURON, OTTAWA, PAULDING, SANDUSKY, and SENECA

	Rates	Fringes
PLASTERER.....	\$ 36.65	25.60
-----		
PLAS0886-004 07/01/2025		

ALLEN, AUGLAIZE, HARDIN, LOGAN, MERCER, and VAN WERT

	Rates	Fringes
PLASTERER.....	\$ 35.29	23.07
-----		
PLUM0042-002 07/01/2025		

ASHLAND, CRAWFORD, ERIE, HURON, KNOX, LORAIN, MORROW, RICHLAND  
& WYANDOT

	Rates	Fringes
Plumber, Pipefitter, Steamfitter.....	\$ 43.02	26.45

-----  
PLUM0050-002 06/30/2025

DEFIANCE, FULTON, HANCOCK, HENRY, LUCAS, OTTAWA, PAULDING,  
PUTNAM, SANDUSKY, SENECA, WILLIAMS & WOOD

	Rates	Fringes
Plumber, Pipefitter, Steamfitter.....	\$ 51.00	32.56

-----

PLUM0055-003 05/05/2025

ASHTABULA, CUYAHOGA, GEAUGA, LAKE, MEDINA (N. of Rte. #18 &  
Smith Road) & SUMMIT (N. of Rte. #303, including the corporate  
limits of the city of Hudson)

	Rates	Fringes
PLUMBER.....	\$ 44.86	30.03

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PLUM0083-001 07/01/2023

BELMONT & MONROE (North of Rte. #78)

	Rates	Fringes
Plumber and Steamfitter.....	\$ 35.94	37.35

-----

PLUM0094-002 05/01/2025

CARROLL (Northen Half), STARK, and WAYNE COUNTIES

	Rates	Fringes
PLUMBER/PIPEFITTER.....	\$ 47.48	27.14

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PLUM0120-002 05/01/2025

ASHTABULA, CUYAHOGA, GEAUGA, LAKE, LORAIN (the C.E.I. Power  
House in Avon Lake), MEDINA (N. of Rte. #18) & SUMMIT (N. of  
#303)

	Rates	Fringes
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PIPEFITTER.....\$ 49.17 28.55

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PLUM0162-002 06/01/2024

CHAMPAIGN, CLARK, CLINTON, DARKE, FAYETTE, GREENE, MIAMI,  
MONTGOMERY & PREBLE

Rates Fringes

Plumber, Pipefitter,  
Steamfitter.....\$ 43.05 27.18

-----  
PLUM0168-002 06/01/2025

MEIGS, MONROE (South of Rte. #78), MORGAN (South of Rte. #78)  
& WASHINGTON

Rates Fringes

PLUMBER/PIPEFITTER.....\$ 40.92 37.20

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PLUM0189-002 06/01/2024

DELAWARE, FAIRFIELD, FRANKLIN, HOCKING, LICKING, MADISON,  
MARION, PERRY, PICKAWAY, ROSS & UNION

Rates Fringes

Plumber, Pipefitter,  
Steamfitter.....\$ 43.25 26.94

-----  
PLUM0219-002 06/01/2025

MEDINA (Rte. #18 from eastern edge of Medina Co., west to  
eastern corporate limits of the city of Medina, & on the county  
road from the west corporate limits of Medina running due west  
to and through community of Risley to the western edge of  
Medina County - All territory south of this line), PORTAGE, and  
SUMMIT (S. of Rte. #303) COUNTIES

Rates Fringes

Plumber and Steamfitter.....\$ 46.87 28.39

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PLUM0392-002 06/01/2025

BROWN, BUTLER, CLERMONT, HAMILTON & WARREN

	Rates	Fringes
PLUMBER/PIPEFITTER.....	\$ 43.30	27.40

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PLUM0396-001 06/01/2025

COLUMBIANA (Excluding Washington & Yellow Creek Townships & Liverpool Twp. - Secs. 35 & 36 - West of County Road #427), MAHONING and TRUMBULL COUNTIES

	Rates	Fringes
PLUMBER/PIPEFITTER.....	\$ 40.55	29.25

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PLUM0495-002 06/01/2025

CARROLL (Rose, Monroe, Union, Lee, Orange, Perry & Loudon Townships), COLUMBIANA (Washington & Yellow Creek Townships & Liverpool Township, Secs. 35 & 36, West of County Rd. #427), COSHOCTON, GUERNSEY, HARRISON, HOLMES, JEFFERSON, MORGAN (South to State Rte. #78 & from McConnelville west on State Rte. #37 to the Perry County line), MUSKINGUM, NOBLE, and TUSCARAWAS COUNTIES

	Rates	Fringes
Plumber, Pipefitter, Steamfitter.....	\$ 39.32	37.60

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PLUM0577-002 06/01/2025

ADAMS, ATHENS, GALLIA, HIGHLAND, JACKSON, LAWRENCE, PIKE, SCIOTO & VINTON

	Rates	Fringes
Plumber, Pipefitter, Steamfitter.....	\$ 42.65	28.56

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PLUM0776-002 07/01/2025

ALLEN, AUGLAIZE, HARDIN, LOGAN, MERCER, SHELBY and VAN WERT  
COUNTIES

	Rates	Fringes
Plumber, Pipefitter, Steamfitter.....	\$ 42.76	30.81
-----		
TEAM0377-003 05/01/2025		

STATEWIDE, EXCEPT CUYAHOGA, GEAUGA & LAKE

	Rates	Fringes
TRUCK DRIVER		
GROUP 1.....	\$ 34.26	18.85
GROUP 2.....	\$ 35.26	18.85

TRUCK DRIVER CLASSIFICATIONS

GROUP 1 - Asphalt Distributor; Batch; 4- Wheel Service;  
4-Wheel Dump; Oil Distributor & Tandem

GROUP 2 - Tractor-Trailer Combination: Fuel; Pole Trailer;  
Ready Mix; Semi-Tractor; & Asphalt Oil Spraybar Man When  
Operated From Cab; 5 Axles & Over; Belly Dump; End Dump;  
Articulated Dump; Heavy Duty Equipment; Low Boy; & Truck  
Mechanic

-----  
TEAM0436-002 05/01/2025

CUYAHOGA, GEAUGA & LAKE

	Rates	Fringes
TRUCK DRIVER		
GROUP 1.....	\$ 34.92	19.30
GROUP 2.....	\$ 35.73	19.30

GROUP 1: Straight & Dump, Straight Fuel

GROUP 2: Semi Fuel, Semi Tractor, Euclids, Darts, Tank,  
Asphalt Spreaders, Low Boys, Carry-All, Tourna-Rockers,  
Hi-Lifts, Extra Long Trailers, Semi-Pole Trailers, Double  
Hook-Up Tractor Trailers including Team Track & Railroad  
Siding, Semi-Tractor & Tri-Axle Trailer, Tandem Tractor &

Tandem Trailer, Tag Along Trailer, Expandable Trailer or Towing Requiring Road Permits, Ready-Mix (Agitator or Non-Agitator), Bulk Concrete Driver, Dry Batch Truck, Articulated End Dump

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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Note: Executive Order 13658 generally applies to contracts subject to the Davis-Bacon Act that were awarded on or between January 1, 2015 and January 29, 2022, and that have not been renewed or extended on or after January 30, 2022. Executive Order 13658 does not apply to contracts subject only to the Davis-Bacon Related Acts regardless of when they were awarded. If a contract is subject to Executive Order 13658, the contractor must pay all covered workers at least \$13.30 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2025. The applicable Executive Order minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under Executive Order 13658 is available at [www.dol.gov/whd/govcontracts](http://www.dol.gov/whd/govcontracts).

Unlisted classifications needed for work not included within

the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

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The body of each wage determination lists the classifications and wage rates that have been found to be prevailing for the type(s) of construction and geographic area covered by the wage determination. The classifications are listed in alphabetical order under rate identifiers indicating whether the particular rate is a union rate (current union negotiated rate), a survey rate, a weighted union average rate, a state adopted rate, or a supplemental classification rate.

#### Union Rate Identifiers

A four-letter identifier beginning with characters other than ""SU"", ""UAVG"", ?SA?, or ?SC? denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

#### Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE: UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

#### Survey Rate Identifiers

The ""SU"" identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the year of the survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

?SU? wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

#### State Adopted Rate Identifiers

The ""SA"" identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the ?SA? identifier took effect under state law in the state from which the rates were adopted.

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#### WAGE DETERMINATION APPEALS PROCESS

1) Has there been an initial decision in the matter? This can be:

- a) a survey underlying a wage determination
- b) an existing published wage determination
- c) an initial WHD letter setting forth a position on a wage determination matter
- d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to [davisbaconinfo@dol.gov](mailto:davisbaconinfo@dol.gov) or by mail to:

Branch of Wage Surveys  
Wage and Hour Division  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to [BCWD-Office@dol.gov](mailto:BCWD-Office@dol.gov) or by mail to:

Branch of Construction Wage Determinations  
Wage and Hour Division  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to [dba.reconsideration@dol.gov](mailto:dba.reconsideration@dol.gov) or by mail to:

Wage and Hour Administrator  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3) If the decision of the Administrator is not favorable, an

interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210.

**SHEET INDEX**

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SITE PLAN - MATE MARY #1	2
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SITE PLAN - WEIL LOWIS #1	3-5
SITE PLAN - WARGO J #1	6-7
SITE PLAN - CARPENTER ART #1	8-9
SITE PLAN - CARPENTER YOST #1	8-12
DETAILS	13-15

**OHIO DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL & GAS RESOURCES MANAGEMENT**

**LORAIN #11F  
PROJECT  
PLUGGING SOW PLAN SET**

**CONTACT INFORMATION**

OHIO DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL & GAS RESOURCES MANAGEMENT  
2207 REISER AVE. SE  
NEW PHILADELPHIA, OHIO 44663  
PH: (330) 308-0007 FAX: (330) 308-0011



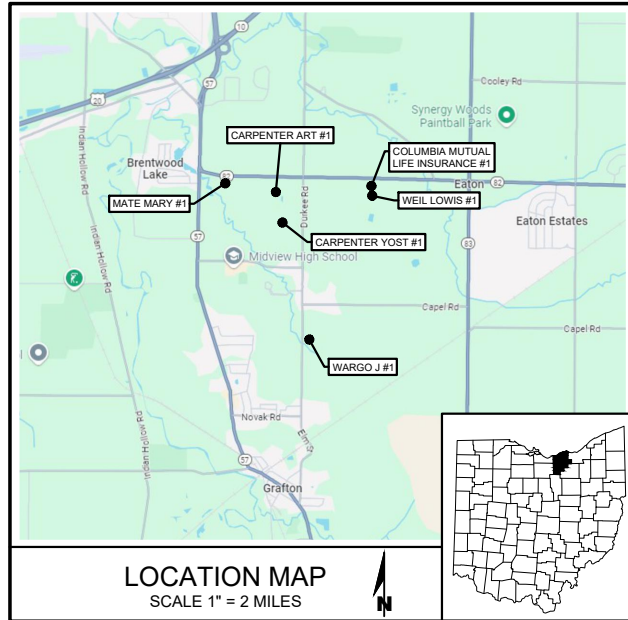
1-800-362-2764

CALL TWO WORKING DAYS BEFORE YOU DIG  
(NON MEMBERS MUST BE CALLED DIRECTLY)

Call Before You Dig

OIL & GAS PRODUCERS UNDERGROUND  
PROTECTION SERVICE (www.ogpups.com)  
1-800-925-0988

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN APPROXIMATELY, BASED EITHER ON REPORTING BY RESPECTIVE OWNERS AND/OR BY FIELD LOCATION. HOWEVER, THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ALL DAMAGES THAT MIGHT OCCUR BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ALL UNDERGROUND UTILITIES. THE CONTRACTOR SHALL MAINTAIN A CURRENT 10 DAY OUPS TICKET DURING THE ENTIRE PROJECT BY CONTACTING OUPS EVERY 10 DAYS.



ORPHAN WELL INFORMATION					
WELL NAME	API NUMBER	COUNTY	MUNICIPALITY	LATITUDE	LONGITUDE
MATE MARY #1	34-093-6-0242	LORAIN	EATON	41.313896°	-82.064705°
COLUMBIA MUTUAL LIFE INSURANCE #1	34-093-2-0039	LORAIN	EATON	41.312903°	-82.039799°
WEIL LOWIS #1	34-093-2-0753	LORAIN	EATON	41.312608°	-82.039720°
WARGO J #1	34-093-2-0032	LORAIN	EATON	41.293029°	-82.049556°
CARPENTER YOST #1	34-093-2-0446	LORAIN	EATON	41.307084°	-82.054014°
CARPENTER ART #1	34-093-2-0018	LORAIN	EATON	41.313059°	-82.055414°

**LEGEND**

<b>EXISTING:</b>		<b>EXISTING:</b>	
VEGITATION BED	TREE LINE	GAS WELL	IRON PIN FOUND
DRIVEWAY	RETAINING WALL	POWER POLE	STORM MANHOLE
OVERHEAD ELECTRIC	CULVERT	WATER VALVE	IRON PIN SET
PROPERTY LINE	RIGHT OF WAY CENTER LINE	WATER HYDRANT	PIN FOUND
EDGE OF PAVEMENT	ELECTRIC	GAS VALVE	GAS STRUCTURE
BUSH LINE	TELEPHONE	TREE/SHRUB	GAS MARKER
RIGHT OF WAY	<b>PROPOSED:</b>	CATCH BASIN	SANITARY MANHOLE
BUILDING	WORK LIMITS	LIGHT POLE	ELECTRIC PEDESTAL
GAS	SILT FENCE	TELE POLE W/ GUY	STEEL POST
WATER	DRIVE OR LOT STONE OVERLAY	WATER METER	
CONTOUR MAJOR	TREE TO BE REMOVED	SIGN	
CONTOUR MINOR		TELEPHONE PEDESTAL	
WOOD FENCE		<b>PROPOSED:</b>	
SANITARY		COMPOSITE MATTING	INLET PROTECTION
STORM SEWER		TIMBER MATTING	
WOVEN WIRE FENCE			
BIKEWAY			
SIDEWALK			
CHAINLINK FENCE			
CONCRETE			

EDIT DATE: 7/2/2025 9:22 AM EDIT BY: KRUSSELL DRAWING FILE: H:\2024\241540\DWG\SHEETS\LORAIN T-1 GROUP 11 - NEW CONR TITLE SHEET\_GROUP-11.DWG



