

# **CONTRACT DOCUMENTS**

**FOR**

**PROJECT**

## **Sherman Park – Taupe Mtn Removal**

**Department of Metropolitan Development  
City of Indianapolis**



**Joseph H. Hogsett.....Mayor  
Scarlett Andrews Martin.....Director**

GEN 09/21



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**NOTICE TO BIDDERS**  
**Consolidated City of Indianapolis**

Department: **Department of Metropolitan Development**  
**200 E Washington St, Suite 2042**  
**Indianapolis, Indiana 46204**

Project/Work: **Sherman Park – Taupe Mtn Removal**

Notice is hereby given that the Purchasing Division of Indianapolis and Marion County will receive sealed bids for the above described “Project/Work” at Room **1522** of the City-County Building, Indianapolis, Indiana, until 9:30 a.m. prevailing local time, and from 9:31 a.m. to 10:00 a.m. in Room **1560**, on **November 18, 2021** and commencing as soon as practicable thereafter on the same date such bids will be publicly opened.

A Bid Bond or certified check in an amount not less than five percent (5%) of the amount bid must be submitted with each Bid. A one hundred percent (100%) Performance and Payment Bond will also be required of the successful Bidder.

The Work consists of, but is not necessarily limited to the following:

**Removal of construction materials, debris, soil and other materials to be flush with existing concrete pads beneath.**

Contract Documents for the Project/Work have been assembled into one or more bound Project Manuals which, together with Drawings, may be examined at <http://www.indygovplans.org> or at the following locations:

City of Indianapolis  
Purchasing Department  
200 East Washington Street  
Suite 1522, City-County Building  
Indianapolis, Indiana 46204

Repro Graphix  
437 North Illinois Street  
Indianapolis, Indiana 46204

Copies of such Drawings and Project Manuals will be available for pick-up or delivery through the online planroom operated by Repro Graphix at <http://www.indygovplans.org>. Planroom registration is free. The plan charge will be listed on the online planroom. Payment may be made by check, credit card, or cash. **NO DEPOSITS ACCEPTED.** Make checks payable to Repro Graphix. All payments and costs of Contract Documents and related supplemental materials are non-refundable. **BID PACKAGES WILL NOT BE AVAILABLE FOR SALE IN THE PURCHASING DIVISION OFFICE OR THE DEPARTMENT OF METROPOLITAN DEVELOPMENT.**

Bidders shall assure that they have obtained complete sets of drawings and Contract Documents and shall assume the risk of any errors or omissions in Bids prepared in reliance on incomplete sets of drawings and Contract Documents.

This Work will be funded by the City of Indianapolis. The participation goal for Minority Business Enterprise (MBE) for this contract is fifteen percent (15%). The participation goal for Women Business Enterprise (WBE) for this contract is eight percent (8%). The participation goal for Veteran Business Enterprise (VBE) is three percent (3%). The participation goal for Disability-owned Business Enterprise (DOBE) is one percent (1%).

Due to restrictions on in-person meetings caused by COVID-19, a pre-bid conference **call** for discussion of the Work, the bidding requirements and other important matters pertaining to MBE/WBE/VBE/DOBE contracting opportunities will be held on **November 9, 2021 at 10:00AM local time. Prospective bidders may participate in the call using the following instructions:**

**Join from the meeting link**

<https://indy.webex.com/indy/j.php?MTID=mc1efec7d47d40bed4dc81b4eb01b3d0f>

**Join from a mobile device**

[+1-408-418-9388](tel:+14084189388).,23487561321## United States Toll

[1-844-992-4726](tel:18449924726).,23487561321## United States Toll Free

All prospective Bidders are strongly urged to participate in the pre-bid conference call and carefully review the pre-bid minutes to learn about other efforts to meet MBE/WBE/VBE/DOBE goals.

All Bidders will be subject to the MBE/WBE/VBE/DOBE Business Utilization Plan (“Utilization Plan”), of the City of Indianapolis. In evaluating a Bidder’s responsibility, the City will consider the Bidder’s Affirmative Action plan.

For accommodations needed by persons with disabilities to attend the public bid opening meeting, please call 327-4900.

The City of Indianapolis reserves the right to reject any or all bids or to waive any informalities and to accept the bid which it deems most favorable to the interests of the City after all bids have been examined and canvassed.

Dave Condon  
Purchasing Administrator

**INSTRUCTIONS TO BIDDERS**  
**Consolidated City of Indianapolis**

Department (“Owner”): **Department of Metropolitan Development**  
**200 E Washington St, Suite 2042**  
**Indianapolis, Indiana 46204**

Project/Work: **Removal of construction materials, debris, soil and other materials to be flush with existing concrete pads beneath.**

Owner’s Representative: **Brett Morgan**  
**Senior Project Manager, Department of Metropolitan Development**

Engineer: **Crawford, Murphy, & Tilly**  
**Heartland Environmental Associates, Inc**

**1. GENERAL**

- 1.1 Submission of a Bid shall constitute an unconditional agreement and acknowledgment by the Bidder to be bound by all terms and conditions set forth herein and in any of the documents assembled or referred to in the bound Project Manual of which these Instructions to Bidders are a part.
- 1.2 Sample forms are included in the Project Manual to acquaint Bidders with the form and provisions of various Bid Documents and other documentation required by the Contract Documents to be executed, completed and submitted by some or all Bidders, either as part of a Bid Submission or after the Bid Date. Such sample forms are not to be detached from the Project Manual, or filled out or executed. Separate copies of such forms and any other required documentation prescribed by the Contract Documents have been or will be furnished separately by the Owner and must be obtained directly from the City Purchasing Division.
- 1.3 Instructions and requirements printed on any sample form included in the Project Manual or any form not so included but required to be completed, signed or furnished by a Bidder as part of a Bid Submission or after receipt and opening of Bids shall be deemed requirements established by these Instructions to Bidders to the same extent as if fully restated herein.
- 1.4 By submitting bid the Bidder agrees the bid proposal and price(s) contained herein shall be valid for ninety (90) days from bid opening.

**2. DEFINITIONS**

The following definitions shall apply to these Instructions to Bidders (ITB):

- 2.1 Bidder - Any person or entity who submits a Bid.
- 2.2 Bid - A written proposal submitted by a Bidder as part of the form prescribed herein offering to perform and complete the Work and to fulfill all other requirements of the Contract Documents for one or more specified prices.

- 2.3 Bid Documents - All documents and completed forms required to be submitted by a Bidder with and as integral parts of a Bid Submission, whether or not included as sample forms assembled in the Project Manual of which these Instructions to Bidders are a part. Such Bid Documents are listed and more fully described in ITB Section 5.3 hereof.
- 2.4 Bid Date - The date when Bids are to be received, opened and publicly read aloud as established by the Notice to Bidders as may be modified by Addenda.
- 2.5 Bid Submission - All documents presented by a Bidder for receipt and opening on the Bid Date.
- 2.6 Contract Documents - The Agreement and any exhibits thereto, Addenda (which pertain to the Contract Documents), Instructions to Bidders, Advertisement, Notice to Bidders, Bidder's Bid (including documentation accompanying the Bid and any post-Bid documentation submitted prior to the Notice of Award), Notice to Proceed, the Bonds, the General Conditions, the Additional Requirements Section, any supplemental or special conditions, the Specifications and the Drawings, as the same are more specifically identified in the Agreement.
- 2.7 Disability-owned Business Enterprise (DOBE) – A business which is certified as a Disability-Owned Business Enterprise by the City of Indianapolis. Certifications are conducted pursuant to Chapter 49 Code of Federal Regulations, as amended, and the City Utilization Plan.
- 2.8 E-Verify Program - An electronic verification of work authorization program of the Illegal Immigration Reform and Immigration Responsibility Act of 1996 (P.L. 104-208), Division C, Title IV, s.403(a), as amended, operated by the United States Department of Homeland Security or successor work authorization program designated by the United States Department of Homeland Security or other federal agency authorized to verify the work authorization status of newly hired employees under the Immigration Reform and control Act of 1986 (P.L. 99-603).
- 2.9 Minority Business Enterprise (MBE) - A business which is certified as a Minority Business Enterprise by the City of Indianapolis. Certifications are conducted pursuant to Chapter 49 Code of Federal Regulations, as amended, and the City Utilization Plan.
- 2.10 Owner - The City of Indianapolis acting by and through the Department or other agency designated above.
- 2.11 Project Manual - The bound set of documents, sample forms, and Contract Documents (excluding plans and Addenda) approved by the Owner for the Work and/or Project described in the Notice to Bidders and of which these Instructions to Bidders are a part.
- 2.12 Veteran Business Enterprise (VBE) – A business which is certified as a Veteran Business Enterprise by the City of Indianapolis.
- 2.13 Women Business Enterprise (WBE) - A business which is certified as a Women Business Enterprise by the City of Indianapolis. Certifications are conducted pursuant to Chapter 49 Code of Federal Regulations, as amended, and the City Utilization Plan.

In all other respects, terms used herein shall have the meanings as stated in the General Conditions or other Contract Documents.

### **3. EXAMINATION OF SITE AND DOCUMENTS**

- 3.1 Before the Bid Date, all Bidders shall carefully and thoroughly examine and inspect the entire site of the proposed Work and adjacent premises and the various means of approach and access thereto by means of a site inspection visit, and make all necessary investigations to inform themselves thoroughly as to the facilities necessary for delivering, placing and operating the necessary construction equipment, and for delivering and handling materials at the site, and shall inform themselves thoroughly as to any and all actual or potential difficulties, hindrances, delays and constraints involved in the commencement, prosecution and completion of the proposed Work in accordance with the requirements of the Contract Documents.
- 3.2 It shall be the sole responsibility of Bidders to make borings, test pits and to conduct such other investigations at or near the site of the proposed Work as they deem necessary to determine the character, location, and amount of materials to be encountered or other subsurface conditions which could affect the manner, cost or time required to perform the Work.
- 3.3 Bidders shall carefully and thoroughly examine the plans, specifications and other Contract and/or Project Manual Documents and shall assume the full risk of their own judgments as to the nature, quality and amount of the whole of the Work to be done, and for the price bid must assume all risk of any and all variances or errors in any computation or statement of amounts or quantities necessary to complete the Work in strict compliance with the Contract Documents.
- 3.4 Elevations of the existing ground surface or structures at the site of the Work as shown on the plans are believed to be reasonably correct, but are not guaranteed to be absolutely so and are presented only as an approximation. Bidders shall satisfy themselves as to the correctness of all elevations.
- 3.5 Information stated or depicted on plans concerning the location, dimensions, depth and other characteristics of underground structures and utilities is given only as general information and shall not be construed or relied upon by Bidders as a representation or assurance that such structures or utilities will be found or encountered as plotted, or that such information is complete or accurate. Bidders, therefore, shall satisfy themselves by such means as they may deem proper as to the location of all structures and utilities that may be encountered in construction of the Work and shall bear the risk of the number, type, location, dimensions and depth of all structures and utilities thus encountered.
- 3.6 The current edition of the City of Indianapolis Standard General Conditions for Construction Contracts, is incorporated by reference as part of this bid. Copies are available at <https://www.indy.gov/activity/public-works-specifications-and-manuals>.

### **4. CLARIFICATIONS AND ADDENDA**

- 4.1 If a Bidder finds conflicts, errors, discrepancies or ambiguities in the Contract Documents or any sample form, or if the Bidder is in doubt as to the intended meaning of any portion or provision therein, the Bidder shall at once give written notice thereof to the Owner's Representative, at least seven (7) consecutive calendar days prior to the Bid Date. No Bidder shall be allowed any extra compensation or time extension by reason of any conflict, error, discrepancy or ambiguity of which the Bidder had actual knowledge or reasonably should have known and which he/she failed to report within the period and in the manner required by these Instructions to Bidders.

- 4.2 No material changes, clarifications or interpretations of the Contract Documents will be issued except by written or graphic Addenda mailed or delivered to record holders of Contract Documents not less than three (3) days prior to the Bid Date. All such Addenda must be acknowledged by the Bidder and will become a part of the Contract Documents. The Owner will not be responsible for or bound by any oral or written interpretations or clarifications of the Contract Documents which anyone presumes to make on its behalf, except by an Addendum issued in accordance with this Section.

## 5. BID SUBMISSION

- 5.1 All Bid Documents shall be placed within a sealed envelope which shall be plainly labeled on the outside with the name and address of the Bidder along with the RFB number, Project name and number (if applicable) and Due Date. If forwarded by mail, the sealed envelope must be enclosed in another envelope addressed to: City of Indianapolis, Purchasing Division, 200 E. Washington Street, Suite 1522, City-County Building; Indianapolis, Indiana 46204.
- 5.2 All Bid Documents as herein prescribed must be submitted with and as integral parts of each Bid Submission and shall be subject to all requirements of the Contract Documents, including drawings and these Instructions to Bidders. Bid Documents must be properly filled in and completed in every material respect and without interlineations, excisions, special conditions, qualifications or exceptions. Each Bid Document requiring a signature shall be signed by an individual duly authorized to execute such document on Bidder's behalf. A bid executed by a corporation, joint venture, or other entity with an assumed name shall have the legal and correct name thereof followed by the word "by" and the signature and title of the officer or other person authorized to sign for it.
- 5.3 The Bid Documents to be thus submitted by each Bidder shall consist of all of the following (5.3.1, 5.3.2, 5.3.3):
- .1 Bidder's Itemized Proposal and Declarations. A sample of this form is included in the Project Manual and must be utilized by all Bidders. Such document includes and consists of the following constituent "Parts":
    - "Part 1 - Bidder Information"
    - "Part 2 - Proposal (Bid)"
    - "Part 3 - Contract Items and Unit Prices"
    - "Part 4 - Contract Documents and Addenda"
    - "Part 5 - Exceptions"
    - "Part 6- MBE/WBE/VBE/DOBE Participation, including all forms required by the City of Indianapolis Office of Minority & Women Business Development"
    - "Part 7A- Nepotism Disclosure Form"
    - "Part 7- Additional Declarations, including certification required by IC 5-22-16.5"
    - "Part 8 – Legal Violations"
    - "Part 9 – Staffing Capabilities"
    - "Part 10 – Tax Deficiencies"
    - "Part 11 – Drug Testing"
    - "Part 12 - Non-Collusion Affidavit"
    - "Part 13 - E-Verify Affidavit"
    - "Part 14 - Signatures"

- .2 Bid Security in the form of a Bid Bond or Certified Check in an amount not less than five percent (5%) of the bid price. Such Bid Security shall serve as security to insure the execution of the Agreement and the furnishing of other required documents by the successful Bidder, including Performance and Payment Bonds. A sample Bid Bond form is included in the Project Manual and such form, or such other form as may be approved in advance by Owner, shall be utilized if such a bond is furnished as Bid Security. A Bid Bond shall be executed by a surety company licensed to transact such business in the State of Indiana and qualified as a surety under the underwriting limitations on the current list of “Surety Companies Acceptable on Federal Bonds” as published in the U.S. Treasury Department Circular No. 570; the Bidder shall also furnish as part of the Bid Submission a signed power of attorney establishing the authority of the person executing such Bid Bond on behalf of the surety. Bid Security shall be held until the Contract is executed with the successful Bidder. In the event that all bids are rejected, the Bid Security of all Bidders will be returned upon request. No “Annual” bid bonds, cash deposits or cashiers’ checks will be accepted.
- .3 Standard Questionnaire and Financial Statement (City Form 102) or Contractor’s Bid for Public Work (State Form 96). Such form is available from the City Central Purchasing Division and their website at <http://www.indy.gov/egov/city/ofm/purch/bids/pages/biddingopportunities.aspx> and will be used in consideration of a Bidder’s ability to perform its obligations under the terms of the contract Documents and in determining other material factors bearing upon a Bidder’s responsibility. If Bid is under \$150,000 either of these forms may be submitted as a Post-Bid submittal under Section 6, Post Bid Requirements.

- 5.4 Bids may be withdrawn in person by a Bidder during normal hours of business prior to the time fixed for opening of Bids. In the event of a valid withdrawal of a Bid, the Bid Security of the withdrawing Bidder will be returned promptly. No Bid may be withdrawn after opening of Bids has commenced except after expiration of such period following the Bid Date as specifically provided by law, plus any extension thereof as provided elsewhere in these Instructions to Bidders. **Bidder’s failure to provide all completed documentation as required in ITB Section 5.3 may result in Bid being deemed non-responsive.**

## 6. POST-BID REQUIREMENTS

Within three (3) business days of notification by Owner, the apparent lowest responsive Bidder will be required to submit additional documents and satisfy additional requirements as conditions to such Bidder being found by the Owner to be a responsible Bidder, as follows:

- 6.1 Affirmative Action Plan. The Bidder shall provide its Affirmative Action Plan and a properly completed and executed “City of Indianapolis - EQUAL OPPORTUNITY COMPLIANCE” form for approval by the City’s Office of Minority & Women Business Development (OMWBD). If a Bidder has fifteen (15) or fewer employees he shall submit an Affirmative Action Policy statement. Otherwise, he shall submit the Indiana Plan/Affirmative Action Certification. A Bidder must submit these items unless they have previously been submitted, accepted and found to be satisfactory by OMWBD during the current calendar year (year of bid opening). If the Bidder has received a letter of compliance from OMWBD for the current calendar year, he/she should submit a copy of such letter.

- .1 Minimum Minority and Female Workforce Utilization Goals. The goals and timetables for minority and female participation, expressed in percentage terms for the Bidder's aggregate work force in each trade on all construction work in the covered area, are as follows:

Goals for female participation in each trade: 6.9%

Goals for minority participation in each trade: 12.5%

These goals are applicable to all the Bidder's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the Bidder performs construction work in a geographical area located outside of the geographical area where the work is actually to be performed, the Bidder also is subject to the goals for both its Federally involved and non-federally involved construction in that area.

The Bidder's compliance with this provision shall be based on its implementation of an affirmative action plan and its efforts to meet the goals set forth in this paragraph. The hours of minority and female employment and training shall be substantially uniform throughout the length of the contract, and in each trade, and the Bidder shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from contractor to contractor or from project to project, for the sole purpose of meeting the Bidder's goals, shall be a violation of the contract. Compliance with the goals will be measured against the total work hours performed.

- 6.2 Proof of Insurability. The Bidder shall furnish: (1) proof of insurance showing existing coverage in accordance with the terms and amounts stated in the General Conditions, or (2) a letter or statement certifying that, in the event that the bid is awarded by the Owner, an insurance company will provide the required coverage to the Bidder submitting the bid. Such proof of insurance or the letter/statement shall be issued by a financially responsible insurance company authorized to do business in the State of Indiana.
- 6.3 Surety Letter of Intent. The Bidder shall furnish a written statement or letter from a Surety company licensed to transact such business in the State of Indiana and qualified as a surety under the underwriting limitations on the current list of "Surety Companies Acceptable on Federal Bonds" as published in U.S. Treasury Department Circular No. 570, which assures the Owner that, in the event the Bid is accepted and a contract is awarded by Owner, said Surety will execute and deliver both a Performance Bond and Payment Bond as required by the Contract Documents.
- 6.4 Joint Venture Agreement. If the Bidder is a joint venture, partnership or other combination of two or more persons or entities, the Bidder shall submit a copy of the joint venture or other agreement by which such joint venture, partnership or other association has been formed, executed by all such participating persons or entities. If the Bid is signed by less than all parties that comprise the Bidder, suitable written evidence of the authority of such signing party to bind all such parties must also be furnished.
- 6.5 Application for MBE/WBE/VBE/DOBE Waiver Program. If Bidder has not met all goals as set out in Section 9.1, the Bidder shall submit a completed Application for MBE/WBE/VBE/DOBE Program Waiver including all backup documentation as prescribed by Section 9 of these Instructions to Bidders.

- 6.6 Subcontractor/Supplier List. The Bidder shall submit all documentation required under Section 9.4 of these Instructions to Bidders, including all MBE/WBE/VBE/DOBE requirements (POST-BID-4).
- 6.7 Manufacturers List. The Bidder shall submit a complete list of all equipment and supplies that are listed in the Manufacturer's List (POST-BID-5).
- 6.8 E-Verify Documentation. - The Bidder shall submit verification that it is enrolled in and participating in the E-Verify program (POST-BID-6).
- 6.9 Eligibility to do Business. The Bidder shall submit a copy of a print-out of the Indiana Secretary of State's online records for the bidder dated within sixty (60) days of the submission showing that the Bidder is in existence, is current with the Secretary of State's Business Entity Reports, and is eligible for a certificate of good standing. This does not apply to Bidders who are individuals, sole proprietors, or partnerships (POST-BID-7).
- 6.10 Apprentice and Training. The Bidder shall submit evidence of participation in apprenticeship and training programs, applicable to the work to be performed on the project, which are approved by and registered with the United States Department of Labor's Office of Apprenticeship, or its successor organization (POST-BID-8).
- 6.11 Project Managers. The Bidder shall submit a list of the names and descriptions of relevant management experience of each of the bidder's project managers and superintendents that the Bidder intends to assign to work on the project (POST-BID-9).
- 6.12 Licensure. The Bidder shall submit proof of any appropriate professional or trade licenses held by the Bidder and its management personnel required by law for any trade or specialty area in which the Bidder is seeking a contract award. The Bidder shall also disclose any letters of suspension or revocation issued in the previous five (5) years of any such license held by the company, or of any director, officer, or manager of the Bidder (POST-BID-10).
- 6.13 Surety. The Bidder shall submit evidence of utilization of a surety company listed as an approved surety by the United States Department of the Treasury. (POST-BID-11).
- 6.14 Bidder Qualification. For contracts estimated to be at least \$300,000.00, the Bidder shall submit evidence that it and all relevant subcontractors have been qualified under IC 4-13.6-4 or IC 8-23-10 (POST-BID-12).

## **7. BID EVALUATION AND AWARD**

- 7.1 **Award of the Contract will be made to the lowest, responsive and responsible Bidder, where the Bid is reasonable and does not exceed the funds available for the project.** The Owner reserves the right to reject all Bids and may waive or allow a Bidder to correct errors, omissions or other irregularities in Bid Documents that are found not to have afforded the Bidder a substantial competitive advantage over other Bidders.
- 7.2 The Owner shall have the right to reject any Bid if investigation of the Bidder fails to satisfy the Owner that such Bidder is properly qualified to carry out the obligations and complete the Work. Any or all Bids will be rejected if there is reason to believe that collusion exists among Bidders.

- 7.3 For unit price Contract Items, estimated quantities and unit prices will serve as the basis for determining the proposed price of each Bid. Patent math errors in statements of Bid prices or totals may be corrected by the Owner or Engineer, in which case the corrected amounts will be used for the purpose of Bid evaluation, comparison and other award considerations. However, neither the Owner nor the Engineer shall be required to discover or correct any error or omission in a Bid and the Bidder shall assume the risk of and be bound to the consequences of any such error or omission.
- 7.4 The Owner may, at its sole option, award the Contract to a Bidder on a conditional basis to afford the Bidder additional time and opportunity to submit required documents or to fulfill other requirements. In such case, the Owner will furnish to the Bidder a notice of conditional award which will establish (i) the additional conditions to be fulfilled for the award to become effective, and (ii) the time limit within which such conditions shall be satisfied. If the Bidder fails to satisfy the conditions in the manner and within the time specified in such notice, the Owner may declare such Bidder to be non-responsible and award the Contract, conditionally or unconditionally, to another Bidder. Time limitations governing the Owner's award of the Contract shall be extended for such additional period as may be required to effectuate the conditional award procedure set forth in this sub-section, and no Bid may be withdrawn during such period of extension.

## **8. CONTRACT EXECUTION; SUBMITTALS**

- 8.1 Within three (3) business days after the award notice, the successful Bidder shall sign and deliver at least three (3) counterparts of the Agreement, utilizing the form thereof included in the Project Manual and make delivery thereof to the Owner, along with other documents as prescribed by the Contract Documents. After execution and delivery of the Agreement and other required documents, and acceptance thereof by the Owner, the Bid Security furnished by each Bidder will be returned to the respective Bidders upon request.
- 8.2 If the Bidder fails or neglects to execute and deliver the Agreement and other required documents as prescribed by the preceding sub-section, the Bidder shall be deemed to have repudiated the Contract and thereupon the award shall be null and void; and the Bid Security provided by the Bidder shall be forfeited to and retained by the Owner as liquidated damages for such failure of the Bidder to execute the Contract, it being understood and agreed that the character and amount of actual damages sustained by the Owner cannot reliably be ascertained and measured and that the amount of the Bid Security is intended as a reasonable prospective estimate of such actual damages.
- 8.3 Concurrently with the execution and delivery of the Agreement to the Owner, or within such other period as the Owner may prescribe, the successful Bidder (Contractor) shall submit the following as conditions to the Bidder's right to proceed with and receive payment for any Work:
- .1 Proof of all required insurance coverage, a one hundred percent (100%) Performance Bond and a one hundred percent (100%) Payment Bond as prescribed by the General Conditions or other Contract Documents. Such bonds shall be executed utilizing the sample forms included in the Project Manual or alternative forms approved in advance by the Owner. Indemnification clauses between successful Bidder and the Surety shall not be binding upon the Owner;
  - .2 The preliminary schedules required by Paragraph 2.7 of the General Conditions;

- .3 A schedule of wages to be paid by the Bidder and his/her subcontractors to laborers, workmen or mechanics for the Work;
- .4 Documentation as prescribed by Section 9 of these Instructions to Bidders in respect of MBE/WBE/VBE/DOBE participation;
- .5 Other Post-Bid submittals required by the Contract Documents.

## 9. MBE/WBE/VBE/DOBE PARTICIPATION REQUIREMENTS

- 9.1 It is the policy of the Consolidated City of Indianapolis that Minority Business Enterprises (MBE), Women Business Enterprises (WBE), Veteran Business Enterprises (VBE) and Disability-Owned Business Enterprises (DOBE) shall have the maximum feasible opportunity to participate in the performance of contracts. Consequently, the Owner has established the following percentage goals for (City of Indianapolis Certified) MBE, WBE, VBE, and DOBE participation on this Project, based on the Contract Price as awarded to the successful Bidder:

MBE: fifteen percent (15%);  
WBE: eight percent (8%);  
VBE: three percent (3%); and  
DOBE: one percent (1%).

- 9.2 Initial evaluation and review of a Bidder's compliance with the requirements set forth herein in respect of MBE/WBE/VBE/DOBE participation, including review of documentation and information submitted by Bidders, shall be undertaken by the OMWBD.

- 9.3 (a) Bidders shall complete Part 6 of the Bidder's Itemized Proposal and Declarations form to disclose the status of its ability to meet the MBE/WBE/VBE/DOBE goals as of the Bid Date. **Failure to do so shall constitute grounds for rejection of the Bid as non-responsive.**

(b) Any Bidder who does not meet a project goal must petition OMWBD for relief from that goal by filing an application for a waiver, which application shall be submitted with the other required bid documents. The application for the waiver shall show with detailed documentation all good faith efforts that were made by the Bidder for the purpose of fulfilling the project goal and to assure that MBE, WBE, VBE, and DOBE firms are used as sources of supplies, equipment, construction and services. The Application for MBE/WBE/VBE/DOBE Program Waiver form may be requested from OMWBD at 1260 City County Building, 200 East Washington Street, Indianapolis, Indiana 46204 (telephone: (317) 327-5262), or found at: <http://www.indy.gov/eGov/City/DMWBD/MBE-WBE-VBE/Pages/FormsandResources.aspx>

(c) Examples of good faith efforts for MBE/WBE/VBE/DOBE shall include, at a minimum, all of the following (resources for good faith efforts can be located under 49 CFR § 26.53c):

- .1 Documentation/Delivery of any advertising that the Bidder performed in search for prospective MBEs, WBEs, VBEs, and DOBE for the contract in general circulation, trade, and minority-focused media.
- .2 Documentation/Delivery of any written notifications that the Bidder (i) provided to City Certified MBE/WBE/VBE/DOBEs notifying them of contracting opportunities in sufficient time to allow them to participate, and (ii) to minority business assistance

agencies for the purpose of locating prospective MBEs, WBEs, VBEs, and DOBEs for the contract. Documentation must also include written notification to OMWBD for assistance in locating prospective MBEs, WBEs, VBEs, and DOBEs for the contract.

- .3 Documentation/Delivery of the Bidder's efforts to select portions of the work to be performed by MBE/WBE/VBE/DOBEs in order to increase the likelihood of achieving the stated goals, including the division of contracts into economically-feasible units to facilitate participation (including work that they would self-perform otherwise).
- .4 Documentation/Delivery of direct contact and negotiations with MBE/WBE/VBE/DOBEs and/or partnerships for specific sub-bids, including at a minimum the following information:
  - a. The names, addresses and telephone numbers of MBE/WBE/VBE/DOBEs that were contacted;
  - b. A description of the information provided to MBE/WBE/VBE/DOBEs regarding the plans and specifications for portions of the work to be performed;
  - c. A statement of why prospective agreements with MBE/WBE/VBE/DOBEs were not reached.
- .5 Documentation of technical assistance provided to MBE/WBE/VBE/DOBEs for obtaining bonding insurance or a needed line of credit for the project.
- .6 Documentation/Delivery relevant to any other efforts the Bidder has made to assist MBEs, WBEs, VBE and DOBEs in overcoming the traditional barriers of participation in the industry affected by the contract.
- .7 Documentation of efforts to research other possible areas of participation, including, but not limited to, any of the following:
  - a. Suppliers;
  - b. Shipping or transport enterprises;
  - c. Engineering enterprises; and
  - d. Any other role that may contribute to the production and delivery of the product or service specified in the contract.
- .8 Documentation of efforts for the Bidder to use subcontractors and suppliers with which they have never worked.

(d) The Bidder shall maintain adequate records of all relevant data with respect to the utilization and attempted utilization of MBEs, WBEs, VBEs, and DOBEs and shall provide full access to these records to the Owner upon its request to inspect them.

- 9.4 The apparent successful Bidder shall, within three (3) business days after notification by the Owner or by OMWBD, provide the application for Program Waiver (if Bidder has not met all goals as set out in section 9.1 above), and any supporting documentation deemed necessary by the Owner or OMWBD to demonstrate utilization of good faith efforts to achieve or maximize MBE/WBE/VBE/DOBE, participation goal levels as set out in sub-section 9.1, which shall serve as an additional condition to the Bidder being found responsible and responsive.

- 9.5 The decision of the Owner concerning whether or not a Bidder has satisfactorily demonstrated good faith efforts shall be conclusive and binding upon such Bidder.
- 9.6 Where a Bidder proposes to utilize a MBE/WBE/VBE/DOBE that has not been certified as such by OMWBD, such MBE/WBE/VBE/DOBE must become certified by OMWBD to count toward attainment of the MBE/WBE/VBE/DOBE goals for the Project. MBE/WBE/VBE/DOBEs may obtain copies of Certification Standards and the Certification Application from OMWBD.
- 9.7 For the purposes of determining the degree of participation for MBEs, WBEs VBEs, or DOBEs operating as participants in Joint Ventures, as Subcontractors or Suppliers, the following methodology shall be utilized:
- .1 A Joint Venture Bidder consisting of one or more MBE/WBE/VBE/DOBE parties will be credited with MBE/WBE/VBE/DOBE participation on the basis of percentage of the dollar amount of the Work to be performed by the MBE/WBE/VBE/DOBE. For example, if such Joint Venture proposes to perform fifty percent (50%) of the dollar amount of the Work quoted at \$1,000,000 and fifty percent (50%) of the Work is to be performed by the MBE/WBE/VBE/DOBE Joint Venture partner, MBE/WBE/VBE/DOBE participation will be credited as twenty-five percent (30%) of the work or \$300,000.
  - .2 A Bidder will receive sixty percent (60%) toward goal attainment for the use of minority Suppliers who are not manufacturers, i.e. where a Bidder proposes to purchase \$100,000 worth of construction materials from a minority Supplier who did not manufacture the materials, \$60,000 will be credited toward the Bidder's minority participation goal. However, where the minority Supplier is the manufacturer of the product supplied, the Bidder will receive MBE/WBE/VBE/DOBE credit of one hundred percent (100%) of the dollar amount of the supply contract.
- 9.8 The Owner may, at any time before or after award, require the Bidder/Contractor to submit additional information to the Owner regarding MBE, WBE, VBE, or DOBE certification and utilization. Such information may include but not be limited to: (i) Copies of all executed agreements for each MBE/WBE/VBE/DOBE enterprise engaged to satisfy the participation goals, showing (ii) the name and address of the MBE/WBE/VBE/DOBE, (iii) the scope of work to be performed, (iv) the dollar value of work to be performed or furnished by each proposed MBE/WBE/VBE/DOBE subcontractor or MBE/WBE/VBE/DOBE joint venture partner, (v) acknowledgment and acceptance of the agreement by the MBE/WBE/VBE/DOBE, and (VI) monthly utilization payment reports with each monthly application for payment using the Subcontractor/Supplier Payment Report, Form SSPR-1.
- 9.9 Post award compliance procedures shall be met as provided in the MBE/WBE/VBE DOBE Business Utilization Plan of the City of Indianapolis, available from the OMWBD. Failure to comply with the MBE/WBE/VBE/DOBE provisions of the contract may result in one or more of the following sanctions: cancellation, termination or suspension of any contracts, or any portion(s) thereof, including but not limited to withholding any progress payment or any other monies payable or due under the contract, and/or inclusion on the Owner's list of contractors or vendors who are non-responsible due to MBE/WBE/VBE/DOBE violations, meaning Bidder would not be eligible to do work for the Owner for a specified period. In the event of breach, the Owner may also exercise its rights under Ind. Code § 5-16-6.5-5 or pursue any other legal or administrative remedies available to the Owner.

## **10. LIQUIDATED DAMAGES**

- 10.1 The Contract Documents provide for the payment of liquidated damages in the event of unexcused failure by the Contractor to complete the Work within the time required by the Contract Documents. **Such liquidated damages are to be assessed and recovered at the rate of \$200 per day for delay in achieving Substantial Completion and at the rate of \$400 per day for delay in achieving Final Completion of all Work.**
- 10.2 The per diem rate(s) of liquidated damages established by the preceding sub-section have been determined and are intended as reasonable prospective estimate(s) of the type and amount of actual damages which the Owner may sustain in the event of such delay(s). Submission of a Bid shall constitute an unconditional acknowledgment and agreement by the Bidder that such liquidated damages are fair and reasonable and do not and will not constitute a penalty, and that such liquidated damages may be assessed and recovered by the Owner as against the successful Bidder/Contractor and its Surety in lieu of actual damages for delayed completion.

## **11. CHANGE ORDERS**

- 11.1 During the course of the Work, should the Owner or Bidder determine that additional work which was foreseeable is required, such work shall not be automatically awarded through change orders. However, the Owner reserves the right to award additional work which was foreseeable to the original Bidder where doing so is in the best interest of the Owner. All such awards are and will remain subject to necessary approvals.

## **END OF INSTRUCTIONS TO BIDDERS**

**BIDDER'S ITEMIZED PROPOSAL**  
**AND DECLARATIONS**

Consolidated City of Indianapolis

*Instructions to Bidders:*

*This form shall be utilized by all Bidders. Except as otherwise specifically provided, all Parts shall be fully and accurately filled in and completed and notarized.*

Project:           **Sherman Park – Taupe Mtn Removal**

Proposal for Construction of: **Removal of construction materials, debris, soil and other materials to be flush with existing concrete pads beneath.**

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

To:                                   **City of Indianapolis, Department of Metropolitan Development  
200 E Washington St, Suite 2042 Indianapolis, Indiana 46204**

PART 1  
BIDDER INFORMATION  
(Print)

1.1 Bidder Name: \_\_\_\_\_

1.2 Bidder Address:           Street Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Phone #: ( ) \_\_\_\_\_ Fax #: ( ) \_\_\_\_\_

1.3 Former Business names of Bidder: \_\_\_\_\_  
\_\_\_\_\_

1.4 Bidder is a/an [mark one]:  
 Individual    Partnership    Indiana Corporation  
 Foreign (Out of State) Corporation  
 Joint Venture  
 MBE    WBE    VBE    DOBE (Must be Certified with OMWBD)  
Other: \_\_\_\_\_

1.5 *[The following must be answered if the Bidder or any of its partners or joint venture parties is a foreign corporation. Note: To do business in or with the Consolidated City of Indianapolis, Indiana, foreign corporations must register with the Secretary of the State of Indiana as required by the "Indiana Code 23-1-49 et seq." General Corporation Act as stated therein and expressed in the Attorney General's Opinion #2, dated January 13, 1958.]*

- .1 Business Entity Name: \_\_\_\_\_
- .2 Address: \_\_\_\_\_
- .3 Date registered with State of Indiana: \_\_\_\_\_
- .4 Indiana Registered Agent Name: \_\_\_\_\_

Address: \_\_\_\_\_

**PART 2**  
**PROPOSAL (BID)**

- 2.1 The undersigned Bidder proposes to furnish all necessary labor, machinery, tools, apparatus, materials, equipment, service and other necessary supplies, and to perform and fulfill all obligations incident thereto in strict accordance with and within the time(s) provided by the terms and conditions of the Contract Documents for the above described Work and Project, including any and all addenda thereto, for the total lump sum of \_\_\_\_\_ Dollars (\$\_\_\_\_\_).
- 2.2 By submitting bid the Bidder agrees the bid proposal and price(s) contained herein shall be valid for ninety (90) days from bid opening.

**PART 3**  
**CONTRACT ITEMS AND UNIT PRICES**

**Sherman Park - Taupe Mtn Removal**

Contract Item No.	Pay Item Number	Pay Item Name	Estimated Quantity	Unit	Unit Price	Price in Figures - Total Price for Item
1	I-110-01001	MOBILIZATION AND DEMOBILIZATION	1	LS		\$ -
2	I-201-52370	CLEARING RIGHT OF WAY	1	LS		\$ -
3	I-203-02020	EXCAVATION, UNCLASSIFIED	159,700	CYS		\$ -
4	202	Non-Hazardous Contaminated Soil, Remove (UNDISTRIBUTED)	32,000	CYS		\$ -
5	I-205-12108	STORM WATER MANAGEMENT BUDGET	65,000	DOL		\$ -
6	I-205-12616	STORMWATER MANAGEMENT IMPLEMENTATION	1	LS		\$ -
7	I-205-12618	SWQCP PREPARATION	1	LS		\$ -
8	I-603-97603	FENCE, CHAIN LINK, 60 IN.	2,550	LFT		\$ -

**PART 4**  
**CONTRACT DOCUMENTS AND ADDENDA**

4.1 The Bidder agrees to be bound by the terms and provisions of all Contract Documents as defined in the General Conditions and incorporates such Contract Documents herein by reference

4.2 The Bidder acknowledges receipt of the following addenda:

<u>Addendum Number</u>	<u>Date</u>
_____	_____
_____	_____
_____	_____
_____	_____

**PART 5**  
**EXCEPTIONS**

*Instructions to Bidders:*

- 5.1 *The Bidder shall fully state each exception taken to the Specifications or other Contract Documents in Section 5.3 of this Part.*
- 5.2 *Bidder is cautioned that any exception taken by Bidder and deemed by Owner to be a material qualification or variance from the terms of the Contract Documents may result in this Bid being rejected as non-responsive.*

5.3 *Exceptions:*

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**PART 6**  
**MBE/WBE/VBE/DOBE PARTICIPATION GOALS PLAN FOR**  
**CONSTRUCTION, GOODS/SUPPLIES, AND SERVICES**

Submittal Due Date: \_\_\_\_\_ Project/Contract Number: \_\_\_\_\_  
 Project/Contract Name: \_\_\_\_\_ Bidder: \_\_\_\_\_  
 Contact Name: \_\_\_\_\_ Bidder Address: \_\_\_\_\_  
 Bidder Phone: \_\_\_\_\_ Bidder E-mail Address: \_\_\_\_\_  
 Bidder  is  is not a City-certified MBE/WBE/VBE/DOBE and will self-perform \_\_\_\_\_% of the total contract amount.

**Does an exclusive contract or agreement exist between the bidder and any subcontractor/supplier listed?**

Yes  No **If yes, please explain):** \_\_\_\_\_

**Provide names of MBE/WBE/VBE/DOBE sub-contractors/suppliers with which bidder has not previously worked (if any):** \_\_\_\_\_

**If Bidder is awarded this contract, the MBE/WBE/VBE/DOBE City certified firms listed below will be utilized in the performance of the contract as a subcontractor/supplier.**

Full Legal Name of Firm	MBE, WBE, VBE, or DOBE	Contact Person	Phone #	Description of Work	\$ Dollar Amount	% of Total Contract Amount

Bidder must submit an *Application for MBE/WBE/VBE/DOBE Program Waiver* if it fails to meet the required utilization goals for the contract. Failure to provide the application for waiver as a post-bid submittal **will** result in the disqualification and rejection of the bid/proposal.

It is the policy of the City that bidder requirements which prevent subcontractors/suppliers from bidding as subcontractors on multiple bids is not permitted. Violation of this policy **will** result in the disqualification and rejection of the bid/proposal.

**Bidder's Signature:** \_\_\_\_\_

Bidder's Name: \_\_\_\_\_

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

OMWBD 2020

**PART 7A**  
**NEPOTISM DISCLOSURE**

Contractor: \_\_\_\_\_

Project: \_\_\_\_\_

For purposes of compliance with Indiana Code Chap. 36-1-21, please specify below whether Contractor (individual), or a person who wholly or partially owns Contractor (business), is a relative, as that term is defined by Indiana Code § 36-1-21-3, of either the Mayor of Indianapolis, Indiana, or a member of the City-County Council of Indianapolis and Marion County, Indiana.

Contractor (individual) or Contractor (business) does NOT have a relative who is either the Mayor of Indianapolis, Indiana or a member of the City-County Council of Indianapolis and Marion County, Indiana.

Contractor (individual) or Contractor (business) DOES have a relative who is either the Mayor of Indianapolis, Indiana or member of the City-County Council of Indianapolis and Marion County, Indiana (must specify all relatives below):

Mayor Joseph H. Hogsett

City-County Councilor [please specify name of Councilor(s)]

\_\_\_\_\_

Name of Authorized Representative (Printed)

\_\_\_\_\_

Signature of Authorized Representative

\_\_\_\_\_

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

**PART 7**  
**ADDITIONAL DECLARATIONS**

- 7.1 Bidder certifies for itself and all its subcontractors compliance with existing laws of the City of Indianapolis, the State of Indiana and the United States regarding (a) prohibition of discrimination in employment practices on the basis of race, sex, disability, religion, national origin, disabled veteran status and Vietnam-era veteran status; and (b) the utilization of Minority, Women, Veteran, and Disability-Owned Business Enterprises. Bidder further certifies that it (a) has formulated its own Affirmative Action Plan for the recruitment, training and employment of minorities, women and veterans, including goals and timetables; and (b) strongly encourages the use of small businesses, minority-owned businesses, women-owned businesses, veteran-owned, and disability-owned businesses in its operation.
- 7.2 Bidder further agrees, as a condition to being found to be a responsible bidder, to provide to the awarding Agency its Affirmative Action Plan as submitted to and approved by the City of Indianapolis, Office of Minority & Women Business Development (OMWBD), together with any and all other documents and forms as may be prescribed by OMWBD to establish, confirm or otherwise fulfill requirements for Equal Opportunity Compliance.
- 7.3 Bidder certifies that all information contained in Part 6 and submitted to OMWBD regarding MBE/WBE/VBE/DOBE utilization, program compliance, or in an application for waiver of program goals is true and accurate. Bidder agrees to notify OMWBD immediately in the event there is any change in its MBE/WBE/VBE/DOBE utilization or compliance during the course of the project.
- 7.4 Bidder certifies that it has thoroughly examined the site of the Work and informed itself fully regarding all conditions under which it will be obligated to operate and that in any way affect the Work, and knows, understands and accepts the existing conditions. Bidder further certifies that it has thoroughly reviewed the Contract Documents, including all Addenda, and has had the opportunity to ask questions and obtain interpretations or clarifications concerning Contract Documents.
- 7.5 Hiring Practices. The Bidder shall, upon request of the Owner, make available its policies, practices and standards for the hiring of applicants, except as prohibited under Indiana Code section 22-2-17-3, to the extent such information is related to the provision of services under this Bid.
- 7.6 Post-Employment Restrictions. Bidder certifies to Owner that no employee, contract employee, or sub-contractor of Bidder:
- .1 Participated in any way in the solicitation, negotiation, or awarding of the contract to result from this Bid while previously employed by an agency of the City of Indianapolis or Marion County for a period of one (1) year prior to the execution of the resulting contract;
  - .2 For a period of one (1) year after such employee ceased supervising the administration or performance of the contract to result from this Bid on behalf of an agency of the City of Indianapolis or Marion County, shall perform functions on behalf of Bidder under the resulting contract with respect to the Owner, unless the employee's former agency has consented to the employee's performance for Bidder in writing;
  - .3 Has violated any provision of Chapter 293 of the Revised

Code of the Consolidated City of Indianapolis and Marion County (“Municipal Code”) regarding the solicitation, negotiation, awarding, or performance of the contract to result from this Bid;

- .4 Is currently an official or deputy mayor of, or has appointing authority to, any agency of the City of Indianapolis or Marion County; and
- .5 Was previously employed by the City of Indianapolis or Marion County within one (1) year of the contract to result from this Bid and currently has the performance of lobbying activity (as that term is defined in Section 909-101 of the Municipal Code) related to an agency or an official as a responsibility of his or her employment or contractual relationship with the Bidder.

7.7 Bidder Qualifications. Bidder certifies to Owner the following:

- .1 That Bidder is eligible to work in the State of Indiana;
- .2 That Bidder’s labor force participates in apprenticeship or training programs approved by and registered with the United States Department of Labor’s Office of Apprenticeship, or its successor organization;
- .3 That Bidder has implemented an employee drug testing plan that meets, or exceeds, the requirements set forth in IC 36-1-12-24;
- .4 That Bidder will utilize project managers and superintendents with sufficient relevant management experience to complete bidder’s scope of work;
- .5 That Bidder and its management personnel possess any and all professional trade licenses required by law for any trade or specialty area in which Bidder is seeking a contract award, and said licensures have not been suspended or revoked within the previous five (5) years;
- .6 That Bidder is utilizing a surety company which is on the United States Department of Treasury’s listing of approved sureties; and
- .7 For contracts estimated to be over \$300,000.00, that Bidder and sub-contractors expected to be awarded at least \$300,000 for the project are qualified under IC 4-13.6-4 or IC 8-23-10.

Violation of this certification shall constitute a material breach of the contract to result from this Bid, and upon such a violation Owner may terminate the contract. In addition, upon a violation of this certification, Owner shall report such violation to the Office of Corporation Counsel who may, at its discretion, debar the Bidder from eligibility for future city and/or county purchasing, bids, contracts, quotes and/or projects.

**Part 8**  
**LEGAL VIOLATIONS**

8.1 Pursuant to Revised Code of the Consolidated City of Indianapolis and Marion County Sec. 261-408 (a)(3), the Bidder shall provide any determinations by a court or government agency for violations of federal, state, or local laws including but not limited to violations of contracting or antitrust laws, tax or licensing laws, environmental laws, the Occupational and Safety and Health Act (“OSHA”), or federal Davis-Bacon and related acts.

8.2 Please answer the following questions to complete this requirement:

.1 Have you had any determinations by a court or government agency for violations of federal, state, or local laws including but not limited to violations of contracting or antitrust laws, tax or licensing laws, environmental laws, the Occupational and Safety and Health Act (“OSHA”), or federal Davis-Bacon and related acts?

Please check one: Yes \_\_\_\_\_ No \_\_\_\_\_

.2 If you answered “yes” to the question above, please list each determination along with the year it occurred below:

**Part 9**  
**STAFFING CAPABILITIES**

- 9.1 Pursuant to Revised Code of the Consolidated City of Indianapolis and Marion County Sec. 261-408 (a)(4), The Bidder shall provide a statement describing the Bidder's full-time staffing capabilities and intended additional labor (skilled labor and unskilled labor), sources from which labor will be derived on this public works project.
- 9.2 Please answer the following questions to provide the statement of your staffing capabilities:
- .1 How many full time staff do you employ? \_\_\_\_\_
  - .2 Of the full time, staff how many are skilled laborers? \_\_\_\_\_
  - .3 Do you intend to employ any additional labor for this project? \_\_\_\_\_
  - .4 If you answered yes to .3, please list the amount of additional skilled and unskilled laborers you intend to hire. \_\_\_\_\_ Skilled \_\_\_\_\_ Unskilled
  - .5 If you answered yes to .3, what sources will you use to find the additional labor?

**Part 10**  
**TAX DEFICIENCIES**

- 10.1 Pursuant to Revised Code of the Consolidated City of Indianapolis and Marion County Sec. 261-408 (a)(10), the Bidder shall provide a statement listing and describing any federal, state, or local tax liens or tax delinquencies owed to any federal, state, or local taxing body in the last 5 years.
- 10.2 Please answer the following questions to provide the statement regarding your tax deficiencies.
- .1 Do you have now or have had in the last 5 years any federal, state, or local tax liens or tax delinquencies owed to any federal, state, or local taxing body?  
Please check one: Yes \_\_\_\_\_ No \_\_\_\_\_
- .2 If you answered “yes” to the question above, please list each lien or delinquency, along with the year it occurred, and whether it has been resolved, below:

**Part 11**  
**Drug Program**

- 11.1 Pursuant to IC 4-13-18-5, the Bidder must submit with the Bid a written plan for a program to test the Bidder's employees for drugs. A contractor that is subject to a collective bargaining agreement that establishes an employee drug testing program shall only submit a copy of the relevant part of the collective bargaining agreement establishing the program. Failure to submit a written plan for an employee drug testing program, or relevant parts of a collective bargaining agreement establishing an employee drug testing program shall result in the Bid being rejected as non-responsive.
- 11.2 Attach a copy of your drug testing program or the relevant parts of your collective bargaining agreement establishing a drug testing program to this page.

**PART 12**  
**NON-COLLUSION AFFIDAVIT**

The individual person(s) executing this Proposal, being first duly sworn, depose(s) and state(s) that the Bidder has not directly or indirectly entered into a combination, collusion, undertaking or agreement with any other bidder or person (i) relative to the price(s) proposed herein or to be bid by another person, or (ii) to prevent any person from bidding, or (iii) to induce a person to refrain from bidding; and furthermore, this Bid Proposal is made and submitted without reference to any other bids and without agreement, understanding or combination, either directly or indirectly, with any persons with reference to such bidding in any way or manner whatsoever.

**PART 13**  
**E-VERIFY PROGRAM**

Pursuant to Indiana Code 22-5-1.7-11.1, the contractor awarded the Bid is required to enroll in and verify the work eligibility status of all its newly hired employees through the E-Verify program. The contractor who is awarded the Bid is not required to verify the work eligibility status of all its newly hired employees through the E-Verify program if the E-Verify program no longer exists.

The individual person(s) executing this Proposal, being first duly sworn, depose(s) and state(s) that the Bidder does not knowingly employ an unauthorized alien. The undersigned further affirms that, prior to entering into an agreement for this Bid, the undersigned business entity will enroll in and agrees to verify the work eligibility status of all its newly hired employees through the E-Verify program.

**PART 14**  
**SIGNATURES**

*[Signature by or on behalf of the Bidder in the spaces provided below shall constitute execution of each and every Part of this Itemized Proposal and Declarations document. SIGNATURE MUST BE PROPERLY NOTARIZED.]*

Written Signature: \_\_\_\_\_

Printed Name: \_\_\_\_\_

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

*Important - Notary Signature and Seal Required in the Space Below*

STATE OF \_\_\_\_\_

SS:

COUNTY OF \_\_\_\_\_

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_.

My commission expires: \_\_\_\_\_ (Signed) \_\_\_\_\_

Residing in \_\_\_\_\_ County, State of \_\_\_\_\_

# Standard Questionnaires and Financial Statement for Bidders

For use in investigating the qualifications of bidders on public works contracts when the aggregate cost of such contract will be a hundred thousand dollars (\$100,000) or more. This form may be used for any other contract when the ordering department requests it.

These statements are to be submitted under oath by each bidder with and as a part of the bid.

NOTE: THIS FORM BECOMES PART OF THE BID FILE, AND PURSUANT TO INDIANA'S PUBLIC RECORDS LAW (IND. CODE SS5-14-3-1-5-14-3-10), WILL BE AVAILABLE FOR PUBLIC INSPECTION AND COPYING DURING CENTRAL PURCHASING'S REGULAR BUSINESS HOURS WHEN THE TOTAL CONTRACT PRICE EXCEEDS \$100,000.

Submitted to: City of Indianapolis, Central Purchasing

Company Name: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

Representative: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

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

## TO THE BIDDER:

These forms, required by the City of Indianapolis and Marion County, Indiana, have been prescribed by the State Board of Accounts.

They properly filled out and attested, must accompany each bid of a hundred thousand dollars (\$100,000), or more. If the ordering department requests it, they may be required for bids of lesser amounts as well.

The forms are designed to cover all public work Contracts/all other applicable situations and the bidder is required to answer such questions as are pertinent to the work being bid/R.F.Q. The purpose of the questionnaire is to enable the awarding body to determine the qualifications of the bidder to carry out successfully the contract if the same is awarded to the bidder.

The bidder will find it to his advantage to answer fully all questions coming within the range of the work being bid. Particular attention should be given to the "Financial Statement" and the details relative to the assets and liabilities set out. This form is made in extensive detail so that the bidder may explain his assets and liabilities in proper sequence and in a uniform manner. NOTE; FAILURE TO FILL OUT THESE FORMS COMPLETELY MAY BE GROUNDS FOR DECLARING THE ENTIRE BID NON-RESPONSIVE.

Submitted by \_\_\_\_\_

- A Corporation
- A Co-partnership
- An Individual

Principal Office at \_\_\_\_\_

To \_\_\_\_\_



## EXPERIENCE QUESTIONNAIRE

The signatory of this questionnaire guarantees the truth and accuracy of all statements and of all answers to interrogatories hereinafter made.

1. How many years has your organization been in business as a general contractor under your present business name?  
\_\_\_\_\_
2. How many years' experience in \_\_\_\_\_ construction work has your organization had:  
(a) As a general contractor \_\_\_\_\_ (b) as a sub-contractor \_\_\_\_\_
3. What projects has your organization completed?

CONTRACT AMOUNT	CLASS OF WORK	WHEN COMPLETED	NAME AND ADDRESS OF OWNER

- 3A What projects has your organization now in process of construction?

CONTRACT AMOUNT	CLASS OF WORK	WHEN TO BE COMPLETED	NAME AND ADDRESS OF OWNER

4. Have you ever failed to complete any work awarded to you? \_\_\_\_\_  
If so, where and why? \_\_\_\_\_  
\_\_\_\_\_
5. Has any officer or partner of your organization ever been an officer or partner of some other organization that failed to complete a construction contract? \_\_\_\_\_ If so, state name of individual, other organization and reason therefore. \_\_\_\_\_  
\_\_\_\_\_
6. Has any officer or partner of your organization ever failed to complete a construction contract handled in his own name? \_\_\_\_\_  
If so, state name of individual, name of owner and therefore. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
7. In what other lines of business are you financially interested? \_\_\_\_\_  
\_\_\_\_\_
8. For what corporation or individuals have you performed work, and to whom do you refer? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
9. For what cities have you performed work and to whom do you refer? \_\_\_\_\_  
\_\_\_\_\_

10. For what counties have you performed work and to whom do you refer? \_\_\_\_\_

\_\_\_\_\_

11. For what State bureaus or departments have you performed work and to whom do you refer? \_\_\_\_\_

\_\_\_\_\_

12. Have you ever performed any work for the U.S. Government? \_\_\_\_\_

If so, when and to whom do you refer? \_\_\_\_\_

\_\_\_\_\_

13. What is the construction experience of the principal individuals of your organization?

INDIVIDUAL'S NAME	PRESENT POSITION OR OFFICE	YEARS OF CONSTRUCTION EXPERIENCE	MAGNITUDE AND TYPE OF WORK	IN WHAT CAPACITY

### PLAN AND EQUIPMENT QUESTIONNAIRE

**The signatory of this questionnaire guarantees the truth and accuracy of all statements and of all answers to interrogatories hereinafter made.**

1. In what manner have you inspected this proposed work? Explain in detail.

\_\_\_\_\_

\_\_\_\_\_

2. Explain your plan or layout for performing the proposed work \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

3. The work, if awarded to you, will have the personal supervision of whom? \_\_\_\_\_

\* 4. Do you intend to do the hauling on the proposed work with your own forces? \_\_\_\_\_  
If so, give amount and type of equipment used \_\_\_\_\_

5. If you intend to sublet the hauling or perform it through an agent, state amount of sub-contract or agent's contract,  
\* and if known, the name and address of sub-contractor or agent, amount and type of his equipment and financial  
responsibility \_\_\_\_\_

\*Items 4, 5, 6, and 7 may not be applicable in all building contracts; if not, omit.

\* 6. Do you intend to do the grading on the proposed work with your own forces? \_\_\_\_\_  
If so, give type of equipment to be used \_\_\_\_\_

7. If you intend to sublet the grading or perform it through an agent, state amount of subcontract or agent's contract, and  
\* if known, the name and address of sub-contractor or agent, amount and type of his equipment and financial  
responsibility. \_\_\_\_\_

8. Do you intend to sublet any other portions of the work? \_\_\_\_\_  
If so, state amount of sub-contract, and if known, the name and address of the sub-contractor, whether subcontract is  
a minority and/or women's business enterprise, amount, and type of his equipment and financial responsibility. \_\_\_\_\_

9. From which sub-contractors or agents do you expect to require a bond? \_\_\_\_\_

10. What equipment do you own that is available for the proposed work?

QUANTITY	ITEM	DESCRIPTION, SIZE CAPACITY, ETC.	CONDITION	YEARS OF SERVICE	PRESENT LOCATION


11. What equipment do you intend to purchase for use on the proposed work, should the contract be awarded to you?

QUANTITY	ITEM	DESCRIPTION, SIZE, CAPACITY, ETC.	APPROXIMATE COST

12. How and when will you pay for the equipment to be purchased? \_\_\_\_\_

\_\_\_\_\_

13. Do you propose to rent any equipment for this work? \_\_\_\_\_ if so, state type, quantity and reasons for renting, \_\_\_\_\_

\_\_\_\_\_

14. Have you made contracts or received firm offers for all materials within prices used in preparing your proposal? Do not give names of dealers or manufacturers \_\_\_\_\_

\_\_\_\_\_

15. List all permits, licenses, or registrations, which you have and are required by law to maintain in order to bid on this work. Please include the type of the permit, license, or registration; the name of the issuing entity; the number of the licenses, permit, or registration; and the expiration date. \_\_\_\_\_

\_\_\_\_\_

Dated at \_\_\_\_\_ this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_

\_\_\_\_\_  
(Name of Organization)

By \_\_\_\_\_

STATE OF \_\_\_\_\_

\_\_\_\_\_  
(Title of Person Signing)

COUNTY OF \_\_\_\_\_

SS:

\_\_\_\_\_ Being duly sworn, deposes and says that he is  
\_\_\_\_\_ of the above \_\_\_\_\_

\_\_\_\_\_ of the above \_\_\_\_\_  
(Name of Organization)

and that the answers to the questions in the foregoing questionnaires and all statements therein contained are true and correct.

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

My Commission expires \_\_\_\_\_  
Notary Public

## CONTRACTOR'S FINANCIAL STATEMENT

Submitted by \_\_\_\_\_

- A Corporation
- A Co-partnership
- An Individual



Principal Office at \_\_\_\_\_

To \_\_\_\_\_

Condition at close of business \_\_\_\_\_ 20\_\_

	Dollars		Cts.
<b>ASSETS</b>			
1. Cash: (a) On Hand \$ _____, (b) In bank \$ _____, (c) Elsewhere \$ _____			
2. Notes receivable (a) Due within 90 days _____			
(b) Due after 90 days _____			
(c) Past Due _____			
3. Accounts receivable from completed contracts, exclusive of claims not approved for payment _____			
5. Sums earned on uncompleted contracts as shown by engineer's or architect's estimate _____			
(a) Amount receivable after deducting retainage _____			
(b) Retainage to date, due upon completion of contracts _____			
6. Accounts receivable from sources other than construction contracts _____			
7. Deposits for bids or other guarantees: (a) Recoverable within 90 days _____			
(b) Recoverable after 90 days _____			
8. Interest accrued on loans, securities, etc. _____			
9. Real Estate: (a) Used for business purposes _____			
(b) Not used for business purposes _____			
10. Stocks and bonds: (a) Listed - - present market value _____			
(b) Unlisted - - present value _____			
10. Materials in stock included in Item 4 (a) For uncompleted contracts (present value) _____			
(b) Other materials (present value) _____			
11. Equipment, book value _____			
12. Furniture and fixtures, book value _____			
13. Other Assets _____			
<b>Total assets</b>			

## LIABILITIES

		Dollars	Cts.
1. Notes payable	(a) To banks regular _____		
	(b) To banks for certified checks _____		
	(c) To others for equipment obligations _____		
	(d) To others exclusive of equipment obligations _____		
2. Accounts payable	(a) Not past due _____		
	(b) Past due _____		
3. Real estate encumbrances	_____		
4. Other liabilities	_____		
5. Reserves	_____		
6. Capital stock paid up:	(a) Common _____		
	(b) Common _____		
	(c) Preferred _____		
	(d) Preferred _____		
7. Surplus (net worth)	_____		
Total liabilities			

## CONTINGENT LIABILITIES

1. Liability on notes receivable, discounted or sold	_____		
2. Liability on accounts receivable, pledged, assigned or sold	_____		
3. Liability as bondsman	_____		
4. Liability as guarantor on contracts or on accounts of others	_____		
5. Other contingent liabilities	_____		
Total contingent liabilities			

**DETAILS RELATIVE TO ASSETS**

<b>1</b>	<b>Cash</b>	(a) on hand _____ \$ _____ (b) deposited in banks named below _____ (c) elsewhere - - (State where) _____
----------	-------------	---

NAME OF BANK	LOCATION	DEPOSIT IN NAME OF	AMOUNT

<b>2*</b>	<b>Notes Receivable</b>	(a) due within 90 days _____ \$ _____ (b) due after 90 days _____ (c) past due _____
-----------	-------------------------	--

RECEIVABLE FROM: NAME AND ADDRESS	FOR WHAT	DATE OF MATURITY	HOW SECURED	AMOUNT

Have any of the above been discounted or sold? \_\_\_\_\_ If so, state amount, to whom, and reason \_\_\_\_\_

<b>3*</b>	<b>Accounts receivable</b> from completed contracts exclusive of claims not approved for payment	\$ _____
-----------	--	----------

NAME AND ADDRESS OF OWNER	NATURE OF CONTRACT	AMOUNT OF CONTRACT	AMOUNT RECEIVABLE

Have any of the above been assigned, sold, or pledged? \_\_\_\_\_ If so, state amount, to whom and reason \_\_\_\_\_

<b>4*</b>	<b>Sums earned on uncompleted contracts, as shown by engineer's or architect's estimate:</b>	
	(a) Amount receivable after deducting retainage _____ \$ _____	
	(b) Retainage to date due upon completion of contract _____	

DESIGNATION OF CONTRACT AND NAME AND ADDRESS OF OWNER	AMOUNT OF CONTRACT	AMOUNT EARNED	AMOUNT RECEIVED	RETAINAGE		AMOUNT EXCLUSIVE OF RETAINAGE
				WHEN DUE	AMOUNT	

Have any of the above been sold, assigned, or pledged? \_\_\_\_\_ If so, state amount, to whom, and reason \_\_\_\_\_

\*List separately each item amounting to 10 percent or more of the total and combine the remainder.

DETAILS RELATIVE TO ASSETS (continued)

**5\***      **Accounts receivable not from construction contracts** \_\_\_\_\_ \$ \_\_\_\_\_

RECEIVABLE: NAME AND ADDRESS	FOR WHAT	WHEN DUE	AMOUNT

What amount, if any, is past due \_\_\_\_\_ \$ \_\_\_\_\_

**6**      **Deposits with bids or otherwise as guarantees** \_\_\_\_\_ \$ \_\_\_\_\_

DEPOSITED WITH: NAME AND ADDRESS	FOR WHAT	WHEN RECOVERABLE	AMOUNT

**7**      **Interest accrued on loans, securities, etc.** \_\_\_\_\_ \$ \_\_\_\_\_

ON WHAT ACCRUED	TO BE PAID WHEN	AMOUNT

**8\***      **Real estate** (a) Used for business purposes \_\_\_\_\_ \$ \_\_\_\_\_  
**Book value** (b) Not used for business purposes \_\_\_\_\_ \$ \_\_\_\_\_

DESCRIPTION OF PROPERTY	IMPROVEMENTS		TOTAL BOOK VALUE
	NATURE OF IMPROVEMENTS	BOOK VALUE	
1.			
2.			
3.			
4.			
5.			
6.			
7.			

LOCATION	HELD IN WHOSE NAME	ASSESSED VALUE	AMOUNT OF ENCUMBERANCES
1.			
2.			
3.			
4.			
5.			
6.			
7.			

\* List separately each item amounting to 10 percent or more of the total and combine the remainder.

**DETAILS RELATIVE TO ASSETS (continued)**

<b>9</b>	<b>Stocks and bonds</b>	(a) Listed - - present market value _____ \$ _____ (b) Unlisted - - present value _____
----------	-------------------------	--

DESCRIPTION	ISSUING COMPANY	LAST INT. OR DIV PAID DATE	%	PAR VALUE	PRESENT MARKET VALUE	QUAN- TITY	AMOUNT
1.							
2.							
3.							
4.							
5.							
6.							
7.							
WHO HAS POSSESSION	IF ANY ARE PLEDGED OR IN ESCROW, STATE FOR WHOM AND REASON						AMOUNT PLEGDED OR IN ESCROW
1.							
2.							
3.							
4.							
5.							
6.							
7.							

<b>10</b>	<b>Materials in stock and not included in Item 4, Assets:</b>	(a) For use on uncompleted contracts (present value) _____ \$ _____ (b) Other materials (present value) _____
-----------	---	--

DESCRIPTION OF MATERIAL	QUANTITY	PRESENT VALUE	
		FOR UNCOM- PLETED CONTRACTS	OTHER MATERIALS

<b>11</b>	<b>Equipment at book value</b>	_____ \$ _____
-----------	--------------------------------	----------------

QUAN- TITY	DESCRIPTION AND CAPACITY OF ITEMS	AGE OF ITEMS	PURCHASE PRICE	DEPRECIATION CHARGED OFF	BOOK VALUE

Are there any liens against the above? \_\_\_\_\_ If so, state total amount \_\_\_\_\_ \$ \_\_\_\_\_

\* If two or more items are lumped above, give the sum of their ages.

DETAILS RELATIVE TO ASSETS (continued)

**12** Furniture and fixtures at book value \_\_\_\_\_ \$ \_\_\_\_\_

**13** Other Assets \_\_\_\_\_ \$ \_\_\_\_\_

DESCRIPTION		AMOUNT
TOTAL ASSETS \$		

DETAILS RELATIVE TO LIABILITIES

**1** Notes payable (a) To banks, regular \_\_\_\_\_ \$ \_\_\_\_\_  
 (b) To banks for certified checks \_\_\_\_\_  
 (c) To others for equipment obligations \_\_\_\_\_  
 (d) To others exclusive of equipment obligations \_\_\_\_\_

TO WHOM: NAME AND ADDRESS	WHAT SECURITY	WHEN DUE	AMOUNT

**2** Accounts payable (a) Not past due \_\_\_\_\_ \$ \_\_\_\_\_  
 (b) Past Due \_\_\_\_\_

TO WHOM: NAME AND ADDRESS	FOR WHAT	DATE PAYABLE	AMOUNT

**3** Real estate encumbrances (see Item 8, Assets) \_\_\_\_\_ \$ \_\_\_\_\_

**4** Other liabilities \_\_\_\_\_ \$ \_\_\_\_\_

DESCRIPTION		AMOUNT

**5** Reserves \_\_\_\_\_ \$ \_\_\_\_\_

INTEREST	INSURANCE	BLDGS. & FIXT.	PLANT DEPR.	TAXES	BAD DEBTS		
\$	\$	\$	\$	\$	\$	\$	\$

**6** Capital stock paid up (a) Common \_\_\_\_\_ \$ \_\_\_\_\_  
 (b) Preferred \_\_\_\_\_

**7** Surplus \_\_\_\_\_ \$ \_\_\_\_\_

TOTAL LIABILITIES \$

**If a corporation, answer this:**

Amount for which incorporated \_\_\_\_\_ \$ \_\_\_\_\_

Capital paid in cash \_\_\_\_\_ \$ \_\_\_\_\_

When incorporated \_\_\_\_\_

In what state \_\_\_\_\_

Names and titles of all persons having authority to execute and receipt estimate vouchers and to conduct other business for the corporation, including its officers, the signatures of whom are legally binding.

\_\_\_\_\_

Do you have necessary "certificate of existence" (or certificate of authorization for a foreign corporation) to transact corporate business in this state, under the terms of Public Law 149, Acts of 1986, and acts amendatory thereto? \_\_\_\_\_

\_\_\_\_\_

**If a co-partnership answer this:**

Date of organization \_\_\_\_\_

State whether co-partnership is general, limited or association \_\_\_\_\_

Give the names, addresses and proportional interests of all parties:

Name	Address	Share
		\$
		\$
		\$
		\$
		\$
		\$

The name of the partnership firm under which the above partners are operating is \_\_\_\_\_

\_\_\_\_\_

Give names and titles of all having authority to execute and receipt estimate vouchers and to conduct other business for the partnership, the signatures of whom are legally binding.

\_\_\_\_\_

The undersigned hereby declares that the foregoing is a true statement of the financial condition of the individual, co-partnership, or corporation herein first named, as of the date herein first given; that this statement is for the express purpose of inducing the party to whom it is submitted to award the submitter a contract; and that any depository, vendor or other agency herein named is hereby authorized to supply such party with any information necessary to verify this statement.

\_\_\_\_\_  
\_\_\_\_\_

Affidavit for Individual

STATE OF \_\_\_\_\_

GEN 12/20

BID-22 }

COUNTY OF \_\_\_\_\_ SS:

\_\_\_\_\_ being duly sworn, deposes and says that the foregoing financial statement, taken from his books, is a true and accurate statement of his financial condition as of the date thereof and that the answers to the foregoing interrogatories are true.

Subscribed and sworn to before me this \_\_\_\_\_  
(Applicant must sign here)

\_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_

Notary Public

Affidavit for Co-Partnership

STATE OF \_\_\_\_\_ }  
COUNTY OF \_\_\_\_\_ SS: }

\_\_\_\_\_ being duly sworn, deposes and says that he is a member of the firm of \_\_\_\_\_; that he is familiar with the books of the said firm showing its financial condition; that the foregoing financial statement, taken from the books of said firm, is a true and accurate statement of the financial condition of the said firm as of the date thereof and that the answer to the foregoing interrogatories are true.

Subscribed and sworn to before me this \_\_\_\_\_  
(Member of firm must sign here)

\_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_

Notary Public

Affidavit for Corporation

STATE OF \_\_\_\_\_ }  
COUNTY OF \_\_\_\_\_ SS: }

\_\_\_\_\_ being duly sworn, deposes and says that he is \_\_\_\_\_ of the \_\_\_\_\_, corporation described in and which executed the foregoing statement; that he is familiar with the books of the said corporation showing its financial condition; that the foregoing financial statement, taken from the books of the said corporation, is a true and accurate statement of the financial condition of said corporation as of the date thereof and that the answers to the foregoing interrogatories are true.

Subscribed and sworn to before me this \_\_\_\_\_  
(Officer must sign here)

\_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_

Notary Public



**POST BID SUBMITTAL**  
**SEE ITB SECTION 6.5**  
**Application for MBE/WBE/VBE/DOBE PROGRAM WAIVER**

Pursuant to the Consolidated City of Indianapolis' Instructions to Bidders Section 9.3 and Part 6, this application for a (check one or both of the following)  MBE  WBE  VBE  DOBE program waiver is hereby submitted for the Project/Contract listed below by Bidder/Applicant (hereinafter Bidder). (Use additional sheets if necessary.)

Date of Application: \_\_\_\_\_ Project/Contract Number: \_\_\_\_\_  
 Project/Contract Name: \_\_\_\_\_ Bidder: \_\_\_\_\_  
 Contact name: \_\_\_\_\_ Phone: \_\_\_\_\_  
 Address: \_\_\_\_\_ E-Mail: \_\_\_\_\_

In attempting to meet the project goal Bidder made the following good faith efforts for the purpose of fulfilling that goal **(Check all that apply)**. Minimum score required to establish "good faith" effort is 70 points.

<u>Item:</u>	<u>Weighting</u>	<u>Score</u>
1. Bidder (check one of the following) <input type="checkbox"/> did <input type="checkbox"/> did not attend all pre-bid or pre-solicitation meetings held by the City to inform MBEs, WBEs, VBEs, and DOBEs of contracting opportunities.	10	_____
<input type="checkbox"/> 2. Bidder placed advertisements in search of prospective MBEs/WBEs/VBE and DOBEs for the contract. Provide all such advertisements, including e-mail "send-to" section, if used.	10	_____
<input type="checkbox"/> 3. Bidder provided written notifications to MBEs/WBEs/VBEs/DOBEs notifying them of contracting opportunities in sufficient time to allow them to participate and to minority business assistance agencies for the purpose of locating prospective MBEs, WBEs, VBEs, and DOBEs for the contract. Bidder's written notification to the Office of the Mayor's Business Development Program for assistance in locating MBEs, WBEs, VBEs, and DOBEs must also be documented. Provide all such documents.	20	_____
<input type="checkbox"/> 4. Bidder made the following efforts to select portions of the work to be performed by MBE/WBE/VBEs/DOBEs in order to increase the likelihood of achieving the stated goals, including the division of contracts into economically feasible units/parcels to facilitate participation _____ _____ _____	10	_____
<input type="checkbox"/> 5. Bidder contacted and/or negotiated with MBEs/WBEs/VBEs/DOBEs for specific sub-bids and/or partnerships. Please include a description of the information provided to MBE/WBE/VBEs/DOBEs regarding the plans and specifications for portions of the work to be performed and a statement of why prospective agreements with MBE/WBE/VBEs/DOBEs were not reached. Provide detailed documentation of such contacts/ negotiations.	15	_____
<input type="checkbox"/> 6. If the bidder rejected any MBE/WBE/VBE/DOBE firm(s) as unqualified, submit the reason(s) for this conclusion.	10	_____
<input type="checkbox"/> 7. Bidder provided the following technical assistance to MBEs/WBEs/VBEs/DOBEs in an effort to obtain MBE/WBE/VBE/DOBE participation, such as obtaining bonding, insurance, or a needed line of credit for the project, in an effort to obtain MBE/WBE/VBE/DOBE participation. Provide detailed documentation of such assistance.	15	_____
<input type="checkbox"/> 8. Provided interested MBE/WBE/VBE/DOBE certified to perform the solicited work with prompt access to the plans, specifications, scope of work and requirements of the contract	10	_____
<input type="checkbox"/> 9. Follow-up to initial solicitations. Provide copy of all e-mails and call logs.	10	_____

- 10. Has project joint venture agreement for this contract with a MBE/WBE/VBE/DOBE business or is a joint venture certified with the City as an MBE/WBE/VBE/DOBE business. MBE/WBE.VBE/DOBE minimum participation shall be 30% or greater (or as may be designated by OMWBD for this contract). 15 \_\_\_\_
- 11. Has a Mentor-Protégé Agreement with a MBE/WBE/VBE/DOBE business for this contract. MBE/WBE.VBE/DOBE minimum participation shall be 30% or greater (or as may be designated by OMWBD for this contract). 10 \_\_\_\_

TOTAL POINTS: \_\_\_\_

**YOU MUST SUBMIT YOUR SUPPORTING DOCUMENTATION WITHIN 3 BUSINESS DAYS OF NOTIFICATION OF AWARD.**

**Bidder certifies that all information contained herein and attached hereto is true and accurate and that all good faith efforts were made by Bidder for the purpose of fulfilling the contract goals. Failure to sign this form will result in the bid being determined non-responsive.**

**Bidder's Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

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

For Office of Minority & Women Business Development use only.

- Contract offers no opportunity to utilize subcontractors/suppliers.
- No MBE/WBE/VBE/DOBEs are certified in the category codes for which there are subcontractor/supplier opportunities.

This Application for Program Waiver is:

- Not Approved                       Approved
- Approved subject to the following conditions/restrictions: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

\_\_\_\_\_  
 Director  
 Office of Minority & Women Business Development

NAME OF FIRM \_\_\_\_\_ DATE \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY OF INDIANAPOLIS  
EQUAL OPPORTUNITY COMPLIANCE

PART I

Bidders participating in contractual or purchasing opportunities offered by the Consolidated City of Indianapolis are subject to compliance with the provisions of Ordinance 581-101 and Executive Order #1, Mayor of Indianapolis, February 27, 1987. Filing of Attachment A and B, which are a part of this form, at the beginning of each calendar year, will relieve the Bidder of the requirement to submit it with each bid, providing the Bidder has complied with Executive Order #1, 1987, and with all Federal, State and City Equal Opportunity provisions. A letter of compliance shall be issued by the City (Office of Minority & Women Business Development OMWBD). The Bidders must attach a copy of such letter, for the current year, to each and every bid. Completion of this form does not service as an Affirmative Action Plan.

“It is the policy of this Administration to strongly encourage efforts to increase opportunities for minority-owned business enterprises and for women-owned business enterprises to do business with the City of Indianapolis”; and  
“It is the goal of this Administration to achieve significant utilization of minority owned business enterprises in the purchasing of goods and services for the City in at least a dollar amount equal to fifteen percent (15%) of the annual amount spent by the City of Indianapolis for construction, goods and supplies and professional services”; and  
“It is the goal of this Administration to achieve significant utilization of women-owned business enterprises in the purchasing of goods and services for the City in at least a dollar amount equal to eight percent (8%) of the annual amount spent by the City of Indianapolis for construction, goods and supplies and professional services”; and  
“It is the goal of this Administration to achieve significant utilization of veteran-owned business enterprises in the purchasing of goods and services for the City in at least a dollar amount equal to three percent (3%) of the annual amount spent by the City of Indianapolis for construction, goods and supplies and professional services”; and  
“It is the goal of this Administration to achieve significant utilization of disability-owned business enterprises in the purchasing of goods and services for the City in at least a dollar amount equal to one percent (1%) of the annual amount spent by the City of Indianapolis for construction, goods, and supplies and professional services”; and  
“The successful implementation of this policy requires the participation and cooperation of all Departments and Divisions of the City of Indianapolis. See Executive Orders #1,1987 and #5, 2008, and Municipal Ordinance 581-101.”