**DIVISION OF OIL & GAS  
RESOURCES MANAGEMENT  
IDLE & ORPHAN WELL PROGRAM**  
<http://oilandgas.ohiodnr.gov>

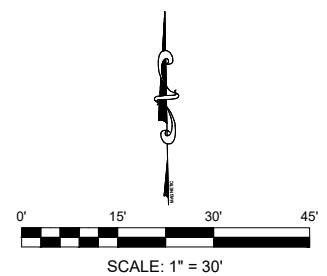
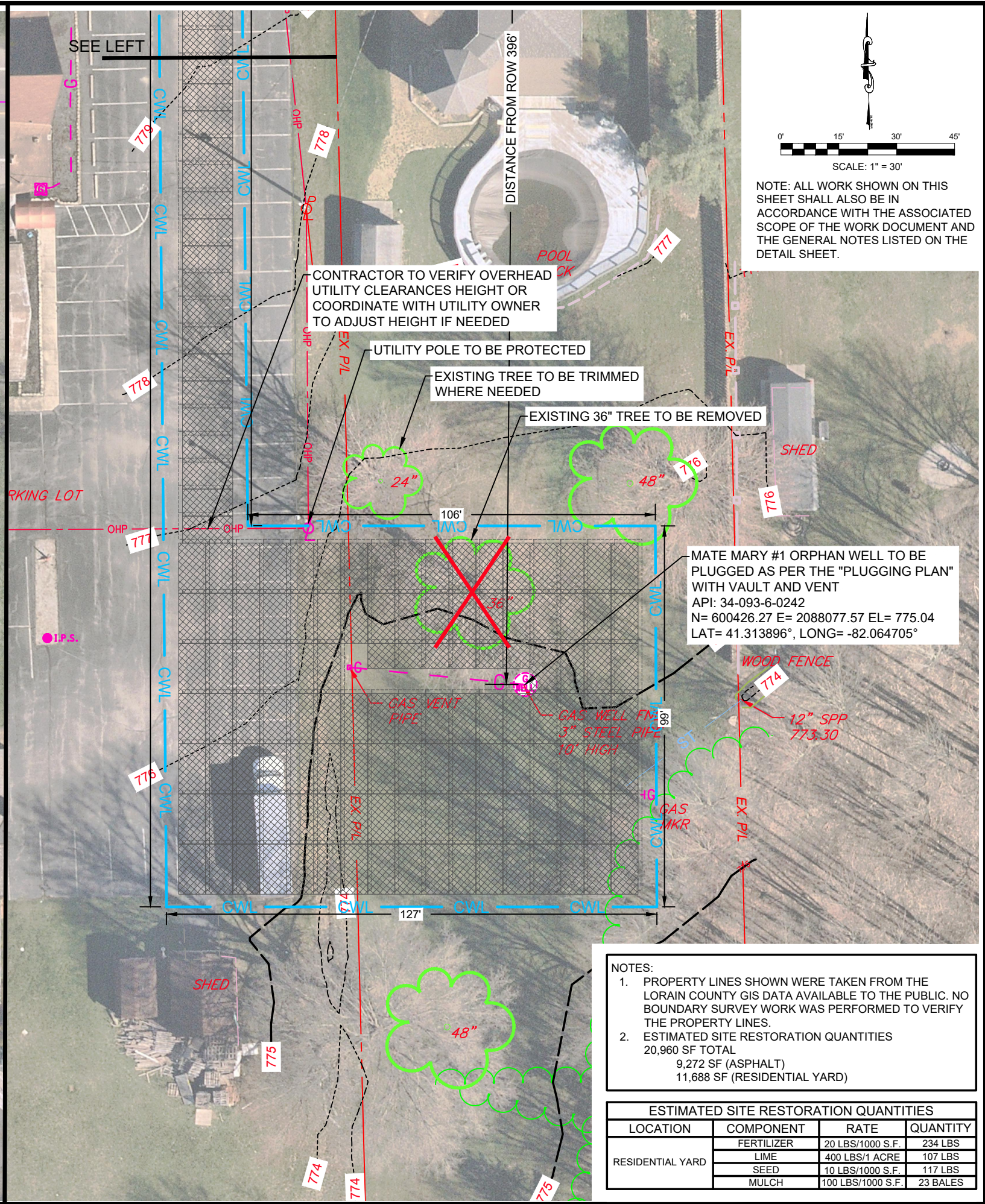
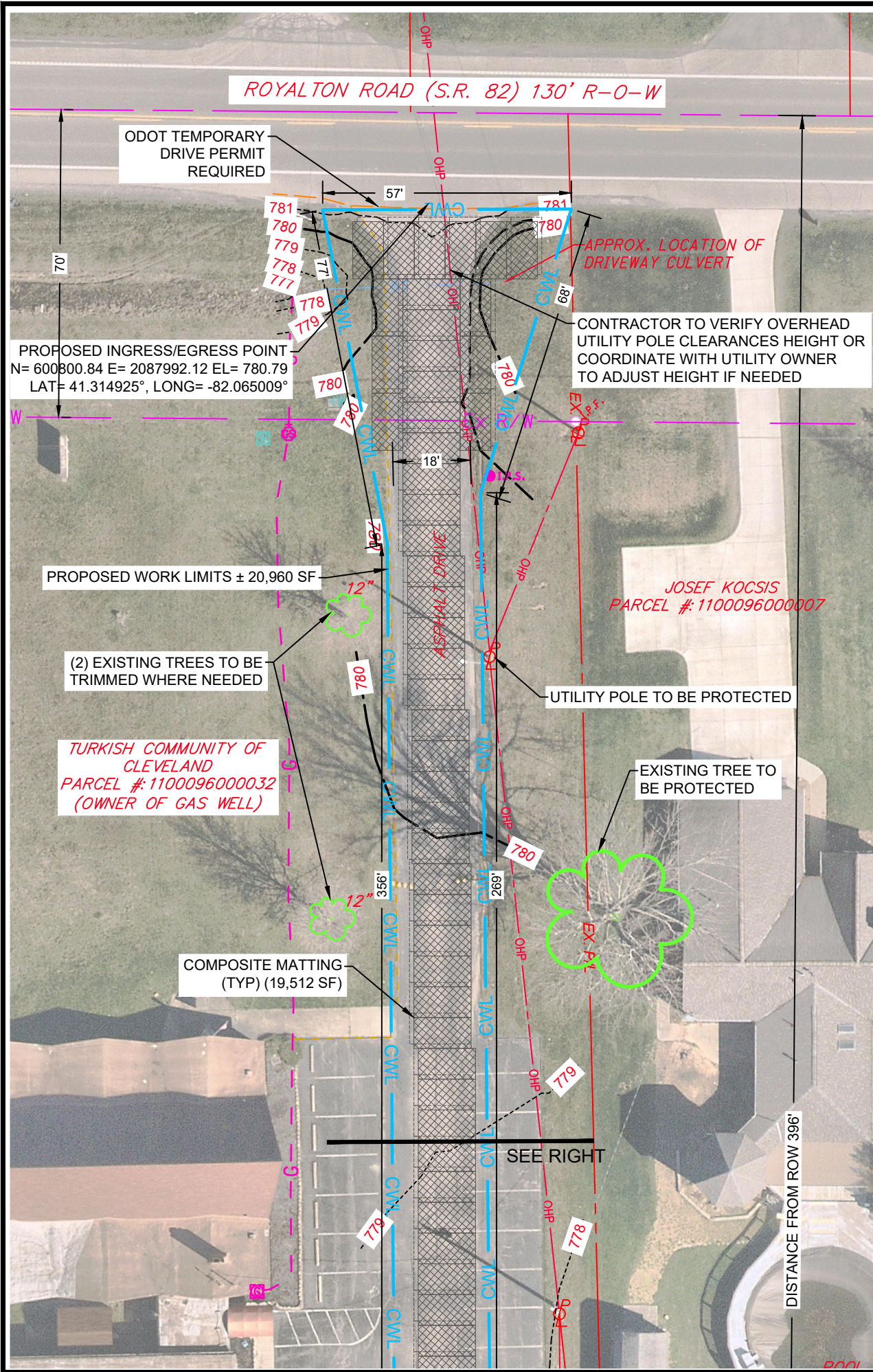


**TITLE SHEET**

**LORAIN #11F PROJECT  
PLUGGING SOW PLAN SET**

REVISION	
7/01/25	
DESIGN UNIT	CT CONSULTANTS
DRAWN BY:	K.M.R.
CHECKED BY:	J.E.C.
DATE:	12/23/2024
SHEET NO.	1 OF 15

EDIT DATE: 7/2/2025 8:33 AM EDIT BY: KRUSSELL DRAWING FILE: H:\2024\241540\DWG\SHEETS\LORAIN T-1 GROUP 11 - NEW C.241540-MATEMARY1-SITE.DWG



NOTE: ALL WORK SHOWN ON THIS SHEET SHALL ALSO BE IN ACCORDANCE WITH THE ASSOCIATED SCOPE OF THE WORK DOCUMENT AND THE GENERAL NOTES LISTED ON THE DETAIL SHEET.

NOTES:  
 1. PROPERTY LINES SHOWN WERE TAKEN FROM THE LORAIN COUNTY GIS DATA AVAILABLE TO THE PUBLIC. NO BOUNDARY SURVEY WORK WAS PERFORMED TO VERIFY THE PROPERTY LINES.  
 2. ESTIMATED SITE RESTORATION QUANTITIES  
 20,960 SF TOTAL  
 9,272 SF (ASPHALT)  
 11,688 SF (RESIDENTIAL YARD)

ESTIMATED SITE RESTORATION QUANTITIES			
LOCATION	COMPONENT	RATE	QUANTITY
RESIDENTIAL YARD	FERTILIZER	20 LBS/1000 S.F.	234 LBS
	LIME	400 LBS/1 ACRE	107 LBS
	SEED	10 LBS/1000 S.F.	117 LBS
	MULCH	100 LBS/1000 S.F.	23 BALES



DIVISION OF OIL & GAS  
 RESOURCES MANAGEMENT  
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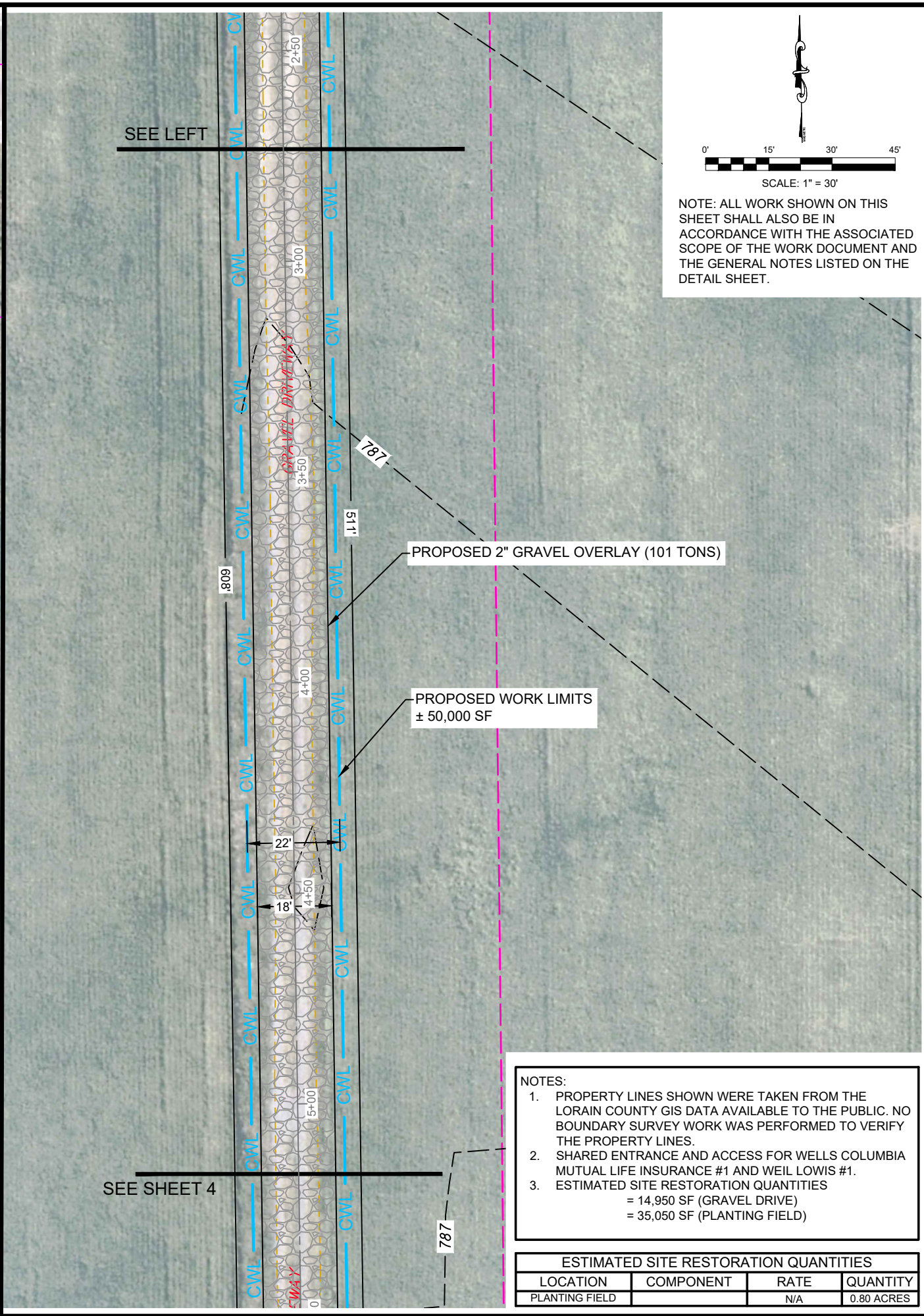
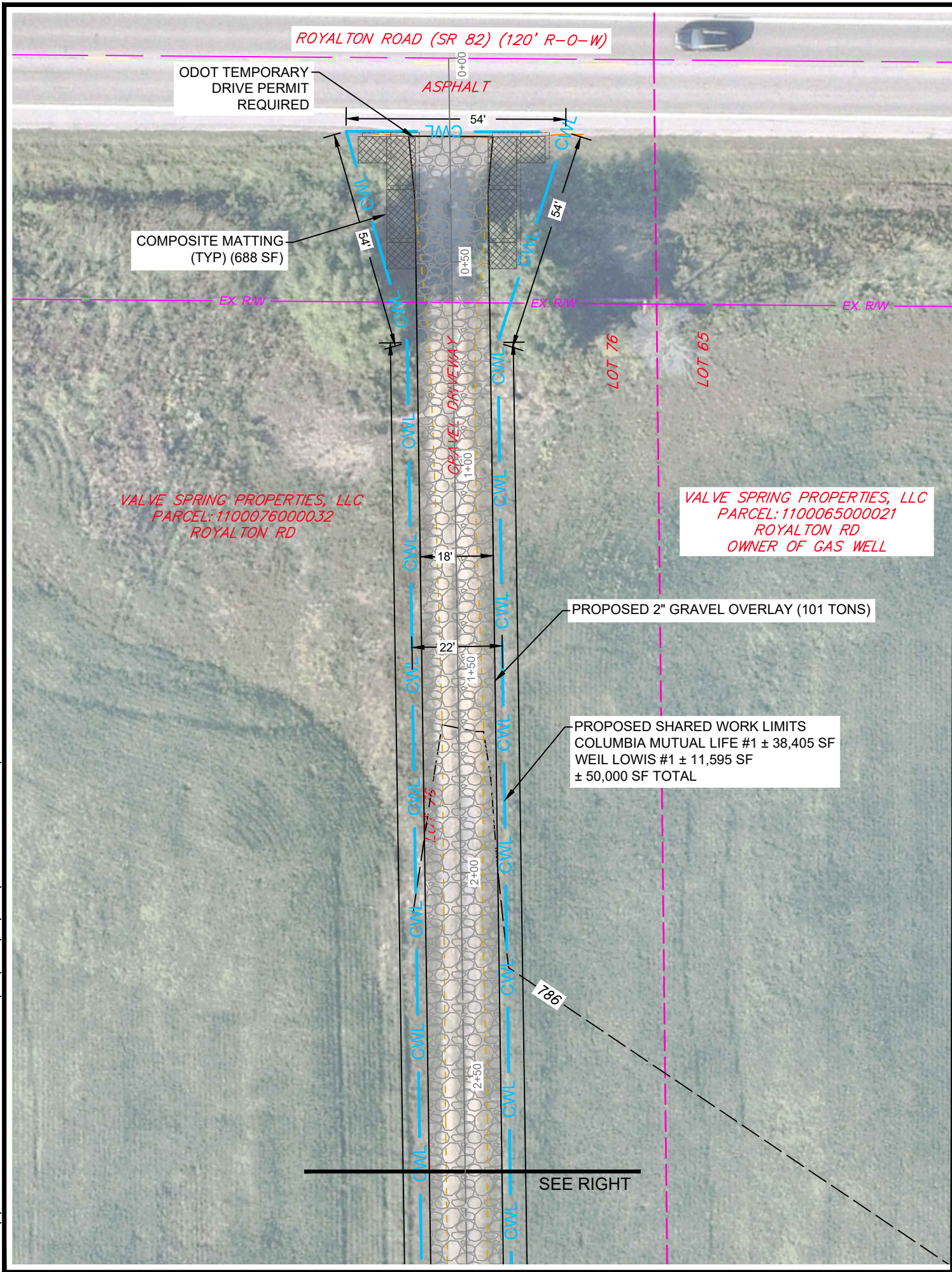
**MATE MARY #1  
 SITE PLAN**

**LORAIN #11F PROJECT  
 PLUGGING SOW PLAN SET**

REVISION
7/1/25

DESIGN UNIT  
 CT CONSULTANTS  
 DRAWN BY: E.J.S  
 CHECKED BY: J.E.C  
 DATE: 12/23/2024  
 SHEET NO.

EDIT DATE: 7/8/2025 12:03 PM EDIT BY: KRUSSELL DRAWING FILE: H:\2024\241540\DWG\SHEETS\LORAIN T-1 GROUP 11 - NEW.C.241540-COLUMBIAMUTUALLIFE1-AND-WELLOWS1-SITE.DWG



SCALE: 1" = 30'

NOTE: ALL WORK SHOWN ON THIS SHEET SHALL ALSO BE IN ACCORDANCE WITH THE ASSOCIATED SCOPE OF THE WORK DOCUMENT AND THE GENERAL NOTES LISTED ON THE DETAIL SHEET.

PROPOSED 2" GRAVEL OVERLAY (101 TONS)


PROPOSED SHARED WORK LIMITS  
COLUMBIA MUTUAL LIFE #1 ± 38,405 SF  
WEIL LOWIS #1 ± 11,595 SF  
± 50,000 SF TOTAL

PROPOSED 2" GRAVEL OVERLAY (101 TONS)


PROPOSED WORK LIMITS  
± 50,000 SF

- NOTES:
- PROPERTY LINES SHOWN WERE TAKEN FROM THE LORAIN COUNTY GIS DATA AVAILABLE TO THE PUBLIC. NO BOUNDARY SURVEY WORK WAS PERFORMED TO VERIFY THE PROPERTY LINES.
  - SHARED ENTRANCE AND ACCESS FOR WELLS COLUMBIA MUTUAL LIFE INSURANCE #1 AND WEIL LOWIS #1.
  - ESTIMATED SITE RESTORATION QUANTITIES  
= 14,950 SF (GRAVEL DRIVE)  
= 35,050 SF (PLANTING FIELD)

ESTIMATED SITE RESTORATION QUANTITIES			
LOCATION	COMPONENT	RATE	QUANTITY
PLANTING FIELD		N/A	0.80 ACRES



**DIVISION OF OIL & GAS**  
RESOURCES MANAGEMENT  
IDLE & ORPHAN WELL PROGRAM  
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**COLUMBIA MUTUAL LIFE**  
INSURANCE #1 AND  
WEIL LOWIS #1  
SITE PLAN

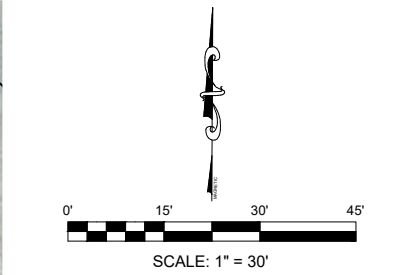
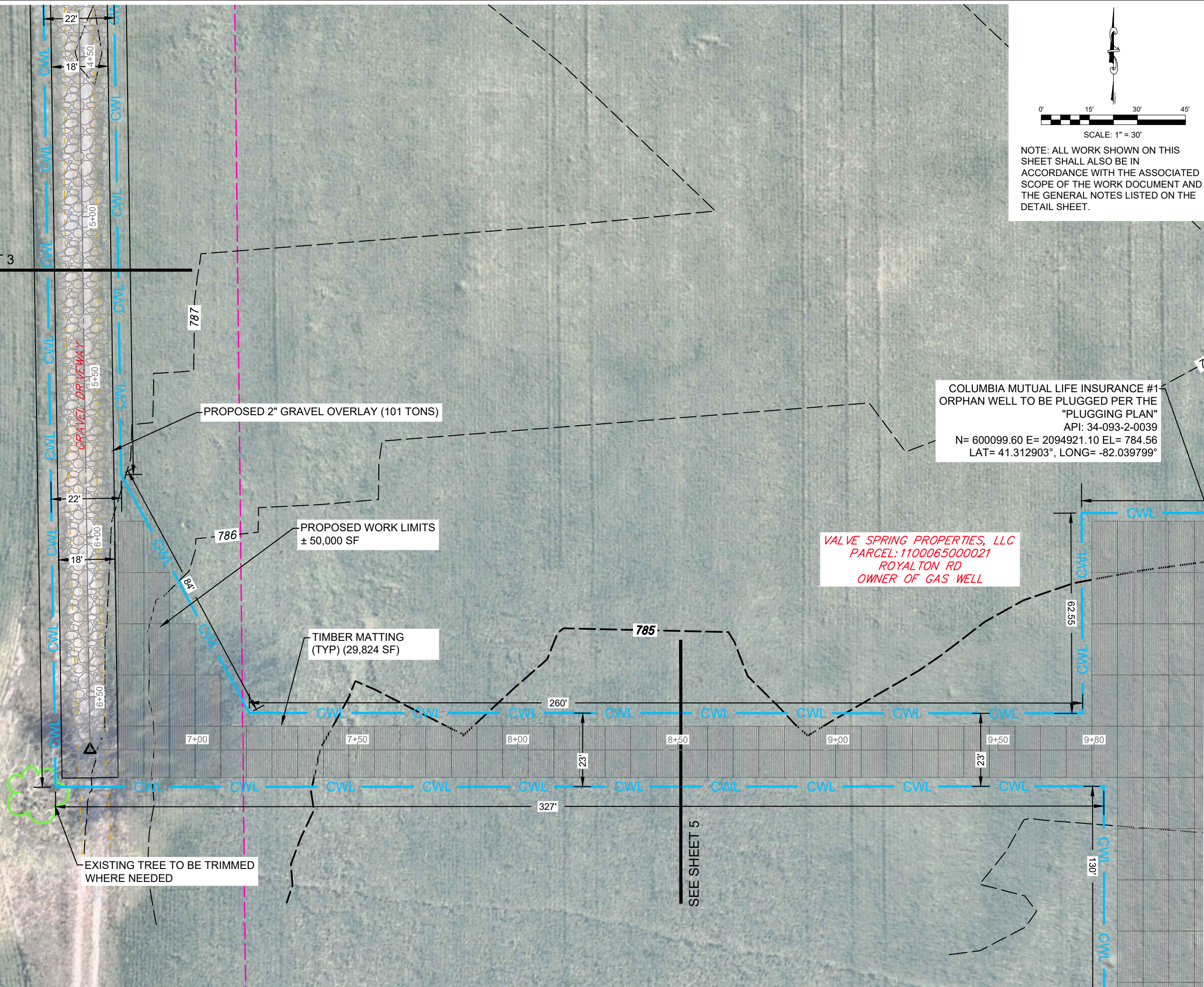
**LORAIN #11F PROJECT**  
PLUGGING SOW PLAN SET

REVISION
7/01/25

DESIGN UNIT  
CT CONSULTANTS  
DRAWN BY: E.J.S.  
CHECKED BY: J.E.C.  
DATE: 12/23/2024  
SHEET NO.  
**3 OF 15**

EDIT DATE: 7/8/2025 12:03 PM EDIT BY: KRUSSELL DRAWING FILE: H:\2024\241540 DWG\SHEETS\LORAIN T-1 GROUP 11 - NEW C-241540-COLUMBIAMUTUALLIFE1-AND-WELLOWIS1-SITING

SEE SHEET 3



NOTE: ALL WORK SHOWN ON THIS SHEET SHALL ALSO BE IN ACCORDANCE WITH THE ASSOCIATED SCOPE OF THE WORK DOCUMENT AND THE GENERAL NOTES LISTED ON THE DETAIL SHEET.

COLUMBIA MUTUAL LIFE INSURANCE #1 ORPHAN WELL TO BE PLUGGED PER THE "PLUGGING PLAN"  
 API: 34-093-2-0039  
 N= 600099.60 E= 2094921.10 EL= 784.56  
 LAT= 41.312903°, LONG= -82.039799°

VALVE SPRING PROPERTIES, LLC  
 PARCEL: 1100065000021  
 ROYALTON RD  
 OWNER OF GAS WELL

EXISTING TREE TO BE TRIMMED WHERE NEEDED

SEE SHEET 5



DIVISION OF OIL & GAS  
 RESOURCES MANAGEMENT  
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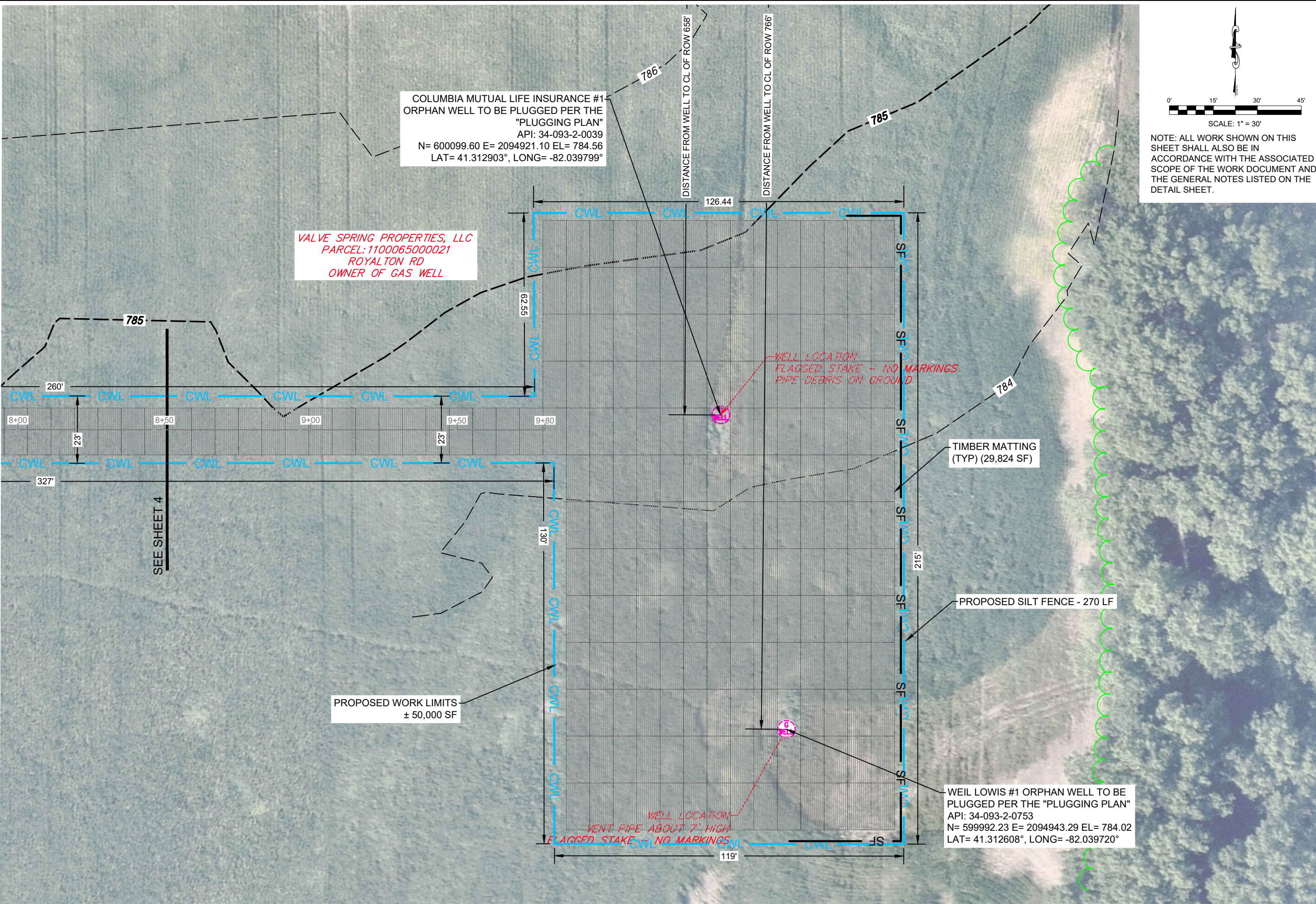


COLUMBIA MUTUAL LIFE  
 INSURANCE #1 AND  
 WEIL LOWIS #1  
 SITE PLAN

LORAIN #11F PROJECT  
 PLUGGING SOW PLAN SET

REVISION	
7/01/25	
DESIGN UNIT	CT CONSULTANTS
DRAWN BY:	E.J.S
CHECKED BY:	J.E.C
DATE:	12/23/2024
SHEET NO.	4 OF 15

EDIT DATE: 7/8/2025 12:03 PM EDIT BY: KRUSSELL DRAWING FILE: H:\2024\241540\DWG\SHEETS\LORAIN T-1 GROUP 11 - NEW C-241540-COLUMBIAMUTUALLIFE1-AND-WELLOWS1-SITE.DWG



COLUMBIA MUTUAL LIFE INSURANCE #1  
ORPHAN WELL TO BE PLUGGED PER THE  
"PLUGGING PLAN"  
API: 34-093-2-0039  
N= 600099.60 E= 2094921.10 EL= 784.56  
LAT= 41.312903°, LONG= -82.039799°

VALVE SPRING PROPERTIES, LLC  
PARCEL: 1100065000021  
ROYALTON RD  
OWNER OF GAS WELL

WELL LOCATION  
FLAGGED STAKE - NO MARKINGS  
PIPE DEBRIS ON GROUND

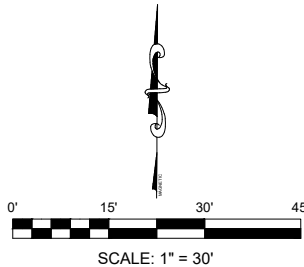
TIMBER MATTING  
(TYP) (29,824 SF)

PROPOSED SILT FENCE - 270 LF

PROPOSED WORK LIMITS  
± 50,000 SF

WEIL LOWIS #1 ORPHAN WELL TO BE  
PLUGGED PER THE "PLUGGING PLAN"  
API: 34-093-2-0753  
N= 599992.23 E= 2094943.29 EL= 784.02  
LAT= 41.312608°, LONG= -82.039720°

WELL LOCATION  
VENT PIPE ABOUT 7' HIGH  
FLAGGED STAKE NO MARKINGS



NOTE: ALL WORK SHOWN ON THIS SHEET SHALL ALSO BE IN ACCORDANCE WITH THE ASSOCIATED SCOPE OF THE WORK DOCUMENT AND THE GENERAL NOTES LISTED ON THE DETAIL SHEET.