PART II

The following standards and procedures are hereby created to ensure compliance with the President’s Executive Order #11246 and the Mayor’s Executive Orders #1, 1987 and #5, 2008:

- (1.) Except as provided in (2) of this Part, all contracts, purchase orders, leases and bids awarded by the Purchasing Division of the Controller’s Office in excess of an annual aggregate amount of Twenty-Five Thousand Dollars (\$25,000) including but not limited to construction, materials and supplies, services, professional services, concessions and franchises, are required to execute the following covenant:

“Contractor certifies for itself and all its subcontractors compliance with existing laws of the City of Indianapolis, State of Indiana and the United States regarding (a) prohibition of discrimination in employment practices on the basis of race, sex, disability, religion, national origin, age, sexual orientation, gender identity, disabled veteran status and United States military service veteran status; and (b) the utilization of Minority, Women, Veteran, and Disability-owned Business Enterprises. Contractor further certifies that it (a) has formulated its own Affirmative Action Plan for the recruitment, training and employment of minorities and women, including goals and timetables; and (b) strongly encourages the use of small businesses, minority-owned businesses, women-owned businesses, veteran-owned business, and disability-owned businesses in its operation.”

\_\_\_\_\_  
Signature of Company Official

\_\_\_\_\_  
Title of Official

If the contractor is bidding on a City contract, a copy of this covenant and the contractor's Affirmative Action Plan must be submitted with the bid package. Any Affirmative Action Plan submitted to OMWBD must be approved by OMWBD. Failure to comply will result in the bid being non-responsive.

- (2.) Signatories to the Indianapolis Plan may submit documentation of their affiliation with the Indianapolis Plan as their Affirmative Action Plan, provided the Indianapolis Plan includes total workforce analysis and goals and timetables. Those contractors having less than fifteen (15) employees are not required to submit an Affirmative Action Plan to OMWBD; however, any such contractor must submit an Affirmative Action policy statement, and they may be investigated by OMWBD to see what commitment, if any, they have made to the goals and principles of Equal Employment Opportunity and Affirmative Action.
- (3.) In addition, all Bidders for contracts funded in whole or in part with federal monies shall fully comply with the United States Department of Labor "Model Federal EEO Bid Condition," as set forth in 41 Federal Register 32482, August 3, 1976, and attached to the invitation to bid, including President's Executive Order #11246, as amended, and all implementing rules and regulations thereunder.
- (4.) City-County contracts shall include the following provisions for determining non-compliance with the non-discrimination requirements of this order:

#### **Non-Compliance Procedure**

After a determination by the Office of Minority & Women Business Development (OMWBD) that the Contractor has failed to comply with the terms of the Mayor's Executive Order #1, 1987; Mayor's Executive Order #5, 2008; President's Executive Order #11246; Revised Code of Indianapolis and Marion County, Chapter 581; or, the applicable wage rate while operating under a City-County contract, or has been adjudged in violation of any applicable State or Federal law, OMWBD shall serve written notice of such non-compliance on the Contractor or his/her representative(s). The Contractor shall be responsible for notifying any subcontractor or supplier who is not in compliance.

Upon request by OMWBD, the Contractor determined to be in non-compliance shall meet with the Compliance Manager within five (5) working days of the written notice in order to determine a method of correcting the deficiencies and the time period within which such remedy shall be effected. If the remedy is not agreed upon within five (5) working days of the required notice, the Compliance Manager shall prescribe the remedy by which deficiencies shall be corrected and notify the Contractor in writing of such determination. If the contractor does not correct the deficiencies in the manner prescribed by OMWBD within thirty (30) calendar days, the City may impose one or more of the following sanctions.

- a. Cancel, terminate, suspend, or cause to be cancelled, terminated, or suspended, any contract, or any portion or portions thereof, including but not limited to withholding any progress payment or any other monies payable or due under the contract, for failure of the Contractor or subcontractor to comply with the provision of these Executive Orders.
- b. Reserve the right to review further contracts, or extensions or other modifications of existing contracts, with any non-complying Contractor to ascertain whether or not the Contractor has satisfied the standards and procedures as established by the OMWBD; and, that the Contractor has established and will implement personnel and employment policies that comply with the provisions of these Executive Orders and requirements.
- c. Placement on a list of contractors and vendors who have failed to comply (determined in accordance with the non-compliance procedure prescribed by the Utilization Plan) with the equal opportunity provisions of City contracts and purchasing policies. Contractors and vendors included on this list shall be denied City business opportunities for which bids are not required or solicited, until such time as the contractor or vendor demonstrates the ability to become compliant pursuant to the Utilization Plan. This list shall be distributed to the Directors of all city Departments and to the Office of the Mayor as prescribed by the Utilization Plan.

#### **PART III**

The City-County will award any contract for public work or improvements to the lowest, responsive Bidder. It is the policy of this Administration to acknowledge the fact that the lowest Bid will not always be a responsible and responsive Bid. In recognition of this fact and in furtherance of the City-County commitment to training, and employment of minorities, women, veterans, and individuals with a disability, the City-County will consider the costs of training and percentage of minority, women, veterans utilization, and individuals with a disability in its determination of "responsible and responsive."

## ATTACHMENT "A" EMPLOYMENT DATA

Please note that this data may be obtained by visual survey or post-employment records. Neither visual surveys nor post-employment records are prohibited by any Federal, State or local law. All specified data is required to be filled in by law.

Does the Bidder currently employ any of the following:  racial minorities  women  Veterans / Vietnam  Individuals with a disability  age 40-70

What is the weekly average number of employees in the past 12 months. \_\_\_\_\_

How many employees were terminated in the past 12 months. \_\_\_\_\_

How many new hires have been made in the past 12 months. \_\_\_\_\_

JOB CATEGORIES	ALL EMPLOYEES			MINORITY GROUP EMPLOYEES											
	TOTAL MALE & FEMALE	MALE	FEMALE	MALE					FEMALE						
				BLACK	ASIAN	AMERICAN INDIAN	HISPANIC	WHITE	BLACK	ASIAN	AMERICAN INDIAN	HISPANIC	WHITE		
Officials, Managers & Supervisors															
Professionals															
Technicians															
Office and Clerical															
Craftsmen (Skilled)															
Operatives (Semi-Skilled)															
Laborers (Unskilled)															
Service Workers															
Apprentices															
TOTAL															
Total Employment from previous report (if any)															

### DESCRIPTION OF OCCUPATIONAL CATEGORIES

**OFFICIALS, MANAGERS & SUPERVISORS** – Occupations requiring administrative personnel who set broad policies, exercise over- all responsibility for execution of these policies, and direct individual departments or special phases of a firm’s operations. Includes: officials, executives, middle management, plant managers, department managers and superintendents, salaried foremen who are members of management, purchasing agents and buyers, and kindred workers.

**PROFESSIONALS** – Occupations requiring either college graduation or experience of such kind and amount as to provide a comparable background. Includes: accounts and auditors, airplane pilots and navigators, architects, artists, chemists designers, dietitians, editors, engineers, lawyers, librarians, mathematicians, natural scientists, personnel and labor relations workers, physical scientist, physicians, social scientists, teachers and kindred workers.

**TECHNICIAN** – Occupations requiring a combination of basic scientific knowledge and manual skill, which can be obtained through about 2 years of post high school education, such as is offered in many technical institutes and junior colleges, or through equivalent on-the-job training. Includes: draftsmen, engineering aids, junior engineers, mathematical aides, nurses, photographers, radio operators, scientific assistants, surveyors, technical illustrators, technicians (medical, dental, electronic physical sciences), and kindred workers.

**SALES WORKERS** – Occupations engaging wholly or primarily in direct selling. Includes: advertising agents and salesmen, insurance agents and brokers, real estate agents and brokers, stock and bond salesmen, demonstrators, salesmen and sales clerks, and kindred workers.

**OFFICE AND CLERICAL** – Includes al clerical-type work regardless of level of difficulty, where the activities are predominately nonmanual though some manual work not directly involved with altering or transporting the products is included. Includes: bookkeepers, cashiers, collectors (bills and account), messengers and office boys, office machine operators, shipping and receiving clerks, stenographers, typists and secretaries, telegraphs and telephone operators, and kindred workers.

**CRAFTSMEN (SKILLED)** – Manual workers of relatively high skill level having a thorough and comprehensive knowledge of the processes involved in their work. Exercise considerable independent judgement and usually receive an extensive period of training. Includes: the building trades, hourly paid foremen and leadmen who are not members of management, mechanics and repairmen, skilled machining occupations, compositors and typesetters, electricians, engravers, job setters (metal), motion picture projectionists , pattern and modern makers, stationary engineers, tailors and tailoresses, and kindred workers.

**OPERATIVES (SEMI-SKILLED)** – Workers who operate machine or processing equipment or perform other factory-type duties of intermediate skill level which can be mastered in a few weeks and require only limited training.

**LABORERS (UNSKILLED)** – Workers in manual occupations which generally require no special training. Perform elementary duties that may be learned in a few days and require the applications of little or no independent judgment. Includes: garage laborers, car washers and greasers, gardeners (except farm) and groundskeepers, longshoremen and stevedores, lumbermen, craftsmen and wood choppers, laborers performing lifting, digging, mixing, loading, and pulling operations, and kindred workers.

**SERVICE WORKERS** – Workers in both protective and non-protective service occupations. Includes: attendants (hospital and other institution, professional and personal service), barbers, charwomen and cleaners, cooks (except household), counter and fountain workers, elevator operators, firemen and fire protection, guards, watchmen and doorkeepers, stewards, janitor, policemen and detectives, porters, waiters and waitresses, and kindred workers.

**APPRENTICES** – Persons employed in a program including work training and related instruction to learn a trade or craft which is traditionally considered an apprenticeship, regardless of whether the program is registered with a Federal or State agency.

Goals for female participation in each trade: 6.9%

Goals for minority participation in each trade: 12.5%

ATTACHMENT "B"  
BIDDER INFORMATION

Questions relative to the information requested should be directed to the Office of Minority & Women Business Development (OMWBD), City of Indianapolis, Suite 1260, City-County Building, 200 E. Washington Street, Indianapolis, IN 317-327-5262.

The OMWBD will use the following information in evaluating the equal opportunity practices of the Bidder. It is necessary to know the type of service or products, ownership status, employment policies, utilization of protected groups, and past performance on public Contracts.

---

Name, Address and Telephone Number of Bidder covered by this Report

---

Name, Address and Telephone Number of Principal Official or Manager

---

Name and Title of Official in Charge

---

Name of Equal Opportunity Officer and How to Contact

Service Performed

Construction Contractor     Supplier     Service  
 Professional Service     Lessor / Lessee     Other

Ownership

Corporation     Company     Proprietorship     Partnership     Joint Venture  
Ownership is 51% or more:  Majority     Racial Minority     Woman-owned     Other

Name of Owner(s) \_\_\_\_\_

<u>General Information</u>	<u>Yes</u> <u>No</u>	<u>Construction Contractors Only</u>	<u>Yes</u> <u>No</u>
Has the Bidder's name changed in the Past 2 years?	_____	Is the Bidder a signatory in good standing with the Indianapolis Plan for Equal Employment?	_____
If yes, state former name: _____		Is the Bidder currently party to a collective bargaining agreement?	_____
Has the Bidder previously received contracts or purchase orders from the Consolidated City of Indianapolis?	_____	Does the Bidder intend to utilize MBE/WBE/VBE/DOBE subcontractors/suppliers?	_____
Has the Bidder been denied a contract from any government agency due to non-compliance with Equal Opportunity requirements or classified as debarred, suspended or ineligible?	_____		
If the Bidder is a minority or woman-owned business, has certification been issued by the OMWBD?	_____		
Has the Bidder filed an Affirmative Action Plan with the City of Indianapolis?	_____		

Certification

I certify that the information submitted on Attachment A and B of this form is accurate and complete.

\_\_\_\_\_  
Signature of Company Official

**ATTENTION:**

If your total number of employees is 15 or less, and your company was awarded a bid, or plans to bid on future projects, a **Policy Statement** is needed. The **Policy Statement** will establish your Company's compliance for one year.

**Note: A Policy Statement should express your Company's commitment to providing Equal Employment Opportunity without regard to race, religion, color, sex, national origin, age, sexual orientation, gender identity, ancestry, United States military service veteran status or disability.**

## SAMPLE POLICY STATEMENT LETTER

1. Must mention at the bottom or top of the page, "Equal Opportunity Employer."
2. Must keep a copy in the Company's file.

### Equal Employment Opportunity Policy

The employment policies and practices of the Company's Name are to recruit, hire, and treat employees without discrimination because of a person's race, religion, color, sex, national origin, age, or disability. Our company is committed to providing Equal Employment Opportunity with respect to hiring, termination, compensation, advancement, upgrading and promotion, and transfer.

This company seeks to ensure compliance with the Civil Rights Acts of 1964, as amended, the Federal Highway Act of 1968, the Executive Order 11246, and 11375, the Indiana Civil Rights Act, Chapter 581 of the Consolidated City of Indianapolis and Marion County Revised Code, and other Federal and State Law and Regulations pertaining to Equality of Opportunity and Affirmative Action Policies.

Our company is committed to leadership within the community, and to put forth-maximum efforts to achieve full employment and utilization of capabilities and productivity of all qualified individuals without regard to race, religion, color, national origin, age, sexual orientation, gender identity, ancestry, United States military service veteran status, or disability.

This company further recognizes that the effective application of a policy of Equal Employment Opportunity involves more than just a policy statement, and is committed to the promotion of Affirmative Action.

#### Signature

Company's Chief Official  
Name and Title

#### Signature

Company's Equal Employment Opportunity Officer  
Company's Address and Telephone Number

**SAMPLE LETTER OF INTENT TO PERFORM AS A SUBCONTRACTOR**

**Instructions:** Within three (3) business days of notification by Owner, the apparent lowest responsive Bidder will be required to submit a “Letter of Intent to Perform as a Subcontractor” for each M/W/V/DOBE subcontractor listed on Bidder’s Participation Goals for Construction, Goods/Supplies, and Services.

PROJECT/CONTRACT: \_\_\_\_\_

BIDDER: \_\_\_\_\_

M/W/V/DOBE FIRM FULL LEGAL NAME: \_\_\_\_\_

The M/W/V/DOBE Firm listed below affirms that they are currently certified as a Minority, Women, Veteran or Disability Owned Business Enterprise (M/W/V/DOBE), in its appropriate category code by the City of Indianapolis; YES\_\_ NO\_\_ as a M/W/V/DOBE (Circle One) Trade of Firm : \_\_\_\_\_. The Prime Bidder hereby states its intent to utilize this M/W/V/DOBE Firm on this Project/Contract. The Prime Bidder intends to enter into a contractual agreement with the listed M/W/V/DOBE Sub-Contractor Firm who will provide the following goods/services as agreed to as a tier one sub-contractor. Sub-Contractor agrees to not then sub-contract out services for this project without expressed written advance approval of the Office of Minority & Women Business Development:

SCOPE OF WORK (What Commercial Useful Function will be provided):	
ESTIMATED VALUE OF SUBCONTRACT:	\$

This document shall not serve in any manner as an actual subcontract between the two parties. A separate subcontract agreement will describe in detail the contractual obligations of the Bidder and the M/W/V/DOBE Firm.

The M/W/V/DOBE Firm affirms that it will self-perform, and the Bidder affirms it intends to utilize the M/W/V/DOBE to perform, the scope of work at the subcontract value amount stated above.

\_\_\_\_\_  
Bidder Representative’s Signature

\_\_\_\_\_  
M/W/V/DOBE Representative’s Signature

\_\_\_\_\_  
Print: Name & Title

\_\_\_\_\_  
Print: Name & Title

\_\_\_\_\_  
Date

\_\_\_\_\_  
Date

**Falsification of Agreement**

**Bidder’s or MBE/WBE/VBE/DOBE’s falsification or misrepresentation of this agreement as to company name, subcontract amount, and/or the scope of work performed by subcontractor will result in sanctions including assessment of penalty fines, termination of contract, and/or debarment.**



**POST-BID SUBMITTAL**  
**(SEE ITB 6.1)**

**INDIANA PLAN/AFFIRMATIVE ACTION CERTIFICATION**  
**(Bidders with more than 15 employees)**

Bidders' Certifications. A Bidder will not be eligible for award of a contract under this Invitation for Bids unless such bidder has submitted as a part of its post-bid submittal the following certification, which will be deemed a part of the resulting contract:

**Bidder's Certification**

\_\_\_\_\_ (Bidder) certifies for itself and its subcontractors that:

1. They intend to use the following listed construction trades in the work under the contract:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2. As to those trades set forth in the preceding paragraph which are eligible for participation in the Indiana Plan, they will comply with the Indiana Plan on all construction work (both federal and non-federal) in Indiana within the scope and coverage of that Plan, those trades being:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

3. As to the trades which are not eligible for participation in the Indiana Plan, they adopt the minimum minority manpower utilization goals and the specific affirmative action steps listed in sections 6.1 and 6.1.1 of the Instructions to Bidders, for all construction work (both federal and non-federal) in Indiana subject to these Bid Conditions, those trades being:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
(Signature of Bidder)

\_\_\_\_\_  
Date

Name: \_\_\_\_\_  
(Printed)

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

**POST-BID SUBMITTAL**  
**SUBCONTRACTOR/SUPPLIER PARTICIPATION**

See Section 9 of the Instruction to Bidders (ITB) for complete instructions on filling out this form.

**A. SUBCONTRACTORS AND SUPPLIERS LIST**

*Instructions to Bidders:* The Bidder shall submit a completed Subcontractor/Supplier list (see below) as required in ITB 6.6.

*The Bidder shall enter the names, the type of work to be done, and the amount, in the Subcontractors/Suppliers List for each subcontractor/supplier that the Bidder proposes to use for services that will be provided for the Project/Contract at an agreed price of \$5,000 or greater, as part of the total amount bid as stated above in Part 2.*

*Bidder shall also list ALL MBE/WBE/VBE/DOBE to be utilized for the Project/Contract, including their amount, regardless of the amount. Any MBE/WBE/VBE/DOBE subcontractors/suppliers shall be identified as such in the righthand column. Bidder shall indicate below if the subcontractor/supplier has multiple certifications. Failure to list all required Subcontractors/Suppliers, required MBE/WBE/VBE/DOBE information, and required pricing may result in Bid being deemed non-responsive.*

*Only one subcontractor/supplier shall be listed for each line. Upon award of a contract, the named subcontractors/suppliers shall be contracted to perform the work, unless changes are specifically authorized by the Owner. Failure to furnish all information requested may render the bid non-responsive if it is determined that such omission materially affords the Bidder a substantial advantage over other Bidders.*

*Except as otherwise specifically stated by the Bidder in this Part, omission of any names of subcontractors/suppliers herein shall constitute an affirmative representation and statement that the Bidder proposes to use its own work force for that portion of the Contract.*

*Bidder's attention is directed to paragraphs 6.8, 6.9, and 6.11 of the City of Indianapolis Standard General Conditions for Construction Contracts as they relate to use of subcontractors/suppliers.*

(Check one if applicable)

Full Subcontractor Name	Description of Work	Amount	MBE	WBE	VBE	DOBE
		\$				
		\$				
		\$				
		\$				
		\$				
		\$				
		\$				
Full Supplier Name	Description of Work	Amount	MBE	WBE	VBE	DOBE
		\$				
		\$				
		\$				
		\$				
		\$				
		\$				
		\$				

(please duplicate and use this form, if additional sheets are necessary)



**POST BID SUBMITTAL**  
**E-VERIFY DOCUMENTATION**  
**SEE ITB SECTION 6.8**

Pursuant to Indiana Code 22-5-1.7-11.1 the Contractor shall provide documentation that it has enrolled and is participating in the E-Verify program. Contractor is required to submit proof from the E-Verify Program that it is currently enrolled in the Program. An example of confirmation is the confirmation e-mail received from E-Verify that the Contractor has successfully enrolled in E-Verify.

**POST BID SUBMITTAL**  
**ELIGIBILITY TO DO BUSINESS**  
**SEE ITB SECTION 6.9**

Pursuant to Revised Code of the Consolidated City of Indianapolis and Marion County Sec. 261-408 (a)(1), the Bidder shall submit a copy of a print-out of the Indiana Secretary of State's online records for the bidder dated within sixty (60) days of the submission showing that the Bidder is in existence, is current with the Secretary of State's Business Entity Reports, and is eligible for a certificate of good standing. This does not apply to Bidders who are individuals, sole proprietors, or partnerships.

**POST BID SUBMITTAL**  
**APPRENTICESHIP AND TRAINING**  
**SEE ITB SECTION 6.10**

Pursuant to Revised Code of the Consolidated City of Indianapolis and Marion County Sec. 261-408 (a)(5), the Bidder shall submit evidence of participation in apprenticeship and training programs, applicable to the work to be performed on the project, which are approved by and registered with the United States Department of Labor's Office of Apprenticeship, or its successor organization.

**POST BID SUBMITTAL**  
**PROJECT MANAGERS**  
**SEE ITB SECTION 6.11**

Pursuant to Revised Code of the Consolidated City of Indianapolis and Marion County Sec. 261-408 (a)(7), the Bidder shall submit a list of the names and descriptions of relevant management experience of each of the bidder's project managers and superintendents that the Bidder intends to assign to work on the project.

**POST BID SUBMITTAL**  
**LICENSURE**  
**SEE ITB SECTION 6.12**

Pursuant to Revised Code of the Consolidated City of Indianapolis and Marion County Sec. 261-408 (a)(8), the Bidder shall submit proof of any appropriate professional or trade licenses held by the Bidder and its management personnel required by law for any trade or specialty area in which the Bidder is seeking a contract award. The Bidder shall also disclose any letters of suspension or revocation issued in the previous five (5) years of any such license held by the company, or of any director, officer, or manager of the Bidder.

**POST BID SUBMITTAL**  
**SURETY**  
**SEE ITB SECTION 6.13**

Pursuant to Revised Code of the Consolidated City of Indianapolis and Marion County Sec. 261-408 (a)(9), The Bidder shall submit evidence of utilization of a surety company listed as an approved surety by the United States Department of the Treasury.

**POST BID SUBMITTAL**  
**BIDDER QUALIFICATION**  
**SEE ITB SECTION 6.14**

Pursuant to Revised Code of the Consolidated City of Indianapolis and Marion County Sec. 261-408 (a)(11), the Bidder shall submit evidence that it and all relevant subcontractors have been qualified under IC 4-13.6-4 or IC 8-23-10 if the contract is estimated to be at least \$300,000.00.

**BID BOND**  
**Consolidated City of Indianapolis**

*Instructions to Bidders*

*Bidders may use this form or other form containing the same material conditions and provisions as approved in advance by Owner/Obligee.*

*Bidder/Surety must attach a signed, certified and effective dated copy of the Power of Attorney or Attorney-In-Fact establishing the authority of the person(s) signing this Bid Bond on behalf of the Surety.*

*Surety company executing this bond shall appear on the most current list of "Surety Companies Acceptable on Federal Bonds" as specified in the U.S. Treasury Department Circular 570, as amended, and be authorized to transact business in the State of Indiana.*

KNOW ALL MEN BY THESE PRESENTS, that the undersigned

"Bidder": \_\_\_\_\_  
and

"Surety": [Name] \_\_\_\_\_  
[Address] \_\_\_\_\_,  
\_\_\_\_\_

a corporation chartered and existing under the laws of the State of \_\_\_\_\_, and authorized to do business in the State of Indiana,

are held and firmly bound unto the Consolidated City of Indianapolis, Indiana ("Owner/Obligee") in the full and just sum equal to five percent (5%) of the price stated in the Bid Proposal described below, including accepted alternates, if any, to be paid upon demand of the Owner/Obligee, together with interest at the maximum legal rate from date of demand and any attorney fees and court costs incurred by Owner/Obligee to enforce this instrument, to which payment well and truly to be made we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally and firmly by these presents.

WHEREAS, the Owner/Obligee has solicited bids for certain Work for or in furtherance of construction of public improvements described generally as

**Sherman Park – Taupe Mtn Removal**

pursuant to plans, specifications and other "Contract Documents" included as parts of and designated by such solicitation; and

WHEREAS, the Bidder has submitted to the Owner/Obligee a Bid Proposal to perform such Work.

NOW THEREFORE: The conditions of this obligation are such that if the Bid Proposal be accepted, with or without conditions, the Bidder shall within such time thereafter as prescribed by the Contract Documents (i) fulfill all conditions of such award that remain to be fulfilled, (ii) execute a Contract in accordance with the Bid Proposal and in the form and manner required by the Contract Documents, and (iii) thereafter provide all bonds, and other documentation required by the Contract Documents to be delivered to Owner/Obligee prior to commencing Work, including without limitation a sufficient and satisfactory Performance Bond and Payment Bond payable to Owner/Obligee, each in an amount of one hundred percent (100%) of the total Contract price as awarded and in form and with surety satisfactory to said Owner/Obligee, then this obligation to be void; otherwise to be and remain in full force and virtue in law, and the Surety shall, upon failure of the Bidder to comply with any or all of the foregoing requirements within the time specified above and as prescribed by the Contract Documents, immediate pay to the Owner/Obligee, upon demand, the amount hereof, in good and lawful money of the United States of America, not as a penalty, but as liquidated damages.

IN TESTIMONY THEREOF, the Bidder and Surety have caused this instrument to be duly signed and sealed this \_\_\_\_ day of \_\_\_\_\_, 20\_\_.

***This Bid Bond shall bind the undersigned Surety whether or not also signed by the Bidder.***

“Bidder”

“Surety”

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

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

Printed: \_\_\_\_\_

Printed: \_\_\_\_\_



NOW, THEREFORE, Contractor warrants the workmanship and all materials used in the construction, installation and completion of said Work, including all improvements and installations thereof, to be of good quality and constructed and completed in a workmanlike manner in accordance with the Agreement and Contract Documents and all local, state and federal laws, ordinances, rules, standards and regulations applicable to said Work;

FURTHERMORE, the conditions of the Surety's obligation hereunder are such that if Contractor at his own expense, for a period of 3 years, commencing on the date of Substantial Completion, shall make all repairs or replacements thereto which may become necessary by reason of improper or defective workmanship or materials, or any failure thereof to conform to the provisions of the Agreement or Contract Documents, then Surety's obligation is to be null and void; otherwise such obligation shall remain in full force and effect. Any repairs or replacements made under this Bond shall in like manner be subject to the terms and conditions hereof.

Contractor and Surety covenant that all action required by law to be taken by them to authorize the execution and delivery of this bond have been previously been taken, that the officers whose signatures appear below have been fully empowered to execute and deliver this instrument and that once executed and delivered, it shall represent the lawful and binding obligation of the parties.

IN WITNESS WHEREOF, this instrument is executed in \_\_\_\_\_ (number) counterparts, each one of which shall be deemed an original, this the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

CONTRACTOR:] \_\_\_\_\_  
[name]

By: \_\_\_\_\_  
[signature] [printed name]

ATTEST: \_\_\_\_\_, Secretary  
[signature]

SURETY:] \_\_\_\_\_  
[name]

By: \_\_\_\_\_, Attorney-in-Fact  
[signature]

\_\_\_\_\_  
[printed name] [address]



PROVIDED, FURTHER, that the said Surety, for value received, hereby stipulates and agrees:

1. that no defect or irregularity in the contract or in the proceedings preliminary to the letting of the contract will operate to release or discharge Surety.
2. that no change, omission, extension of time, alteration or addition to the terms of the Agreement, Contract Documents or to any Work to be furnished thereunder, and no delay by the Owner/Obligee in enforcement of the Agreement or this Bond shall in any way affect its obligation on this Bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Agreement, Contract Documents or to the Work.
3. that no final settlement between the Owner/Obligee and the Contractor shall abridge any right of the Owner/Obligee hereunder as to any claim that may remain unsatisfied.
4. that this Payment Bond and Surety shall not be released until one (1) year after the Owner/Obligee's final settlement with the Contractor.

IN WITNESS WHEREOF, this instrument is executed in \_\_\_\_\_ (number) counterparts, each one of which shall be deemed an original, this the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

CONTRACTOR:] \_\_\_\_\_  
[name]

By: \_\_\_\_\_  
[signature] [printed name]

ATTEST: \_\_\_\_\_, Secretary  
[signature]

SURETY: \_\_\_\_\_  
[name]

By: \_\_\_\_\_, Attorney-in-Fact  
[signature]

\_\_\_\_\_  
[printed name] [address]

**PERFORMANCE BOND**  
**Consolidated City of Indianapolis**

*Instructions:*

*Successful Bidder must use this form or other form containing the same material conditions and provisions as approved in advance by Owner.*

*Date of Bond must not be prior to date of Contract. If Contractor is a Partnership, all partners should execute bond.*

*Surety company executing this bond shall appear on the most current list of "Surety Companies Acceptable on Federal Bonds" as specified in the U.S. Treasury Department Circular 570, as amended, and be authorized to transact business in the State of Indiana.*

KNOW ALL MEN BY THESE PRESENTS: that

"Contractor": \_\_\_\_\_

and

"Surety": [name] \_\_\_\_\_  
[Address] \_\_\_\_\_  
\_\_\_\_\_

a corporation chartered and existing under the laws of the State of \_\_\_\_\_, and authorized to do business in the State of Indiana,

are held and firmly bound unto the Consolidated City of Indianapolis, Indiana hereinafter called Owner/Obligee, in the penal sum of \_\_\_\_\_ Dollars, (\$\_\_\_\_\_) in lawful money of the United States, for the payment of which sum well and truly to be made, together with interest at the maximum legal rate from date of demand and any attorney fees and court costs incurred by Owner/Obligee to enforce this instrument, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Contractor has entered into a certain Agreement with the Owner/Obligee, dated as of the \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_, by which Contractor has agreed to perform and furnish certain Work for or in furtherance of construction of public improvements described generally as

**Sherman Park – Taupe Mtn Removal**

which Agreement, and the "Contract Documents" as referred to therein, are hereby incorporated herein by reference;

NOW, THEREFORE, the conditions of this obligation are such that if the Contractor shall well, truly and faithfully perform his duties, all the undertakings, covenants, terms and conditions of said Agreement whether during the original term thereof, and any extensions thereof which may be granted by the Owner/Obligee, with or without notice to the Surety and during any period of guaranty or warranty provided therein or arising thereunder, and if he shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and save harmless the Owner/Obligee from all costs and

damages which he may suffer by reason of failure to do so, and shall reimburse and repay the Owner/Obligee all outlay and expense which the Owner/Obligee may incur in making good any default, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety, for value received, hereby stipulates and agrees:

1. that no defect or irregularity in the contract or in the proceedings preliminary to the letting of the contract will operate to release or discharge Surety.
2. that no change, omission, extension of time, alteration or addition to the terms of the Agreement, Contract Documents or to any Work to be furnished thereunder, and no delay by the Owner/Obligee in enforcement of the Agreement or this Bond shall in any way affect its obligation on this Bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Agreement, Contract Documents or to the Work.
3. that no final settlement between the Owner/Obligee and the Contractor shall abridge any right of the Owner/Obligee hereunder as to any claim that may remain unsatisfied.
4. that this Performance Bond and Surety shall not be released until one (1) year after the Owner/Obligee's final settlement with the Contractor.

IN WITNESS WHEREOF, this instrument is executed in \_\_\_\_\_ (number) counterparts, each one of which shall be deemed an original, this the \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

CONTRACTOR: \_\_\_\_\_  
[name]

By: \_\_\_\_\_  
[signature] [printed name]

ATTEST: \_\_\_\_\_, Secretary  
[signature]

SURETY: \_\_\_\_\_  
[name]

By: \_\_\_\_\_, Attorney-in-Fact  
[signature]

\_\_\_\_\_  
[printed name] [address]

**AGREEMENT**  
**Consolidated City of Indianapolis**

THIS AGREEMENT is Effective as of the date of the last signatory for the City of Indianapolis.

by and between

“OWNER”: Consolidated City of Indianapolis, Indiana, by and through its Department of Metropolitan Development, **200 E Washington St, Suite 2042 Indianapolis, IN 46204**

and

“CONTRACTOR”:

concerning the following:

“PROJECT”: **Sherman Park – Taupe Mtn Removal**

“WORK”: **Removal of construction materials, debris, soil and other materials to be flush with existing concrete pads beneath.**

“ENGINEER”: **Crawford, Murphy, & Tilly  
Heartland Environmental Associates, Inc.**

RECITALS:

- A. The OWNER has heretofore caused to be prepared certain plans, specifications and other “Contract Documents” as hereinafter listed pertaining to the above described Project and Work, and the CONTRACTOR has filed Proposal to furnish said labor, tools, material, equipment, services, and perform said Work upon the terms and for the price(s) therein fully stated and set forth;
- B. The said Contract Documents accurately and fully describe the terms and conditions upon which the CONTRACTOR is willing to furnish the labor, tools, material, equipment, services, and perform the Work called for by the Contract Documents and in the manner and time and for the price(s) set forth herein.

THE OWNER AND CONTRACTOR AGREE AS FOLLOWS:

1. Contract Documents

1.1 This Agreement consists of the following Contract Documents all of which are as fully a part of this Agreement as if set out verbatim herein or attached hereto and the same do in all particulars become the Agreement between the parties hereto in all matters and things set forth herein and described:

- .1 This Agreement;
- .2 All Addenda issued prior to receipt of Bids, whether or not receipt thereof has been acknowledged by CONTRACTOR in its Bid;
- .3 Special Conditions;
- .4 General Conditions;
- .5 CONTRACTOR's Itemized Proposal and Declarations;
- .6 Technical Specifications;
- .7 Plans;
- .8 City Standards and Specifications;
- .9 INDOT Standard Drawings;
- .10 INDOT Supplemental Specifications;
- .11 INDOT Standard Specifications;
- .12 Additional Requirements Section of the Bid Documents (change order forms, Indiana Code 5-16-13, etc.);
- .13 Instructions to Bidders;
- .14 Advertisement or Notice to Bidders; and
- .15 Performance, Payment and Warranty Bonds.

1.2 In resolving conflicts, errors, discrepancies and disputes concerning the nature, character, scope or extent of Work to be performed or furnished by the CONTRACTOR, or other rights and obligations of the OWNER and CONTRACTOR, arising from or prescribed by one or more of the Contract Documents, the following rules shall govern:

- .1 A requirement occurring in one Contract Document is as binding as though occurring in all Contract Documents;
- .2 Calculated dimensions shall govern over scaled dimensions;

- .3. The Contract Documents shall be given precedence in the order listed in Paragraph 1.1 above; and
- .4. In documents of equal priority, if any such conflict, error, discrepancy or dispute cannot be resolved or reconciled by application of the rules stated in Subparagraphs 1.2.1 through 1.2.3, then the provision expressing the greater quantity, quality, or scope of work, or imposing the greater obligation upon the CONTRACTOR or affording the greater right or remedy to the OWNER shall govern, without regard to the party who drafted such provision.

## 2. Contract Price

- 2.1 The CONTRACTOR shall, in strict conformity with the Contract Documents, furnish all labor, tools, materials, equipment, services, assume and fulfill all obligations and perform all Work required to construct, complete, and make ready for use by the OWNER for the lump sum of \_\_\_\_\_ Dollars (\$\_\_\_\_\_).
- 2.2 The above stated Contract Sum will be paid to the CONTRACTOR in the manner and at such times as set forth in the Contract Documents.

## 3. Contract Time

- 3.1 It is hereby understood and mutually agreed, by and between the CONTRACTOR and OWNER, that the date of commencement and the time for completion of the Work as specified in the Contract Documents are ESSENTIAL CONDITIONS of this Agreement.
- 3.2 The CONTRACTOR agrees that the Work shall be commenced no later than the date indicated in the Notice to Proceed and that the Work shall be prosecuted regularly, diligently and uninterruptedly at such a rate of progress as will insure **Substantial Completion on or before July 29, 2022, and Final Completion on or before September 16, 2022.**
- 3.3 The CONTRACTOR and OWNER acknowledge and agree that the time allotted by this Agreement for the performance and completion of the Work is reasonable and takes into account any and all risks and adverse conditions assumed by CONTRACTOR hereunder.

## 4. Liquidated Damages

The CONTRACTOR and OWNER recognize and contemplate that unexcused failure by the CONTRACTOR to complete the Work within the Contract Time will cause the OWNER and the Public to suffer financial losses or inconvenience the full and exact extent and character of which cannot be measured as a basis for recovery by the OWNER of actual damages, and that liquidated damages as prescribed in the Contract Documents represent a fair, reasonable and appropriate estimate thereof. Accordingly, the CONTRACTOR agrees that such liquidated damages may be assessed and recovered by the OWNER, as against CONTRACTOR and its Surety, in the event of delayed completion and without the OWNER being required to present any evidence of the amount or character of actual damages sustained by reason thereof. **Such liquidated damages shall be assessed and recovered at the rate of \$200 per day for delay in achieving Substantial Completion and at the rate of \$400 per day in achieving Final Completion of the Work.**

**Construction signs shall be removed within seven (7) calendar days of final acceptance of an individual street. The cost of coordinating work activities associated with this specification shall not be paid for directly, but shall be included in the total cost of the contract.**

[REST OF PAGE INTENTIONALLY LEFT BLANK]

“CONTRACTOR” SIGNATURE:

IN TESTIMONY THEREOF, the CONTRACTOR has hereunder set his hand this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

Firm Name \_\_\_\_\_

Address \_\_\_\_\_

Telephone No. \_\_\_\_\_ Fax No. \_\_\_\_\_

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

Printed: \_\_\_\_\_

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

“OWNER” SIGNATURES:

IN WITNESS WHEREOF, the OWNER does hereby accept the foregoing Agreement, and has herewith set his/her hand this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

For and on behalf of the Consolidated City of Indianapolis by its Department of Metropolitan Development and its Metropolitan Development Commission.

CITY OF INDIANAPOLIS  
DEPARTMENT OF METROPOLITAN DEVELOPMENT  
200 East Washington Street, Suite 2460  
Indianapolis, Indiana 46204

APPROVED AS TO LEGAL FORM:  
OFFICE OF CORPORATION  
COUNSEL

By: \_\_\_\_\_  
Scarlett Andrews Martin  
Director

\_\_\_\_\_  
Sheila Kinney  
Assistant Corporation Counsel

As authorized by the Metropolitan Development Commission on \_\_\_\_\_, 20\_\_\_\_\_.

ATTEST:

- Approved for Availability of Funding
- Approved for Execution

\_\_\_\_\_  
Macha Ledet  
Secretary, Metropolitan Development Commission

\_\_\_\_\_  
Ken Clark  
City Controller

\_\_\_\_\_  
Date



# ADDITIONAL REQUIREMENTS

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City of Indianapolis Sample Change Order Forms	AR-3
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Following are specimen forms proposed to be used for the issuance of change orders, field orders, and work directive changes. Procedure for the development, submittal and processing of these forms will be discussed during the preconstruction conference.

CITY OF INDIANAPOLIS

OWNER: CITY OF INDIANAPOLIS

FIELD ORDER NUMBER: \_\_\_\_\_

DATE: \_\_\_\_\_

PROJECT NAME: \_\_\_\_\_

PROJECT NO: \_\_\_\_\_

---

You are hereby directed to execute promptly this Field Order which interprets the Contract Documents or orders minor changes in the Work without change in Contract Sum or Contract Time.

If you consider that a change in Contract Sum or Contract Time is required, please submit your itemized proposal to the Engineer immediately and before proceeding with this Work. If your proposal is found to be satisfactory and in proper order, this Field Order will in that event be superseded by a Change Order.

---

Description:

Attachments:

---

PROJECT MANAGER:

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

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

CITY OF INDIANAPOLIS

TO: WORK DIRECTIVE CHANGE NO. \_\_\_\_\_  
DATE: \_\_\_\_\_  
PROJECT NAME: \_\_\_\_\_  
PROJECT NO.: \_\_\_\_\_

Specification Reference: \_\_\_\_\_

Drawing Reference: \_\_\_\_\_

DESCRIPTION OF WORK COVERED BY THIS DIRECTIVE CHANGE:

REASON FOR THIS ORDER:

AUTHORIZATION:  
THIS WORK DIRECTIVE CHANGE AUTHORIZES THE WORK TO BE COMPLETED AS OUTLINED. A Contract Change Order in the amount of \$\_\_\_\_\_ will be issued to you in the near future to cover this Work Directive Change.

PROJECT COMPLETION DATE: ADD/DEDUCT/UNCHANGED \_\_\_\_\_ DAYS.

By: \_\_\_\_\_  
Project Manager (Engineering)

By: \_\_\_\_\_  
Resident Project Representative

By: \_\_\_\_\_  
Project Manager (Construction)

By: \_\_\_\_\_  
Administrator of Construction Services

CITY OF INDIANAPOLIS

TO: REQUEST FOR PROPOSAL NO.: \_\_\_\_\_  
DATE: \_\_\_\_\_  
PROJECT NAME: \_\_\_\_\_  
PROJECT NO.: \_\_\_\_\_

Specification Reference: \_\_\_\_\_

Drawing Reference: \_\_\_\_\_ Drawing Date: \_\_\_\_\_

Identification of Attachments: \_\_\_\_\_

Please submit within fifteen calendar days of this request date a proposal showing increase, decrease or no change in contract price and/or contract time. Proposal shall be accompanied by four (4) copies of breakdown showing quantities, cost of material, equipment, labor, overhead, profit and basis for the additional time if any.

DESCRIPTION OF PROPOSED CHANGE COVERED BY THIS REQUEST:

REASON FOR CHANGE:

SPECIAL INSTRUCTIONS:

THIS REQUEST DOES NOT AUTHORIZE YOU TO PROCEED WITH THE ABOVE WORK NOR STOP PREVIOUSLY SCHEDULED WORK. Upon approval a Contract Change Order and a Notice to Proceed will be issued.

Please state in your proposal the effect the acceptance of this REQUEST will have on the project completion, if accepted within \_\_\_ days of proposal due date.

YOUR PROPOSAL DUE DATE: \_\_\_\_\_

By: \_\_\_\_\_  
Project Manager Date

CITY OF INDIANAPOLIS

TO: CONTRACT CHANGE REQUEST NO.: \_\_\_\_\_  
DATE: \_\_\_\_\_  
PROJECT NAME: \_\_\_\_\_

FROM: \_\_\_\_\_

IT IS REQUESTED THAT A CONTRACT CHANGE BE MADE TO THE ABOVE REFERENCED CONTRACT.

1. SCOPE OF WORK (USE ADDITIONAL PAGES IF REQUIRED. ALSO LIST OTHER CONTRACTS INVOLVED.)

\_\_\_\_\_  
\_\_\_\_\_

2. REASON FOR CHANGE:

\_\_\_\_\_  
\_\_\_\_\_

3. APPROXIMATE COST CHANGE TO CONTRACT PRICE: \_\_\_\_\_

4. WILL THE CONTRACT NEED ADDITIONAL CONTRACT TIME TO COMPLETE THE CHANGE IN WORK SCOPE? \_\_\_\_\_ -YES \_\_\_\_\_ -NO \_\_\_\_\_ -(CALENDAR DAYS)

5. WILL THE CONTRACTOR NEED ADDITIONAL PERSONNEL TO COMPLETE THE CHANGE IN WORK SCOPE? \_\_\_\_\_ -YES \_\_\_\_\_ -NO

IF NO, TRADE(S): \_\_\_\_\_

NO. OF PERSONNEL: \_\_\_\_\_

DURATION: \_\_\_\_\_

6. IDENTIFICATION OF ATTACHMENTS:

\_\_\_\_\_  
\_\_\_\_\_

DATE: \_\_\_\_\_ DATE: \_\_\_\_\_

PREPARED  
REVIEWED BY: \_\_\_\_\_

REVIEWED BY: \_\_\_\_\_  
Project Manager

Comments and Recommendation:

\_\_\_\_\_

CITY OF INDIANAPOLIS

TO: CONTRACT CHANGE ORDER NO.: \_\_\_\_\_  
DATE: \_\_\_\_\_  
PROJECT NAME: \_\_\_\_\_  
ORIGINAL CITY P.O. NO.: \_\_\_\_\_

I. You are directed to make the following changes in this contract:

<u>ITEM</u>	<u>AMOUNT</u>	<u>SCHEDULED ADJUSTMENT</u> <u>(+) OR (-) DAYS</u>
-------------	---------------	---

II. The following referenced documents further describe the changes outlined in Paragraph I, and are to be considered a part of this Change Order:

R.F.P.: \_\_\_\_\_ W.D.C.: \_\_\_\_\_

The changes result in the following adjustment of Contract Price and Contract Time:

Contract Sum prior to this Change Order	\$ _____
Contract Sum will be increased/decreased by this Change Order	\$ _____
New Contract Sum including this Change Order	\$ _____
Contract Time Prior to this Change Order _____	Substantial Completion Date _____
	Final Completion Date _____
Net increased/decreased resulting from this Change Order _____ Days	
Current Contract Time including this Change Order _____	Substantial Completion Date _____
	Final Completion Date _____

This Change Order is for full and final settlement of all direct, indirect, impact costs and time extension incurred at any time resulting from the performance of the changed work.

The Above Changes Are Recommended:

The Above Changes Are Accepted:

Approved:

\_\_\_\_\_  
Engineer

\_\_\_\_\_  
Contractor

City of Indianapolis  
Owner

\_\_\_\_\_  
Address

\_\_\_\_\_  
Address

200 E. Washington St.  
Address

\_\_\_\_\_  
City/State/Zip

\_\_\_\_\_  
City/State/Zip

Indpls., IN 46204  
City/State/Zip

By \_\_\_\_\_

By \_\_\_\_\_

By \_\_\_\_\_

Phone \_\_\_\_\_

Phone \_\_\_\_\_

Phone \_\_\_\_\_

Date \_\_\_\_\_

Date \_\_\_\_\_

Date \_\_\_\_\_



## INDIANA CODE (IC) ADDITIONAL REQUIREMENTS

### I. IC 5-16-13

1. The definitions in IC 5-16-3 are incorporated by reference into this Section.
2. In accordance with IC 5-16-13-9, the Bidder, as a “Tier 1 contractor” (as defined in IC 5-16-3-4), if awarded a contract for the Work contemplated by this Bid must contribute:
  - (a) Work performed by the tier 1 contractor’s employees;
  - (b) Materials supplied directly by the tier 1 contractor;
  - (c) Services supplied directly by the tier 1 contractor’s employees; or
  - (d) Any combination of subdivisions (a) through (d);at least fifteen percent (15%) of the tier 1 contractor’s total contract price as determined at the time the contract is awarded.

**NOTE:** In accordance with Subsection 6.8.1 of the City of Indianapolis Standard General Conditions for Construction Contracts the successful Bidder is required to perform with its own organization Work amounting to **not less than thirty percent (30%)** of the original or revised contract amount, whichever is less.

3. In accordance with IC 5-16-13-10, if awarded a contract for the Work contemplated by this Bid, the Bidder, as a “Tier 1 contractor”, and each “Tier 2 contractor” and “Tier 3 contractor” (as defined in IC 5-16-3-4 (i.e., subcontractors and sub-subcontractors)) employed to perform Work on the Project must maintain general liability insurance in at least the following amounts:
  - (a) For the each occurrence limit, one million dollars (\$1,000,000).
  - (b) For the general aggregate limit, two million dollars (\$2,000,000).

**NOTE:** The successful Bidder, its subcontractors and sub-subcontractors, are required to maintain all insurance coverage as provided for in Article 5 of the City of Indianapolis Standard General Conditions for Construction Contracts.

4. In accordance with IC 5-16-13-11, if awarded a contract for the Work contemplated by this Bid, the Bidder as a “Tier 1 contractor” and each “Tier 2 contractor” and “Tier 3 contractor” employed to perform Work on the Project:
  - (a) Shall submit, before Work begins, the E-Verify case verification number for each individual who is required to be verified under IC 22-5-1.7. An individual who is required to be verified under IC 22-5-1.7 whose final case result is final non-confirmation may not be employed on the Project.
  - (b) May not pay cash to any individual employed by the contractor for Work done by the individual on the Project.
  - (c) Must be in compliance with the federal Fair Labor Standards Act of 1938, as amended (29 U.S.C. 201-209) and IC 22-2-2-1 through IC 22-2-2-8.
  - (d) Must be in compliance with IC 22-3-5-1 and IC 22-3-7-34.
  - (e) Must be in compliance with IC 22-4-1 through IC 22-4-39.5.
  - (f) Must be in compliance with IC 4-13-18-1 through IC 4-13-18-7.
  - (g) Must comply with IC 5-16-13-12, if applicable.
5. In accordance with IC 5-16-13-12, if awarded a contract for the Work contemplated by this Bid, the Bidder as a “Tier 1 contractor” and each “Tier 2 contractor” employed to perform Work on the Project, if they employ fifty (50) or more journeymen:
  - (a) Must provide access to a training program applicable to the tasks to be performed in the normal

course of the employee's employment with the contractor.

- (b) Shall participate in an apprenticeship training program that meets the standards established by the United States Department of Labor, Bureau of Apprenticeship and Training.
- (c) May comply with this section through any of the following:
  - (1) An apprenticeship program.
  - (2) A program offered by Ivy Tech Community College of Indiana.
  - (3) A program offered by Vincennes University.
  - (4) A program established by or for the contractor.
  - (5) A program offered by an entity sponsored by the United States Department of Labor, Bureau of Apprenticeship and Training.
  - (6) A program that results in the award of an industry recognized portable certification.

- 6. In accordance with IC 5-16-13-13, if awarded a contract for the Work contemplated by this Bid, the payroll and related records of the Bidder as a "Tier 1 contractor" and each "Tier 2 contractor" and "Tier 3 contractor" employed to perform Work on the Project, must be:
  - (a) Preserved by the contractor for a period of three (3) years after completion of the Project Work; and
  - (b) Open to inspection by the Indiana Department of Workforce Development (DWD).

In accordance with IC 5-16-13-14, if the City of Indianapolis suspects a misclassification of one (1) or more workers by a contractor in any contractor tier working on the Project may request in writing that DWD investigate the suspected worker misclassification, and in so doing shall provide to DWD any information or records that the City has concerning the misclassification. DWD may investigate such a request, and if it finds information or records that support a finding that worker misclassification has occurred, DWD may refer the matter to the appropriate agency or official for further action.

- 7. In accordance with IC 5-16-13-15, if the City of Indianapolis reasonably suspects the Bidder awarded a contract for the Work contemplated by this Bid or any "Tier 2 contractor" and "Tier 3 contractor" employed to perform Work on the Project has violated a provision of IC 5-16-13, the City is required to do one (1) of the following:
  - (a) If the suspected violation concerns or is related to any of the following provisions, the City shall refer the matter to the appropriate agency as follows:
    - (1) For a suspected violation of IC 5-16-13-11(1) (E-Verify), the Indiana Department of Labor.
    - (2) For a suspected violation of IC 5-16-13-11(3) (the federal FLSA or state minimum wage law), the Indiana Department of Labor.
    - (3) For a suspected violation of IC 5-16-13-11(4) (worker's compensation or occupational diseases), the Worker's Compensation Board of Indiana.
    - (4) For a suspected violation of IC 5-16-13-11(5) (unemployment insurance), the Department of Workforce Development.
  - (b) If the suspected violation concerns a provision of IC 5-16-13 other than a provision listed in subdivision (a), the City shall require the contractor to remedy the violation not later than thirty (30) days after the City notifies the contractor of the violation in accordance with IC 5-16-13-15(b)(2). During the thirty (30) day period, the contractor may continue to work on the Project; however, if the contractor fails to remedy the violation within the thirty (30) day period, the City shall find the contractor not responsible and shall determine the length of time the contractor is considered not responsible by the City based on the severity of the violation. The period during which a contractor is considered not responsible:
    - (1) May not exceed forty-eight (48) months; and
    - (2) Begins on the date of substantial completion of the Project.

A finding by the City that a contractor is not responsible under this section may not be used by another public agency in making a determination as to whether the contractor is responsible for purposes of that public agency's award of a public works contract to that contractor.

II. IC 4-13-18 (A response to "Part 11—Drug Testing" of the "Bidder's Itemized Proposal and Declarations" fulfills this requirement)

1. IC 4-13-18 applies if the Bid is one hundred fifty thousand dollars (\$150,000) or more.
2. The definitions in IC 4-13-18 are incorporated by reference into this Section.
3. In accordance with IC 4-13-18-5, the Bidder must submit with the Bid a written plan for a program to test the Bidder's employees for drugs. A contractor that is subject to a collective bargaining agreement that establishes an employee drug testing program shall only submit a copy of the relevant part of the collective bargaining agreement establishing the program. Failure to submit a written plan for an employee drug testing program, or relevant parts of a collective bargaining agreement establishing an employee drug testing program shall result in the Bid being rejected as non-responsive.
4. The Bidder's employee drug testing program must satisfy all of the following requirements:
  - (a) In accordance with IC 4-13-18-4, if the Bidder's employee drug testing program is established by a collective bargaining agreement it shall include the following:
    - (1) Provides for the random testing of the contractor's employees.
    - (2) Contains a five (5) drug panel that tests for the following substances:
      - (A) amphetamines;
      - (B) cocaine;
      - (C) opiates (2000 ng/ml);
      - (D) PCP;
      - (E) THC
    - (3) Imposes disciplinary measures on an employee who fails a drug test which includes at a minimum all of the following:
      - (A) the employee is subject to suspension or immediate termination;
      - (B) the employee is not eligible for reinstatement until the employee tests negative on a five (5) panel test certified by a medical review officer;
      - (C) the employee is subject to unscheduled sporadic testing for at least one (1) year after reinstatement; and
      - (D) the employee successfully completes a rehabilitation program recommended by a substance abuse professional if the employee fails more than one (1) drug test.
  - (b) In accordance with IC 4-13-18-5, if the Bidder has its own employee drug testing program (which is not included as part of a collective bargaining unit), the Bidder's program shall include the following:
    - (1) Subject each of the contractor's employees to a drug test at least one (1) time each year.
    - (2) Provide for random employee testing, with at least two percent (2%) of the contractor's employees randomly selected each month for testing.
    - (3) Contain at least a five (5) drug panel that tests for:
      - (A) amphetamines;
      - (B) cocaine;
      - (C) opiates (2000 ng/ml);
      - (D) PCP;
      - (E) THC.

- (4) Impose progressive discipline on an employee who fails a drug test with at least the following progression:
- (A) after the first positive test, an employee must be:
    - (i) suspended from work for 30 days;
    - (ii) directed to a program of treatment or rehabilitation; and
    - (iii) subject to unannounced drug testing for one (1) year from the day the employee returns to work.
  - (B) after a second positive test, an employee must be:
    - (i) suspended from work for 90 days;
    - (ii) directed to a program of treatment or rehabilitation; and
    - (iii) subject to unannounced drug testing for one (1) year from the day the employee returns to work.
  - (C) after a third or subsequent positive test, an employee must be:
    - (i) suspended from work for one (1) year;
    - (ii) directed to a program of treatment or rehabilitation; and
    - (iii) subject to unannounced drug testing for one (1) year from the day the employee returns to work.

The program may require dismissal of the employee after any positive drug test or other discipline more severe than described above. An employer complies with the requirement to direct an employee to a program of treatment or rehabilitation if the employer either advised the employee of any such program covered by employer-provided insurance, or, if the employer's insurance does not provide insurance coverage, the employer advises the employee of agencies that provide such programs.

5. In accordance with IC 4-13-18-7, if awarded a contract for the Project, the Bidder must implement the employee drug testing program as described in the plan or collective bargaining agreement. The City of Indianapolis shall cancel the contract with the successful Bidder if it:
- (a) Fails to implement its employee drug testing program during the term of the contract;
  - (b) Fails to provide information regarding implementation of the employee drug testing program at the request of the City; or
  - (c) Provides the City with false information regarding the contractor's employee drug testing program.

### III. IC 8-23-10 or IC 4-13.6-4

1. The requirements of this Section III are effective for Bids awarded by the City of Indianapolis **after December 31, 2016**.
2. The definitions in IC 5-16-3 are incorporated by reference into this Section.
3. In accordance with IC 8-23-10-0.5, if the total amount of the contract awarded under this Bid is **three hundred thousand dollars (\$300,000) or more** and the Project is for the construction, improvement, alteration, repair, or maintenance of a road (as defined by IC 8-23-1-23), highway, street, or alley, then the Bidder, as a "Tier 1 contractor" (as defined in IC 5-16-3-4), and each "Tier 2 contractor" and "Tier 3 contractor" (as defined in IC 5-16-3-4 (i.e., subcontractors and sub-subcontractors)) employed to perform Work on the Project must be qualified by the Indiana Department of Transportation under IC 8-23-10 before performing any Work on the Project.
4. In accordance with IC 4-13.6-4-2.5, if the total amount of the contract awarded under this Bid is **three hundred thousand dollars (\$300,000) or more** and the Project is for any work other than for the construction, improvement, alteration, repair, or maintenance of a road (as defined by IC

8-23-1-23), highway, street, or alley, then the Bidder, as a “Tier 1 contractor” (as defined in IC 5-16-3-4), and each “Tier 2 contractor” and “Tier 3 contractor” (as defined in IC 5-16-3-4 (i.e., subcontractors and sub-subcontractors)) employed to perform Work on the Project must be qualified under IC 4-13.6-4 by the Indiana Certification Board established by IC 4-13.6-3-3 before performing any Work on the Project.



**SPECIAL CONDITIONS**  
**April 2019**

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Note: Any of these Special Conditions may or may not be used in a particular project. The designer shall carefully review the General Conditions for each project to determine, in consultation with DPW, which of these Special Conditions should be used and whether any additional project-specific Special Conditions are needed.



**SPECIAL CONDITIONS**  
**April 2019**

**SC 01            Work Schedule Transmittal**

*The following shall replace paragraph 2.7.4 of the General Conditions:*

2.7.4 CONTRACTOR shall provide OWNER and CONSTRUCTION INSPECTOR, by 1:30 p.m. of the preceding weekday workday, a list of all Work activities scheduled for the following day. The list shall be submitted to OWNER by email at [brett.morgan@indy.gov](mailto:brett.morgan@indy.gov) and to the CONSTRUCTION INSPECTOR. The CONSTRUCTION INSPECTOR's email address shall be furnished at the Pre-Construction Meeting for notification of the work schedule. All Work scheduled for Saturday and/or Monday shall be submitted by 1:30 p.m. on the preceding Friday. Failure of CONTRACTOR to provide such notice shall entitle OWNER to disallow payment for materials placed and Work performed that day.

**SC 02            Right-of-Way**

*The following shall be an addition to paragraph 4.1 of the General Conditions:*

All right-of-way required for the construction of this project has been acquired. ~~The following parcel(s) that remain to be acquired at the time of preparing this project for bidding are:~~

STATION	NAME	ANTICIPATED DATE OF ACQUISITION
---------	------	------------------------------------

~~CONTRACTOR shall not perform any Work or encroach upon any parcel(s) referenced above until ENGINEER has issued written notification.~~

~~OWNER specifically disclaims any guarantee or warranty that any of these parcels will be acquired by the above dates. Should any or all said parcels not be acquired by the anticipated date(s), CONTRACTOR's sole remedy shall be limited to an extension of contract time, as provided in Article 11.~~

~~CONTRACTOR shall not be entitled to any change in contract price due to any delays or hindrances in acquiring these parcels.~~

**SC 03            Scope of Work**

*The following shall be an addition to paragraph 9.1 of the General Conditions:*

OWNER reserves the right to increase or decrease the Scope of Work by adding and/or deleting [resurfacing] or [curb, sidewalk and ramp removal and replacement] or [sewer pipe

and structures] to this contract outside of the original construction limits, within CENTER township.

**SC 04            Changes in Contract Time** [Use only when completion dates are specific calendar dates]

*The following shall be an addition to paragraph 11.4 of the General Conditions:*

An extended date of Substantial Completion, Intermediate, and Final Completion shall be allowed for each calendar day for delay in the issuance of the Notice to Proceed if the Notice to Proceed is not issued within 60 days of the bid award except if the delay is due to the failure of the Contractor to furnish requested forms or information.

**SC 05            Measurement and Payment**

*The following shall be added to paragraph 13.2 of the General Conditions:*

13.2.1    Measurement and payment for all items as listed within the “Contract Pay Items” (Section 100 of the Technical Specifications, labeled per UNIT or LUMP SUM) will be in accordance to the procedures as described within the latest approved and adopted edition of the Indiana Department of Transportation Standard Specifications, unless specified otherwise within the Technical Specifications.

13.2.2    If a “Contract Pay Item” for a particular item is not listed within the latest approved and adopted edition of the INDOT Standard Specifications, refer to the Technical Specification, which will set out payment and measurement herewith.

13.2.3    Measurement of Quantities for Sanitary Sewer Systems:

1.    Measurement of sanitary sewers shall be listed within the “Description of Pay Items” for sanitary sewer systems.

13.2.4    Measurement of Quantities for Streets and Roads:

1.    Streets and Roads Measurement: General Requirements.
  - a.    The method of measurement and computations to be used in determination of quantities of material furnished and of Work performed under the contract will be those methods generally recognized as conforming to good engineering practice.
  - b.    Unless otherwise specified, longitudinal measurements for base, surface, and shoulder area computations will be made along the centerline of the actual surface of the roadway. No deduction will be made along the centerline of the actual surface of the roadway. No deduction will be made for individual fixtures having an area of 10 Sq. Ft. or less. Unless otherwise

specified, transverse measurements for area computations will be the neat line dimensions shown on the plans or ordered in writing.

- c. Structures will be measured according to neat lines shown on the plans or as altered to fit field conditions.
- d. When a complete structure or structural unit (in effect lump sum Work) is specified as the unit of measurement, the unit will be constructed to include all necessary fittings and accessories.
- e. All Work, which is measured by the linear foot, will be measured parallel to the base or foundation upon which Work is placed, unless otherwise specified.
- f. A station when used as a definition or term of measurements will be 100 linear feet.
- g. The term gage, when used in connection with the measurement of metal plates or sheets, will mean the U.S. Standard Gage except when the referenced AASHTO, ASTM, or other specifications for a material specifies that it be ordered and measured in terms of thickness.
- h. When the term gage refers to the measurement of wire, it will mean the U.S. Steel Wire Gage except when the reference AASHTO, ASTM, or other specification for the wire specifies that it be ordered and measured in terms of a wire size number or diameter.
- i. The term ton will mean the short ton consisting of 2,000 pounds avoirdupois. All materials which are measured or proportioned by mass (weight) shall be weighed on accurate approved scales, which are in accordance with all requirements and specifications adopted, by the Indiana State Board of Health, Division of Weights and Measures. Competent qualified personnel at designated locations shall accomplish the weighing.

#### 13.2.5 Scales and Measurement by Mass (Weight):

1. All materials for which measurements are obtained by mass (weight) shall be weighed on approved scales, which, except as hereinafter provided for out-of-state scales, shall be tested and sealed, by the Indiana State Board of Health, Division of Weights and Measures. This inspection shall have been made within a period of not more than one year prior to the date of use for weighing material. A scale, which has been tested and approved within this one-year period and which has been repaired or dismantled or moved to another location, shall again be tested and approved before it is eligible for weighing. All interested parties, such as OWNER, CONTRACTOR, or the owner of the scales, may request an inspection of the scales in question. The latest inspection shall take precedence over all previous inspections. Automatic printer systems may be used with HMA plant scale systems under certain conditions in accordance with Section 409 in the latest approved and adopted

edition of the INDOT Standard Specifications. If automatic printer systems are used, the same inspection, testing, and scaling requirements specified herein for scales shall apply to HMA plant batch scales and printer systems.

2. A motor-truck scale shall have a suitable undercarriage of such construction that shall safely carry and weigh an amount equal to 80% of the rated capacity of the scale on either end of the scale platform. When so loaded, the stresses in the lever system shall not exceed the stresses allowable under AREA specifications. The load carried per 25 mm (1 in.) of knife-edged bearing shall not exceed 2270 kg (5,000 lb.)
3. The scale platform shall be of such length and width as to conveniently accommodate all trucks containing materials, which need to be weighed. The entire truckload shall rest on the scale platform and shall be weighed as one draft.
4. If material is weighed on truck scales, weigh tickets showing the net mass (weight) of each load of material delivered shall be supplied for use in computing quantities. The tickets shall contain the weight ticket serial number, date, contract number, source of supply, material designation such as size or type, DMF or JMF number for HMA, truck number, time weighed, gross mass (weight) direct reading if scale is of the direct reading type, tare, net mass (weight) and moisture content if applicable. The CONTRACTOR for its records may furnish a duplicate ticket. The original, and duplicate if furnished, tickets will be signed at the weighing site and at the point of incorporation into the Work. No additional payment will be made for furnishing, maintaining, and operating scales.
5. The mass (weight) of materials weighed outside Indiana and intended for use on the project may be determined on scales tested and approved by the proper governmental unit having authority where the scales are located. In such case, OWNER shall be furnished with a certified copy of such inspection and approval which, to be acceptable, shall have been made within one year prior to the time of such weighing. Out-of-state truck scales used shall be in accordance with all pertinent provisions as they apply to truck scales accepted within the State of Indiana. They shall be subject to approval and inspection by OWNER or ENGINEER and to the requirements applicable to such scales located within Indiana.
6. If materials are shipped by rail, the car mass (weight) may be accepted provided payment is made for only the actual mass (weight) of the materials. Car masses (weights) will not be acceptable for material to be passed through mixing plants. Trucks used to haul material being paid for by mass (weight) shall be weighed empty daily at such times as directed. Each truck shall bear a plainly legible identification mark.
7. General Requirements:

- a. The method of measurement and computations to be used in determination in approved vehicles and measured therein at the point of delivery. Vehicles for this purpose may be of the size or acceptable type provided the body is of such shape that the actual contents may be determined readily and accurately. All vehicles shall be loaded to at least their water level capacity. All loads shall be leveled when directed after the vehicles arrive at the point of delivery.
  - b. When requested and approved in writing, material specified to be measured by the cubic yard may be weighed. Factors for conversion from mass (weight) measurement to volume measurement will be determined and shall be agreed to by CONTRACTOR before such method of measurement of pay quantities is used.
    - i. In computing volumes of excavation, the average end area method or other acceptable methods will be used.
    - ii. If excavation is measured by cross sections, the following will apply:
      - 1. Unless otherwise provided, where sodded areas are involved, the cross sections will be considered as located at the surface of the sod.
      - 2. If the cost of excavation is specifically included in the payment of a pay item of Work, the final sections will be taken at the finished surface of the Work.
      - 3. If the cost of excavation is not specifically included in the payment for a pay item of Work, the final sections will be taken at the limits of the authorized excavation.
      - 4. Unauthorized wastage of material will be deducted. Only such quantities as are actually incorporated into the completed Work will be included in the final estimate.
8. Additional Requirements:
- a. Partial payment will not be allowed on an estimate for materials of less than \$10,000 in value.
  - b. OWNER may consider partial payment for stockpiled materials having a value over \$25,000. This consideration will only take place when the Work on the controlling operation has been delayed and justifies an extension of more than 60 calendar days or 40 Work days in accordance with the General Conditions and Contract Documents. Partial payment will be the delivered cost verified by invoices, except it will not exceed 50% of the contract unit price.

- c. All materials when so paid for under this requirement will become the property of OWNER in the event of default on the part of CONTRACTOR. OWNER may use, or cause to be used, such materials in the construction of the Work provided for in the Contract.
- d. Although payment may have been made for materials, CONTRACTOR shall be responsible for loss or damage to the materials. Such materials shall be replaced with no additional payment.
- e. Approval of partial payment for stockpiled materials will not constitute final acceptance of such materials for use in completing the Work. Structural Steel members and pavement reinforcing steel may be subjected to additional inspection and testing prior to final acceptance and incorporation into the Work. All other stockpiled pay items will be subjected to additional inspection and testing prior to final acceptance and incorporation into the Work.
- f. Partial payments for stockpiled materials that are a portion of the pay item will be deducted from estimates due CONTRACTOR as the material is incorporated in the Work.

#### 13.2.6 Measurement of Asphalt Materials:

- 1. If an asphalt material is to be paid for directly, it will, except as hereinafter provided, be weighed and paid for by the ton. If ENGINEER decides that weighing is not feasible, the asphalt material may be measured by volume and converted to tons. The conversion will be based on the unit weight as determined in the laboratory.
- 2. If asphalt material is to be measured by volume, the gallon in tank cars will measure it, distributor tanks, tanks, or drums. Certified calibration of tank cars, distributor tanks and certified quantities in drums in which asphalt materials are delivered or stored shall be furnished.
- 3. If asphalt material is furnished in drums, the producer shall stencil the amount in each drum plainly on the drumhead. The amount so indicated will be accepted as the quantity furnished. However, the amount in each drum may be checked in accordance with the requirements set out herein.
- 4. Tank car deliveries will be measured by volume and converted to tons.
- 5. Volumes will be measured at 60o F or will be corrected to the volume at 60o F in accordance with ASTM D 1250 for asphalts or ASTM D 633 for tars.
- 6. Net certified scale weights or certified weights in the case of rail shipments will be used as a basis of measurement, subject to correction when asphalt material has been lost from the car or the distributor, is wasted, or is otherwise not incorporated into the Work.

13.2.7 Measurement of Portland Cement Concrete.

1. For design and production, portland cement concrete will be measured by the cubic yard. The relative yield will be determined in accordance with Section 505 in the latest approved and adopted edition of the INDOT Standard Specifications. Payment for portland cement concrete will be in the unit designated for the specified use.

13.2.8 Measurement of Aggregates:

1. Unless otherwise provided, all aggregates for which measurements are obtained by the cubic yard will be measured at the truck loading point in truck beds that have been measured, stenciled, and approved. They may be weighed and converted to cubic yards by a conversion factor computed at sufficient intervals to ensure correct measurement.
2. Free water in all aggregates for which payment is made as a separate pay item on a weight basis shall be drained prior to weighing and selection of samples. Samples for determination of moisture content shall be taken immediately prior to the time the material is to be weighed. The number of moisture tests will be governed by moisture conditions. Moisture contents shall be determined on the basis of oven dry weight by drying samples to constant weight at 110°C. However, if ovens are not available for drying samples, other methods, which give equivalent results, may be used. Moisture content shall be computed to the nearest 0.5% in accordance with the formula as follows:

$$\text{Percent of Moisture (M)} = \frac{\text{Wet weight of sample} - \text{Dry weight of sample}}{\text{Dry weight of sample}} \times 100\%$$

3. The percent of moisture shall be noted on each weight ticket.
4. The wet weight will be used for the basis of payment, if the percent of moisture is determined to be less than 6% for B borrow; 9% of optimum moisture content, as determined in accordance with AASHTO T 99 except as modified in Section 203 in the latest approved and adopted edition of the INDOT Standard Specifications, whichever is greater, for size No. 53 or No. 73 aggregates or modifications thereof when specified; or 4% for aggregates of all other specified sizes including sand.
5. If the percent of moisture exceeds the limitations set out above, the weight to be paid for will be the gross weight of aggregate minus the weight of the excess moisture computed as follows:

$$\text{Weight to be paid for} = G \times \frac{(100+m)}{(100+M)}$$

in which:

- G = Gross weight of material
- M = Percent of moisture in the aggregate to the nearest 0.5% bases on oven dry weight
- m = Percent of moisture permitted in the wet aggregate to be paid for based on oven dry weight

13.2.9 Measurement of Timber or Lumber;

1. Timber or lumber will be measured by the thousand feet board measure or MFBM actually incorporated in the Work. Measurement will be based on nominal widths and thicknesses and the extreme length of each piece.

13.2.10 Manufactured Material:

1. If standard manufactured materials are specified such as fence, wire, plates, rolled shapes, pipe, or conduit, and such materials are identified by gate, unit weight, or section dimensions, such identification will be considered to be nominal weights or dimensions. Unless more stringently controlled by tolerances in cited specifications, manufacturing tolerances established by the industries involved will be accepted.

13.2.11 Scope of Payment:

1. If it is agreed in writing that the quantities of certain items or portions of items of Work, as set forth in the contract documents, are in substantial agreement with actual quantities of Work performed, compensation there of will be based on the quantities set forth in the contract without measurement thereof upon completion of the Work. Compensation based on contract quantities as agreed shall be accepted as full payment for such items or portions of items.
2. If CONTRACTOR has previously agreed in writing to accept photogrammetric methods of measurement for common excavation and borrow, the OWNER may utilize such methods of measurements as the basis of payment. Computation of volumes shall be in accordance with Section 203 in the latest approved and adopted edition of the INDOT Standard Specifications.

**SC 06 Stockpiled Materials**

*The following shall be an addition to paragraph 13.3 of the General Conditions:*

13.3.1 Description

1. This Work shall consist of the partial payment for certain stockpiled materials.

13.3.2 General Requirements:

1. After certified copies of costs are presented, partial payments may be allowed for tested and acceptable nonperishable materials purchased or produced

expressly to be incorporated into the Work and delivered in the vicinity of the project, or stored in approved storage facilities. Such materials shall be limited to pipe, sewer structures, permanent pumps, manholes, Structural Steel, Concrete Structural Members, pavement reinforcing steel, pavement contraction joints, granular base and sub-base materials, aggregates for signals, signs, and luminaries.

### 13.3.3 Pipe, Pumps, Controls, Structures, Wet Wells and Manholes:

1. Partial payment for any of these pay items will be considered only when the total quantity for an entire structure, or designated unit of a structure as specified on the plans, has been stored on site in an acceptable manner.
  - a. Delivered to the Job Site: Partial payment made under the requirements of this paragraph will be the delivered cost of the pipe and manholes or structures, as verified by invoices, including freight, furnished by CONTRACTOR. However, such partial payment will not exceed 75% of the contract unit price as set out in the Schedule of Pay Items for pipe or manholes or structures. Prior to authorizing partial payment, verification will be obtained that all required inspection has been made and the items are acceptable and they are acceptably stored.
  - b. Acceptably Stored at the Contractor's, Fabricator's or Manufacturer's Storage Facilities. Partial payment made under the requirements of this paragraph will be the delivered cost of grinder pumps, pumps, controls and wet wells, minus freight charges, as verified from invoices furnished by CONTRACTOR. However, such partial payment will not exceed 70% of the contract unit price as set out in the Schedule of Pay Items under the lump sum items of Grinder Pumps or Lift Stations. Under this requirement, all invoices shall show the location of where the material is being stored. Prior to authorizing partial payment, verification will be obtained that all required inspection has been made, the items are acceptable and they are acceptably stored.

### 13.3.4 Structural Steel and Concrete Structural Members:

1. Partial payment for either of these pay items will be considered only when the total quantity for an entire structure, or designated unit of a structure as specified on the plans, has been completely fabricated.
  - a. Delivered to the Job Site. Partial payment made under the requirements of this paragraph will be the delivered cost of the Structural Steel and Concrete Structural Members, as verified by invoices, including freight, furnished by CONTRACTOR. However, such partial payment will not exceed 75% of the contract unit price as set out in the Schedule of Pay Items for Structural Steel or Concrete Structural Members. Prior to authorizing partial payment, verification will be obtained that all required inspection has been made and the members are acceptable.

- b. Acceptably Stored at the Fabricator's or Manufacturer's Storage Facilities. Partial payment made under the requirements of this paragraph will be the delivered cost of and Concrete Structural Members, minus freight charges, as verified from invoices furnished by CONTRACTOR. However, such partial payment will not exceed 70% of the contract unit price as set out in the Schedule of Pay Items for Structural Steel or Concrete Structural Members. Under this requirement, all invoices shall show the location of where the material is being stored. Prior to authorizing partial payment, verification will be obtained that all required inspection has been made, and the members are acceptable and they are acceptably stored.

#### 13.3.5 Dowel Bar Assemblies:

1. Partial payment made under the requirements herein will be the delivered cost of the dowel bar assemblies stored within the project limits or at a storage facility adjacent to the project site. Basis of payment for the dowel bar assemblies shall be the paid invoices furnished by CONTRACTOR. Prior to authorizing partial payment, verification will be obtained that the dowel bars have been tested and are acceptable.

#### 13.3.6 Granular Base, Sub-base Materials, and Aggregates for HMA and Concrete Pavements:

1. Partial payment made under the requirements of this paragraph will be made upon presentation of paid invoices or certified copies of the cost for the production of such materials. The partial payment shall not exceed 30% of the unit price bid for the base or sub-base material item as set out in the Schedule of Pay Items. The invoice or certified copies of the cost shall include an estimated quantity of the materials stored for partial payment. ENGINEER shall verify the estimated quantity of materials before payment.
2. The approved storage site shall be within the project limits, at CONTRACTOR's adjacent storage facility, or at a production site where the designated materials are either assigned to, or owned by CONTRACTOR.
3. Materials stored under this requirement shall be kept separate from other production and shall not be used except on the assigned contract, unless otherwise approved in writing.
4. Testing shall be provided as directed, during production. Prior to authorizing partial payment, verification will be obtained that the materials have been tested and are acceptable.

#### 13.3.7 Bridge Expansion Joints:

1. Type SS:
  - a. Partial payment will be the delivered cost of the expansion joint SS, as verified by invoices, except it will not exceed 75% of the contract unit price

for expansion joint SS. Prior to authorizing partial payment, verification will be obtained that all required inspections have been made and the joint is acceptable.

2. Type M:

- a. Partial payment will be the delivered costs of the expansion joint M, as verified by invoices, except it will not exceed 75% of the contract unit price for expansion joint M. Prior to authorizing partial payment, verification will be obtained that all required inspections have been made and the joint is acceptable.

13.3.9 Structural Supports for Signals, Signs and Luminaries:

- 1. Partial payment will be the delivered cost of the materials, as verified by the invoices, except it will not exceed 50% of the contract unit price for the structural support which is stored within the project limits or at an approved storage facility adjacent to the project site. Prior to authorizing partial payment, verification will be obtained that the material has been tested and is acceptable.

13.3.10 Precast Concrete Median Barrier:

- 1. Partial payment for precast concrete median barrier as stockpiled material will be the delivered cost of the materials, including freight, as verified by invoices furnished by CONTRACTOR. Such partial payment will not exceed 50% of the contract unit price for the median barrier. The concrete barrier shall be stored within the project limits or at an approved storage facility adjacent to the project in order for stockpiled material payment to be favorably considered.

13.3.11 Method of Measurement:

- 1. No measurement will be made. However, the amount will be substantially verified before authorization for payment.

13.3.12 Basis of Payment:

- 1. Stockpiled materials, which are authorized for payment in accordance with the requirements herein, will be paid for in accordance with the Contract Documents.
- 2. Payment will be made under:

Pay Item	English Pay Unit Symbol
Stockpile Material,	LFT
Type of Material	
	EACH
	CYS
	SYS
	TON

	LBS	
Structural Steel	LS	
Structural Members, Concrete		LS
Structural Expansion Joint _____		LFT
	Type	

**SC 07      Service Connections Prior to Substantial and Final Completion**

*The following shall be an addition to paragraph 13.12 of the General Conditions:*

CONTRACTOR agrees that if OWNER authorizes a request by governing authorities to make a connection(s), it will be made after Partial Substantial Completion and prior to Final Acceptance of the Project. Such requests for connection will be accompanied by a certification from the Marion County Health Department documenting that the connection is necessary to eliminate an existing health hazard. Non-emergency connections may also be allowed with approval from OWNER. Partial Substantial Completion shall be defined as the completion of all requirements necessary to enable the proper functioning of the sanitary sewer and necessary appurtenances both adjacent to and downstream of the property having the existing health hazard. This shall include, but not be limited to, all necessary testing as required by the laws and regulations of OWNER and the Contract Documents. OWNER shall determine partial Substantial Completion.

END OF SPECIAL CONDITIONS

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## Survey Information

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**SECTION 100 GENERAL**

100-DPW-001 GENERAL PROVISIONS

The Standard Specifications are revised as follows:

DELETE SECTION 101

DELETE SECTION 102

SECTION 103, DELETE LINES 2 THROUGH 625

SECTION 103, AFTER LINE 634, DELETE AS FOLLOWS:

~~In addition, the limits specified in 103.04(b)3 shall be increased to \$2,000,000.~~

SECTION 103, DELETE LINES 636 THROUGH 791

SECTION 104, DELETE LINES 2 THROUGH 267

SECTION 104, AFTER LINE 268, INSERT AND DELETE AS FOLLOWS:

~~Unless otherwise provided,~~ The road shall be kept open to all traffic while undergoing improvements. Where so provided on the plans, the traffic may be bypassed over an approved detour route. The detour route markings shall be erected, maintained, and removed by the CONTRACTOR. Maintenance of traffic shall be in accordance with the details as shown on the plans or as directed. ~~If~~ *In the event* an alternate plan for maintaining traffic is requested, it shall be submitted in writing as soon as possible for consideration. ~~Such submittal shall include the complete details of the alternate maintenance of traffic scheme including all traffic control devices to be incorporated.~~ If approved, the alternate plan shall not increase the cost of maintaining traffic to the ~~Department~~ OWNER. The portion of the roadway being used by public traffic shall be kept in such condition that such traffic will be adequately accommodated. Drums in accordance with Section 801.09 shall be placed at 200 ft intervals where drop-offs of greater than 3 in. are adjacent to the shoulder until the aggregate or earth wedge is placed. Temporary approaches to businesses, parking lots, residences, garages, farms, and crossings and intersections with trails, roads, and streets shall be provided in a safe condition. All traffic control devices shall be maintained with no additional payment, ~~except as set out in 107.18.~~ Regulatory controls shall not be changed by the Contractor without prior approval. Regulatory control devices may be relocated in order to enable necessary construction, provided these control devices remain effective and convey the intended meaning after relocation to a position which complies with the requirements of the MUTCD. After completion of the construction, regulatory control devices which were relocated to facilitate construction shall be permanently installed with no additional payment, in accordance with the plans, or as otherwise directed. All traffic control devices damaged, while being moved or handled, shall be replaced with no additional payment. All other traffic control devices necessary to maintain safe traffic operation and routings shall not be removed, changed, or relocated, except as authorized. Traffic control devices removed without authorization shall be replaced with no additional payment. The cost of maintaining traffic over the section of road undergoing improvement and the cost of the construction and maintenance of such necessary features as approaches, crossings, and intersections shall be included in the contract unit price bid for maintenance of traffic pay items

as set out in the ~~Schedule of Pay Items, except as provided in 104.04(a), 104.04(b), and 107.18~~ *Itemized Proposal and Declarations, except as provided below.*

**(a) Special Detours**

When the ~~Schedule of Pay Items~~ *Itemized Proposal and Declarations* contains a pay item for maintenance of detours or removing existing structures and maintaining traffic, the payment for such pay item shall cover all cost of constructing and maintaining such detour or detours, including the construction of temporary bridges and accessory features and the removal of the same in accordance with Section 713.08.

**(b) Maintenance Directed by the Engineer**

If special maintenance is directed for the benefit of the traveling public, payment will be made on the basis of unit prices or in accordance with ~~104.03 or 105.13~~ *the Contract Documents for extra or unforeseen Work*. The ENGINEER will be the sole judge of *Work to be classed as whether special maintenance shall be performed*. Except as otherwise expressly provided in the contract, existing Department maintained roads and other public roads and streets within the limits of the contract shall be kept open to two-way traffic between the dates of December 1 and April 1. Where the surface on an existing road or street is disturbed by the Contractor and the entire depth of the new surface is not completed prior to December 1, two-way traffic shall be maintained between the above dates on the partially completed new surface or on a temporary surface satisfactory for two-way traffic. Such surfaces shall be maintained between the above dates with no additional payment. Precautions shall be taken to prevent unnecessary damage to partially completed surfaces. All portions which become damaged shall be repaired with no additional payment. Public roads, commercial and private drives, and mailbox approaches which are disturbed, and on which the surfacing has not been completed, shall be maintained in a condition satisfactory for use during the time work is suspended. Where such approaches have been constructed to grade and drainage structures installed, the approaches shall be surfaced with compacted aggregate, No. 53, to a depth as directed. Such surfacing material, which is incorporated in the finished work, will be paid for at the contract unit price. The following season, the surfacing on the approaches shall be completed to the compacted depth shown on the plans by the addition of the surfacing material specified in the contract. During suspension of the work where such approaches have not been constructed to grade, a satisfactory temporary surface shall be provided with no additional payment.

~~(c)~~ Blank

~~(d)~~ **(c) Traffic Control for Patching on a Two-Lane Roadway**

~~Unless otherwise directed or permitted, the work~~ specified shall be arranged and prosecuted in accordance with the applicable requirements of ~~107~~ *the Contract Documents* and 801, ~~and as shown below, and as set out herein~~. Only one lane may be closed at a time. A minimum of two drums shall be placed on the traffic approach side of each concrete patch or opened hole. Patching on a two-lane roadway shall be in accordance with 305 and the details shown on the plans. Traffic restrictions will be allowed during daylight hours only. If the CONTRACTOR is unable to fill an area to be patched with concrete during daylight hours, the patch shall be filled with No. 53 aggregate for the times other than daylight hours.

Drums in accordance with 801.09 shall be placed at the side of the roadway at the patch locations. If an opened hole cannot be patched for two or more calendar days, a 6 in. HMA cap shall be placed in the hole if concrete cannot be obtained. A ~~watcher~~flagman will be required while the roadway is temporarily patched.

***(d) Maintaining Traffic – Prosecution and Progress***

*Maintenance of traffic shall be the sole responsibility of the CONTRACTOR. Access and traffic to all businesses, residences, for all postal deliveries and all emergency traffic such as police, fire, medical, etc. within the project limits, shall be maintained at all times.*

*Unless otherwise directed, or permitted, the Work specified shall be arranged and prosecuted in accordance with all applicable provisions of this Technical Specification, the Contract Documents, and 801 and as set out herein.*

*The names and telephone numbers of the CONTRACTOR's superintendent and two other responsible employees shall be furnished at the pre-construction conference.*

*These employees shall be on call and available at nights, weekends, or during other non-working periods to repair or replace all traffic control devices which may become damaged or inoperative.*

*At least three weeks before a road is to be closed to traffic, notification shall be given of such intention. Detour route marker assemblies shall be erected and maintained along the detour route designated by the Department. Barricades shall not be erected nor the traffic interfered with until the posted detour or the temporary runaround is approved.*

*In the event the CONTRACTOR desires not to perform traffic maintenance in accordance with the sequence of operations as called for within the Contract Documents, CONTRACTOR shall submit his alternate plan in writing to the ENGINEER and obtain acceptance at least 2 weeks prior to the commencement of any construction activities.*

*Should the CONTRACTOR propose a street closure not otherwise identified within the Contract Documents, he shall submit a written request to the ENGINEER for review and acceptance at least three weeks prior to the planned closure.*

*The ENGINEER will give written notification of the acceptance or denial of any maintenance of traffic proposals and, if approved, ENGINEER will inform the Public Information Office at 317-327-4700, which will give notice to all public agencies and businesses within the project area. The failure to accept the request, as long as the decision is reasonable, shall not entitle the CONTRACTOR to an extension in contract time or to an increase in contract price.*

*When conduit or cable is being placed between 7:00 A.M. and 6:00 P.M. steel plating shall be utilized in order to ensure that movement through the intersection is not deterred.*

*Pedestrian traffic also shall be maintained and disruption thereof kept to a minimum.*

*Open trenches, if permitted by the ENGINEER, shall be spanned per current OSHA requirements and with the concurrence of the ENGINEER.*

*Any trenching areas adjacent to a sidewalk shall be barricaded. If adequate sidewalk area is not available, the CONTRACTOR shall divert pedestrian traffic across the street and shall provide all materials necessary to provide for the crossover.*

*Trenching in the streets shall not be left open during off-working hours. The trenches shall be either backfilled with crushed stone or steel plated per current OWNER's ordinances or regulations.*

SECTION 104, DELETE LINES 364 THROUGH 600

SECTION 105, DELETE LINES 2 THROUGH 143

SECTION 105, AFTER LINE 144, INSERT AND DELETE AS FOLLOWS:

**105.06 Cooperation with Utilities**

~~Prior to letting the contract, the Department will notify all known utility companies, all pipe line owners, or other parties affected. The Department will endeavor to have all necessary adjustments of the public or private utility fixtures, pipe lines, and other appurtenances within or adjacent to the limits of construction completed.~~

*The utilities are beyond the control of the OWNER. Coordination with any applicable utility or utilities shall be the sole responsibility of CONTRACTOR. CONTRACTOR shall be responsible for the availability and accuracy of information relating to the utilities.*

~~Water lines, gas lines, wire lines, service connections, water and gas meter boxes, water and gas valve boxes, light standards, cableways, signals, and all other utility appurtenances facilities within the Project limits of the proposed construction which are to be relocated or adjusted are to be moved by the owners public utility which owns them, at the expense of the respective public utility. at their expense, except as otherwise provided for in the special provisions or as noted on the plans. Notwithstanding the preceding sentence, the CONTRACTOR shall be responsible to relocate or adjust all facilities owned by the City of Indianapolis and all facilities not owned by public utilities or for which the public utility is not responsible, at the expense of the CONTRACTOR. To the extent that said relocation and adjustment described in the preceding sentences are not pay items in this project CONTRACTOR may make a claim under the General Conditions.~~

The plans show all known utilities located within the Project limits of the contract according to information and data furnished to OWNER or ENGINEER by obtained from the various utility companies. The accuracy of the plans in this respect is not guaranteed or warranted by the Department Owner. All of the permanent and temporary utility appurtenances in their present or relocated positions as shown on the plans shall have been considered in the bid. No additional compensation will be allowed for suspensions, delays, interference, hindrances, inconvenience, or damage sustained by CONTRACTOR due to said utility facilities

*or the operations of moving them. However, if the prosecution of the work is delayed for an unreasonable period of time, CONTRACTOR may make a claim therefore as provided in the General Conditions.*

~~If work by one or more utilities is contingent on work by the Contractor or another utility, the Contractor shall keep all parties informed of the status and estimated completion date for the advance work in order to give each utility as much notice as possible to schedule crews and material for their relocation work.~~

~~The contract documents identify each known utility and describe all known necessary work and an anticipated schedule for completion. However, if a utility fails to relocate or adjust their facilities as provided for in the contract documents and the Contractor sustains delays, losses, or both, that could not have been avoided by the Contractor's judicious handling of forces, equipment, and plant or by reasonable revisions to the schedule of operations, and the Contractor has documented its utility coordination efforts and sustained delays and losses, and if the sustained delays and losses were not caused by the negligence of the Contractor, the Contractor may pursue appropriate compensation under 104.02 or from the documented offending party in accordance with Public Law 35-2005. If the Contractor is delayed and it provides the aforementioned information to the Engineer, the time for completion may be extended in such amount as the conditions 200 justify or the Contractor may be compensated for an accelerated construction schedule.~~

*Any repair or replacement work by public utilities shall be completed prior to the resurfacing of a street. The CONTRACTOR shall contact all utilities to adjust their facilities (valves, castings, etc.).*

*Damage to any of the existing public utility facilities within the limits of the project caused by the CONTRACTOR's operations or equipment shall be repaired by the CONTRACTOR at no expense to the OWNER.*

*For utility contact information, please contact the DPW Utility Coordinator for an updated list. The list to be provided is for information purposes only and neither OWNER nor ENGINEER guarantees or warrant its accuracy.*

SECTION 105, DELETE LINES 182 THROUGH 201

SECTION 105, AFTER LINE 202, INSERT AS FOLLOWS:

***(a) Construction Engineering by the Contractor for Storm and Sanitary Sewer Installation***

*The survey centerline shall be staked at a maximum spacing of 100 feet. The right of way offset stakes shall be set at a maximum of 100 feet intervals.*

- As-Built information shall be furnished in a field book that includes the following:*
- (a) As-Built elevations for all sewers constructed or affected within the project.*
  - (b) As-Built cross-sections every 500 feet.*
  - (c) As-Built elevations on curb lines or along the pavement edges every 100 feet.*
  - (d) As-Built check of P.C.'s, P.I.'s, and P.T.'s.*

**(c) As-Built Drawings**

*The CONTRACTOR shall keep a daily record of any changes in the work including but not limited to storm sewer alignment, length, and elevations and to note the exact location of the service connections, utilities, storm sewers, and other items encountered during construction as the work progresses. Upon completion of the work and prior to the acceptance of the project, the CONTRACTOR shall furnish one set of marked-up prints showing the as-built locations, pipe length, and elevations of all construction.*

SECTION 105, DELETE LINES 203 THROUGH 500

SECTION 105, AFTER LINE 513, INSERT AND DELETE AS FOLLOWS:

*work will be paid for under the appropriate pay items or in accordance with ~~104.03~~ the Contract Documents for extra or unforeseen Work.*

SECTION 105, AFTER LINE 520, INSERT AND DELETE AS FOLLOWS:

**105.14 Failure to Maintain Roadway, Structures, Barricades, and Construction Signs**

*If the Contractor at any time fails to comply with the requirements of 105.13 and 107.12, it will immediately be notified of such non-compliance. If satisfactory maintenance is not furnished or unsatisfactory maintenance is not remedied within ~~24 h after receipt of such notice~~ a reasonable period of time, the ENGINEER may order suspension of Work and proceed to maintain the Project, and all progress estimates will be withheld until the CONTRACTOR complies. The entire cost of this maintenance will be deducted from the money due or to become due on the contract. ~~No additional contract time will be considered~~ There will be no extension of Contract Time.*

SECTION 105, DELETE LINES 530 THROUGH 561

SECTION 105, AFTER LINE 562, INSERT AND DELETE AS FOLLOWS:

**(b) Final Acceptance**

~~When the Contractor gives notice of presumptive completion of the entire contract, an inspection will be made. If all construction provided for and contemplated by the contract is found completed satisfactorily, that inspection shall constitute the final inspection and the Contractor will be notified in writing of final acceptance. The date of final acceptance shall be the date the Contractor is relieved of further maintenance in accordance with 107.18 and as set out in the final acceptance letter. This date shall not be prior to the date of the final inspection or the date of last work. The date of last work will normally be the date the Contractor removes the last construction traffic control device.~~

~~If the work is not acceptable at the time of such inspection, the Contractor will be advised in writing as to the particular defects to be remedied before final acceptance. If, within a period of 10 days after such notice, steps have not been taken to complete the work speedily as outlined, the Department, acting through the Commissioner, may, without further notice and without in any way impairing the contract, make such other arrangements as may be necessary to have the work completed in a satisfactory manner. The cost of so completing the work may be deducted from money due or which may become due the Contractor on the contract.~~

*Construction signs shall be removed within seven (7) calendar days of final acceptance of a project, phase or street.*

SECTION 105, DELETE LINES 583 THROUGH 832

SECTION 106, AFTER LINE 2, INSERT AND DELETE AS FOLLOWS:

~~The Contractor shall furnish the Engineer~~ *CONTRACTOR shall furnish a complete statement of the origin, composition, and manufacture of any or all materials to be used in the construction of the Work together with samples, which may be subjected to the tests provided for in these specifications to determine their quality and fitness for the Work. at the preconstruction conference. If, during the course of the contract, changes or additions to the statement are required, the Contractor shall provide the information five calendar days prior to the source supplying materials to the project.*

*All aggregate, concrete, and asphalt materials used for the project shall be produced from an INDOT-approved source. The CONTRACTOR shall submit the names and addresses of the suppliers of these materials for the project to the ENGINEER at the preconstruction conference. Prior to delivery, the CONTRACTOR shall submit to the ENGINEER a copy of the INDOT certification for each material supplier. Aggregate acceptance shall be based on material certification from an INDOT-approved source.*

**(a) Approved or Prequalified Materials**

Certain materials and equipment require pre-approval by brand name or source of manufacture. The lists of approved materials, equipment and sources are maintained by ~~the Department~~ *INDOT as provided in the specifications and may be obtained from the Contract Services Section of INDOT. The Department will review all approved materials lists prior to January 1 of even numbered years. Unless otherwise provided, any item listed for three years prior to the review without being supplied to a contract will be removed from the list.*

The materials used shall be those prescribed for the several items which constitute the finished Work and shall comply with all the requirements for such materials in accordance with this specification and 900. In any combination of materials, even though the individual components meet the specifications, such combination shall also meet the specifications and produce the required results. Failure to do so will be cause for rejection.

Approval of a material at its source will not necessarily constitute acceptance of materials from that source. All materials tested at the source may be subjected to further testing from production to after incorporation into the Work. Approval will be based on the results of tests made nearest to incorporation into the Work. Material tested prior to incorporation into the Work and not in accordance with the requirements will be rejected. Material tested after incorporation into the Work and not in accordance with the requirements will be governed by ~~105.03~~ *General Conditions and Contract Documents*.

If a material from a source has a continued approval as shown by five or more consecutive tests, it may, if allowed, be put on an immediate usage basis and while on that basis may be incorporated into the Work prior to the receipt of test results. If any subsequent test reveals non-conformance with the specifications, material from that source shall be removed at once from the immediate usage basis and shall not be used until tests indicate conformance. If, after any test showing non-conformance, five or more consecutive tests show conformance, the material may be restored to an immediate usage basis.

If a material on an immediate usage basis has been incorporated into the Work and later is found as not being in accordance with the specifications, the ENGINEER may, in accordance with ~~105.03~~ *the General Conditions and the Contract Documents*, require its removal from the Work or allow it to remain. If ~~allowed~~ *permitted* to remain, the appropriate contract unit price will be reduced.

All packaged materials shall be marked plainly showing the amount and nature of contents and shall be delivered intact.

#### ~~(b) Material Records~~

~~The Engineer will prepare the material record from the documentation provided by the Contractor. The Engineer will submit the completed forms to the Contractor by the end of the fifth business day of each month for the preceding month. The Contractor shall distribute this information to the appropriate subcontractors as required. The Contractor shall review, sign, and return the material record to the Engineer by the 28th day of each month, along with documentation to support the Contractor's recommended adjustments to the record.~~

#### ~~1. Documentation of Material Delivery~~

~~The Contractor shall provide a copy of each delivery ticket and certifications, if required, to the Engineer not later than the next business day. If providing this information on the next business day is not possible, the Contractor and the Engineer will agree upon other arrangements for the receipt of the necessary documentation prior to the event.~~

#### ~~2. Delivery Ticket Information~~

~~The material delivery ticket shall include an itemized quantity of all materials delivered, the date of delivery, and the contract number. The material delivery ticket shall document the source of supply and source code if known, and shall contain~~

~~information necessary to obtain a basis for use as required by Department specifications. All required certifications shall be in accordance with 916 or as directed.~~

### ~~3. Payment Procedures~~

~~If the Contractor does not provide the necessary documentation for the materials, such materials will not be paid for. The Engineer will notify the Contractor of those materials held from the estimate with the justification for withholding payment. If corrective action has not been taken within six weeks of the materials delivery to the project site, the entire estimate payment may be withheld.~~

#### ~~(c) Buy America Requirement~~

~~All contracts, whether financed entirely or partially with State or Federal funds, shall comply with IC 5-16-8 and the 23 CFR 635.410.~~

~~Except for pig iron and processed, pelletized, and reduced iron ore, steel shall be made in the United States by the open hearth, basic oxygen, electric furnace, Bessemer, or other steel making process. Except for pig iron and processed, pelletized, and reduced iron ore, all steel and cast iron materials and products permanently incorporated in the contract shall be manufactured in the United States. Manufactured products include those which are rolled, formed, shaped, drawn extruded, forged, cast, or fabricated. The United States includes all territories, continental and insular, subject to the jurisdiction of the United States of America.~~

~~Except for pig iron and processed, pelletized, and reduced iron ore, no steel or cast iron products produced in the United States may be modified in a foreign country and still comply with the Buy America Requirement.~~

~~A Buy America Certification shall be submitted and received for each product or source of material prior to being incorporated into the contract in accordance with 916.02(g) and 916.03(a).~~

### **106.02 Samples, Tests, Cited Specifications**

~~Such facilities as may be required for collecting and forwarding samples shall be provided and the materials represented by the samples shall be held until tests have been made and such materials found to have the qualities required in the specifications. All samples required and additional material required to replace samples shall be furnished without charge.~~

~~To facilitate the sampling and testing of materials, the Engineer shall promptly be advised when orders for materials are placed and when such materials are received. The quantity, source of supply, and the locations where the materials have been stored shall be included in the notice.~~

~~All tests of materials will be made in accordance with the methods described or designated in these specifications. When tests are made at places other than the laboratory, every needed facility shall be furnished for the verification of all scales, measures, and other devices which are used.~~

If the CONTRACTOR elects to supply materials other than structural steel ~~and prestressed structural members~~ which require on-site sampling or testing as they are manufactured in out-of-state manufacturing plants located more than ~~60~~ 100 mi outside a State line, the CONTRACTOR shall provide the sampling or testing services required. No additional payment will be made for such services. Such services shall be conducted by a ~~Department~~ OWNER-approved testing laboratory.

~~The standards for materials and methods of tests of AASHTO and ASTM or other specification referred to herein or elsewhere shall be the standard, interim, or tentative specifications included in the latest published edition which is on file on January 1, unless otherwise specified. Indiana Test Methods and Procedures will be designated as a test method by inserting a T in the ITM number or as a procedure by inserting a P in the ITM number. A test method will become effective immediately upon approval by the ITM Committee. A procedure will become effective on the next September 1, unless approved otherwise by the ITM Committee. In case of discrepancy, the following relationships apply:~~

~~Special Provisions hold over: ITM, AASHTO and ASTM or other specification for materials and methods of tests~~

~~ITM hold over: AASHTO and ASTM or other specification for materials and methods of tests~~

~~AASHTO hold over: ASTM or other specification for materials and methods of tests~~

~~Tests will be made by and at the expense of the Department unless otherwise specified. The minimum required number of samples and tests will be as set out in the Frequency Manual. Samples will be taken by or under the supervision of a representative of the Department. All materials being used are subject to inspection, test, or rejection at any time~~

SECTION 106, AFTER LINE 156, INSERT AND DELETE AS FOLLOWS:

**106.04 BlankField Laboratory**

*If required for the contract Work, a shelter or field laboratory consisting of a suitable building or trailer in which to house and use equipment necessary to carry on the required tests shall be provided. It shall be in accordance with the Technical Specification for Field Office, except for the telephone, adding machine, calculator, telephone answering machine, dry ink copier, and typewriter, and will be paid for as set out therein.*

**106.05 Storage of Materials**

Storage of materials shall be such that will assure the preservation of their quality and fitness for the Work. When considered necessary, materials shall be placed on raised, clean platforms, constructed of wood or other hard surfaced material and under cover. Stored materials shall be located to facilitate proper inspection. Materials to be used for all contracts shall be stored separately and intact and, after being tested for such work, shall not be used for other purposes except unless otherwise approved.

~~The portion of the right-of-way not required for public travel may be used for~~

~~storage purposes and for placing the Contractor's plant and equipment, subject to requirements set out in 107.08 and only by written request. Approval will be based on compliance with 107.08 and the Contractor's proposed procedure for re-establishing vegetation in the affected area to its original condition or better. Except as provided in 105.07 and except where necessary for drainage, if storage limits are shown on the plans, or as described in the Contract Documents, the right-of-way within such storage limits will be available for construction operations and storage of materials. Private property shall not be used for storage purposes without written permission of the owner or lessee. If requested, copies of such written permission shall be furnished. All storage sites shall be restored to their original condition with no additional payment. This shall not apply to the stripping and storing of topsoil, or to other materials salvaged from the Work.~~

SECTION 106, AFTER LINE 189, INSERT AND DELETE AS FOLLOWS:

If rejected materials are not removed within the time specified, the ~~Department~~OWNER may order their removal with no additional payment, or complete the contract in accordance with ~~108.09~~the General Conditions and the Contract Documents.

#### **106.08 Hazard Communication Program**

The CONTRACTOR and all subcontractors will be required to furnish the ENGINEER with Material Safety Data Sheets for each hazardous material which each firm uses or stores on the project site for ~~Department~~OWNER maintained roadways. Such sheets shall be generated by each hazardous material manufacturer and shall be in accordance with Indiana OSHA requirements.

#### **106.09 ~~Department~~OWNER Furnished Materials**

The CONTRACTOR shall furnish all materials required to complete the Work except those specified to be furnished by the ~~Department~~OWNER. Materials furnished by the ~~Department~~OWNER will be delivered or made available at the locations specified. The cost of handling and placing materials after they are delivered to the locations specified shall be included in the contract price for the item in connection with which they are used. The CONTRACTOR will be held responsible for all materials delivered. Deductions will be made from any monies due to the CONTRACTOR to make good all shortages or deficiencies and for all damage which might occur after delivery or for demurrage charges.

#### **106.10 Proportioning Materials**

All materials used shall be proportioned as specified for each type of work, kind of unit, or item of Work required by the contract. No change in the source or kind of materials or blending of asphalt materials will be ~~allowed~~permitted during construction without written consent. Application for such ~~consent~~permission shall be in writing, a material which is not in accordance with the quality requirements set out in these specifications shall not be blended with a better quality material to upgrade the end product.

SECTION 107, DELETE LINES 2 THROUGH 253

SECTION 107, AFTER LINE 254, INSERT AND DELETE AS FOLLOWS:

~~Provision shall be made for prompt removal from traveled roadways of all dirt and other materials that have been deposited thereon by operations concerned with the project whenever the accumulation is sufficient to cause the formation of dust or mud, interfere with drainage, damage pavements, or create a traffic hazard. Construction methods and means shall be employed to keep flying dust and air pollution to a minimum. Provision shall be made for the control of dust on the project and on roads, streets, and other areas affected by the project wherever traffic or buildings, or construction materials are affected by such dust. The materials and methods used for dust control shall be subject to approval. The cost of controlling dust and air pollution shall be included in the cost of other pay items and no 270 additional payment will be made. The CONTRACTOR shall provide effective dust control in all phases. Loader-mounted pick-up, power sweepers, or other types of pull type models shall be used in all phases of street cleaning. Street cleaning will not be paid directly, but shall be included in the cost of various items of the contract.~~

SECTION 107, DELETE LINES 266 THROUGH 323

SECTION 107, AFTER LINE 373, INSERT AND DELETE AS FOLLOWS:  
*OWNER* from all suits, actions, or claims of any character brought for or on account

SECTION 107, DELETE LINES 383 THROUGH 406

SECTION 107, AFTER LINE 431, INSERT AND DELETE AS FOLLOWS:  
condition and in accordance with 105.13, *105.14*, 801, and 802. Barricades and the backgrounds and messages of all signs shall be kept clean and bright. They shall be renewed or replaced as often as necessary to keep them effective. ~~Failure to maintain these devices may result in the assessment of damages in accordance with 105.14 and 801.14.~~

~~Pavements and shoulders having an edge drop of more than 3 in. shall be delineated with drums in accordance with 801.09. Delineation shall be at a maximum spacing of 200 ft. The use of cones in accordance with 801.08 will be allowed as shown on the plans except cones shall not be used for interstate lane restrictions.~~

~~At least 14 days before a road is to be closed to traffic, notification shall be given of such intention. Detour route marker assemblies shall be erected and maintained along the detour route designated by the Department. Barricades shall not be erected nor the traffic interfered with until the posted detour or the temporary runaround is approved.~~

If it is necessary to close a road for the purpose of replacing a drainage structure, the road shall not be closed until the pipe structure is at the project site.

~~Sufficient barricades, supplemented by watchers or flaggers when necessary, shall be provided continuously to protect any and all parts of the work and to promote safe and orderly movement of traffic. When a road is closed or posted for official detour but is still usable by local traffic, barricades and road closure sign assemblies, in addition to the closure barricades, required at the beginning and end of the portion of such road being detoured, shall be erected at the site of bridge removals, pipe removals, or other high hazard locations. Such barricades shall be located within 150 ft of the removal location. These barricades shall be of the type shown on~~

~~the plans, and in accordance with 801.07. Such barricades shall extend from shoulder to shoulder, or to the limit of area that is readily traversable by a motor vehicle, as directed. During non-working hours, no opening shall exist in the barricades. The road closure sign assembly shall be placed at or near the center of the roadway. If these requirements are violated, operations shall be suspended until adequate measures are taken for full compliance. The use of hand signaling flags will not be allowed except for emergency situations. The “Stop”/“Slow” paddle shall be required as a primary hand signaling device to control traffic through work areas. The “Stop”/“Slow” paddle shall be in accordance with section 6E.03 of the MUTCD, except it shall be at least 24 in. wide.~~

~~Unless otherwise specified, sufficient watchers shall be furnished and be on duty 24 h a day during the time widening or patching is in progress. These workers shall have adequate transportation facilities to patrol the entire portion under construction. They shall maintain the signs, barricades, and lights at all times for the safety of pedestrian and vehicular traffic.~~

### **107.13 Use of Explosives**

~~When the use of explosives is necessary for the prosecution of the work, the utmost care shall be exercised not to endanger life or property, including new work. The Contractor shall be responsible for all damage resulting from the use explosives.~~

~~All explosives shall be stored in a secure manner in accordance with all laws and ordinances. All such storage places shall be clearly marked in large black letters on a 490 red background “Dangerous Explosives”. Where no local laws or ordinances apply, satisfactory storage shall be provided no closer than 1,000 ft from the road or from a building or camping area or place of human occupancy. Detonators shall not be stored with explosives.~~

~~Each public utility company having structures in proximity to the site of the work shall be notified of intentions to use explosives. Such notice shall be given sufficiently in advance to enable the companies to take such steps necessary to protect their property from injury. The notification shall in no way relieve responsibility for damage to the structures.~~

*Use of explosives is prohibited.*

SECTION 107, DELETE LINES 493 THROUGH 602

SECTION 107, AFTER LINE 620, INSERT AND DELETE AS FOLLOWS:  
of the ~~Department~~ *OWNER* or not.

On those portions of an incomplete contract that have been ordered opened to traffic or are constructed under traffic and the contract time has not yet expired, the ~~Department~~ *OWNER* will assume the responsibility for repairs of damages resulting directly from traffic, provided that such damage is not the direct or indirect result of the operations of the CONTRACTOR and provided the CONTRACTOR is unable to collect damages from the responsible party or parties.

The OWNER will only assume such responsibility

- (a) If the CONTRACTOR documents those damages with all available information, including but not limited to photos and investigative materials, and
- (b) If the CONTRACTOR preserves all documentation, evidence, photos and information regarding the nature, extent and cause of such damage.

Also, the OWNER will only assume such responsibility if, within 90 days from the date of such damage is discovered by the CONTRACTOR or the CONTRACTOR receives notice of that damage, whichever is earlier,

- (a) The CONTRACTOR demonstrates to the OWNER that despite its good faith, vigorous efforts, it has been unable to collect those damages from the responsible party or parties, and
- (b) The CONTRACTOR provides to the OWNER all documentation, evidence, photos and information regarding the nature, extent and cause of such damage.

Ordered repairs for damage for which the ~~Department~~ OWNER assumes responsibility will be paid for at the contract unit price for the item involved in making the repairs, where such items are applicable.

Opening a portion of a project to traffic does not preclude the responsibility of the CONTRACTOR for providing necessary safety measures, as required in these Standard Specifications *or in the contract technical specifications* to protect persons using the highway.

SECTION 107, DELETE LINES 659 THROUGH 768

DELETE SECTION 108

DELETE SECTION 109

SECTION 110, AFTER LINE 12, INSERT AND DELETE AS FOLLOWS:

pay item for mobilization and demobilization that is ~~equal to the lesser of~~ *no more than 5%* of the original total contract price ~~or the contract lump sum price for the pay item mobilization and demobilization~~. *The exact amount will be a portion of the lump sum price which is an even percentage of the pay item.* The balance of the lump sum price will be paid when the contract has been completed and accepted.

*When additional work is requested of the Contractor, mobilization and demobilization shall be capped at the greater of \$6,000.00 or 15% of the total amount increased to the original contract price for the additional work requested. Additional work is defined as work added during the course of the project that is outside the original scope of work of this contract.*

SECTION 110, AFTER LINE 34, INSERT AND DELETE AS FOLLOWS:

If no pay item for mobilization and demobilization is shown in the ~~Schedule of Pay Items~~ *Itemized Proposal and Declarations*, the cost of the Work described above shall be included in the total cost of the contract, with no direct payment for the Work.

DELETE SECTION 111

DELETE SECTION 112

DELETE SECTION 113

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100-DPW-004 TESTING REQUIREMENTS

*When INDOT Specifications refer to “Testing by the Department,” this shall be construed as “Testing by Contractor.”*

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CONSTRUCTION ENTRANCE

*The construction entrance and exit shall be from Sherman Drive utilizing an existing curb cut along the west side of Sherman Drive. No construction traffic shall enter or exit the site utilizing Michigan Street.*

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PERMITS

*The Owner has applied for an IDEM 327 IAC 15-5 (Rule 5) permit. It is anticipated that this permit will be received by the start of construction. The Contractor shall comply with all requirements of the Rule 5 permit. No payment will be made for this work. This work shall be included in the cost of stormwater items.*

*The Contractor is responsible for obtaining the City of Indianapolis Flora Permit and completing any requirements of the permit. No direct payment will be made for this work. Trees to be removed because they are located within the excavation area will not be paid for directly, but shall be included in the lump sum cost of Clearing Right of Way.*

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TIMELINE FOR REMOVAL OF MATERIAL AT NORTHWEST CORNER

*The Contractor shall remove the material in the northwest corner of the site within 45 days of the Notice to Proceed, or within 30 days of receipt of Rule 5 permit, whichever comes later.*

*The Contractor shall be aware that there is a development on this parcel, that will be under construction during the work in this contract. Contractor shall coordinate this work with the work of the developer, so as not to hinder the work of either project.*

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**SECTION 200**

201-DPW-039 OPEN BURNING OF NATURAL GROWTH

The Standard Specifications are revised as follows:

SECTION 201, BEGIN LINE 37, DELETE AND INSERT AS FOLLOWS:

~~Burning of perishable material shall be done in accordance with applicable laws, ordinances, rules, and regulations. All necessary permit approvals shall be obtained prior to burning.~~

*Open burning of natural growth is not permitted on this contract.*

~~Unless burned in accordance with the requirements herein,~~ perishable materials and debris shall be removed from the right-of-way and disposed of in accordance with 203.08. If allowed, sod may be disposed of within the right-of-way.

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NON-HAZARDOUS CONTAMINATED SOIL, REMOVE

**Description**

This work shall consist of the removal, wholly or in part, and satisfactory disposal of all obstructions which are not designated or allowed to remain, except for the obstructions to be removed and disposed of under other items in the contract. It shall include the salvaging of designated materials and backfilling the resulting trenches, holes, and pits.

**Remediation of Contaminated Soil and Groundwater**

This work shall consist of remediation. All work shall be performed in accordance with all applicable Federal, State and local requirements, and in accordance with Article 4.7 of the *City of Indianapolis Standard General Conditions for Construction Contracts* (Amend Date April 2019).

Prior to commencing work, the Contractor shall provide evidence satisfactory to the Project Engineer that the firm and personnel which are performing the remediation are properly trained or certified as required. The Contractor shall have the equipment for the proper remediation of regulated materials. The Contractor shall be familiar with the required procedures and practices governing such work.

The Contractor shall have the responsibilities as follows:

- (a) Notify the appropriate authorities regarding remedial operations and provide verification to the Engineer;
- (b) Assist the Engineer in collect samples, if determined necessary;
- (c) Backfill excavations and restore ground lines as directed, in accordance with INDOT Spec 211;
- (d) Maintain accurate and complete records of all operations; and
- (e) Submit proper documentation and removal and disposal activities, included disposal manifests and records, as requested for proper cleanup documentation.

**Remediation of Other Regulated Materials**

This work shall consist of the remediation of regulated materials not otherwise described herein. This work shall include all necessary excavation, backfilling of resultant excavations, and other handling or storage required.

All work shall be performed in accordance with all applicable Federal, State and local requirements, and in accordance with Article 4.7 of the *City of Indianapolis Standard General Conditions for Construction Contracts* (Amend Date April 2019).

The Contractor shall have the responsibilities as follows:

- (a) Determine the location for disposal, treatment, or recycling of regulated materials removed from the project site; obtain written approval of the site; arrange with the approved site for the acceptance of the materials; and obtain the Project Engineer's written approval for the use of the site prior to transporting the materials;

- (b) Ensure that all packing / shipping containers or tank vehicles are in accordance with the applicable Federal, State, and local requirements;
- (c) Prepare a shipping paper or manifest, as required by Federal and State requirements, for signature of the Project Engineer or designated Contractor representative;
- (d) Ensure that the shipping paper or manifest is carried in the vehicle;
- (e) Ensure that all required placards are properly displayed on the vehicle;
- (f) Ensure prompt movement of the vehicle to the disposal site; and
- (g) Return one copy of the signed shipping or manifest documents to the Project Engineer.

### **Method of Measurement**

Payment will be made for the removal of specific obstructions on a unit basis, measurement will be made by the unit specified in the Schedule of Pay Items. Removal of “non-hazardous contaminated soil, remove” as directed will be measured by the cubic yard.

Contractor will be subject to audit and authorization by the Project Engineer. Determination of removal activities as regulated, contaminated materials will be completed by the Project Engineer.

### **Basis of Payment**

The accepted quantities of removal of “non-hazardous contaminated soil, remove” within the construction limits will be paid for at a contract unit basis. All “non-hazardous contaminated soil, remove” the Contractor is directed to remove outside the construction limits, will be paid for whenever it is deemed necessary by the Project Engineer to fully complete the contract within its intended scope, or it is in the best interest of the project, to complete the unforeseen work under the contract, unless such clearing is shown on the plans or in the Contract Information book. Such price shall be full compensation for removing, transporting and disposing of materials in accordance with requirements herein. Regulated materials shall be subject to Article 4.7 of the *City of Indianapolis Standard General Conditions for Construction Contracts* (Amend Date April 2019). If no contract price is listed in the Schedule of Pay Items for a pay item set out in this specification, no direct payment will be made for work necessary to comply with the requirements for such pay item, except as set out herein. The cost thereof shall be included in the cost of other pay items.

If unknown regulated materials, beyond what is allotted for in this contract, are discovered during the life of the contract, payment for all work relating to removal, testing, transportation, or disposal of such materials will be in accordance with the unit price noted in the contract and only after audit and authorization from the Project Engineer.

Testing for regulated materials will not be the responsibility of the Contractor and will be the responsibility of the Project Engineer under a separate contract.

Payment for removal of “non-hazardous contaminated soil, remove” will be based on the actual cubic yard removed, and will be subject to audit and authorization by the Project Engineer. Payment will include removal, transport and disposal only.

**SECTION 600**

600-DPW-004 PROTECTION OF PUBLIC SERVICE STRUCTURES

*The CONTRACTOR shall assume all risk and liability for any inconvenience, delay, or expense that may be occasioned him by public utilities or other public or private property within the limits of the proposed improvements, whether or not such property is shown on the plans and shall not do Work which might injure or damage such property until arrangements satisfactory to the OWNER have been made for its protection.*

*In the case of sewer construction, the CONTRACTOR shall be responsible for the protection of the various utility facilities within and immediately adjacent to the standard trench as follows:*

*When the angle of intersection between the utility's existing facility and the centerline of the sewer is less than 45 degrees and the existing facility falls within the confines of the standard trench, the utility shall be responsible for protecting, relocating, shoring, or replacing its facility at no cost to the CONTRACTOR or the City.*

*When the angle of intersection between the utility's existing facility and the centerline of the sewer is less than 45 degrees and the existing facility falls outside the confines of the standard trench and is subject to damage during or immediately following the sewer construction, the utility shall protect, relocate, shore, or replace its facility as the utility deems appropriate at the CONTRACTOR's expense unless the utility agrees to allow the CONTRACTOR to perform the necessary protection with his own forces. Citizens Energy Group - Gas chooses to protect its own facilities and will provide the CONTRACTOR a schedule of estimated costs upon request.*

*When the utility's facility crosses the sewer trench at an angle of 45 degrees or greater, for a known facility, and the facility is not in direct conflict with the sewer or appurtenances, the utility shall protect its facility as the utility deems appropriate at the CONTRACTOR's expense, subject to City approval, unless the utility agrees to allow the CONTRACTOR to perform the necessary protection with his own forces. Citizens Energy Group - Gas chooses to protect its own facilities and will provide the CONTRACTOR a schedule of estimated costs upon request.*

*When the utility's facility crosses the sewer trench at an angle of 45 degrees or greater and the facility is in direct conflict with the sewer or appurtenances, the utility shall rearrange or protect its facility at its own expense.*

*The standard trench shall be the sewer trench shown in the contract plans. If the CONTRACTOR is required to provide shoring or a drag box to install the sewer, the trench protection shall be provided per OSHA requirements.*

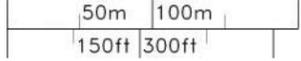
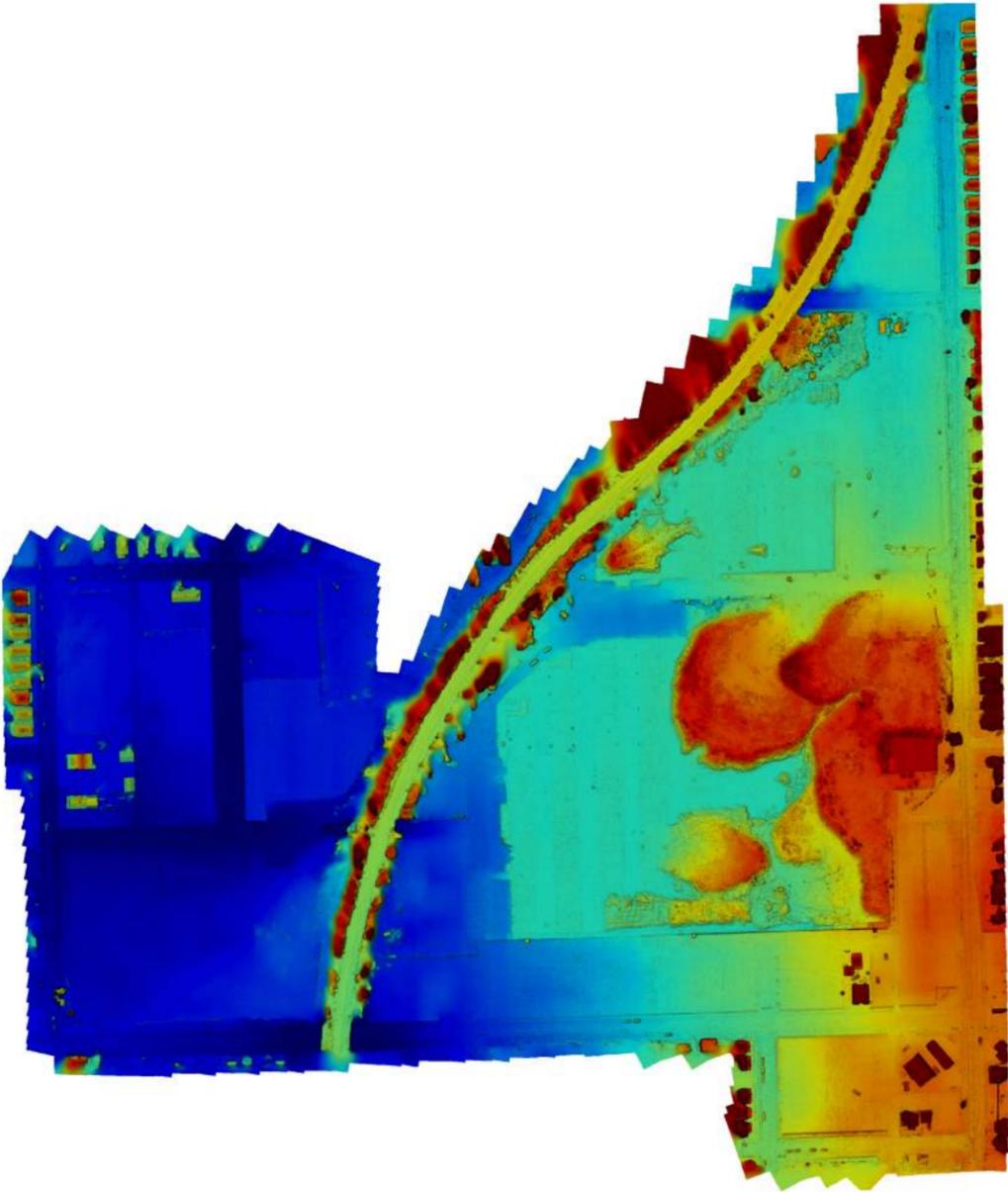
600-DPW-006 PROTECTION OF EXISTING SIDEWALK, DRIVES AND STREET PAVEMENT

*The CONTRACTOR shall protect existing drives, sidewalks and streets not designated for removal. Areas damaged by the CONTRACTOR shall be restored to pre-existing or better conditions. No direct payment will be made for this Work and the cost shall be included in the costs of other items.*

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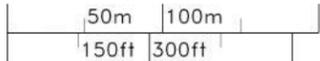
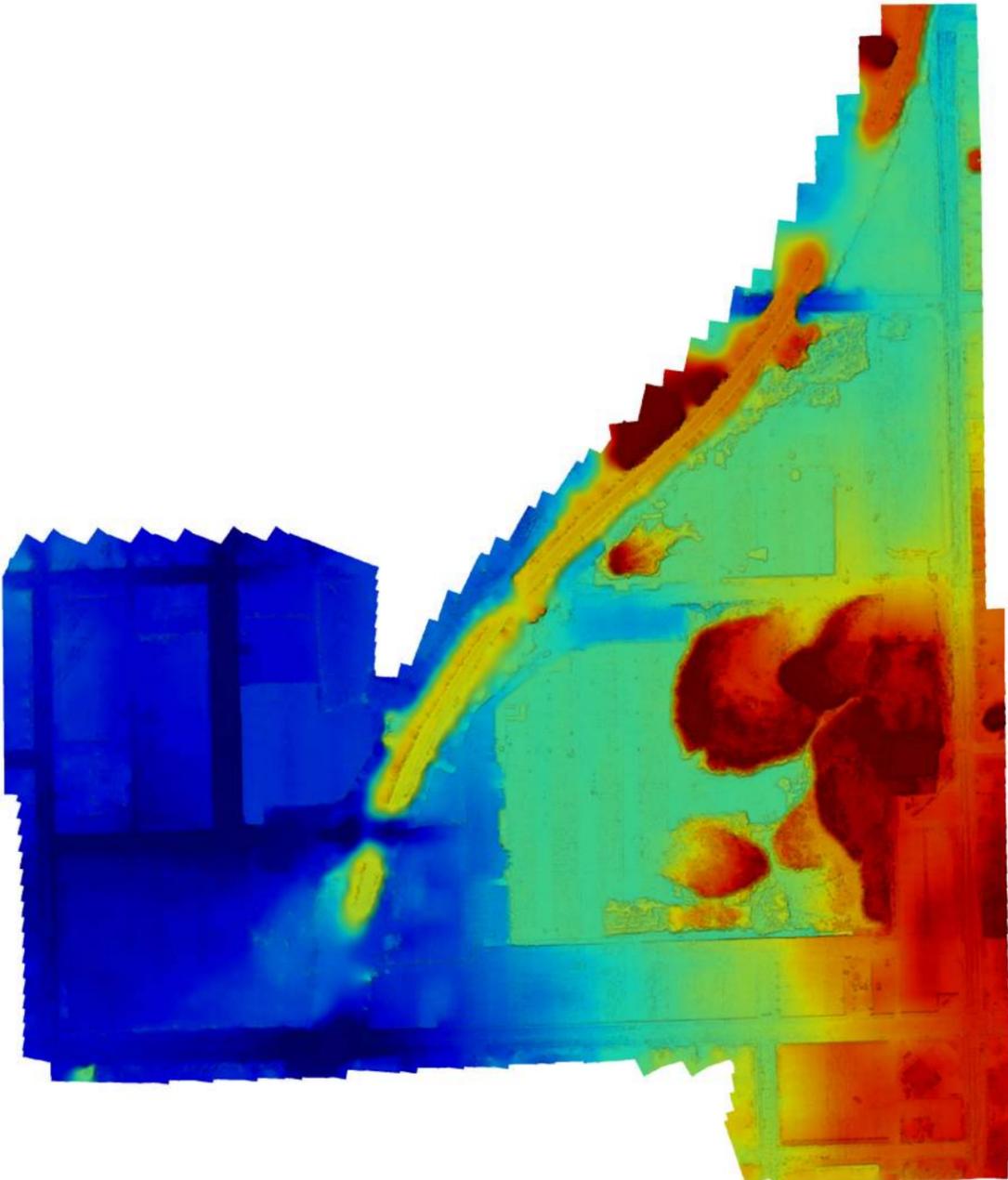


**Orthomosaic Export**



Powered by DroneDeploy

Digital Elevation Model



Powered by DroneDeploy

**Digital Terrain Model**  
(Terrain only, trees, vehicles,  
buildings removed)

# Sherman Park - Consolidated Map (GCP) - Sherman Park - Consolidated Map (GCP)

Captured: Jan 14, 2020, Processed: Jan 19, 2020



## Map Details Summary (i)

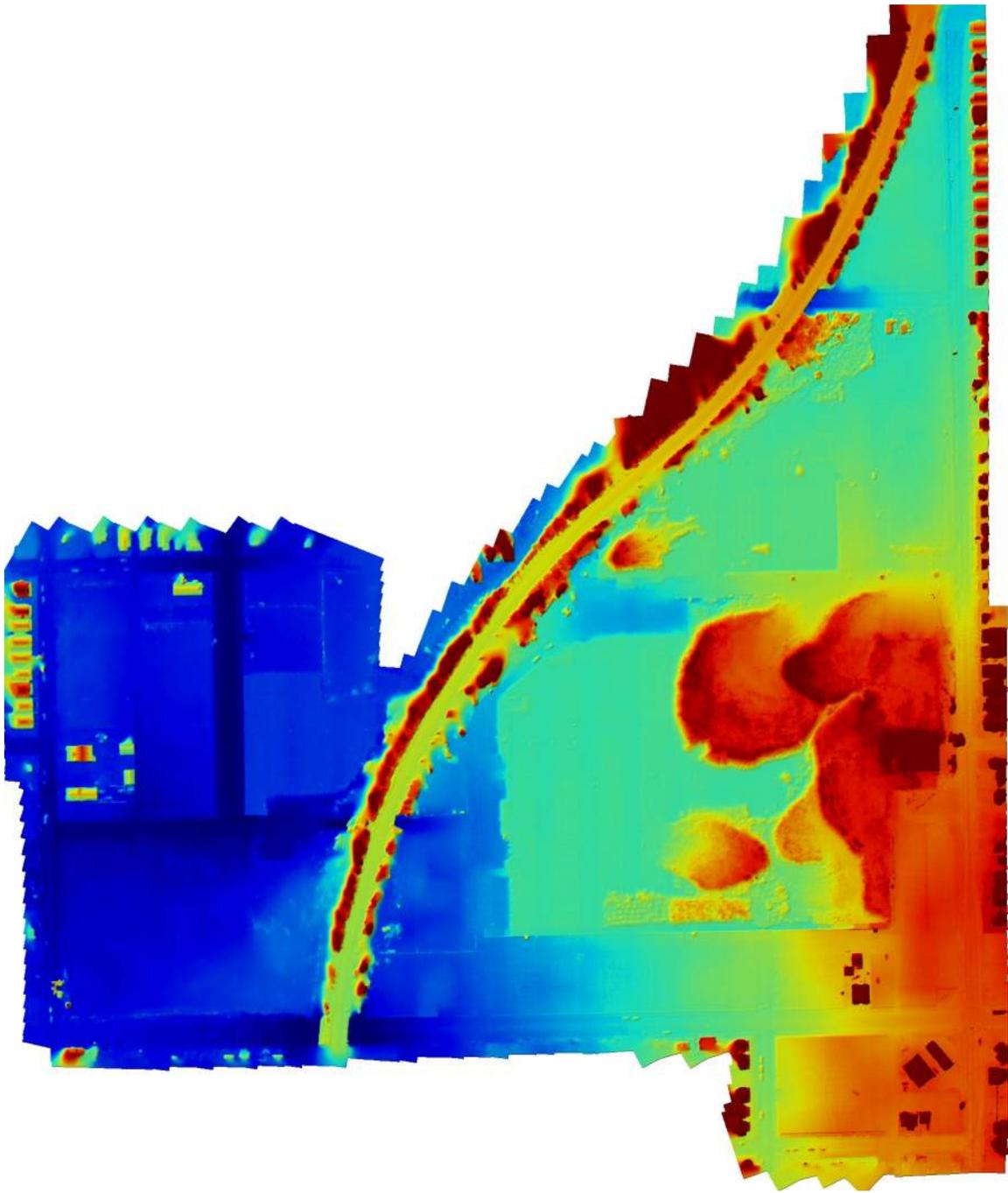
Project Name	Sherman Park - Consolidated Map (GCP) - Sherman Park - Consolidated Map (GCP)
Photogrammetry Engine	DroneDeploy Proprietary
Date Of Capture	Jan 14, 2020
Date Processed	Jan 19, 2020
Processing Mode	Terrain (2D)
GSD Orthomosaic (GSD DEM)	0.53in/px (DEM 2.13in/px)
Area Bounds (Coverage)	6784239.54ft <sup>2</sup> (51%)
Image Sensors	DJI - FC6310S

## Quality & Accuracy Summary (i)

Image Quality	High texture images
Median Shutter Speed	1/160
Processing Mode	<b>Terrain Mode (2D)</b> - Optimized for efficiently mapping large fields and crops, natural open terrain, and generating topographical maps. This mode expects Nadir (top down) imagery, and so is not recommended for reconstructing the sides of buildings, overhangs, or complex equipment.
Images Uploaded (Aligned %)	1844 (100%)
Camera Optimization	0.00% variation from reference intrinsics
GCP & Checkpoint count	22 GCPs - Mean RMS Error = 0.18in 0 checkpoints

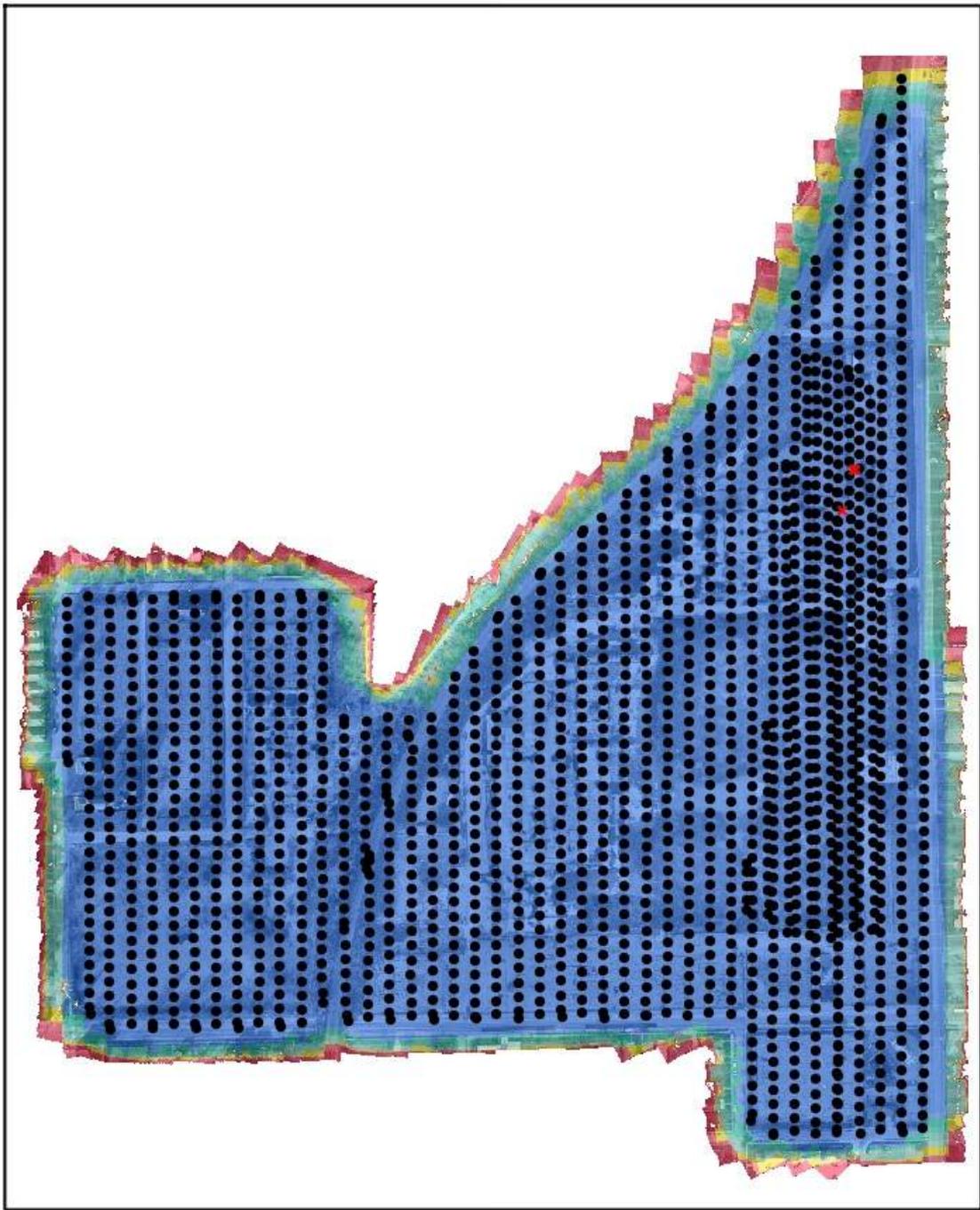
## Preview (i)



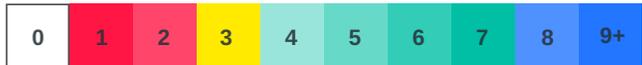


Dataset Quality Review ⓘ

Orthomosaic Coverage ⓘ



ROI  
 ● Aligned  
 × Unaligned



Insufficient coverage, expect large holes in the map, and low accuracy.

Marginal coverage, expect distortion or holes on buildings or sharp edges, and lower accuracy measurements.

Good coverage, expect a high quality reconstruction

Sensor(s) Used	DJI - FC6310S
Image Count (by sensor)	1844
Image Resolution	4864x3648 (~18MP)
Orthomosaic coverage (% of area of interest)	51.05
Average Orthomosaic Image Density within Structured Area	17 images/pixel
Median Shutter Speed	1/160

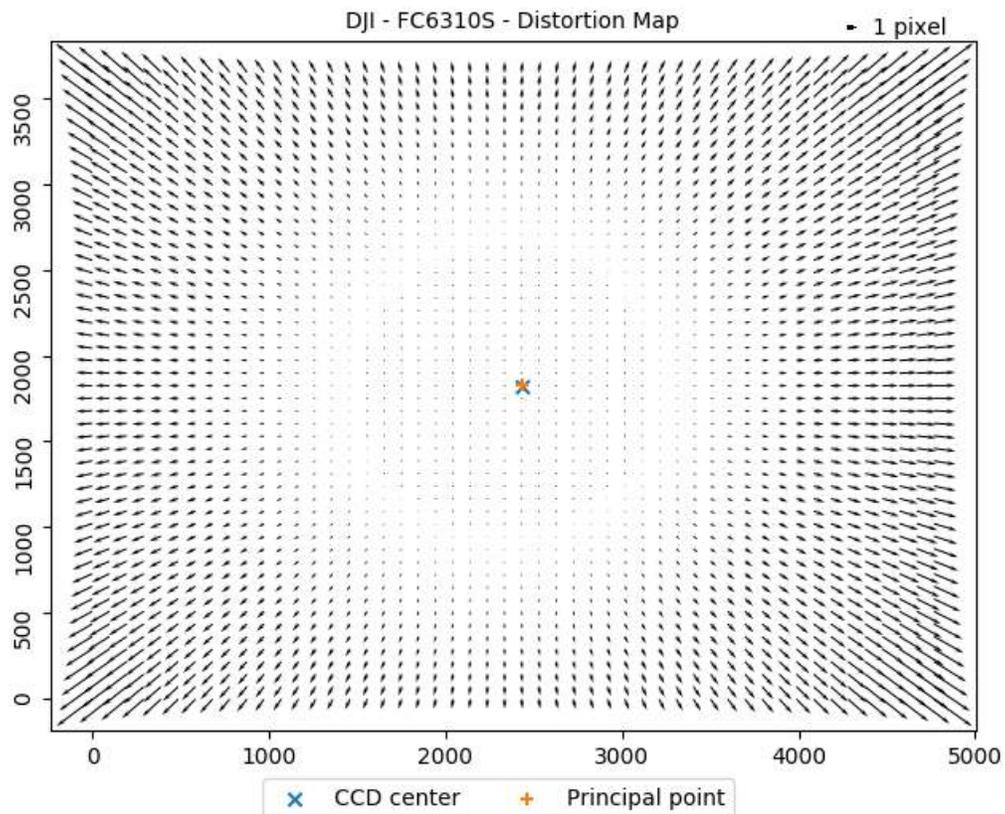
## Structure from Motion i

Aligned Cameras	100% 1838/1844
RMSE of Camera GPS Location	X 3.43ft Y 5.03ft Z 3.96ft RMSE 4.19ft

## Camera Calibration i

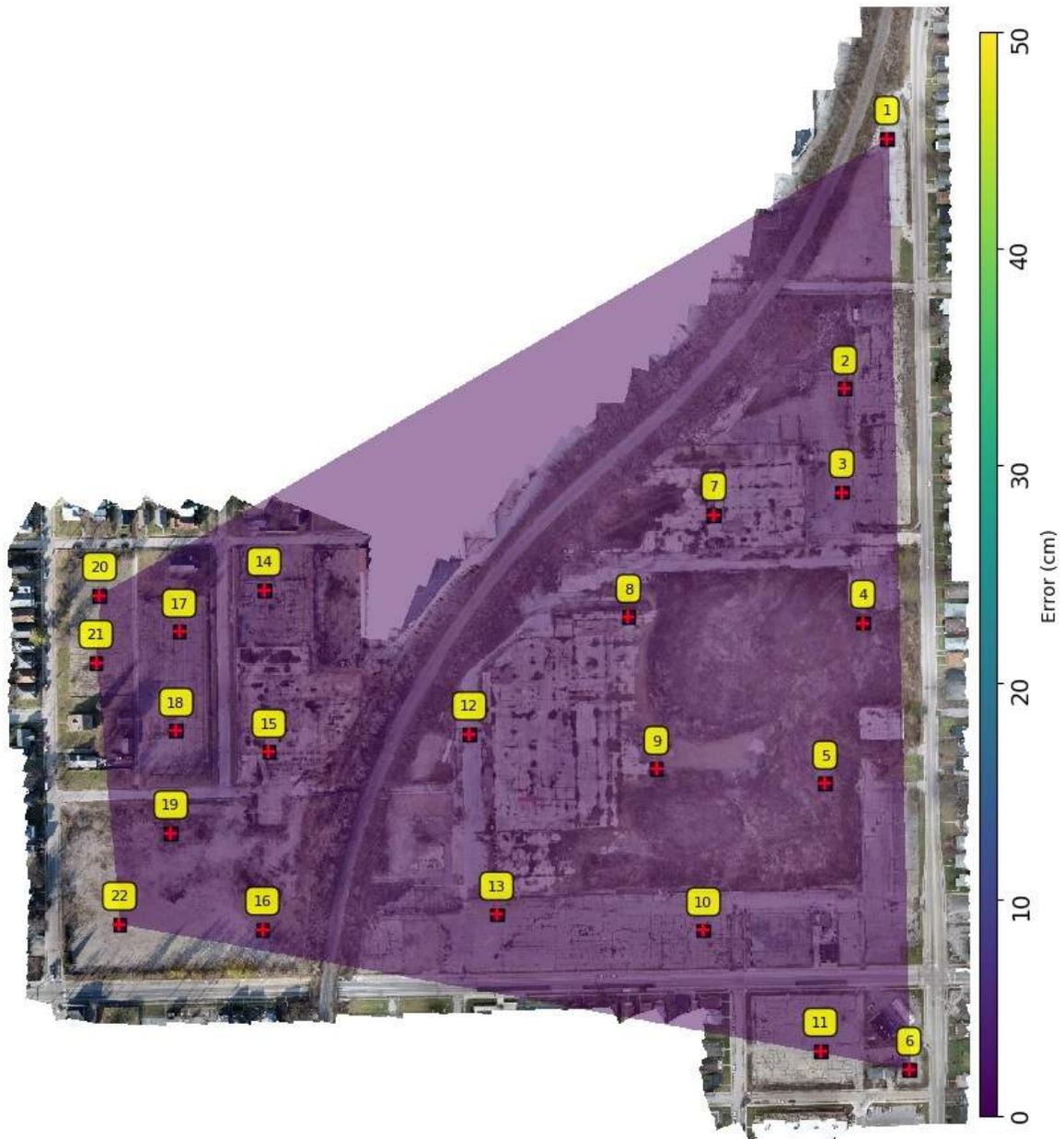
Camera Optimization	0.00% variation from reference intrinsics
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DJI - FC6310S



## GCPs and Checkpoints i

GCP & Checkpoint count	22 GCPs - Mean RMS Error = 0.18in 0 checkpoints
------------------------	--



Visualisation of the expected absolute position error within the checkpoint area.

### GCP Input i

EPSG Code	EPSG-2965 - <a href="#">NAD83 / Indiana East (ftUS)</a>
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### GCP Geolocation Error i

GCP data is used to constrain the map reconstruction, so real world error between GCPs can ONLY be evaluated using Checkpoints. Error on GCPs is NOT representative of map error, instead it allows you to identify GCPs that have issues - for example incorrect survey locations, or that have been improperly tagged. Typical error should be less than a few centimeters for well tagged GCPs.

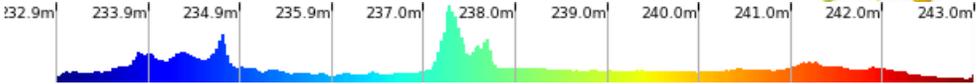
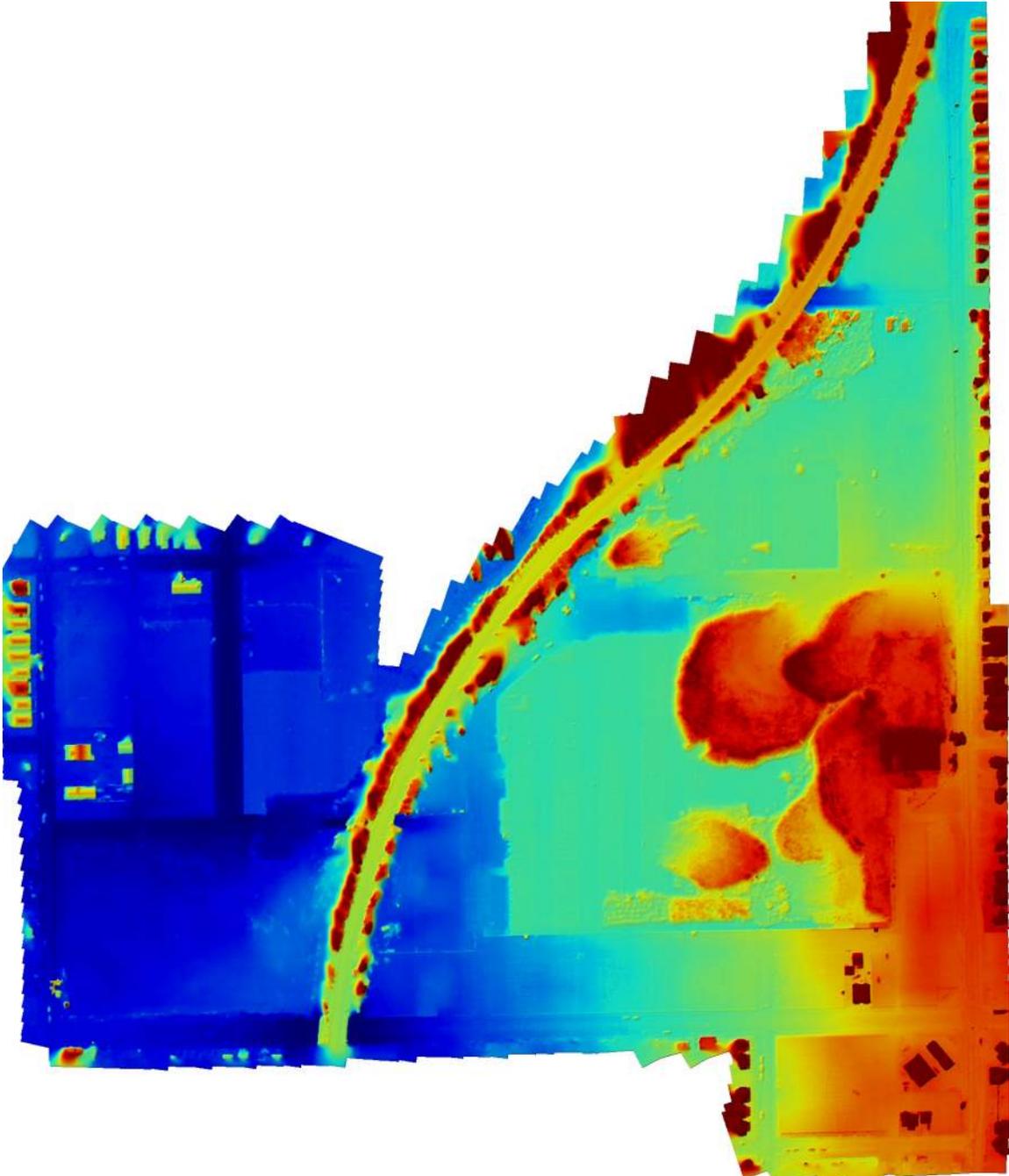
GCP Label		X Error (in)	Y Error (in)	Z Error (in)
1		-0.0197	0.0157	-0.0669
2		0.0787	0.0709	0.1535
3		-0.3307	0.2126	0.1299
4		-0.1142	-0.0433	0.0236
5		-0.2756	0.0787	0.0709
6		-0.0157	-0.0315	-0.1417
7		0.3150	0.0315	-0.1811
8		0.2441	0.1339	0.2717
9		0.0709	0.0433	-0.0512
10		-0.0433	-0.2992	-0.0748
11		-0.0512	-0.0039	0.0000
12		0.1417	0.0157	-0.1772
13		-0.1378	-0.0276	-0.0394
14		-0.0039	0.2047	0.1142
15		0.0669	0.0827	0.1457
16		-0.3780	-0.0157	-0.0394
17		0.0984	-0.1142	-0.2520
18		-0.0669	0.0118	-0.5472
19		0.3031	-0.2087	0.3819
20		0.0748	0.0197	-0.4094
21		0.1102	-0.0433	0.4803
22		-0.0591	-0.1339	0.2047
<b>Total (RMSE) Excludes Outliers</b>		<b>0.1767</b>	<b>0.1161</b>	<b>0.2339</b>

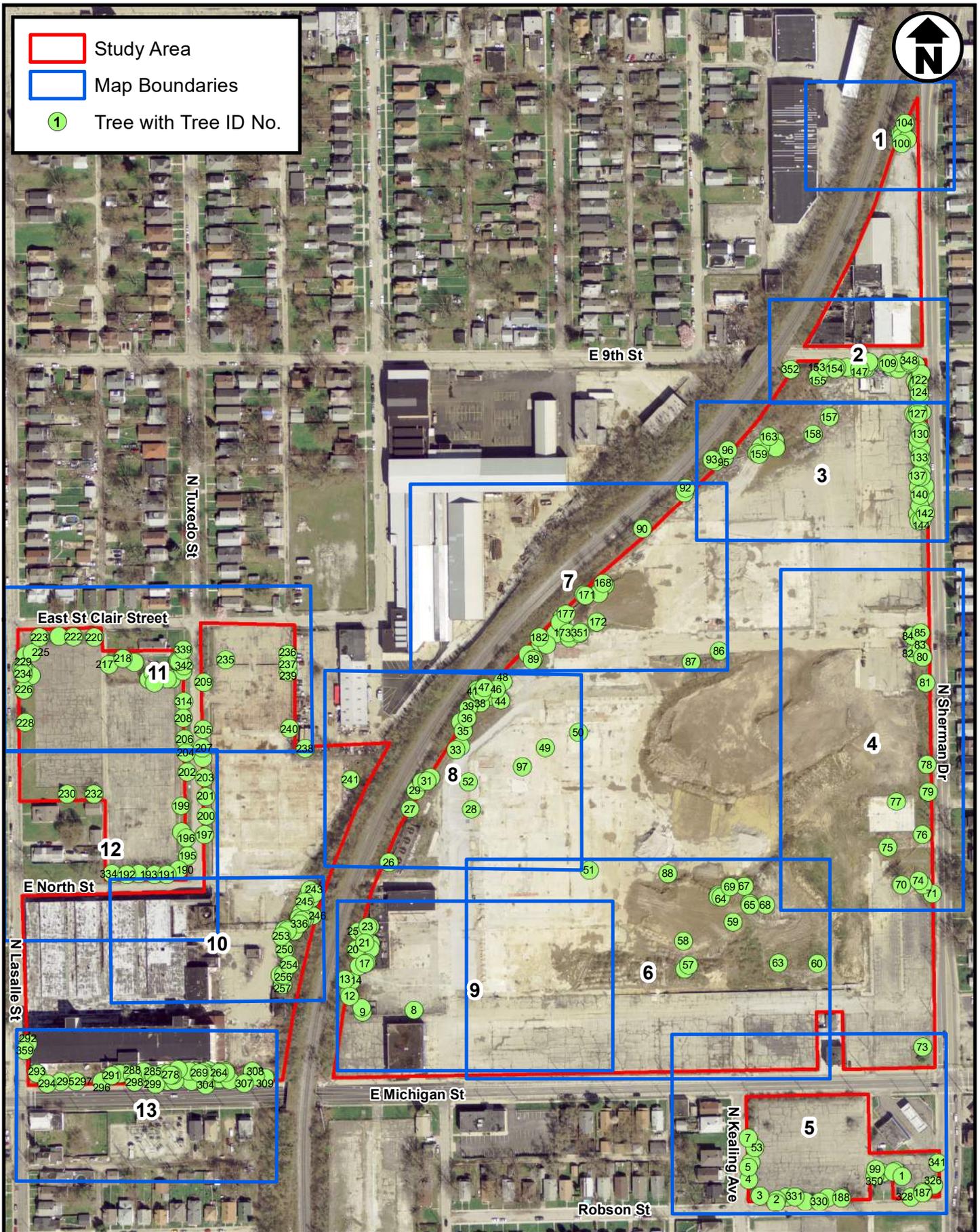
## Densification and Meshing

Processing Mode	<b>Terrain Mode (2D)</b> - Optimized for efficiently mapping large fields and crops, natural open terrain, and generating topographical maps. This mode expects Nadir (top down) imagery, and so is not recommended for reconstructing the sides of buildings, overhangs, or complex equipment.
Processing Mode Quality	Med
Nadir Images	100%
Oblique images	0%
Horizontal images	0%
Total Points	10.1 million
Point Cloud Density	2.90 points/ft <sup>2</sup>
Mesh Triangles	4.0 million

# Digital Elevation Model

Mode	Generated from Mesh
DEM GSD	DEM 2.13in/px
Relative/Absolute	Absolute Altitude vs GCPs





Sherman Park Area - Indianapolis, Marion Co., IN  
**Tree Survey Key Map**

Study Area  
 Tree with Tree ID No.