DIVISION OF OIL & GAS  
RESOURCES MANAGEMENT  
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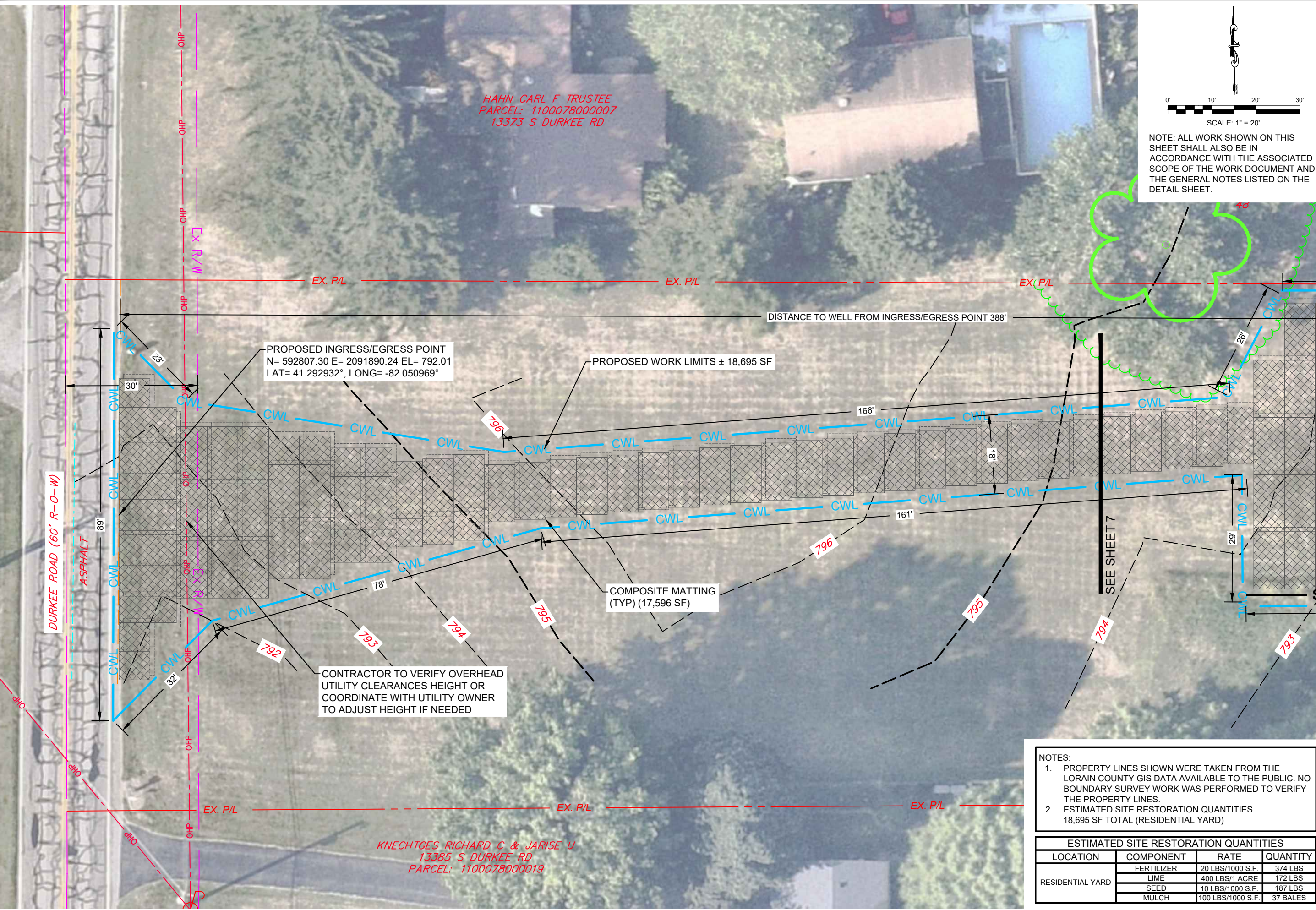


COLUMBIA MUTUAL LIFE  
INSURANCE #1 AND  
WEIL LOWIS #1  
SITE PLAN

LORAIN #11F PROJECT  
PLUGGING SOW PLAN SET

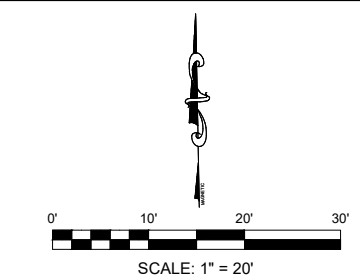
REVISION	
7/01/25	
DESIGN UNIT CT CONSULTANTS	
DRAWN BY: E.J.S	
CHECKED BY: J.E.C	
DATE: 12/23/2024	
SHEET NO. 5 OF 15	

EDIT DATE: 7/2/2025 8:00 AM EDIT BY: KRUSSELL DRAWING FILE: H:\2024\241540\DWG\SHEETS\LORAIN T-1 GROUP 11 - NEW C. 241540-WARGOJ1-SITE.DWG



Hahn Carl F Trustee  
Parcel: 1100078000007  
13373 S Durkee Rd

Knechtges Richard C & Jarise U  
13385 S Durkee Rd  
Parcel: 1100078000019



NOTE: ALL WORK SHOWN ON THIS SHEET SHALL ALSO BE IN ACCORDANCE WITH THE ASSOCIATED SCOPE OF THE WORK DOCUMENT AND THE GENERAL NOTES LISTED ON THE DETAIL SHEET.

PROPOSED INGRESS/EGRESS POINT  
N= 592807.30 E= 2091890.24 EL= 792.01  
LAT= 41.292932°, LONG= -82.050969°

PROPOSED WORK LIMITS ± 18,695 SF

COMPOSITE MATTING (TYP) (17,596 SF)

CONTRACTOR TO VERIFY OVERHEAD UTILITY CLEARANCES HEIGHT OR COORDINATE WITH UTILITY OWNER TO ADJUST HEIGHT IF NEEDED

NOTES:  
1. PROPERTY LINES SHOWN WERE TAKEN FROM THE LORAIN COUNTY GIS DATA AVAILABLE TO THE PUBLIC. NO BOUNDARY SURVEY WORK WAS PERFORMED TO VERIFY THE PROPERTY LINES.  
2. ESTIMATED SITE RESTORATION QUANTITIES 18,695 SF TOTAL (RESIDENTIAL YARD)

ESTIMATED SITE RESTORATION QUANTITIES			
LOCATION	COMPONENT	RATE	QUANTITY
RESIDENTIAL YARD	FERTILIZER	20 LBS/1000 S.F.	374 LBS
	LIME	400 LBS/1 ACRE	172 LBS
	SEED	10 LBS/1000 S.F.	187 LBS
	MULCH	100 LBS/1000 S.F.	37 BALES



DIVISION OF OIL & GAS  
RESOURCES MANAGEMENT  
IDLE & ORPHAN WELL PROGRAM  
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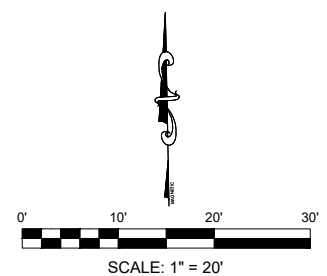
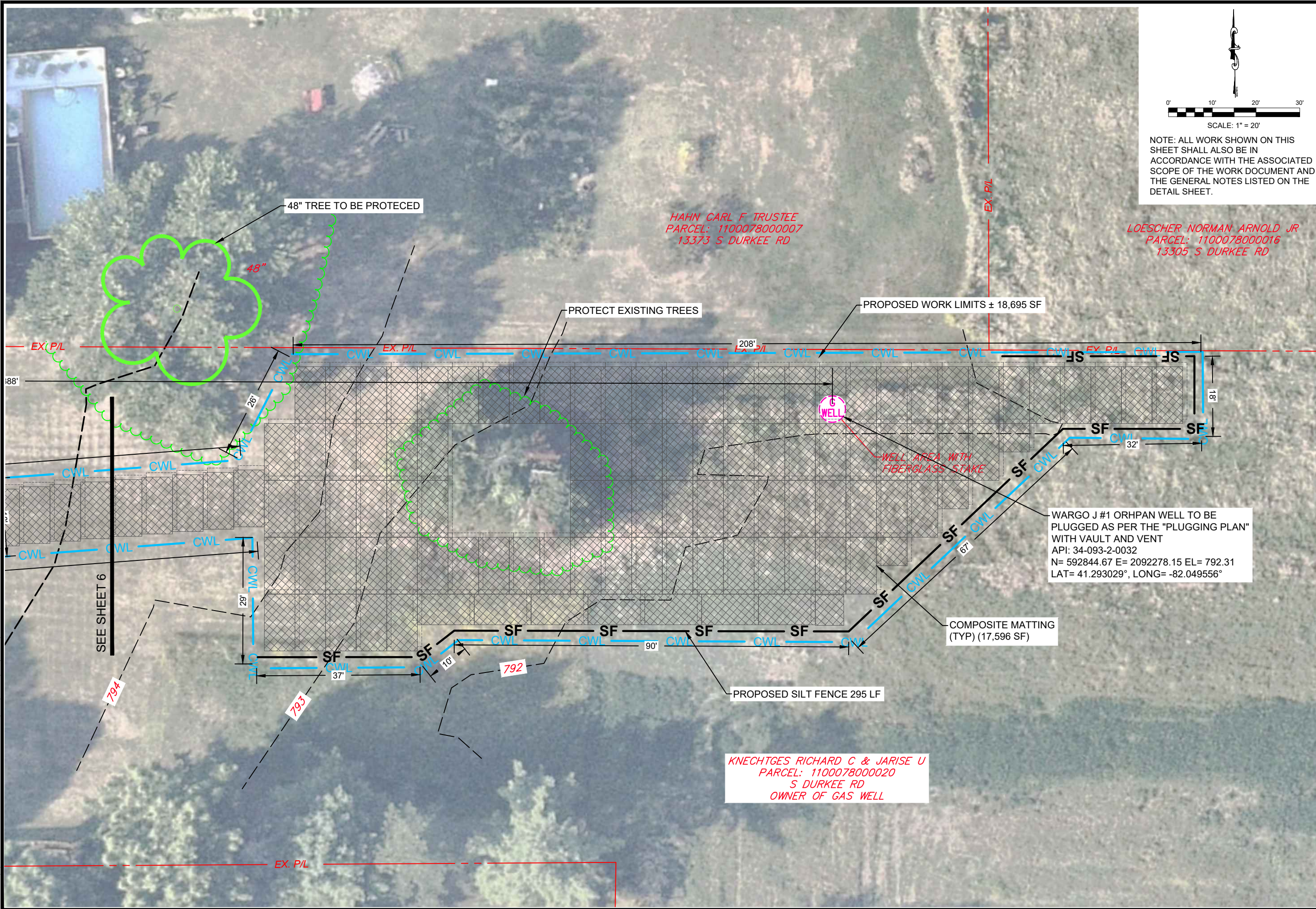
WARGO J #1  
SITE PLAN

LORAIN #11F PROJECT  
PLUGGING SOW PLAN SET

REVISION	
7/01/25	

DESIGN UNIT  
CT CONSULTANTS  
DRAWN BY: E.J.S  
CHECKED BY: J.E.C  
DATE: 12/23/2024  
SHEET NO.  
6 OF 15

EDIT DATE: 7/2/2025 9:00 AM EDIT BY: KRUSSELL DRAWING FILE: H:\2024\241540\DWG\SHEETS\LORAIN T-1 GROUP 11 - NEW C. 241540-WARGO J - SITE.DWG



NOTE: ALL WORK SHOWN ON THIS SHEET SHALL ALSO BE IN ACCORDANCE WITH THE ASSOCIATED SCOPE OF THE WORK DOCUMENT AND THE GENERAL NOTES LISTED ON THE DETAIL SHEET.

HAHN CARL F TRUSTEE  
PARCEL: 110007800007  
13373 S DURKEE RD

LOESCHER NORMAN ARNOLD JR  
PARCEL: 1100078000016  
13305 S DURKEE RD

KNECHTGES RICHARD C & JARISE U  
PARCEL: 1100078000020  
S DURKEE RD  
OWNER OF GAS WELL

WARGO J #1 ORPHAN WELL TO BE PLUGGED AS PER THE "PLUGGING PLAN" WITH VAULT AND VENT  
API: 34-093-2-0032  
N= 592844.67 E= 2092278.15 EL= 792.31  
LAT= 41.293029°, LONG= -82.049556°



DIVISION OF OIL & GAS  
RESOURCES MANAGEMENT  
IDLE & ORPHAN WELL PROGRAM  
<http://oilandgas.ohiodnr.gov>

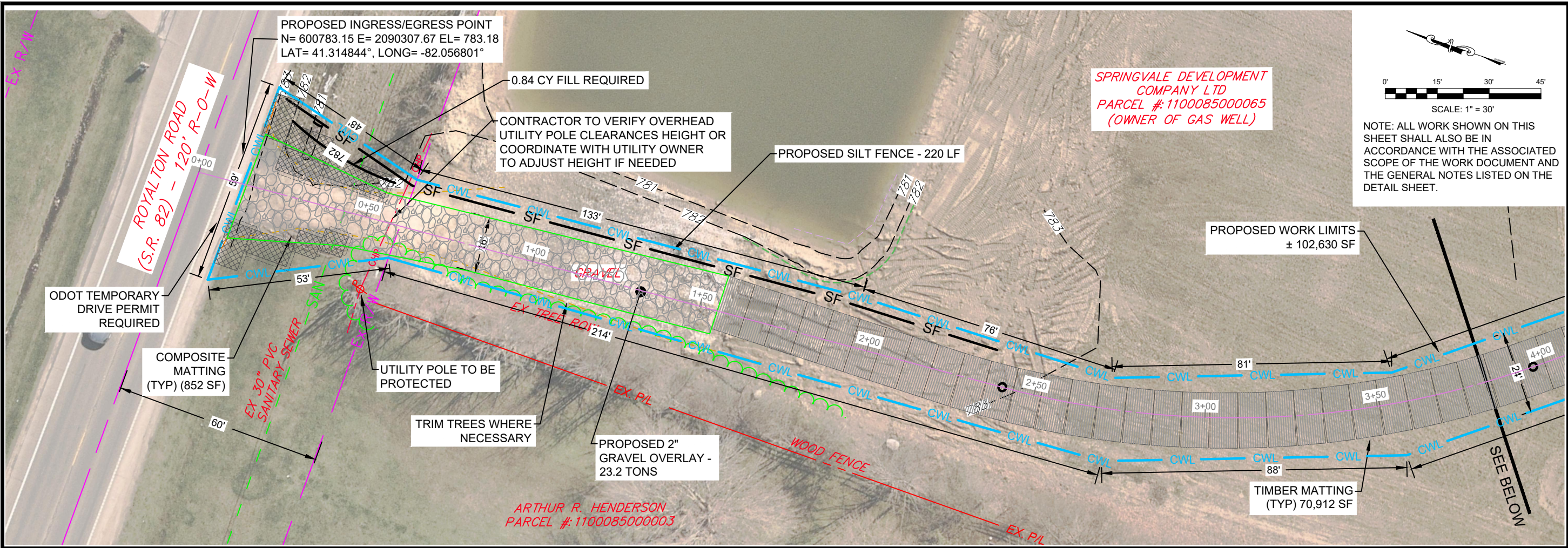


WARGO J #1  
SITE PLAN

LORAIN #11F PROJECT  
PLUGGING SOW PLAN SET

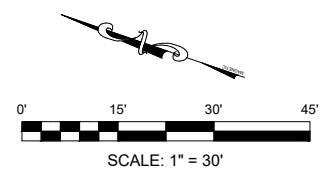
REVISION	
7/01/25	
DESIGN UNIT	CT CONSULTANTS
DRAWN BY:	E.J.S.
CHECKED BY:	J.E.C.
DATE:	12/23/2024
SHEET NO.	7 OF 15

EDIT DATE: 7/9/2025 1:33 PM EDIT BY: KRUSSELL DRAWING FILE: H:\2024\241540\DWG\SHEETS\LORAIN T-1 GROUP 11 - NEW C. 241540-CARPENTER-ART1-AND-CARPENTER-YOST1-SITE.DWG



PROPOSED INGRESS/EGRESS POINT  
 N= 600783.15 E= 2090307.67 EL= 783.18  
 LAT= 41.314844°, LONG= -82.056801°

SPRINGVALE DEVELOPMENT  
 COMPANY LTD  
 PARCEL #: 1100085000065  
 (OWNER OF GAS WELL)



NOTE: ALL WORK SHOWN ON THIS SHEET SHALL ALSO BE IN ACCORDANCE WITH THE ASSOCIATED SCOPE OF THE WORK DOCUMENT AND THE GENERAL NOTES LISTED ON THE DETAIL SHEET.



DIVISION OF OIL & GAS  
 RESOURCES MANAGEMENT  
 IDLE & ORPHAN WELL PROGRAM  
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CARPENTER ART #1 AND  
 CARPENTER YOST #1  
 SITE PLAN



SPRINGVALE DEVELOPMENT  
 COMPANY LTD  
 PARCEL #: 1100085000065  
 (OWNER OF GAS WELL)

- NOTES:
- PROPERTY LINES SHOWN WERE TAKEN FROM THE LORAIN COUNTY GIS DATA AVAILABLE TO THE PUBLIC. NO BOUNDARY SURVEY WORK WAS PERFORMED TO VERIFY THE PROPERTY LINES.
  - WELLS CARPENTER ART #1 AND CARPENTER YOST #1 UTILIZE A SHARED ENTRANCE AND ACCESS DRIVE.
  - ESTIMATED SITE RESTORATION QUANTITIES  
 CARPENTER ART #1 = 4,326 SF (GRAVEL ENTRANCE)  
 = 27,480 SF (PLANTING FIELD)  
 CARPENTER YOST #1 = 70,824 SF (PLANTING FIELD)  
 = 98,304 SF (PLANTING FIELD TOTAL)

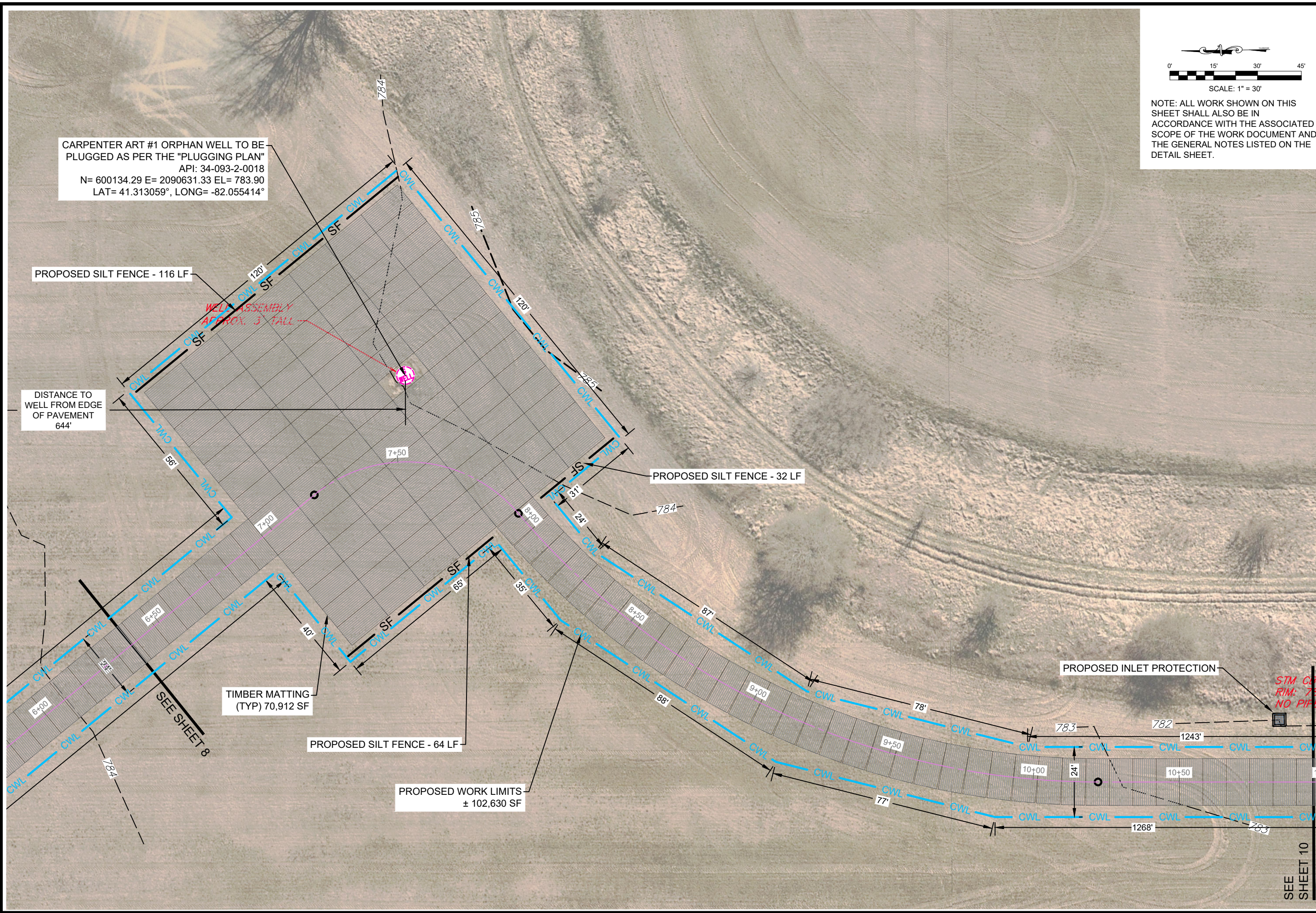
ESTIMATED SITE RESTORATION QUANTITIES			
LOCATION	COMPONENT	RATE	QUANTITY
PLANTING FIELD		N/A	2.25 ACRES

LORAIN #11F PROJECT  
 PLUGGING SOW PLAN SET

REVISION	
7/01/25	

DESIGN UNIT  
 CT CONSULTANTS  
 DRAWN BY: K.M.R.  
 CHECKED BY: J.E.C.  
 DATE: 12/23/2024  
 SHEET NO.  
 8 OF 15

EDIT DATE: 7/9/2025 1:33 PM EDIT BY: KRUSSELL DRAWING FILE: H:\2024\241540\DWG\SHEETS\LORAIN T-1 GROUP 11 - NEW C.241540-CARPENTER-ART1-AND-CARPENTER-YOST1-SITE.DWG



CARPENTER ART #1 ORPHAN WELL TO BE PLUGGED AS PER THE "PLUGGING PLAN"  
 API: 34-093-2-0018  
 N= 600134.29 E= 2090631.33 EL= 783.90  
 LAT= 41.313059°, LONG= -82.055414°

PROPOSED SILT FENCE - 116 LF

DISTANCE TO WELL FROM EDGE OF PAVEMENT  
 644'

PROPOSED SILT FENCE - 32 LF

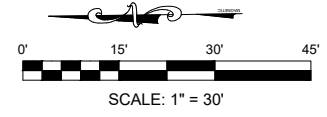
TIMBER MATTING  
 (TYP) 70,912 SF

PROPOSED SILT FENCE - 64 LF

PROPOSED WORK LIMITS  
 ± 102,630 SF

PROPOSED INLET PROTECTION

SEE SHEET 8  
 SEE SHEET 10



NOTE: ALL WORK SHOWN ON THIS SHEET SHALL ALSO BE IN ACCORDANCE WITH THE ASSOCIATED SCOPE OF THE WORK DOCUMENT AND THE GENERAL NOTES LISTED ON THE DETAIL SHEET.



DIVISION OF OIL & GAS  
 RESOURCES MANAGEMENT  
 IDLE & ORPHAN WELL PROGRAM  
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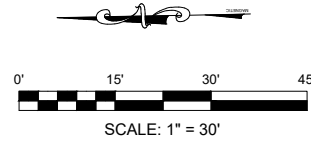


CARPENTER ART #1 AND  
 CARPENTER YOST #1  
 SITE PLAN

LORAIN #11F PROJECT  
 PLUGGING SOW PLAN SET

REVISION	7/01/25
DESIGN UNIT	CT CONSULTANTS
DRAWN BY:	K.M.R.
CHECKED BY:	J.E.C.
DATE:	12/23/2024
SHEET NO.	9 OF 15

EDIT DATE: 7/9/2025 1:38 PM EDIT BY: KRUSSELL DRAWING FILE: H:\2024\241540\DWG\SHEETS\LORAIN T-1 GROUP 11 - NEW C-241540-CARPENTER-ARTI-AND-CARPENTER-YOSTI-SITE.DWG



NOTE: ALL WORK SHOWN ON THIS SHEET SHALL ALSO BE IN ACCORDANCE WITH THE ASSOCIATED SCOPE OF THE WORK DOCUMENT AND THE GENERAL NOTES LISTED ON THE DETAIL SHEET.



DIVISION OF OIL & GAS  
RESOURCES MANAGEMENT  
IDLE & ORPHAN WELL PROGRAM  
<http://oilandgas.ohiodnr.gov>



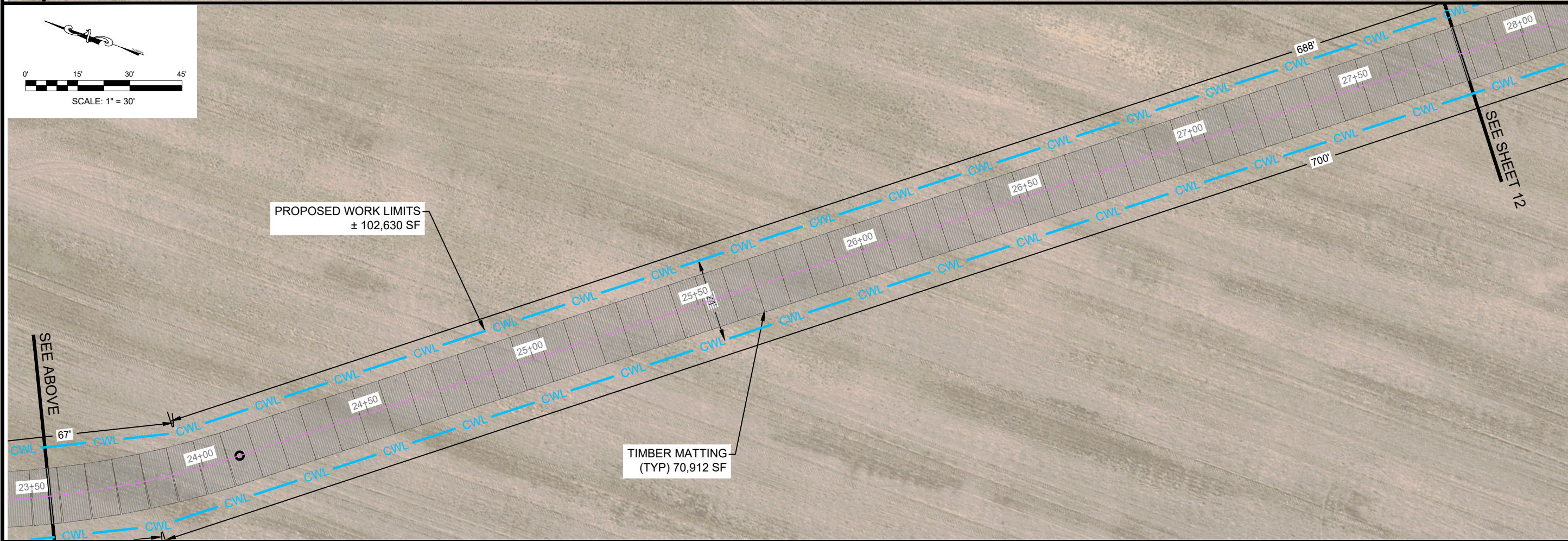
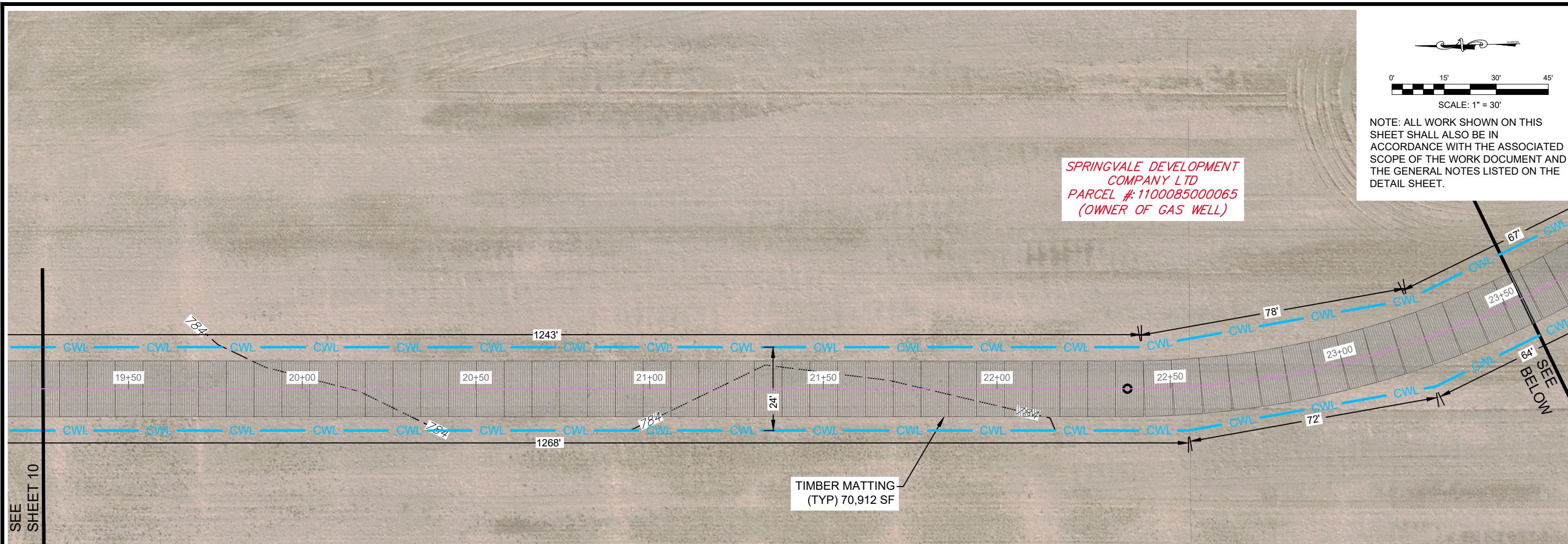
**CARPENTER YOST #1  
SITE PLAN**

**LORAIN #11F PROJECT  
PLUGGING SOW PLAN SET**

REVISION	
7/01/25	

DESIGN UNIT  
CT CONSULTANTS  
DRAWN BY: K.M.R.  
CHECKED BY: J.E.C  
DATE: 12/23/2024  
SHEET NO.