Tree ID #	DBH (")	Form	Scientific Name	Tree Species	Condition	Owner/MGR	Condition Comments	Recommendation	Conflict	Additional Maintenance	Mitigation	Mitigation for Flora Permit	Potential Bat Tree Habitat
70	23	SS	<i>Platanus occidentalis</i>	American sycamore	GOOD	ROW		PRESERVE	MINOR	CLEAN	PLANTED	2	NO
71	21	SS	<i>Quercus velutina</i>	Black oak	FAIR	ROW	Needs some attention	PRESERVE	MINOR	REDUCE	PLANTED	2	NO
72	27	SS	<i>Quercus velutina</i>	Black oak	GOOD	ROW		PRESERVE	MINOR	REDUCE	PLANTED	3	NO
74	17	SS	<i>Platanus occidentalis</i>	American sycamore	FAIR	PRI	Needs some attention	REMOVE	SIGNIFICANT	N/A	PLANTED	2	NO
75	12	MULTI	<i>Robinia pseudoacacia</i>	Black locust	GOOD	PRI	Multistem (4+4+2+2)	REMOVE	SIGNIFICANT	N/A	VOLUNTEER	1	NO
76	7	SS	<i>Ulmus pumila</i>	Siberian elm	GOOD	ROW		PRESERVE	MINOR	CLEAN	PLANTED	1	NO
77	7	SS	<i>Populus deltoides</i>	Eastern cottonwood	GOOD	ROW		REMOVE	SIGNIFICANT	N/A	VOLUNTEER	1	NO
78	16	SS	<i>Acer saccharinum</i>	Silver maple	FAIR	ROW	Needs some attention	REMOVE	SIGNIFICANT	N/A	PLANTED	2	NO
79	18	SS	<i>Pinus sylvestris</i>	Scotch pine	GOOD	ROW		PRESERVE	MINOR	REDUCE	PLANTED	2	NO
80	14	SS	<i>Acer rubrum</i>	Red maple	GOOD	ROW		PRESERVE	MINOR	REDUCE	PLANTED	2	YES
81	31	SS	<i>Gleditsia triacanthos</i>	Honey locust	FAIR	ROW	Needs some attention	PRESERVE	MINOR	REDUCE	PLANTED	3	NO
82	14	SS	<i>Pinus strobus</i>	White pine	GOOD	ROW		PRESERVE	MINOR	CLEAN	PLANTED	2	NO
83	29	SS	<i>Acer saccharinum</i>	Silver maple	GOOD	ROW		PRESERVE	MINOR	REDUCE	PLANTED	3	YES
84	13	SS	<i>Pinus strobus</i>	White pine	GOOD	ROW		PRESERVE	MINOR	CLEAN	PLANTED	2	NO
85	19	SS	N/A	Dead	DEAD	ROW	More than 50% of tree is affected	REMOVE	LIABILITY	N/A	PLANTED	2	YES



## Sherman Park Area - Indianapolis, Marion Co., IN Tree Survey (Map 4 of 13)



Tree ID #	DBH (")	Form	Scientific Name	Tree Species	Condition	Owner/MGR	Condition Comments	Recommendation	Conflict	Additional Maintenance	Mitigation	Mitigation for Flora Permit	Potential Bat Tree Habitat
51	22	MULTI	<i>Populus deltoides</i>	Eastern cottonwood	FAIR	PRI	Needs some attention, Multistem (3+3+3+3+2+2+2+2+2)	REMOVE	SIGNIFICANT	N/A	VOLUNTEER	2	NO
56	10	MULTI	<i>Robinia pseudoacacia</i>	Black locust	GOOD	ROW	Multistem (6+4)	PRESERVE	MINOR	CLEAN	VOLUNTEER	1	NO
57	9	MULTI	<i>Robinia pseudoacacia</i>	Black locust	GOOD	PRI	Multistem (4+3+2)	REMOVE	SIGNIFICANT	N/A	VOLUNTEER	1	NO
58	6	MULTI	<i>Robinia pseudoacacia</i>	Black locust	GOOD	PRI	Multistem (3+3)	REMOVE	SIGNIFICANT	N/A	VOLUNTEER	1	NO
59	18	MULTI	<i>Robinia pseudoacacia</i>	Black locust	GOOD	PRI	Multistem (5+3+5+2+3)	REMOVE	SIGNIFICANT	N/A	VOLUNTEER	2	NO
60	6	SS	<i>Gleditsia triacanthos</i>	Honey locust	GOOD	ROW		PRESERVE	MINOR	CLEAN	VOLUNTEER	1	NO
61	15	MULTI	<i>Robinia pseudoacacia</i>	Black locust	GOOD	PRI	Multistem (5+5+2+3)	REMOVE	SIGNIFICANT	N/A	VOLUNTEER	1	NO
62	8	MULTI	<i>Robinia pseudoacacia</i>	Black locust	GOOD	PRI	Multistem (3+3+2)	REMOVE	SIGNIFICANT	N/A	VOLUNTEER	1	NO
63	6	SS	<i>Gleditsia triacanthos</i>	Honey locust	GOOD	ROW		PRESERVE	MINOR	CLEAN	VOLUNTEER	1	NO
64	9	MULTI	<i>Robinia pseudoacacia</i>	Black locust	GOOD	PRI	Multistem (5+4)	REMOVE	SIGNIFICANT	N/A	VOLUNTEER	1	NO
65	9	MULTI	<i>Robinia pseudoacacia</i>	Black locust	GOOD	PRI	Multistem (4+4+1)	REMOVE	SIGNIFICANT	N/A	VOLUNTEER	1	NO
66	6	MULTI	<i>Robinia pseudoacacia</i>	Black locust	GOOD	PRI	Multistem (3+3)	REMOVE	SIGNIFICANT	N/A	VOLUNTEER	1	NO
67	6	SS	<i>Gleditsia triacanthos</i>	Honey locust	GOOD	ROW		PRESERVE	MINOR	CLEAN	VOLUNTEER	1	NO
68	9	MULTI	<i>Robinia pseudoacacia</i>	Black locust	GOOD	PRI	Multistem (3+3+2+1)	REMOVE	SIGNIFICANT	N/A	VOLUNTEER	1	NO
69	6	MULTI	<i>Gleditsia triacanthos</i>	Honey locust	GOOD	ROW	Multistem (3+3)	PRESERVE	MINOR	CLEAN	VOLUNTEER	1	NO
88	18	MULTI	<i>Robinia pseudoacacia</i>	Black locust	GOOD	PRI	Multistem (3+3+3+3+3+3)	REMOVE	SIGNIFICANT	N/A	VOLUNTEER	2	NO

Tree ID #	DBH (")	Form	Scientific Name	Tree Species	Condition	Owner/MGR	Condition Comments	Recommendation	Conflict	Additional Maintenance	Mitigation	Mitigation for Flora Permit	Potential Bat Tree Habitat
86	7	SS	<i>Ulmus pumila</i>	Siberian elm	GOOD	ROW		REMOVE	SIGNIFICANT	N/A	VOLUNTEER	1	NO
87	6	MULTI	<i>Robinia pseudoacacia</i>	Black locust	GOOD	PRI	Multistem (3+3)	REMOVE	SIGNIFICANT	N/A	VOLUNTEER	1	NO
89	6	SS	<i>Acer rubrum</i>	Red maple	GOOD	PRI		REMOVE	SIGNIFICANT	N/A	VOLUNTEER	1	NO
90	8	SS	<i>Ulmus pumila</i>	Siberian elm	GOOD	ROW		REMOVE	SIGNIFICANT	N/A	VOLUNTEER	1	NO
91	7	SS	<i>Ulmus pumila</i>	Siberian elm	GOOD	PRI		REMOVE	SIGNIFICANT	N/A	VOLUNTEER	1	NO
92	6	SS	<i>Ulmus pumila</i>	Siberian elm	GOOD	ROW		REMOVE	SIGNIFICANT	N/A	VOLUNTEER	1	NO
167	36	SS	<i>Platanus occidentalis</i>	American sycamore	GOOD	ROW		PRESERVE	MINOR	N/A	VOLUNTEER	3	NO
168	6	SS	<i>Ailanthus altissima</i>	Tree-of-heaven	NUSIANCE	PRI	Nuisance species	REMOVE	NUSIANCE	N/A	VOLUNTEER	1	NO
169	10	SS	<i>Ailanthus altissima</i>	Tree-of-heaven	NUSIANCE	PRI	Nuisance species	REMOVE	NUSIANCE	N/A	VOLUNTEER	1	NO
170	6	SS	<i>Ailanthus altissima</i>	Tree-of-heaven	NUSIANCE	PRI	Nuisance species	REMOVE	NUSIANCE	N/A	VOLUNTEER	1	NO
171	10	MULTI	<i>Ailanthus altissima</i>	Tree-of-heaven	NUSIANCE	PRI	Nuisance species, Multistem (6+4)	REMOVE	NUSIANCE	N/A	VOLUNTEER	1	NO
172	9	SS	<i>Robinia pseudoacacia</i>	Black locust	GOOD	ROW		PRESERVE	MINOR	N/A	VOLUNTEER	1	NO
173	9	SS	<i>Platanus occidentalis</i>	American sycamore	GOOD	PRI		PRESERVE	MINOR	N/A	VOLUNTEER	1	NO
174	20	SS	<i>Populus deltoides</i>	Eastern cottonwood	GOOD	ROW		REMOVE	SIGNIFICANT	N/A	VOLUNTEER	2	NO
175	15	MULTI	<i>Platanus occidentalis</i>	American sycamore	GOOD	PRI	Multistem (7+8)	PRESERVE	MINOR	N/A	VOLUNTEER	2	NO
176	12	SS	<i>Ulmus pumila</i>	Siberian elm	GOOD	ROW		REMOVE	SIGNIFICANT	N/A	VOLUNTEER	1	NO
177	6	SS	<i>Platanus occidentalis</i>	American sycamore	GOOD	PRI		PRESERVE	MINOR	N/A	VOLUNTEER	1	NO
178	6	SS	<i>Platanus occidentalis</i>	American sycamore	GOOD	ROW		REMOVE	SIGNIFICANT	N/A	VOLUNTEER	1	NO
179	8	SS	<i>Ailanthus altissima</i>	Tree-of-heaven	NUSIANCE	PRI	Nuisance species	REMOVE	NUSIANCE	N/A	VOLUNTEER	1	NO
180	12	MULTI	<i>Ailanthus altissima</i>	Tree-of-heaven	NUSIANCE	ROW	Nuisance species, Multistem (5+4+3)	REMOVE	NUSIANCE	N/A	VOLUNTEER	1	NO
181	10	SS	<i>Acer negundo</i>	Box elder	FAIR	PRI	Needs some attention, tree growing in fence	REMOVE	SIGNIFICANT	N/A	VOLUNTEER	1	NO
182	9	SS	<i>Ailanthus altissima</i>	Tree-of-heaven	NUSIANCE	PRI	Nuisance species	PRESERVE	NUSIANCE	N/A	VOLUNTEER	1	NO
183	8	SS	<i>Ailanthus altissima</i>	Tree-of-heaven	NUSIANCE	PRI	Nuisance species	REMOVE	NUSIANCE	N/A	VOLUNTEER	1	NO
351	14	SS	<i>Ulmus pumila</i>	Siberian elm	GOOD	PRI		PRESERVE	MINOR	N/A	PLANTED	2	NO
358	7	SS	<i>Ulmus pumila</i>	Siberian elm	GOOD	PRI		PRESERVE	MINOR	N/A	VOLUNTEER	1	YES

Study Area  
1 Tree with Tree ID No.



**Sherman Park Area - Indianapolis, Marion Co., IN  
Tree Survey (Map 7 of 13)**

Tree ID #	DBH (")	Form	Scientific Name	Tree Species	Condition	Owner/MGR	Condition Comments	Recommendation	Conflict	Additional Maintenance	Mitigation	Mitigation for Flora Permit	Potential Bat Tree Habitat
26	24	MULTI	<i>Morus alba</i>	White mulberry	NUSIANCE	PRI	Nuisance species, Multistem (8+7+5+4)	REMOVE	NUSIANCE	N/A	VOLUNTEER	2	NO
27	8	SS	<i>Ailanthus altissima</i>	Tree-of-heaven	NUSIANCE	ROW	Nuisance species	REMOVE	NUSIANCE	N/A	VOLUNTEER	1	NO
28	6	MULTI	<i>Ailanthus altissima</i>	Tree-of-heaven	NUSIANCE	PRI	Nuisance species, Multistem (3+3)	REMOVE	NUSIANCE	N/A	VOLUNTEER	1	NO
29	25	MULTI	<i>Ailanthus altissima</i>	Tree-of-heaven	NUSIANCE	ROW	Nuisance species, Multistem (14+6+5)	REMOVE	NUSIANCE	N/A	VOLUNTEER	3	NO
30	6	SS	<i>Ailanthus altissima</i>	Tree-of-heaven	NUSIANCE	PRI	Nuisance species	REMOVE	NUSIANCE	N/A	VOLUNTEER	1	NO
31	6	SS	<i>Ailanthus altissima</i>	Tree-of-heaven	NUSIANCE	ROW	Nuisance species	REMOVE	NUSIANCE	N/A	VOLUNTEER	1	NO
32	8	MULTI	<i>Ulmus pumila</i>	Siberian elm	GOOD	PRI	Multistem (5+3)	REMOVE	SIGNIFICANT	N/A	VOLUNTEER	1	NO
33	10	MULTI	<i>Ulmus pumila</i>	Siberian elm	GOOD	ROW	Multistem (5+5)	REMOVE	SIGNIFICANT	N/A	VOLUNTEER	1	NO
34	9	SS	<i>Ulmus pumila</i>	Siberian elm	GOOD	PRI		REMOVE	SIGNIFICANT	N/A	VOLUNTEER	1	NO
35	15	MULTI	<i>Ulmus pumila</i>	Siberian elm	GOOD	ROW	Multistem (7+6+2)	REMOVE	SIGNIFICANT	N/A	VOLUNTEER	2	
36	22	MULTI	<i>Ailanthus altissima</i>	Tree-of-heaven	NUSIANCE	PRI	Nuisance species, Multistem (7+5+4+6)	REMOVE	NUSIANCE	N/A	VOLUNTEER	2	NO
37	9	MULTI	<i>Ailanthus altissima</i>	Tree-of-heaven	NUSIANCE	ROW	Nuisance species, Multistem (5+4)	REMOVE	NUSIANCE	N/A	VOLUNTEER	1	NO
38	17	MULTI	<i>Ailanthus altissima</i>	Tree-of-heaven	NUSIANCE	PRI	Nuisance species, Multistem (6+6+5)	REMOVE	NUSIANCE	N/A	VOLUNTEER	2	NO
39	10	MULTI	<i>Ailanthus altissima</i>	Tree-of-heaven	NUSIANCE	ROW	Nuisance species, Multistem (7+3)	REMOVE	NUSIANCE	N/A	VOLUNTEER	1	NO
40	8	MULTI	<i>Ulmus pumila</i>	Siberian elm	GOOD	PRI	Multistem (4+4)	REMOVE	SIGNIFICANT	N/A	VOLUNTEER	1	NO
41	10	MULTI	<i>Ailanthus altissima</i>	Tree-of-heaven	NUSIANCE	ROW	Nuisance species, Multistem (8+2)	REMOVE	NUSIANCE	N/A	VOLUNTEER	1	NO
42	7	SS	<i>Ulmus pumila</i>	Siberian elm	GOOD	PRI		REMOVE	SIGNIFICANT	N/A	VOLUNTEER	1	NO
43	13	MULTI	<i>Acer negundo</i>	Box elder	GOOD	ROW	Multistem (6+4+3)	PRESERVE	MINOR	THIN	VOLUNTEER	1	NO
44	9	MULTI	<i>Ulmus pumila</i>	Siberian elm	GOOD	PRI	Multistem (6+3)	REMOVE	SIGNIFICANT	N/A	VOLUNTEER	1	NO
45	10	MULTI	<i>Ailanthus altissima</i>	Tree-of-heaven	NUSIANCE	ROW	Nuisance species, Multistem (6+4)	REMOVE	NUSIANCE	N/A	VOLUNTEER	1	NO
46	6	SS	<i>Ulmus pumila</i>	Siberian elm	FAIR	PRI	Needs some attention	REMOVE	SIGNIFICANT	N/A	VOLUNTEER	1	NO
47	11	MULTI	<i>Ailanthus altissima</i>	Tree-of-heaven	NUSIANCE	ROW	Nuisance species, Multistem (6+5)	REMOVE	NUSIANCE	N/A	VOLUNTEER	1	NO
48	15	MULTI	<i>Ulmus pumila</i>	Siberian elm	POOR	PRI	More than 50% of tree is affected, Multistem (6+4+5)	REMOVE	SIGNIFICANT	N/A	VOLUNTEER	2	NO
49	6	MULTI	<i>Populus deltoides</i>	Eastern cottonwood	GOOD	PRI	Multistem (3+3)	REMOVE	SIGNIFICANT	N/A	VOLUNTEER	1	NO
50	9	MULTI	<i>Populus deltoides</i>	Eastern cottonwood	FAIR	PRI	Needs some attention, Multistem (4+3+2)	REMOVE	SIGNIFICANT	N/A	VOLUNTEER	1	NO
52	7	SS	<i>Populus deltoides</i>	Eastern cottonwood	GOOD	PRI		REMOVE	SIGNIFICANT	N/A	VOLUNTEER	1	NO
55	7	SS	<i>Cercis canadensis</i>	Redbud	GOOD	ROW		PRESERVE	MINOR	CLEAN	VOLUNTEER	1	NO
97	14	MULTI	<i>Populus deltoides</i>	Eastern cottonwood	GOOD	PRI	Multistem (7+5+2)	REMOVE	SIGNIFICANT	N/A	VOLUNTEER	2	NO
241	15	MULTI	<i>Catalpa speciosa</i>	Northern catalpa	GOOD	ROW	Multistem (2+3+10)	REMOVE	SIGNIFICANT	N/A	VOLUNTEER	2	NO



Sherman Park Area - Indianapolis, Marion Co., IN  
**Tree Survey (Map 8 of 13)**

 Study Area

 Tree with Tree ID No.



Tree ID #	DBH (")	Form	Scientific Name	Tree Species	Condition	Owner/MGR	Condition Comments	Recommendation	Conflict	Additional Maintenance	Mitigation	Mitigation for Flora Permit	Potential Bat Tree Habitat
8	11	MULTI	<i>Ulmus pumila</i>	Siberian elm	FAIR	PRI	Needs some attention, Multistem (7+4)	REMOVE	SIGNIFICANT	N/A	VOLUNTEER	1	NO
9	9	SS	<i>Ulmus pumila</i>	Siberian elm	FAIR	PRI	Needs some attention	REMOVE	SIGNIFICANT	N/A	VOLUNTEER	1	NO
10	9	SS	<i>Ulmus pumila</i>	Siberian elm	GOOD	ROW		REMOVE	SIGNIFICANT	N/A	VOLUNTEER	1	NO
11	6	SS	<i>Robinia pseudoacacia</i>	Black locust	GOOD	ROW		REMOVE	SIGNIFICANT	N/A	VOLUNTEER	1	NO
12	6	SS	<i>Robinia pseudoacacia</i>	Black locust	GOOD	PRI		REMOVE	SIGNIFICANT	N/A	VOLUNTEER	1	NO
13	22	MULTI	<i>Cercis canadensis</i>	Redbud	GOOD	ROW	Multistem (12+8+2)	PRESERVE	MINOR	REDUCE	VOLUNTEER	2	NO
14	7	SS	<i>Cercis canadensis</i>	Redbud	GOOD	PRI		PRESERVE	MINOR	REDUCE	VOLUNTEER	1	NO
15	9	SS	<i>Ailanthus altissima</i>	Tree-of-heaven	NUSIANCE	ROW	Nuisance species	REMOVE	NUSIANCE	N/A	VOLUNTEER	1	NO
16	10	SS	<i>Ulmus pumila</i>	Siberian elm	GOOD	PRI		REMOVE	SIGNIFICANT	N/A	VOLUNTEER	1	NO
17	8	SS	<i>Ulmus pumila</i>	Siberian elm	GOOD	ROW		REMOVE	SIGNIFICANT	N/A	VOLUNTEER	1	NO
18	8	SS	<i>Ulmus pumila</i>	Siberian elm	GOOD	PRI		REMOVE	SIGNIFICANT	N/A	VOLUNTEER	1	NO
19	9	SS	<i>Ulmus pumila</i>	Siberian elm	GOOD	ROW		REMOVE	SIGNIFICANT	N/A	VOLUNTEER	1	NO
20	9	SS	<i>Acer negundo</i>	Box elder	POOR	ROW	Less than 25% of crown is alive	REMOVE	SIGNIFICANT	N/A	VOLUNTEER	1	NO
21	13	MULTI	<i>Ulmus pumila</i>	Siberian elm	GOOD	ROW	Multistem (7+6)	REMOVE	SIGNIFICANT	N/A	VOLUNTEER	2	NO
22	8	SS	<i>Ulmus pumila</i>	Siberian elm	GOOD	ROW		REMOVE	SIGNIFICANT	N/A	VOLUNTEER	1	NO
23	9	SS	<i>Ulmus pumila</i>	Siberian elm	FAIR	PRI	Needs some attention	REMOVE	SIGNIFICANT	N/A	VOLUNTEER	1	NO
24	6	SS	<i>Morus alba</i>	White mulberry	NUSIANCE	PRI	Nuisance species	REMOVE	NUSIANCE	N/A	VOLUNTEER	1	NO
25	8	SS	<i>Acer rubrum</i>	Red maple	GOOD	ROW		PRESERVE	MINOR	REDUCE	VOLUNTEER	1	NO
54	27	MULTI	<i>Ulmus pumila</i>	Siberian elm	FAIR	PRI	Needs some attention, Multistem (9+8+6+4)	REMOVE	SIGNIFICANT	N/A	VOLUNTEER	3	NO



March 26, 2021

Mr. Piers Kirby  
Principal Program Manager  
City of Indianapolis, Indiana  
Department of Metropolitan Development  
Brownfield Redevelopment Program  
200 East Washington Street, Room 2042  
Indianapolis, Indiana 46204



**Re: Test Pit Soils Sampling and Analysis Memorandum  
Former Thomson Consumer Electronics / Former Radio Corporation of America  
Facility / Sherman Park Redevelopment Project Site  
600 / 604 North Sherman Drive in Indianapolis, Indiana  
Heartland Project #5102-19-03**

Dear Mr. Kirby:

Heartland Environmental Associates, Inc. (Heartland) is pleased to provide the City of Indianapolis Department of Metropolitan Development (City DMD) with this memorandum documenting sampling of soils collected from test pits at the above referenced redevelopment site in Indianapolis, Indiana. This sampling and analysis investigation was conducted in concert with geotechnical analysis of the materials, and was conducted to evaluate for the presence and/or absence of chemical impacts to stockpiled soil piles staged on the southern, eastern and southeastern portions of the project site. The stockpiled soil piles are commonly referred to as the “Taupe Mountain” spoils.

This sampling and analysis investigation was developed after consultation with the City DMD and was specifically conducted to determine whether soils present in the stockpiles contain chemical impacts which would require special disposal.

Provided below is a description of the sampling and analysis activities, the findings, conclusions and recommendations. A site location map is provided as Figure 1. A site map depicting the site and associated parcel boundaries is provided as Figure 2.

## **1.0 Stockpile Test Pitting**

### **1.1 Sampling Methodology**

On January 6, 2021, Heartland personnel provided oversight for the excavation of eight (8) test pits at the subject site in select areas located throughout the southern, eastern and southeastern portion of the project site. Test pit locations were selected to provide a representative grid of the large stockpiles present. Test pit locations were coordinated with Earth Exploration, Inc. (EEI), and were also selected to assist in gathering geotechnical data of the materials. It should be noted that EEI was mobilized to the site by the City DMD to conduct geotechnical sampling and analysis of soils in order to determine the suitability of reusing the materials for structural purposes. Heartland provided oversight and collected split samples for environmental analysis in concert with the geotechnical sampling activities. A site map depicting the test pit locations, as generated by EEI, is provided as Figure 3.

*“Your dependable partner for environmental compliance”*

An appropriately sized excavator was mobilized to the site to excavate down to the base of the stockpiles, generally determined to be the foundation of the former site building. Soil samples were logged in approximate 5-foot deep intervals to the base of each pit, which extended to depths ranging from 6 feet to 17 feet below ground surface (bgs). EEI provided logging services of these materials as part of their geotechnical analysis, the results of which were provided under separate cover to the City DMD. Photographs taken during test pitting activities are provided in Attachment A.

Soils in the areas of investigation were consistent with soils previously identified as part of historical investigations at the subject site. The soil samples were inspected for indications of chemical impacts, such as staining and odors. The soil samples collected from the pits were continuously screened for soil vapors using a pre-calibrated photo-ionization detector (PID) organic vapor monitor. Based on the results of this screening, vapor readings were not registered for any of the soils subject to screening as part of the test pitting activities.

A total of 23 soil samples were collected for laboratory analysis. Soil samples were collected in composite 5-foot to 7-foot intervals from each pit, extending to the base of the test pit (maximum 17 feet bgs in Test Pit #5). Soil samples were submitted for laboratory analysis of volatile organic compounds (VOCs) using USEPA SW-846 Method 8260, polynuclear aromatic hydrocarbons (PAHs) using USEPA SW-846 Method 8270 via Selected Ion Monitoring (SIM) and Resource Conservation and Recovery Act (RCRA) 8 Metals using USEPA SW-846 Method 6010B/7471. Soil samples collected for analysis of VOCs were collected utilizing USEPA field sampling methodology 5035A.

Groundwater was not sampled as part of this investigation as test pitting was limited to the stockpiled soils placed over historic building foundations.

All collected soil samples were placed into laboratory prepared sample containers and stored in a secured, iced cooler (at <6°C). Samples were transported to Pace Analytical Services, LLC in Indianapolis, Indiana and submitted for laboratory analysis under Heartland's chain of custody protocol. All removed soils were placed back into their respective pits after completion of sampling activities.

## **2.0 Soil Analytical Results**

Laboratory analytical results for the soil samples collected were compared to the Indiana Department of Environmental Management (IDEM) Remediation Closure Guide (RCG) Appendix A Screening Levels (amended March 2020) and are presented in Tables 1 through 3. The laboratory certificate of analysis and associated chain of custody documentation is provided in Attachment B.

### **2.1 Volatile Organic Compounds**

VOC impacts were not encountered in any of the soil samples that exceeded IDEM RCG Residential Migration to Groundwater Screening Levels (MTGSLs) and/or Residential Direct Contact Screening Levels (RDCSLs). VOCs in soil analytical results are summarized in Table 1.

### **2.2 Polycyclic Aromatic Hydrocarbons**

Numerous PAH chemical constituents were encountered in several soil samples collected that exceeded laboratory reporting limits. These constituents included benzo(a)anthracene, benzo(a)pyrene, 1-methylnaphthalene, 2-methylnaphthalene and naphthalene. However, concentrations of these constituents were not encountered in any soil sample collected that exceeded IDEM RCG MTGSLs and/or IDEM RCG RDCSLs. PAHs in soil analytical results are summarized

in Table 2.

## 2.3 Metals

Arsenic impacts were encountered in 20 of the 23 soil samples collected that exceeded IDEM RCG MTGSLs, with concentrations ranging from 6.2 parts per million (ppm) to 11.1 ppm. Concentrations were further encountered in two (2) soil samples that exceeded IDEM RCG RDCSLs. Arsenic impacts were not encountered in any soil sample that exceeded IDEM RCG Commercial/Industrial Direct Contact Screening Levels (CDCSLs).

No other metals constituents were encountered that exceeded IDEM RCG MTGSLs and/or IDEM RCG RDCSLs. Metals in soil analytical results are summarized in Table 3.

## 3.0 Conclusions & Recommendations

Heartland has completed sampling and analysis activities that included the excavation of eight (8) test pits of stockpiled soils and associated soil sampling of stockpiled materials at the former Thomson Consumer Electronics / former Radio Corporation of America (RCA) facility located at 600 – 604 North Sherman Drive in Indianapolis, Indiana. The objective of this investigation was to provide additional soil sampling data of the stockpiled materials commonly referred to as “Taupe Mountain” and to further evaluate disposal alternatives as it relates to these stockpiled soils. This investigation was conducted in concert with geotechnical evaluation of these soils, which was conducted to evaluate the suitability of the materials for reuse.

Based on the results of this investigation, VOC and/or PAH impacts were not encountered in sampled soils that exceeded IDEM RCG MTGSLs and/or IDEM RCG RDCSLs. Arsenic impacts were encountered in soil samples that exceeded both IDEM RCG MTGSLs and IDEM RCG RDCSLs. Impacts of arsenic were not encountered in that exceeded IDEM RCG CDCSLs.

Based on the results of this investigation, low-level concentrations of various PAH chemical constituents are present in stockpiled soils located at the site. These sample results are consistent with those encountered during previously completed investigations of these materials in 2017. Concentrations encountered as part of these investigation did not exceed present day IDEM RCG Screening Levels. Although these select PAH concentrations are low level in nature, these materials may pose a potential threat to subsurface media at the site.

Elevated arsenic concentrations encountered in soils are likely attributable to naturally occurring concentrations of arsenic encountered in Marion County and throughout the State of Indiana. These elevated arsenic concentrations do not appear to be present as a result of historic manufacturing operations, as no outlier concentrations of arsenic exceeding presumed background levels were encountered. These arsenic concentrations are consistent with concentrations encountered as part of previously completed investigations.

The potential exists that IDEM will require that the stockpiled material be removed and disposed of at an offsite landfill as “impacted material” prior to any future redevelopment of the site. At this time, consultation with IDEM has not taken place. Furthermore, geotechnical sampling evaluation is currently ongoing, with a determination of the suitability of the reuse of the stockpiled materials still subject to this evaluation.

Heartland is prepared to further assist the City DMD in its evaluation of this project site and to further assist the City DMD in its proposed redevelopment planning.

## 4.0 Disclaimer

This investigative report was prepared in accordance with generally accepted principles and practices in the environmental consulting field. Conclusions and recommendations expressed herein were developed from site evaluation and limited research, and we are not responsible for unrecorded data pertaining to this site. Heartland makes no warranties, expressed or implied, as to the fitness or merchantability of said property for any particular purpose, and we are not responsible for independent conclusions or opinions made by others based on this report.

This investigation was limited to the areas specified in the report. Heartland is not responsible for the identification of environmental conditions that may be present outside this evaluated area, chemical parameters other than those analyzed for or at depths greater than that to which soil borings were advanced.

Any opinions and/or recommendations presented apply to site conditions existing at the time of performance of services. We are unable to report on or accurately predict events, which may impact the site, following performance of the described services, whether occurring naturally or caused by external forces. We assume no responsibility for conditions we are not authorized to investigate, or conditions not generally recognized as predictable at the time services are performed. Heartland makes no recommendations in regard to the sale, purchase, lease, construction, or other improvements on the subject property.

Heartland is not responsible for unrecorded data pertaining to the property, nor are we responsible for independent conclusions or opinions made by others of this report. Heartland makes no warranties, expressed or implied, as to fitness of this report for any particular purpose.

We are not responsible for changes in applicable regulatory standards, practices, or regulations following performance of services.

Should you have any questions regarding this letter report, please contact Nivas R. Vijay at (574) 289-1191.

Sincerely,



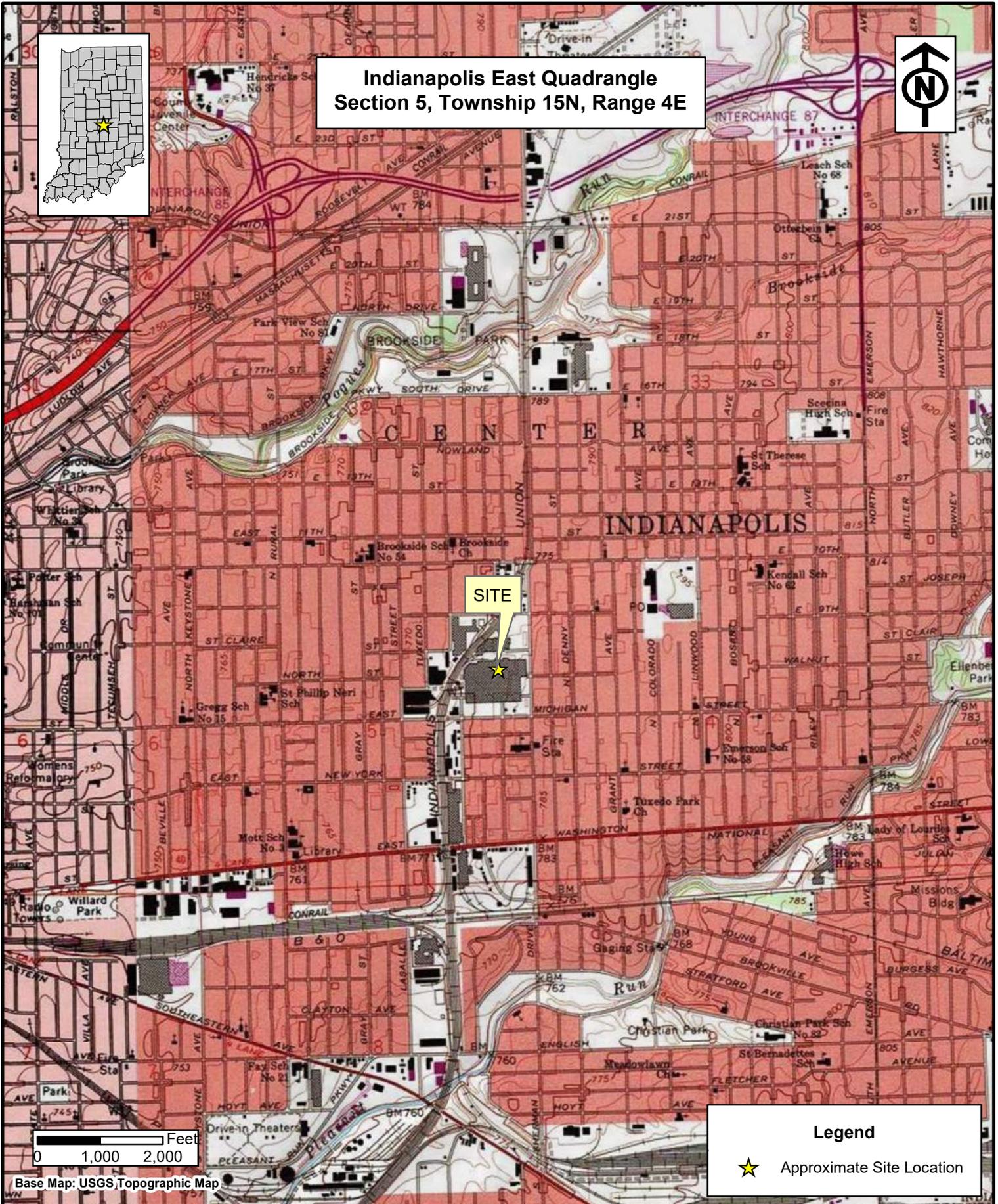
Nivas R. Vijay, CHMM  
Senior Project Manager / Principal

*Enclosures:*      *Figures*  
                         *Tables*  
                         *Attachment A – Site Photographic Record*  
                         *Attachment B – Laboratory Certificate of Analysis*

## **FIGURES**



Indianapolis East Quadrangle  
Section 5, Township 15N, Range 4E



0 1,000 2,000 Feet

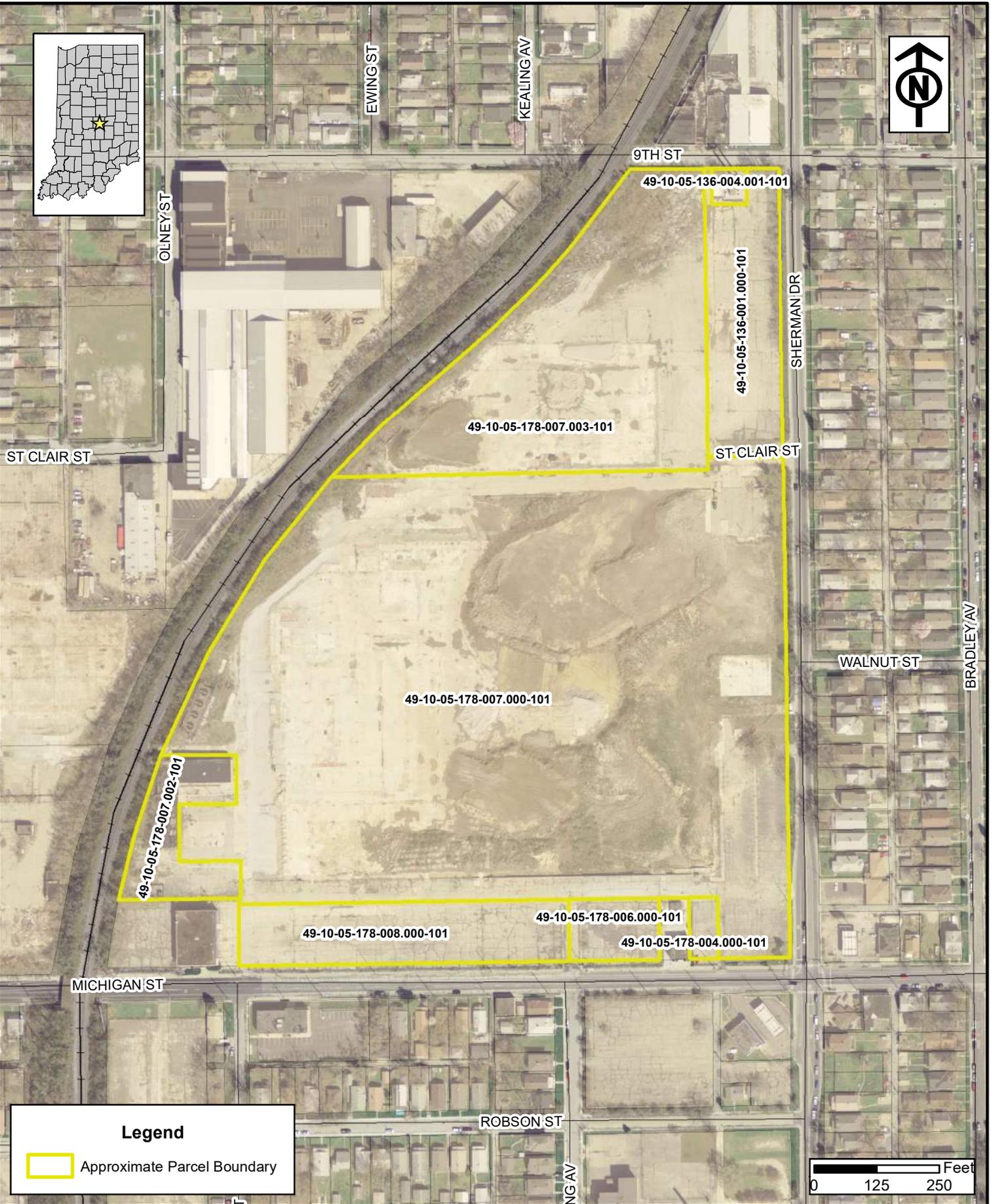
Base Map: USGS Topographic Map

**Legend**  
★ Approximate Site Location

**HEA** Heartland Environmental Associates, Inc.  
3410 Mishawaka Avenue, South Bend, Indiana 46615  
1324 East 16th Street, Indianapolis, Indiana 46202

FIGURE 1  
SITE LOCATION MAP  
FORMER THOMPSON ELECTRONICS / FORMER GE  
SHERMAN PARK FACILITY  
600-604 NORTH SHERMAN DRIVE  
INDIANAPOLIS, INDIANA

Date:  
3/1/2021  
Scale:  
1"=2,000'  
Drawn By:  
NV



**Legend**

 Approximate Parcel Boundary



**HEA** Heartland Environmental Associates, Inc.  
 3410 Mishawaka Avenue, South Bend, Indiana 46615  
 1324 East 16th Street, Indianapolis, Indiana 46202

**FIGURE 2**  
 SITE LOCATION MAP W/PARCEL BOUNDARIES  
 FORMER THOMPSON ELECTRONICS / FORMER GE  
 SHERMAN PARK FACILITY  
 600-604 NORTH SHERMAN DRIVE  
 INDIANAPOLIS, INDIANA

Date:  
3/1/2021

Scale:  
1"=250'

Drawn By:  
NV

## **TABLES**



**Table 1**  
**VOCs in Soil Analytical Results**  
**Former RCA / Thomson Consumer Electronics - Sherman Park Redevelopment Site**  
**"Taupe Mountain" Soil Pile**  
**604 North Sherman Drive**  
**Indianapolis, Indiana**

Sample ID	Date Sampled	Sample Depth (feet)	Acetone	Benzene	2-Butanone (MEK)	Carbon tetrachloride	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Ethylbenzene	n-Hexane	2-Hexanone	Isopropylbenzene (Cumene)	p-Isopropyltoluene	Methylene Chloride	Methyl-tert-butyl ether	n-Propylbenzene	Tetrachloroethene	Toluene	1,1,1-Trichloroethane	Trichloroethene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl chloride	Xylene (Total)	
IDEM RCG Residential Migration to GW			57	0.051	23	0.039	0.41	0.62	16	210	0.18	15	-	0.025	0.63	25	0.045	14	1.4	0.036	1.6	1.7	0.014	200	
IDEM RCG Residential Direct Contact			85,000	17	28,000	9.1	220	1,900	81	140	280	270	-	490	660	260	110	820	640	5.7	220	180	0.83	260	
IDEM RCG Commercial Direct Contact			100,000	51	28,000	29.0	2,300	1,900	250	140	1,300	270	-	3,200	2,100	260	170	820	640	19	220	180	17	260	
PIT - 1	1/6/2021	0' - 5'	<0.090	<0.0045	<0.023	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.090	<0.0045	<0.0045	<0.018	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0090	
		5' - 10'	<0.090	<0.0045	<0.023	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.090	<0.0045	<0.0045	<0.018	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0090
		10' - 15'	<0.093	<0.0046	<0.023	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.093	<0.0046	<0.0046	<0.019	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0093
PIT - 2	1/6/2021	0' - 5'	<0.096	<0.0048	<0.024	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.096	<0.0048	<0.0048	<0.019	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0096	
		5' - 10'	<0.10	<0.0051	<0.025	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.10	<0.0051	<0.0051	<0.020	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.10
		10' - 15'	<0.12	<0.0058	<0.029	<0.0058	<0.0058	<0.0058	<0.0058	<0.0058	<0.12	<0.0058	<0.0058	<0.023	<0.0058	<0.0058	<0.0058	<0.0058	<0.0058	<0.0058	<0.0058	<0.0058	<0.0058	<0.0058	<0.0058
PIT - 3	1/6/2021	0' - 5'	<0.093	<0.0046	<0.023	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.093	<0.0046	<0.0046	<0.019	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0093
		5' - 10'	<0.090	<0.0045	<0.022	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.090	<0.0045	<0.0045	<0.018	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0090
		10' - 15'	<0.091	<0.0046	<0.023	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.091	<0.0046	<0.0046	<0.018	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0091
		15' - 21'	<0.079	<0.0039	<0.020	<0.0039	<0.0039	<0.0039	<0.0039	<0.0039	<0.079	<0.0039	<0.0039	<0.016	<0.0039	<0.0039	<0.0039	<0.0039	<0.0039	<0.0039	<0.0039	<0.0039	<0.0039	<0.0039	<0.0039
PIT - 4	1/6/2021	0' - 5'	<0.10	<0.0050	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	<0.10	<0.0050	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.10
		5' - 10'	<0.085	<0.0043	<0.021	<0.0043	<0.0043	<0.0043	<0.0043	<0.0043	<0.085	<0.0043	<0.0043	<0.017	<0.0043	<0.0043	<0.0043	<0.0043	<0.0043	<0.0043	<0.0043	<0.0043	<0.0043	<0.0043	<0.0085
		10' - 16'	<0.10	<0.0052	<0.026	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.10	<0.0052	<0.0052	<0.021	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.10
PIT - 5	1/6/2021	0' - 5'	<0.090	<0.0045	<0.023	<0.0045	<0.0045	<0.0045	<0.0045	<0.090	<0.0045	<0.0045	<0.018	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0090
		5' - 10'	<0.091	<0.0045	<0.023	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.091	<0.0045	<0.0045	<0.018	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0091
		10' - 17'	<0.13	<0.0063	<0.032	<0.0063	<0.0063	<0.0063	<0.0063	<0.0063	<0.13	<0.0063	<0.0063	<0.025	<0.0063	<0.0063	<0.0063	<0.0063	<0.0063	<0.0063	<0.0063	<0.0063	<0.0063	<0.0063	<0.13
PIT - 6	1/6/2021	0' - 5'	<0.098	<0.0049	<0.024	<0.0049	<0.0049	<0.0049	<0.0049	<0.098	<0.0049	<0.0049	<0.020	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0098
		5' - 10'	<0.088	<0.0044	<0.022	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044	<0.088	<0.0044	<0.0044	<0.018	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044	<0.0088
		10' - 15'	<0.086	<0.0043	<0.021	<0.0043	<0.0043	<0.0043	<0.0043	<0.0043	<0.086	<0.0043	<0.0043	<0.017	<0.0043	<0.0043	<0.0043	<0.0043	<0.0043	<0.0043	<0.0043	<0.0043	<0.0043	<0.0043	<0.0086
PIT - 7	1/6/2021	0' - 5'	0.13	<0.0072	<0.036	<0.0072	<0.0072	<0.0072	<0.0072	<0.14	<0.0072	<0.0072	<b>&lt;0.029</b>	<0.0072	<0.0072	<0.0072	<0.0072	<0.0072	<0.0072	<0.0072	<0.0072	<0.0072	<0.0072	<0.014	
		5' - 10'	0.14	<0.0053	<0.026	<0.0053	<0.0053	<0.0053	<0.0053	<0.11	<0.0053	<0.0053	<0.021	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.011	
		10' - 15'	<0.10	<0.0052	<0.026	<0.0052	<0.0052	<0.0052	<0.0052	<0.10	<0.0052	<0.0052	<0.021	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.10
PIT - 8	1/6/2021	0' - 6'	<0.13	<0.0063	<0.031	<0.0063	<0.0063	<0.0063	<0.0063	<0.13	<0.0063	<0.0063	<0.025	<0.0063	<0.0063	<0.0063	<0.0063	<0.0063	<0.0063	<0.0063	<0.0063	<0.0063	<0.0063	<0.13	

Notes: Values presented in parts per million (ppm) or mg/kg

Default Closure levels based on IDEM Remediation Closure Guide Technical Document issued March 2012 and amended March 2020

**Bold cell** denotes value exceeds IDEM RCG Residential Migration to Groundwater Levels

**Shaded cell** denotes value exceeds IDEM RCG Residential Direct Contact Screening Levels

VOC Constituents not listed were identified below laboratory detection limits

Non-detect concentrations encountered exceeding IDEM RCG Default Criteria are a result of laboratory dilution methods, but do not necessarily represent chemical impacts.

**Table 2**  
**PAHs in Soil Analytical Results**  
**Former RCA / Thomson Consumer Electronics - Sherman Park Redevelopment Site**  
**"Taupe Mountain" Soil Pile**  
**604 North Sherman Drive**  
**Indianapolis, Indiana**

Sample ID	Date Sampled	Sample Depth (feet)	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene	
IDEM RCG Residential Migration to GW			110	-	1,200	2.1	4.7	60	-	590	1,800	19	1,800	110	200	1.2	3.7	0.110	-	260	
IDEM RCG Residential Direct Contact			5,000	-	25,000	15	1.5	15	-	150	1,500	1.5	3,400	3,400	15	250	340	53	-	2,500	
IDEM RCG Commercial Direct Contact			45,000	-	100,000	210	21	210	-	2,100	21,000	21	30,000	30,000	210	390	3,000	170	-	23,000	
PIT - 1	1/6/2021	0' - 5'	0.0059	0.091	0.12	0.15	0.22	0.34	0.17	0.14	0.21	0.036	0.21	0.011	0.15	0.066	0.087	0.072	0.12	0.22	
		5' - 10'	0.30	0.14	0.38	0.68	0.66	0.97	0.38	0.41	0.80	0.086	1.3	0.38	0.35	0.15	0.19	0.083	1.2	1.2	
		10' - 15'	0.052	0.074	0.21	0.63	0.65	0.90	0.36	0.27	0.66	0.071	1.2	0.054	0.30	0.045	0.062	0.072	0.78	1.1	
PIT - 2	1/6/2021	0' - 5'	<0.0060	<0.0060	<0.0060	0.0096	0.0090	0.014	0.0084	<0.0060	0.011	<0.0060	0.017	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	0.010	0.015	
		5' - 10'	<0.0058	0.014	0.021	0.12	0.14	0.22	0.095	0.093	0.16	0.016	0.29	<0.0058	0.080	0.0080	0.011	0.010	0.11	0.27	
		10' - 15'	<0.0059	0.026	0.040	0.18	0.21	0.29	0.12	0.13	0.23	0.023	0.30	0.011	0.10	<0.0059	<0.0059	<0.0059	0.11	0.29	
PIT - 3	1/6/2021	0' - 5'	<0.0054	<0.0054	<0.0054	<0.0054	<0.0054	0.0056	<0.0054	<0.0054	0.0077	<0.0054	<0.0054	<0.0054	<0.0054	<0.0054	<0.0054	<0.0054	<0.0054	<0.0054	
		5' - 10'	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056	0.0082	0.0057	<0.0056	0.0073	<0.0056	0.013	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056	0.010	
		10' - 15'	<0.0056	<0.0056	0.0084	0.025	0.023	0.033	0.017	0.012	0.028	<0.0056	0.052	<0.0056	0.013	<0.0056	<0.0056	<0.0056	<0.0056	0.037	0.045
		15' - 21'	<0.0057	<0.0057	<0.0057	0.0093	0.011	0.015	0.0076	<0.0057	0.011	<0.0057	0.015	<0.0057	0.0061	<0.0057	<0.0057	<0.0057	<0.0057	0.0079	0.014
PIT - 4	1/6/2021	0' - 5'	<0.0061	<0.0061	<0.0061	<0.0061	<0.0061	<0.0061	<0.0061	<0.0061	<0.0061	<0.0061	<0.0061	<0.0061	<0.0061	<0.0061	<0.0061	<0.0061	<0.0061	<0.0061	
		5' - 10'	<0.0057	<0.0057	0.0059	0.047	0.052	0.080	0.033	0.034	0.068	0.0058	0.14	<0.0057	0.029	<0.0057	<0.0057	<0.0057	0.061	0.12	
		10' - 16'	<0.0062	<0.0062	0.0080	0.029	0.032	0.052	0.019	0.016	0.037	<0.0062	0.067	<0.0062	0.017	<0.0062	<0.0062	0.0098	0.037	0.058	
PIT - 5	1/6/2021	0' - 5'	<0.0056	<0.0056	<0.0056	0.014	0.015	0.022	0.0099	0.0094	0.017	<0.0056	0.035	<0.0056	0.0088	<0.0056	<0.0056	<0.0056	0.017	0.031	
		5' - 10'	<0.0054	0.013	0.010	0.036	0.041	0.056	0.023	0.026	0.040	<0.0054	0.060	<0.0054	0.020	0.0099	0.015	0.0083	0.020	0.057	
		10' - 17'	0.014	0.026	0.039	0.12	0.13	0.17	0.065	0.060	0.13	0.013	0.22	0.012	0.057	0.0077	0.0069	0.0078	0.13	0.20	
PIT - 6	1/6/2021	0' - 5'	<0.0060	<0.0060	<0.0060	0.031	0.034	0.050	0.019	0.016	0.039	<0.0060	0.066	<0.0060	0.016	<0.0060	<0.0060	<0.0060	0.028	0.061	
		5' - 10'	<0.0058	<0.0058	<0.0058	0.018	0.018	0.029	0.011	0.0090	0.022	<0.0058	0.038	<0.0058	0.0095	<0.0058	<0.0058	<0.0058	0.017	0.036	
		10' - 15'	<0.0055	<0.0055	0.0057	0.029	0.032	0.046	0.028	0.021	0.040	<0.0055	0.076	<0.0055	0.017	<0.0055	<0.0055	<0.0055	0.035	0.065	
PIT - 7	1/6/2021	0' - 5'	0.0068	0.012	0.035	0.27	0.31	0.45	0.15	0.16	0.33	0.029	0.058	0.0090	0.14	<0.0058	<0.0058	0.0060	0.21	0.50	
		5' - 10'	<0.0060	<0.0060	<0.0060	<0.0060	0.0064	0.011	<0.0060	<0.0060	0.0083	<0.0060	0.013	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	0.012	
		10' - 15'	<0.0062	<0.0062	<0.0062	0.039	0.058	0.092	0.039	0.029	0.062	<0.0062	0.096	<0.0062	0.034	<0.0062	<0.0062	<0.0062	0.021	0.085	
PIT - 8	1/6/2021	0' - 6'	<0.0059	<0.0059	0.021	0.12	0.16	0.24	0.097	0.077	0.17	0.015	0.31	<0.0059	0.081	<0.0059	<0.0059	<0.0059	0.11	0.27	

Notes: Values presented in parts per million (ppm) or mg/kg

Default Closure levels based on IDEM Remediation Closure Guide Technical Document issued March 2012 and amended March 2020

**Bold cell** denotes value exceeds IDEM RCG Residential Migration to Groundwater Levels

**Shaded cell** denotes value exceeds IDEM RCG Residential Direct Contact Screening Levels

**Table 3**  
**Metals in Soil Analytical Results**  
**Former RCA / Thomson Consumer Electronics - Sherman Park Redevelopment Site**  
**"Taupe Mountain" Soil Pile**  
**604 North Sherman Drive**  
**Indianapolis, Indiana**

Sample ID	Date Sampled	Sample Depth (feet)	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
IDEM RCG Residential Migration to GW			5.9	1,700	-	1,000,000	270	2.1	5.3	16
IDEM RCG Residential Direct Contact			9.5	21,000	-	100,000	400	3.1	550	550
IDEM RCG Commercial/Industrial Direct Contact			30	100,000	-	100,000	800	3.1	5,800	5,800
PIT - 1	1/6/2021	0' - 5'	10.5	62.8	<0.54	13.0	16	<0.25	<1.1	<0.54
		5' - 10'	11.1	107	<0.60	21.7	21.7	<0.25	<1.2	<0.60
		10' - 15'	8.7	114	<0.51	27.6	183	<0.26	<1.0	<0.51
PIT - 2	1/6/2021	0' - 5'	3.4	28.1	<0.55	3.7	27.3	<0.24	<1.1	<0.55
		5' - 10'	6.2	77.8	<0.50	13.5	12.1	<0.24	<1.0	<0.50
		10' - 15'	7.1	75.7	<0.50	14.2	9.9	<0.24	<1.0	<0.50
PIT - 3	1/6/2021	0' - 5'	8.4	57.4	<0.50	11.0	6.6	<0.21	<1.0	<0.50
		5' - 10'	5.1	27.3	<0.53	6.4	4.1	<0.22	<1.1	<0.53
		10' - 15'	9.2	59.0	<0.49	11.5	24.6	<0.23	<0.98	<0.49
		15' - 21'	6.7	49.2	<0.52	9.8	14.1	<0.24	<1.0	<0.52
PIT - 4	1/6/2021	0' - 5'	9.2	84.4	<0.55	16.9	14.2	<0.24	<1.1	<0.55
		5' - 10'	7.2	68.5	<0.53	13.0	9.5	<0.23	<1.1	<0.53
		10' - 16'	9.2	124	<0.57	18.8	12.0	<0.25	<1.1	<0.57
PIT - 5	1/6/2021	0' - 5'	7.4	63.5	<0.55	11.6	15.9	<0.22	<1.1	<0.55
		5' - 10'	5.6	35.5	<0.47	11.4	8.7	<0.21	<0.94	<0.47
		10' - 17'	8.5	79.6	<0.57	17.1	18.1	<0.25	<1.1	<0.57

**Table 3**  
**Metals in Soil Analytical Results**  
**Former RCA / Thomson Consumer Electronics - Sherman Park Redevelopment Site**  
**"Taupe Mountain" Soil Pile**  
**604 North Sherman Drive**  
**Indianapolis, Indiana**

Sample ID	Date Sampled	Sample Depth (feet)	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
<b>IDEM RCG Residential Migration to GW</b>			<b>5.9</b>	<b>1,700</b>	<b>-</b>	<b>1,000,000</b>	<b>270</b>	<b>2.1</b>	<b>5.3</b>	<b>16</b>
<b>IDEM RCG Residential Direct Contact</b>			<b>9.5</b>	<b>21,000</b>	<b>-</b>	<b>100,000</b>	<b>400</b>	<b>3.1</b>	<b>550</b>	<b>550</b>
<b>IDEM RCG Commercial/Industrial Direct Contact</b>			<b>30</b>	<b>100,000</b>	<b>-</b>	<b>100,000</b>	<b>800</b>	<b>3.1</b>	<b>5,800</b>	<b>5,800</b>
<b>PIT - 6</b>	<b>1/6/2021</b>	<b>0' - 5'</b>	<b>7.1</b>	49.1	<0.56	12.8	13.8	<0.23	<1.1	<0.56
		<b>5' - 10'</b>	<b>8.9</b>	55.8	<0.56	15.3	16.0	<0.24	<1.1	<0.56
		<b>10' - 15'</b>	<b>7.3</b>	107	0.64	10	129	<0.23	<1.1	<0.53
<b>PIT - 7</b>	<b>1/6/2021</b>	<b>0' - 5'</b>	<b>6.5</b>	65.3	<0.53	10.7	22	<0.24	<1.1	<0.53
		<b>5' - 10'</b>	<b>7.7</b>	73.8	<0.55	15.2	17.2	<0.24	<1.1	<0.55
		<b>10' - 15'</b>	<b>8.9</b>	77.6	<0.58	16.8	17.8	<0.25	<1.2	<0.58
<b>PIT - 8</b>	<b>1/6/2021</b>	<b>0' - 6'</b>	<b>7.1</b>	109	<0.55	18.1	14.6	<0.26	<1.1	<0.55

Notes: Values presented in parts per million (ppm) or mg/kg

Default Closure levels based on IDEM Remediation Closure Guide issued March 2012 and amended March 2020

**Bold cell** denotes value exceeds IDEM RCG Residential Migration to Groundwater Levels

**Shaded cell** denotes value exceeds IDEM RCG Residential Direct Contact Screening Levels

**Italicized cell** denotes value exceeds IDEM RCG Commercial/Industrial Direct Contact Screening Levels

**ATTACHMENT A**

**SITE PHOTOGRAPHIC RECORD**



**ATTACHMENT A – SITE PHOTOGRAPHIC RECORD**

**Project Site: 600 – 604 North Sherman Drive in Indianapolis, Indiana  
Test Pit Soils Sampling and Analysis**



Photo #1: Example view of test pitting of stockpiled soils (1/6/2021).



Photo #2: Further example view of test pitting of stockpiled soils (1/6/2021).



Photo #3: Further example view of test pitting of stockpiled soils (1/6/2021).

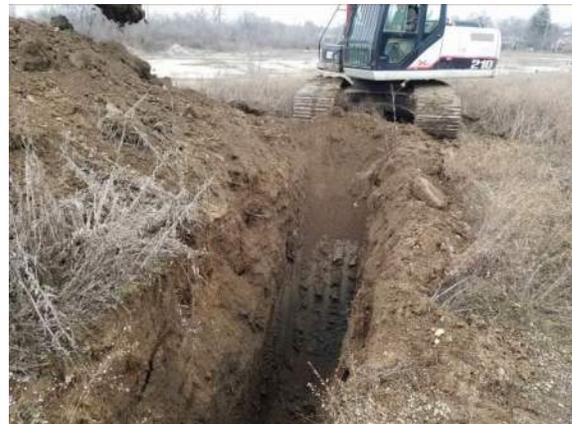


Photo #4: Further example view of test pitting of stockpiled soils (1/6/2021).



Photo #5: View of staging of test pitted soils for sampling (1/6/2021).



Photo #6: Further example view of test pitting of stockpiled soils (1/6/2021).

**ATTACHMENT A – SITE PHOTOGRAPHIC RECORD**

**Project Site: 600 – 604 North Sherman Drive in Indianapolis, Indiana  
Test Pit Soils Sampling and Analysis**



Photo #7:	Further example view of test pitting of stockpiled soils (1/6/2021).
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Photo #8:	Further example view of test pitting of stockpiled soils (1/6/2021). Note debris, gravel and spoils in soils.
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Photo #9:	View of staging of test pitted soils for sampling (1/6/2021). Note extensive debris in soils.
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Photo #10:	Further example view of test pitting of stockpiled soils (1/6/2021).
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## **ATTACHMENT B**

### **LABORATORY CERTIFICATE OF ANALYSIS**



January 19, 2021

Nivas Vijay  
Heartland  
3410 Mishawaka Ave.  
South Bend, IN 46615

RE: Project: Sherman Park  
Pace Project No.: 50277309

Dear Nivas Vijay:

Enclosed are the analytical results for sample(s) received by the laboratory on January 08, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Mick Mayse  
mick.mayse@pacelabs.com  
(317)228-3100  
Project Manager

Enclosures

cc: Nivas Vijay, Heartland Environmental



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Sherman Park

Pace Project No.: 50277309

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### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Wisconsin Laboratory #: 999788130

USDA Soil Permit #: P330-19-00257

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Sherman Park

Pace Project No.: 50277309

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50277309001	Pit 1 0-5'	Solid	01/06/21 08:40	01/08/21 08:45
50277309002	Pit 1 5-10'	Solid	01/06/21 08:45	01/08/21 08:45
50277309003	Pit 1 10-15'	Solid	01/06/21 08:52	01/08/21 08:45
50277309004	Pit 2 0-5'	Solid	01/06/21 09:10	01/08/21 08:45
50277309005	Pit 2 5-10'	Solid	01/06/21 09:25	01/08/21 08:45
50277309006	Pit 2 10-15'	Solid	01/06/21 09:41	01/08/21 08:45
50277309007	Pit 3 0-5'	Solid	01/06/21 09:56	01/08/21 08:45
50277309008	Pit 3 5-10'	Solid	01/06/21 10:10	01/08/21 08:45
50277309009	Pit 3 10-15'	Solid	01/06/21 10:20	01/08/21 08:45
50277309010	Pit 3 15-21'	Solid	01/06/21 10:30	01/08/21 08:45
50277309011	Pit 4 0-5'	Solid	01/06/21 10:45	01/08/21 08:45
50277309012	Pit 4 5-10'	Solid	01/06/21 11:00	01/08/21 08:45
50277309013	Pit 4 10-16'	Solid	01/06/21 11:11	01/08/21 08:45
50277309014	Pit 5 0-5'	Solid	01/06/21 11:22	01/08/21 08:45
50277309015	Pit 5 5-10'	Solid	01/06/21 11:30	01/08/21 08:45
50277309016	Pit 5 10-17'	Solid	01/06/21 11:48	01/08/21 08:45
50277309017	Pit 6 0-5'	Solid	01/06/21 12:21	01/08/21 08:45
50277309018	Pit 6 5-10'	Solid	01/06/21 12:35	01/08/21 08:45
50277309019	Pit 6 10-15'	Solid	01/06/21 12:47	01/08/21 08:45
50277309020	Pit 7 0-5'	Solid	01/06/21 13:00	01/08/21 08:45
50277309021	Pit 7 5-10'	Solid	01/06/21 13:10	01/08/21 08:45
50277309022	Pit 7 10-15'	Solid	01/06/21 13:13	01/08/21 08:45
50277309023	Pit 8 0-6'	Solid	01/06/21 13:30	01/08/21 08:45

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Sherman Park

Pace Project No.: 50277309

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50277309001	Pit 1 0-5'	EPA 6010	JDG	7	PASI-I
		EPA 7471	LBT	1	PASI-I
		EPA 8270 by SIM	LWG	20	PASI-I
		EPA 8260	TMW	75	PASI-I
		SM 2540G	SLB	1	PASI-I
50277309002	Pit 1 5-10'	EPA 6010	JDG	7	PASI-I
		EPA 7471	LBT	1	PASI-I
		EPA 8270 by SIM	LWG	20	PASI-I
		EPA 8260	TMW	75	PASI-I
		SM 2540G	SLB	1	PASI-I
50277309003	Pit 1 10-15'	EPA 6010	JDG	7	PASI-I
		EPA 7471	LBT	1	PASI-I
		EPA 8270 by SIM	LWG	20	PASI-I
		EPA 8260	TMW	75	PASI-I
		SM 2540G	SLB	1	PASI-I
50277309004	Pit 2 0-5'	EPA 6010	JDG	7	PASI-I
		EPA 7471	LBT	1	PASI-I
		EPA 8270 by SIM	LWG	20	PASI-I
		EPA 8260	TMW	75	PASI-I
		SM 2540G	SLB	1	PASI-I
50277309005	Pit 2 5-10'	EPA 6010	JDG	7	PASI-I
		EPA 7471	LBT	1	PASI-I
		EPA 8270 by SIM	LWG	20	PASI-I
		EPA 8260	TMW	75	PASI-I
		SM 2540G	SLB	1	PASI-I
50277309006	Pit 2 10-15'	EPA 6010	JDG	7	PASI-I
		EPA 7471	LBT	1	PASI-I
		EPA 8270 by SIM	LWG	20	PASI-I
		EPA 8260	TMW	75	PASI-I
		SM 2540G	SLB	1	PASI-I
50277309007	Pit 3 0-5'	EPA 6010	JDG	7	PASI-I
		EPA 7471	LBT	1	PASI-I
		EPA 8270 by SIM	LWG	20	PASI-I
		EPA 8260	TMW	75	PASI-I
		SM 2540G	SLB	1	PASI-I
50277309008	Pit 3 5-10'	EPA 6010	JDG	7	PASI-I
		EPA 7471	LBT	1	PASI-I

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### SAMPLE ANALYTE COUNT

Project: Sherman Park

Pace Project No.: 50277309

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50277309009	Pit 3 10-15'	EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8260	TMW	75	PASI-I
		SM 2540G	SLB	1	PASI-I
		EPA 6010	JDG	7	PASI-I
		EPA 7471	LBT	1	PASI-I
50277309010	Pit 3 15-21'	EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8260	TMW	75	PASI-I
		SM 2540G	SLB	1	PASI-I
		EPA 6010	JDG	7	PASI-I
		EPA 7471	LBT	1	PASI-I
50277309011	Pit 4 0-5'	EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8260	TMW	75	PASI-I
		SM 2540G	SLB	1	PASI-I
		EPA 6010	JDG	7	PASI-I
		EPA 7471	LBT	1	PASI-I
50277309012	Pit 4 5-10'	EPA 8270 by SIM	JCM	20	PASI-I
		EPA 8260	TMW	75	PASI-I
		SM 2540G	SLB	1	PASI-I
		EPA 6010	JDG	7	PASI-I
		EPA 7471	LBT	1	PASI-I
50277309013	Pit 4 10-16'	EPA 8270 by SIM	LWG	20	PASI-I
		EPA 8260	TMW	75	PASI-I
		SM 2540G	SLB	1	PASI-I
		EPA 6010	JDG	7	PASI-I
		EPA 7471	LBT	1	PASI-I
50277309014	Pit 5 0-5'	EPA 8270 by SIM	LWG	20	PASI-I
		EPA 8260	TMW	75	PASI-I
		SM 2540G	SLB	1	PASI-I
		EPA 6010	JDG	7	PASI-I
		EPA 7471	LBT	1	PASI-I
50277309015	Pit 5 5-10'	EPA 8270 by SIM	LWG	20	PASI-I
		EPA 8260	TMW	75	PASI-I
		SM 2540G	SLB	1	PASI-I
		EPA 6010	JDG	7	PASI-I
		EPA 7471	LBT	1	PASI-I

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### SAMPLE ANALYTE COUNT

Project: Sherman Park  
Pace Project No.: 50277309

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50277309016	Pit 5 10-17'	SM 2540G	SLB	1	PASI-I
		EPA 6010	JDG	7	PASI-I
		EPA 7471	LBT	1	PASI-I
		EPA 8270 by SIM	LWG	20	PASI-I
		EPA 8260	TMW	75	PASI-I
50277309017	Pit 6 0-5'	SM 2540G	SLB	1	PASI-I
		EPA 6010	JDG	7	PASI-I
		EPA 7471	LBT	1	PASI-I
		EPA 8270 by SIM	LWG	20	PASI-I
		EPA 8260	TMW	75	PASI-I
50277309018	Pit 6 5-10'	SM 2540G	SLB	1	PASI-I
		EPA 6010	JDG	7	PASI-I
		EPA 7471	LBT	1	PASI-I
		EPA 8270 by SIM	LWG	20	PASI-I
		EPA 8260	TMW	75	PASI-I
50277309019	Pit 6 10-15'	SM 2540G	SLB	1	PASI-I
		EPA 6010	JDG	7	PASI-I
		EPA 7471	LBT	1	PASI-I
		EPA 8270 by SIM	LWG	20	PASI-I
		EPA 8260	TMW	75	PASI-I
50277309020	Pit 7 0-5'	SM 2540G	SLB	1	PASI-I
		EPA 6010	JDG	7	PASI-I
		EPA 7471	LBT	1	PASI-I
		EPA 8270 by SIM	LWG	20	PASI-I
		EPA 8260	TMW	75	PASI-I
50277309021	Pit 7 5-10'	SM 2540G	SLB	1	PASI-I
		EPA 6010	JDG	7	PASI-I
		EPA 7471	LBT	1	PASI-I
		EPA 8270 by SIM	LWG	20	PASI-I
		EPA 8260	TMW	75	PASI-I
50277309022	Pit 7 10-15'	SM 2540G	SLB	1	PASI-I
		EPA 6010	JDG	7	PASI-I
		EPA 7471	LBT	1	PASI-I
		EPA 8270 by SIM	LWG	20	PASI-I
		EPA 8260	TMW	75	PASI-I
50277309023	Pit 8 0-6'	SM 2540G	MMS	1	PASI-I
		EPA 6010	JDG	7	PASI-I

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### SAMPLE ANALYTE COUNT

Project: Sherman Park

Pace Project No.: 50277309

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 7471	LBT	1	PASI-I
		EPA 8270 by SIM	LWG	20	PASI-I
		EPA 8260	TMW	75	PASI-I
		SM 2540G	MMS	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

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### SUMMARY OF DETECTION

Project: Sherman Park

Pace Project No.: 50277309

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>50277309001</b>	<b>Pit 1 0-5'</b>					
EPA 6010	Arsenic	10.5	mg/kg	1.1	01/18/21 13:39	
EPA 6010	Barium	62.8	mg/kg	1.1	01/18/21 13:39	
EPA 6010	Chromium	13.0	mg/kg	1.1	01/18/21 13:39	
EPA 6010	Lead	16.8	mg/kg	1.1	01/18/21 13:39	
EPA 8270 by SIM	Acenaphthene	0.0059	mg/kg	0.0056	01/15/21 18:47	
EPA 8270 by SIM	Acenaphthylene	0.091	mg/kg	0.0056	01/15/21 18:47	
EPA 8270 by SIM	Anthracene	0.12	mg/kg	0.0056	01/15/21 18:47	
EPA 8270 by SIM	Benzo(a)anthracene	0.15	mg/kg	0.0056	01/15/21 18:47	
EPA 8270 by SIM	Benzo(a)pyrene	0.22	mg/kg	0.0056	01/15/21 18:47	
EPA 8270 by SIM	Benzo(b)fluoranthene	0.34	mg/kg	0.0056	01/15/21 18:47	
EPA 8270 by SIM	Benzo(g,h,i)perylene	0.17	mg/kg	0.0056	01/15/21 18:47	
EPA 8270 by SIM	Benzo(k)fluoranthene	0.14	mg/kg	0.0056	01/15/21 18:47	
EPA 8270 by SIM	Chrysene	0.21	mg/kg	0.0056	01/15/21 18:47	
EPA 8270 by SIM	Dibenz(a,h)anthracene	0.036	mg/kg	0.0056	01/15/21 18:47	
EPA 8270 by SIM	Fluoranthene	0.21	mg/kg	0.0056	01/15/21 18:47	
EPA 8270 by SIM	Fluorene	0.011	mg/kg	0.0056	01/15/21 18:47	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	0.15	mg/kg	0.0056	01/15/21 18:47	
EPA 8270 by SIM	1-Methylnaphthalene	0.066	mg/kg	0.0056	01/15/21 18:47	
EPA 8270 by SIM	2-Methylnaphthalene	0.087	mg/kg	0.0056	01/15/21 18:47	
EPA 8270 by SIM	Naphthalene	0.072	mg/kg	0.0056	01/15/21 18:47	
EPA 8270 by SIM	Phenanthrene	0.12	mg/kg	0.0056	01/15/21 18:47	
EPA 8270 by SIM	Pyrene	0.22	mg/kg	0.0056	01/15/21 18:47	
SM 2540G	Percent Moisture	14.3	%	0.10	01/13/21 11:23	N2
<b>50277309002</b>	<b>Pit 1 5-10'</b>					
EPA 6010	Arsenic	11.1	mg/kg	1.2	01/18/21 13:42	
EPA 6010	Barium	107	mg/kg	1.2	01/18/21 13:42	
EPA 6010	Chromium	21.7	mg/kg	1.2	01/18/21 13:42	
EPA 6010	Lead	21.7	mg/kg	1.2	01/18/21 13:42	
EPA 8270 by SIM	Acenaphthene	0.30	mg/kg	0.030	01/15/21 19:01	
EPA 8270 by SIM	Acenaphthylene	0.14	mg/kg	0.030	01/15/21 19:01	
EPA 8270 by SIM	Anthracene	0.38	mg/kg	0.030	01/15/21 19:01	
EPA 8270 by SIM	Benzo(a)anthracene	0.68	mg/kg	0.030	01/15/21 19:01	
EPA 8270 by SIM	Benzo(a)pyrene	0.66	mg/kg	0.030	01/15/21 19:01	
EPA 8270 by SIM	Benzo(b)fluoranthene	0.97	mg/kg	0.030	01/15/21 19:01	
EPA 8270 by SIM	Benzo(g,h,i)perylene	0.38	mg/kg	0.030	01/15/21 19:01	
EPA 8270 by SIM	Benzo(k)fluoranthene	0.41	mg/kg	0.030	01/15/21 19:01	
EPA 8270 by SIM	Chrysene	0.80	mg/kg	0.030	01/15/21 19:01	
EPA 8270 by SIM	Dibenz(a,h)anthracene	0.086	mg/kg	0.030	01/15/21 19:01	
EPA 8270 by SIM	Fluoranthene	1.3	mg/kg	0.030	01/15/21 19:01	
EPA 8270 by SIM	Fluorene	0.38	mg/kg	0.030	01/15/21 19:01	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	0.35	mg/kg	0.030	01/15/21 19:01	
EPA 8270 by SIM	1-Methylnaphthalene	0.15	mg/kg	0.030	01/15/21 19:01	
EPA 8270 by SIM	2-Methylnaphthalene	0.19	mg/kg	0.030	01/15/21 19:01	
EPA 8270 by SIM	Naphthalene	0.083	mg/kg	0.030	01/15/21 19:01	ED
EPA 8270 by SIM	Phenanthrene	1.2	mg/kg	0.030	01/15/21 19:01	
EPA 8270 by SIM	Pyrene	1.2	mg/kg	0.030	01/15/21 19:01	
SM 2540G	Percent Moisture	17.5	%	0.10	01/13/21 11:24	N2

### REPORT OF LABORATORY ANALYSIS

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### SUMMARY OF DETECTION

Project: Sherman Park

Pace Project No.: 50277309

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>50277309003</b>	<b>Pit 1 10-15'</b>					
EPA 6010	Arsenic	8.7	mg/kg	1.0	01/18/21 13:44	
EPA 6010	Barium	114	mg/kg	1.0	01/18/21 13:44	
EPA 6010	Chromium	27.6	mg/kg	1.0	01/18/21 13:44	
EPA 6010	Lead	183	mg/kg	1.0	01/18/21 13:44	
EPA 8270 by SIM	Acenaphthene	0.052	mg/kg	0.029	01/15/21 19:16	
EPA 8270 by SIM	Acenaphthylene	0.074	mg/kg	0.029	01/15/21 19:16	
EPA 8270 by SIM	Anthracene	0.21	mg/kg	0.029	01/15/21 19:16	
EPA 8270 by SIM	Benzo(a)anthracene	0.63	mg/kg	0.029	01/15/21 19:16	
EPA 8270 by SIM	Benzo(a)pyrene	0.65	mg/kg	0.029	01/15/21 19:16	
EPA 8270 by SIM	Benzo(b)fluoranthene	0.90	mg/kg	0.029	01/15/21 19:16	
EPA 8270 by SIM	Benzo(g,h,i)perylene	0.36	mg/kg	0.029	01/15/21 19:16	
EPA 8270 by SIM	Benzo(k)fluoranthene	0.27	mg/kg	0.029	01/15/21 19:16	
EPA 8270 by SIM	Chrysene	0.66	mg/kg	0.029	01/15/21 19:16	
EPA 8270 by SIM	Dibenz(a,h)anthracene	0.071	mg/kg	0.029	01/15/21 19:16	
EPA 8270 by SIM	Fluoranthene	1.2	mg/kg	0.029	01/15/21 19:16	
EPA 8270 by SIM	Fluorene	0.054	mg/kg	0.029	01/15/21 19:16	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	0.30	mg/kg	0.029	01/15/21 19:16	
EPA 8270 by SIM	1-Methylnaphthalene	0.045	mg/kg	0.029	01/15/21 19:16	
EPA 8270 by SIM	2-Methylnaphthalene	0.062	mg/kg	0.029	01/15/21 19:16	
EPA 8270 by SIM	Naphthalene	0.072	mg/kg	0.029	01/15/21 19:16	ED
EPA 8270 by SIM	Phenanthrene	0.78	mg/kg	0.029	01/15/21 19:16	
EPA 8270 by SIM	Pyrene	1.1	mg/kg	0.029	01/15/21 19:16	
SM 2540G	Percent Moisture	16.3	%	0.10	01/13/21 11:24	N2
<b>50277309004</b>	<b>Pit 2 0-5'</b>					
EPA 6010	Arsenic	3.4	mg/kg	1.1	01/18/21 14:00	
EPA 6010	Barium	28.1	mg/kg	1.1	01/18/21 14:00	
EPA 6010	Chromium	3.7	mg/kg	1.1	01/18/21 14:00	
EPA 6010	Lead	27.3	mg/kg	1.1	01/18/21 14:00	
EPA 8270 by SIM	Benzo(a)anthracene	0.0096	mg/kg	0.0060	01/15/21 19:30	
EPA 8270 by SIM	Benzo(a)pyrene	0.0090	mg/kg	0.0060	01/15/21 19:30	
EPA 8270 by SIM	Benzo(b)fluoranthene	0.014	mg/kg	0.0060	01/15/21 19:30	
EPA 8270 by SIM	Benzo(g,h,i)perylene	0.0084	mg/kg	0.0060	01/15/21 19:30	
EPA 8270 by SIM	Chrysene	0.011	mg/kg	0.0060	01/15/21 19:30	
EPA 8270 by SIM	Fluoranthene	0.017	mg/kg	0.0060	01/15/21 19:30	
EPA 8270 by SIM	Phenanthrene	0.010	mg/kg	0.0060	01/15/21 19:30	
EPA 8270 by SIM	Pyrene	0.015	mg/kg	0.0060	01/15/21 19:30	
SM 2540G	Percent Moisture	20.2	%	0.10	01/13/21 11:24	N2
<b>50277309005</b>	<b>Pit 2 5-10'</b>					
EPA 6010	Arsenic	6.2	mg/kg	1.0	01/18/21 14:02	
EPA 6010	Barium	77.8	mg/kg	1.0	01/18/21 14:02	
EPA 6010	Chromium	13.5	mg/kg	1.0	01/18/21 14:02	
EPA 6010	Lead	12.1	mg/kg	1.0	01/18/21 14:02	
EPA 8270 by SIM	Acenaphthylene	0.014	mg/kg	0.0058	01/15/21 19:45	
EPA 8270 by SIM	Anthracene	0.021	mg/kg	0.0058	01/15/21 19:45	
EPA 8270 by SIM	Benzo(a)anthracene	0.12	mg/kg	0.0058	01/15/21 19:45	
EPA 8270 by SIM	Benzo(a)pyrene	0.14	mg/kg	0.0058	01/15/21 19:45	

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### SUMMARY OF DETECTION

Project: Sherman Park

Pace Project No.: 50277309

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50277309005</b>	<b>Pit 2 5-10'</b>					
EPA 8270 by SIM	Benzo(b)fluoranthene	0.22	mg/kg	0.0058	01/15/21 19:45	
EPA 8270 by SIM	Benzo(g,h,i)perylene	0.095	mg/kg	0.0058	01/15/21 19:45	
EPA 8270 by SIM	Benzo(k)fluoranthene	0.093	mg/kg	0.0058	01/15/21 19:45	
EPA 8270 by SIM	Chrysene	0.16	mg/kg	0.0058	01/15/21 19:45	
EPA 8270 by SIM	Dibenz(a,h)anthracene	0.016	mg/kg	0.0058	01/15/21 19:45	
EPA 8270 by SIM	Fluoranthene	0.29	mg/kg	0.0058	01/15/21 19:45	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	0.080	mg/kg	0.0058	01/15/21 19:45	
EPA 8270 by SIM	1-Methylnaphthalene	0.0080	mg/kg	0.0058	01/15/21 19:45	
EPA 8270 by SIM	2-Methylnaphthalene	0.011	mg/kg	0.0058	01/15/21 19:45	
EPA 8270 by SIM	Naphthalene	0.010	mg/kg	0.0058	01/15/21 19:45	
EPA 8270 by SIM	Phenanthrene	0.11	mg/kg	0.0058	01/15/21 19:45	
EPA 8270 by SIM	Pyrene	0.27	mg/kg	0.0058	01/15/21 19:45	
SM 2540G	Percent Moisture	16.2	%	0.10	01/13/21 11:24	N2
<b>50277309006</b>	<b>Pit 2 10-15'</b>					
EPA 6010	Arsenic	7.1	mg/kg	1.0	01/18/21 14:05	
EPA 6010	Barium	75.7	mg/kg	1.0	01/18/21 14:05	
EPA 6010	Chromium	14.2	mg/kg	1.0	01/18/21 14:05	
EPA 6010	Lead	9.9	mg/kg	1.0	01/18/21 14:05	
EPA 8270 by SIM	Acenaphthylene	0.026	mg/kg	0.0059	01/15/21 19:59	
EPA 8270 by SIM	Anthracene	0.040	mg/kg	0.0059	01/15/21 19:59	
EPA 8270 by SIM	Benzo(a)anthracene	0.18	mg/kg	0.0059	01/15/21 19:59	
EPA 8270 by SIM	Benzo(a)pyrene	0.21	mg/kg	0.0059	01/15/21 19:59	
EPA 8270 by SIM	Benzo(b)fluoranthene	0.29	mg/kg	0.0059	01/15/21 19:59	
EPA 8270 by SIM	Benzo(g,h,i)perylene	0.12	mg/kg	0.0059	01/15/21 19:59	
EPA 8270 by SIM	Benzo(k)fluoranthene	0.13	mg/kg	0.0059	01/15/21 19:59	
EPA 8270 by SIM	Chrysene	0.23	mg/kg	0.0059	01/15/21 19:59	
EPA 8270 by SIM	Dibenz(a,h)anthracene	0.023	mg/kg	0.0059	01/15/21 19:59	
EPA 8270 by SIM	Fluoranthene	0.30	mg/kg	0.0059	01/15/21 19:59	
EPA 8270 by SIM	Fluorene	0.011	mg/kg	0.0059	01/15/21 19:59	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	0.10	mg/kg	0.0059	01/15/21 19:59	
EPA 8270 by SIM	Phenanthrene	0.11	mg/kg	0.0059	01/15/21 19:59	
EPA 8270 by SIM	Pyrene	0.29	mg/kg	0.0059	01/15/21 19:59	
SM 2540G	Percent Moisture	15.6	%	0.10	01/13/21 11:24	N2
<b>50277309007</b>	<b>Pit 3 0-5'</b>					
EPA 6010	Arsenic	8.4	mg/kg	1.0	01/18/21 14:07	
EPA 6010	Barium	57.4	mg/kg	1.0	01/18/21 14:07	
EPA 6010	Chromium	11.0	mg/kg	1.0	01/18/21 14:07	
EPA 6010	Lead	6.6	mg/kg	1.0	01/18/21 14:07	
EPA 8270 by SIM	Benzo(b)fluoranthene	0.0056	mg/kg	0.0054	01/15/21 20:14	
EPA 8270 by SIM	Chrysene	0.0077	mg/kg	0.0054	01/15/21 20:14	
SM 2540G	Percent Moisture	9.7	%	0.10	01/13/21 11:24	N2
<b>50277309008</b>	<b>Pit 3 5-10'</b>					
EPA 6010	Arsenic	5.1	mg/kg	1.1	01/18/21 14:09	
EPA 6010	Barium	27.3	mg/kg	1.1	01/18/21 14:09	
EPA 6010	Chromium	6.4	mg/kg	1.1	01/18/21 14:09	
EPA 6010	Lead	4.1	mg/kg	1.1	01/18/21 14:09	

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### SUMMARY OF DETECTION

Project: Sherman Park

Pace Project No.: 50277309

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50277309008</b>	<b>Pit 3 5-10'</b>					
EPA 8270 by SIM	Benzo(b)fluoranthene	0.0082	mg/kg	0.0056	01/18/21 16:53	
EPA 8270 by SIM	Benzo(g,h,i)perylene	0.0057	mg/kg	0.0056	01/18/21 16:53	
EPA 8270 by SIM	Chrysene	0.0073	mg/kg	0.0056	01/18/21 16:53	
EPA 8270 by SIM	Fluoranthene	0.013	mg/kg	0.0056	01/18/21 16:53	
EPA 8270 by SIM	Pyrene	0.010	mg/kg	0.0056	01/18/21 16:53	
SM 2540G	Percent Moisture	11.9	%	0.10	01/13/21 11:24	N2
<b>50277309009</b>	<b>Pit 3 10-15'</b>					
EPA 6010	Arsenic	9.2	mg/kg	0.98	01/18/21 14:12	
EPA 6010	Barium	59.0	mg/kg	0.98	01/18/21 14:12	
EPA 6010	Chromium	11.5	mg/kg	0.98	01/18/21 14:12	
EPA 6010	Lead	24.6	mg/kg	0.98	01/18/21 14:12	
EPA 8270 by SIM	Anthracene	0.0084	mg/kg	0.0056	01/18/21 17:07	
EPA 8270 by SIM	Benzo(a)anthracene	0.025	mg/kg	0.0056	01/18/21 17:07	
EPA 8270 by SIM	Benzo(a)pyrene	0.023	mg/kg	0.0056	01/18/21 17:07	
EPA 8270 by SIM	Benzo(b)fluoranthene	0.033	mg/kg	0.0056	01/18/21 17:07	
EPA 8270 by SIM	Benzo(g,h,i)perylene	0.017	mg/kg	0.0056	01/18/21 17:07	
EPA 8270 by SIM	Benzo(k)fluoranthene	0.012	mg/kg	0.0056	01/18/21 17:07	
EPA 8270 by SIM	Chrysene	0.028	mg/kg	0.0056	01/18/21 17:07	
EPA 8270 by SIM	Fluoranthene	0.052	mg/kg	0.0056	01/18/21 17:07	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	0.013	mg/kg	0.0056	01/18/21 17:07	
EPA 8270 by SIM	Phenanthrene	0.037	mg/kg	0.0056	01/18/21 17:07	
EPA 8270 by SIM	Pyrene	0.045	mg/kg	0.0056	01/18/21 17:07	
SM 2540G	Percent Moisture	12.3	%	0.10	01/13/21 11:25	N2
<b>50277309010</b>	<b>Pit 3 15-21'</b>					
EPA 6010	Arsenic	6.7	mg/kg	1.0	01/18/21 14:14	
EPA 6010	Barium	49.2	mg/kg	1.0	01/18/21 14:14	
EPA 6010	Chromium	9.8	mg/kg	1.0	01/18/21 14:14	
EPA 6010	Lead	14.1	mg/kg	1.0	01/18/21 14:14	
EPA 8270 by SIM	Benzo(a)anthracene	0.0093	mg/kg	0.0057	01/18/21 17:22	
EPA 8270 by SIM	Benzo(a)pyrene	0.011	mg/kg	0.0057	01/18/21 17:22	
EPA 8270 by SIM	Benzo(b)fluoranthene	0.015	mg/kg	0.0057	01/18/21 17:22	
EPA 8270 by SIM	Benzo(g,h,i)perylene	0.0076	mg/kg	0.0057	01/18/21 17:22	
EPA 8270 by SIM	Chrysene	0.011	mg/kg	0.0057	01/18/21 17:22	
EPA 8270 by SIM	Fluoranthene	0.015	mg/kg	0.0057	01/18/21 17:22	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	0.0061	mg/kg	0.0057	01/18/21 17:22	
EPA 8270 by SIM	Phenanthrene	0.0079	mg/kg	0.0057	01/18/21 17:22	
EPA 8270 by SIM	Pyrene	0.014	mg/kg	0.0057	01/18/21 17:22	
SM 2540G	Percent Moisture	12.9	%	0.10	01/13/21 11:25	N2
<b>50277309011</b>	<b>Pit 4 0-5'</b>					
EPA 6010	Arsenic	9.2	mg/kg	1.1	01/18/21 14:17	
EPA 6010	Barium	84.4	mg/kg	1.1	01/18/21 14:17	
EPA 6010	Chromium	16.9	mg/kg	1.1	01/18/21 14:17	
EPA 6010	Lead	14.2	mg/kg	1.1	01/18/21 14:17	
SM 2540G	Percent Moisture	18.7	%	0.10	01/13/21 11:25	N2

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### SUMMARY OF DETECTION

Project: Sherman Park

Pace Project No.: 50277309

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>50277309012</b>	<b>Pit 4 5-10'</b>					
EPA 6010	Arsenic	7.2	mg/kg	1.1	01/18/21 14:19	
EPA 6010	Barium	68.5	mg/kg	1.1	01/18/21 14:19	
EPA 6010	Chromium	13.0	mg/kg	1.1	01/18/21 14:19	
EPA 6010	Lead	9.5	mg/kg	1.1	01/18/21 14:19	
EPA 8270 by SIM	Anthracene	0.0059	mg/kg	0.0057	01/16/21 09:38	
EPA 8270 by SIM	Benzo(a)anthracene	0.047	mg/kg	0.0057	01/16/21 09:38	
EPA 8270 by SIM	Benzo(a)pyrene	0.052	mg/kg	0.0057	01/16/21 09:38	
EPA 8270 by SIM	Benzo(b)fluoranthene	0.080	mg/kg	0.0057	01/16/21 09:38	
EPA 8270 by SIM	Benzo(g,h,i)perylene	0.033	mg/kg	0.0057	01/16/21 09:38	
EPA 8270 by SIM	Benzo(k)fluoranthene	0.034	mg/kg	0.0057	01/16/21 09:38	
EPA 8270 by SIM	Chrysene	0.068	mg/kg	0.0057	01/16/21 09:38	
EPA 8270 by SIM	Dibenz(a,h)anthracene	0.0058	mg/kg	0.0057	01/16/21 09:38	
EPA 8270 by SIM	Fluoranthene	0.14	mg/kg	0.0057	01/16/21 09:38	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	0.029	mg/kg	0.0057	01/16/21 09:38	
EPA 8270 by SIM	Phenanthrene	0.061	mg/kg	0.0057	01/16/21 09:38	
EPA 8270 by SIM	Pyrene	0.12	mg/kg	0.0057	01/16/21 09:38	
SM 2540G	Percent Moisture	14.8	%	0.10	01/13/21 11:25	N2
<b>50277309013</b>	<b>Pit 4 10-16'</b>					
EPA 6010	Arsenic	9.2	mg/kg	1.1	01/18/21 14:21	
EPA 6010	Barium	124	mg/kg	1.1	01/18/21 14:21	
EPA 6010	Chromium	18.8	mg/kg	1.1	01/18/21 14:21	
EPA 6010	Lead	12.0	mg/kg	1.1	01/18/21 14:21	
EPA 8270 by SIM	Anthracene	0.0080	mg/kg	0.0062	01/16/21 09:52	
EPA 8270 by SIM	Benzo(a)anthracene	0.029	mg/kg	0.0062	01/16/21 09:52	
EPA 8270 by SIM	Benzo(a)pyrene	0.032	mg/kg	0.0062	01/16/21 09:52	
EPA 8270 by SIM	Benzo(b)fluoranthene	0.052	mg/kg	0.0062	01/16/21 09:52	
EPA 8270 by SIM	Benzo(g,h,i)perylene	0.019	mg/kg	0.0062	01/16/21 09:52	
EPA 8270 by SIM	Benzo(k)fluoranthene	0.016	mg/kg	0.0062	01/16/21 09:52	
EPA 8270 by SIM	Chrysene	0.037	mg/kg	0.0062	01/16/21 09:52	
EPA 8270 by SIM	Fluoranthene	0.067	mg/kg	0.0062	01/16/21 09:52	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	0.017	mg/kg	0.0062	01/16/21 09:52	
EPA 8270 by SIM	Naphthalene	0.0098	mg/kg	0.0062	01/16/21 09:52	
EPA 8270 by SIM	Phenanthrene	0.037	mg/kg	0.0062	01/16/21 09:52	
EPA 8270 by SIM	Pyrene	0.058	mg/kg	0.0062	01/16/21 09:52	
SM 2540G	Percent Moisture	19.8	%	0.10	01/14/21 07:52	N2
<b>50277309014</b>	<b>Pit 5 0-5'</b>					
EPA 6010	Arsenic	7.4	mg/kg	1.1	01/18/21 14:28	
EPA 6010	Barium	63.5	mg/kg	1.1	01/18/21 14:28	
EPA 6010	Chromium	11.6	mg/kg	1.1	01/18/21 14:28	
EPA 6010	Lead	15.9	mg/kg	1.1	01/18/21 14:28	
EPA 8270 by SIM	Benzo(a)anthracene	0.014	mg/kg	0.0056	01/16/21 10:07	
EPA 8270 by SIM	Benzo(a)pyrene	0.015	mg/kg	0.0056	01/16/21 10:07	
EPA 8270 by SIM	Benzo(b)fluoranthene	0.022	mg/kg	0.0056	01/16/21 10:07	
EPA 8270 by SIM	Benzo(g,h,i)perylene	0.0099	mg/kg	0.0056	01/16/21 10:07	
EPA 8270 by SIM	Benzo(k)fluoranthene	0.0094	mg/kg	0.0056	01/16/21 10:07	
EPA 8270 by SIM	Chrysene	0.017	mg/kg	0.0056	01/16/21 10:07	

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### SUMMARY OF DETECTION

Project: Sherman Park

Pace Project No.: 50277309

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50277309014</b>	<b>Pit 5 0-5'</b>					
EPA 8270 by SIM	Fluoranthene	0.035	mg/kg	0.0056	01/16/21 10:07	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	0.0088	mg/kg	0.0056	01/16/21 10:07	
EPA 8270 by SIM	Phenanthrene	0.017	mg/kg	0.0056	01/16/21 10:07	
EPA 8270 by SIM	Pyrene	0.031	mg/kg	0.0056	01/16/21 10:07	
SM 2540G	Percent Moisture	14.5	%	0.10	01/14/21 07:52	N2
<b>50277309015</b>	<b>Pit 5 5-10'</b>					
EPA 6010	Arsenic	5.6	mg/kg	0.94	01/18/21 14:31	
EPA 6010	Barium	35.5	mg/kg	0.94	01/18/21 14:31	
EPA 6010	Chromium	11.4	mg/kg	0.94	01/18/21 14:31	
EPA 6010	Lead	8.7	mg/kg	0.94	01/18/21 14:31	
EPA 8270 by SIM	Acenaphthylene	0.013	mg/kg	0.0054	01/16/21 10:21	
EPA 8270 by SIM	Anthracene	0.010	mg/kg	0.0054	01/16/21 10:21	
EPA 8270 by SIM	Benzo(a)anthracene	0.036	mg/kg	0.0054	01/16/21 10:21	
EPA 8270 by SIM	Benzo(a)pyrene	0.041	mg/kg	0.0054	01/16/21 10:21	
EPA 8270 by SIM	Benzo(b)fluoranthene	0.056	mg/kg	0.0054	01/16/21 10:21	
EPA 8270 by SIM	Benzo(g,h,i)perylene	0.023	mg/kg	0.0054	01/16/21 10:21	
EPA 8270 by SIM	Benzo(k)fluoranthene	0.026	mg/kg	0.0054	01/16/21 10:21	
EPA 8270 by SIM	Chrysene	0.040	mg/kg	0.0054	01/16/21 10:21	
EPA 8270 by SIM	Fluoranthene	0.060	mg/kg	0.0054	01/16/21 10:21	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	0.020	mg/kg	0.0054	01/16/21 10:21	
EPA 8270 by SIM	1-Methylnaphthalene	0.0099	mg/kg	0.0054	01/16/21 10:21	
EPA 8270 by SIM	2-Methylnaphthalene	0.015	mg/kg	0.0054	01/16/21 10:21	
EPA 8270 by SIM	Naphthalene	0.0083	mg/kg	0.0054	01/16/21 10:21	
EPA 8270 by SIM	Phenanthrene	0.020	mg/kg	0.0054	01/16/21 10:21	
EPA 8270 by SIM	Pyrene	0.057	mg/kg	0.0054	01/16/21 10:21	
SM 2540G	Percent Moisture	9.5	%	0.10	01/14/21 07:53	N2
<b>50277309016</b>	<b>Pit 5 10-17'</b>					
EPA 6010	Arsenic	8.5	mg/kg	1.1	01/18/21 14:47	
EPA 6010	Barium	79.6	mg/kg	1.1	01/18/21 14:47	
EPA 6010	Chromium	17.1	mg/kg	1.1	01/18/21 14:47	
EPA 6010	Lead	18.1	mg/kg	1.1	01/18/21 14:47	
EPA 8270 by SIM	Acenaphthene	0.014	mg/kg	0.0060	01/16/21 10:36	
EPA 8270 by SIM	Acenaphthylene	0.026	mg/kg	0.0060	01/16/21 10:36	
EPA 8270 by SIM	Anthracene	0.039	mg/kg	0.0060	01/16/21 10:36	
EPA 8270 by SIM	Benzo(a)anthracene	0.12	mg/kg	0.0060	01/16/21 10:36	
EPA 8270 by SIM	Benzo(a)pyrene	0.13	mg/kg	0.0060	01/16/21 10:36	
EPA 8270 by SIM	Benzo(b)fluoranthene	0.17	mg/kg	0.0060	01/16/21 10:36	
EPA 8270 by SIM	Benzo(g,h,i)perylene	0.065	mg/kg	0.0060	01/16/21 10:36	
EPA 8270 by SIM	Benzo(k)fluoranthene	0.060	mg/kg	0.0060	01/16/21 10:36	
EPA 8270 by SIM	Chrysene	0.13	mg/kg	0.0060	01/16/21 10:36	
EPA 8270 by SIM	Dibenz(a,h)anthracene	0.013	mg/kg	0.0060	01/16/21 10:36	
EPA 8270 by SIM	Fluoranthene	0.22	mg/kg	0.0060	01/16/21 10:36	
EPA 8270 by SIM	Fluorene	0.012	mg/kg	0.0060	01/16/21 10:36	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	0.057	mg/kg	0.0060	01/16/21 10:36	
EPA 8270 by SIM	1-Methylnaphthalene	0.0077	mg/kg	0.0060	01/16/21 10:36	
EPA 8270 by SIM	2-Methylnaphthalene	0.0069	mg/kg	0.0060	01/16/21 10:36	

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### SUMMARY OF DETECTION

Project: Sherman Park

Pace Project No.: 50277309

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>50277309016</b>	<b>Pit 5 10-17'</b>					
EPA 8270 by SIM	Naphthalene	0.0078	mg/kg	0.0060	01/16/21 10:36	
EPA 8270 by SIM	Phenanthrene	0.13	mg/kg	0.0060	01/16/21 10:36	
EPA 8270 by SIM	Pyrene	0.20	mg/kg	0.0060	01/16/21 10:36	
SM 2540G	Percent Moisture	18.7	%	0.10	01/14/21 07:53	N2
<b>50277309017</b>	<b>Pit 6 0-5'</b>					
EPA 6010	Arsenic	7.1	mg/kg	1.1	01/18/21 14:35	
EPA 6010	Barium	49.1	mg/kg	1.1	01/18/21 14:35	
EPA 6010	Chromium	12.8	mg/kg	1.1	01/18/21 14:35	
EPA 6010	Lead	13.8	mg/kg	1.1	01/18/21 14:35	
EPA 8270 by SIM	Benzo(a)anthracene	0.031	mg/kg	0.0060	01/16/21 10:50	
EPA 8270 by SIM	Benzo(a)pyrene	0.034	mg/kg	0.0060	01/16/21 10:50	
EPA 8270 by SIM	Benzo(b)fluoranthene	0.050	mg/kg	0.0060	01/16/21 10:50	
EPA 8270 by SIM	Benzo(g,h,i)perylene	0.019	mg/kg	0.0060	01/16/21 10:50	
EPA 8270 by SIM	Benzo(k)fluoranthene	0.016	mg/kg	0.0060	01/16/21 10:50	
EPA 8270 by SIM	Chrysene	0.039	mg/kg	0.0060	01/16/21 10:50	
EPA 8270 by SIM	Fluoranthene	0.066	mg/kg	0.0060	01/16/21 10:50	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	0.016	mg/kg	0.0060	01/16/21 10:50	
EPA 8270 by SIM	Phenanthrene	0.028	mg/kg	0.0060	01/16/21 10:50	
EPA 8270 by SIM	Pyrene	0.061	mg/kg	0.0060	01/16/21 10:50	
SM 2540G	Percent Moisture	16.6	%	0.10	01/14/21 07:53	N2
<b>50277309018</b>	<b>Pit 6 5-10'</b>					
EPA 6010	Arsenic	8.9	mg/kg	1.1	01/18/21 14:38	
EPA 6010	Barium	55.8	mg/kg	1.1	01/18/21 14:38	
EPA 6010	Chromium	15.3	mg/kg	1.1	01/18/21 14:38	
EPA 6010	Lead	16.0	mg/kg	1.1	01/18/21 14:38	
EPA 8270 by SIM	Benzo(a)anthracene	0.018	mg/kg	0.0058	01/16/21 11:05	
EPA 8270 by SIM	Benzo(a)pyrene	0.018	mg/kg	0.0058	01/16/21 11:05	
EPA 8270 by SIM	Benzo(b)fluoranthene	0.029	mg/kg	0.0058	01/16/21 11:05	
EPA 8270 by SIM	Benzo(g,h,i)perylene	0.011	mg/kg	0.0058	01/16/21 11:05	
EPA 8270 by SIM	Benzo(k)fluoranthene	0.0090	mg/kg	0.0058	01/16/21 11:05	
EPA 8270 by SIM	Chrysene	0.022	mg/kg	0.0058	01/16/21 11:05	
EPA 8270 by SIM	Fluoranthene	0.038	mg/kg	0.0058	01/16/21 11:05	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	0.0095	mg/kg	0.0058	01/16/21 11:05	
EPA 8270 by SIM	Phenanthrene	0.017	mg/kg	0.0058	01/16/21 11:05	
EPA 8270 by SIM	Pyrene	0.036	mg/kg	0.0058	01/16/21 11:05	
SM 2540G	Percent Moisture	16.7	%	0.10	01/14/21 07:53	N2
<b>50277309019</b>	<b>Pit 6 10-15'</b>					
EPA 6010	Arsenic	7.3	mg/kg	1.1	01/18/21 14:40	
EPA 6010	Barium	107	mg/kg	1.1	01/18/21 14:40	
EPA 6010	Cadmium	0.64	mg/kg	0.53	01/18/21 14:40	
EPA 6010	Chromium	10	mg/kg	1.1	01/18/21 14:40	
EPA 6010	Lead	129	mg/kg	1.1	01/18/21 14:40	
EPA 8270 by SIM	Anthracene	0.0057	mg/kg	0.0055	01/16/21 11:19	
EPA 8270 by SIM	Benzo(a)anthracene	0.029	mg/kg	0.0055	01/16/21 11:19	
EPA 8270 by SIM	Benzo(a)pyrene	0.032	mg/kg	0.0055	01/16/21 11:19	
EPA 8270 by SIM	Benzo(b)fluoranthene	0.046	mg/kg	0.0055	01/16/21 11:19	

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### SUMMARY OF DETECTION

Project: Sherman Park

Pace Project No.: 50277309

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>50277309019</b>	<b>Pit 6 10-15'</b>					
EPA 8270 by SIM	Benzo(g,h,i)perylene	0.028	mg/kg	0.0055	01/16/21 11:19	
EPA 8270 by SIM	Benzo(k)fluoranthene	0.021	mg/kg	0.0055	01/16/21 11:19	
EPA 8270 by SIM	Chrysene	0.040	mg/kg	0.0055	01/16/21 11:19	
EPA 8270 by SIM	Fluoranthene	0.076	mg/kg	0.0055	01/16/21 11:19	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	0.017	mg/kg	0.0055	01/16/21 11:19	
EPA 8270 by SIM	Phenanthrene	0.035	mg/kg	0.0055	01/16/21 11:19	
EPA 8270 by SIM	Pyrene	0.065	mg/kg	0.0055	01/16/21 11:19	
SM 2540G	Percent Moisture	12.4	%	0.10	01/14/21 07:53	N2
<b>50277309020</b>	<b>Pit 7 0-5'</b>					
EPA 6010	Arsenic	6.5	mg/kg	1.1	01/18/21 14:42	
EPA 6010	Barium	65.3	mg/kg	1.1	01/18/21 14:42	
EPA 6010	Chromium	10.7	mg/kg	1.1	01/18/21 14:42	
EPA 6010	Lead	21.6	mg/kg	1.1	01/18/21 14:42	
EPA 8270 by SIM	Acenaphthene	0.0068	mg/kg	0.0058	01/16/21 11:34	
EPA 8270 by SIM	Acenaphthylene	0.012	mg/kg	0.0058	01/16/21 11:34	
EPA 8270 by SIM	Anthracene	0.035	mg/kg	0.0058	01/16/21 11:34	
EPA 8270 by SIM	Benzo(a)anthracene	0.27	mg/kg	0.0058	01/16/21 11:34	
EPA 8270 by SIM	Benzo(a)pyrene	0.31	mg/kg	0.0058	01/16/21 11:34	
EPA 8270 by SIM	Benzo(b)fluoranthene	0.45	mg/kg	0.0058	01/16/21 11:34	
EPA 8270 by SIM	Benzo(g,h,i)perylene	0.15	mg/kg	0.0058	01/16/21 11:34	
EPA 8270 by SIM	Benzo(k)fluoranthene	0.16	mg/kg	0.0058	01/16/21 11:34	
EPA 8270 by SIM	Chrysene	0.33	mg/kg	0.0058	01/16/21 11:34	
EPA 8270 by SIM	Dibenz(a,h)anthracene	0.029	mg/kg	0.0058	01/16/21 11:34	
EPA 8270 by SIM	Fluoranthene	0.58	mg/kg	0.0058	01/16/21 11:34	
EPA 8270 by SIM	Fluorene	0.0090	mg/kg	0.0058	01/16/21 11:34	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	0.14	mg/kg	0.0058	01/16/21 11:34	
EPA 8270 by SIM	Naphthalene	0.0060	mg/kg	0.0058	01/16/21 11:34	
EPA 8270 by SIM	Phenanthrene	0.21	mg/kg	0.0058	01/16/21 11:34	
EPA 8270 by SIM	Pyrene	0.50	mg/kg	0.0058	01/16/21 11:34	
EPA 8260	Acetone	0.13	mg/kg	0.090	01/13/21 16:04	
SM 2540G	Percent Moisture	14.4	%	0.10	01/14/21 07:53	N2
<b>50277309021</b>	<b>Pit 7 5-10'</b>					
EPA 6010	Arsenic	7.7	mg/kg	1.1	01/15/21 13:51	
EPA 6010	Barium	73.8	mg/kg	1.1	01/15/21 13:51	
EPA 6010	Chromium	15.2	mg/kg	1.1	01/15/21 13:51	
EPA 6010	Lead	17.2	mg/kg	1.1	01/15/21 13:51	
EPA 8270 by SIM	Benzo(a)pyrene	0.0064	mg/kg	0.0060	01/16/21 11:49	
EPA 8270 by SIM	Benzo(b)fluoranthene	0.011	mg/kg	0.0060	01/16/21 11:49	
EPA 8270 by SIM	Chrysene	0.0083	mg/kg	0.0060	01/16/21 11:49	
EPA 8270 by SIM	Fluoranthene	0.013	mg/kg	0.0060	01/16/21 11:49	
EPA 8270 by SIM	Pyrene	0.012	mg/kg	0.0060	01/16/21 11:49	
EPA 8260	Acetone	0.14	mg/kg	0.10	01/13/21 16:38	
SM 2540G	Percent Moisture	18.2	%	0.10	01/14/21 07:53	N2
<b>50277309022</b>	<b>Pit 7 10-15'</b>					
EPA 6010	Arsenic	8.9	mg/kg	1.2	01/15/21 13:54	
EPA 6010	Barium	77.6	mg/kg	1.2	01/15/21 13:54	

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### SUMMARY OF DETECTION

Project: Sherman Park  
Pace Project No.: 50277309

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
<b>50277309022</b>	<b>Pit 7 10-15'</b>					
EPA 6010	Chromium	16.8	mg/kg	1.2	01/15/21 13:54	
EPA 6010	Lead	17.8	mg/kg	1.2	01/15/21 13:54	
EPA 8270 by SIM	Benzo(a)anthracene	0.039	mg/kg	0.0062	01/16/21 12:03	
EPA 8270 by SIM	Benzo(a)pyrene	0.058	mg/kg	0.0062	01/16/21 12:03	
EPA 8270 by SIM	Benzo(b)fluoranthene	0.092	mg/kg	0.0062	01/16/21 12:03	
EPA 8270 by SIM	Benzo(g,h,i)perylene	0.039	mg/kg	0.0062	01/16/21 12:03	
EPA 8270 by SIM	Benzo(k)fluoranthene	0.029	mg/kg	0.0062	01/16/21 12:03	
EPA 8270 by SIM	Chrysene	0.062	mg/kg	0.0062	01/16/21 12:03	
EPA 8270 by SIM	Fluoranthene	0.096	mg/kg	0.0062	01/16/21 12:03	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	0.034	mg/kg	0.0062	01/16/21 12:03	
EPA 8270 by SIM	Phenanthrene	0.021	mg/kg	0.0062	01/16/21 12:03	
EPA 8270 by SIM	Pyrene	0.085	mg/kg	0.0062	01/16/21 12:03	
SM 2540G	Percent Moisture	19.7	%	0.10	01/14/21 10:28	N2
<b>50277309023</b>	<b>Pit 8 0-6'</b>					
EPA 6010	Arsenic	7.1	mg/kg	1.1	01/15/21 13:57	
EPA 6010	Barium	109	mg/kg	1.1	01/15/21 13:57	
EPA 6010	Chromium	18.1	mg/kg	1.1	01/15/21 13:57	
EPA 6010	Lead	14.6	mg/kg	1.1	01/15/21 13:57	
EPA 8270 by SIM	Anthracene	0.021	mg/kg	0.0059	01/16/21 12:18	
EPA 8270 by SIM	Benzo(a)anthracene	0.12	mg/kg	0.0059	01/16/21 12:18	
EPA 8270 by SIM	Benzo(a)pyrene	0.16	mg/kg	0.0059	01/16/21 12:18	
EPA 8270 by SIM	Benzo(b)fluoranthene	0.24	mg/kg	0.0059	01/16/21 12:18	
EPA 8270 by SIM	Benzo(g,h,i)perylene	0.097	mg/kg	0.0059	01/16/21 12:18	
EPA 8270 by SIM	Benzo(k)fluoranthene	0.077	mg/kg	0.0059	01/16/21 12:18	
EPA 8270 by SIM	Chrysene	0.17	mg/kg	0.0059	01/16/21 12:18	
EPA 8270 by SIM	Dibenz(a,h)anthracene	0.015	mg/kg	0.0059	01/16/21 12:18	
EPA 8270 by SIM	Fluoranthene	0.31	mg/kg	0.0059	01/16/21 12:18	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	0.081	mg/kg	0.0059	01/16/21 12:18	
EPA 8270 by SIM	Phenanthrene	0.11	mg/kg	0.0059	01/16/21 12:18	
EPA 8270 by SIM	Pyrene	0.27	mg/kg	0.0059	01/16/21 12:18	
SM 2540G	Percent Moisture	20.0	%	0.10	01/14/21 10:28	N2

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample:** Pit 1 0-5'      **Lab ID:** 50277309001      Collected: 01/06/21 08:40      Received: 01/08/21 08:45      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>								
Analytical Method: EPA 6010    Preparation Method: EPA 3050								
Pace Analytical Services - Indianapolis								
Arsenic	10.5	mg/kg	1.1	1	01/17/21 13:17	01/18/21 13:39	7440-38-2	
Barium	62.8	mg/kg	1.1	1	01/17/21 13:17	01/18/21 13:39	7440-39-3	
Cadmium	ND	mg/kg	0.54	1	01/17/21 13:17	01/18/21 13:39	7440-43-9	
Chromium	13.0	mg/kg	1.1	1	01/17/21 13:17	01/18/21 13:39	7440-47-3	
Lead	16.8	mg/kg	1.1	1	01/17/21 13:17	01/18/21 13:39	7439-92-1	
Selenium	ND	mg/kg	1.1	1	01/17/21 13:17	01/18/21 13:39	7782-49-2	
Silver	ND	mg/kg	0.54	1	01/17/21 13:17	01/18/21 13:39	7440-22-4	
<b>7471 Mercury</b>								
Analytical Method: EPA 7471    Preparation Method: EPA 7471								
Pace Analytical Services - Indianapolis								
Mercury	ND	mg/kg	0.25	1	01/13/21 10:28	01/13/21 19:41	7439-97-6	
<b>8270 PAH Soil by SIM</b>								
Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546								
Pace Analytical Services - Indianapolis								
Acenaphthene	0.0059	mg/kg	0.0056	1	01/15/21 10:00	01/15/21 18:47	83-32-9	
Acenaphthylene	0.091	mg/kg	0.0056	1	01/15/21 10:00	01/15/21 18:47	208-96-8	
Anthracene	0.12	mg/kg	0.0056	1	01/15/21 10:00	01/15/21 18:47	120-12-7	
Benzo(a)anthracene	0.15	mg/kg	0.0056	1	01/15/21 10:00	01/15/21 18:47	56-55-3	
Benzo(a)pyrene	0.22	mg/kg	0.0056	1	01/15/21 10:00	01/15/21 18:47	50-32-8	
Benzo(b)fluoranthene	0.34	mg/kg	0.0056	1	01/15/21 10:00	01/15/21 18:47	205-99-2	
Benzo(g,h,i)perylene	0.17	mg/kg	0.0056	1	01/15/21 10:00	01/15/21 18:47	191-24-2	
Benzo(k)fluoranthene	0.14	mg/kg	0.0056	1	01/15/21 10:00	01/15/21 18:47	207-08-9	
Chrysene	0.21	mg/kg	0.0056	1	01/15/21 10:00	01/15/21 18:47	218-01-9	
Dibenz(a,h)anthracene	0.036	mg/kg	0.0056	1	01/15/21 10:00	01/15/21 18:47	53-70-3	
Fluoranthene	0.21	mg/kg	0.0056	1	01/15/21 10:00	01/15/21 18:47	206-44-0	
Fluorene	0.011	mg/kg	0.0056	1	01/15/21 10:00	01/15/21 18:47	86-73-7	
Indeno(1,2,3-cd)pyrene	0.15	mg/kg	0.0056	1	01/15/21 10:00	01/15/21 18:47	193-39-5	
1-Methylnaphthalene	0.066	mg/kg	0.0056	1	01/15/21 10:00	01/15/21 18:47	90-12-0	
2-Methylnaphthalene	0.087	mg/kg	0.0056	1	01/15/21 10:00	01/15/21 18:47	91-57-6	
Naphthalene	0.072	mg/kg	0.0056	1	01/15/21 10:00	01/15/21 18:47	91-20-3	
Phenanthrene	0.12	mg/kg	0.0056	1	01/15/21 10:00	01/15/21 18:47	85-01-8	
Pyrene	0.22	mg/kg	0.0056	1	01/15/21 10:00	01/15/21 18:47	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	78	%	37-111	1	01/15/21 10:00	01/15/21 18:47	321-60-8	
p-Terphenyl-d14 (S)	90	%	29-124	1	01/15/21 10:00	01/15/21 18:47	1718-51-0	
<b>8260 MSV 5035A VOA</b>								
Analytical Method: EPA 8260								
Pace Analytical Services - Indianapolis								
Acetone	ND	mg/kg	0.090	1		01/11/21 15:34	67-64-1	
Acrolein	ND	mg/kg	0.090	1		01/11/21 15:34	107-02-8	
Acrylonitrile	ND	mg/kg	0.090	1		01/11/21 15:34	107-13-1	
Benzene	ND	mg/kg	0.0045	1		01/11/21 15:34	71-43-2	
Bromobenzene	ND	mg/kg	0.0045	1		01/11/21 15:34	108-86-1	
Bromochloromethane	ND	mg/kg	0.0045	1		01/11/21 15:34	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0045	1		01/11/21 15:34	75-27-4	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample: Pit 1 0-5'**      **Lab ID: 50277309001**      Collected: 01/06/21 08:40      Received: 01/08/21 08:45      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Bromoform	ND	mg/kg	0.0045	1		01/11/21 15:34	75-25-2	
Bromomethane	ND	mg/kg	0.0045	1		01/11/21 15:34	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.023	1		01/11/21 15:34	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0045	1		01/11/21 15:34	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0045	1		01/11/21 15:34	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0045	1		01/11/21 15:34	98-06-6	
Carbon disulfide	ND	mg/kg	0.0090	1		01/11/21 15:34	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0045	1		01/11/21 15:34	56-23-5	
Chlorobenzene	ND	mg/kg	0.0045	1		01/11/21 15:34	108-90-7	
Chloroethane	ND	mg/kg	0.0045	1		01/11/21 15:34	75-00-3	
Chloroform	ND	mg/kg	0.0045	1		01/11/21 15:34	67-66-3	
Chloromethane	ND	mg/kg	0.0045	1		01/11/21 15:34	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0045	1		01/11/21 15:34	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0045	1		01/11/21 15:34	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0045	1		01/11/21 15:34	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0045	1		01/11/21 15:34	106-93-4	
Dibromomethane	ND	mg/kg	0.0045	1		01/11/21 15:34	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0045	1		01/11/21 15:34	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0045	1		01/11/21 15:34	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0045	1		01/11/21 15:34	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.090	1		01/11/21 15:34	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0045	1		01/11/21 15:34	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0045	1		01/11/21 15:34	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0045	1		01/11/21 15:34	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0045	1		01/11/21 15:34	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0045	1		01/11/21 15:34	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0045	1		01/11/21 15:34	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0045	1		01/11/21 15:34	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0045	1		01/11/21 15:34	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0045	1		01/11/21 15:34	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0045	1		01/11/21 15:34	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0045	1		01/11/21 15:34	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0045	1		01/11/21 15:34	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0045	1		01/11/21 15:34	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.090	1		01/11/21 15:34	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0045	1		01/11/21 15:34	87-68-3	
n-Hexane	ND	mg/kg	0.0045	1		01/11/21 15:34	110-54-3	
2-Hexanone	ND	mg/kg	0.090	1		01/11/21 15:34	591-78-6	
Iodomethane	ND	mg/kg	0.090	1		01/11/21 15:34	74-88-4	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0045	1		01/11/21 15:34	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0045	1		01/11/21 15:34	99-87-6	
Methylene Chloride	ND	mg/kg	0.018	1		01/11/21 15:34	75-09-2	
1-Methylnaphthalene	ND	ug/kg	9.0	1		01/11/21 15:34	90-12-0	
2-Methylnaphthalene	ND	ug/kg	9.0	1		01/11/21 15:34	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.023	1		01/11/21 15:34	108-10-1	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample:** Pit 1 0-5'      **Lab ID:** 50277309001      Collected: 01/06/21 08:40      Received: 01/08/21 08:45      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Methyl-tert-butyl ether	ND	mg/kg	0.0045	1		01/11/21 15:34	1634-04-4	
Naphthalene	ND	mg/kg	0.0045	1		01/11/21 15:34	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0045	1		01/11/21 15:34	103-65-1	
Styrene	ND	mg/kg	0.0045	1		01/11/21 15:34	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0045	1		01/11/21 15:34	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0045	1		01/11/21 15:34	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0045	1		01/11/21 15:34	127-18-4	
Toluene	ND	mg/kg	0.0045	1		01/11/21 15:34	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0045	1		01/11/21 15:34	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0045	1		01/11/21 15:34	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0045	1		01/11/21 15:34	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0045	1		01/11/21 15:34	79-00-5	
Trichloroethene	ND	mg/kg	0.0045	1		01/11/21 15:34	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0045	1		01/11/21 15:34	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0045	1		01/11/21 15:34	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0045	1		01/11/21 15:34	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0045	1		01/11/21 15:34	108-67-8	
Vinyl acetate	ND	mg/kg	0.090	1		01/11/21 15:34	108-05-4	
Vinyl chloride	ND	mg/kg	0.0045	1		01/11/21 15:34	75-01-4	
Xylene (Total)	ND	mg/kg	0.0090	1		01/11/21 15:34	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	118	%	73-133	1		01/11/21 15:34	1868-53-7	
Toluene-d8 (S)	110	%	73-130	1		01/11/21 15:34	2037-26-5	
4-Bromofluorobenzene (S)	76	%	55-129	1		01/11/21 15:34	460-00-4	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	<b>14.3</b>	%	0.10	1		01/13/21 11:23		N2

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample:** Pit 1 5-10' **Lab ID:** 50277309002 **Collected:** 01/06/21 08:45 **Received:** 01/08/21 08:45 **Matrix:** Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>								
Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Pace Analytical Services - Indianapolis								
Arsenic	11.1	mg/kg	1.2	1	01/17/21 13:17	01/18/21 13:42	7440-38-2	
Barium	107	mg/kg	1.2	1	01/17/21 13:17	01/18/21 13:42	7440-39-3	
Cadmium	ND	mg/kg	0.60	1	01/17/21 13:17	01/18/21 13:42	7440-43-9	
Chromium	21.7	mg/kg	1.2	1	01/17/21 13:17	01/18/21 13:42	7440-47-3	
Lead	21.7	mg/kg	1.2	1	01/17/21 13:17	01/18/21 13:42	7439-92-1	
Selenium	ND	mg/kg	1.2	1	01/17/21 13:17	01/18/21 13:42	7782-49-2	
Silver	ND	mg/kg	0.60	1	01/17/21 13:17	01/18/21 13:42	7440-22-4	
<b>7471 Mercury</b>								
Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Pace Analytical Services - Indianapolis								
Mercury	ND	mg/kg	0.25	1	01/13/21 10:28	01/13/21 19:43	7439-97-6	
<b>8270 PAH Soil by SIM</b>								
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Pace Analytical Services - Indianapolis								
Acenaphthene	0.30	mg/kg	0.030	5	01/15/21 10:00	01/15/21 19:01	83-32-9	
Acenaphthylene	0.14	mg/kg	0.030	5	01/15/21 10:00	01/15/21 19:01	208-96-8	
Anthracene	0.38	mg/kg	0.030	5	01/15/21 10:00	01/15/21 19:01	120-12-7	
Benzo(a)anthracene	0.68	mg/kg	0.030	5	01/15/21 10:00	01/15/21 19:01	56-55-3	
Benzo(a)pyrene	0.66	mg/kg	0.030	5	01/15/21 10:00	01/15/21 19:01	50-32-8	
Benzo(b)fluoranthene	0.97	mg/kg	0.030	5	01/15/21 10:00	01/15/21 19:01	205-99-2	
Benzo(g,h,i)perylene	0.38	mg/kg	0.030	5	01/15/21 10:00	01/15/21 19:01	191-24-2	
Benzo(k)fluoranthene	0.41	mg/kg	0.030	5	01/15/21 10:00	01/15/21 19:01	207-08-9	
Chrysene	0.80	mg/kg	0.030	5	01/15/21 10:00	01/15/21 19:01	218-01-9	
Dibenz(a,h)anthracene	0.086	mg/kg	0.030	5	01/15/21 10:00	01/15/21 19:01	53-70-3	
Fluoranthene	1.3	mg/kg	0.030	5	01/15/21 10:00	01/15/21 19:01	206-44-0	
Fluorene	0.38	mg/kg	0.030	5	01/15/21 10:00	01/15/21 19:01	86-73-7	
Indeno(1,2,3-cd)pyrene	0.35	mg/kg	0.030	5	01/15/21 10:00	01/15/21 19:01	193-39-5	
1-Methylnaphthalene	0.15	mg/kg	0.030	5	01/15/21 10:00	01/15/21 19:01	90-12-0	
2-Methylnaphthalene	0.19	mg/kg	0.030	5	01/15/21 10:00	01/15/21 19:01	91-57-6	
Naphthalene	0.083	mg/kg	0.030	5	01/15/21 10:00	01/15/21 19:01	91-20-3	ED
Phenanthrene	1.2	mg/kg	0.030	5	01/15/21 10:00	01/15/21 19:01	85-01-8	
Pyrene	1.2	mg/kg	0.030	5	01/15/21 10:00	01/15/21 19:01	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	72	%	37-111	5	01/15/21 10:00	01/15/21 19:01	321-60-8	
p-Terphenyl-d14 (S)	82	%	29-124	5	01/15/21 10:00	01/15/21 19:01	1718-51-0	
<b>8260 MSV 5035A VOA</b>								
Analytical Method: EPA 8260								
Pace Analytical Services - Indianapolis								
Acetone	ND	mg/kg	0.090	1		01/11/21 15:51	67-64-1	
Acrolein	ND	mg/kg	0.090	1		01/11/21 15:51	107-02-8	
Acrylonitrile	ND	mg/kg	0.090	1		01/11/21 15:51	107-13-1	
Benzene	ND	mg/kg	0.0045	1		01/11/21 15:51	71-43-2	
Bromobenzene	ND	mg/kg	0.0045	1		01/11/21 15:51	108-86-1	
Bromochloromethane	ND	mg/kg	0.0045	1		01/11/21 15:51	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0045	1		01/11/21 15:51	75-27-4	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

Sample: Pit 1 5-10' Lab ID: 50277309002 Collected: 01/06/21 08:45 Received: 01/08/21 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Bromoform	ND	mg/kg	0.0045	1		01/11/21 15:51	75-25-2	
Bromomethane	ND	mg/kg	0.0045	1		01/11/21 15:51	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.023	1		01/11/21 15:51	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0045	1		01/11/21 15:51	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0045	1		01/11/21 15:51	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0045	1		01/11/21 15:51	98-06-6	
Carbon disulfide	ND	mg/kg	0.0090	1		01/11/21 15:51	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0045	1		01/11/21 15:51	56-23-5	
Chlorobenzene	ND	mg/kg	0.0045	1		01/11/21 15:51	108-90-7	
Chloroethane	ND	mg/kg	0.0045	1		01/11/21 15:51	75-00-3	
Chloroform	ND	mg/kg	0.0045	1		01/11/21 15:51	67-66-3	
Chloromethane	ND	mg/kg	0.0045	1		01/11/21 15:51	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0045	1		01/11/21 15:51	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0045	1		01/11/21 15:51	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0045	1		01/11/21 15:51	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0045	1		01/11/21 15:51	106-93-4	
Dibromomethane	ND	mg/kg	0.0045	1		01/11/21 15:51	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0045	1		01/11/21 15:51	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0045	1		01/11/21 15:51	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0045	1		01/11/21 15:51	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.090	1		01/11/21 15:51	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0045	1		01/11/21 15:51	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0045	1		01/11/21 15:51	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0045	1		01/11/21 15:51	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0045	1		01/11/21 15:51	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0045	1		01/11/21 15:51	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0045	1		01/11/21 15:51	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0045	1		01/11/21 15:51	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0045	1		01/11/21 15:51	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0045	1		01/11/21 15:51	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0045	1		01/11/21 15:51	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0045	1		01/11/21 15:51	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0045	1		01/11/21 15:51	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0045	1		01/11/21 15:51	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.090	1		01/11/21 15:51	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0045	1		01/11/21 15:51	87-68-3	
n-Hexane	ND	mg/kg	0.0045	1		01/11/21 15:51	110-54-3	
2-Hexanone	ND	mg/kg	0.090	1		01/11/21 15:51	591-78-6	
Iodomethane	ND	mg/kg	0.090	1		01/11/21 15:51	74-88-4	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0045	1		01/11/21 15:51	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0045	1		01/11/21 15:51	99-87-6	
Methylene Chloride	ND	mg/kg	0.018	1		01/11/21 15:51	75-09-2	
1-Methylnaphthalene	ND	ug/kg	9.0	1		01/11/21 15:51	90-12-0	
2-Methylnaphthalene	ND	ug/kg	9.0	1		01/11/21 15:51	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.023	1		01/11/21 15:51	108-10-1	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample:** Pit 1 5-10'      **Lab ID:** 50277309002      Collected: 01/06/21 08:45      Received: 01/08/21 08:45      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Methyl-tert-butyl ether	ND	mg/kg	0.0045	1		01/11/21 15:51	1634-04-4	
Naphthalene	ND	mg/kg	0.0045	1		01/11/21 15:51	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0045	1		01/11/21 15:51	103-65-1	
Styrene	ND	mg/kg	0.0045	1		01/11/21 15:51	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0045	1		01/11/21 15:51	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0045	1		01/11/21 15:51	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0045	1		01/11/21 15:51	127-18-4	
Toluene	ND	mg/kg	0.0045	1		01/11/21 15:51	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0045	1		01/11/21 15:51	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0045	1		01/11/21 15:51	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0045	1		01/11/21 15:51	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0045	1		01/11/21 15:51	79-00-5	
Trichloroethene	ND	mg/kg	0.0045	1		01/11/21 15:51	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0045	1		01/11/21 15:51	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0045	1		01/11/21 15:51	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0045	1		01/11/21 15:51	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0045	1		01/11/21 15:51	108-67-8	
Vinyl acetate	ND	mg/kg	0.090	1		01/11/21 15:51	108-05-4	
Vinyl chloride	ND	mg/kg	0.0045	1		01/11/21 15:51	75-01-4	
Xylene (Total)	ND	mg/kg	0.0090	1		01/11/21 15:51	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	118	%	73-133	1		01/11/21 15:51	1868-53-7	
Toluene-d8 (S)	112	%	73-130	1		01/11/21 15:51	2037-26-5	
4-Bromofluorobenzene (S)	76	%	55-129	1		01/11/21 15:51	460-00-4	

**Percent Moisture**

Analytical Method: SM 2540G  
Pace Analytical Services - Indianapolis

Percent Moisture	<b>17.5</b>	%	0.10	1		01/13/21 11:24		N2
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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample:** Pit 1 10-15'      **Lab ID:** 50277309003      Collected: 01/06/21 08:52      Received: 01/08/21 08:45      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>								
Analytical Method: EPA 6010    Preparation Method: EPA 3050								
Pace Analytical Services - Indianapolis								
Arsenic	8.7	mg/kg	1.0	1	01/17/21 13:17	01/18/21 13:44	7440-38-2	
Barium	114	mg/kg	1.0	1	01/17/21 13:17	01/18/21 13:44	7440-39-3	
Cadmium	ND	mg/kg	0.51	1	01/17/21 13:17	01/18/21 13:44	7440-43-9	
Chromium	27.6	mg/kg	1.0	1	01/17/21 13:17	01/18/21 13:44	7440-47-3	
Lead	183	mg/kg	1.0	1	01/17/21 13:17	01/18/21 13:44	7439-92-1	
Selenium	ND	mg/kg	1.0	1	01/17/21 13:17	01/18/21 13:44	7782-49-2	
Silver	ND	mg/kg	0.51	1	01/17/21 13:17	01/18/21 13:44	7440-22-4	
<b>7471 Mercury</b>								
Analytical Method: EPA 7471    Preparation Method: EPA 7471								
Pace Analytical Services - Indianapolis								
Mercury	ND	mg/kg	0.26	1	01/13/21 10:28	01/13/21 19:49	7439-97-6	
<b>8270 PAH Soil by SIM</b>								
Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546								
Pace Analytical Services - Indianapolis								
Acenaphthene	0.052	mg/kg	0.029	5	01/15/21 10:00	01/15/21 19:16	83-32-9	
Acenaphthylene	0.074	mg/kg	0.029	5	01/15/21 10:00	01/15/21 19:16	208-96-8	
Anthracene	0.21	mg/kg	0.029	5	01/15/21 10:00	01/15/21 19:16	120-12-7	
Benzo(a)anthracene	0.63	mg/kg	0.029	5	01/15/21 10:00	01/15/21 19:16	56-55-3	
Benzo(a)pyrene	0.65	mg/kg	0.029	5	01/15/21 10:00	01/15/21 19:16	50-32-8	
Benzo(b)fluoranthene	0.90	mg/kg	0.029	5	01/15/21 10:00	01/15/21 19:16	205-99-2	
Benzo(g,h,i)perylene	0.36	mg/kg	0.029	5	01/15/21 10:00	01/15/21 19:16	191-24-2	
Benzo(k)fluoranthene	0.27	mg/kg	0.029	5	01/15/21 10:00	01/15/21 19:16	207-08-9	
Chrysene	0.66	mg/kg	0.029	5	01/15/21 10:00	01/15/21 19:16	218-01-9	
Dibenz(a,h)anthracene	0.071	mg/kg	0.029	5	01/15/21 10:00	01/15/21 19:16	53-70-3	
Fluoranthene	1.2	mg/kg	0.029	5	01/15/21 10:00	01/15/21 19:16	206-44-0	
Fluorene	0.054	mg/kg	0.029	5	01/15/21 10:00	01/15/21 19:16	86-73-7	
Indeno(1,2,3-cd)pyrene	0.30	mg/kg	0.029	5	01/15/21 10:00	01/15/21 19:16	193-39-5	
1-Methylnaphthalene	0.045	mg/kg	0.029	5	01/15/21 10:00	01/15/21 19:16	90-12-0	
2-Methylnaphthalene	0.062	mg/kg	0.029	5	01/15/21 10:00	01/15/21 19:16	91-57-6	
Naphthalene	0.072	mg/kg	0.029	5	01/15/21 10:00	01/15/21 19:16	91-20-3	ED
Phenanthrene	0.78	mg/kg	0.029	5	01/15/21 10:00	01/15/21 19:16	85-01-8	
Pyrene	1.1	mg/kg	0.029	5	01/15/21 10:00	01/15/21 19:16	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	70	%	37-111	5	01/15/21 10:00	01/15/21 19:16	321-60-8	
p-Terphenyl-d14 (S)	81	%	29-124	5	01/15/21 10:00	01/15/21 19:16	1718-51-0	
<b>8260 MSV 5035A VOA</b>								
Analytical Method: EPA 8260								
Pace Analytical Services - Indianapolis								
Acetone	ND	mg/kg	0.093	1		01/12/21 00:12	67-64-1	
Acrolein	ND	mg/kg	0.093	1		01/12/21 00:12	107-02-8	
Acrylonitrile	ND	mg/kg	0.093	1		01/12/21 00:12	107-13-1	
Benzene	ND	mg/kg	0.0046	1		01/12/21 00:12	71-43-2	
Bromobenzene	ND	mg/kg	0.0046	1		01/12/21 00:12	108-86-1	
Bromochloromethane	ND	mg/kg	0.0046	1		01/12/21 00:12	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0046	1		01/12/21 00:12	75-27-4	

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

Sample: Pit 1 10-15' Lab ID: 50277309003 Collected: 01/06/21 08:52 Received: 01/08/21 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Bromoform	ND	mg/kg	0.0046	1		01/12/21 00:12	75-25-2	
Bromomethane	ND	mg/kg	0.0046	1		01/12/21 00:12	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.023	1		01/12/21 00:12	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0046	1		01/12/21 00:12	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0046	1		01/12/21 00:12	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0046	1		01/12/21 00:12	98-06-6	
Carbon disulfide	ND	mg/kg	0.0093	1		01/12/21 00:12	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0046	1		01/12/21 00:12	56-23-5	
Chlorobenzene	ND	mg/kg	0.0046	1		01/12/21 00:12	108-90-7	
Chloroethane	ND	mg/kg	0.0046	1		01/12/21 00:12	75-00-3	
Chloroform	ND	mg/kg	0.0046	1		01/12/21 00:12	67-66-3	
Chloromethane	ND	mg/kg	0.0046	1		01/12/21 00:12	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0046	1		01/12/21 00:12	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0046	1		01/12/21 00:12	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0046	1		01/12/21 00:12	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0046	1		01/12/21 00:12	106-93-4	
Dibromomethane	ND	mg/kg	0.0046	1		01/12/21 00:12	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0046	1		01/12/21 00:12	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0046	1		01/12/21 00:12	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0046	1		01/12/21 00:12	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.093	1		01/12/21 00:12	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0046	1		01/12/21 00:12	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0046	1		01/12/21 00:12	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0046	1		01/12/21 00:12	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0046	1		01/12/21 00:12	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0046	1		01/12/21 00:12	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0046	1		01/12/21 00:12	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0046	1		01/12/21 00:12	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0046	1		01/12/21 00:12	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0046	1		01/12/21 00:12	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0046	1		01/12/21 00:12	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0046	1		01/12/21 00:12	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0046	1		01/12/21 00:12	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0046	1		01/12/21 00:12	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.093	1		01/12/21 00:12	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0046	1		01/12/21 00:12	87-68-3	
n-Hexane	ND	mg/kg	0.0046	1		01/12/21 00:12	110-54-3	
2-Hexanone	ND	mg/kg	0.093	1		01/12/21 00:12	591-78-6	
Iodomethane	ND	mg/kg	0.093	1		01/12/21 00:12	74-88-4	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0046	1		01/12/21 00:12	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0046	1		01/12/21 00:12	99-87-6	
Methylene Chloride	ND	mg/kg	0.019	1		01/12/21 00:12	75-09-2	
1-Methylnaphthalene	ND	ug/kg	9.3	1		01/12/21 00:12	90-12-0	
2-Methylnaphthalene	ND	ug/kg	9.3	1		01/12/21 00:12	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.023	1		01/12/21 00:12	108-10-1	

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample: Pit 1 10-15'**      **Lab ID: 50277309003**      Collected: 01/06/21 08:52      Received: 01/08/21 08:45      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Methyl-tert-butyl ether	ND	mg/kg	0.0046	1		01/12/21 00:12	1634-04-4	
Naphthalene	ND	mg/kg	0.0046	1		01/12/21 00:12	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0046	1		01/12/21 00:12	103-65-1	
Styrene	ND	mg/kg	0.0046	1		01/12/21 00:12	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0046	1		01/12/21 00:12	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0046	1		01/12/21 00:12	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0046	1		01/12/21 00:12	127-18-4	
Toluene	ND	mg/kg	0.0046	1		01/12/21 00:12	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0046	1		01/12/21 00:12	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0046	1		01/12/21 00:12	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0046	1		01/12/21 00:12	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0046	1		01/12/21 00:12	79-00-5	
Trichloroethene	ND	mg/kg	0.0046	1		01/12/21 00:12	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0046	1		01/12/21 00:12	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0046	1		01/12/21 00:12	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0046	1		01/12/21 00:12	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0046	1		01/12/21 00:12	108-67-8	
Vinyl acetate	ND	mg/kg	0.093	1		01/12/21 00:12	108-05-4	
Vinyl chloride	ND	mg/kg	0.0046	1		01/12/21 00:12	75-01-4	
Xylene (Total)	ND	mg/kg	0.0093	1		01/12/21 00:12	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	105	%	73-133	1		01/12/21 00:12	1868-53-7	
Toluene-d8 (S)	98	%	73-130	1		01/12/21 00:12	2037-26-5	
4-Bromofluorobenzene (S)	100	%	55-129	1		01/12/21 00:12	460-00-4	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	<b>16.3</b>	%	0.10	1		01/13/21 11:24		N2

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample:** Pit 2 0-5'      **Lab ID:** 50277309004      Collected: 01/06/21 09:10      Received: 01/08/21 08:45      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>								
Analytical Method: EPA 6010    Preparation Method: EPA 3050								
Pace Analytical Services - Indianapolis								
Arsenic	3.4	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:00	7440-38-2	
Barium	28.1	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:00	7440-39-3	
Cadmium	ND	mg/kg	0.55	1	01/17/21 13:17	01/18/21 14:00	7440-43-9	
Chromium	3.7	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:00	7440-47-3	
Lead	27.3	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:00	7439-92-1	
Selenium	ND	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:00	7782-49-2	
Silver	ND	mg/kg	0.55	1	01/17/21 13:17	01/18/21 14:00	7440-22-4	
<b>7471 Mercury</b>								
Analytical Method: EPA 7471    Preparation Method: EPA 7471								
Pace Analytical Services - Indianapolis								
Mercury	ND	mg/kg	0.24	1	01/13/21 10:28	01/13/21 19:51	7439-97-6	
<b>8270 PAH Soil by SIM</b>								
Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546								
Pace Analytical Services - Indianapolis								
Acenaphthene	ND	mg/kg	0.0060	1	01/15/21 10:00	01/15/21 19:30	83-32-9	
Acenaphthylene	ND	mg/kg	0.0060	1	01/15/21 10:00	01/15/21 19:30	208-96-8	
Anthracene	ND	mg/kg	0.0060	1	01/15/21 10:00	01/15/21 19:30	120-12-7	
Benzo(a)anthracene	0.0096	mg/kg	0.0060	1	01/15/21 10:00	01/15/21 19:30	56-55-3	
Benzo(a)pyrene	0.0090	mg/kg	0.0060	1	01/15/21 10:00	01/15/21 19:30	50-32-8	
Benzo(b)fluoranthene	0.014	mg/kg	0.0060	1	01/15/21 10:00	01/15/21 19:30	205-99-2	
Benzo(g,h,i)perylene	0.0084	mg/kg	0.0060	1	01/15/21 10:00	01/15/21 19:30	191-24-2	
Benzo(k)fluoranthene	ND	mg/kg	0.0060	1	01/15/21 10:00	01/15/21 19:30	207-08-9	
Chrysene	0.011	mg/kg	0.0060	1	01/15/21 10:00	01/15/21 19:30	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0060	1	01/15/21 10:00	01/15/21 19:30	53-70-3	
Fluoranthene	0.017	mg/kg	0.0060	1	01/15/21 10:00	01/15/21 19:30	206-44-0	
Fluorene	ND	mg/kg	0.0060	1	01/15/21 10:00	01/15/21 19:30	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	mg/kg	0.0060	1	01/15/21 10:00	01/15/21 19:30	193-39-5	
1-Methylnaphthalene	ND	mg/kg	0.0060	1	01/15/21 10:00	01/15/21 19:30	90-12-0	
2-Methylnaphthalene	ND	mg/kg	0.0060	1	01/15/21 10:00	01/15/21 19:30	91-57-6	
Naphthalene	ND	mg/kg	0.0060	1	01/15/21 10:00	01/15/21 19:30	91-20-3	
Phenanthrene	0.010	mg/kg	0.0060	1	01/15/21 10:00	01/15/21 19:30	85-01-8	
Pyrene	0.015	mg/kg	0.0060	1	01/15/21 10:00	01/15/21 19:30	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	77	%	37-111	1	01/15/21 10:00	01/15/21 19:30	321-60-8	
p-Terphenyl-d14 (S)	88	%	29-124	1	01/15/21 10:00	01/15/21 19:30	1718-51-0	
<b>8260 MSV 5035A VOA</b>								
Analytical Method: EPA 8260								
Pace Analytical Services - Indianapolis								
Acetone	ND	mg/kg	0.096	1		01/12/21 00:36	67-64-1	
Acrolein	ND	mg/kg	0.096	1		01/12/21 00:36	107-02-8	
Acrylonitrile	ND	mg/kg	0.096	1		01/12/21 00:36	107-13-1	
Benzene	ND	mg/kg	0.0048	1		01/12/21 00:36	71-43-2	
Bromobenzene	ND	mg/kg	0.0048	1		01/12/21 00:36	108-86-1	
Bromochloromethane	ND	mg/kg	0.0048	1		01/12/21 00:36	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0048	1		01/12/21 00:36	75-27-4	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample: Pit 2 0-5'**      **Lab ID: 50277309004**      Collected: 01/06/21 09:10      Received: 01/08/21 08:45      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Bromoform	ND	mg/kg	0.0048	1		01/12/21 00:36	75-25-2	
Bromomethane	ND	mg/kg	0.0048	1		01/12/21 00:36	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.024	1		01/12/21 00:36	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0048	1		01/12/21 00:36	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0048	1		01/12/21 00:36	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0048	1		01/12/21 00:36	98-06-6	
Carbon disulfide	ND	mg/kg	0.0096	1		01/12/21 00:36	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0048	1		01/12/21 00:36	56-23-5	
Chlorobenzene	ND	mg/kg	0.0048	1		01/12/21 00:36	108-90-7	
Chloroethane	ND	mg/kg	0.0048	1		01/12/21 00:36	75-00-3	
Chloroform	ND	mg/kg	0.0048	1		01/12/21 00:36	67-66-3	
Chloromethane	ND	mg/kg	0.0048	1		01/12/21 00:36	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0048	1		01/12/21 00:36	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0048	1		01/12/21 00:36	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0048	1		01/12/21 00:36	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0048	1		01/12/21 00:36	106-93-4	
Dibromomethane	ND	mg/kg	0.0048	1		01/12/21 00:36	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0048	1		01/12/21 00:36	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0048	1		01/12/21 00:36	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0048	1		01/12/21 00:36	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.096	1		01/12/21 00:36	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0048	1		01/12/21 00:36	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0048	1		01/12/21 00:36	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0048	1		01/12/21 00:36	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0048	1		01/12/21 00:36	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0048	1		01/12/21 00:36	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0048	1		01/12/21 00:36	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0048	1		01/12/21 00:36	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0048	1		01/12/21 00:36	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0048	1		01/12/21 00:36	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0048	1		01/12/21 00:36	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0048	1		01/12/21 00:36	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0048	1		01/12/21 00:36	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0048	1		01/12/21 00:36	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.096	1		01/12/21 00:36	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0048	1		01/12/21 00:36	87-68-3	
n-Hexane	ND	mg/kg	0.0048	1		01/12/21 00:36	110-54-3	
2-Hexanone	ND	mg/kg	0.096	1		01/12/21 00:36	591-78-6	
Iodomethane	ND	mg/kg	0.096	1		01/12/21 00:36	74-88-4	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0048	1		01/12/21 00:36	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0048	1		01/12/21 00:36	99-87-6	
Methylene Chloride	ND	mg/kg	0.019	1		01/12/21 00:36	75-09-2	
1-Methylnaphthalene	ND	ug/kg	9.6	1		01/12/21 00:36	90-12-0	
2-Methylnaphthalene	ND	ug/kg	9.6	1		01/12/21 00:36	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.024	1		01/12/21 00:36	108-10-1	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample:** Pit 2 0-5'      **Lab ID:** 50277309004      Collected: 01/06/21 09:10      Received: 01/08/21 08:45      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Methyl-tert-butyl ether	ND	mg/kg	0.0048	1		01/12/21 00:36	1634-04-4	
Naphthalene	ND	mg/kg	0.0048	1		01/12/21 00:36	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0048	1		01/12/21 00:36	103-65-1	
Styrene	ND	mg/kg	0.0048	1		01/12/21 00:36	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0048	1		01/12/21 00:36	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0048	1		01/12/21 00:36	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0048	1		01/12/21 00:36	127-18-4	
Toluene	ND	mg/kg	0.0048	1		01/12/21 00:36	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0048	1		01/12/21 00:36	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0048	1		01/12/21 00:36	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0048	1		01/12/21 00:36	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0048	1		01/12/21 00:36	79-00-5	
Trichloroethene	ND	mg/kg	0.0048	1		01/12/21 00:36	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0048	1		01/12/21 00:36	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0048	1		01/12/21 00:36	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0048	1		01/12/21 00:36	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0048	1		01/12/21 00:36	108-67-8	
Vinyl acetate	ND	mg/kg	0.096	1		01/12/21 00:36	108-05-4	
Vinyl chloride	ND	mg/kg	0.0048	1		01/12/21 00:36	75-01-4	
Xylene (Total)	ND	mg/kg	0.0096	1		01/12/21 00:36	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	105	%	73-133	1		01/12/21 00:36	1868-53-7	
Toluene-d8 (S)	102	%	73-130	1		01/12/21 00:36	2037-26-5	
4-Bromofluorobenzene (S)	92	%	55-129	1		01/12/21 00:36	460-00-4	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	<b>20.2</b>	%	0.10	1		01/13/21 11:24		N2

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample:** Pit 2 5-10'      **Lab ID:** 50277309005      Collected: 01/06/21 09:25      Received: 01/08/21 08:45      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>								
Analytical Method: EPA 6010    Preparation Method: EPA 3050								
Pace Analytical Services - Indianapolis								
Arsenic	6.2	mg/kg	1.0	1	01/17/21 13:17	01/18/21 14:02	7440-38-2	
Barium	77.8	mg/kg	1.0	1	01/17/21 13:17	01/18/21 14:02	7440-39-3	
Cadmium	ND	mg/kg	0.50	1	01/17/21 13:17	01/18/21 14:02	7440-43-9	
Chromium	13.5	mg/kg	1.0	1	01/17/21 13:17	01/18/21 14:02	7440-47-3	
Lead	12.1	mg/kg	1.0	1	01/17/21 13:17	01/18/21 14:02	7439-92-1	
Selenium	ND	mg/kg	1.0	1	01/17/21 13:17	01/18/21 14:02	7782-49-2	
Silver	ND	mg/kg	0.50	1	01/17/21 13:17	01/18/21 14:02	7440-22-4	
<b>7471 Mercury</b>								
Analytical Method: EPA 7471    Preparation Method: EPA 7471								
Pace Analytical Services - Indianapolis								
Mercury	ND	mg/kg	0.24	1	01/13/21 10:28	01/13/21 19:54	7439-97-6	
<b>8270 PAH Soil by SIM</b>								
Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546								
Pace Analytical Services - Indianapolis								
Acenaphthene	ND	mg/kg	0.0058	1	01/15/21 10:00	01/15/21 19:45	83-32-9	
Acenaphthylene	0.014	mg/kg	0.0058	1	01/15/21 10:00	01/15/21 19:45	208-96-8	
Anthracene	0.021	mg/kg	0.0058	1	01/15/21 10:00	01/15/21 19:45	120-12-7	
Benzo(a)anthracene	0.12	mg/kg	0.0058	1	01/15/21 10:00	01/15/21 19:45	56-55-3	
Benzo(a)pyrene	0.14	mg/kg	0.0058	1	01/15/21 10:00	01/15/21 19:45	50-32-8	
Benzo(b)fluoranthene	0.22	mg/kg	0.0058	1	01/15/21 10:00	01/15/21 19:45	205-99-2	
Benzo(g,h,i)perylene	0.095	mg/kg	0.0058	1	01/15/21 10:00	01/15/21 19:45	191-24-2	
Benzo(k)fluoranthene	0.093	mg/kg	0.0058	1	01/15/21 10:00	01/15/21 19:45	207-08-9	
Chrysene	0.16	mg/kg	0.0058	1	01/15/21 10:00	01/15/21 19:45	218-01-9	
Dibenz(a,h)anthracene	0.016	mg/kg	0.0058	1	01/15/21 10:00	01/15/21 19:45	53-70-3	
Fluoranthene	0.29	mg/kg	0.0058	1	01/15/21 10:00	01/15/21 19:45	206-44-0	
Fluorene	ND	mg/kg	0.0058	1	01/15/21 10:00	01/15/21 19:45	86-73-7	
Indeno(1,2,3-cd)pyrene	0.080	mg/kg	0.0058	1	01/15/21 10:00	01/15/21 19:45	193-39-5	
1-Methylnaphthalene	0.0080	mg/kg	0.0058	1	01/15/21 10:00	01/15/21 19:45	90-12-0	
2-Methylnaphthalene	0.011	mg/kg	0.0058	1	01/15/21 10:00	01/15/21 19:45	91-57-6	
Naphthalene	0.010	mg/kg	0.0058	1	01/15/21 10:00	01/15/21 19:45	91-20-3	
Phenanthrene	0.11	mg/kg	0.0058	1	01/15/21 10:00	01/15/21 19:45	85-01-8	
Pyrene	0.27	mg/kg	0.0058	1	01/15/21 10:00	01/15/21 19:45	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	71	%	37-111	1	01/15/21 10:00	01/15/21 19:45	321-60-8	
p-Terphenyl-d14 (S)	84	%	29-124	1	01/15/21 10:00	01/15/21 19:45	1718-51-0	
<b>8260 MSV 5035A VOA</b>								
Analytical Method: EPA 8260								
Pace Analytical Services - Indianapolis								
Acetone	ND	mg/kg	0.10	1		01/12/21 01:01	67-64-1	
Acrolein	ND	mg/kg	0.10	1		01/12/21 01:01	107-02-8	
Acrylonitrile	ND	mg/kg	0.10	1		01/12/21 01:01	107-13-1	
Benzene	ND	mg/kg	0.0051	1		01/12/21 01:01	71-43-2	
Bromobenzene	ND	mg/kg	0.0051	1		01/12/21 01:01	108-86-1	
Bromochloromethane	ND	mg/kg	0.0051	1		01/12/21 01:01	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0051	1		01/12/21 01:01	75-27-4	

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### ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

Sample: Pit 2 5-10' Lab ID: 50277309005 Collected: 01/06/21 09:25 Received: 01/08/21 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Bromoform	ND	mg/kg	0.0051	1		01/12/21 01:01	75-25-2	
Bromomethane	ND	mg/kg	0.0051	1		01/12/21 01:01	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.025	1		01/12/21 01:01	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0051	1		01/12/21 01:01	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0051	1		01/12/21 01:01	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0051	1		01/12/21 01:01	98-06-6	
Carbon disulfide	ND	mg/kg	0.010	1		01/12/21 01:01	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0051	1		01/12/21 01:01	56-23-5	
Chlorobenzene	ND	mg/kg	0.0051	1		01/12/21 01:01	108-90-7	
Chloroethane	ND	mg/kg	0.0051	1		01/12/21 01:01	75-00-3	
Chloroform	ND	mg/kg	0.0051	1		01/12/21 01:01	67-66-3	
Chloromethane	ND	mg/kg	0.0051	1		01/12/21 01:01	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0051	1		01/12/21 01:01	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0051	1		01/12/21 01:01	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0051	1		01/12/21 01:01	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0051	1		01/12/21 01:01	106-93-4	
Dibromomethane	ND	mg/kg	0.0051	1		01/12/21 01:01	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0051	1		01/12/21 01:01	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0051	1		01/12/21 01:01	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0051	1		01/12/21 01:01	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.10	1		01/12/21 01:01	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0051	1		01/12/21 01:01	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0051	1		01/12/21 01:01	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0051	1		01/12/21 01:01	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0051	1		01/12/21 01:01	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0051	1		01/12/21 01:01	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0051	1		01/12/21 01:01	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0051	1		01/12/21 01:01	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0051	1		01/12/21 01:01	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0051	1		01/12/21 01:01	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0051	1		01/12/21 01:01	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0051	1		01/12/21 01:01	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0051	1		01/12/21 01:01	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0051	1		01/12/21 01:01	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.10	1		01/12/21 01:01	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0051	1		01/12/21 01:01	87-68-3	
n-Hexane	ND	mg/kg	0.0051	1		01/12/21 01:01	110-54-3	
2-Hexanone	ND	mg/kg	0.10	1		01/12/21 01:01	591-78-6	
Iodomethane	ND	mg/kg	0.10	1		01/12/21 01:01	74-88-4	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0051	1		01/12/21 01:01	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0051	1		01/12/21 01:01	99-87-6	
Methylene Chloride	ND	mg/kg	0.020	1		01/12/21 01:01	75-09-2	
1-Methylnaphthalene	ND	ug/kg	10.1	1		01/12/21 01:01	90-12-0	
2-Methylnaphthalene	ND	ug/kg	10.1	1		01/12/21 01:01	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.025	1		01/12/21 01:01	108-10-1	

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample:** Pit 2 5-10'      **Lab ID:** 50277309005      Collected: 01/06/21 09:25      Received: 01/08/21 08:45      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Methyl-tert-butyl ether	ND	mg/kg	0.0051	1		01/12/21 01:01	1634-04-4	
Naphthalene	ND	mg/kg	0.0051	1		01/12/21 01:01	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0051	1		01/12/21 01:01	103-65-1	
Styrene	ND	mg/kg	0.0051	1		01/12/21 01:01	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0051	1		01/12/21 01:01	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0051	1		01/12/21 01:01	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0051	1		01/12/21 01:01	127-18-4	
Toluene	ND	mg/kg	0.0051	1		01/12/21 01:01	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0051	1		01/12/21 01:01	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0051	1		01/12/21 01:01	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0051	1		01/12/21 01:01	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0051	1		01/12/21 01:01	79-00-5	
Trichloroethene	ND	mg/kg	0.0051	1		01/12/21 01:01	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0051	1		01/12/21 01:01	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0051	1		01/12/21 01:01	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0051	1		01/12/21 01:01	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0051	1		01/12/21 01:01	108-67-8	
Vinyl acetate	ND	mg/kg	0.10	1		01/12/21 01:01	108-05-4	
Vinyl chloride	ND	mg/kg	0.0051	1		01/12/21 01:01	75-01-4	
Xylene (Total)	ND	mg/kg	0.010	1		01/12/21 01:01	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	104	%	73-133	1		01/12/21 01:01	1868-53-7	
Toluene-d8 (S)	94	%	73-130	1		01/12/21 01:01	2037-26-5	
4-Bromofluorobenzene (S)	99	%	55-129	1		01/12/21 01:01	460-00-4	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	<b>16.2</b>	%	0.10	1		01/13/21 11:24		N2