EDIT DATE: 7/9/2025 1:38 PM EDIT BY: KRUSSELL DRAWING FILE: H:\2024\241540\DWG\SHEETS\LORAIN T-1 GROUP 11 - NEW\C\_241540-CARPENTER-ART1-AND-CARPENTER-YOST1-SITE.DWG



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RESOURCES MANAGEMENT  
IDLE & ORPHAN WELL PROGRAM  
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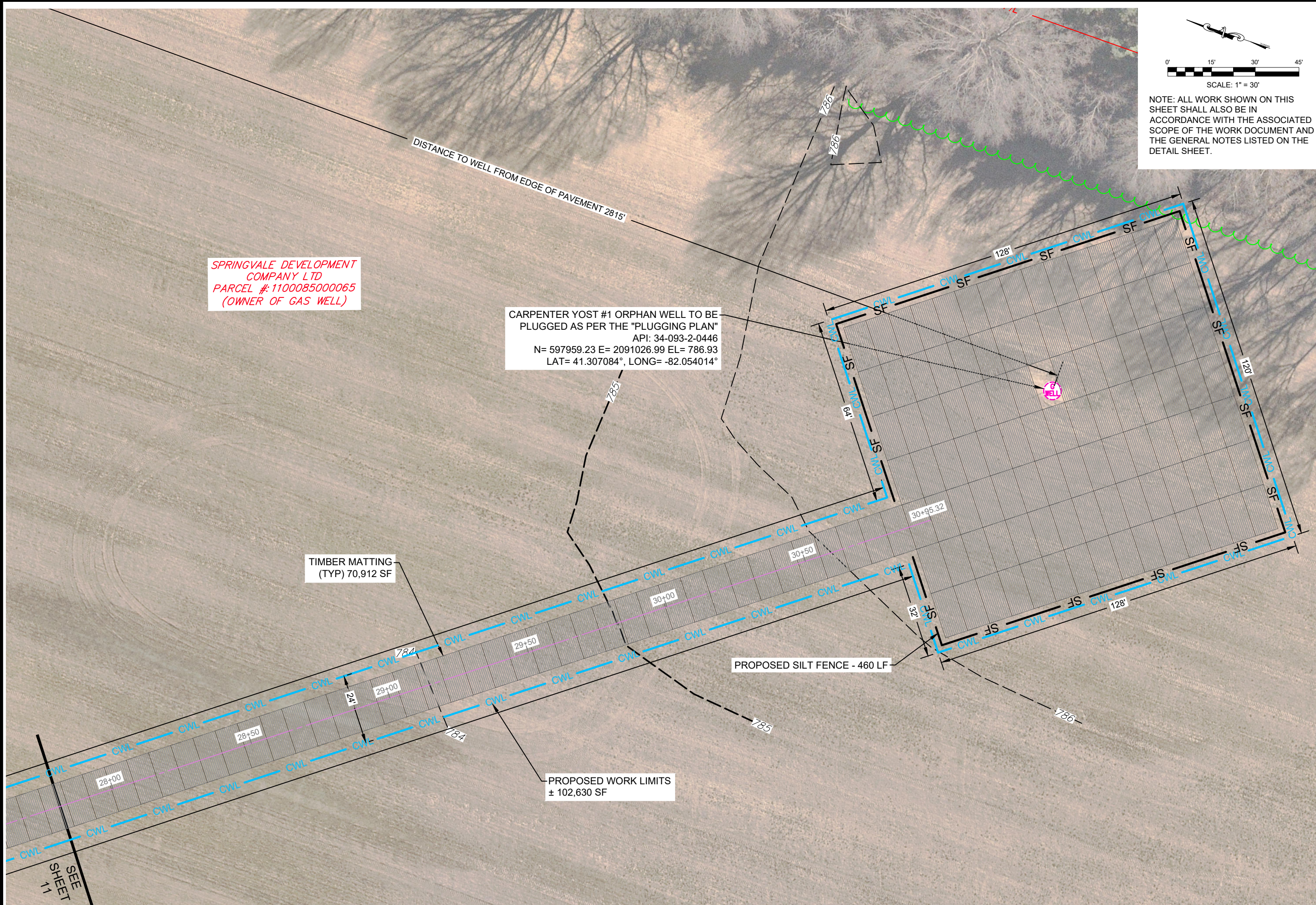
CARPENTER YOST #1  
SITE PLAN

LORAIN #11F PROJECT  
PLUGGING SOW PLAN SET

REVISION	
7/01/25	

DESIGN UNIT  
CT CONSULTANTS  
DRAWN BY: K.M.R.  
CHECKED BY: J.E.C  
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SHEET NO.

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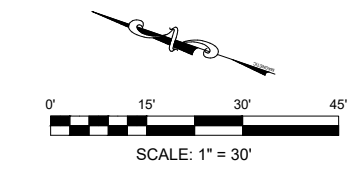
SPRINGVALE DEVELOPMENT  
COMPANY LTD  
PARCEL #: 1100085000065  
(OWNER OF GAS WELL)

CARPENTER YOST #1 ORPHAN WELL TO BE  
PLUGGED AS PER THE "PLUGGING PLAN"  
API: 34-093-2-0446  
N= 597959.23 E= 2091026.99 EL= 786.93  
LAT= 41.307084°, LONG= -82.054014°

TIMBER MATTING  
(TYP) 70,912 SF

PROPOSED SILT FENCE - 460 LF

PROPOSED WORK LIMITS  
± 102,630 SF



NOTE: ALL WORK SHOWN ON THIS  
SHEET SHALL ALSO BE IN  
ACCORDANCE WITH THE ASSOCIATED  
SCOPE OF THE WORK DOCUMENT AND  
THE GENERAL NOTES LISTED ON THE  
DETAIL SHEET.



DIVISION OF OIL & GAS  
RESOURCES MANAGEMENT  
IDLE & ORPHAN WELL PROGRAM  
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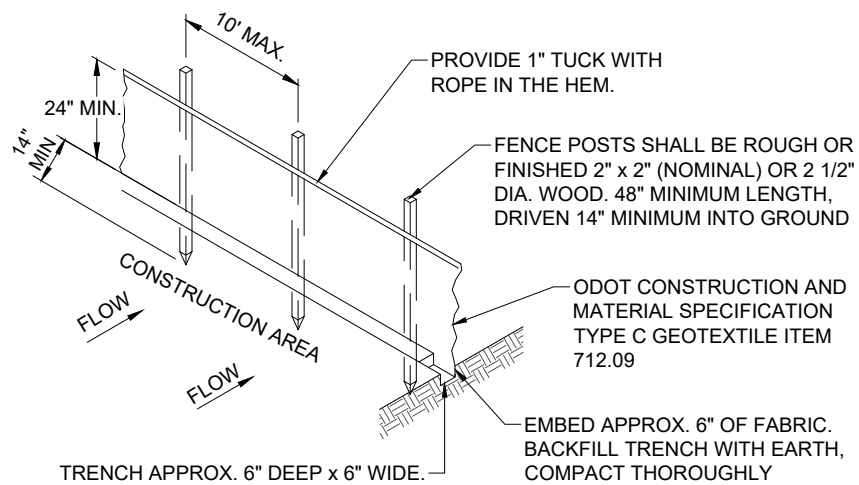
### CARPENTER YOST #1 SITE PLAN

### LORAIN #11F PROJECT PLUGGING SOW PLAN SET

REVISION	
7/01/25	

DESIGN UNIT  
CT CONSULTANTS  
DRAWN BY: K.M.R.  
CHECKED BY: J.E.C  
DATE: 12/23/2024  
SHEET NO.

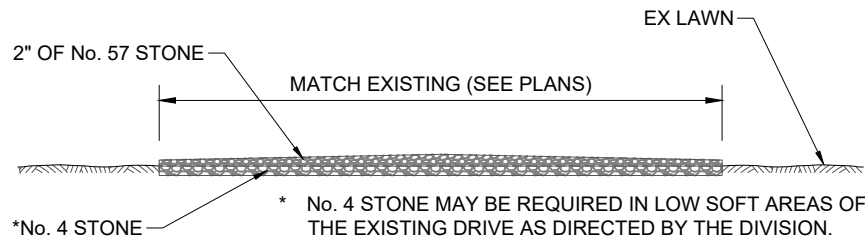
SEE  
SHEET  
11



**NOTES:**

1. FABRIC TO BE FASTENED SECURELY TO FENCE POST AS PER MANUFACTURER'S RECOMMENDATIONS.
2. ENDS OF INDIVIDUAL ROLLS OF FABRIC SHALL BE SECURELY FASTENED TO A COMMON POST OR OVERLAPPED 3" MIN.

**SILT FENCE DETAIL**  
NOT TO SCALE

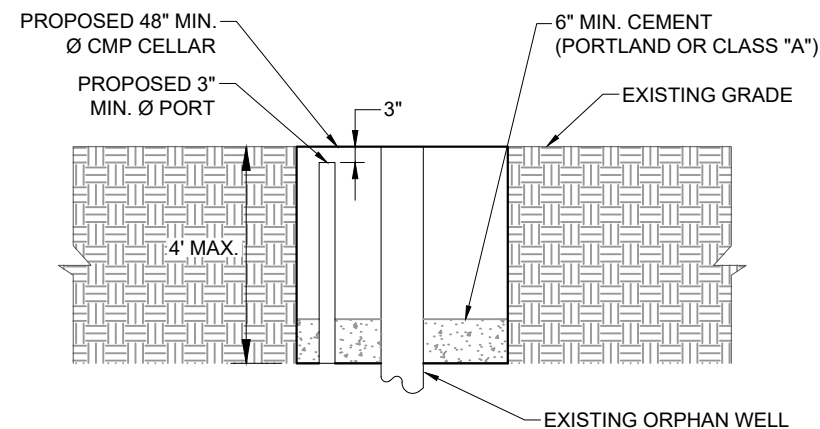


**SECTION A-A'**

**NOTES:**

1. THE EXISTING DRIVE WILL BE THE ONLY ACCESS TO THE PROJECT SITE(S). ACCESS FOR THE LANDOWNER SHALL BE MAINTAINED FOR THE DURATION OF THE PROJECT. AT THE DISCRETION OF THE DIVISION, No. 57 STONE SHALL BE PLACED ON THE EXISTING DRIVE UPON COMPLETION OF THE PROJECT. ALL OTHER ACCESS AREAS SHALL BE RESTORED PER LINE ITEM "SITE RESTORATION".
2. ADDITIONAL STONE MAY BE NECESSARY TO ENSURE ADEQUATE COVER OVER TOP OF DRAINAGE CULVERTS. (12" COVER PREFERRED)

**ACCESS DRIVE AND LOT STONE OVERLAY**  
NOT TO SCALE



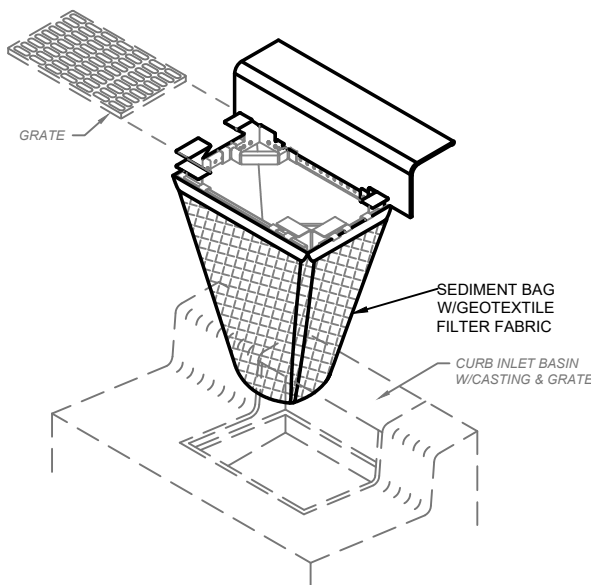
**NOTES:**

- ALL WORK & MATERIAL ASSOCIATED WITH THE INSTALLATION & REMOVAL OF THE CELLAR SHALL BE CONSIDERED INCIDENTAL TO LINE ITEM "WELL HEAD CONTROL".

**TEMPORARY CELLAR**  
NOT TO SCALE

**GENERAL NOTES:**

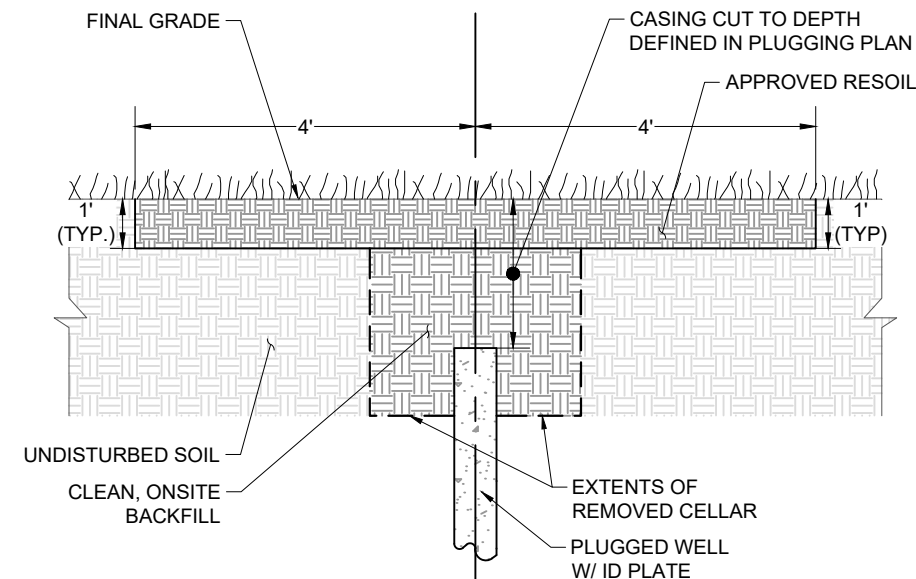
1. UTILITY LINES AND APPURTENANCES ARE SHOWN AS LOCATED IN THE FIELD AND/OR AS REPORTED BY THE RESPECTIVE OWNERS. NEITHER THE NUMBER, TYPE, SIZE, OR LOCATION CAN BE GUARANTEED, AND IT IS THEREFORE, THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL UTILITY LOCATIONS.
2. **THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATELY PROTECTING THE EXISTING BURIED UTILITIES AND CURB & GUTTER DURING CONSTRUCTION. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO LINE ITEM "MOBILIZATION".**
3. THE HORIZONTAL DATUM IS BASED ON NAD83 (2011) OHIO STATE PLANE NORTH 3401, AND THE VERTICAL DATUM IS BASED ON NAVD88 GEOID 18A CORS DERIVED.
4. AERIAL IMAGES OBTAINED FROM NEARMAP DATED APRIL 2024 AND SEPTEMBER 2024.
5. THE CONTRACTOR SHALL WORK WITHIN THE WORK LIMITS AT ALL TIMES DURING CONSTRUCTION.
6. TRAFFIC CONTROLS SHALL BE IN ACCORDANCE WITH THE DETAILED SPECIFICATIONS FOR "TRAFFIC MAINTENANCE".
7. A FLAGGER IN EACH DIRECTION SHALL BE USED WHEN MATERIALS ARE BEING UNLOADED WITHIN THE ROAD RIGHT OF WAY.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PHOTO/VIDEO DOCUMENTING THE CONDITION OF THE EXISTING PERMANENT CONDITIONS PRIOR TO BEGINNING CONSTRUCTION.
9. TREE AND OVERHANGING LIMB REMOVAL SHALL BE AS DESIGNATED BY THE DIVISION. REMOVALS SHALL PROVIDE THE CONTRACTOR WITH ADEQUATE SPACE REQUIRED TO COMPLETE THE PROJECT. TRIMMING OF TREES SHALL BE CONSIDERED INCIDENTAL TO LINE ITEMS AS SPECIFIED.
10. THE DIVISION MUST BE PRESENT DURING ALL CLEARING OPERATIONS. NO TREES ARE TO BE REMOVED UNLESS DESIGNATED BY THE DIVISION.
11. ANY REMOVED TREES AND VEGETATION SHALL BE PLACED INTO BRUSH PILES AT THE DISCRETION OF THE DIVISION.
12. ALL "CUT" MATERIAL SHALL BE STOCKPILED ON SITE FOR REUSE. STOCKPILES SHALL BE STABILIZED PER LINE ITEM "SITE RESTORATION" UPON ESTABLISHMENT OF TEMPORARY GRADE IF AREAS ARE TO REMAIN OPEN FOR 14 DAYS OR LONGER.
13. ALL COMPOSITE MATTING INSTALLED SHALL BE INTERLOCKED PER THE MANUFACTURER'S REQUIREMENTS. IN AREAS WHERE POOR SUBGRADE IS ENCOUNTERED MATS CAN BE STACKED OVER TOP OF ONE ANOTHER AT THE DISCRETION OF THE DIVISION.
14. ALL STONE PLACED USING SIX (6) INCH MAXIMUM LIFTS, SHALL BE COMPACTED WITH A MINIMUM OF THREE (3) PASSES PER LIFT USING ONSITE EQUIPMENT.
15. AT THE DISCRETION OF THE DIVISION, ALL STONE, FABRIC, AND/OR GEOGRID SHOWN ON THE SITE PLAN SHEET(S) AS TEMPORARY SHALL BE REMOVED UPON COMPLETION OF THE PROJECT AND RESTORED PER LINE ITEM "SITE RESTORATION"



**NOTES:**

1. ALL SURROUNDING DOWNSTREAM INLET BASINS SHALL HAVE INLET PROTECTION INSTALLED.
2. DIFFERENT INLET CONFIGURATIONS MAY BE REQUIRED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEASURING AND INSTALLING PROPERLY SIZED INLET PROTECTION BAGS OR COMPOST FILTER SOCKS AS APPROVED BY THE DIVISION.

**INLET PROTECTION DETAIL**  
NOT TO SCALE



**NOTES:**

1. ANY REMOVED MATERIAL FROM AROUND THE WELL HEAD SHALL BE SEGREGATED TO PREVENT ADDITIONAL CONTAMINATION.
2. ONCE THE WELL IS CUT BELOW GRADE, AN EIGHT (8) FOOT BY EIGHT (8) FOOT AREA, ONE (1) FOOT DEEP SHALL BE EXCAVATED AROUND THE WELL HEAD & REPLACED WITH "APPROVED RESOIL".
3. REMOVED MATERIAL SHALL BE DISPOSED OF PER LINE ITEM "CONTAMINATED MATERIAL DISPOSAL".
4. PRIOR TO DELIVERY TO THE SITE OF "APPROVED RESOIL", ON SITE TOPSOIL MAY BE UTILIZED AT THE APPROVAL OF THE DIVISION
5. ALL WORK NOT INCLUDED IN "APPROVED RESOIL" OF "CONTAMINATED MATERIAL DISPOSAL" SHALL BE INCIDENTAL TO LINE ITEM "SITE RESTORATION".

**WELL RESTORATION SECTION**  
NOT TO SCALE



**DIVISION OF OIL & GAS**  
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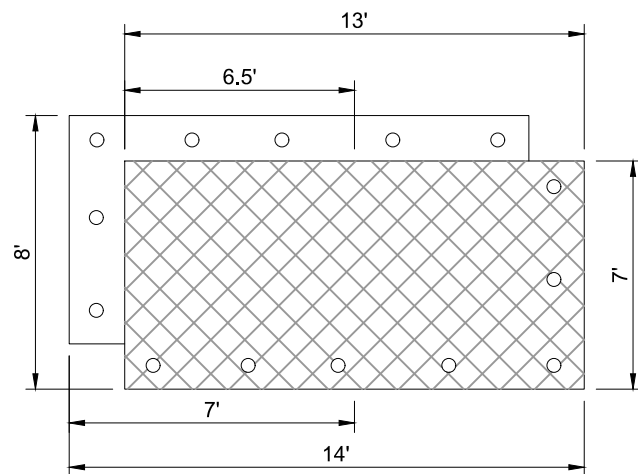
**DETAILS**

**LORAIN #11F PROJECT**  
**PLUGGING SOW PLAN SET**

REVISION	
7/01/25	
DESIGN UNIT CT CONSULTANTS	
DRAWN BY: K.M.R.	
CHECKED BY: J.E.C.	
DATE: 12/23/2024	
SHEET NO.	

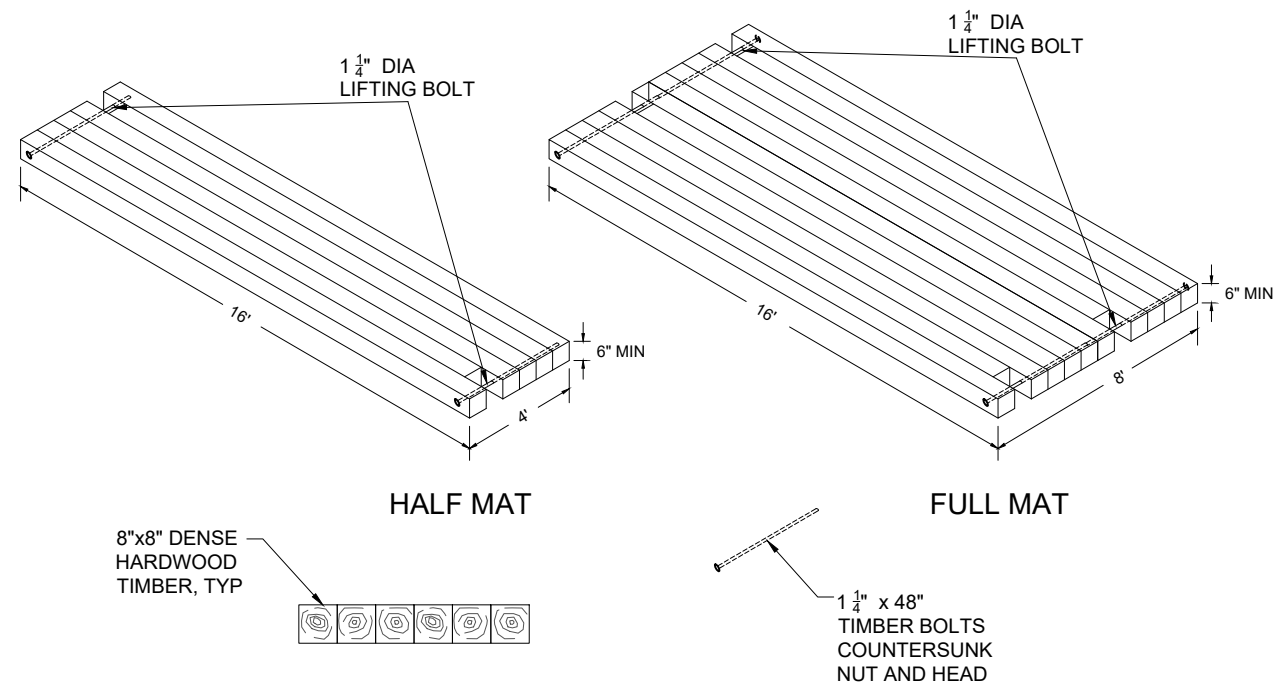
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EDIT DATE: 7/2/2025 9:27 AM EDIT BY: KRUSSELL DRAWING FILE: H:\2024\241540\DWG\SHEETS\LORAIN T-1 GROUP 11 - NEW DETAILS SHEET-GROUP-11.DWG



PRODUCT SPECIFICATIONS	
MANUFACTURER	NEWPARK
FULL SIZE	OVERALL DIMENSIONS: 8' X 14' X 4" SURFACE DIMENSIONS: 7' X 13' X 4"
HALF SIZE	OVERALL DIMENSIONS: 8' X 7.5' X 4" SURFACE DIMENSIONS: 7' X 6.5' X 4"
WEIGHT	1,000 LBS
COMPRESSIVE LOAD CAPACITY	600 PSI (70 KG/CM2)
COLOR	BEIGE
MATERIAL	THE DURABASE ADVANCED COMPOSITE MATS ARE COMPOSED OF A PROPRIETARY FORMULATION THAT INCLUDES SPECIALTY RESINS AND HIGH-END POLYMER ADDITIVES FOR ENHANCED DURABILITY AND DIMENSIONAL STABILITY. THIS SPECIAL FORMULATION ALSO PROVIDES AN ANTI-SKID SURFACE AND PREVENTS STATIC CHARGE ACCUMULATION FOR ADDED WORKER SAFETY.
FLAMMABILITY RESISTANCE	NEED INFO RATED
INDUSTRIES	OIL & GAS, TRANSMISSION & DISTRIBUTION, CONSTRUCTION, UTILIZED PETROCHEMICAL, PIPES

**DURA-BASE ADVANCED COMPOSITE  
MAT SYSTEM OR EQUIVALENT  
NOT TO SCALE**



**TIMBER MAT  
NOT TO SCALE**



W21-1  
(500' FROM W20-7,  
BOTH SIDES OF THE  
ENTRANCE)



W20-7  
COVER OR TURN DURING EVENINGS  
OR WHEN BOTH LANES ARE OPEN  
(500' FROM FLAGGER, BOTH SIDES OF  
ENTRANCE)

**NOTES:**

- THIS WORK SHALL BE PER THE GENERAL SPECIFICATIONS, PART 7: MAINTENANCE OF TRAFFIC AND SHALL BE INCIDENTAL TO LINE ITEM "MOBILIZATION" FOR EACH SITE, UNLESS OTHERWISE NOTED. **THIS WORK SHALL INCLUDE ALL REQUIRED PERMITS FROM THE LOCAL ROAD AUTHORITIES.**
- ALL SIGNS MAY BE MOUNTED PORTABLE MOUNTS.
- CONTRACTOR SHALL FOLLOW THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) FIGURE 6H-1, IN BOTH DIRECTIONS ALONG THE ROADWAY. W21-1 SHALL BE IN PLACE AS SOON AS THE CONTRACTOR ARRIVES TO THE SITE EACH DAY.
- CONTRACTOR SHALL FOLLOW THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) FIGURE 6H-13, LANE CLOSURE ON A TWO-LANE ROAD USING FLAGGERS (TA-13).
- FLAGGERS SHALL HAVE PROPER COMMUNICATION DEVICES AND SHALL BE POSITIONED 20' FROM EACH EDGE OF THE CONSTRUCTION WORK LIMITS. ANY VARIATION MUST BE APPROVED PER LOCATION. **TEMPORARY CLOSURES SHALL NOT BE COMPLETED WITHOUT A FLAGGER.**
- TEMPORARY CLOSURES SHALL BE MINIMIZED TO LESS THAN 20 MINUTES AND THEN THE ROAD SHALL BE FULLY REOPENED TO TRAFFIC.
- ANY WORK IN THE ROADWAY THAT IS REQUIRING MORE THAN 20 MINUTES SHALL BE COMPLETED PER GENERAL SPECIFICATIONS, PART 7: MAINTENANCE OF TRAFFIC WITH THE PROPER PERMITS FROM THE LOCAL ROAD AUTHORITIES AND APPROVAL FROM THE DIVISION.

**FLAGGER & CONSTRUCTION SIGNAGE NOTES  
NOT TO SCALE**



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**DETAILS**

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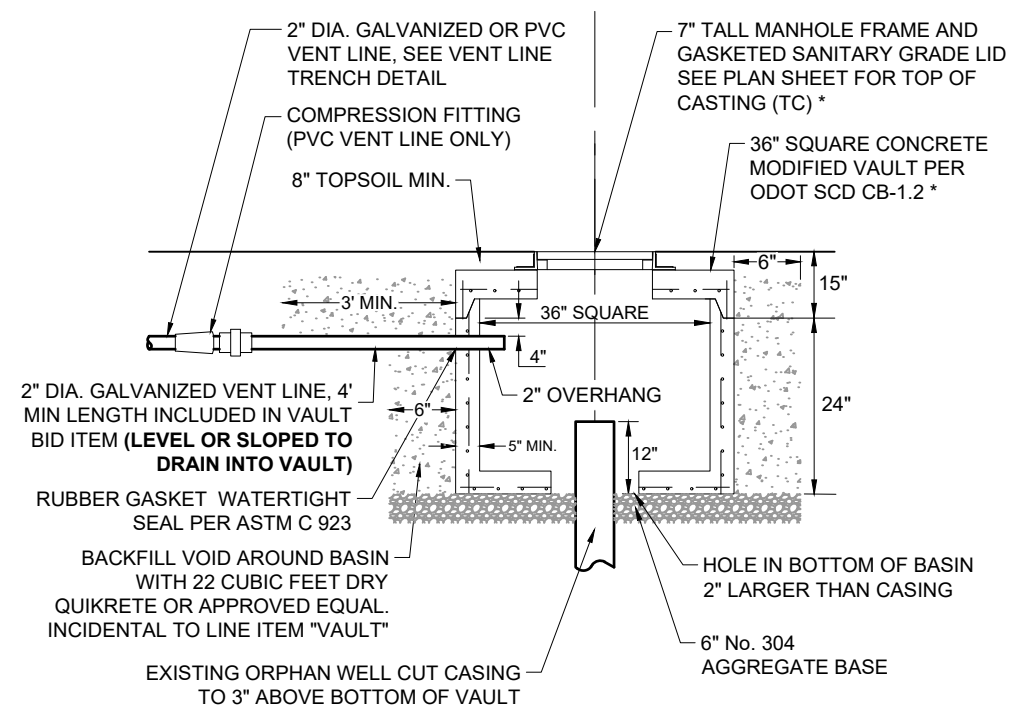