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample:** Pit 2 10-15'      **Lab ID:** 50277309006      Collected: 01/06/21 09:41      Received: 01/08/21 08:45      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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**6010 MET ICP**

Analytical Method: EPA 6010      Preparation Method: EPA 3050

Pace Analytical Services - Indianapolis

Arsenic	7.1	mg/kg	1.0	1	01/17/21 13:17	01/18/21 14:05	7440-38-2	
Barium	75.7	mg/kg	1.0	1	01/17/21 13:17	01/18/21 14:05	7440-39-3	
Cadmium	ND	mg/kg	0.50	1	01/17/21 13:17	01/18/21 14:05	7440-43-9	
Chromium	14.2	mg/kg	1.0	1	01/17/21 13:17	01/18/21 14:05	7440-47-3	
Lead	9.9	mg/kg	1.0	1	01/17/21 13:17	01/18/21 14:05	7439-92-1	
Selenium	ND	mg/kg	1.0	1	01/17/21 13:17	01/18/21 14:05	7782-49-2	
Silver	ND	mg/kg	0.50	1	01/17/21 13:17	01/18/21 14:05	7440-22-4	

**7471 Mercury**

Analytical Method: EPA 7471      Preparation Method: EPA 7471

Pace Analytical Services - Indianapolis

Mercury	ND	mg/kg	0.24	1	01/13/21 10:28	01/13/21 20:00	7439-97-6	
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**8270 PAH Soil by SIM**

Analytical Method: EPA 8270 by SIM      Preparation Method: EPA 3546

Pace Analytical Services - Indianapolis

Acenaphthene	ND	mg/kg	0.0059	1	01/15/21 10:00	01/15/21 19:59	83-32-9	
Acenaphthylene	0.026	mg/kg	0.0059	1	01/15/21 10:00	01/15/21 19:59	208-96-8	
Anthracene	0.040	mg/kg	0.0059	1	01/15/21 10:00	01/15/21 19:59	120-12-7	
Benzo(a)anthracene	0.18	mg/kg	0.0059	1	01/15/21 10:00	01/15/21 19:59	56-55-3	
Benzo(a)pyrene	0.21	mg/kg	0.0059	1	01/15/21 10:00	01/15/21 19:59	50-32-8	
Benzo(b)fluoranthene	0.29	mg/kg	0.0059	1	01/15/21 10:00	01/15/21 19:59	205-99-2	
Benzo(g,h,i)perylene	0.12	mg/kg	0.0059	1	01/15/21 10:00	01/15/21 19:59	191-24-2	
Benzo(k)fluoranthene	0.13	mg/kg	0.0059	1	01/15/21 10:00	01/15/21 19:59	207-08-9	
Chrysene	0.23	mg/kg	0.0059	1	01/15/21 10:00	01/15/21 19:59	218-01-9	
Dibenz(a,h)anthracene	0.023	mg/kg	0.0059	1	01/15/21 10:00	01/15/21 19:59	53-70-3	
Fluoranthene	0.30	mg/kg	0.0059	1	01/15/21 10:00	01/15/21 19:59	206-44-0	
Fluorene	0.011	mg/kg	0.0059	1	01/15/21 10:00	01/15/21 19:59	86-73-7	
Indeno(1,2,3-cd)pyrene	0.10	mg/kg	0.0059	1	01/15/21 10:00	01/15/21 19:59	193-39-5	
1-Methylnaphthalene	ND	mg/kg	0.0059	1	01/15/21 10:00	01/15/21 19:59	90-12-0	
2-Methylnaphthalene	ND	mg/kg	0.0059	1	01/15/21 10:00	01/15/21 19:59	91-57-6	
Naphthalene	ND	mg/kg	0.0059	1	01/15/21 10:00	01/15/21 19:59	91-20-3	
Phenanthrene	0.11	mg/kg	0.0059	1	01/15/21 10:00	01/15/21 19:59	85-01-8	
Pyrene	0.29	mg/kg	0.0059	1	01/15/21 10:00	01/15/21 19:59	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	62	%	37-111	1	01/15/21 10:00	01/15/21 19:59	321-60-8	
p-Terphenyl-d14 (S)	74	%	29-124	1	01/15/21 10:00	01/15/21 19:59	1718-51-0	

**8260 MSV 5035A VOA**

Analytical Method: EPA 8260

Pace Analytical Services - Indianapolis

Acetone	ND	mg/kg	0.12	1	01/12/21 01:26	67-64-1	
Acrolein	ND	mg/kg	0.12	1	01/12/21 01:26	107-02-8	
Acrylonitrile	ND	mg/kg	0.12	1	01/12/21 01:26	107-13-1	
Benzene	ND	mg/kg	0.0058	1	01/12/21 01:26	71-43-2	
Bromobenzene	ND	mg/kg	0.0058	1	01/12/21 01:26	108-86-1	
Bromochloromethane	ND	mg/kg	0.0058	1	01/12/21 01:26	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0058	1	01/12/21 01:26	75-27-4	

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

Sample: Pit 2 10-15' Lab ID: 50277309006 Collected: 01/06/21 09:41 Received: 01/08/21 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Bromoform	ND	mg/kg	0.0058	1		01/12/21 01:26	75-25-2	
Bromomethane	ND	mg/kg	0.0058	1		01/12/21 01:26	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.029	1		01/12/21 01:26	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0058	1		01/12/21 01:26	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0058	1		01/12/21 01:26	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0058	1		01/12/21 01:26	98-06-6	
Carbon disulfide	ND	mg/kg	0.012	1		01/12/21 01:26	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0058	1		01/12/21 01:26	56-23-5	
Chlorobenzene	ND	mg/kg	0.0058	1		01/12/21 01:26	108-90-7	
Chloroethane	ND	mg/kg	0.0058	1		01/12/21 01:26	75-00-3	
Chloroform	ND	mg/kg	0.0058	1		01/12/21 01:26	67-66-3	
Chloromethane	ND	mg/kg	0.0058	1		01/12/21 01:26	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0058	1		01/12/21 01:26	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0058	1		01/12/21 01:26	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0058	1		01/12/21 01:26	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0058	1		01/12/21 01:26	106-93-4	
Dibromomethane	ND	mg/kg	0.0058	1		01/12/21 01:26	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0058	1		01/12/21 01:26	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0058	1		01/12/21 01:26	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0058	1		01/12/21 01:26	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.12	1		01/12/21 01:26	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0058	1		01/12/21 01:26	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0058	1		01/12/21 01:26	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0058	1		01/12/21 01:26	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0058	1		01/12/21 01:26	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0058	1		01/12/21 01:26	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0058	1		01/12/21 01:26	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0058	1		01/12/21 01:26	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0058	1		01/12/21 01:26	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0058	1		01/12/21 01:26	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0058	1		01/12/21 01:26	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0058	1		01/12/21 01:26	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0058	1		01/12/21 01:26	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0058	1		01/12/21 01:26	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.12	1		01/12/21 01:26	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0058	1		01/12/21 01:26	87-68-3	
n-Hexane	ND	mg/kg	0.0058	1		01/12/21 01:26	110-54-3	
2-Hexanone	ND	mg/kg	0.12	1		01/12/21 01:26	591-78-6	
Iodomethane	ND	mg/kg	0.12	1		01/12/21 01:26	74-88-4	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0058	1		01/12/21 01:26	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0058	1		01/12/21 01:26	99-87-6	
Methylene Chloride	ND	mg/kg	0.023	1		01/12/21 01:26	75-09-2	
1-Methylnaphthalene	ND	ug/kg	11.7	1		01/12/21 01:26	90-12-0	
2-Methylnaphthalene	ND	ug/kg	11.7	1		01/12/21 01:26	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.029	1		01/12/21 01:26	108-10-1	

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample: Pit 2 10-15'**      **Lab ID: 50277309006**      Collected: 01/06/21 09:41      Received: 01/08/21 08:45      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Methyl-tert-butyl ether	ND	mg/kg	0.0058	1		01/12/21 01:26	1634-04-4	
Naphthalene	ND	mg/kg	0.0058	1		01/12/21 01:26	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0058	1		01/12/21 01:26	103-65-1	
Styrene	ND	mg/kg	0.0058	1		01/12/21 01:26	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0058	1		01/12/21 01:26	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0058	1		01/12/21 01:26	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0058	1		01/12/21 01:26	127-18-4	
Toluene	ND	mg/kg	0.0058	1		01/12/21 01:26	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0058	1		01/12/21 01:26	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0058	1		01/12/21 01:26	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0058	1		01/12/21 01:26	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0058	1		01/12/21 01:26	79-00-5	
Trichloroethene	ND	mg/kg	0.0058	1		01/12/21 01:26	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0058	1		01/12/21 01:26	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0058	1		01/12/21 01:26	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0058	1		01/12/21 01:26	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0058	1		01/12/21 01:26	108-67-8	
Vinyl acetate	ND	mg/kg	0.12	1		01/12/21 01:26	108-05-4	
Vinyl chloride	ND	mg/kg	0.0058	1		01/12/21 01:26	75-01-4	
Xylene (Total)	ND	mg/kg	0.012	1		01/12/21 01:26	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	103	%	73-133	1		01/12/21 01:26	1868-53-7	
Toluene-d8 (S)	107	%	73-130	1		01/12/21 01:26	2037-26-5	
4-Bromofluorobenzene (S)	92	%	55-129	1		01/12/21 01:26	460-00-4	

**Percent Moisture**

Analytical Method: SM 2540G  
Pace Analytical Services - Indianapolis

Percent Moisture	<b>15.6</b>	%	0.10	1		01/13/21 11:24		N2
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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample:** Pit 3 0-5'      **Lab ID:** 50277309007      Collected: 01/06/21 09:56      Received: 01/08/21 08:45      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>								
Analytical Method: EPA 6010    Preparation Method: EPA 3050								
Pace Analytical Services - Indianapolis								
Arsenic	8.4	mg/kg	1.0	1	01/17/21 13:17	01/18/21 14:07	7440-38-2	
Barium	57.4	mg/kg	1.0	1	01/17/21 13:17	01/18/21 14:07	7440-39-3	
Cadmium	ND	mg/kg	0.50	1	01/17/21 13:17	01/18/21 14:07	7440-43-9	
Chromium	11.0	mg/kg	1.0	1	01/17/21 13:17	01/18/21 14:07	7440-47-3	
Lead	6.6	mg/kg	1.0	1	01/17/21 13:17	01/18/21 14:07	7439-92-1	
Selenium	ND	mg/kg	1.0	1	01/17/21 13:17	01/18/21 14:07	7782-49-2	
Silver	ND	mg/kg	0.50	1	01/17/21 13:17	01/18/21 14:07	7440-22-4	
<b>7471 Mercury</b>								
Analytical Method: EPA 7471    Preparation Method: EPA 7471								
Pace Analytical Services - Indianapolis								
Mercury	ND	mg/kg	0.21	1	01/13/21 10:28	01/13/21 20:02	7439-97-6	
<b>8270 PAH Soil by SIM</b>								
Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546								
Pace Analytical Services - Indianapolis								
Acenaphthene	ND	mg/kg	0.0054	1	01/15/21 10:00	01/15/21 20:14	83-32-9	
Acenaphthylene	ND	mg/kg	0.0054	1	01/15/21 10:00	01/15/21 20:14	208-96-8	
Anthracene	ND	mg/kg	0.0054	1	01/15/21 10:00	01/15/21 20:14	120-12-7	
Benzo(a)anthracene	ND	mg/kg	0.0054	1	01/15/21 10:00	01/15/21 20:14	56-55-3	
Benzo(a)pyrene	ND	mg/kg	0.0054	1	01/15/21 10:00	01/15/21 20:14	50-32-8	
Benzo(b)fluoranthene	0.0056	mg/kg	0.0054	1	01/15/21 10:00	01/15/21 20:14	205-99-2	
Benzo(g,h,i)perylene	ND	mg/kg	0.0054	1	01/15/21 10:00	01/15/21 20:14	191-24-2	
Benzo(k)fluoranthene	ND	mg/kg	0.0054	1	01/15/21 10:00	01/15/21 20:14	207-08-9	
Chrysene	0.0077	mg/kg	0.0054	1	01/15/21 10:00	01/15/21 20:14	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0054	1	01/15/21 10:00	01/15/21 20:14	53-70-3	
Fluoranthene	ND	mg/kg	0.0054	1	01/15/21 10:00	01/15/21 20:14	206-44-0	
Fluorene	ND	mg/kg	0.0054	1	01/15/21 10:00	01/15/21 20:14	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	mg/kg	0.0054	1	01/15/21 10:00	01/15/21 20:14	193-39-5	
1-Methylnaphthalene	ND	mg/kg	0.0054	1	01/15/21 10:00	01/15/21 20:14	90-12-0	
2-Methylnaphthalene	ND	mg/kg	0.0054	1	01/15/21 10:00	01/15/21 20:14	91-57-6	
Naphthalene	ND	mg/kg	0.0054	1	01/15/21 10:00	01/15/21 20:14	91-20-3	
Phenanthrene	ND	mg/kg	0.0054	1	01/15/21 10:00	01/15/21 20:14	85-01-8	
Pyrene	ND	mg/kg	0.0054	1	01/15/21 10:00	01/15/21 20:14	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	78	%	37-111	1	01/15/21 10:00	01/15/21 20:14	321-60-8	
p-Terphenyl-d14 (S)	93	%	29-124	1	01/15/21 10:00	01/15/21 20:14	1718-51-0	
<b>8260 MSV 5035A VOA</b>								
Analytical Method: EPA 8260								
Pace Analytical Services - Indianapolis								
Acetone	ND	mg/kg	0.093	1		01/12/21 01:50	67-64-1	
Acrolein	ND	mg/kg	0.093	1		01/12/21 01:50	107-02-8	
Acrylonitrile	ND	mg/kg	0.093	1		01/12/21 01:50	107-13-1	
Benzene	ND	mg/kg	0.0046	1		01/12/21 01:50	71-43-2	
Bromobenzene	ND	mg/kg	0.0046	1		01/12/21 01:50	108-86-1	
Bromochloromethane	ND	mg/kg	0.0046	1		01/12/21 01:50	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0046	1		01/12/21 01:50	75-27-4	

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### ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

Sample: Pit 3 0-5' Lab ID: 50277309007 Collected: 01/06/21 09:56 Received: 01/08/21 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Bromoform	ND	mg/kg	0.0046	1		01/12/21 01:50	75-25-2	
Bromomethane	ND	mg/kg	0.0046	1		01/12/21 01:50	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.023	1		01/12/21 01:50	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0046	1		01/12/21 01:50	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0046	1		01/12/21 01:50	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0046	1		01/12/21 01:50	98-06-6	
Carbon disulfide	ND	mg/kg	0.0093	1		01/12/21 01:50	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0046	1		01/12/21 01:50	56-23-5	
Chlorobenzene	ND	mg/kg	0.0046	1		01/12/21 01:50	108-90-7	
Chloroethane	ND	mg/kg	0.0046	1		01/12/21 01:50	75-00-3	
Chloroform	ND	mg/kg	0.0046	1		01/12/21 01:50	67-66-3	
Chloromethane	ND	mg/kg	0.0046	1		01/12/21 01:50	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0046	1		01/12/21 01:50	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0046	1		01/12/21 01:50	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0046	1		01/12/21 01:50	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0046	1		01/12/21 01:50	106-93-4	
Dibromomethane	ND	mg/kg	0.0046	1		01/12/21 01:50	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0046	1		01/12/21 01:50	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0046	1		01/12/21 01:50	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0046	1		01/12/21 01:50	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.093	1		01/12/21 01:50	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0046	1		01/12/21 01:50	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0046	1		01/12/21 01:50	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0046	1		01/12/21 01:50	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0046	1		01/12/21 01:50	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0046	1		01/12/21 01:50	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0046	1		01/12/21 01:50	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0046	1		01/12/21 01:50	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0046	1		01/12/21 01:50	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0046	1		01/12/21 01:50	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0046	1		01/12/21 01:50	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0046	1		01/12/21 01:50	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0046	1		01/12/21 01:50	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0046	1		01/12/21 01:50	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.093	1		01/12/21 01:50	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0046	1		01/12/21 01:50	87-68-3	
n-Hexane	ND	mg/kg	0.0046	1		01/12/21 01:50	110-54-3	
2-Hexanone	ND	mg/kg	0.093	1		01/12/21 01:50	591-78-6	
Iodomethane	ND	mg/kg	0.093	1		01/12/21 01:50	74-88-4	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0046	1		01/12/21 01:50	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0046	1		01/12/21 01:50	99-87-6	
Methylene Chloride	ND	mg/kg	0.019	1		01/12/21 01:50	75-09-2	
1-Methylnaphthalene	ND	ug/kg	9.3	1		01/12/21 01:50	90-12-0	
2-Methylnaphthalene	ND	ug/kg	9.3	1		01/12/21 01:50	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.023	1		01/12/21 01:50	108-10-1	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample: Pit 3 0-5'**      **Lab ID: 50277309007**      Collected: 01/06/21 09:56      Received: 01/08/21 08:45      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Methyl-tert-butyl ether	ND	mg/kg	0.0046	1		01/12/21 01:50	1634-04-4	
Naphthalene	ND	mg/kg	0.0046	1		01/12/21 01:50	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0046	1		01/12/21 01:50	103-65-1	
Styrene	ND	mg/kg	0.0046	1		01/12/21 01:50	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0046	1		01/12/21 01:50	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0046	1		01/12/21 01:50	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0046	1		01/12/21 01:50	127-18-4	
Toluene	ND	mg/kg	0.0046	1		01/12/21 01:50	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0046	1		01/12/21 01:50	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0046	1		01/12/21 01:50	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0046	1		01/12/21 01:50	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0046	1		01/12/21 01:50	79-00-5	
Trichloroethene	ND	mg/kg	0.0046	1		01/12/21 01:50	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0046	1		01/12/21 01:50	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0046	1		01/12/21 01:50	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0046	1		01/12/21 01:50	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0046	1		01/12/21 01:50	108-67-8	
Vinyl acetate	ND	mg/kg	0.093	1		01/12/21 01:50	108-05-4	
Vinyl chloride	ND	mg/kg	0.0046	1		01/12/21 01:50	75-01-4	
Xylene (Total)	ND	mg/kg	0.0093	1		01/12/21 01:50	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	100	%	73-133	1		01/12/21 01:50	1868-53-7	
Toluene-d8 (S)	104	%	73-130	1		01/12/21 01:50	2037-26-5	
4-Bromofluorobenzene (S)	89	%	55-129	1		01/12/21 01:50	460-00-4	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	<b>9.7</b>	%	0.10	1		01/13/21 11:24		N2

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample:** Pit 3 5-10' **Lab ID:** 50277309008 **Collected:** 01/06/21 10:10 **Received:** 01/08/21 08:45 **Matrix:** Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>								
Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Pace Analytical Services - Indianapolis								
Arsenic	5.1	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:09	7440-38-2	
Barium	27.3	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:09	7440-39-3	
Cadmium	ND	mg/kg	0.53	1	01/17/21 13:17	01/18/21 14:09	7440-43-9	
Chromium	6.4	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:09	7440-47-3	
Lead	4.1	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:09	7439-92-1	
Selenium	ND	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:09	7782-49-2	
Silver	ND	mg/kg	0.53	1	01/17/21 13:17	01/18/21 14:09	7440-22-4	
<b>7471 Mercury</b>								
Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Pace Analytical Services - Indianapolis								
Mercury	ND	mg/kg	0.22	1	01/13/21 10:28	01/13/21 20:04	7439-97-6	
<b>8270 PAH Soil by SIM</b>								
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Pace Analytical Services - Indianapolis								
Acenaphthene	ND	mg/kg	0.0056	1	01/18/21 11:45	01/18/21 16:53	83-32-9	
Acenaphthylene	ND	mg/kg	0.0056	1	01/18/21 11:45	01/18/21 16:53	208-96-8	
Anthracene	ND	mg/kg	0.0056	1	01/18/21 11:45	01/18/21 16:53	120-12-7	
Benzo(a)anthracene	ND	mg/kg	0.0056	1	01/18/21 11:45	01/18/21 16:53	56-55-3	
Benzo(a)pyrene	ND	mg/kg	0.0056	1	01/18/21 11:45	01/18/21 16:53	50-32-8	
Benzo(b)fluoranthene	0.0082	mg/kg	0.0056	1	01/18/21 11:45	01/18/21 16:53	205-99-2	
Benzo(g,h,i)perylene	0.0057	mg/kg	0.0056	1	01/18/21 11:45	01/18/21 16:53	191-24-2	
Benzo(k)fluoranthene	ND	mg/kg	0.0056	1	01/18/21 11:45	01/18/21 16:53	207-08-9	
Chrysene	0.0073	mg/kg	0.0056	1	01/18/21 11:45	01/18/21 16:53	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0056	1	01/18/21 11:45	01/18/21 16:53	53-70-3	
Fluoranthene	0.013	mg/kg	0.0056	1	01/18/21 11:45	01/18/21 16:53	206-44-0	
Fluorene	ND	mg/kg	0.0056	1	01/18/21 11:45	01/18/21 16:53	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	mg/kg	0.0056	1	01/18/21 11:45	01/18/21 16:53	193-39-5	
1-Methylnaphthalene	ND	mg/kg	0.0056	1	01/18/21 11:45	01/18/21 16:53	90-12-0	
2-Methylnaphthalene	ND	mg/kg	0.0056	1	01/18/21 11:45	01/18/21 16:53	91-57-6	
Naphthalene	ND	mg/kg	0.0056	1	01/18/21 11:45	01/18/21 16:53	91-20-3	
Phenanthrene	ND	mg/kg	0.0056	1	01/18/21 11:45	01/18/21 16:53	85-01-8	
Pyrene	0.010	mg/kg	0.0056	1	01/18/21 11:45	01/18/21 16:53	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	58	%	37-111	1	01/18/21 11:45	01/18/21 16:53	321-60-8	
p-Terphenyl-d14 (S)	67	%	29-124	1	01/18/21 11:45	01/18/21 16:53	1718-51-0	
<b>8260 MSV 5035A VOA</b>								
Analytical Method: EPA 8260								
Pace Analytical Services - Indianapolis								
Acetone	ND	mg/kg	0.090	1		01/12/21 02:14	67-64-1	
Acrolein	ND	mg/kg	0.090	1		01/12/21 02:14	107-02-8	
Acrylonitrile	ND	mg/kg	0.090	1		01/12/21 02:14	107-13-1	
Benzene	ND	mg/kg	0.0045	1		01/12/21 02:14	71-43-2	
Bromobenzene	ND	mg/kg	0.0045	1		01/12/21 02:14	108-86-1	
Bromochloromethane	ND	mg/kg	0.0045	1		01/12/21 02:14	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0045	1		01/12/21 02:14	75-27-4	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample:** Pit 3 5-10'      **Lab ID:** 50277309008      Collected: 01/06/21 10:10      Received: 01/08/21 08:45      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Bromoform	ND	mg/kg	0.0045	1		01/12/21 02:14	75-25-2	
Bromomethane	ND	mg/kg	0.0045	1		01/12/21 02:14	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.022	1		01/12/21 02:14	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0045	1		01/12/21 02:14	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0045	1		01/12/21 02:14	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0045	1		01/12/21 02:14	98-06-6	
Carbon disulfide	ND	mg/kg	0.0090	1		01/12/21 02:14	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0045	1		01/12/21 02:14	56-23-5	
Chlorobenzene	ND	mg/kg	0.0045	1		01/12/21 02:14	108-90-7	
Chloroethane	ND	mg/kg	0.0045	1		01/12/21 02:14	75-00-3	
Chloroform	ND	mg/kg	0.0045	1		01/12/21 02:14	67-66-3	
Chloromethane	ND	mg/kg	0.0045	1		01/12/21 02:14	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0045	1		01/12/21 02:14	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0045	1		01/12/21 02:14	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0045	1		01/12/21 02:14	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0045	1		01/12/21 02:14	106-93-4	
Dibromomethane	ND	mg/kg	0.0045	1		01/12/21 02:14	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0045	1		01/12/21 02:14	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0045	1		01/12/21 02:14	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0045	1		01/12/21 02:14	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.090	1		01/12/21 02:14	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0045	1		01/12/21 02:14	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0045	1		01/12/21 02:14	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0045	1		01/12/21 02:14	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0045	1		01/12/21 02:14	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0045	1		01/12/21 02:14	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0045	1		01/12/21 02:14	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0045	1		01/12/21 02:14	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0045	1		01/12/21 02:14	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0045	1		01/12/21 02:14	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0045	1		01/12/21 02:14	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0045	1		01/12/21 02:14	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0045	1		01/12/21 02:14	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0045	1		01/12/21 02:14	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.090	1		01/12/21 02:14	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0045	1		01/12/21 02:14	87-68-3	
n-Hexane	ND	mg/kg	0.0045	1		01/12/21 02:14	110-54-3	
2-Hexanone	ND	mg/kg	0.090	1		01/12/21 02:14	591-78-6	
Iodomethane	ND	mg/kg	0.090	1		01/12/21 02:14	74-88-4	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0045	1		01/12/21 02:14	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0045	1		01/12/21 02:14	99-87-6	
Methylene Chloride	ND	mg/kg	0.018	1		01/12/21 02:14	75-09-2	
1-Methylnaphthalene	ND	ug/kg	9.0	1		01/12/21 02:14	90-12-0	
2-Methylnaphthalene	ND	ug/kg	9.0	1		01/12/21 02:14	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.022	1		01/12/21 02:14	108-10-1	

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

Sample: Pit 3 5-10' Lab ID: 50277309008 Collected: 01/06/21 10:10 Received: 01/08/21 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Methyl-tert-butyl ether	ND	mg/kg	0.0045	1		01/12/21 02:14	1634-04-4	
Naphthalene	ND	mg/kg	0.0045	1		01/12/21 02:14	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0045	1		01/12/21 02:14	103-65-1	
Styrene	ND	mg/kg	0.0045	1		01/12/21 02:14	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0045	1		01/12/21 02:14	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0045	1		01/12/21 02:14	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0045	1		01/12/21 02:14	127-18-4	
Toluene	ND	mg/kg	0.0045	1		01/12/21 02:14	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0045	1		01/12/21 02:14	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0045	1		01/12/21 02:14	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0045	1		01/12/21 02:14	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0045	1		01/12/21 02:14	79-00-5	
Trichloroethene	ND	mg/kg	0.0045	1		01/12/21 02:14	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0045	1		01/12/21 02:14	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0045	1		01/12/21 02:14	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0045	1		01/12/21 02:14	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0045	1		01/12/21 02:14	108-67-8	
Vinyl acetate	ND	mg/kg	0.090	1		01/12/21 02:14	108-05-4	
Vinyl chloride	ND	mg/kg	0.0045	1		01/12/21 02:14	75-01-4	
Xylene (Total)	ND	mg/kg	0.0090	1		01/12/21 02:14	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	104	%	73-133	1		01/12/21 02:14	1868-53-7	
Toluene-d8 (S)	101	%	73-130	1		01/12/21 02:14	2037-26-5	
4-Bromofluorobenzene (S)	98	%	55-129	1		01/12/21 02:14	460-00-4	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	11.9	%	0.10	1		01/13/21 11:24		N2

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample: Pit 3 10-15'**      **Lab ID: 50277309009**      Collected: 01/06/21 10:20      Received: 01/08/21 08:45      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>								
Analytical Method: EPA 6010    Preparation Method: EPA 3050								
Pace Analytical Services - Indianapolis								
Arsenic	9.2	mg/kg	0.98	1	01/17/21 13:17	01/18/21 14:12	7440-38-2	
Barium	59.0	mg/kg	0.98	1	01/17/21 13:17	01/18/21 14:12	7440-39-3	
Cadmium	ND	mg/kg	0.49	1	01/17/21 13:17	01/18/21 14:12	7440-43-9	
Chromium	11.5	mg/kg	0.98	1	01/17/21 13:17	01/18/21 14:12	7440-47-3	
Lead	24.6	mg/kg	0.98	1	01/17/21 13:17	01/18/21 14:12	7439-92-1	
Selenium	ND	mg/kg	0.98	1	01/17/21 13:17	01/18/21 14:12	7782-49-2	
Silver	ND	mg/kg	0.49	1	01/17/21 13:17	01/18/21 14:12	7440-22-4	
<b>7471 Mercury</b>								
Analytical Method: EPA 7471    Preparation Method: EPA 7471								
Pace Analytical Services - Indianapolis								
Mercury	ND	mg/kg	0.23	1	01/13/21 10:28	01/13/21 20:06	7439-97-6	
<b>8270 PAH Soil by SIM</b>								
Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546								
Pace Analytical Services - Indianapolis								
Acenaphthene	ND	mg/kg	0.0056	1	01/18/21 11:45	01/18/21 17:07	83-32-9	
Acenaphthylene	ND	mg/kg	0.0056	1	01/18/21 11:45	01/18/21 17:07	208-96-8	
Anthracene	0.0084	mg/kg	0.0056	1	01/18/21 11:45	01/18/21 17:07	120-12-7	
Benzo(a)anthracene	0.025	mg/kg	0.0056	1	01/18/21 11:45	01/18/21 17:07	56-55-3	
Benzo(a)pyrene	0.023	mg/kg	0.0056	1	01/18/21 11:45	01/18/21 17:07	50-32-8	
Benzo(b)fluoranthene	0.033	mg/kg	0.0056	1	01/18/21 11:45	01/18/21 17:07	205-99-2	
Benzo(g,h,i)perylene	0.017	mg/kg	0.0056	1	01/18/21 11:45	01/18/21 17:07	191-24-2	
Benzo(k)fluoranthene	0.012	mg/kg	0.0056	1	01/18/21 11:45	01/18/21 17:07	207-08-9	
Chrysene	0.028	mg/kg	0.0056	1	01/18/21 11:45	01/18/21 17:07	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0056	1	01/18/21 11:45	01/18/21 17:07	53-70-3	
Fluoranthene	0.052	mg/kg	0.0056	1	01/18/21 11:45	01/18/21 17:07	206-44-0	
Fluorene	ND	mg/kg	0.0056	1	01/18/21 11:45	01/18/21 17:07	86-73-7	
Indeno(1,2,3-cd)pyrene	0.013	mg/kg	0.0056	1	01/18/21 11:45	01/18/21 17:07	193-39-5	
1-Methylnaphthalene	ND	mg/kg	0.0056	1	01/18/21 11:45	01/18/21 17:07	90-12-0	
2-Methylnaphthalene	ND	mg/kg	0.0056	1	01/18/21 11:45	01/18/21 17:07	91-57-6	
Naphthalene	ND	mg/kg	0.0056	1	01/18/21 11:45	01/18/21 17:07	91-20-3	
Phenanthrene	0.037	mg/kg	0.0056	1	01/18/21 11:45	01/18/21 17:07	85-01-8	
Pyrene	0.045	mg/kg	0.0056	1	01/18/21 11:45	01/18/21 17:07	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	57	%	37-111	1	01/18/21 11:45	01/18/21 17:07	321-60-8	
p-Terphenyl-d14 (S)	63	%	29-124	1	01/18/21 11:45	01/18/21 17:07	1718-51-0	
<b>8260 MSV 5035A VOA</b>								
Analytical Method: EPA 8260								
Pace Analytical Services - Indianapolis								
Acetone	ND	mg/kg	0.091	1		01/12/21 12:58	67-64-1	
Acrolein	ND	mg/kg	0.091	1		01/12/21 12:58	107-02-8	
Acrylonitrile	ND	mg/kg	0.091	1		01/12/21 12:58	107-13-1	
Benzene	ND	mg/kg	0.0046	1		01/12/21 12:58	71-43-2	
Bromobenzene	ND	mg/kg	0.0046	1		01/12/21 12:58	108-86-1	
Bromochloromethane	ND	mg/kg	0.0046	1		01/12/21 12:58	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0046	1		01/12/21 12:58	75-27-4	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample: Pit 3 10-15'**      **Lab ID: 50277309009**      Collected: 01/06/21 10:20      Received: 01/08/21 08:45      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Bromoform	ND	mg/kg	0.0046	1		01/12/21 12:58	75-25-2	
Bromomethane	ND	mg/kg	0.0046	1		01/12/21 12:58	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.023	1		01/12/21 12:58	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0046	1		01/12/21 12:58	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0046	1		01/12/21 12:58	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0046	1		01/12/21 12:58	98-06-6	
Carbon disulfide	ND	mg/kg	0.0091	1		01/12/21 12:58	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0046	1		01/12/21 12:58	56-23-5	
Chlorobenzene	ND	mg/kg	0.0046	1		01/12/21 12:58	108-90-7	
Chloroethane	ND	mg/kg	0.0046	1		01/12/21 12:58	75-00-3	
Chloroform	ND	mg/kg	0.0046	1		01/12/21 12:58	67-66-3	
Chloromethane	ND	mg/kg	0.0046	1		01/12/21 12:58	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0046	1		01/12/21 12:58	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0046	1		01/12/21 12:58	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0046	1		01/12/21 12:58	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0046	1		01/12/21 12:58	106-93-4	
Dibromomethane	ND	mg/kg	0.0046	1		01/12/21 12:58	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0046	1		01/12/21 12:58	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0046	1		01/12/21 12:58	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0046	1		01/12/21 12:58	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.091	1		01/12/21 12:58	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0046	1		01/12/21 12:58	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0046	1		01/12/21 12:58	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0046	1		01/12/21 12:58	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0046	1		01/12/21 12:58	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0046	1		01/12/21 12:58	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0046	1		01/12/21 12:58	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0046	1		01/12/21 12:58	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0046	1		01/12/21 12:58	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0046	1		01/12/21 12:58	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0046	1		01/12/21 12:58	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0046	1		01/12/21 12:58	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0046	1		01/12/21 12:58	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0046	1		01/12/21 12:58	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.091	1		01/12/21 12:58	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0046	1		01/12/21 12:58	87-68-3	
n-Hexane	ND	mg/kg	0.0046	1		01/12/21 12:58	110-54-3	
2-Hexanone	ND	mg/kg	0.091	1		01/12/21 12:58	591-78-6	
Iodomethane	ND	mg/kg	0.091	1		01/12/21 12:58	74-88-4	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0046	1		01/12/21 12:58	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0046	1		01/12/21 12:58	99-87-6	
Methylene Chloride	ND	mg/kg	0.018	1		01/12/21 12:58	75-09-2	
1-Methylnaphthalene	ND	ug/kg	9.1	1		01/12/21 12:58	90-12-0	
2-Methylnaphthalene	ND	ug/kg	9.1	1		01/12/21 12:58	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.023	1		01/12/21 12:58	108-10-1	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample:** Pit 3 10-15'      **Lab ID:** 50277309009      Collected: 01/06/21 10:20      Received: 01/08/21 08:45      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Methyl-tert-butyl ether	ND	mg/kg	0.0046	1		01/12/21 12:58	1634-04-4	
Naphthalene	ND	mg/kg	0.0046	1		01/12/21 12:58	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0046	1		01/12/21 12:58	103-65-1	
Styrene	ND	mg/kg	0.0046	1		01/12/21 12:58	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0046	1		01/12/21 12:58	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0046	1		01/12/21 12:58	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0046	1		01/12/21 12:58	127-18-4	
Toluene	ND	mg/kg	0.0046	1		01/12/21 12:58	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0046	1		01/12/21 12:58	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0046	1		01/12/21 12:58	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0046	1		01/12/21 12:58	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0046	1		01/12/21 12:58	79-00-5	
Trichloroethene	ND	mg/kg	0.0046	1		01/12/21 12:58	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0046	1		01/12/21 12:58	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0046	1		01/12/21 12:58	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0046	1		01/12/21 12:58	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0046	1		01/12/21 12:58	108-67-8	
Vinyl acetate	ND	mg/kg	0.091	1		01/12/21 12:58	108-05-4	
Vinyl chloride	ND	mg/kg	0.0046	1		01/12/21 12:58	75-01-4	
Xylene (Total)	ND	mg/kg	0.0091	1		01/12/21 12:58	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	123	%	73-133	1		01/12/21 12:58	1868-53-7	
Toluene-d8 (S)	114	%	73-130	1		01/12/21 12:58	2037-26-5	
4-Bromofluorobenzene (S)	76	%	55-129	1		01/12/21 12:58	460-00-4	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	<b>12.3</b>	%	0.10	1		01/13/21 11:25		N2

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample:** Pit 3 15-21' **Lab ID:** 50277309010 **Collected:** 01/06/21 10:30 **Received:** 01/08/21 08:45 **Matrix:** Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>								
Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Pace Analytical Services - Indianapolis								
Arsenic	6.7	mg/kg	1.0	1	01/17/21 13:17	01/18/21 14:14	7440-38-2	
Barium	49.2	mg/kg	1.0	1	01/17/21 13:17	01/18/21 14:14	7440-39-3	
Cadmium	ND	mg/kg	0.52	1	01/17/21 13:17	01/18/21 14:14	7440-43-9	
Chromium	9.8	mg/kg	1.0	1	01/17/21 13:17	01/18/21 14:14	7440-47-3	
Lead	14.1	mg/kg	1.0	1	01/17/21 13:17	01/18/21 14:14	7439-92-1	
Selenium	ND	mg/kg	1.0	1	01/17/21 13:17	01/18/21 14:14	7782-49-2	
Silver	ND	mg/kg	0.52	1	01/17/21 13:17	01/18/21 14:14	7440-22-4	
<b>7471 Mercury</b>								
Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Pace Analytical Services - Indianapolis								
Mercury	ND	mg/kg	0.24	1	01/13/21 10:28	01/13/21 20:08	7439-97-6	
<b>8270 PAH Soil by SIM</b>								
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Pace Analytical Services - Indianapolis								
Acenaphthene	ND	mg/kg	0.0057	1	01/18/21 11:45	01/18/21 17:22	83-32-9	
Acenaphthylene	ND	mg/kg	0.0057	1	01/18/21 11:45	01/18/21 17:22	208-96-8	
Anthracene	ND	mg/kg	0.0057	1	01/18/21 11:45	01/18/21 17:22	120-12-7	
Benzo(a)anthracene	0.0093	mg/kg	0.0057	1	01/18/21 11:45	01/18/21 17:22	56-55-3	
Benzo(a)pyrene	0.011	mg/kg	0.0057	1	01/18/21 11:45	01/18/21 17:22	50-32-8	
Benzo(b)fluoranthene	0.015	mg/kg	0.0057	1	01/18/21 11:45	01/18/21 17:22	205-99-2	
Benzo(g,h,i)perylene	0.0076	mg/kg	0.0057	1	01/18/21 11:45	01/18/21 17:22	191-24-2	
Benzo(k)fluoranthene	ND	mg/kg	0.0057	1	01/18/21 11:45	01/18/21 17:22	207-08-9	
Chrysene	0.011	mg/kg	0.0057	1	01/18/21 11:45	01/18/21 17:22	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0057	1	01/18/21 11:45	01/18/21 17:22	53-70-3	
Fluoranthene	0.015	mg/kg	0.0057	1	01/18/21 11:45	01/18/21 17:22	206-44-0	
Fluorene	ND	mg/kg	0.0057	1	01/18/21 11:45	01/18/21 17:22	86-73-7	
Indeno(1,2,3-cd)pyrene	0.0061	mg/kg	0.0057	1	01/18/21 11:45	01/18/21 17:22	193-39-5	
1-Methylnaphthalene	ND	mg/kg	0.0057	1	01/18/21 11:45	01/18/21 17:22	90-12-0	
2-Methylnaphthalene	ND	mg/kg	0.0057	1	01/18/21 11:45	01/18/21 17:22	91-57-6	
Naphthalene	ND	mg/kg	0.0057	1	01/18/21 11:45	01/18/21 17:22	91-20-3	
Phenanthrene	0.0079	mg/kg	0.0057	1	01/18/21 11:45	01/18/21 17:22	85-01-8	
Pyrene	0.014	mg/kg	0.0057	1	01/18/21 11:45	01/18/21 17:22	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	52	%	37-111	1	01/18/21 11:45	01/18/21 17:22	321-60-8	
p-Terphenyl-d14 (S)	58	%	29-124	1	01/18/21 11:45	01/18/21 17:22	1718-51-0	
<b>8260 MSV 5035A VOA</b>								
Analytical Method: EPA 8260								
Pace Analytical Services - Indianapolis								
Acetone	ND	mg/kg	0.079	1		01/12/21 14:07	67-64-1	
Acrolein	ND	mg/kg	0.079	1		01/12/21 14:07	107-02-8	
Acrylonitrile	ND	mg/kg	0.079	1		01/12/21 14:07	107-13-1	
Benzene	ND	mg/kg	0.0039	1		01/12/21 14:07	71-43-2	
Bromobenzene	ND	mg/kg	0.0039	1		01/12/21 14:07	108-86-1	
Bromochloromethane	ND	mg/kg	0.0039	1		01/12/21 14:07	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0039	1		01/12/21 14:07	75-27-4	

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### ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

Sample: Pit 3 15-21' Lab ID: 50277309010 Collected: 01/06/21 10:30 Received: 01/08/21 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Bromoform	ND	mg/kg	0.0039	1		01/12/21 14:07	75-25-2	
Bromomethane	ND	mg/kg	0.0039	1		01/12/21 14:07	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.020	1		01/12/21 14:07	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0039	1		01/12/21 14:07	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0039	1		01/12/21 14:07	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0039	1		01/12/21 14:07	98-06-6	
Carbon disulfide	ND	mg/kg	0.0079	1		01/12/21 14:07	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0039	1		01/12/21 14:07	56-23-5	
Chlorobenzene	ND	mg/kg	0.0039	1		01/12/21 14:07	108-90-7	
Chloroethane	ND	mg/kg	0.0039	1		01/12/21 14:07	75-00-3	
Chloroform	ND	mg/kg	0.0039	1		01/12/21 14:07	67-66-3	
Chloromethane	ND	mg/kg	0.0039	1		01/12/21 14:07	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0039	1		01/12/21 14:07	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0039	1		01/12/21 14:07	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0039	1		01/12/21 14:07	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0039	1		01/12/21 14:07	106-93-4	
Dibromomethane	ND	mg/kg	0.0039	1		01/12/21 14:07	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0039	1		01/12/21 14:07	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0039	1		01/12/21 14:07	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0039	1		01/12/21 14:07	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.079	1		01/12/21 14:07	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0039	1		01/12/21 14:07	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0039	1		01/12/21 14:07	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0039	1		01/12/21 14:07	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0039	1		01/12/21 14:07	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0039	1		01/12/21 14:07	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0039	1		01/12/21 14:07	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0039	1		01/12/21 14:07	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0039	1		01/12/21 14:07	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0039	1		01/12/21 14:07	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0039	1		01/12/21 14:07	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0039	1		01/12/21 14:07	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0039	1		01/12/21 14:07	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0039	1		01/12/21 14:07	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.079	1		01/12/21 14:07	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0039	1		01/12/21 14:07	87-68-3	
n-Hexane	ND	mg/kg	0.0039	1		01/12/21 14:07	110-54-3	
2-Hexanone	ND	mg/kg	0.079	1		01/12/21 14:07	591-78-6	
Iodomethane	ND	mg/kg	0.079	1		01/12/21 14:07	74-88-4	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0039	1		01/12/21 14:07	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0039	1		01/12/21 14:07	99-87-6	
Methylene Chloride	ND	mg/kg	0.016	1		01/12/21 14:07	75-09-2	
1-Methylnaphthalene	ND	ug/kg	7.9	1		01/12/21 14:07	90-12-0	
2-Methylnaphthalene	ND	ug/kg	7.9	1		01/12/21 14:07	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.020	1		01/12/21 14:07	108-10-1	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample:** Pit 3 15-21'      **Lab ID:** 50277309010      Collected: 01/06/21 10:30      Received: 01/08/21 08:45      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Methyl-tert-butyl ether	ND	mg/kg	0.0039	1		01/12/21 14:07	1634-04-4	
Naphthalene	ND	mg/kg	0.0039	1		01/12/21 14:07	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0039	1		01/12/21 14:07	103-65-1	
Styrene	ND	mg/kg	0.0039	1		01/12/21 14:07	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0039	1		01/12/21 14:07	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0039	1		01/12/21 14:07	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0039	1		01/12/21 14:07	127-18-4	
Toluene	ND	mg/kg	0.0039	1		01/12/21 14:07	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0039	1		01/12/21 14:07	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0039	1		01/12/21 14:07	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0039	1		01/12/21 14:07	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0039	1		01/12/21 14:07	79-00-5	
Trichloroethene	ND	mg/kg	0.0039	1		01/12/21 14:07	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0039	1		01/12/21 14:07	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0039	1		01/12/21 14:07	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0039	1		01/12/21 14:07	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0039	1		01/12/21 14:07	108-67-8	
Vinyl acetate	ND	mg/kg	0.079	1		01/12/21 14:07	108-05-4	
Vinyl chloride	ND	mg/kg	0.0039	1		01/12/21 14:07	75-01-4	
Xylene (Total)	ND	mg/kg	0.0079	1		01/12/21 14:07	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	118	%	73-133	1		01/12/21 14:07	1868-53-7	
Toluene-d8 (S)	105	%	73-130	1		01/12/21 14:07	2037-26-5	
4-Bromofluorobenzene (S)	80	%	55-129	1		01/12/21 14:07	460-00-4	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	<b>12.9</b>	%	0.10	1		01/13/21 11:25		N2

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample:** Pit 4 0-5'      **Lab ID:** 50277309011      Collected: 01/06/21 10:45      Received: 01/08/21 08:45      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>								
Analytical Method: EPA 6010    Preparation Method: EPA 3050								
Pace Analytical Services - Indianapolis								
Arsenic	9.2	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:17	7440-38-2	
Barium	84.4	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:17	7440-39-3	
Cadmium	ND	mg/kg	0.55	1	01/17/21 13:17	01/18/21 14:17	7440-43-9	
Chromium	16.9	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:17	7440-47-3	
Lead	14.2	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:17	7439-92-1	
Selenium	ND	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:17	7782-49-2	
Silver	ND	mg/kg	0.55	1	01/17/21 13:17	01/18/21 14:17	7440-22-4	
<b>7471 Mercury</b>								
Analytical Method: EPA 7471    Preparation Method: EPA 7471								
Pace Analytical Services - Indianapolis								
Mercury	ND	mg/kg	0.24	1	01/18/21 12:10	01/18/21 19:39	7439-97-6	
<b>8270 PAH Soil by SIM</b>								
Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546								
Pace Analytical Services - Indianapolis								
Acenaphthene	ND	mg/kg	0.0061	1	01/18/21 11:45	01/18/21 17:36	83-32-9	
Acenaphthylene	ND	mg/kg	0.0061	1	01/18/21 11:45	01/18/21 17:36	208-96-8	
Anthracene	ND	mg/kg	0.0061	1	01/18/21 11:45	01/18/21 17:36	120-12-7	
Benzo(a)anthracene	ND	mg/kg	0.0061	1	01/18/21 11:45	01/18/21 17:36	56-55-3	
Benzo(a)pyrene	ND	mg/kg	0.0061	1	01/18/21 11:45	01/18/21 17:36	50-32-8	
Benzo(b)fluoranthene	ND	mg/kg	0.0061	1	01/18/21 11:45	01/18/21 17:36	205-99-2	
Benzo(g,h,i)perylene	ND	mg/kg	0.0061	1	01/18/21 11:45	01/18/21 17:36	191-24-2	
Benzo(k)fluoranthene	ND	mg/kg	0.0061	1	01/18/21 11:45	01/18/21 17:36	207-08-9	
Chrysene	ND	mg/kg	0.0061	1	01/18/21 11:45	01/18/21 17:36	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0061	1	01/18/21 11:45	01/18/21 17:36	53-70-3	
Fluoranthene	ND	mg/kg	0.0061	1	01/18/21 11:45	01/18/21 17:36	206-44-0	
Fluorene	ND	mg/kg	0.0061	1	01/18/21 11:45	01/18/21 17:36	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	mg/kg	0.0061	1	01/18/21 11:45	01/18/21 17:36	193-39-5	
1-Methylnaphthalene	ND	mg/kg	0.0061	1	01/18/21 11:45	01/18/21 17:36	90-12-0	
2-Methylnaphthalene	ND	mg/kg	0.0061	1	01/18/21 11:45	01/18/21 17:36	91-57-6	
Naphthalene	ND	mg/kg	0.0061	1	01/18/21 11:45	01/18/21 17:36	91-20-3	
Phenanthrene	ND	mg/kg	0.0061	1	01/18/21 11:45	01/18/21 17:36	85-01-8	
Pyrene	ND	mg/kg	0.0061	1	01/18/21 11:45	01/18/21 17:36	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	62	%	37-111	1	01/18/21 11:45	01/18/21 17:36	321-60-8	
p-Terphenyl-d14 (S)	63	%	29-124	1	01/18/21 11:45	01/18/21 17:36	1718-51-0	
<b>8260 MSV 5035A VOA</b>								
Analytical Method: EPA 8260								
Pace Analytical Services - Indianapolis								
Acetone	ND	mg/kg	0.10	1		01/12/21 13:32	67-64-1	
Acrolein	ND	mg/kg	0.10	1		01/12/21 13:32	107-02-8	
Acrylonitrile	ND	mg/kg	0.10	1		01/12/21 13:32	107-13-1	
Benzene	ND	mg/kg	0.0050	1		01/12/21 13:32	71-43-2	
Bromobenzene	ND	mg/kg	0.0050	1		01/12/21 13:32	108-86-1	
Bromochloromethane	ND	mg/kg	0.0050	1		01/12/21 13:32	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0050	1		01/12/21 13:32	75-27-4	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample: Pit 4 0-5'**      **Lab ID: 50277309011**      Collected: 01/06/21 10:45      Received: 01/08/21 08:45      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Bromoform	ND	mg/kg	0.0050	1		01/12/21 13:32	75-25-2	
Bromomethane	ND	mg/kg	0.0050	1		01/12/21 13:32	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.025	1		01/12/21 13:32	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0050	1		01/12/21 13:32	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0050	1		01/12/21 13:32	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0050	1		01/12/21 13:32	98-06-6	
Carbon disulfide	ND	mg/kg	0.010	1		01/12/21 13:32	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0050	1		01/12/21 13:32	56-23-5	
Chlorobenzene	ND	mg/kg	0.0050	1		01/12/21 13:32	108-90-7	
Chloroethane	ND	mg/kg	0.0050	1		01/12/21 13:32	75-00-3	
Chloroform	ND	mg/kg	0.0050	1		01/12/21 13:32	67-66-3	
Chloromethane	ND	mg/kg	0.0050	1		01/12/21 13:32	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0050	1		01/12/21 13:32	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0050	1		01/12/21 13:32	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0050	1		01/12/21 13:32	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0050	1		01/12/21 13:32	106-93-4	
Dibromomethane	ND	mg/kg	0.0050	1		01/12/21 13:32	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0050	1		01/12/21 13:32	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0050	1		01/12/21 13:32	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0050	1		01/12/21 13:32	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.10	1		01/12/21 13:32	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0050	1		01/12/21 13:32	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0050	1		01/12/21 13:32	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0050	1		01/12/21 13:32	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0050	1		01/12/21 13:32	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0050	1		01/12/21 13:32	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0050	1		01/12/21 13:32	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0050	1		01/12/21 13:32	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0050	1		01/12/21 13:32	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0050	1		01/12/21 13:32	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0050	1		01/12/21 13:32	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0050	1		01/12/21 13:32	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0050	1		01/12/21 13:32	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0050	1		01/12/21 13:32	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.10	1		01/12/21 13:32	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0050	1		01/12/21 13:32	87-68-3	
n-Hexane	ND	mg/kg	0.0050	1		01/12/21 13:32	110-54-3	
2-Hexanone	ND	mg/kg	0.10	1		01/12/21 13:32	591-78-6	
Iodomethane	ND	mg/kg	0.10	1		01/12/21 13:32	74-88-4	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0050	1		01/12/21 13:32	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0050	1		01/12/21 13:32	99-87-6	
Methylene Chloride	ND	mg/kg	0.020	1		01/12/21 13:32	75-09-2	
1-Methylnaphthalene	ND	ug/kg	10.0	1		01/12/21 13:32	90-12-0	
2-Methylnaphthalene	ND	ug/kg	10.0	1		01/12/21 13:32	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.025	1		01/12/21 13:32	108-10-1	

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

Sample: Pit 4 0-5' Lab ID: 50277309011 Collected: 01/06/21 10:45 Received: 01/08/21 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Methyl-tert-butyl ether	ND	mg/kg	0.0050	1		01/12/21 13:32	1634-04-4	
Naphthalene	ND	mg/kg	0.0050	1		01/12/21 13:32	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0050	1		01/12/21 13:32	103-65-1	
Styrene	ND	mg/kg	0.0050	1		01/12/21 13:32	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0050	1		01/12/21 13:32	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0050	1		01/12/21 13:32	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0050	1		01/12/21 13:32	127-18-4	
Toluene	ND	mg/kg	0.0050	1		01/12/21 13:32	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0050	1		01/12/21 13:32	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0050	1		01/12/21 13:32	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0050	1		01/12/21 13:32	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0050	1		01/12/21 13:32	79-00-5	
Trichloroethene	ND	mg/kg	0.0050	1		01/12/21 13:32	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0050	1		01/12/21 13:32	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0050	1		01/12/21 13:32	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0050	1		01/12/21 13:32	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0050	1		01/12/21 13:32	108-67-8	
Vinyl acetate	ND	mg/kg	0.10	1		01/12/21 13:32	108-05-4	
Vinyl chloride	ND	mg/kg	0.0050	1		01/12/21 13:32	75-01-4	
Xylene (Total)	ND	mg/kg	0.010	1		01/12/21 13:32	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	120	%	73-133	1		01/12/21 13:32	1868-53-7	
Toluene-d8 (S)	104	%	73-130	1		01/12/21 13:32	2037-26-5	
4-Bromofluorobenzene (S)	82	%	55-129	1		01/12/21 13:32	460-00-4	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	18.7	%	0.10	1		01/13/21 11:25		N2

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample:** Pit 4 5-10' **Lab ID:** 50277309012 **Collected:** 01/06/21 11:00 **Received:** 01/08/21 08:45 **Matrix:** Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3050 Pace Analytical Services - Indianapolis						
Arsenic	7.2	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:19	7440-38-2	
Barium	68.5	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:19	7440-39-3	
Cadmium	ND	mg/kg	0.53	1	01/17/21 13:17	01/18/21 14:19	7440-43-9	
Chromium	13.0	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:19	7440-47-3	
Lead	9.5	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:19	7439-92-1	
Selenium	ND	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:19	7782-49-2	
Silver	ND	mg/kg	0.53	1	01/17/21 13:17	01/18/21 14:19	7440-22-4	
<b>7471 Mercury</b>		Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Indianapolis						
Mercury	ND	mg/kg	0.23	1	01/18/21 12:10	01/18/21 19:45	7439-97-6	
<b>8270 PAH Soil by SIM</b>		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Pace Analytical Services - Indianapolis						
Acenaphthene	ND	mg/kg	0.0057	1	01/15/21 12:02	01/16/21 09:38	83-32-9	
Acenaphthylene	ND	mg/kg	0.0057	1	01/15/21 12:02	01/16/21 09:38	208-96-8	
Anthracene	0.0059	mg/kg	0.0057	1	01/15/21 12:02	01/16/21 09:38	120-12-7	
Benzo(a)anthracene	0.047	mg/kg	0.0057	1	01/15/21 12:02	01/16/21 09:38	56-55-3	
Benzo(a)pyrene	0.052	mg/kg	0.0057	1	01/15/21 12:02	01/16/21 09:38	50-32-8	
Benzo(b)fluoranthene	0.080	mg/kg	0.0057	1	01/15/21 12:02	01/16/21 09:38	205-99-2	
Benzo(g,h,i)perylene	0.033	mg/kg	0.0057	1	01/15/21 12:02	01/16/21 09:38	191-24-2	
Benzo(k)fluoranthene	0.034	mg/kg	0.0057	1	01/15/21 12:02	01/16/21 09:38	207-08-9	
Chrysene	0.068	mg/kg	0.0057	1	01/15/21 12:02	01/16/21 09:38	218-01-9	
Dibenz(a,h)anthracene	0.0058	mg/kg	0.0057	1	01/15/21 12:02	01/16/21 09:38	53-70-3	
Fluoranthene	0.14	mg/kg	0.0057	1	01/15/21 12:02	01/16/21 09:38	206-44-0	
Fluorene	ND	mg/kg	0.0057	1	01/15/21 12:02	01/16/21 09:38	86-73-7	
Indeno(1,2,3-cd)pyrene	0.029	mg/kg	0.0057	1	01/15/21 12:02	01/16/21 09:38	193-39-5	
1-Methylnaphthalene	ND	mg/kg	0.0057	1	01/15/21 12:02	01/16/21 09:38	90-12-0	
2-Methylnaphthalene	ND	mg/kg	0.0057	1	01/15/21 12:02	01/16/21 09:38	91-57-6	
Naphthalene	ND	mg/kg	0.0057	1	01/15/21 12:02	01/16/21 09:38	91-20-3	
Phenanthrene	0.061	mg/kg	0.0057	1	01/15/21 12:02	01/16/21 09:38	85-01-8	
Pyrene	0.12	mg/kg	0.0057	1	01/15/21 12:02	01/16/21 09:38	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	66	%	37-111	1	01/15/21 12:02	01/16/21 09:38	321-60-8	
p-Terphenyl-d14 (S)	75	%	29-124	1	01/15/21 12:02	01/16/21 09:38	1718-51-0	
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Acetone	ND	mg/kg	0.085	1		01/12/21 15:50	67-64-1	
Acrolein	ND	mg/kg	0.085	1		01/12/21 15:50	107-02-8	
Acrylonitrile	ND	mg/kg	0.085	1		01/12/21 15:50	107-13-1	
Benzene	ND	mg/kg	0.0043	1		01/12/21 15:50	71-43-2	
Bromobenzene	ND	mg/kg	0.0043	1		01/12/21 15:50	108-86-1	
Bromochloromethane	ND	mg/kg	0.0043	1		01/12/21 15:50	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0043	1		01/12/21 15:50	75-27-4	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample: Pit 4 5-10'**      **Lab ID: 50277309012**      Collected: 01/06/21 11:00      Received: 01/08/21 08:45      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Bromoform	ND	mg/kg	0.0043	1		01/12/21 15:50	75-25-2	
Bromomethane	ND	mg/kg	0.0043	1		01/12/21 15:50	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.021	1		01/12/21 15:50	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0043	1		01/12/21 15:50	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0043	1		01/12/21 15:50	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0043	1		01/12/21 15:50	98-06-6	
Carbon disulfide	ND	mg/kg	0.0085	1		01/12/21 15:50	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0043	1		01/12/21 15:50	56-23-5	
Chlorobenzene	ND	mg/kg	0.0043	1		01/12/21 15:50	108-90-7	
Chloroethane	ND	mg/kg	0.0043	1		01/12/21 15:50	75-00-3	
Chloroform	ND	mg/kg	0.0043	1		01/12/21 15:50	67-66-3	
Chloromethane	ND	mg/kg	0.0043	1		01/12/21 15:50	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0043	1		01/12/21 15:50	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0043	1		01/12/21 15:50	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0043	1		01/12/21 15:50	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0043	1		01/12/21 15:50	106-93-4	
Dibromomethane	ND	mg/kg	0.0043	1		01/12/21 15:50	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0043	1		01/12/21 15:50	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0043	1		01/12/21 15:50	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0043	1		01/12/21 15:50	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.085	1		01/12/21 15:50	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0043	1		01/12/21 15:50	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0043	1		01/12/21 15:50	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0043	1		01/12/21 15:50	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0043	1		01/12/21 15:50	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0043	1		01/12/21 15:50	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0043	1		01/12/21 15:50	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0043	1		01/12/21 15:50	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0043	1		01/12/21 15:50	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0043	1		01/12/21 15:50	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0043	1		01/12/21 15:50	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0043	1		01/12/21 15:50	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0043	1		01/12/21 15:50	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0043	1		01/12/21 15:50	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.085	1		01/12/21 15:50	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0043	1		01/12/21 15:50	87-68-3	
n-Hexane	ND	mg/kg	0.0043	1		01/12/21 15:50	110-54-3	
2-Hexanone	ND	mg/kg	0.085	1		01/12/21 15:50	591-78-6	
Iodomethane	ND	mg/kg	0.085	1		01/12/21 15:50	74-88-4	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0043	1		01/12/21 15:50	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0043	1		01/12/21 15:50	99-87-6	
Methylene Chloride	ND	mg/kg	0.017	1		01/12/21 15:50	75-09-2	
1-Methylnaphthalene	ND	ug/kg	8.5	1		01/12/21 15:50	90-12-0	
2-Methylnaphthalene	ND	ug/kg	8.5	1		01/12/21 15:50	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.021	1		01/12/21 15:50	108-10-1	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample:** Pit 4 5-10'      **Lab ID:** 50277309012      Collected: 01/06/21 11:00      Received: 01/08/21 08:45      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Methyl-tert-butyl ether	ND	mg/kg	0.0043	1		01/12/21 15:50	1634-04-4	
Naphthalene	ND	mg/kg	0.0043	1		01/12/21 15:50	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0043	1		01/12/21 15:50	103-65-1	
Styrene	ND	mg/kg	0.0043	1		01/12/21 15:50	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0043	1		01/12/21 15:50	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0043	1		01/12/21 15:50	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0043	1		01/12/21 15:50	127-18-4	
Toluene	ND	mg/kg	0.0043	1		01/12/21 15:50	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0043	1		01/12/21 15:50	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0043	1		01/12/21 15:50	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0043	1		01/12/21 15:50	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0043	1		01/12/21 15:50	79-00-5	
Trichloroethene	ND	mg/kg	0.0043	1		01/12/21 15:50	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0043	1		01/12/21 15:50	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0043	1		01/12/21 15:50	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0043	1		01/12/21 15:50	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0043	1		01/12/21 15:50	108-67-8	
Vinyl acetate	ND	mg/kg	0.085	1		01/12/21 15:50	108-05-4	
Vinyl chloride	ND	mg/kg	0.0043	1		01/12/21 15:50	75-01-4	
Xylene (Total)	ND	mg/kg	0.0085	1		01/12/21 15:50	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	121	%	73-133	1		01/12/21 15:50	1868-53-7	
Toluene-d8 (S)	104	%	73-130	1		01/12/21 15:50	2037-26-5	
4-Bromofluorobenzene (S)	82	%	55-129	1		01/12/21 15:50	460-00-4	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	<b>14.8</b>	%	0.10	1		01/13/21 11:25		N2

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample:** Pit 4 10-16'      **Lab ID:** 50277309013      Collected: 01/06/21 11:11      Received: 01/08/21 08:45      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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**6010 MET ICP**

Analytical Method: EPA 6010    Preparation Method: EPA 3050  
Pace Analytical Services - Indianapolis

Arsenic	9.2	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:21	7440-38-2	
Barium	124	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:21	7440-39-3	
Cadmium	ND	mg/kg	0.57	1	01/17/21 13:17	01/18/21 14:21	7440-43-9	
Chromium	18.8	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:21	7440-47-3	
Lead	12.0	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:21	7439-92-1	
Selenium	ND	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:21	7782-49-2	
Silver	ND	mg/kg	0.57	1	01/17/21 13:17	01/18/21 14:21	7440-22-4	

**7471 Mercury**

Analytical Method: EPA 7471    Preparation Method: EPA 7471  
Pace Analytical Services - Indianapolis

Mercury	ND	mg/kg	0.25	1	01/18/21 12:10	01/18/21 19:47	7439-97-6	
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**8270 PAH Soil by SIM**

Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546  
Pace Analytical Services - Indianapolis

Acenaphthene	ND	mg/kg	0.0062	1	01/15/21 12:02	01/16/21 09:52	83-32-9	
Acenaphthylene	ND	mg/kg	0.0062	1	01/15/21 12:02	01/16/21 09:52	208-96-8	
Anthracene	0.0080	mg/kg	0.0062	1	01/15/21 12:02	01/16/21 09:52	120-12-7	
Benzo(a)anthracene	0.029	mg/kg	0.0062	1	01/15/21 12:02	01/16/21 09:52	56-55-3	
Benzo(a)pyrene	0.032	mg/kg	0.0062	1	01/15/21 12:02	01/16/21 09:52	50-32-8	
Benzo(b)fluoranthene	0.052	mg/kg	0.0062	1	01/15/21 12:02	01/16/21 09:52	205-99-2	
Benzo(g,h,i)perylene	0.019	mg/kg	0.0062	1	01/15/21 12:02	01/16/21 09:52	191-24-2	
Benzo(k)fluoranthene	0.016	mg/kg	0.0062	1	01/15/21 12:02	01/16/21 09:52	207-08-9	
Chrysene	0.037	mg/kg	0.0062	1	01/15/21 12:02	01/16/21 09:52	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0062	1	01/15/21 12:02	01/16/21 09:52	53-70-3	
Fluoranthene	0.067	mg/kg	0.0062	1	01/15/21 12:02	01/16/21 09:52	206-44-0	
Fluorene	ND	mg/kg	0.0062	1	01/15/21 12:02	01/16/21 09:52	86-73-7	
Indeno(1,2,3-cd)pyrene	0.017	mg/kg	0.0062	1	01/15/21 12:02	01/16/21 09:52	193-39-5	
1-Methylnaphthalene	ND	mg/kg	0.0062	1	01/15/21 12:02	01/16/21 09:52	90-12-0	
2-Methylnaphthalene	ND	mg/kg	0.0062	1	01/15/21 12:02	01/16/21 09:52	91-57-6	
Naphthalene	0.0098	mg/kg	0.0062	1	01/15/21 12:02	01/16/21 09:52	91-20-3	
Phenanthrene	0.037	mg/kg	0.0062	1	01/15/21 12:02	01/16/21 09:52	85-01-8	
Pyrene	0.058	mg/kg	0.0062	1	01/15/21 12:02	01/16/21 09:52	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	71	%	37-111	1	01/15/21 12:02	01/16/21 09:52	321-60-8	
p-Terphenyl-d14 (S)	79	%	29-124	1	01/15/21 12:02	01/16/21 09:52	1718-51-0	

**8260 MSV 5035A VOA**

Analytical Method: EPA 8260  
Pace Analytical Services - Indianapolis

Acetone	ND	mg/kg	0.10	1		01/12/21 16:24	67-64-1	
Acrolein	ND	mg/kg	0.10	1		01/12/21 16:24	107-02-8	
Acrylonitrile	ND	mg/kg	0.10	1		01/12/21 16:24	107-13-1	
Benzene	ND	mg/kg	0.0052	1		01/12/21 16:24	71-43-2	
Bromobenzene	ND	mg/kg	0.0052	1		01/12/21 16:24	108-86-1	
Bromochloromethane	ND	mg/kg	0.0052	1		01/12/21 16:24	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0052	1		01/12/21 16:24	75-27-4	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

Sample: Pit 4 10-16' Lab ID: 50277309013 Collected: 01/06/21 11:11 Received: 01/08/21 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Bromoform	ND	mg/kg	0.0052	1		01/12/21 16:24	75-25-2	
Bromomethane	ND	mg/kg	0.0052	1		01/12/21 16:24	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.026	1		01/12/21 16:24	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0052	1		01/12/21 16:24	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0052	1		01/12/21 16:24	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0052	1		01/12/21 16:24	98-06-6	
Carbon disulfide	ND	mg/kg	0.010	1		01/12/21 16:24	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0052	1		01/12/21 16:24	56-23-5	
Chlorobenzene	ND	mg/kg	0.0052	1		01/12/21 16:24	108-90-7	
Chloroethane	ND	mg/kg	0.0052	1		01/12/21 16:24	75-00-3	
Chloroform	ND	mg/kg	0.0052	1		01/12/21 16:24	67-66-3	
Chloromethane	ND	mg/kg	0.0052	1		01/12/21 16:24	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0052	1		01/12/21 16:24	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0052	1		01/12/21 16:24	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0052	1		01/12/21 16:24	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0052	1		01/12/21 16:24	106-93-4	
Dibromomethane	ND	mg/kg	0.0052	1		01/12/21 16:24	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0052	1		01/12/21 16:24	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0052	1		01/12/21 16:24	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0052	1		01/12/21 16:24	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.10	1		01/12/21 16:24	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0052	1		01/12/21 16:24	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0052	1		01/12/21 16:24	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0052	1		01/12/21 16:24	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0052	1		01/12/21 16:24	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0052	1		01/12/21 16:24	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0052	1		01/12/21 16:24	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0052	1		01/12/21 16:24	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0052	1		01/12/21 16:24	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0052	1		01/12/21 16:24	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0052	1		01/12/21 16:24	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0052	1		01/12/21 16:24	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0052	1		01/12/21 16:24	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0052	1		01/12/21 16:24	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.10	1		01/12/21 16:24	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0052	1		01/12/21 16:24	87-68-3	
n-Hexane	ND	mg/kg	0.0052	1		01/12/21 16:24	110-54-3	
2-Hexanone	ND	mg/kg	0.10	1		01/12/21 16:24	591-78-6	
Iodomethane	ND	mg/kg	0.10	1		01/12/21 16:24	74-88-4	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0052	1		01/12/21 16:24	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0052	1		01/12/21 16:24	99-87-6	
Methylene Chloride	ND	mg/kg	0.021	1		01/12/21 16:24	75-09-2	
1-Methylnaphthalene	ND	ug/kg	10.3	1		01/12/21 16:24	90-12-0	
2-Methylnaphthalene	ND	ug/kg	10.3	1		01/12/21 16:24	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.026	1		01/12/21 16:24	108-10-1	

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample:** Pit 4 10-16'      **Lab ID:** 50277309013      Collected: 01/06/21 11:11      Received: 01/08/21 08:45      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Methyl-tert-butyl ether	ND	mg/kg	0.0052	1		01/12/21 16:24	1634-04-4	
Naphthalene	ND	mg/kg	0.0052	1		01/12/21 16:24	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0052	1		01/12/21 16:24	103-65-1	
Styrene	ND	mg/kg	0.0052	1		01/12/21 16:24	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0052	1		01/12/21 16:24	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0052	1		01/12/21 16:24	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0052	1		01/12/21 16:24	127-18-4	
Toluene	ND	mg/kg	0.0052	1		01/12/21 16:24	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0052	1		01/12/21 16:24	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0052	1		01/12/21 16:24	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0052	1		01/12/21 16:24	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0052	1		01/12/21 16:24	79-00-5	
Trichloroethene	ND	mg/kg	0.0052	1		01/12/21 16:24	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0052	1		01/12/21 16:24	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0052	1		01/12/21 16:24	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0052	1		01/12/21 16:24	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0052	1		01/12/21 16:24	108-67-8	
Vinyl acetate	ND	mg/kg	0.10	1		01/12/21 16:24	108-05-4	
Vinyl chloride	ND	mg/kg	0.0052	1		01/12/21 16:24	75-01-4	
Xylene (Total)	ND	mg/kg	0.010	1		01/12/21 16:24	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	120	%	73-133	1		01/12/21 16:24	1868-53-7	
Toluene-d8 (S)	103	%	73-130	1		01/12/21 16:24	2037-26-5	
4-Bromofluorobenzene (S)	85	%	55-129	1		01/12/21 16:24	460-00-4	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	<b>19.8</b>	%	0.10	1		01/14/21 07:52		N2

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample:** Pit 5 0-5'      **Lab ID:** 50277309014      Collected: 01/06/21 11:22      Received: 01/08/21 08:45      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>								
Analytical Method: EPA 6010    Preparation Method: EPA 3050								
Pace Analytical Services - Indianapolis								
Arsenic	7.4	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:28	7440-38-2	
Barium	63.5	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:28	7440-39-3	
Cadmium	ND	mg/kg	0.55	1	01/17/21 13:17	01/18/21 14:28	7440-43-9	
Chromium	11.6	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:28	7440-47-3	
Lead	15.9	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:28	7439-92-1	
Selenium	ND	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:28	7782-49-2	
Silver	ND	mg/kg	0.55	1	01/17/21 13:17	01/18/21 14:28	7440-22-4	
<b>7471 Mercury</b>								
Analytical Method: EPA 7471    Preparation Method: EPA 7471								
Pace Analytical Services - Indianapolis								
Mercury	ND	mg/kg	0.22	1	01/18/21 12:10	01/18/21 19:49	7439-97-6	
<b>8270 PAH Soil by SIM</b>								
Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546								
Pace Analytical Services - Indianapolis								
Acenaphthene	ND	mg/kg	0.0056	1	01/15/21 12:02	01/16/21 10:07	83-32-9	
Acenaphthylene	ND	mg/kg	0.0056	1	01/15/21 12:02	01/16/21 10:07	208-96-8	
Anthracene	ND	mg/kg	0.0056	1	01/15/21 12:02	01/16/21 10:07	120-12-7	
Benzo(a)anthracene	0.014	mg/kg	0.0056	1	01/15/21 12:02	01/16/21 10:07	56-55-3	
Benzo(a)pyrene	0.015	mg/kg	0.0056	1	01/15/21 12:02	01/16/21 10:07	50-32-8	
Benzo(b)fluoranthene	0.022	mg/kg	0.0056	1	01/15/21 12:02	01/16/21 10:07	205-99-2	
Benzo(g,h,i)perylene	0.0099	mg/kg	0.0056	1	01/15/21 12:02	01/16/21 10:07	191-24-2	
Benzo(k)fluoranthene	0.0094	mg/kg	0.0056	1	01/15/21 12:02	01/16/21 10:07	207-08-9	
Chrysene	0.017	mg/kg	0.0056	1	01/15/21 12:02	01/16/21 10:07	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0056	1	01/15/21 12:02	01/16/21 10:07	53-70-3	
Fluoranthene	0.035	mg/kg	0.0056	1	01/15/21 12:02	01/16/21 10:07	206-44-0	
Fluorene	ND	mg/kg	0.0056	1	01/15/21 12:02	01/16/21 10:07	86-73-7	
Indeno(1,2,3-cd)pyrene	0.0088	mg/kg	0.0056	1	01/15/21 12:02	01/16/21 10:07	193-39-5	
1-Methylnaphthalene	ND	mg/kg	0.0056	1	01/15/21 12:02	01/16/21 10:07	90-12-0	
2-Methylnaphthalene	ND	mg/kg	0.0056	1	01/15/21 12:02	01/16/21 10:07	91-57-6	
Naphthalene	ND	mg/kg	0.0056	1	01/15/21 12:02	01/16/21 10:07	91-20-3	
Phenanthrene	0.017	mg/kg	0.0056	1	01/15/21 12:02	01/16/21 10:07	85-01-8	
Pyrene	0.031	mg/kg	0.0056	1	01/15/21 12:02	01/16/21 10:07	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	70	%	37-111	1	01/15/21 12:02	01/16/21 10:07	321-60-8	
p-Terphenyl-d14 (S)	82	%	29-124	1	01/15/21 12:02	01/16/21 10:07	1718-51-0	
<b>8260 MSV 5035A VOA</b>								
Analytical Method: EPA 8260								
Pace Analytical Services - Indianapolis								
Acetone	ND	mg/kg	0.090	1		01/12/21 16:59	67-64-1	
Acrolein	ND	mg/kg	0.090	1		01/12/21 16:59	107-02-8	
Acrylonitrile	ND	mg/kg	0.090	1		01/12/21 16:59	107-13-1	
Benzene	ND	mg/kg	0.0045	1		01/12/21 16:59	71-43-2	
Bromobenzene	ND	mg/kg	0.0045	1		01/12/21 16:59	108-86-1	
Bromochloromethane	ND	mg/kg	0.0045	1		01/12/21 16:59	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0045	1		01/12/21 16:59	75-27-4	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample: Pit 5 0-5'**      **Lab ID: 50277309014**      Collected: 01/06/21 11:22      Received: 01/08/21 08:45      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Bromoform	ND	mg/kg	0.0045	1		01/12/21 16:59	75-25-2	
Bromomethane	ND	mg/kg	0.0045	1		01/12/21 16:59	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.023	1		01/12/21 16:59	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0045	1		01/12/21 16:59	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0045	1		01/12/21 16:59	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0045	1		01/12/21 16:59	98-06-6	
Carbon disulfide	ND	mg/kg	0.0090	1		01/12/21 16:59	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0045	1		01/12/21 16:59	56-23-5	
Chlorobenzene	ND	mg/kg	0.0045	1		01/12/21 16:59	108-90-7	
Chloroethane	ND	mg/kg	0.0045	1		01/12/21 16:59	75-00-3	
Chloroform	ND	mg/kg	0.0045	1		01/12/21 16:59	67-66-3	
Chloromethane	ND	mg/kg	0.0045	1		01/12/21 16:59	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0045	1		01/12/21 16:59	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0045	1		01/12/21 16:59	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0045	1		01/12/21 16:59	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0045	1		01/12/21 16:59	106-93-4	
Dibromomethane	ND	mg/kg	0.0045	1		01/12/21 16:59	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0045	1		01/12/21 16:59	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0045	1		01/12/21 16:59	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0045	1		01/12/21 16:59	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.090	1		01/12/21 16:59	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0045	1		01/12/21 16:59	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0045	1		01/12/21 16:59	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0045	1		01/12/21 16:59	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0045	1		01/12/21 16:59	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0045	1		01/12/21 16:59	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0045	1		01/12/21 16:59	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0045	1		01/12/21 16:59	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0045	1		01/12/21 16:59	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0045	1		01/12/21 16:59	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0045	1		01/12/21 16:59	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0045	1		01/12/21 16:59	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0045	1		01/12/21 16:59	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0045	1		01/12/21 16:59	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.090	1		01/12/21 16:59	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0045	1		01/12/21 16:59	87-68-3	
n-Hexane	ND	mg/kg	0.0045	1		01/12/21 16:59	110-54-3	
2-Hexanone	ND	mg/kg	0.090	1		01/12/21 16:59	591-78-6	
Iodomethane	ND	mg/kg	0.090	1		01/12/21 16:59	74-88-4	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0045	1		01/12/21 16:59	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0045	1		01/12/21 16:59	99-87-6	
Methylene Chloride	ND	mg/kg	0.018	1		01/12/21 16:59	75-09-2	
1-Methylnaphthalene	ND	ug/kg	9.0	1		01/12/21 16:59	90-12-0	
2-Methylnaphthalene	ND	ug/kg	9.0	1		01/12/21 16:59	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.023	1		01/12/21 16:59	108-10-1	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample:** Pit 5 0-5'      **Lab ID:** 50277309014      Collected: 01/06/21 11:22      Received: 01/08/21 08:45      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Methyl-tert-butyl ether	ND	mg/kg	0.0045	1		01/12/21 16:59	1634-04-4	
Naphthalene	ND	mg/kg	0.0045	1		01/12/21 16:59	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0045	1		01/12/21 16:59	103-65-1	
Styrene	ND	mg/kg	0.0045	1		01/12/21 16:59	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0045	1		01/12/21 16:59	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0045	1		01/12/21 16:59	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0045	1		01/12/21 16:59	127-18-4	
Toluene	ND	mg/kg	0.0045	1		01/12/21 16:59	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0045	1		01/12/21 16:59	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0045	1		01/12/21 16:59	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0045	1		01/12/21 16:59	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0045	1		01/12/21 16:59	79-00-5	
Trichloroethene	ND	mg/kg	0.0045	1		01/12/21 16:59	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0045	1		01/12/21 16:59	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0045	1		01/12/21 16:59	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0045	1		01/12/21 16:59	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0045	1		01/12/21 16:59	108-67-8	
Vinyl acetate	ND	mg/kg	0.090	1		01/12/21 16:59	108-05-4	
Vinyl chloride	ND	mg/kg	0.0045	1		01/12/21 16:59	75-01-4	
Xylene (Total)	ND	mg/kg	0.0090	1		01/12/21 16:59	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	120	%	73-133	1		01/12/21 16:59	1868-53-7	
Toluene-d8 (S)	104	%	73-130	1		01/12/21 16:59	2037-26-5	
4-Bromofluorobenzene (S)	84	%	55-129	1		01/12/21 16:59	460-00-4	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	<b>14.5</b>	%	0.10	1		01/14/21 07:52		N2

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample:** Pit 5 5-10' **Lab ID:** 50277309015 **Collected:** 01/06/21 11:30 **Received:** 01/08/21 08:45 **Matrix:** Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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### 6010 MET ICP

Analytical Method: EPA 6010 Preparation Method: EPA 3050

Pace Analytical Services - Indianapolis

Arsenic	5.6	mg/kg	0.94	1	01/17/21 13:17	01/18/21 14:31	7440-38-2	
Barium	35.5	mg/kg	0.94	1	01/17/21 13:17	01/18/21 14:31	7440-39-3	
Cadmium	ND	mg/kg	0.47	1	01/17/21 13:17	01/18/21 14:31	7440-43-9	
Chromium	11.4	mg/kg	0.94	1	01/17/21 13:17	01/18/21 14:31	7440-47-3	
Lead	8.7	mg/kg	0.94	1	01/17/21 13:17	01/18/21 14:31	7439-92-1	
Selenium	ND	mg/kg	0.94	1	01/17/21 13:17	01/18/21 14:31	7782-49-2	
Silver	ND	mg/kg	0.47	1	01/17/21 13:17	01/18/21 14:31	7440-22-4	

### 7471 Mercury

Analytical Method: EPA 7471 Preparation Method: EPA 7471

Pace Analytical Services - Indianapolis

Mercury	ND	mg/kg	0.21	1	01/18/21 12:10	01/18/21 19:51	7439-97-6	
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### 8270 PAH Soil by SIM

Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546

Pace Analytical Services - Indianapolis

Acenaphthene	ND	mg/kg	0.0054	1	01/15/21 12:02	01/16/21 10:21	83-32-9	
Acenaphthylene	0.013	mg/kg	0.0054	1	01/15/21 12:02	01/16/21 10:21	208-96-8	
Anthracene	0.010	mg/kg	0.0054	1	01/15/21 12:02	01/16/21 10:21	120-12-7	
Benzo(a)anthracene	0.036	mg/kg	0.0054	1	01/15/21 12:02	01/16/21 10:21	56-55-3	
Benzo(a)pyrene	0.041	mg/kg	0.0054	1	01/15/21 12:02	01/16/21 10:21	50-32-8	
Benzo(b)fluoranthene	0.056	mg/kg	0.0054	1	01/15/21 12:02	01/16/21 10:21	205-99-2	
Benzo(g,h,i)perylene	0.023	mg/kg	0.0054	1	01/15/21 12:02	01/16/21 10:21	191-24-2	
Benzo(k)fluoranthene	0.026	mg/kg	0.0054	1	01/15/21 12:02	01/16/21 10:21	207-08-9	
Chrysene	0.040	mg/kg	0.0054	1	01/15/21 12:02	01/16/21 10:21	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0054	1	01/15/21 12:02	01/16/21 10:21	53-70-3	
Fluoranthene	0.060	mg/kg	0.0054	1	01/15/21 12:02	01/16/21 10:21	206-44-0	
Fluorene	ND	mg/kg	0.0054	1	01/15/21 12:02	01/16/21 10:21	86-73-7	
Indeno(1,2,3-cd)pyrene	0.020	mg/kg	0.0054	1	01/15/21 12:02	01/16/21 10:21	193-39-5	
1-Methylnaphthalene	0.0099	mg/kg	0.0054	1	01/15/21 12:02	01/16/21 10:21	90-12-0	
2-Methylnaphthalene	0.015	mg/kg	0.0054	1	01/15/21 12:02	01/16/21 10:21	91-57-6	
Naphthalene	0.0083	mg/kg	0.0054	1	01/15/21 12:02	01/16/21 10:21	91-20-3	
Phenanthrene	0.020	mg/kg	0.0054	1	01/15/21 12:02	01/16/21 10:21	85-01-8	
Pyrene	0.057	mg/kg	0.0054	1	01/15/21 12:02	01/16/21 10:21	129-00-0	

### Surrogates

2-Fluorobiphenyl (S)	61	%	37-111	1	01/15/21 12:02	01/16/21 10:21	321-60-8	
p-Terphenyl-d14 (S)	72	%	29-124	1	01/15/21 12:02	01/16/21 10:21	1718-51-0	

### 8260 MSV 5035A VOA

Analytical Method: EPA 8260

Pace Analytical Services - Indianapolis

Acetone	ND	mg/kg	0.091	1	01/12/21 17:33	67-64-1	
Acrolein	ND	mg/kg	0.091	1	01/12/21 17:33	107-02-8	
Acrylonitrile	ND	mg/kg	0.091	1	01/12/21 17:33	107-13-1	
Benzene	ND	mg/kg	0.0045	1	01/12/21 17:33	71-43-2	
Bromobenzene	ND	mg/kg	0.0045	1	01/12/21 17:33	108-86-1	
Bromochloromethane	ND	mg/kg	0.0045	1	01/12/21 17:33	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0045	1	01/12/21 17:33	75-27-4	

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### ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

Sample: Pit 5 5-10' Lab ID: 50277309015 Collected: 01/06/21 11:30 Received: 01/08/21 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Bromoform	ND	mg/kg	0.0045	1		01/12/21 17:33	75-25-2	
Bromomethane	ND	mg/kg	0.0045	1		01/12/21 17:33	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.023	1		01/12/21 17:33	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0045	1		01/12/21 17:33	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0045	1		01/12/21 17:33	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0045	1		01/12/21 17:33	98-06-6	
Carbon disulfide	ND	mg/kg	0.0091	1		01/12/21 17:33	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0045	1		01/12/21 17:33	56-23-5	
Chlorobenzene	ND	mg/kg	0.0045	1		01/12/21 17:33	108-90-7	
Chloroethane	ND	mg/kg	0.0045	1		01/12/21 17:33	75-00-3	
Chloroform	ND	mg/kg	0.0045	1		01/12/21 17:33	67-66-3	
Chloromethane	ND	mg/kg	0.0045	1		01/12/21 17:33	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0045	1		01/12/21 17:33	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0045	1		01/12/21 17:33	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0045	1		01/12/21 17:33	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0045	1		01/12/21 17:33	106-93-4	
Dibromomethane	ND	mg/kg	0.0045	1		01/12/21 17:33	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0045	1		01/12/21 17:33	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0045	1		01/12/21 17:33	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0045	1		01/12/21 17:33	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.091	1		01/12/21 17:33	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0045	1		01/12/21 17:33	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0045	1		01/12/21 17:33	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0045	1		01/12/21 17:33	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0045	1		01/12/21 17:33	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0045	1		01/12/21 17:33	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0045	1		01/12/21 17:33	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0045	1		01/12/21 17:33	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0045	1		01/12/21 17:33	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0045	1		01/12/21 17:33	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0045	1		01/12/21 17:33	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0045	1		01/12/21 17:33	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0045	1		01/12/21 17:33	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0045	1		01/12/21 17:33	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.091	1		01/12/21 17:33	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0045	1		01/12/21 17:33	87-68-3	
n-Hexane	ND	mg/kg	0.0045	1		01/12/21 17:33	110-54-3	
2-Hexanone	ND	mg/kg	0.091	1		01/12/21 17:33	591-78-6	
Iodomethane	ND	mg/kg	0.091	1		01/12/21 17:33	74-88-4	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0045	1		01/12/21 17:33	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0045	1		01/12/21 17:33	99-87-6	
Methylene Chloride	ND	mg/kg	0.018	1		01/12/21 17:33	75-09-2	
1-Methylnaphthalene	ND	ug/kg	9.1	1		01/12/21 17:33	90-12-0	
2-Methylnaphthalene	ND	ug/kg	9.1	1		01/12/21 17:33	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.023	1		01/12/21 17:33	108-10-1	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample: Pit 5 5-10'**      **Lab ID: 50277309015**      Collected: 01/06/21 11:30      Received: 01/08/21 08:45      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Methyl-tert-butyl ether	ND	mg/kg	0.0045	1		01/12/21 17:33	1634-04-4	
Naphthalene	ND	mg/kg	0.0045	1		01/12/21 17:33	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0045	1		01/12/21 17:33	103-65-1	
Styrene	ND	mg/kg	0.0045	1		01/12/21 17:33	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0045	1		01/12/21 17:33	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0045	1		01/12/21 17:33	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0045	1		01/12/21 17:33	127-18-4	
Toluene	ND	mg/kg	0.0045	1		01/12/21 17:33	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0045	1		01/12/21 17:33	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0045	1		01/12/21 17:33	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0045	1		01/12/21 17:33	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0045	1		01/12/21 17:33	79-00-5	
Trichloroethene	ND	mg/kg	0.0045	1		01/12/21 17:33	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0045	1		01/12/21 17:33	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0045	1		01/12/21 17:33	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0045	1		01/12/21 17:33	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0045	1		01/12/21 17:33	108-67-8	
Vinyl acetate	ND	mg/kg	0.091	1		01/12/21 17:33	108-05-4	
Vinyl chloride	ND	mg/kg	0.0045	1		01/12/21 17:33	75-01-4	
Xylene (Total)	ND	mg/kg	0.0091	1		01/12/21 17:33	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	124	%	73-133	1		01/12/21 17:33	1868-53-7	
Toluene-d8 (S)	114	%	73-130	1		01/12/21 17:33	2037-26-5	
4-Bromofluorobenzene (S)	77	%	55-129	1		01/12/21 17:33	460-00-4	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	<b>9.5</b>	%	0.10	1		01/14/21 07:53		N2

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample:** Pit 5 10-17' **Lab ID:** 50277309016 **Collected:** 01/06/21 11:48 **Received:** 01/08/21 08:45 **Matrix:** Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>								
Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Pace Analytical Services - Indianapolis								
Arsenic	8.5	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:47	7440-38-2	
Barium	79.6	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:47	7440-39-3	
Cadmium	ND	mg/kg	0.57	1	01/17/21 13:17	01/18/21 14:47	7440-43-9	
Chromium	17.1	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:47	7440-47-3	
Lead	18.1	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:47	7439-92-1	
Selenium	ND	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:47	7782-49-2	
Silver	ND	mg/kg	0.57	1	01/17/21 13:17	01/18/21 14:47	7440-22-4	
<b>7471 Mercury</b>								
Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Pace Analytical Services - Indianapolis								
Mercury	ND	mg/kg	0.25	1	01/18/21 12:10	01/18/21 19:53	7439-97-6	
<b>8270 PAH Soil by SIM</b>								
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Pace Analytical Services - Indianapolis								
Acenaphthene	0.014	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 10:36	83-32-9	
Acenaphthylene	0.026	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 10:36	208-96-8	
Anthracene	0.039	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 10:36	120-12-7	
Benzo(a)anthracene	0.12	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 10:36	56-55-3	
Benzo(a)pyrene	0.13	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 10:36	50-32-8	
Benzo(b)fluoranthene	0.17	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 10:36	205-99-2	
Benzo(g,h,i)perylene	0.065	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 10:36	191-24-2	
Benzo(k)fluoranthene	0.060	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 10:36	207-08-9	
Chrysene	0.13	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 10:36	218-01-9	
Dibenz(a,h)anthracene	0.013	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 10:36	53-70-3	
Fluoranthene	0.22	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 10:36	206-44-0	
Fluorene	0.012	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 10:36	86-73-7	
Indeno(1,2,3-cd)pyrene	0.057	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 10:36	193-39-5	
1-Methylnaphthalene	0.0077	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 10:36	90-12-0	
2-Methylnaphthalene	0.0069	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 10:36	91-57-6	
Naphthalene	0.0078	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 10:36	91-20-3	
Phenanthrene	0.13	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 10:36	85-01-8	
Pyrene	0.20	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 10:36	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	62	%	37-111	1	01/15/21 12:02	01/16/21 10:36	321-60-8	
p-Terphenyl-d14 (S)	68	%	29-124	1	01/15/21 12:02	01/16/21 10:36	1718-51-0	
<b>8260 MSV 5035A VOA</b>								
Analytical Method: EPA 8260								
Pace Analytical Services - Indianapolis								
Acetone	ND	mg/kg	0.13	1		01/12/21 18:07	67-64-1	
Acrolein	ND	mg/kg	0.13	1		01/12/21 18:07	107-02-8	
Acrylonitrile	ND	mg/kg	0.13	1		01/12/21 18:07	107-13-1	
Benzene	ND	mg/kg	0.0063	1		01/12/21 18:07	71-43-2	
Bromobenzene	ND	mg/kg	0.0063	1		01/12/21 18:07	108-86-1	
Bromochloromethane	ND	mg/kg	0.0063	1		01/12/21 18:07	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0063	1		01/12/21 18:07	75-27-4	

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

Sample: Pit 5 10-17' Lab ID: 50277309016 Collected: 01/06/21 11:48 Received: 01/08/21 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Bromoform	ND	mg/kg	0.0063	1		01/12/21 18:07	75-25-2	
Bromomethane	ND	mg/kg	0.0063	1		01/12/21 18:07	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.032	1		01/12/21 18:07	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0063	1		01/12/21 18:07	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0063	1		01/12/21 18:07	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0063	1		01/12/21 18:07	98-06-6	
Carbon disulfide	ND	mg/kg	0.013	1		01/12/21 18:07	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0063	1		01/12/21 18:07	56-23-5	
Chlorobenzene	ND	mg/kg	0.0063	1		01/12/21 18:07	108-90-7	
Chloroethane	ND	mg/kg	0.0063	1		01/12/21 18:07	75-00-3	
Chloroform	ND	mg/kg	0.0063	1		01/12/21 18:07	67-66-3	
Chloromethane	ND	mg/kg	0.0063	1		01/12/21 18:07	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0063	1		01/12/21 18:07	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0063	1		01/12/21 18:07	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0063	1		01/12/21 18:07	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0063	1		01/12/21 18:07	106-93-4	
Dibromomethane	ND	mg/kg	0.0063	1		01/12/21 18:07	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0063	1		01/12/21 18:07	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0063	1		01/12/21 18:07	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0063	1		01/12/21 18:07	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.13	1		01/12/21 18:07	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0063	1		01/12/21 18:07	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0063	1		01/12/21 18:07	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0063	1		01/12/21 18:07	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0063	1		01/12/21 18:07	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0063	1		01/12/21 18:07	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0063	1		01/12/21 18:07	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0063	1		01/12/21 18:07	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0063	1		01/12/21 18:07	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0063	1		01/12/21 18:07	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0063	1		01/12/21 18:07	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0063	1		01/12/21 18:07	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0063	1		01/12/21 18:07	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0063	1		01/12/21 18:07	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.13	1		01/12/21 18:07	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0063	1		01/12/21 18:07	87-68-3	
n-Hexane	ND	mg/kg	0.0063	1		01/12/21 18:07	110-54-3	
2-Hexanone	ND	mg/kg	0.13	1		01/12/21 18:07	591-78-6	
Iodomethane	ND	mg/kg	0.13	1		01/12/21 18:07	74-88-4	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0063	1		01/12/21 18:07	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0063	1		01/12/21 18:07	99-87-6	
Methylene Chloride	ND	mg/kg	0.025	1		01/12/21 18:07	75-09-2	
1-Methylnaphthalene	ND	ug/kg	12.6	1		01/12/21 18:07	90-12-0	
2-Methylnaphthalene	ND	ug/kg	12.6	1		01/12/21 18:07	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.032	1		01/12/21 18:07	108-10-1	

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

Sample: Pit 5 10-17' Lab ID: 50277309016 Collected: 01/06/21 11:48 Received: 01/08/21 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Methyl-tert-butyl ether	ND	mg/kg	0.0063	1		01/12/21 18:07	1634-04-4	
Naphthalene	ND	mg/kg	0.0063	1		01/12/21 18:07	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0063	1		01/12/21 18:07	103-65-1	
Styrene	ND	mg/kg	0.0063	1		01/12/21 18:07	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0063	1		01/12/21 18:07	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0063	1		01/12/21 18:07	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0063	1		01/12/21 18:07	127-18-4	
Toluene	ND	mg/kg	0.0063	1		01/12/21 18:07	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0063	1		01/12/21 18:07	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0063	1		01/12/21 18:07	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0063	1		01/12/21 18:07	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0063	1		01/12/21 18:07	79-00-5	
Trichloroethene	ND	mg/kg	0.0063	1		01/12/21 18:07	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0063	1		01/12/21 18:07	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0063	1		01/12/21 18:07	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0063	1		01/12/21 18:07	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0063	1		01/12/21 18:07	108-67-8	
Vinyl acetate	ND	mg/kg	0.13	1		01/12/21 18:07	108-05-4	
Vinyl chloride	ND	mg/kg	0.0063	1		01/12/21 18:07	75-01-4	
Xylene (Total)	ND	mg/kg	0.013	1		01/12/21 18:07	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	123	%	73-133	1		01/12/21 18:07	1868-53-7	
Toluene-d8 (S)	106	%	73-130	1		01/12/21 18:07	2037-26-5	
4-Bromofluorobenzene (S)	81	%	55-129	1		01/12/21 18:07	460-00-4	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	18.7	%	0.10	1		01/14/21 07:53		N2

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample:** Pit 6 0-5'      **Lab ID:** 50277309017      Collected: 01/06/21 12:21      Received: 01/08/21 08:45      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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**6010 MET ICP**

Analytical Method: EPA 6010      Preparation Method: EPA 3050

Pace Analytical Services - Indianapolis

Arsenic	7.1	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:35	7440-38-2	
Barium	49.1	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:35	7440-39-3	
Cadmium	ND	mg/kg	0.56	1	01/17/21 13:17	01/18/21 14:35	7440-43-9	
Chromium	12.8	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:35	7440-47-3	
Lead	13.8	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:35	7439-92-1	
Selenium	ND	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:35	7782-49-2	
Silver	ND	mg/kg	0.56	1	01/17/21 13:17	01/18/21 14:35	7440-22-4	

**7471 Mercury**

Analytical Method: EPA 7471      Preparation Method: EPA 7471

Pace Analytical Services - Indianapolis

Mercury	ND	mg/kg	0.23	1	01/18/21 12:10	01/18/21 20:00	7439-97-6	
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**8270 PAH Soil by SIM**

Analytical Method: EPA 8270 by SIM      Preparation Method: EPA 3546

Pace Analytical Services - Indianapolis

Acenaphthene	ND	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 10:50	83-32-9	
Acenaphthylene	ND	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 10:50	208-96-8	
Anthracene	ND	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 10:50	120-12-7	
Benzo(a)anthracene	0.031	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 10:50	56-55-3	
Benzo(a)pyrene	0.034	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 10:50	50-32-8	
Benzo(b)fluoranthene	0.050	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 10:50	205-99-2	
Benzo(g,h,i)perylene	0.019	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 10:50	191-24-2	
Benzo(k)fluoranthene	0.016	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 10:50	207-08-9	
Chrysene	0.039	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 10:50	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 10:50	53-70-3	
Fluoranthene	0.066	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 10:50	206-44-0	
Fluorene	ND	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 10:50	86-73-7	
Indeno(1,2,3-cd)pyrene	0.016	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 10:50	193-39-5	
1-Methylnaphthalene	ND	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 10:50	90-12-0	
2-Methylnaphthalene	ND	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 10:50	91-57-6	
Naphthalene	ND	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 10:50	91-20-3	
Phenanthrene	0.028	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 10:50	85-01-8	
Pyrene	0.061	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 10:50	129-00-0	

**Surrogates**

2-Fluorobiphenyl (S)	73	%	37-111	1	01/15/21 12:02	01/16/21 10:50	321-60-8	
p-Terphenyl-d14 (S)	80	%	29-124	1	01/15/21 12:02	01/16/21 10:50	1718-51-0	

**8260 MSV 5035A VOA**

Analytical Method: EPA 8260

Pace Analytical Services - Indianapolis

Acetone	ND	mg/kg	0.098	1		01/12/21 18:42	67-64-1	
Acrolein	ND	mg/kg	0.098	1		01/12/21 18:42	107-02-8	
Acrylonitrile	ND	mg/kg	0.098	1		01/12/21 18:42	107-13-1	
Benzene	ND	mg/kg	0.0049	1		01/12/21 18:42	71-43-2	
Bromobenzene	ND	mg/kg	0.0049	1		01/12/21 18:42	108-86-1	
Bromochloromethane	ND	mg/kg	0.0049	1		01/12/21 18:42	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0049	1		01/12/21 18:42	75-27-4	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

Sample: Pit 6 0-5' Lab ID: 50277309017 Collected: 01/06/21 12:21 Received: 01/08/21 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Bromoform	ND	mg/kg	0.0049	1		01/12/21 18:42	75-25-2	
Bromomethane	ND	mg/kg	0.0049	1		01/12/21 18:42	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.024	1		01/12/21 18:42	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0049	1		01/12/21 18:42	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0049	1		01/12/21 18:42	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0049	1		01/12/21 18:42	98-06-6	
Carbon disulfide	ND	mg/kg	0.0098	1		01/12/21 18:42	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0049	1		01/12/21 18:42	56-23-5	
Chlorobenzene	ND	mg/kg	0.0049	1		01/12/21 18:42	108-90-7	
Chloroethane	ND	mg/kg	0.0049	1		01/12/21 18:42	75-00-3	
Chloroform	ND	mg/kg	0.0049	1		01/12/21 18:42	67-66-3	
Chloromethane	ND	mg/kg	0.0049	1		01/12/21 18:42	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0049	1		01/12/21 18:42	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0049	1		01/12/21 18:42	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0049	1		01/12/21 18:42	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0049	1		01/12/21 18:42	106-93-4	
Dibromomethane	ND	mg/kg	0.0049	1		01/12/21 18:42	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0049	1		01/12/21 18:42	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0049	1		01/12/21 18:42	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0049	1		01/12/21 18:42	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.098	1		01/12/21 18:42	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0049	1		01/12/21 18:42	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0049	1		01/12/21 18:42	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0049	1		01/12/21 18:42	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0049	1		01/12/21 18:42	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0049	1		01/12/21 18:42	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0049	1		01/12/21 18:42	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0049	1		01/12/21 18:42	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0049	1		01/12/21 18:42	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0049	1		01/12/21 18:42	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0049	1		01/12/21 18:42	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0049	1		01/12/21 18:42	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0049	1		01/12/21 18:42	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0049	1		01/12/21 18:42	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.098	1		01/12/21 18:42	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0049	1		01/12/21 18:42	87-68-3	
n-Hexane	ND	mg/kg	0.0049	1		01/12/21 18:42	110-54-3	
2-Hexanone	ND	mg/kg	0.098	1		01/12/21 18:42	591-78-6	
Iodomethane	ND	mg/kg	0.098	1		01/12/21 18:42	74-88-4	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0049	1		01/12/21 18:42	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0049	1		01/12/21 18:42	99-87-6	
Methylene Chloride	ND	mg/kg	0.020	1		01/12/21 18:42	75-09-2	
1-Methylnaphthalene	ND	ug/kg	9.8	1		01/12/21 18:42	90-12-0	
2-Methylnaphthalene	ND	ug/kg	9.8	1		01/12/21 18:42	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.024	1		01/12/21 18:42	108-10-1	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample:** Pit 6 0-5'      **Lab ID:** 50277309017      Collected: 01/06/21 12:21      Received: 01/08/21 08:45      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Methyl-tert-butyl ether	ND	mg/kg	0.0049	1		01/12/21 18:42	1634-04-4	
Naphthalene	ND	mg/kg	0.0049	1		01/12/21 18:42	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0049	1		01/12/21 18:42	103-65-1	
Styrene	ND	mg/kg	0.0049	1		01/12/21 18:42	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0049	1		01/12/21 18:42	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0049	1		01/12/21 18:42	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0049	1		01/12/21 18:42	127-18-4	
Toluene	ND	mg/kg	0.0049	1		01/12/21 18:42	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0049	1		01/12/21 18:42	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0049	1		01/12/21 18:42	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0049	1		01/12/21 18:42	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0049	1		01/12/21 18:42	79-00-5	
Trichloroethene	ND	mg/kg	0.0049	1		01/12/21 18:42	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0049	1		01/12/21 18:42	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0049	1		01/12/21 18:42	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0049	1		01/12/21 18:42	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0049	1		01/12/21 18:42	108-67-8	
Vinyl acetate	ND	mg/kg	0.098	1		01/12/21 18:42	108-05-4	
Vinyl chloride	ND	mg/kg	0.0049	1		01/12/21 18:42	75-01-4	
Xylene (Total)	ND	mg/kg	0.0098	1		01/12/21 18:42	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	118	%	73-133	1		01/12/21 18:42	1868-53-7	
Toluene-d8 (S)	104	%	73-130	1		01/12/21 18:42	2037-26-5	
4-Bromofluorobenzene (S)	83	%	55-129	1		01/12/21 18:42	460-00-4	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	<b>16.6</b>	%	0.10	1		01/14/21 07:53		N2

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample:** Pit 6 5-10' **Lab ID:** 50277309018 **Collected:** 01/06/21 12:35 **Received:** 01/08/21 08:45 **Matrix:** Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>								
Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Pace Analytical Services - Indianapolis								
Arsenic	8.9	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:38	7440-38-2	
Barium	55.8	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:38	7440-39-3	
Cadmium	ND	mg/kg	0.56	1	01/17/21 13:17	01/18/21 14:38	7440-43-9	
Chromium	15.3	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:38	7440-47-3	
Lead	16.0	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:38	7439-92-1	
Selenium	ND	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:38	7782-49-2	
Silver	ND	mg/kg	0.56	1	01/17/21 13:17	01/18/21 14:38	7440-22-4	
<b>7471 Mercury</b>								
Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Pace Analytical Services - Indianapolis								
Mercury	ND	mg/kg	0.24	1	01/18/21 12:10	01/18/21 20:02	7439-97-6	
<b>8270 PAH Soil by SIM</b>								
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Pace Analytical Services - Indianapolis								
Acenaphthene	ND	mg/kg	0.0058	1	01/15/21 12:02	01/16/21 11:05	83-32-9	
Acenaphthylene	ND	mg/kg	0.0058	1	01/15/21 12:02	01/16/21 11:05	208-96-8	
Anthracene	ND	mg/kg	0.0058	1	01/15/21 12:02	01/16/21 11:05	120-12-7	
Benzo(a)anthracene	0.018	mg/kg	0.0058	1	01/15/21 12:02	01/16/21 11:05	56-55-3	
Benzo(a)pyrene	0.018	mg/kg	0.0058	1	01/15/21 12:02	01/16/21 11:05	50-32-8	
Benzo(b)fluoranthene	0.029	mg/kg	0.0058	1	01/15/21 12:02	01/16/21 11:05	205-99-2	
Benzo(g,h,i)perylene	0.011	mg/kg	0.0058	1	01/15/21 12:02	01/16/21 11:05	191-24-2	
Benzo(k)fluoranthene	0.0090	mg/kg	0.0058	1	01/15/21 12:02	01/16/21 11:05	207-08-9	
Chrysene	0.022	mg/kg	0.0058	1	01/15/21 12:02	01/16/21 11:05	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0058	1	01/15/21 12:02	01/16/21 11:05	53-70-3	
Fluoranthene	0.038	mg/kg	0.0058	1	01/15/21 12:02	01/16/21 11:05	206-44-0	
Fluorene	ND	mg/kg	0.0058	1	01/15/21 12:02	01/16/21 11:05	86-73-7	
Indeno(1,2,3-cd)pyrene	0.0095	mg/kg	0.0058	1	01/15/21 12:02	01/16/21 11:05	193-39-5	
1-Methylnaphthalene	ND	mg/kg	0.0058	1	01/15/21 12:02	01/16/21 11:05	90-12-0	
2-Methylnaphthalene	ND	mg/kg	0.0058	1	01/15/21 12:02	01/16/21 11:05	91-57-6	
Naphthalene	ND	mg/kg	0.0058	1	01/15/21 12:02	01/16/21 11:05	91-20-3	
Phenanthrene	0.017	mg/kg	0.0058	1	01/15/21 12:02	01/16/21 11:05	85-01-8	
Pyrene	0.036	mg/kg	0.0058	1	01/15/21 12:02	01/16/21 11:05	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	72	%	37-111	1	01/15/21 12:02	01/16/21 11:05	321-60-8	
p-Terphenyl-d14 (S)	82	%	29-124	1	01/15/21 12:02	01/16/21 11:05	1718-51-0	
<b>8260 MSV 5035A VOA</b>								
Analytical Method: EPA 8260								
Pace Analytical Services - Indianapolis								
Acetone	ND	mg/kg	0.088	1		01/12/21 19:16	67-64-1	
Acrolein	ND	mg/kg	0.088	1		01/12/21 19:16	107-02-8	
Acrylonitrile	ND	mg/kg	0.088	1		01/12/21 19:16	107-13-1	
Benzene	ND	mg/kg	0.0044	1		01/12/21 19:16	71-43-2	
Bromobenzene	ND	mg/kg	0.0044	1		01/12/21 19:16	108-86-1	
Bromochloromethane	ND	mg/kg	0.0044	1		01/12/21 19:16	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0044	1		01/12/21 19:16	75-27-4	

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

Sample: Pit 6 5-10' Lab ID: 50277309018 Collected: 01/06/21 12:35 Received: 01/08/21 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Bromoform	ND	mg/kg	0.0044	1		01/12/21 19:16	75-25-2	
Bromomethane	ND	mg/kg	0.0044	1		01/12/21 19:16	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.022	1		01/12/21 19:16	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0044	1		01/12/21 19:16	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0044	1		01/12/21 19:16	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0044	1		01/12/21 19:16	98-06-6	
Carbon disulfide	ND	mg/kg	0.0088	1		01/12/21 19:16	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0044	1		01/12/21 19:16	56-23-5	
Chlorobenzene	ND	mg/kg	0.0044	1		01/12/21 19:16	108-90-7	
Chloroethane	ND	mg/kg	0.0044	1		01/12/21 19:16	75-00-3	
Chloroform	ND	mg/kg	0.0044	1		01/12/21 19:16	67-66-3	
Chloromethane	ND	mg/kg	0.0044	1		01/12/21 19:16	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0044	1		01/12/21 19:16	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0044	1		01/12/21 19:16	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0044	1		01/12/21 19:16	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0044	1		01/12/21 19:16	106-93-4	
Dibromomethane	ND	mg/kg	0.0044	1		01/12/21 19:16	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0044	1		01/12/21 19:16	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0044	1		01/12/21 19:16	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0044	1		01/12/21 19:16	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.088	1		01/12/21 19:16	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0044	1		01/12/21 19:16	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0044	1		01/12/21 19:16	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0044	1		01/12/21 19:16	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0044	1		01/12/21 19:16	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0044	1		01/12/21 19:16	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0044	1		01/12/21 19:16	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0044	1		01/12/21 19:16	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0044	1		01/12/21 19:16	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0044	1		01/12/21 19:16	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0044	1		01/12/21 19:16	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0044	1		01/12/21 19:16	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0044	1		01/12/21 19:16	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0044	1		01/12/21 19:16	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.088	1		01/12/21 19:16	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0044	1		01/12/21 19:16	87-68-3	
n-Hexane	ND	mg/kg	0.0044	1		01/12/21 19:16	110-54-3	
2-Hexanone	ND	mg/kg	0.088	1		01/12/21 19:16	591-78-6	
Iodomethane	ND	mg/kg	0.088	1		01/12/21 19:16	74-88-4	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0044	1		01/12/21 19:16	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0044	1		01/12/21 19:16	99-87-6	
Methylene Chloride	ND	mg/kg	0.018	1		01/12/21 19:16	75-09-2	
1-Methylnaphthalene	ND	ug/kg	8.8	1		01/12/21 19:16	90-12-0	
2-Methylnaphthalene	ND	ug/kg	8.8	1		01/12/21 19:16	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.022	1		01/12/21 19:16	108-10-1	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample:** Pit 6 5-10'      **Lab ID:** 50277309018      Collected: 01/06/21 12:35      Received: 01/08/21 08:45      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Methyl-tert-butyl ether	ND	mg/kg	0.0044	1		01/12/21 19:16	1634-04-4	
Naphthalene	ND	mg/kg	0.0044	1		01/12/21 19:16	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0044	1		01/12/21 19:16	103-65-1	
Styrene	ND	mg/kg	0.0044	1		01/12/21 19:16	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0044	1		01/12/21 19:16	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0044	1		01/12/21 19:16	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0044	1		01/12/21 19:16	127-18-4	
Toluene	ND	mg/kg	0.0044	1		01/12/21 19:16	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0044	1		01/12/21 19:16	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0044	1		01/12/21 19:16	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0044	1		01/12/21 19:16	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0044	1		01/12/21 19:16	79-00-5	
Trichloroethene	ND	mg/kg	0.0044	1		01/12/21 19:16	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0044	1		01/12/21 19:16	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0044	1		01/12/21 19:16	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0044	1		01/12/21 19:16	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0044	1		01/12/21 19:16	108-67-8	
Vinyl acetate	ND	mg/kg	0.088	1		01/12/21 19:16	108-05-4	
Vinyl chloride	ND	mg/kg	0.0044	1		01/12/21 19:16	75-01-4	
Xylene (Total)	ND	mg/kg	0.0088	1		01/12/21 19:16	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	121	%	73-133	1		01/12/21 19:16	1868-53-7	
Toluene-d8 (S)	108	%	73-130	1		01/12/21 19:16	2037-26-5	
4-Bromofluorobenzene (S)	80	%	55-129	1		01/12/21 19:16	460-00-4	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	<b>16.7</b>	%	0.10	1		01/14/21 07:53		N2

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample:** Pit 6 10-15'      **Lab ID:** 50277309019      Collected: 01/06/21 12:47      Received: 01/08/21 08:45      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>								
Analytical Method: EPA 6010    Preparation Method: EPA 3050								
Pace Analytical Services - Indianapolis								
Arsenic	7.3	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:40	7440-38-2	
Barium	107	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:40	7440-39-3	
Cadmium	0.64	mg/kg	0.53	1	01/17/21 13:17	01/18/21 14:40	7440-43-9	
Chromium	10	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:40	7440-47-3	
Lead	129	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:40	7439-92-1	
Selenium	ND	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:40	7782-49-2	
Silver	ND	mg/kg	0.53	1	01/17/21 13:17	01/18/21 14:40	7440-22-4	
<b>7471 Mercury</b>								
Analytical Method: EPA 7471    Preparation Method: EPA 7471								
Pace Analytical Services - Indianapolis								
Mercury	ND	mg/kg	0.23	1	01/18/21 12:10	01/18/21 20:04	7439-97-6	
<b>8270 PAH Soil by SIM</b>								
Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546								
Pace Analytical Services - Indianapolis								
Acenaphthene	ND	mg/kg	0.0055	1	01/15/21 12:02	01/16/21 11:19	83-32-9	
Acenaphthylene	ND	mg/kg	0.0055	1	01/15/21 12:02	01/16/21 11:19	208-96-8	
Anthracene	0.0057	mg/kg	0.0055	1	01/15/21 12:02	01/16/21 11:19	120-12-7	
Benzo(a)anthracene	0.029	mg/kg	0.0055	1	01/15/21 12:02	01/16/21 11:19	56-55-3	
Benzo(a)pyrene	0.032	mg/kg	0.0055	1	01/15/21 12:02	01/16/21 11:19	50-32-8	
Benzo(b)fluoranthene	0.046	mg/kg	0.0055	1	01/15/21 12:02	01/16/21 11:19	205-99-2	
Benzo(g,h,i)perylene	0.028	mg/kg	0.0055	1	01/15/21 12:02	01/16/21 11:19	191-24-2	
Benzo(k)fluoranthene	0.021	mg/kg	0.0055	1	01/15/21 12:02	01/16/21 11:19	207-08-9	
Chrysene	0.040	mg/kg	0.0055	1	01/15/21 12:02	01/16/21 11:19	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0055	1	01/15/21 12:02	01/16/21 11:19	53-70-3	
Fluoranthene	0.076	mg/kg	0.0055	1	01/15/21 12:02	01/16/21 11:19	206-44-0	
Fluorene	ND	mg/kg	0.0055	1	01/15/21 12:02	01/16/21 11:19	86-73-7	
Indeno(1,2,3-cd)pyrene	0.017	mg/kg	0.0055	1	01/15/21 12:02	01/16/21 11:19	193-39-5	
1-Methylnaphthalene	ND	mg/kg	0.0055	1	01/15/21 12:02	01/16/21 11:19	90-12-0	
2-Methylnaphthalene	ND	mg/kg	0.0055	1	01/15/21 12:02	01/16/21 11:19	91-57-6	
Naphthalene	ND	mg/kg	0.0055	1	01/15/21 12:02	01/16/21 11:19	91-20-3	
Phenanthrene	0.035	mg/kg	0.0055	1	01/15/21 12:02	01/16/21 11:19	85-01-8	
Pyrene	0.065	mg/kg	0.0055	1	01/15/21 12:02	01/16/21 11:19	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	75	%	37-111	1	01/15/21 12:02	01/16/21 11:19	321-60-8	
p-Terphenyl-d14 (S)	78	%	29-124	1	01/15/21 12:02	01/16/21 11:19	1718-51-0	
<b>8260 MSV 5035A VOA</b>								
Analytical Method: EPA 8260								
Pace Analytical Services - Indianapolis								
Acetone	ND	mg/kg	0.086	1		01/12/21 19:51	67-64-1	
Acrolein	ND	mg/kg	0.086	1		01/12/21 19:51	107-02-8	
Acrylonitrile	ND	mg/kg	0.086	1		01/12/21 19:51	107-13-1	
Benzene	ND	mg/kg	0.0043	1		01/12/21 19:51	71-43-2	
Bromobenzene	ND	mg/kg	0.0043	1		01/12/21 19:51	108-86-1	
Bromochloromethane	ND	mg/kg	0.0043	1		01/12/21 19:51	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0043	1		01/12/21 19:51	75-27-4	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

Sample: Pit 6 10-15' Lab ID: 50277309019 Collected: 01/06/21 12:47 Received: 01/08/21 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Bromoform	ND	mg/kg	0.0043	1		01/12/21 19:51	75-25-2	
Bromomethane	ND	mg/kg	0.0043	1		01/12/21 19:51	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.021	1		01/12/21 19:51	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0043	1		01/12/21 19:51	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0043	1		01/12/21 19:51	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0043	1		01/12/21 19:51	98-06-6	
Carbon disulfide	ND	mg/kg	0.0086	1		01/12/21 19:51	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0043	1		01/12/21 19:51	56-23-5	
Chlorobenzene	ND	mg/kg	0.0043	1		01/12/21 19:51	108-90-7	
Chloroethane	ND	mg/kg	0.0043	1		01/12/21 19:51	75-00-3	
Chloroform	ND	mg/kg	0.0043	1		01/12/21 19:51	67-66-3	
Chloromethane	ND	mg/kg	0.0043	1		01/12/21 19:51	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0043	1		01/12/21 19:51	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0043	1		01/12/21 19:51	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0043	1		01/12/21 19:51	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0043	1		01/12/21 19:51	106-93-4	
Dibromomethane	ND	mg/kg	0.0043	1		01/12/21 19:51	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0043	1		01/12/21 19:51	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0043	1		01/12/21 19:51	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0043	1		01/12/21 19:51	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.086	1		01/12/21 19:51	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0043	1		01/12/21 19:51	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0043	1		01/12/21 19:51	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0043	1		01/12/21 19:51	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0043	1		01/12/21 19:51	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0043	1		01/12/21 19:51	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0043	1		01/12/21 19:51	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0043	1		01/12/21 19:51	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0043	1		01/12/21 19:51	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0043	1		01/12/21 19:51	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0043	1		01/12/21 19:51	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0043	1		01/12/21 19:51	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0043	1		01/12/21 19:51	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0043	1		01/12/21 19:51	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.086	1		01/12/21 19:51	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0043	1		01/12/21 19:51	87-68-3	
n-Hexane	ND	mg/kg	0.0043	1		01/12/21 19:51	110-54-3	
2-Hexanone	ND	mg/kg	0.086	1		01/12/21 19:51	591-78-6	
Iodomethane	ND	mg/kg	0.086	1		01/12/21 19:51	74-88-4	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0043	1		01/12/21 19:51	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0043	1		01/12/21 19:51	99-87-6	
Methylene Chloride	ND	mg/kg	0.017	1		01/12/21 19:51	75-09-2	
1-Methylnaphthalene	ND	ug/kg	8.6	1		01/12/21 19:51	90-12-0	
2-Methylnaphthalene	ND	ug/kg	8.6	1		01/12/21 19:51	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.021	1		01/12/21 19:51	108-10-1	

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample:** Pit 6 10-15'      **Lab ID:** 50277309019      Collected: 01/06/21 12:47      Received: 01/08/21 08:45      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Methyl-tert-butyl ether	ND	mg/kg	0.0043	1		01/12/21 19:51	1634-04-4	
Naphthalene	ND	mg/kg	0.0043	1		01/12/21 19:51	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0043	1		01/12/21 19:51	103-65-1	
Styrene	ND	mg/kg	0.0043	1		01/12/21 19:51	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0043	1		01/12/21 19:51	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0043	1		01/12/21 19:51	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0043	1		01/12/21 19:51	127-18-4	
Toluene	ND	mg/kg	0.0043	1		01/12/21 19:51	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0043	1		01/12/21 19:51	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0043	1		01/12/21 19:51	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0043	1		01/12/21 19:51	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0043	1		01/12/21 19:51	79-00-5	
Trichloroethene	ND	mg/kg	0.0043	1		01/12/21 19:51	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0043	1		01/12/21 19:51	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0043	1		01/12/21 19:51	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0043	1		01/12/21 19:51	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0043	1		01/12/21 19:51	108-67-8	
Vinyl acetate	ND	mg/kg	0.086	1		01/12/21 19:51	108-05-4	
Vinyl chloride	ND	mg/kg	0.0043	1		01/12/21 19:51	75-01-4	
Xylene (Total)	ND	mg/kg	0.0086	1		01/12/21 19:51	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	121	%	73-133	1		01/12/21 19:51	1868-53-7	
Toluene-d8 (S)	112	%	73-130	1		01/12/21 19:51	2037-26-5	
4-Bromofluorobenzene (S)	77	%	55-129	1		01/12/21 19:51	460-00-4	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	<b>12.4</b>	%	0.10	1		01/14/21 07:53		N2

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample:** Pit 7 0-5'      **Lab ID:** 50277309020      Collected: 01/06/21 13:00      Received: 01/08/21 08:45      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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**6010 MET ICP**

Analytical Method: EPA 6010      Preparation Method: EPA 3050

Pace Analytical Services - Indianapolis

Arsenic	6.5	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:42	7440-38-2	
Barium	65.3	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:42	7440-39-3	
Cadmium	ND	mg/kg	0.53	1	01/17/21 13:17	01/18/21 14:42	7440-43-9	
Chromium	10.7	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:42	7440-47-3	
Lead	21.6	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:42	7439-92-1	
Selenium	ND	mg/kg	1.1	1	01/17/21 13:17	01/18/21 14:42	7782-49-2	
Silver	ND	mg/kg	0.53	1	01/17/21 13:17	01/18/21 14:42	7440-22-4	

**7471 Mercury**

Analytical Method: EPA 7471      Preparation Method: EPA 7471

Pace Analytical Services - Indianapolis

Mercury	ND	mg/kg	0.24	1	01/18/21 12:10	01/18/21 20:06	7439-97-6	
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**8270 PAH Soil by SIM**

Analytical Method: EPA 8270 by SIM      Preparation Method: EPA 3546

Pace Analytical Services - Indianapolis

Acenaphthene	0.0068	mg/kg	0.0058	1	01/15/21 12:02	01/16/21 11:34	83-32-9	
Acenaphthylene	0.012	mg/kg	0.0058	1	01/15/21 12:02	01/16/21 11:34	208-96-8	
Anthracene	0.035	mg/kg	0.0058	1	01/15/21 12:02	01/16/21 11:34	120-12-7	
Benzo(a)anthracene	0.27	mg/kg	0.0058	1	01/15/21 12:02	01/16/21 11:34	56-55-3	
Benzo(a)pyrene	0.31	mg/kg	0.0058	1	01/15/21 12:02	01/16/21 11:34	50-32-8	
Benzo(b)fluoranthene	0.45	mg/kg	0.0058	1	01/15/21 12:02	01/16/21 11:34	205-99-2	
Benzo(g,h,i)perylene	0.15	mg/kg	0.0058	1	01/15/21 12:02	01/16/21 11:34	191-24-2	
Benzo(k)fluoranthene	0.16	mg/kg	0.0058	1	01/15/21 12:02	01/16/21 11:34	207-08-9	
Chrysene	0.33	mg/kg	0.0058	1	01/15/21 12:02	01/16/21 11:34	218-01-9	
Dibenz(a,h)anthracene	0.029	mg/kg	0.0058	1	01/15/21 12:02	01/16/21 11:34	53-70-3	
Fluoranthene	0.58	mg/kg	0.0058	1	01/15/21 12:02	01/16/21 11:34	206-44-0	
Fluorene	0.0090	mg/kg	0.0058	1	01/15/21 12:02	01/16/21 11:34	86-73-7	
Indeno(1,2,3-cd)pyrene	0.14	mg/kg	0.0058	1	01/15/21 12:02	01/16/21 11:34	193-39-5	
1-Methylnaphthalene	ND	mg/kg	0.0058	1	01/15/21 12:02	01/16/21 11:34	90-12-0	
2-Methylnaphthalene	ND	mg/kg	0.0058	1	01/15/21 12:02	01/16/21 11:34	91-57-6	
Naphthalene	0.0060	mg/kg	0.0058	1	01/15/21 12:02	01/16/21 11:34	91-20-3	
Phenanthrene	0.21	mg/kg	0.0058	1	01/15/21 12:02	01/16/21 11:34	85-01-8	
Pyrene	0.50	mg/kg	0.0058	1	01/15/21 12:02	01/16/21 11:34	129-00-0	

**Surrogates**

2-Fluorobiphenyl (S)	73	%.	37-111	1	01/15/21 12:02	01/16/21 11:34	321-60-8	
p-Terphenyl-d14 (S)	85	%.	29-124	1	01/15/21 12:02	01/16/21 11:34	1718-51-0	

**8260 MSV 5035A VOA**

Analytical Method: EPA 8260

Pace Analytical Services - Indianapolis

Acetone	0.13	mg/kg	0.090	1		01/13/21 16:04	67-64-1	
Acrolein	ND	mg/kg	0.14	1		01/12/21 20:25	107-02-8	
Acrylonitrile	ND	mg/kg	0.14	1		01/12/21 20:25	107-13-1	
Benzene	ND	mg/kg	0.0072	1		01/12/21 20:25	71-43-2	
Bromobenzene	ND	mg/kg	0.0072	1		01/12/21 20:25	108-86-1	
Bromochloromethane	ND	mg/kg	0.0072	1		01/12/21 20:25	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0072	1		01/12/21 20:25	75-27-4	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample:** Pit 7 0-5'      **Lab ID:** 50277309020      Collected: 01/06/21 13:00      Received: 01/08/21 08:45      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Bromoform	ND	mg/kg	0.0072	1		01/12/21 20:25	75-25-2	
Bromomethane	ND	mg/kg	0.0072	1		01/12/21 20:25	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.036	1		01/12/21 20:25	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0072	1		01/12/21 20:25	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0072	1		01/12/21 20:25	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0072	1		01/12/21 20:25	98-06-6	
Carbon disulfide	ND	mg/kg	0.014	1		01/12/21 20:25	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0072	1		01/12/21 20:25	56-23-5	
Chlorobenzene	ND	mg/kg	0.0072	1		01/12/21 20:25	108-90-7	
Chloroethane	ND	mg/kg	0.0072	1		01/12/21 20:25	75-00-3	
Chloroform	ND	mg/kg	0.0072	1		01/12/21 20:25	67-66-3	
Chloromethane	ND	mg/kg	0.0072	1		01/12/21 20:25	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0072	1		01/12/21 20:25	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0072	1		01/12/21 20:25	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0072	1		01/12/21 20:25	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0072	1		01/12/21 20:25	106-93-4	
Dibromomethane	ND	mg/kg	0.0072	1		01/12/21 20:25	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0072	1		01/12/21 20:25	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0072	1		01/12/21 20:25	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0072	1		01/12/21 20:25	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.14	1		01/12/21 20:25	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0072	1		01/12/21 20:25	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0072	1		01/12/21 20:25	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0072	1		01/12/21 20:25	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0072	1		01/12/21 20:25	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0072	1		01/12/21 20:25	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0072	1		01/12/21 20:25	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0072	1		01/12/21 20:25	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0072	1		01/12/21 20:25	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0072	1		01/12/21 20:25	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0072	1		01/12/21 20:25	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0072	1		01/12/21 20:25	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0072	1		01/12/21 20:25	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0072	1		01/12/21 20:25	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.14	1		01/12/21 20:25	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0072	1		01/12/21 20:25	87-68-3	
n-Hexane	ND	mg/kg	0.0072	1		01/12/21 20:25	110-54-3	
2-Hexanone	ND	mg/kg	0.14	1		01/12/21 20:25	591-78-6	
Iodomethane	ND	mg/kg	0.14	1		01/12/21 20:25	74-88-4	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0072	1		01/12/21 20:25	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0072	1		01/12/21 20:25	99-87-6	
Methylene Chloride	ND	mg/kg	0.029	1		01/12/21 20:25	75-09-2	
1-Methylnaphthalene	ND	ug/kg	14.4	1		01/12/21 20:25	90-12-0	
2-Methylnaphthalene	ND	ug/kg	14.4	1		01/12/21 20:25	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.036	1		01/12/21 20:25	108-10-1	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample:** Pit 7 0-5'      **Lab ID:** 50277309020      Collected: 01/06/21 13:00      Received: 01/08/21 08:45      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Methyl-tert-butyl ether	ND	mg/kg	0.0072	1		01/12/21 20:25	1634-04-4	
Naphthalene	ND	mg/kg	0.0072	1		01/12/21 20:25	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0072	1		01/12/21 20:25	103-65-1	
Styrene	ND	mg/kg	0.0072	1		01/12/21 20:25	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0072	1		01/12/21 20:25	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0072	1		01/12/21 20:25	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0072	1		01/12/21 20:25	127-18-4	
Toluene	ND	mg/kg	0.0072	1		01/12/21 20:25	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0072	1		01/12/21 20:25	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0072	1		01/12/21 20:25	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0072	1		01/12/21 20:25	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0072	1		01/12/21 20:25	79-00-5	
Trichloroethene	ND	mg/kg	0.0072	1		01/12/21 20:25	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0072	1		01/12/21 20:25	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0072	1		01/12/21 20:25	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0072	1		01/12/21 20:25	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0072	1		01/12/21 20:25	108-67-8	
Vinyl acetate	ND	mg/kg	0.14	1		01/12/21 20:25	108-05-4	
Vinyl chloride	ND	mg/kg	0.0072	1		01/12/21 20:25	75-01-4	
Xylene (Total)	ND	mg/kg	0.014	1		01/12/21 20:25	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	121	%	73-133	1		01/12/21 20:25	1868-53-7	
Toluene-d8 (S)	106	%	73-130	1		01/12/21 20:25	2037-26-5	
4-Bromofluorobenzene (S)	81	%	55-129	1		01/12/21 20:25	460-00-4	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	<b>14.4</b>	%	0.10	1		01/14/21 07:53		N2

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample:** Pit 7 5-10'      **Lab ID:** 50277309021      Collected: 01/06/21 13:10      Received: 01/08/21 08:45      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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**6010 MET ICP**

Analytical Method: EPA 6010      Preparation Method: EPA 3050

Pace Analytical Services - Indianapolis

Arsenic	7.7	mg/kg	1.1	1	01/15/21 06:05	01/15/21 13:51	7440-38-2	
Barium	73.8	mg/kg	1.1	1	01/15/21 06:05	01/15/21 13:51	7440-39-3	
Cadmium	ND	mg/kg	0.55	1	01/15/21 06:05	01/15/21 13:51	7440-43-9	
Chromium	15.2	mg/kg	1.1	1	01/15/21 06:05	01/15/21 13:51	7440-47-3	
Lead	17.2	mg/kg	1.1	1	01/15/21 06:05	01/15/21 13:51	7439-92-1	
Selenium	ND	mg/kg	1.1	1	01/15/21 06:05	01/15/21 13:51	7782-49-2	
Silver	ND	mg/kg	0.55	1	01/15/21 06:05	01/15/21 13:51	7440-22-4	

**7471 Mercury**

Analytical Method: EPA 7471      Preparation Method: EPA 7471

Pace Analytical Services - Indianapolis

Mercury	ND	mg/kg	0.24	1	01/18/21 12:10	01/18/21 20:08	7439-97-6	
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**8270 PAH Soil by SIM**

Analytical Method: EPA 8270 by SIM      Preparation Method: EPA 3546

Pace Analytical Services - Indianapolis

Acenaphthene	ND	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 11:49	83-32-9	
Acenaphthylene	ND	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 11:49	208-96-8	
Anthracene	ND	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 11:49	120-12-7	
Benzo(a)anthracene	ND	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 11:49	56-55-3	
Benzo(a)pyrene	0.0064	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 11:49	50-32-8	
Benzo(b)fluoranthene	0.011	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 11:49	205-99-2	
Benzo(g,h,i)perylene	ND	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 11:49	191-24-2	
Benzo(k)fluoranthene	ND	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 11:49	207-08-9	
Chrysene	0.0083	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 11:49	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 11:49	53-70-3	
Fluoranthene	0.013	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 11:49	206-44-0	
Fluorene	ND	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 11:49	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 11:49	193-39-5	
1-Methylnaphthalene	ND	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 11:49	90-12-0	
2-Methylnaphthalene	ND	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 11:49	91-57-6	
Naphthalene	ND	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 11:49	91-20-3	
Phenanthrene	ND	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 11:49	85-01-8	
Pyrene	0.012	mg/kg	0.0060	1	01/15/21 12:02	01/16/21 11:49	129-00-0	

**Surrogates**

2-Fluorobiphenyl (S)	75	%	37-111	1	01/15/21 12:02	01/16/21 11:49	321-60-8	
p-Terphenyl-d14 (S)	78	%	29-124	1	01/15/21 12:02	01/16/21 11:49	1718-51-0	

**8260 MSV 5035A VOA**

Analytical Method: EPA 8260

Pace Analytical Services - Indianapolis

Acetone	0.14	mg/kg	0.10	1		01/13/21 16:38	67-64-1	
Acrolein	ND	mg/kg	0.11	1		01/12/21 21:00	107-02-8	
Acrylonitrile	ND	mg/kg	0.11	1		01/12/21 21:00	107-13-1	
Benzene	ND	mg/kg	0.0053	1		01/12/21 21:00	71-43-2	
Bromobenzene	ND	mg/kg	0.0053	1		01/12/21 21:00	108-86-1	
Bromochloromethane	ND	mg/kg	0.0053	1		01/12/21 21:00	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0053	1		01/12/21 21:00	75-27-4	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

Sample: Pit 7 5-10' Lab ID: 50277309021 Collected: 01/06/21 13:10 Received: 01/08/21 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Bromoform	ND	mg/kg	0.0053	1		01/12/21 21:00	75-25-2	
Bromomethane	ND	mg/kg	0.0053	1		01/12/21 21:00	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.026	1		01/12/21 21:00	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0053	1		01/12/21 21:00	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0053	1		01/12/21 21:00	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0053	1		01/12/21 21:00	98-06-6	
Carbon disulfide	ND	mg/kg	0.011	1		01/12/21 21:00	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0053	1		01/12/21 21:00	56-23-5	
Chlorobenzene	ND	mg/kg	0.0053	1		01/12/21 21:00	108-90-7	
Chloroethane	ND	mg/kg	0.0053	1		01/12/21 21:00	75-00-3	
Chloroform	ND	mg/kg	0.0053	1		01/12/21 21:00	67-66-3	
Chloromethane	ND	mg/kg	0.0053	1		01/12/21 21:00	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0053	1		01/12/21 21:00	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0053	1		01/12/21 21:00	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0053	1		01/12/21 21:00	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0053	1		01/12/21 21:00	106-93-4	
Dibromomethane	ND	mg/kg	0.0053	1		01/12/21 21:00	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0053	1		01/12/21 21:00	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0053	1		01/12/21 21:00	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0053	1		01/12/21 21:00	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.11	1		01/12/21 21:00	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0053	1		01/12/21 21:00	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0053	1		01/12/21 21:00	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0053	1		01/12/21 21:00	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0053	1		01/12/21 21:00	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0053	1		01/12/21 21:00	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0053	1		01/12/21 21:00	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0053	1		01/12/21 21:00	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0053	1		01/12/21 21:00	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0053	1		01/12/21 21:00	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0053	1		01/12/21 21:00	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0053	1		01/12/21 21:00	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0053	1		01/12/21 21:00	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0053	1		01/12/21 21:00	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.11	1		01/12/21 21:00	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0053	1		01/12/21 21:00	87-68-3	
n-Hexane	ND	mg/kg	0.0053	1		01/12/21 21:00	110-54-3	
2-Hexanone	ND	mg/kg	0.11	1		01/12/21 21:00	591-78-6	
Iodomethane	ND	mg/kg	0.11	1		01/12/21 21:00	74-88-4	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0053	1		01/12/21 21:00	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0053	1		01/12/21 21:00	99-87-6	
Methylene Chloride	ND	mg/kg	0.021	1		01/12/21 21:00	75-09-2	
1-Methylnaphthalene	ND	ug/kg	10.5	1		01/12/21 21:00	90-12-0	
2-Methylnaphthalene	ND	ug/kg	10.5	1		01/12/21 21:00	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.026	1		01/12/21 21:00	108-10-1	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample:** Pit 7 5-10'      **Lab ID:** 50277309021      Collected: 01/06/21 13:10      Received: 01/08/21 08:45      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Methyl-tert-butyl ether	ND	mg/kg	0.0053	1		01/12/21 21:00	1634-04-4	
Naphthalene	ND	mg/kg	0.0053	1		01/12/21 21:00	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0053	1		01/12/21 21:00	103-65-1	
Styrene	ND	mg/kg	0.0053	1		01/12/21 21:00	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0053	1		01/12/21 21:00	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0053	1		01/12/21 21:00	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0053	1		01/12/21 21:00	127-18-4	
Toluene	ND	mg/kg	0.0053	1		01/12/21 21:00	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0053	1		01/12/21 21:00	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0053	1		01/12/21 21:00	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0053	1		01/12/21 21:00	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0053	1		01/12/21 21:00	79-00-5	
Trichloroethene	ND	mg/kg	0.0053	1		01/12/21 21:00	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0053	1		01/12/21 21:00	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0053	1		01/12/21 21:00	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0053	1		01/12/21 21:00	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0053	1		01/12/21 21:00	108-67-8	
Vinyl acetate	ND	mg/kg	0.11	1		01/12/21 21:00	108-05-4	
Vinyl chloride	ND	mg/kg	0.0053	1		01/12/21 21:00	75-01-4	
Xylene (Total)	ND	mg/kg	0.011	1		01/12/21 21:00	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	121	%	73-133	1		01/12/21 21:00	1868-53-7	
Toluene-d8 (S)	105	%	73-130	1		01/12/21 21:00	2037-26-5	
4-Bromofluorobenzene (S)	83	%	55-129	1		01/12/21 21:00	460-00-4	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	<b>18.2</b>	%	0.10	1		01/14/21 07:53		N2

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample: Pit 7 10-15'**      **Lab ID: 50277309022**      Collected: 01/06/21 13:13      Received: 01/08/21 08:45      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>								
Analytical Method: EPA 6010    Preparation Method: EPA 3050								
Pace Analytical Services - Indianapolis								
Arsenic	8.9	mg/kg	1.2	1	01/15/21 06:05	01/15/21 13:54	7440-38-2	
Barium	77.6	mg/kg	1.2	1	01/15/21 06:05	01/15/21 13:54	7440-39-3	
Cadmium	ND	mg/kg	0.58	1	01/15/21 06:05	01/15/21 13:54	7440-43-9	
Chromium	16.8	mg/kg	1.2	1	01/15/21 06:05	01/15/21 13:54	7440-47-3	
Lead	17.8	mg/kg	1.2	1	01/15/21 06:05	01/15/21 13:54	7439-92-1	
Selenium	ND	mg/kg	1.2	1	01/15/21 06:05	01/15/21 13:54	7782-49-2	
Silver	ND	mg/kg	0.58	1	01/15/21 06:05	01/15/21 13:54	7440-22-4	
<b>7471 Mercury</b>								
Analytical Method: EPA 7471    Preparation Method: EPA 7471								
Pace Analytical Services - Indianapolis								
Mercury	ND	mg/kg	0.25	1	01/18/21 12:10	01/18/21 20:10	7439-97-6	
<b>8270 PAH Soil by SIM</b>								
Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546								
Pace Analytical Services - Indianapolis								
Acenaphthene	ND	mg/kg	0.0062	1	01/15/21 12:02	01/16/21 12:03	83-32-9	
Acenaphthylene	ND	mg/kg	0.0062	1	01/15/21 12:02	01/16/21 12:03	208-96-8	
Anthracene	ND	mg/kg	0.0062	1	01/15/21 12:02	01/16/21 12:03	120-12-7	
Benzo(a)anthracene	0.039	mg/kg	0.0062	1	01/15/21 12:02	01/16/21 12:03	56-55-3	
Benzo(a)pyrene	0.058	mg/kg	0.0062	1	01/15/21 12:02	01/16/21 12:03	50-32-8	
Benzo(b)fluoranthene	0.092	mg/kg	0.0062	1	01/15/21 12:02	01/16/21 12:03	205-99-2	
Benzo(g,h,i)perylene	0.039	mg/kg	0.0062	1	01/15/21 12:02	01/16/21 12:03	191-24-2	
Benzo(k)fluoranthene	0.029	mg/kg	0.0062	1	01/15/21 12:02	01/16/21 12:03	207-08-9	
Chrysene	0.062	mg/kg	0.0062	1	01/15/21 12:02	01/16/21 12:03	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0062	1	01/15/21 12:02	01/16/21 12:03	53-70-3	
Fluoranthene	0.096	mg/kg	0.0062	1	01/15/21 12:02	01/16/21 12:03	206-44-0	
Fluorene	ND	mg/kg	0.0062	1	01/15/21 12:02	01/16/21 12:03	86-73-7	
Indeno(1,2,3-cd)pyrene	0.034	mg/kg	0.0062	1	01/15/21 12:02	01/16/21 12:03	193-39-5	
1-Methylnaphthalene	ND	mg/kg	0.0062	1	01/15/21 12:02	01/16/21 12:03	90-12-0	
2-Methylnaphthalene	ND	mg/kg	0.0062	1	01/15/21 12:02	01/16/21 12:03	91-57-6	
Naphthalene	ND	mg/kg	0.0062	1	01/15/21 12:02	01/16/21 12:03	91-20-3	
Phenanthrene	0.021	mg/kg	0.0062	1	01/15/21 12:02	01/16/21 12:03	85-01-8	
Pyrene	0.085	mg/kg	0.0062	1	01/15/21 12:02	01/16/21 12:03	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	70	%	37-111	1	01/15/21 12:02	01/16/21 12:03	321-60-8	
p-Terphenyl-d14 (S)	78	%	29-124	1	01/15/21 12:02	01/16/21 12:03	1718-51-0	
<b>8260 MSV 5035A VOA</b>								
Analytical Method: EPA 8260								
Pace Analytical Services - Indianapolis								
Acetone	ND	mg/kg	0.10	1		01/12/21 21:34	67-64-1	
Acrolein	ND	mg/kg	0.10	1		01/12/21 21:34	107-02-8	
Acrylonitrile	ND	mg/kg	0.10	1		01/12/21 21:34	107-13-1	
Benzene	ND	mg/kg	0.0052	1		01/12/21 21:34	71-43-2	
Bromobenzene	ND	mg/kg	0.0052	1		01/12/21 21:34	108-86-1	
Bromochloromethane	ND	mg/kg	0.0052	1		01/12/21 21:34	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0052	1		01/12/21 21:34	75-27-4	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

Sample: Pit 7 10-15' Lab ID: 50277309022 Collected: 01/06/21 13:13 Received: 01/08/21 08:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Bromoform	ND	mg/kg	0.0052	1		01/12/21 21:34	75-25-2	
Bromomethane	ND	mg/kg	0.0052	1		01/12/21 21:34	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.026	1		01/12/21 21:34	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0052	1		01/12/21 21:34	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0052	1		01/12/21 21:34	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0052	1		01/12/21 21:34	98-06-6	
Carbon disulfide	ND	mg/kg	0.010	1		01/12/21 21:34	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0052	1		01/12/21 21:34	56-23-5	
Chlorobenzene	ND	mg/kg	0.0052	1		01/12/21 21:34	108-90-7	
Chloroethane	ND	mg/kg	0.0052	1		01/12/21 21:34	75-00-3	
Chloroform	ND	mg/kg	0.0052	1		01/12/21 21:34	67-66-3	
Chloromethane	ND	mg/kg	0.0052	1		01/12/21 21:34	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0052	1		01/12/21 21:34	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0052	1		01/12/21 21:34	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0052	1		01/12/21 21:34	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0052	1		01/12/21 21:34	106-93-4	
Dibromomethane	ND	mg/kg	0.0052	1		01/12/21 21:34	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0052	1		01/12/21 21:34	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0052	1		01/12/21 21:34	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0052	1		01/12/21 21:34	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.10	1		01/12/21 21:34	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0052	1		01/12/21 21:34	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0052	1		01/12/21 21:34	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0052	1		01/12/21 21:34	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0052	1		01/12/21 21:34	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0052	1		01/12/21 21:34	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0052	1		01/12/21 21:34	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0052	1		01/12/21 21:34	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0052	1		01/12/21 21:34	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0052	1		01/12/21 21:34	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0052	1		01/12/21 21:34	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0052	1		01/12/21 21:34	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0052	1		01/12/21 21:34	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0052	1		01/12/21 21:34	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.10	1		01/12/21 21:34	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0052	1		01/12/21 21:34	87-68-3	
n-Hexane	ND	mg/kg	0.0052	1		01/12/21 21:34	110-54-3	
2-Hexanone	ND	mg/kg	0.10	1		01/12/21 21:34	591-78-6	
Iodomethane	ND	mg/kg	0.10	1		01/12/21 21:34	74-88-4	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0052	1		01/12/21 21:34	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0052	1		01/12/21 21:34	99-87-6	
Methylene Chloride	ND	mg/kg	0.021	1		01/12/21 21:34	75-09-2	
1-Methylnaphthalene	ND	ug/kg	10.3	1		01/12/21 21:34	90-12-0	
2-Methylnaphthalene	ND	ug/kg	10.3	1		01/12/21 21:34	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.026	1		01/12/21 21:34	108-10-1	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample:** Pit 7 10-15'      **Lab ID:** 50277309022      Collected: 01/06/21 13:13      Received: 01/08/21 08:45      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Methyl-tert-butyl ether	ND	mg/kg	0.0052	1		01/12/21 21:34	1634-04-4	
Naphthalene	ND	mg/kg	0.0052	1		01/12/21 21:34	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0052	1		01/12/21 21:34	103-65-1	
Styrene	ND	mg/kg	0.0052	1		01/12/21 21:34	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0052	1		01/12/21 21:34	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0052	1		01/12/21 21:34	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0052	1		01/12/21 21:34	127-18-4	
Toluene	ND	mg/kg	0.0052	1		01/12/21 21:34	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0052	1		01/12/21 21:34	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0052	1		01/12/21 21:34	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0052	1		01/12/21 21:34	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0052	1		01/12/21 21:34	79-00-5	
Trichloroethene	ND	mg/kg	0.0052	1		01/12/21 21:34	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0052	1		01/12/21 21:34	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0052	1		01/12/21 21:34	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0052	1		01/12/21 21:34	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0052	1		01/12/21 21:34	108-67-8	
Vinyl acetate	ND	mg/kg	0.10	1		01/12/21 21:34	108-05-4	
Vinyl chloride	ND	mg/kg	0.0052	1		01/12/21 21:34	75-01-4	
Xylene (Total)	ND	mg/kg	0.010	1		01/12/21 21:34	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	120	%	73-133	1		01/12/21 21:34	1868-53-7	
Toluene-d8 (S)	105	%	73-130	1		01/12/21 21:34	2037-26-5	
4-Bromofluorobenzene (S)	82	%	55-129	1		01/12/21 21:34	460-00-4	
<b>Percent Moisture</b>		Analytical Method: SM 2540G Pace Analytical Services - Indianapolis						
Percent Moisture	<b>19.7</b>	%	0.10	1		01/14/21 10:28		N2

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample:** Pit 8 0-6'      **Lab ID:** 50277309023      Collected: 01/06/21 13:30      Received: 01/08/21 08:45      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>								
Analytical Method: EPA 6010    Preparation Method: EPA 3050								
Pace Analytical Services - Indianapolis								
Arsenic	7.1	mg/kg	1.1	1	01/15/21 06:05	01/15/21 13:57	7440-38-2	
Barium	109	mg/kg	1.1	1	01/15/21 06:05	01/15/21 13:57	7440-39-3	
Cadmium	ND	mg/kg	0.55	1	01/15/21 06:05	01/15/21 13:57	7440-43-9	
Chromium	18.1	mg/kg	1.1	1	01/15/21 06:05	01/15/21 13:57	7440-47-3	
Lead	14.6	mg/kg	1.1	1	01/15/21 06:05	01/15/21 13:57	7439-92-1	
Selenium	ND	mg/kg	1.1	1	01/15/21 06:05	01/15/21 13:57	7782-49-2	
Silver	ND	mg/kg	0.55	1	01/15/21 06:05	01/15/21 13:57	7440-22-4	
<b>7471 Mercury</b>								
Analytical Method: EPA 7471    Preparation Method: EPA 7471								
Pace Analytical Services - Indianapolis								
Mercury	ND	mg/kg	0.26	1	01/18/21 12:10	01/18/21 20:12	7439-97-6	
<b>8270 PAH Soil by SIM</b>								
Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546								
Pace Analytical Services - Indianapolis								
Acenaphthene	ND	mg/kg	0.0059	1	01/15/21 12:02	01/16/21 12:18	83-32-9	
Acenaphthylene	ND	mg/kg	0.0059	1	01/15/21 12:02	01/16/21 12:18	208-96-8	
Anthracene	0.021	mg/kg	0.0059	1	01/15/21 12:02	01/16/21 12:18	120-12-7	
Benzo(a)anthracene	0.12	mg/kg	0.0059	1	01/15/21 12:02	01/16/21 12:18	56-55-3	
Benzo(a)pyrene	0.16	mg/kg	0.0059	1	01/15/21 12:02	01/16/21 12:18	50-32-8	
Benzo(b)fluoranthene	0.24	mg/kg	0.0059	1	01/15/21 12:02	01/16/21 12:18	205-99-2	
Benzo(g,h,i)perylene	0.097	mg/kg	0.0059	1	01/15/21 12:02	01/16/21 12:18	191-24-2	
Benzo(k)fluoranthene	0.077	mg/kg	0.0059	1	01/15/21 12:02	01/16/21 12:18	207-08-9	
Chrysene	0.17	mg/kg	0.0059	1	01/15/21 12:02	01/16/21 12:18	218-01-9	
Dibenz(a,h)anthracene	0.015	mg/kg	0.0059	1	01/15/21 12:02	01/16/21 12:18	53-70-3	
Fluoranthene	0.31	mg/kg	0.0059	1	01/15/21 12:02	01/16/21 12:18	206-44-0	
Fluorene	ND	mg/kg	0.0059	1	01/15/21 12:02	01/16/21 12:18	86-73-7	
Indeno(1,2,3-cd)pyrene	0.081	mg/kg	0.0059	1	01/15/21 12:02	01/16/21 12:18	193-39-5	
1-Methylnaphthalene	ND	mg/kg	0.0059	1	01/15/21 12:02	01/16/21 12:18	90-12-0	
2-Methylnaphthalene	ND	mg/kg	0.0059	1	01/15/21 12:02	01/16/21 12:18	91-57-6	
Naphthalene	ND	mg/kg	0.0059	1	01/15/21 12:02	01/16/21 12:18	91-20-3	
Phenanthrene	0.11	mg/kg	0.0059	1	01/15/21 12:02	01/16/21 12:18	85-01-8	
Pyrene	0.27	mg/kg	0.0059	1	01/15/21 12:02	01/16/21 12:18	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	69	%	37-111	1	01/15/21 12:02	01/16/21 12:18	321-60-8	
p-Terphenyl-d14 (S)	75	%	29-124	1	01/15/21 12:02	01/16/21 12:18	1718-51-0	
<b>8260 MSV 5035A VOA</b>								
Analytical Method: EPA 8260								
Pace Analytical Services - Indianapolis								
Acetone	ND	mg/kg	0.13	1		01/13/21 03:18	67-64-1	
Acrolein	ND	mg/kg	0.13	1		01/13/21 03:18	107-02-8	
Acrylonitrile	ND	mg/kg	0.13	1		01/13/21 03:18	107-13-1	
Benzene	ND	mg/kg	0.0063	1		01/13/21 03:18	71-43-2	
Bromobenzene	ND	mg/kg	0.0063	1		01/13/21 03:18	108-86-1	
Bromochloromethane	ND	mg/kg	0.0063	1		01/13/21 03:18	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0063	1		01/13/21 03:18	75-27-4	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample: Pit 8 0-6'**      **Lab ID: 50277309023**      Collected: 01/06/21 13:30      Received: 01/08/21 08:45      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Bromoform	ND	mg/kg	0.0063	1		01/13/21 03:18	75-25-2	
Bromomethane	ND	mg/kg	0.0063	1		01/13/21 03:18	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.031	1		01/13/21 03:18	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0063	1		01/13/21 03:18	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0063	1		01/13/21 03:18	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0063	1		01/13/21 03:18	98-06-6	
Carbon disulfide	ND	mg/kg	0.013	1		01/13/21 03:18	75-15-0	
Carbon tetrachloride	ND	mg/kg	0.0063	1		01/13/21 03:18	56-23-5	
Chlorobenzene	ND	mg/kg	0.0063	1		01/13/21 03:18	108-90-7	
Chloroethane	ND	mg/kg	0.0063	1		01/13/21 03:18	75-00-3	
Chloroform	ND	mg/kg	0.0063	1		01/13/21 03:18	67-66-3	
Chloromethane	ND	mg/kg	0.0063	1		01/13/21 03:18	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0063	1		01/13/21 03:18	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0063	1		01/13/21 03:18	106-43-4	
Dibromochloromethane	ND	mg/kg	0.0063	1		01/13/21 03:18	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0063	1		01/13/21 03:18	106-93-4	
Dibromomethane	ND	mg/kg	0.0063	1		01/13/21 03:18	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0063	1		01/13/21 03:18	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0063	1		01/13/21 03:18	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0063	1		01/13/21 03:18	106-46-7	
trans-1,4-Dichloro-2-butene	ND	mg/kg	0.13	1		01/13/21 03:18	110-57-6	
Dichlorodifluoromethane	ND	mg/kg	0.0063	1		01/13/21 03:18	75-71-8	
1,1-Dichloroethane	ND	mg/kg	0.0063	1		01/13/21 03:18	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0063	1		01/13/21 03:18	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0063	1		01/13/21 03:18	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0063	1		01/13/21 03:18	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0063	1		01/13/21 03:18	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0063	1		01/13/21 03:18	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0063	1		01/13/21 03:18	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0063	1		01/13/21 03:18	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0063	1		01/13/21 03:18	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0063	1		01/13/21 03:18	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0063	1		01/13/21 03:18	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0063	1		01/13/21 03:18	100-41-4	
Ethyl methacrylate	ND	mg/kg	0.13	1		01/13/21 03:18	97-63-2	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0063	1		01/13/21 03:18	87-68-3	
n-Hexane	ND	mg/kg	0.0063	1		01/13/21 03:18	110-54-3	
2-Hexanone	ND	mg/kg	0.13	1		01/13/21 03:18	591-78-6	
Iodomethane	ND	mg/kg	0.13	1		01/13/21 03:18	74-88-4	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0063	1		01/13/21 03:18	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0063	1		01/13/21 03:18	99-87-6	
Methylene Chloride	ND	mg/kg	0.025	1		01/13/21 03:18	75-09-2	
1-Methylnaphthalene	ND	ug/kg	12.6	1		01/13/21 03:18	90-12-0	
2-Methylnaphthalene	ND	ug/kg	12.6	1		01/13/21 03:18	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.031	1		01/13/21 03:18	108-10-1	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Sherman Park