DETAILS

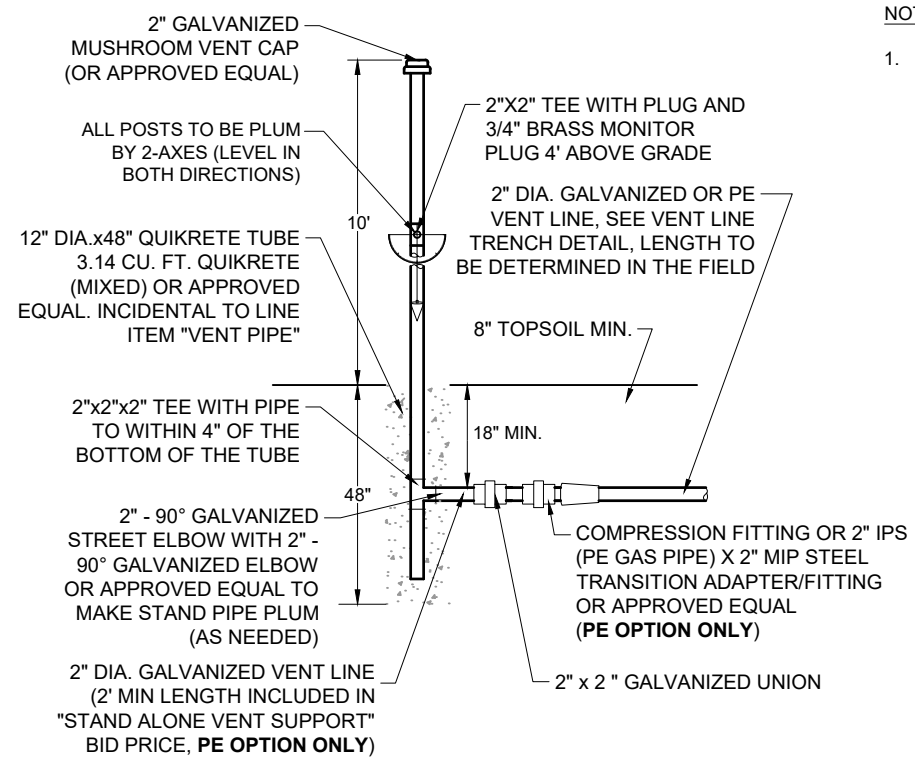
LORAIN #11F PROJECT  
PLUGGING SOW PLAN SET

REVISION	DATE	BY

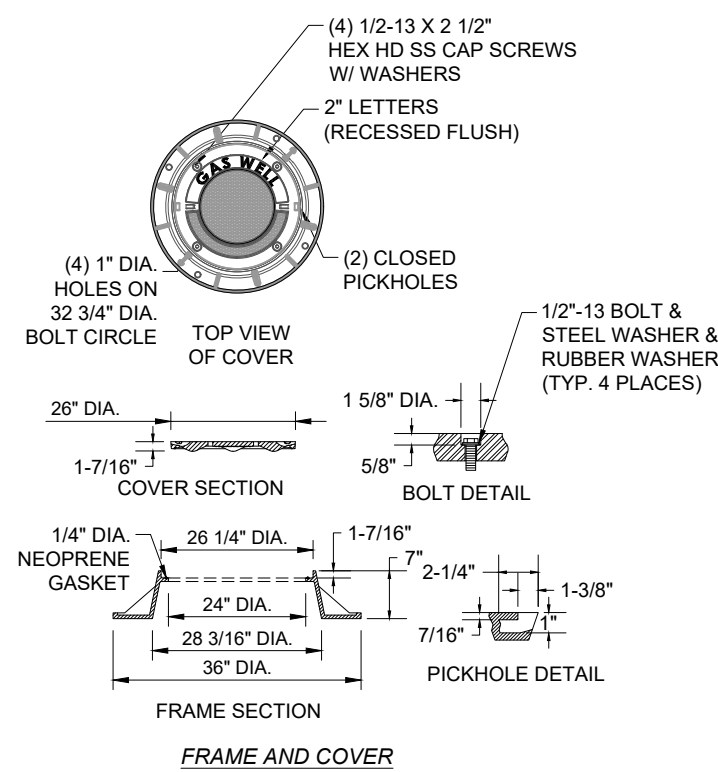
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SECTION VIEW & PROFILE

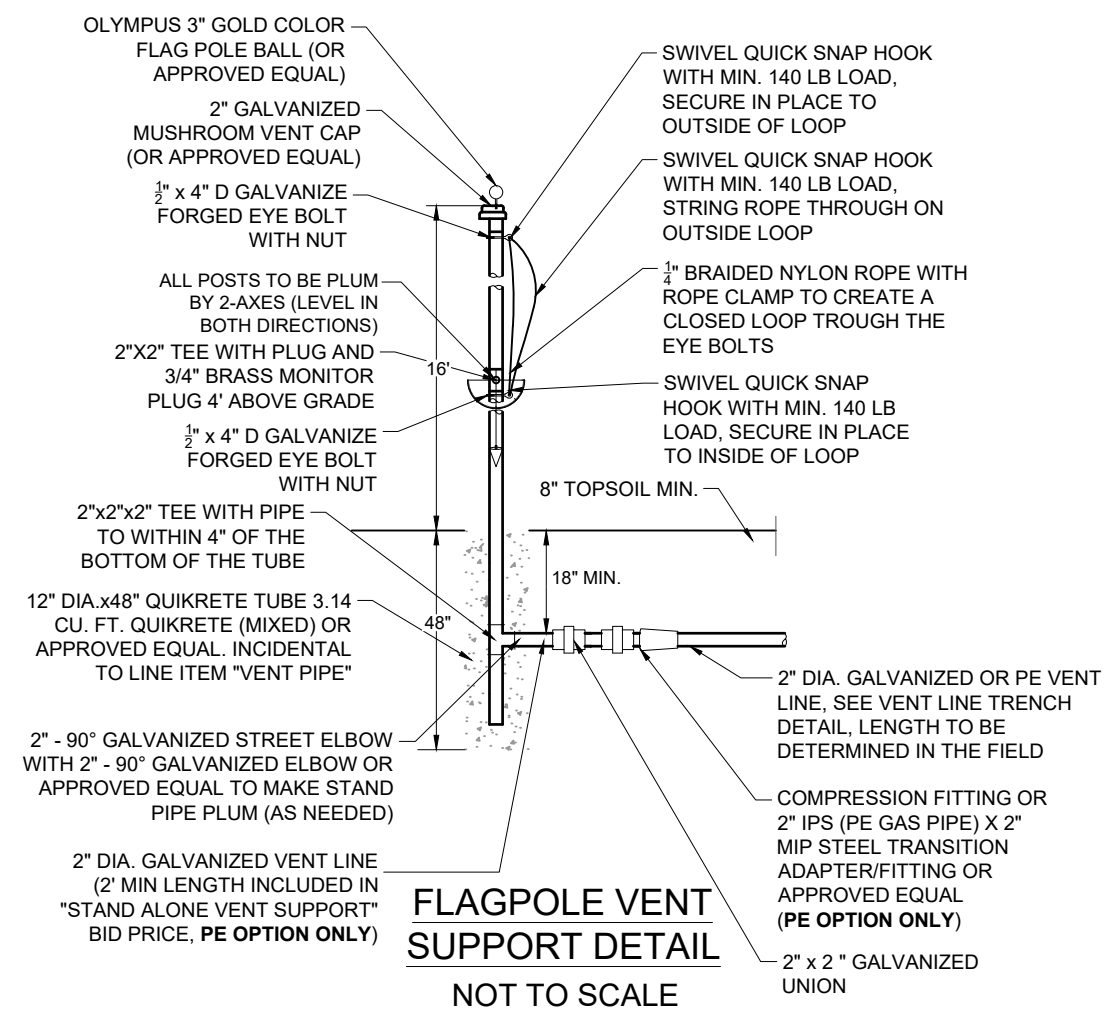


STAND ALONE VENT  
SUPPORT DETAIL  
NOT TO SCALE



VAULT DETAILS  
NOT TO SCALE

NOTES:  
1. JOINT SEAL: FURNISH RESILIENT SEAL BETWEEN PRECAST MANHOLE SECTIONS AND FLEXIBLE GASKET JOINTS PER ODOT CMS 706.11.  
2. MATERIALS: PROVIDE MATERIALS FOR PRECAST SECTIONS, INCLUDING REINFORCEMENT NOT SPECIFIED HERE, THAT MEET THE REQUIREMENTS OF ODOT CMS 706.13.  
3. FRAME & COVER: PROVIDE MATERIALS THAT MEET THE MATERIALS REQUIREMENTS OF ODOT CMS 711.14 (NEENAH 1916-C1, EJIW 1040 APT 1045ZPT ASSEMBLY, OR APPROVED EQUAL).  
4. VENT PIPES: HORIZONTAL AND VERTICAL LOCATIONS SHALL BE DEFINED IN PLAN VIEW OF THIS PLAN SET OR AS DETERMINED BY THE CHIEF.  
5. \*\*VENT PIPE SUPPORT: CONCRETE SHALL MEET THE REQUIREMENTS OF ODOT CLASS "C" AND SHALL BE PLACED IN THE CONCRETE TUBE AS SHOWN IN THE SECTION VIEW. THE VENT PIPE SHALL BE SET THROUGH THE TUBE PRIOR TO THE PLACEMENT OF THE CONCRETE.



FLAGPOLE VENT  
SUPPORT DETAIL  
NOT TO SCALE

NOTE:

1. ODNr AND HOMEOWNER TO COORDINATE AND DECIDE WHICH VENT OPTION (STAND ALONE OR FLAGPOLE) THEY'D LIKE THE CONTRACTOR TO INSTALL.



## SCOPE OF WORK

### Quantity Sheet

#### Lorain 11F Project

Lorain County, Eaton Township

Well Names 0000, CARPENTER ART., CARPENTER-YOST 1, COLUMBIA MUTUAL LIFE INSURANCE 1, MATE MARY 1, WEIL LOWIS 1  
 APIs 34093200320000, 34093200180000, 34093204460000, 34093200390000, 34093602420000, 34093207530000



Line	Item	Description	Unit	Type	Cost	Qty	Estimate Total
<b>Phase 1: Mobilization and Access</b>							
1	1100	Mobilization	Each	Material		6.00	
2	1110	Demobilization	Each	Material		6.00	
3	1140	Clear & Grub (Mate Mary 1) (LS)	Each	Material		1.00	
4	1140	Clear & Grub (Col Mut Life Ins 1) (LS)	Each	Material		1.00	
5	1160	Silt Fence	Linear Ft.	Material		1187.00	
6	1390	No. 57 Stone	Ton	Material		125.00	
7	1510	Road Mats	Sq. Ft.	Material		139324.00	
<b>Phase 2: Well Site Safety</b>							
8	2100	Site Safety	Each	Material		6.00	
9	2130	Secondary Containment	Each	Material		6.00	
10	2140	H2S Safety Team	Day	Material		2.00	
11	2150	H2S Safety Team Standby	Day	Material		2.00	
12	2160	Well Head Control		Material		6.00	
13	2160	Well Head Control H2S		Material		1.00	
14	2171	Well Kill Fluid	BBL	Material		1850.00	
15	2230	Conductor Casing (13-3/8") (CML1 / Weil	Linear Ft.	Material		70.00	
16	2240	Surface Casing (7-0")	Linear Ft.	Material		895.00	
<b>Phase 3: Plugging</b>							
17	3100	Well Prep & Plug (Mate Mary 1) (LS)	Each	Material		1.00	
18	3100	Well Prep & Plug (Col. Mut. Ins Co) (LS)	Each	Material		1.00	
19	3100	Well Prep & Plug (Weil Lowis 1) (LS)	Each	Material		1.00	
20	3100	Well Prep & Plug (Wargo J 1) (LS)	Each	Material		1.00	
21	3100	Well Prep & Plug (Carpenter Yost 1) (LS)	Each	Material		1.00	
22	3100	Well Prep & Plug (Carpenter Art 1) (LS)	Each	Material		1.00	
23	3240	Logging (GR/CCL/Bond/Caliper)	Each	Material		6.00	
24	3310	Tubing	Each	Material		6.00	
25	3340	Approved Cement (Sack)	Each	Material		3194.00	
26	3350	Cement Mixing & Pumping	Each	Material		30.00	
<b>Phase 4: Site Clean-up and Restoration</b>							
27	4100	Site Restoration (Mate Mary 1)	Each	Material		1.00	
28	4100	Site Restoration (Col. Mut. Ins Co)	Each	Material		1.00	
29	4100	Site Restoration (Weil Lowis 1)	Each	Material		1.00	
30	4100	Site Restoration (Wargo J 1)	Each	Material		1.00	
31	4100	Site Restoration (Carpenter Yost 1)	Each	Material		1.00	
32	4160	Approved Resoil	Ton	Material		12.00	
33	4320	Vault	Each	Material		2.00	
34	4330	Vent Pipe	Linear Ft.	Material		30.00	
35	4340	Vent Pipe Support	Each	Material		1200.00	
36	4420	Contaminated Material Disposal	Ton	Material		12.00	
37	4440	Salvage Material Disposal	Each	Material		6.00	
38	4460	Fluid Disposal	BBL	Material		150.00	
<b>Fixed Costs</b>							
39	0800	Salvage Material Reimbursement	Each	Material	-\$1.00	0.00	\$0.00
40	0810	Crop Damage (Corn)	Acre	Material	\$897.00	2.92	\$2,619.24
41	0820	Crop Damage (Soybean)	Acre	Material	\$515.00	2.92	\$1,503.80
<b>Contingency</b>							
42	0240	Professional Services (Mud Engineer)	Each	Labor	\$ 1.00	10000.00	\$10,000.00
43	1520	Road Mats	Each	Material		7655.00	
44	2181	Additional Circulation Fluid (Freshwater)	BBL	Material		200.00	
45	2191	Additional Circulation Fluid (Brine)	BBL	Material		200.00	
46	2360	Downhole Videography	Each	Material		6.00	
47	3140	Fishing	Hour	Material		36.00	
48	3160	Milling/Drillout	Hour	Material		36.00	
49	3170	Magnet	Each	Material		6.00	
50	3240	Logging (GR/CCL/Temp/Bond/Caliper)	Each	Material		6.00	
51	3450	Lost Circulation Materials (Sack)	Each	Material		100.00	
52	3470	Drilling Mud (Sack)	Each	Material		100.00	
53	3480	Hydrogen Sulfide Scavenger	Gallons	Material		330.00	
54	4250	Asphalt Pavement	Sq. Ft.	Material		9272.00	

**Note:** This quantity sheet is provided for reference only. The Contractor's Offer must be submitted online through OhioBuys (<https://procure.ohio.gov/bidders-and-suppliers>). Quantities are only an estimate. Payment shall be based on quantities satisfactorily completed.

Each contractor is responsible for logging into OhioBuys and submitting an offer that is responsive to all amendments issued. All offers submitted prior to an amendment being issued shall become null/void and not considered in the opening. All amendments shall

**become part of the Scope of Work.**

Offers must be fully submitted online through OhioBuys (<https://procure.ohio.gov/bidders-and-suppliers>).