Pace Project No.: 50277309

**Sample:** Pit 8 0-6'      **Lab ID:** 50277309023      Collected: 01/06/21 13:30      Received: 01/08/21 08:45      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis						
Methyl-tert-butyl ether	ND	mg/kg	0.0063	1		01/13/21 03:18	1634-04-4	
Naphthalene	ND	mg/kg	0.0063	1		01/13/21 03:18	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0063	1		01/13/21 03:18	103-65-1	
Styrene	ND	mg/kg	0.0063	1		01/13/21 03:18	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0063	1		01/13/21 03:18	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0063	1		01/13/21 03:18	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0063	1		01/13/21 03:18	127-18-4	
Toluene	ND	mg/kg	0.0063	1		01/13/21 03:18	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0063	1		01/13/21 03:18	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0063	1		01/13/21 03:18	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0063	1		01/13/21 03:18	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0063	1		01/13/21 03:18	79-00-5	
Trichloroethene	ND	mg/kg	0.0063	1		01/13/21 03:18	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0063	1		01/13/21 03:18	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0063	1		01/13/21 03:18	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0063	1		01/13/21 03:18	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0063	1		01/13/21 03:18	108-67-8	
Vinyl acetate	ND	mg/kg	0.13	1		01/13/21 03:18	108-05-4	
Vinyl chloride	ND	mg/kg	0.0063	1		01/13/21 03:18	75-01-4	
Xylene (Total)	ND	mg/kg	0.013	1		01/13/21 03:18	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	123	%	73-133	1		01/13/21 03:18	1868-53-7	
Toluene-d8 (S)	102	%	73-130	1		01/13/21 03:18	2037-26-5	
4-Bromofluorobenzene (S)	86	%	55-129	1		01/13/21 03:18	460-00-4	

**Percent Moisture**

Analytical Method: SM 2540G  
Pace Analytical Services - Indianapolis

Percent Moisture	<b>20.0</b>	%	0.10	1		01/14/21 10:28		N2
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### QUALITY CONTROL DATA

Project: Sherman Park

Pace Project No.: 50277309

QC Batch:	602075	Analysis Method:	EPA 7471
QC Batch Method:	EPA 7471	Analysis Description:	7471 Mercury
		Laboratory:	Pace Analytical Services - Indianapolis

Associated Lab Samples: 50277309001, 50277309002, 50277309003, 50277309004, 50277309005, 50277309006, 50277309007, 50277309008, 50277309009, 50277309010

METHOD BLANK: 2776479 Matrix: Solid

Associated Lab Samples: 50277309001, 50277309002, 50277309003, 50277309004, 50277309005, 50277309006, 50277309007, 50277309008, 50277309009, 50277309010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.20	01/13/21 19:35	

LABORATORY CONTROL SAMPLE: 2776480

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.51	0.54	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2776481 2776482

Parameter	Units	50277309002		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
Mercury	mg/kg	ND	0.63	0.63	0.70	0.67	103	99	75-125	4	20		

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**QUALITY CONTROL DATA**

Project: Sherman Park

Pace Project No.: 50277309

QC Batch: 602342

Analysis Method: EPA 7471

QC Batch Method: EPA 7471

Analysis Description: 7471 Mercury

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50277309011, 50277309012, 50277309013, 50277309014, 50277309015, 50277309016, 50277309017, 50277309018, 50277309019, 50277309020, 50277309021, 50277309022, 50277309023

METHOD BLANK: 2777546

Matrix: Solid

Associated Lab Samples: 50277309011, 50277309012, 50277309013, 50277309014, 50277309015, 50277309016, 50277309017, 50277309018, 50277309019, 50277309020, 50277309021, 50277309022, 50277309023

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.19	01/18/21 19:34	

LABORATORY CONTROL SAMPLE: 2777547

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.49	0.51	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2777548 2777549

Parameter	Units	50277309011 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.	Result	Result						
Mercury	mg/kg	ND	0.63	0.64	0.61	0.61	88	87	75-125	0	20	

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**QUALITY CONTROL DATA**

Project: Sherman Park  
Pace Project No.: 50277309

QC Batch: 601501 Analysis Method: EPA 6010  
QC Batch Method: EPA 3050 Analysis Description: 6010 MET  
Laboratory: Pace Analytical Services - Indianapolis  
Associated Lab Samples: 50277309001, 50277309002, 50277309003, 50277309004, 50277309005, 50277309006, 50277309007, 50277309008, 50277309009, 50277309010, 50277309011, 50277309012, 50277309013, 50277309014, 50277309015, 50277309016, 50277309017, 50277309018, 50277309019, 50277309020

METHOD BLANK: 2774039 Matrix: Solid  
Associated Lab Samples: 50277309001, 50277309002, 50277309003, 50277309004, 50277309005, 50277309006, 50277309007, 50277309008, 50277309009, 50277309010, 50277309011, 50277309012, 50277309013, 50277309014, 50277309015, 50277309016, 50277309017, 50277309018, 50277309019, 50277309020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	ND	0.93	01/18/21 13:35	
Barium	mg/kg	ND	0.93	01/18/21 13:35	
Cadmium	mg/kg	ND	0.47	01/18/21 13:35	
Chromium	mg/kg	ND	0.93	01/18/21 13:35	
Lead	mg/kg	ND	0.93	01/18/21 13:35	
Selenium	mg/kg	ND	0.93	01/18/21 13:35	
Silver	mg/kg	ND	0.47	01/18/21 13:35	

LABORATORY CONTROL SAMPLE: 2774040

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	48.7	52.3	108	80-120	
Barium	mg/kg	48.7	52.5	108	80-120	
Cadmium	mg/kg	48.7	51.0	105	80-120	
Chromium	mg/kg	48.7	52.0	107	80-120	
Lead	mg/kg	48.7	50.4	104	80-120	
Selenium	mg/kg	48.7	51.3	106	80-120	
Silver	mg/kg	24.3	24.5	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2774041 2774042

Parameter	Units	50277309003		2774041		2774042		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec							
Arsenic	mg/kg	8.7	55	54.7	63.1	64.1	99	101	75-125	2	20			
Barium	mg/kg	114	55	54.7	169	214	101	184	75-125	24	20	M0, R1		
Cadmium	mg/kg	ND	55	54.7	53.3	54.1	96	98	75-125	2	20			
Chromium	mg/kg	27.6	55	54.7	85.9	83.5	106	102	75-125	3	20			
Lead	mg/kg	183	55	54.7	237	353	99	312	75-125	39	20	M0, R1		
Selenium	mg/kg	ND	55	54.7	51.3	51.8	93	95	75-125	1	20			
Silver	mg/kg	ND	27.5	27.4	25.9	26.3	94	96	75-125	1	20			

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### QUALITY CONTROL DATA

Project: Sherman Park  
Pace Project No.: 50277309

QC Batch: 601843 Analysis Method: EPA 6010  
QC Batch Method: EPA 3050 Analysis Description: 6010 MET  
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50277309021, 50277309022, 50277309023

METHOD BLANK: 2775515 Matrix: Solid

Associated Lab Samples: 50277309021, 50277309022, 50277309023

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	ND	1.0	01/15/21 12:50	
Barium	mg/kg	ND	1.0	01/15/21 12:50	
Cadmium	mg/kg	ND	0.50	01/15/21 12:50	
Chromium	mg/kg	ND	1.0	01/15/21 12:50	
Lead	mg/kg	ND	1.0	01/15/21 12:50	
Selenium	mg/kg	ND	1.0	01/15/21 12:50	
Silver	mg/kg	ND	0.50	01/15/21 12:50	

LABORATORY CONTROL SAMPLE: 2775516

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	50	52.7	105	80-120	
Barium	mg/kg	50	51.8	104	80-120	
Cadmium	mg/kg	50	51.2	102	80-120	
Chromium	mg/kg	50	52.4	105	80-120	
Lead	mg/kg	50	50.4	101	80-120	
Selenium	mg/kg	50	51.6	103	80-120	
Silver	mg/kg	25	25.8	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2775517 2775518

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		50277416005 Result	Spike Conc.	Spike Conc.	MS Result							MSD Result
Arsenic	mg/kg	11.0	51.3	53.1	65.9	70.3	107	112	75-125	7	20	
Barium	mg/kg	911	51.3	53.1	994	922	162	21	75-125	7	20	P6
Cadmium	mg/kg	1.8	51.3	53.1	54.5	56.0	103	102	75-125	3	20	
Chromium	mg/kg	109	51.3	53.1	192	285	162	331	75-125	39	20	M3, R1
Lead	mg/kg	1010	51.3	53.1	1030	1260	28	468	75-125	20	20	P6
Selenium	mg/kg	ND	51.3	53.1	51.9	52.8	101	99	75-125	2	20	
Silver	mg/kg	ND	25.6	26.6	27.3	28.0	105	104	75-125	3	20	

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### QUALITY CONTROL DATA

Project: Sherman Park  
Pace Project No.: 50277309

QC Batch: 601794	Analysis Method: EPA 8260
QC Batch Method: EPA 8260	Analysis Description: 8260 MSV 5035A Volatile Organics
	Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50277309002

METHOD BLANK: 2775422 Matrix: Solid

Associated Lab Samples: 50277309002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	mg/kg	ND	0.0050	01/11/21 12:59	
1,1,1-Trichloroethane	mg/kg	ND	0.0050	01/11/21 12:59	
1,1,2,2-Tetrachloroethane	mg/kg	ND	0.0050	01/11/21 12:59	
1,1,2-Trichloroethane	mg/kg	ND	0.0050	01/11/21 12:59	
1,1-Dichloroethane	mg/kg	ND	0.0050	01/11/21 12:59	
1,1-Dichloroethene	mg/kg	ND	0.0050	01/11/21 12:59	
1,1-Dichloropropene	mg/kg	ND	0.0050	01/11/21 12:59	
1,2,3-Trichlorobenzene	mg/kg	ND	0.0050	01/11/21 12:59	
1,2,3-Trichloropropane	mg/kg	ND	0.0050	01/11/21 12:59	
1,2,4-Trichlorobenzene	mg/kg	ND	0.0050	01/11/21 12:59	
1,2,4-Trimethylbenzene	mg/kg	ND	0.0050	01/11/21 12:59	
1,2-Dibromoethane (EDB)	mg/kg	ND	0.0050	01/11/21 12:59	
1,2-Dichlorobenzene	mg/kg	ND	0.0050	01/11/21 12:59	
1,2-Dichloroethane	mg/kg	ND	0.0050	01/11/21 12:59	
1,2-Dichloropropane	mg/kg	ND	0.0050	01/11/21 12:59	
1,3,5-Trimethylbenzene	mg/kg	ND	0.0050	01/11/21 12:59	
1,3-Dichlorobenzene	mg/kg	ND	0.0050	01/11/21 12:59	
1,3-Dichloropropane	mg/kg	ND	0.0050	01/11/21 12:59	
1,4-Dichlorobenzene	mg/kg	ND	0.0050	01/11/21 12:59	
1-Methylnaphthalene	ug/kg	ND	10.0	01/11/21 12:59	
2,2-Dichloropropane	mg/kg	ND	0.0050	01/11/21 12:59	
2-Butanone (MEK)	mg/kg	ND	0.025	01/11/21 12:59	
2-Chlorotoluene	mg/kg	ND	0.0050	01/11/21 12:59	
2-Hexanone	mg/kg	ND	0.10	01/11/21 12:59	
2-Methylnaphthalene	ug/kg	ND	10.0	01/11/21 12:59	
4-Chlorotoluene	mg/kg	ND	0.0050	01/11/21 12:59	
4-Methyl-2-pentanone (MIBK)	mg/kg	ND	0.025	01/11/21 12:59	
Acetone	mg/kg	ND	0.10	01/11/21 12:59	
Acrolein	mg/kg	ND	0.10	01/11/21 12:59	
Acrylonitrile	mg/kg	ND	0.10	01/11/21 12:59	
Benzene	mg/kg	ND	0.0050	01/11/21 12:59	
Bromobenzene	mg/kg	ND	0.0050	01/11/21 12:59	
Bromochloromethane	mg/kg	ND	0.0050	01/11/21 12:59	
Bromodichloromethane	mg/kg	ND	0.0050	01/11/21 12:59	
Bromoform	mg/kg	ND	0.0050	01/11/21 12:59	
Bromomethane	mg/kg	ND	0.0050	01/11/21 12:59	
Carbon disulfide	mg/kg	ND	0.010	01/11/21 12:59	
Carbon tetrachloride	mg/kg	ND	0.0050	01/11/21 12:59	
Chlorobenzene	mg/kg	ND	0.0050	01/11/21 12:59	
Chloroethane	mg/kg	ND	0.0050	01/11/21 12:59	

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### QUALITY CONTROL DATA

Project: Sherman Park

Pace Project No.: 50277309

METHOD BLANK: 2775422

Matrix: Solid

Associated Lab Samples: 50277309002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloroform	mg/kg	ND	0.0050	01/11/21 12:59	
Chloromethane	mg/kg	ND	0.0050	01/11/21 12:59	
cis-1,2-Dichloroethene	mg/kg	ND	0.0050	01/11/21 12:59	
cis-1,3-Dichloropropene	mg/kg	ND	0.0050	01/11/21 12:59	
Dibromochloromethane	mg/kg	ND	0.0050	01/11/21 12:59	
Dibromomethane	mg/kg	ND	0.0050	01/11/21 12:59	
Dichlorodifluoromethane	mg/kg	ND	0.0050	01/11/21 12:59	
Ethyl methacrylate	mg/kg	ND	0.10	01/11/21 12:59	
Ethylbenzene	mg/kg	ND	0.0050	01/11/21 12:59	
Hexachloro-1,3-butadiene	mg/kg	ND	0.0050	01/11/21 12:59	
Iodomethane	mg/kg	ND	0.10	01/11/21 12:59	
Isopropylbenzene (Cumene)	mg/kg	ND	0.0050	01/11/21 12:59	
Methyl-tert-butyl ether	mg/kg	ND	0.0050	01/11/21 12:59	
Methylene Chloride	mg/kg	ND	0.020	01/11/21 12:59	
n-Butylbenzene	mg/kg	ND	0.0050	01/11/21 12:59	
n-Hexane	mg/kg	ND	0.0050	01/11/21 12:59	
n-Propylbenzene	mg/kg	ND	0.0050	01/11/21 12:59	
Naphthalene	mg/kg	ND	0.0050	01/11/21 12:59	
p-Isopropyltoluene	mg/kg	ND	0.0050	01/11/21 12:59	
sec-Butylbenzene	mg/kg	ND	0.0050	01/11/21 12:59	
Styrene	mg/kg	ND	0.0050	01/11/21 12:59	
tert-Butylbenzene	mg/kg	ND	0.0050	01/11/21 12:59	
Tetrachloroethene	mg/kg	ND	0.0050	01/11/21 12:59	
Toluene	mg/kg	ND	0.0050	01/11/21 12:59	
trans-1,2-Dichloroethene	mg/kg	ND	0.0050	01/11/21 12:59	
trans-1,3-Dichloropropene	mg/kg	ND	0.0050	01/11/21 12:59	
trans-1,4-Dichloro-2-butene	mg/kg	ND	0.10	01/11/21 12:59	
Trichloroethene	mg/kg	ND	0.0050	01/11/21 12:59	
Trichlorofluoromethane	mg/kg	ND	0.0050	01/11/21 12:59	
Vinyl acetate	mg/kg	ND	0.10	01/11/21 12:59	
Vinyl chloride	mg/kg	ND	0.0050	01/11/21 12:59	
Xylene (Total)	mg/kg	ND	0.010	01/11/21 12:59	
4-Bromofluorobenzene (S)	%	89	55-129	01/11/21 12:59	
Dibromofluoromethane (S)	%	114	73-133	01/11/21 12:59	
Toluene-d8 (S)	%	101	73-130	01/11/21 12:59	

LABORATORY CONTROL SAMPLE: 2775423

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	mg/kg	0.05	0.054	109	72-132	
1,1,2,2-Tetrachloroethane	mg/kg	0.05	0.049	99	63-127	
1,1-Dichloroethene	mg/kg	0.05	0.057	114	70-126	
1,2,4-Trimethylbenzene	mg/kg	0.05	0.046	92	62-117	
1,2-Dibromoethane (EDB)	mg/kg	0.05	0.052	103	73-124	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Sherman Park

Pace Project No.: 50277309

LABORATORY CONTROL SAMPLE: 2775423

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	mg/kg	0.05	0.054	108	67-129	
1,2-Dichloropropane	mg/kg	0.05	0.048	95	72-125	
Benzene	mg/kg	0.05	0.050	101	74-117	
Chlorobenzene	mg/kg	0.05	0.050	101	72-114	
Chloroform	mg/kg	0.05	0.051	101	69-120	
cis-1,2-Dichloroethene	mg/kg	0.05	0.053	107	73-117	
Ethylbenzene	mg/kg	0.05	0.049	98	68-118	
Isopropylbenzene (Cumene)	mg/kg	0.05	0.051	102	69-121	
Methyl-tert-butyl ether	mg/kg	0.05	0.050	100	75-136	
Naphthalene	mg/kg	0.05	0.046	93	66-120	
Tetrachloroethene	mg/kg	0.05	0.056	113	59-119	
Toluene	mg/kg	0.05	0.049	99	68-115	
trans-1,2-Dichloroethene	mg/kg	0.05	0.054	109	71-125	
Trichloroethene	mg/kg	0.05	0.051	102	68-118	
Vinyl chloride	mg/kg	0.05	0.049	98	49-125	
Xylene (Total)	mg/kg	0.15	0.15	97	69-118	
4-Bromofluorobenzene (S)	%			95	55-129	
Dibromofluoromethane (S)	%			108	73-133	
Toluene-d8 (S)	%			100	73-130	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Sherman Park  
Pace Project No.: 50277309

QC Batch: 601801	Analysis Method: EPA 8260
QC Batch Method: EPA 8260	Analysis Description: 8260 MSV 5035A Volatile Organics
	Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50277309001

METHOD BLANK: 2775437 Matrix: Solid

Associated Lab Samples: 50277309001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	mg/kg	ND	0.0050	01/11/21 12:42	
1,1,1-Trichloroethane	mg/kg	ND	0.0050	01/11/21 12:42	
1,1,2,2-Tetrachloroethane	mg/kg	ND	0.0050	01/11/21 12:42	
1,1,2-Trichloroethane	mg/kg	ND	0.0050	01/11/21 12:42	
1,1-Dichloroethane	mg/kg	ND	0.0050	01/11/21 12:42	
1,1-Dichloroethene	mg/kg	ND	0.0050	01/11/21 12:42	
1,1-Dichloropropene	mg/kg	ND	0.0050	01/11/21 12:42	
1,2,3-Trichlorobenzene	mg/kg	ND	0.0050	01/11/21 12:42	
1,2,3-Trichloropropane	mg/kg	ND	0.0050	01/11/21 12:42	
1,2,4-Trichlorobenzene	mg/kg	ND	0.0050	01/11/21 12:42	
1,2,4-Trimethylbenzene	mg/kg	ND	0.0050	01/11/21 12:42	
1,2-Dibromoethane (EDB)	mg/kg	ND	0.0050	01/11/21 12:42	
1,2-Dichlorobenzene	mg/kg	ND	0.0050	01/11/21 12:42	
1,2-Dichloroethane	mg/kg	ND	0.0050	01/11/21 12:42	
1,2-Dichloropropane	mg/kg	ND	0.0050	01/11/21 12:42	
1,3,5-Trimethylbenzene	mg/kg	ND	0.0050	01/11/21 12:42	
1,3-Dichlorobenzene	mg/kg	ND	0.0050	01/11/21 12:42	
1,3-Dichloropropane	mg/kg	ND	0.0050	01/11/21 12:42	
1,4-Dichlorobenzene	mg/kg	ND	0.0050	01/11/21 12:42	
1-Methylnaphthalene	ug/kg	ND	10.0	01/11/21 12:42	
2,2-Dichloropropane	mg/kg	ND	0.0050	01/11/21 12:42	
2-Butanone (MEK)	mg/kg	ND	0.025	01/11/21 12:42	
2-Chlorotoluene	mg/kg	ND	0.0050	01/11/21 12:42	
2-Hexanone	mg/kg	ND	0.10	01/11/21 12:42	
2-Methylnaphthalene	ug/kg	ND	10.0	01/11/21 12:42	
4-Chlorotoluene	mg/kg	ND	0.0050	01/11/21 12:42	
4-Methyl-2-pentanone (MIBK)	mg/kg	ND	0.025	01/11/21 12:42	
Acetone	mg/kg	ND	0.10	01/11/21 12:42	
Acrolein	mg/kg	ND	0.10	01/11/21 12:42	
Acrylonitrile	mg/kg	ND	0.10	01/11/21 12:42	
Benzene	mg/kg	ND	0.0050	01/11/21 12:42	
Bromobenzene	mg/kg	ND	0.0050	01/11/21 12:42	
Bromochloromethane	mg/kg	ND	0.0050	01/11/21 12:42	
Bromodichloromethane	mg/kg	ND	0.0050	01/11/21 12:42	
Bromoform	mg/kg	ND	0.0050	01/11/21 12:42	
Bromomethane	mg/kg	ND	0.0050	01/11/21 12:42	
Carbon disulfide	mg/kg	ND	0.010	01/11/21 12:42	
Carbon tetrachloride	mg/kg	ND	0.0050	01/11/21 12:42	
Chlorobenzene	mg/kg	ND	0.0050	01/11/21 12:42	
Chloroethane	mg/kg	ND	0.0050	01/11/21 12:42	

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### QUALITY CONTROL DATA

Project: Sherman Park

Pace Project No.: 50277309

METHOD BLANK: 2775437

Matrix: Solid

Associated Lab Samples: 50277309001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloroform	mg/kg	ND	0.0050	01/11/21 12:42	
Chloromethane	mg/kg	ND	0.0050	01/11/21 12:42	
cis-1,2-Dichloroethene	mg/kg	ND	0.0050	01/11/21 12:42	
cis-1,3-Dichloropropene	mg/kg	ND	0.0050	01/11/21 12:42	
Dibromochloromethane	mg/kg	ND	0.0050	01/11/21 12:42	
Dibromomethane	mg/kg	ND	0.0050	01/11/21 12:42	
Dichlorodifluoromethane	mg/kg	ND	0.0050	01/11/21 12:42	
Ethyl methacrylate	mg/kg	ND	0.10	01/11/21 12:42	
Ethylbenzene	mg/kg	ND	0.0050	01/11/21 12:42	
Hexachloro-1,3-butadiene	mg/kg	ND	0.0050	01/11/21 12:42	
Iodomethane	mg/kg	ND	0.10	01/11/21 12:42	
Isopropylbenzene (Cumene)	mg/kg	ND	0.0050	01/11/21 12:42	
Methyl-tert-butyl ether	mg/kg	ND	0.0050	01/11/21 12:42	
Methylene Chloride	mg/kg	ND	0.020	01/11/21 12:42	
n-Butylbenzene	mg/kg	ND	0.0050	01/11/21 12:42	
n-Hexane	mg/kg	ND	0.0050	01/11/21 12:42	
n-Propylbenzene	mg/kg	ND	0.0050	01/11/21 12:42	
Naphthalene	mg/kg	ND	0.0050	01/11/21 12:42	
p-Isopropyltoluene	mg/kg	ND	0.0050	01/11/21 12:42	
sec-Butylbenzene	mg/kg	ND	0.0050	01/11/21 12:42	
Styrene	mg/kg	ND	0.0050	01/11/21 12:42	
tert-Butylbenzene	mg/kg	ND	0.0050	01/11/21 12:42	
Tetrachloroethene	mg/kg	ND	0.0050	01/11/21 12:42	
Toluene	mg/kg	ND	0.0050	01/11/21 12:42	
trans-1,2-Dichloroethene	mg/kg	ND	0.0050	01/11/21 12:42	
trans-1,3-Dichloropropene	mg/kg	ND	0.0050	01/11/21 12:42	
trans-1,4-Dichloro-2-butene	mg/kg	ND	0.10	01/11/21 12:42	
Trichloroethene	mg/kg	ND	0.0050	01/11/21 12:42	
Trichlorofluoromethane	mg/kg	ND	0.0050	01/11/21 12:42	
Vinyl acetate	mg/kg	ND	0.10	01/11/21 12:42	
Vinyl chloride	mg/kg	ND	0.0050	01/11/21 12:42	
Xylene (Total)	mg/kg	ND	0.010	01/11/21 12:42	
4-Bromofluorobenzene (S)	%	92	55-129	01/11/21 12:42	
Dibromofluoromethane (S)	%	113	73-133	01/11/21 12:42	
Toluene-d8 (S)	%	100	73-130	01/11/21 12:42	

LABORATORY CONTROL SAMPLE: 2775438

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	mg/kg	0.05	0.053	106	72-132	
1,1,2,2-Tetrachloroethane	mg/kg	0.05	0.049	99	63-127	
1,1-Dichloroethene	mg/kg	0.05	0.057	113	70-126	
1,2,4-Trimethylbenzene	mg/kg	0.05	0.047	94	62-117	
1,2-Dibromoethane (EDB)	mg/kg	0.05	0.054	107	73-124	

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### QUALITY CONTROL DATA

Project: Sherman Park

Pace Project No.: 50277309

LABORATORY CONTROL SAMPLE: 2775438

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	mg/kg	0.05	0.051	103	67-129	
1,2-Dichloropropane	mg/kg	0.05	0.047	93	72-125	
Benzene	mg/kg	0.05	0.050	100	74-117	
Chlorobenzene	mg/kg	0.05	0.050	100	72-114	
Chloroform	mg/kg	0.05	0.050	100	69-120	
cis-1,2-Dichloroethene	mg/kg	0.05	0.051	102	73-117	
Ethylbenzene	mg/kg	0.05	0.051	101	68-118	
Isopropylbenzene (Cumene)	mg/kg	0.05	0.051	102	69-121	
Methyl-tert-butyl ether	mg/kg	0.05	0.050	100	75-136	
Naphthalene	mg/kg	0.05	0.050	100	66-120	
Tetrachloroethene	mg/kg	0.05	0.058	116	59-119	
Toluene	mg/kg	0.05	0.051	102	68-115	
trans-1,2-Dichloroethene	mg/kg	0.05	0.052	104	71-125	
Trichloroethene	mg/kg	0.05	0.052	104	68-118	
Vinyl chloride	mg/kg	0.05	0.055	110	49-125	
Xylene (Total)	mg/kg	0.15	0.15	99	69-118	
4-Bromofluorobenzene (S)	%			93	55-129	
Dibromofluoromethane (S)	%			104	73-133	
Toluene-d8 (S)	%			102	73-130	

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### QUALITY CONTROL DATA

Project: Sherman Park

Pace Project No.: 50277309

QC Batch: 601807

Analysis Method: EPA 8260

QC Batch Method: EPA 8260

Analysis Description: 8260 MSV 5035A Volatile Organics

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50277309003, 50277309004, 50277309005, 50277309006, 50277309007, 50277309008

METHOD BLANK: 2775446

Matrix: Solid

Associated Lab Samples: 50277309003, 50277309004, 50277309005, 50277309006, 50277309007, 50277309008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	mg/kg	ND	0.0050	01/11/21 18:04	
1,1,1-Trichloroethane	mg/kg	ND	0.0050	01/11/21 18:04	
1,1,2,2-Tetrachloroethane	mg/kg	ND	0.0050	01/11/21 18:04	
1,1,2-Trichloroethane	mg/kg	ND	0.0050	01/11/21 18:04	
1,1-Dichloroethane	mg/kg	ND	0.0050	01/11/21 18:04	
1,1-Dichloroethene	mg/kg	ND	0.0050	01/11/21 18:04	
1,1-Dichloropropene	mg/kg	ND	0.0050	01/11/21 18:04	
1,2,3-Trichlorobenzene	mg/kg	ND	0.0050	01/11/21 18:04	
1,2,3-Trichloropropane	mg/kg	ND	0.0050	01/11/21 18:04	
1,2,4-Trichlorobenzene	mg/kg	ND	0.0050	01/11/21 18:04	
1,2,4-Trimethylbenzene	mg/kg	ND	0.0050	01/11/21 18:04	
1,2-Dibromoethane (EDB)	mg/kg	ND	0.0050	01/11/21 18:04	
1,2-Dichlorobenzene	mg/kg	ND	0.0050	01/11/21 18:04	
1,2-Dichloroethane	mg/kg	ND	0.0050	01/11/21 18:04	
1,2-Dichloropropane	mg/kg	ND	0.0050	01/11/21 18:04	
1,3,5-Trimethylbenzene	mg/kg	ND	0.0050	01/11/21 18:04	
1,3-Dichlorobenzene	mg/kg	ND	0.0050	01/11/21 18:04	
1,3-Dichloropropane	mg/kg	ND	0.0050	01/11/21 18:04	
1,4-Dichlorobenzene	mg/kg	ND	0.0050	01/11/21 18:04	
1-Methylnaphthalene	ug/kg	ND	10.0	01/11/21 18:04	
2,2-Dichloropropane	mg/kg	ND	0.0050	01/11/21 18:04	
2-Butanone (MEK)	mg/kg	ND	0.025	01/11/21 18:04	
2-Chlorotoluene	mg/kg	ND	0.0050	01/11/21 18:04	
2-Hexanone	mg/kg	ND	0.10	01/11/21 18:04	
2-Methylnaphthalene	ug/kg	ND	10.0	01/11/21 18:04	
4-Chlorotoluene	mg/kg	ND	0.0050	01/11/21 18:04	
4-Methyl-2-pentanone (MIBK)	mg/kg	ND	0.025	01/11/21 18:04	
Acetone	mg/kg	ND	0.10	01/11/21 18:04	
Acrolein	mg/kg	ND	0.10	01/11/21 18:04	
Acrylonitrile	mg/kg	ND	0.10	01/11/21 18:04	
Benzene	mg/kg	ND	0.0050	01/11/21 18:04	
Bromobenzene	mg/kg	ND	0.0050	01/11/21 18:04	
Bromochloromethane	mg/kg	ND	0.0050	01/11/21 18:04	
Bromodichloromethane	mg/kg	ND	0.0050	01/11/21 18:04	
Bromoform	mg/kg	ND	0.0050	01/11/21 18:04	
Bromomethane	mg/kg	ND	0.0050	01/11/21 18:04	
Carbon disulfide	mg/kg	ND	0.010	01/11/21 18:04	
Carbon tetrachloride	mg/kg	ND	0.0050	01/11/21 18:04	
Chlorobenzene	mg/kg	ND	0.0050	01/11/21 18:04	
Chloroethane	mg/kg	ND	0.0050	01/11/21 18:04	

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**QUALITY CONTROL DATA**

Project: Sherman Park

Pace Project No.: 50277309

METHOD BLANK: 2775446

Matrix: Solid

Associated Lab Samples: 50277309003, 50277309004, 50277309005, 50277309006, 50277309007, 50277309008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloroform	mg/kg	ND	0.0050	01/11/21 18:04	
Chloromethane	mg/kg	ND	0.0050	01/11/21 18:04	
cis-1,2-Dichloroethene	mg/kg	ND	0.0050	01/11/21 18:04	
cis-1,3-Dichloropropene	mg/kg	ND	0.0050	01/11/21 18:04	
Dibromochloromethane	mg/kg	ND	0.0050	01/11/21 18:04	
Dibromomethane	mg/kg	ND	0.0050	01/11/21 18:04	
Dichlorodifluoromethane	mg/kg	ND	0.0050	01/11/21 18:04	
Ethyl methacrylate	mg/kg	ND	0.10	01/11/21 18:04	
Ethylbenzene	mg/kg	ND	0.0050	01/11/21 18:04	
Hexachloro-1,3-butadiene	mg/kg	ND	0.0050	01/11/21 18:04	
Iodomethane	mg/kg	ND	0.10	01/11/21 18:04	
Isopropylbenzene (Cumene)	mg/kg	ND	0.0050	01/11/21 18:04	
Methyl-tert-butyl ether	mg/kg	ND	0.0050	01/11/21 18:04	
Methylene Chloride	mg/kg	ND	0.020	01/11/21 18:04	
n-Butylbenzene	mg/kg	ND	0.0050	01/11/21 18:04	
n-Hexane	mg/kg	ND	0.0050	01/11/21 18:04	
n-Propylbenzene	mg/kg	ND	0.0050	01/11/21 18:04	
Naphthalene	mg/kg	ND	0.0050	01/11/21 18:04	
p-Isopropyltoluene	mg/kg	ND	0.0050	01/11/21 18:04	
sec-Butylbenzene	mg/kg	ND	0.0050	01/11/21 18:04	
Styrene	mg/kg	ND	0.0050	01/11/21 18:04	
tert-Butylbenzene	mg/kg	ND	0.0050	01/11/21 18:04	
Tetrachloroethene	mg/kg	ND	0.0050	01/11/21 18:04	
Toluene	mg/kg	ND	0.0050	01/11/21 18:04	
trans-1,2-Dichloroethene	mg/kg	ND	0.0050	01/11/21 18:04	
trans-1,3-Dichloropropene	mg/kg	ND	0.0050	01/11/21 18:04	
trans-1,4-Dichloro-2-butene	mg/kg	ND	0.10	01/11/21 18:04	
Trichloroethene	mg/kg	ND	0.0050	01/11/21 18:04	
Trichlorofluoromethane	mg/kg	ND	0.0050	01/11/21 18:04	
Vinyl acetate	mg/kg	ND	0.10	01/11/21 18:04	
Vinyl chloride	mg/kg	ND	0.0050	01/11/21 18:04	
Xylene (Total)	mg/kg	ND	0.010	01/11/21 18:04	
4-Bromofluorobenzene (S)	%	100	55-129	01/11/21 18:04	
Dibromofluoromethane (S)	%	106	73-133	01/11/21 18:04	
Toluene-d8 (S)	%	98	73-130	01/11/21 18:04	

LABORATORY CONTROL SAMPLE: 2775447

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	mg/kg	0.05	0.043	86	72-132	
1,1,2,2-Tetrachloroethane	mg/kg	0.05	0.043	86	63-127	
1,1-Dichloroethene	mg/kg	0.05	0.043	85	70-126	
1,2,4-Trimethylbenzene	mg/kg	0.05	0.043	85	62-117	
1,2-Dibromoethane (EDB)	mg/kg	0.05	0.044	88	73-124	

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### QUALITY CONTROL DATA

Project: Sherman Park

Pace Project No.: 50277309

LABORATORY CONTROL SAMPLE: 2775447

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	mg/kg	0.05	0.043	87	67-129	
1,2-Dichloropropane	mg/kg	0.05	0.043	86	72-125	
Benzene	mg/kg	0.05	0.043	86	74-117	
Chlorobenzene	mg/kg	0.05	0.042	83	72-114	
Chloroform	mg/kg	0.05	0.041	82	69-120	
cis-1,2-Dichloroethene	mg/kg	0.05	0.042	84	73-117	
Ethylbenzene	mg/kg	0.05	0.042	83	68-118	
Isopropylbenzene (Cumene)	mg/kg	0.05	0.046	91	69-121	
Methyl-tert-butyl ether	mg/kg	0.05	0.043	87	75-136	
Naphthalene	mg/kg	0.05	0.048	96	66-120	
Tetrachloroethene	mg/kg	0.05	0.042	84	59-119	
Toluene	mg/kg	0.05	0.044	87	68-115	
trans-1,2-Dichloroethene	mg/kg	0.05	0.042	84	71-125	
Trichloroethene	mg/kg	0.05	0.042	85	68-118	
Vinyl chloride	mg/kg	0.05	0.045	89	49-125	
Xylene (Total)	mg/kg	0.15	0.12	82	69-118	
4-Bromofluorobenzene (S)	%			106	55-129	
Dibromofluoromethane (S)	%			104	73-133	
Toluene-d8 (S)	%			102	73-130	

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### QUALITY CONTROL DATA

Project: Sherman Park  
Pace Project No.: 50277309

QC Batch: 601981 Analysis Method: EPA 8260  
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV 5035A Volatile Organics  
Laboratory: Pace Analytical Services - Indianapolis  
Associated Lab Samples: 50277309009, 50277309010, 50277309011, 50277309012, 50277309013, 50277309014, 50277309015, 50277309016, 50277309017, 50277309018, 50277309019, 50277309020, 50277309021, 50277309022

METHOD BLANK: 2776179 Matrix: Solid  
Associated Lab Samples: 50277309009, 50277309010, 50277309011, 50277309012, 50277309013, 50277309014, 50277309015, 50277309016, 50277309017, 50277309018, 50277309019, 50277309020, 50277309021, 50277309022

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	mg/kg	ND	0.0050	01/12/21 12:23	
1,1,1-Trichloroethane	mg/kg	ND	0.0050	01/12/21 12:23	
1,1,2,2-Tetrachloroethane	mg/kg	ND	0.0050	01/12/21 12:23	
1,1,2-Trichloroethane	mg/kg	ND	0.0050	01/12/21 12:23	
1,1-Dichloroethane	mg/kg	ND	0.0050	01/12/21 12:23	
1,1-Dichloroethene	mg/kg	ND	0.0050	01/12/21 12:23	
1,1-Dichloropropene	mg/kg	ND	0.0050	01/12/21 12:23	
1,2,3-Trichlorobenzene	mg/kg	ND	0.0050	01/12/21 12:23	
1,2,3-Trichloropropane	mg/kg	ND	0.0050	01/12/21 12:23	
1,2,4-Trichlorobenzene	mg/kg	ND	0.0050	01/12/21 12:23	
1,2,4-Trimethylbenzene	mg/kg	ND	0.0050	01/12/21 12:23	
1,2-Dibromoethane (EDB)	mg/kg	ND	0.0050	01/12/21 12:23	
1,2-Dichlorobenzene	mg/kg	ND	0.0050	01/12/21 12:23	
1,2-Dichloroethane	mg/kg	ND	0.0050	01/12/21 12:23	
1,2-Dichloropropane	mg/kg	ND	0.0050	01/12/21 12:23	
1,3,5-Trimethylbenzene	mg/kg	ND	0.0050	01/12/21 12:23	
1,3-Dichlorobenzene	mg/kg	ND	0.0050	01/12/21 12:23	
1,3-Dichloropropane	mg/kg	ND	0.0050	01/12/21 12:23	
1,4-Dichlorobenzene	mg/kg	ND	0.0050	01/12/21 12:23	
1-Methylnaphthalene	ug/kg	ND	10.0	01/12/21 12:23	
2,2-Dichloropropane	mg/kg	ND	0.0050	01/12/21 12:23	
2-Butanone (MEK)	mg/kg	ND	0.025	01/12/21 12:23	
2-Chlorotoluene	mg/kg	ND	0.0050	01/12/21 12:23	
2-Hexanone	mg/kg	ND	0.10	01/12/21 12:23	
2-Methylnaphthalene	ug/kg	ND	10.0	01/12/21 12:23	
4-Chlorotoluene	mg/kg	ND	0.0050	01/12/21 12:23	
4-Methyl-2-pentanone (MIBK)	mg/kg	ND	0.025	01/12/21 12:23	
Acetone	mg/kg	ND	0.10	01/12/21 12:23	
Acrolein	mg/kg	ND	0.10	01/12/21 12:23	
Acrylonitrile	mg/kg	ND	0.10	01/12/21 12:23	
Benzene	mg/kg	ND	0.0050	01/12/21 12:23	
Bromobenzene	mg/kg	ND	0.0050	01/12/21 12:23	
Bromochloromethane	mg/kg	ND	0.0050	01/12/21 12:23	
Bromodichloromethane	mg/kg	ND	0.0050	01/12/21 12:23	
Bromoform	mg/kg	ND	0.0050	01/12/21 12:23	
Bromomethane	mg/kg	ND	0.0050	01/12/21 12:23	
Carbon disulfide	mg/kg	ND	0.010	01/12/21 12:23	
Carbon tetrachloride	mg/kg	ND	0.0050	01/12/21 12:23	
Chlorobenzene	mg/kg	ND	0.0050	01/12/21 12:23	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Sherman Park

Pace Project No.: 50277309

METHOD BLANK: 2776179

Matrix: Solid

Associated Lab Samples: 50277309009, 50277309010, 50277309011, 50277309012, 50277309013, 50277309014, 50277309015, 50277309016, 50277309017, 50277309018, 50277309019, 50277309020, 50277309021, 50277309022

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloroethane	mg/kg	ND	0.0050	01/12/21 12:23	
Chloroform	mg/kg	ND	0.0050	01/12/21 12:23	
Chloromethane	mg/kg	ND	0.0050	01/12/21 12:23	
cis-1,2-Dichloroethene	mg/kg	ND	0.0050	01/12/21 12:23	
cis-1,3-Dichloropropene	mg/kg	ND	0.0050	01/12/21 12:23	
Dibromochloromethane	mg/kg	ND	0.0050	01/12/21 12:23	
Dibromomethane	mg/kg	ND	0.0050	01/12/21 12:23	
Dichlorodifluoromethane	mg/kg	ND	0.0050	01/12/21 12:23	
Ethyl methacrylate	mg/kg	ND	0.10	01/12/21 12:23	
Ethylbenzene	mg/kg	ND	0.0050	01/12/21 12:23	
Hexachloro-1,3-butadiene	mg/kg	ND	0.0050	01/12/21 12:23	
Iodomethane	mg/kg	ND	0.10	01/12/21 12:23	
Isopropylbenzene (Cumene)	mg/kg	ND	0.0050	01/12/21 12:23	
Methyl-tert-butyl ether	mg/kg	ND	0.0050	01/12/21 12:23	
Methylene Chloride	mg/kg	ND	0.020	01/12/21 12:23	
n-Butylbenzene	mg/kg	ND	0.0050	01/12/21 12:23	
n-Hexane	mg/kg	ND	0.0050	01/12/21 12:23	
n-Propylbenzene	mg/kg	ND	0.0050	01/12/21 12:23	
Naphthalene	mg/kg	ND	0.0050	01/12/21 12:23	
p-Isopropyltoluene	mg/kg	ND	0.0050	01/12/21 12:23	
sec-Butylbenzene	mg/kg	ND	0.0050	01/12/21 12:23	
Styrene	mg/kg	ND	0.0050	01/12/21 12:23	
tert-Butylbenzene	mg/kg	ND	0.0050	01/12/21 12:23	
Tetrachloroethene	mg/kg	ND	0.0050	01/12/21 12:23	
Toluene	mg/kg	ND	0.0050	01/12/21 12:23	
trans-1,2-Dichloroethene	mg/kg	ND	0.0050	01/12/21 12:23	
trans-1,3-Dichloropropene	mg/kg	ND	0.0050	01/12/21 12:23	
trans-1,4-Dichloro-2-butene	mg/kg	ND	0.10	01/12/21 12:23	
Trichloroethene	mg/kg	ND	0.0050	01/12/21 12:23	
Trichlorofluoromethane	mg/kg	ND	0.0050	01/12/21 12:23	
Vinyl acetate	mg/kg	ND	0.10	01/12/21 12:23	
Vinyl chloride	mg/kg	ND	0.0050	01/12/21 12:23	
Xylene (Total)	mg/kg	ND	0.010	01/12/21 12:23	
4-Bromofluorobenzene (S)	%	89	55-129	01/12/21 12:23	
Dibromofluoromethane (S)	%	120	73-133	01/12/21 12:23	
Toluene-d8 (S)	%	100	73-130	01/12/21 12:23	

LABORATORY CONTROL SAMPLE: 2776180

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	mg/kg	0.05	0.052	103	72-132	
1,1,2,2-Tetrachloroethane	mg/kg	0.05	0.044	88	63-127	
1,1-Dichloroethene	mg/kg	0.05	0.053	106	70-126	

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### QUALITY CONTROL DATA

Project: Sherman Park

Pace Project No.: 50277309

LABORATORY CONTROL SAMPLE: 2776180

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	mg/kg	0.05	0.041	82	62-117	
1,2-Dibromoethane (EDB)	mg/kg	0.05	0.051	102	73-124	
1,2-Dichloroethane	mg/kg	0.05	0.050	100	67-129	
1,2-Dichloropropane	mg/kg	0.05	0.042	84	72-125	
Benzene	mg/kg	0.05	0.047	94	74-117	
Chlorobenzene	mg/kg	0.05	0.046	92	72-114	
Chloroform	mg/kg	0.05	0.049	97	69-120	
cis-1,2-Dichloroethene	mg/kg	0.05	0.049	99	73-117	
Ethylbenzene	mg/kg	0.05	0.046	91	68-118	
Isopropylbenzene (Cumene)	mg/kg	0.05	0.046	92	69-121	
Methyl-tert-butyl ether	mg/kg	0.05	0.047	95	75-136	
Naphthalene	mg/kg	0.05	0.044	87	66-120	
Tetrachloroethene	mg/kg	0.05	0.054	108	59-119	
Toluene	mg/kg	0.05	0.047	93	68-115	
trans-1,2-Dichloroethene	mg/kg	0.05	0.050	100	71-125	
Trichloroethene	mg/kg	0.05	0.048	96	68-118	
Vinyl chloride	mg/kg	0.05	0.053	107	49-125	
Xylene (Total)	mg/kg	0.15	0.14	91	69-118	
4-Bromofluorobenzene (S)	%			94	55-129	
Dibromofluoromethane (S)	%			111	73-133	
Toluene-d8 (S)	%			101	73-130	

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### QUALITY CONTROL DATA

Project: Sherman Park

Pace Project No.: 50277309

QC Batch: 601988

Analysis Method: EPA 8260

QC Batch Method: EPA 8260

Analysis Description: 8260 MSV 5035A Volatile Organics

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50277309023

METHOD BLANK: 2776193

Matrix: Solid

Associated Lab Samples: 50277309023

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	mg/kg	ND	0.0050	01/13/21 00:26	
1,1,1-Trichloroethane	mg/kg	ND	0.0050	01/13/21 00:26	
1,1,2,2-Tetrachloroethane	mg/kg	ND	0.0050	01/13/21 00:26	
1,1,2-Trichloroethane	mg/kg	ND	0.0050	01/13/21 00:26	
1,1-Dichloroethane	mg/kg	ND	0.0050	01/13/21 00:26	
1,1-Dichloroethene	mg/kg	ND	0.0050	01/13/21 00:26	
1,1-Dichloropropene	mg/kg	ND	0.0050	01/13/21 00:26	
1,2,3-Trichlorobenzene	mg/kg	ND	0.0050	01/13/21 00:26	
1,2,3-Trichloropropane	mg/kg	ND	0.0050	01/13/21 00:26	
1,2,4-Trichlorobenzene	mg/kg	ND	0.0050	01/13/21 00:26	
1,2,4-Trimethylbenzene	mg/kg	ND	0.0050	01/13/21 00:26	
1,2-Dibromoethane (EDB)	mg/kg	ND	0.0050	01/13/21 00:26	
1,2-Dichlorobenzene	mg/kg	ND	0.0050	01/13/21 00:26	
1,2-Dichloroethane	mg/kg	ND	0.0050	01/13/21 00:26	
1,2-Dichloropropane	mg/kg	ND	0.0050	01/13/21 00:26	
1,3,5-Trimethylbenzene	mg/kg	ND	0.0050	01/13/21 00:26	
1,3-Dichlorobenzene	mg/kg	ND	0.0050	01/13/21 00:26	
1,3-Dichloropropane	mg/kg	ND	0.0050	01/13/21 00:26	
1,4-Dichlorobenzene	mg/kg	ND	0.0050	01/13/21 00:26	
1-Methylnaphthalene	ug/kg	ND	10.0	01/13/21 00:26	
2,2-Dichloropropane	mg/kg	ND	0.0050	01/13/21 00:26	
2-Butanone (MEK)	mg/kg	ND	0.025	01/13/21 00:26	
2-Chlorotoluene	mg/kg	ND	0.0050	01/13/21 00:26	
2-Hexanone	mg/kg	ND	0.10	01/13/21 00:26	
2-Methylnaphthalene	ug/kg	ND	10.0	01/13/21 00:26	
4-Chlorotoluene	mg/kg	ND	0.0050	01/13/21 00:26	
4-Methyl-2-pentanone (MIBK)	mg/kg	ND	0.025	01/13/21 00:26	
Acetone	mg/kg	ND	0.10	01/13/21 00:26	
Acrolein	mg/kg	ND	0.10	01/13/21 00:26	
Acrylonitrile	mg/kg	ND	0.10	01/13/21 00:26	
Benzene	mg/kg	ND	0.0050	01/13/21 00:26	
Bromobenzene	mg/kg	ND	0.0050	01/13/21 00:26	
Bromochloromethane	mg/kg	ND	0.0050	01/13/21 00:26	
Bromodichloromethane	mg/kg	ND	0.0050	01/13/21 00:26	
Bromoform	mg/kg	ND	0.0050	01/13/21 00:26	
Bromomethane	mg/kg	ND	0.0050	01/13/21 00:26	
Carbon disulfide	mg/kg	ND	0.010	01/13/21 00:26	
Carbon tetrachloride	mg/kg	ND	0.0050	01/13/21 00:26	
Chlorobenzene	mg/kg	ND	0.0050	01/13/21 00:26	
Chloroethane	mg/kg	ND	0.0050	01/13/21 00:26	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Sherman Park  
Pace Project No.: 50277309

METHOD BLANK: 2776193 Matrix: Solid  
Associated Lab Samples: 50277309023

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloroform	mg/kg	ND	0.0050	01/13/21 00:26	
Chloromethane	mg/kg	ND	0.0050	01/13/21 00:26	
cis-1,2-Dichloroethene	mg/kg	ND	0.0050	01/13/21 00:26	
cis-1,3-Dichloropropene	mg/kg	ND	0.0050	01/13/21 00:26	
Dibromochloromethane	mg/kg	ND	0.0050	01/13/21 00:26	
Dibromomethane	mg/kg	ND	0.0050	01/13/21 00:26	
Dichlorodifluoromethane	mg/kg	ND	0.0050	01/13/21 00:26	
Ethyl methacrylate	mg/kg	ND	0.10	01/13/21 00:26	
Ethylbenzene	mg/kg	ND	0.0050	01/13/21 00:26	
Hexachloro-1,3-butadiene	mg/kg	ND	0.0050	01/13/21 00:26	
Iodomethane	mg/kg	ND	0.10	01/13/21 00:26	
Isopropylbenzene (Cumene)	mg/kg	ND	0.0050	01/13/21 00:26	
Methyl-tert-butyl ether	mg/kg	ND	0.0050	01/13/21 00:26	
Methylene Chloride	mg/kg	ND	0.020	01/13/21 00:26	
n-Butylbenzene	mg/kg	ND	0.0050	01/13/21 00:26	
n-Hexane	mg/kg	ND	0.0050	01/13/21 00:26	
n-Propylbenzene	mg/kg	ND	0.0050	01/13/21 00:26	
Naphthalene	mg/kg	ND	0.0050	01/13/21 00:26	
p-Isopropyltoluene	mg/kg	ND	0.0050	01/13/21 00:26	
sec-Butylbenzene	mg/kg	ND	0.0050	01/13/21 00:26	
Styrene	mg/kg	ND	0.0050	01/13/21 00:26	
tert-Butylbenzene	mg/kg	ND	0.0050	01/13/21 00:26	
Tetrachloroethene	mg/kg	ND	0.0050	01/13/21 00:26	
Toluene	mg/kg	ND	0.0050	01/13/21 00:26	
trans-1,2-Dichloroethene	mg/kg	ND	0.0050	01/13/21 00:26	
trans-1,3-Dichloropropene	mg/kg	ND	0.0050	01/13/21 00:26	
trans-1,4-Dichloro-2-butene	mg/kg	ND	0.10	01/13/21 00:26	
Trichloroethene	mg/kg	ND	0.0050	01/13/21 00:26	
Trichlorofluoromethane	mg/kg	ND	0.0050	01/13/21 00:26	
Vinyl acetate	mg/kg	ND	0.10	01/13/21 00:26	
Vinyl chloride	mg/kg	ND	0.0050	01/13/21 00:26	
Xylene (Total)	mg/kg	ND	0.010	01/13/21 00:26	
4-Bromofluorobenzene (S)	%	90	55-129	01/13/21 00:26	
Dibromofluoromethane (S)	%	124	73-133	01/13/21 00:26	
Toluene-d8 (S)	%	100	73-130	01/13/21 00:26	

LABORATORY CONTROL SAMPLE: 2776194

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	mg/kg	0.05	0.053	107	72-132	
1,1,2,2-Tetrachloroethane	mg/kg	0.05	0.044	89	63-127	
1,1-Dichloroethene	mg/kg	0.05	0.053	106	70-126	
1,2,4-Trimethylbenzene	mg/kg	0.05	0.040	80	62-117	
1,2-Dibromoethane (EDB)	mg/kg	0.05	0.053	106	73-124	

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### QUALITY CONTROL DATA

Project: Sherman Park

Pace Project No.: 50277309

LABORATORY CONTROL SAMPLE: 2776194

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	mg/kg	0.05	0.048	96	67-129	
1,2-Dichloropropane	mg/kg	0.05	0.042	83	72-125	
Benzene	mg/kg	0.05	0.048	95	74-117	
Chlorobenzene	mg/kg	0.05	0.048	97	72-114	
Chloroform	mg/kg	0.05	0.049	99	69-120	
cis-1,2-Dichloroethene	mg/kg	0.05	0.051	102	73-117	
Ethylbenzene	mg/kg	0.05	0.047	95	68-118	
Isopropylbenzene (Cumene)	mg/kg	0.05	0.048	95	69-121	
Methyl-tert-butyl ether	mg/kg	0.05	0.048	97	75-136	
Naphthalene	mg/kg	0.05	0.046	92	66-120	
Tetrachloroethene	mg/kg	0.05	0.058	117	59-119	
Toluene	mg/kg	0.05	0.048	96	68-115	
trans-1,2-Dichloroethene	mg/kg	0.05	0.049	98	71-125	
Trichloroethene	mg/kg	0.05	0.048	96	68-118	
Vinyl chloride	mg/kg	0.05	0.046	93	49-125	
Xylene (Total)	mg/kg	0.15	0.14	93	69-118	
4-Bromofluorobenzene (S)	%			90	55-129	
Dibromofluoromethane (S)	%			110	73-133	
Toluene-d8 (S)	%			101	73-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2776195 2776196

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50277352003 Result	Spike Conc.	Spike Conc.	Conc.								
1,1,1-Trichloroethane	mg/kg	ND	0.045	0.048	0.048	0.052	109	108	48-141	8	20		
1,1,2,2-Tetrachloroethane	mg/kg	ND	0.045	0.048	0.038	0.041	85	86	14-173	9	20		
1,1-Dichloroethene	mg/kg	ND	0.045	0.048	0.048	0.053	108	110	33-162	11	20		
1,2,4-Trimethylbenzene	mg/kg	ND	0.045	0.048	0.033	0.038	74	78	10-171	14	20		
1,2-Dibromoethane (EDB)	mg/kg	ND	0.045	0.048	0.044	0.048	98	99	14-151	10	20		
1,2-Dichloroethane	mg/kg	ND	0.045	0.048	0.043	0.047	97	97	35-142	8	20		
1,2-Dichloropropane	mg/kg	ND	0.045	0.048	0.038	0.042	85	86	26-148	9	20		
Benzene	mg/kg	ND	0.045	0.048	0.042	0.046	95	95	23-146	9	20		
Chlorobenzene	mg/kg	ND	0.045	0.048	0.039	0.044	88	90	10-144	11	20		
Chloroform	mg/kg	ND	0.045	0.048	0.045	0.049	100	101	33-142	9	20		
cis-1,2-Dichloroethene	mg/kg	ND	0.045	0.048	0.045	0.049	100	102	30-143	10	20		
Ethylbenzene	mg/kg	ND	0.045	0.048	0.041	0.045	91	92	10-153	10	20		
Isopropylbenzene (Cumene)	mg/kg	ND	0.045	0.048	0.040	0.045	90	93	10-160	12	20		
Methyl-tert-butyl ether	mg/kg	ND	0.045	0.048	0.043	0.047	96	97	55-156	10	20		
Naphthalene	mg/kg	ND	0.045	0.048	0.025	0.032	57	66	10-134	24	20	R1	
Tetrachloroethene	mg/kg	ND	0.045	0.048	0.067	0.079	151	163	10-173	17	20		
Toluene	mg/kg	ND	0.045	0.048	0.043	0.047	96	97	10-150	10	20		
trans-1,2-Dichloroethene	mg/kg	ND	0.045	0.048	0.043	0.048	96	98	28-156	11	20		
Trichloroethene	mg/kg	ND	0.045	0.048	0.044	0.049	98	100	12-153	11	20		
Vinyl chloride	mg/kg	ND	0.045	0.048	0.044	0.050	99	103	21-155	12	20		

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**QUALITY CONTROL DATA**

Project: Sherman Park

Pace Project No.: 50277309

Parameter	Units	2776195		2776196		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		50277352003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							
Xylene (Total)	mg/kg	ND	0.13	0.15	0.12	0.13	87	90	10-151	12	20	
4-Bromofluorobenzene (S)	%						89	91	55-129			
Dibromofluoromethane (S)	%						111	111	73-133			
Toluene-d8 (S)	%						104	104	73-130			

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### QUALITY CONTROL DATA

Project: Sherman Park

Pace Project No.: 50277309

QC Batch: 602501

Analysis Method: EPA 8270 by SIM

QC Batch Method: EPA 3546

Analysis Description: 8270 Soil PAH by SIM

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50277309001, 50277309002, 50277309003, 50277309004, 50277309005, 50277309006, 50277309007

METHOD BLANK: 2778310

Matrix: Solid

Associated Lab Samples: 50277309001, 50277309002, 50277309003, 50277309004, 50277309005, 50277309006, 50277309007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	mg/kg	ND	0.0050	01/15/21 14:25	
2-Methylnaphthalene	mg/kg	ND	0.0050	01/15/21 14:25	
Acenaphthene	mg/kg	ND	0.0050	01/15/21 14:25	
Acenaphthylene	mg/kg	ND	0.0050	01/15/21 14:25	
Anthracene	mg/kg	ND	0.0050	01/15/21 14:25	
Benzo(a)anthracene	mg/kg	ND	0.0050	01/15/21 14:25	
Benzo(a)pyrene	mg/kg	ND	0.0050	01/15/21 14:25	
Benzo(b)fluoranthene	mg/kg	ND	0.0050	01/15/21 14:25	
Benzo(g,h,i)perylene	mg/kg	ND	0.0050	01/15/21 14:25	
Benzo(k)fluoranthene	mg/kg	ND	0.0050	01/15/21 14:25	
Chrysene	mg/kg	ND	0.0050	01/15/21 14:25	
Dibenz(a,h)anthracene	mg/kg	ND	0.0050	01/15/21 14:25	
Fluoranthene	mg/kg	ND	0.0050	01/15/21 14:25	
Fluorene	mg/kg	ND	0.0050	01/15/21 14:25	
Indeno(1,2,3-cd)pyrene	mg/kg	ND	0.0050	01/15/21 14:25	
Naphthalene	mg/kg	ND	0.0050	01/15/21 14:25	
Phenanthrene	mg/kg	ND	0.0050	01/15/21 14:25	
Pyrene	mg/kg	ND	0.0050	01/15/21 14:25	
2-Fluorobiphenyl (S)	%	73	37-111	01/15/21 14:25	
p-Terphenyl-d14 (S)	%	88	29-124	01/15/21 14:25	

LABORATORY CONTROL SAMPLE: 2778311

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	mg/kg	0.64	0.49	77	50-114	
2-Methylnaphthalene	mg/kg	0.64	0.51	79	50-117	
Acenaphthene	mg/kg	0.64	0.51	80	54-116	
Acenaphthylene	mg/kg	0.64	0.51	80	55-119	
Anthracene	mg/kg	0.64	0.55	85	51-122	
Benzo(a)anthracene	mg/kg	0.64	0.57	89	66-125	
Benzo(a)pyrene	mg/kg	0.64	0.56	87	61-133	
Benzo(b)fluoranthene	mg/kg	0.64	0.58	90	49-141	
Benzo(g,h,i)perylene	mg/kg	0.64	0.51	79	53-130	
Benzo(k)fluoranthene	mg/kg	0.64	0.61	95	51-135	
Chrysene	mg/kg	0.64	0.57	89	63-125	
Dibenz(a,h)anthracene	mg/kg	0.64	0.53	83	59-130	
Fluoranthene	mg/kg	0.64	0.56	87	65-128	
Fluorene	mg/kg	0.64	0.53	83	57-122	
Indeno(1,2,3-cd)pyrene	mg/kg	0.64	0.52	81	62-122	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Sherman Park

Pace Project No.: 50277309

LABORATORY CONTROL SAMPLE: 2778311

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Naphthalene	mg/kg	0.64	0.49	76	48-109	
Phenanthrene	mg/kg	0.64	0.55	85	57-120	
Pyrene	mg/kg	0.64	0.60	94	53-127	
2-Fluorobiphenyl (S)	%			72	37-111	
p-Terphenyl-d14 (S)	%			83	29-124	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2778312 2778313

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50277417001 Result	Spike Conc.	Spike Conc.	MS Result						
1-Methylnaphthalene	mg/kg	0.023	0.81	0.8	0.70	0.70	84	85	22-131	0	20
2-Methylnaphthalene	mg/kg	0.028	0.81	0.8	0.70	0.71	84	86	22-135	1	20
Acenaphthene	mg/kg	ND	0.81	0.8	0.67	0.64	83	81	34-123	5	20
Acenaphthylene	mg/kg	0.015	0.81	0.8	0.67	0.65	82	80	34-127	3	20
Anthracene	mg/kg	0.025	0.81	0.8	0.75	0.71	90	87	15-142	5	20
Benzo(a)anthracene	mg/kg	0.075	0.81	0.8	0.85	0.81	96	93	23-148	4	20
Benzo(a)pyrene	mg/kg	0.090	0.81	0.8	0.80	0.77	89	86	19-149	4	20
Benzo(b)fluoranthene	mg/kg	0.14	0.81	0.8	0.97	0.95	102	102	13-153	2	20
Benzo(g,h,i)perylene	mg/kg	0.060	0.81	0.8	0.65	0.62	73	70	10-144	5	20
Benzo(k)fluoranthene	mg/kg	0.054	0.81	0.8	0.79	0.76	91	88	18-142	4	20
Chrysene	mg/kg	0.096	0.81	0.8	0.87	0.84	96	94	22-146	3	20
Dibenz(a,h)anthracene	mg/kg	0.011	0.81	0.8	0.66	0.60	80	75	28-133	9	20
Fluoranthene	mg/kg	0.13	0.81	0.8	0.92	0.89	99	96	13-162	4	20
Fluorene	mg/kg	ND	0.81	0.8	0.70	0.67	87	85	32-134	4	20
Indeno(1,2,3-cd)pyrene	mg/kg	0.050	0.81	0.8	0.68	0.63	79	73	15-141	8	20
Naphthalene	mg/kg	0.016	0.81	0.8	0.65	0.65	79	80	19-131	0	20
Phenanthrene	mg/kg	0.097	0.81	0.8	0.90	0.82	100	91	16-149	10	20
Pyrene	mg/kg	0.13	0.81	0.8	0.98	0.93	106	101	13-152	5	20
2-Fluorobiphenyl (S)	%						73	73	37-111		
p-Terphenyl-d14 (S)	%						85	83	29-124		

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### QUALITY CONTROL DATA

Project: Sherman Park

Pace Project No.: 50277309

QC Batch:	602519	Analysis Method:	EPA 8270 by SIM
QC Batch Method:	EPA 3546	Analysis Description:	8270 Soil PAH by SIM
		Laboratory:	Pace Analytical Services - Indianapolis

Associated Lab Samples: 50277309012, 50277309013, 50277309014, 50277309015, 50277309016, 50277309017, 50277309018, 50277309019, 50277309020, 50277309021, 50277309022, 50277309023

METHOD BLANK: 2778413 Matrix: Solid

Associated Lab Samples: 50277309012, 50277309013, 50277309014, 50277309015, 50277309016, 50277309017, 50277309018, 50277309019, 50277309020, 50277309021, 50277309022, 50277309023

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	mg/kg	ND	0.0048	01/16/21 09:09	
2-Methylnaphthalene	mg/kg	ND	0.0048	01/16/21 09:09	
Acenaphthene	mg/kg	ND	0.0048	01/16/21 09:09	
Acenaphthylene	mg/kg	ND	0.0048	01/16/21 09:09	
Anthracene	mg/kg	ND	0.0048	01/16/21 09:09	
Benzo(a)anthracene	mg/kg	ND	0.0048	01/16/21 09:09	
Benzo(a)pyrene	mg/kg	ND	0.0048	01/16/21 09:09	
Benzo(b)fluoranthene	mg/kg	ND	0.0048	01/16/21 09:09	
Benzo(g,h,i)perylene	mg/kg	ND	0.0048	01/16/21 09:09	
Benzo(k)fluoranthene	mg/kg	ND	0.0048	01/16/21 09:09	
Chrysene	mg/kg	ND	0.0048	01/16/21 09:09	
Dibenz(a,h)anthracene	mg/kg	ND	0.0048	01/16/21 09:09	
Fluoranthene	mg/kg	ND	0.0048	01/16/21 09:09	
Fluorene	mg/kg	ND	0.0048	01/16/21 09:09	
Indeno(1,2,3-cd)pyrene	mg/kg	ND	0.0048	01/16/21 09:09	
Naphthalene	mg/kg	ND	0.0048	01/16/21 09:09	
Phenanthrene	mg/kg	ND	0.0048	01/16/21 09:09	
Pyrene	mg/kg	ND	0.0048	01/16/21 09:09	
2-Fluorobiphenyl (S)	%	75	37-111	01/16/21 09:09	
p-Terphenyl-d14 (S)	%	90	29-124	01/16/21 09:09	

LABORATORY CONTROL SAMPLE: 2778414

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	mg/kg	0.67	0.58	88	50-114	
2-Methylnaphthalene	mg/kg	0.67	0.58	87	50-117	
Acenaphthene	mg/kg	0.67	0.57	86	54-116	
Acenaphthylene	mg/kg	0.67	0.57	85	55-119	
Anthracene	mg/kg	0.67	0.62	92	51-122	
Benzo(a)anthracene	mg/kg	0.67	0.63	95	66-125	
Benzo(a)pyrene	mg/kg	0.67	0.61	92	61-133	
Benzo(b)fluoranthene	mg/kg	0.67	0.63	95	49-141	
Benzo(g,h,i)perylene	mg/kg	0.67	0.52	78	53-130	
Benzo(k)fluoranthene	mg/kg	0.67	0.70	104	51-135	
Chrysene	mg/kg	0.67	0.65	98	63-125	
Dibenz(a,h)anthracene	mg/kg	0.67	0.58	86	59-130	
Fluoranthene	mg/kg	0.67	0.62	93	65-128	

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### QUALITY CONTROL DATA

Project: Sherman Park

Pace Project No.: 50277309

LABORATORY CONTROL SAMPLE: 2778414

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluorene	mg/kg	0.67	0.59	89	57-122	
Indeno(1,2,3-cd)pyrene	mg/kg	0.67	0.56	84	62-122	
Naphthalene	mg/kg	0.67	0.55	83	48-109	
Phenanthrene	mg/kg	0.67	0.62	93	57-120	
Pyrene	mg/kg	0.67	0.68	103	53-127	
2-Fluorobiphenyl (S)	%			79	37-111	
p-Terphenyl-d14 (S)	%			93	29-124	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2778415 2778416

Parameter	Units	MS 50277468003		MSD 2778415		MS 2778416		MSD 2778416		% Rec Limits	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec				
1-Methylnaphthalene	mg/kg	ND	0.89	0.89	0.61	0.65	68	73	22-131	6	20	
2-Methylnaphthalene	mg/kg	ND	0.89	0.89	0.63	0.64	69	72	22-135	3	20	
Acenaphthene	mg/kg	ND	0.89	0.89	0.63	0.61	70	69	34-123	3	20	
Acenaphthylene	mg/kg	0.0077	0.89	0.89	0.63	0.61	69	68	34-127	2	20	
Anthracene	mg/kg	0.0079	0.89	0.89	0.67	0.66	75	74	15-142	2	20	
Benzo(a)anthracene	mg/kg	0.046	0.89	0.89	0.70	0.66	73	70	23-148	5	20	
Benzo(a)pyrene	mg/kg	0.050	0.89	0.89	0.65	0.62	67	64	19-149	5	20	
Benzo(b)fluoranthene	mg/kg	0.088	0.89	0.89	0.70	0.66	69	65	13-153	6	20	
Benzo(g,h,i)perylene	mg/kg	0.038	0.89	0.89	0.48	0.49	49	51	10-144	2	20	
Benzo(k)fluoranthene	mg/kg	0.029	0.89	0.89	0.73	0.71	78	77	18-142	2	20	
Chrysene	mg/kg	0.068	0.89	0.89	0.74	0.72	75	73	22-146	3	20	
Dibenz(a,h)anthracene	mg/kg	ND	0.89	0.89	0.52	0.50	58	55	28-133	4	20	
Fluoranthene	mg/kg	0.099	0.89	0.89	0.74	0.72	71	70	13-162	2	20	
Fluorene	mg/kg	ND	0.89	0.89	0.65	0.63	72	71	32-134	2	20	
Indeno(1,2,3-cd)pyrene	mg/kg	0.029	0.89	0.89	0.51	0.50	54	53	15-141	2	20	
Naphthalene	mg/kg	ND	0.89	0.89	0.62	0.63	69	70	19-131	2	20	
Phenanthrene	mg/kg	0.037	0.89	0.89	0.71	0.68	75	73	16-149	4	20	
Pyrene	mg/kg	0.091	0.89	0.89	0.81	0.76	80	75	13-152	6	20	
2-Fluorobiphenyl (S)	%						66	64	37-111			
p-Terphenyl-d14 (S)	%						74	72	29-124			

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### QUALITY CONTROL DATA

Project: Sherman Park

Pace Project No.: 50277309

QC Batch:	602703	Analysis Method:	EPA 8270 by SIM
QC Batch Method:	EPA 3546	Analysis Description:	8270 Soil PAH by SIM
		Laboratory:	Pace Analytical Services - Indianapolis

Associated Lab Samples: 50277309008, 50277309009, 50277309010, 50277309011

METHOD BLANK: 2779344 Matrix: Solid  
Associated Lab Samples: 50277309008, 50277309009, 50277309010, 50277309011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	mg/kg	ND	0.0049	01/18/21 16:24	
2-Methylnaphthalene	mg/kg	ND	0.0049	01/18/21 16:24	
Acenaphthene	mg/kg	ND	0.0049	01/18/21 16:24	
Acenaphthylene	mg/kg	ND	0.0049	01/18/21 16:24	
Anthracene	mg/kg	ND	0.0049	01/18/21 16:24	
Benzo(a)anthracene	mg/kg	ND	0.0049	01/18/21 16:24	
Benzo(a)pyrene	mg/kg	ND	0.0049	01/18/21 16:24	
Benzo(b)fluoranthene	mg/kg	ND	0.0049	01/18/21 16:24	
Benzo(g,h,i)perylene	mg/kg	ND	0.0049	01/18/21 16:24	
Benzo(k)fluoranthene	mg/kg	ND	0.0049	01/18/21 16:24	
Chrysene	mg/kg	ND	0.0049	01/18/21 16:24	
Dibenz(a,h)anthracene	mg/kg	ND	0.0049	01/18/21 16:24	
Fluoranthene	mg/kg	ND	0.0049	01/18/21 16:24	
Fluorene	mg/kg	ND	0.0049	01/18/21 16:24	
Indeno(1,2,3-cd)pyrene	mg/kg	ND	0.0049	01/18/21 16:24	
Naphthalene	mg/kg	ND	0.0049	01/18/21 16:24	
Phenanthrene	mg/kg	ND	0.0049	01/18/21 16:24	
Pyrene	mg/kg	ND	0.0049	01/18/21 16:24	
2-Fluorobiphenyl (S)	%	69	37-111	01/18/21 16:24	
p-Terphenyl-d14 (S)	%	81	29-124	01/18/21 16:24	

LABORATORY CONTROL SAMPLE: 2779345

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	mg/kg	0.66	0.48	72	50-114	
2-Methylnaphthalene	mg/kg	0.66	0.48	73	50-117	
Acenaphthene	mg/kg	0.66	0.48	72	54-116	
Acenaphthylene	mg/kg	0.66	0.47	71	55-119	
Anthracene	mg/kg	0.66	0.49	74	51-122	
Benzo(a)anthracene	mg/kg	0.66	0.49	75	66-125	
Benzo(a)pyrene	mg/kg	0.66	0.49	74	61-133	
Benzo(b)fluoranthene	mg/kg	0.66	0.53	81	49-141	
Benzo(g,h,i)perylene	mg/kg	0.66	0.46	70	53-130	
Benzo(k)fluoranthene	mg/kg	0.66	0.50	76	51-135	
Chrysene	mg/kg	0.66	0.51	77	63-125	
Dibenz(a,h)anthracene	mg/kg	0.66	0.48	73	59-130	
Fluoranthene	mg/kg	0.66	0.51	78	65-128	
Fluorene	mg/kg	0.66	0.49	75	57-122	
Indeno(1,2,3-cd)pyrene	mg/kg	0.66	0.47	72	62-122	

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### QUALITY CONTROL DATA

Project: Sherman Park  
Pace Project No.: 50277309

LABORATORY CONTROL SAMPLE: 2779345

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Naphthalene	mg/kg	0.66	0.47	71	48-109	
Phenanthrene	mg/kg	0.66	0.49	74	57-120	
Pyrene	mg/kg	0.66	0.51	78	53-127	
2-Fluorobiphenyl (S)	%			73	37-111	
p-Terphenyl-d14 (S)	%			81	29-124	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2779346 2779347

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		50277053010 Result	Spike Conc.	Spike Conc.	MS Result						
1-Methylnaphthalene	mg/kg	5.7 ug/kg	0.73	0.77	0.42	0.45	57	59	22-131	7	20
2-Methylnaphthalene	mg/kg	ND	0.73	0.77	0.42	0.45	57	58	22-135	6	20
Acenaphthene	mg/kg	ND	0.73	0.77	0.41	0.42	56	55	34-123	3	20
Acenaphthylene	mg/kg	ND	0.73	0.77	0.41	0.41	56	54	34-127	0	20
Anthracene	mg/kg	ND	0.73	0.77	0.41	0.43	56	57	15-142	6	20
Benzo(a)anthracene	mg/kg	ND	0.73	0.77	0.40	0.45	54	58	23-148	11	20
Benzo(a)pyrene	mg/kg	ND	0.73	0.77	0.37	0.43	51	56	19-149	14	20
Benzo(b)fluoranthene	mg/kg	ND	0.73	0.77	0.38	0.45	52	59	13-153	17	20
Benzo(g,h,i)perylene	mg/kg	ND	0.73	0.77	0.33	0.40	45	53	10-144	19	20
Benzo(k)fluoranthene	mg/kg	ND	0.73	0.77	0.42	0.47	57	61	18-142	11	20
Chrysene	mg/kg	ND	0.73	0.77	0.42	0.46	57	60	22-146	9	20
Dibenz(a,h)anthracene	mg/kg	ND	0.73	0.77	0.38	0.43	51	56	28-133	13	20
Fluoranthene	mg/kg	ND	0.73	0.77	0.41	0.45	56	59	13-162	8	20
Fluorene	mg/kg	ND	0.73	0.77	0.42	0.44	57	58	32-134	4	20
Indeno(1,2,3-cd)pyrene	mg/kg	ND	0.73	0.77	0.35	0.42	48	54	15-141	17	20
Naphthalene	mg/kg	24.4 ug/kg	0.73	0.77	0.44	0.44	56	54	19-131	1	20
Phenanthrene	mg/kg	ND	0.73	0.77	0.42	0.44	57	57	16-149	4	20
Pyrene	mg/kg	ND	0.73	0.77	0.43	0.46	58	61	13-152	8	20
2-Fluorobiphenyl (S)	%						59	59	37-111		
p-Terphenyl-d14 (S)	%						62	67	29-124		

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### QUALITY CONTROL DATA

Project: Sherman Park

Pace Project No.: 50277309

QC Batch: 602133

Analysis Method: SM 2540G

QC Batch Method: SM 2540G

Analysis Description: Dry Weight/Percent Moisture

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50277309001, 50277309002, 50277309003, 50277309004, 50277309005, 50277309006, 50277309007, 50277309008, 50277309009, 50277309010, 50277309011, 50277309012

SAMPLE DUPLICATE: 2776693

Parameter	Units	50277417001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	19.8	21.6	9	5	N2,R1

SAMPLE DUPLICATE: 2776694

Parameter	Units	50277309004 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	20.2	14.4	33	5	N2,R1

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**QUALITY CONTROL DATA**

Project: Sherman Park

Pace Project No.: 50277309

QC Batch: 602283

Analysis Method: SM 2540G

QC Batch Method: SM 2540G

Analysis Description: Dry Weight/Percent Moisture

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50277309013, 50277309014, 50277309015, 50277309016, 50277309017, 50277309018, 50277309019, 50277309020, 50277309021

SAMPLE DUPLICATE: 2777344

Parameter	Units	50277309013 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	19.8	18.2	8	5	N2,R1

SAMPLE DUPLICATE: 2777345

Parameter	Units	50277309020 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	14.4	15.3	6	5	N2,R1

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### QUALITY CONTROL DATA

Project: Sherman Park

Pace Project No.: 50277309

QC Batch: 602317

Analysis Method: SM 2540G

QC Batch Method: SM 2540G

Analysis Description: Dry Weight/Percent Moisture

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50277309022, 50277309023

SAMPLE DUPLICATE: 2777442

Parameter	Units	50277309022 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	19.7	20.1	2	5	N2

SAMPLE DUPLICATE: 2777443

Parameter	Units	50277389005 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	24.5	24.0	2	5	N2

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: Sherman Park

Pace Project No.: 50277309

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

ED Due to the extract's physical characteristics, the analysis was performed at dilution.

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

M3 Matrix spike recovery was outside laboratory control limits due to matrix interferences.

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

P6 Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

R1 RPD value was outside control limits.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Sherman Park

Pace Project No.: 50277309

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50277309001	Pit 1 0-5'	EPA 3050	601501	EPA 6010	602684
50277309002	Pit 1 5-10'	EPA 3050	601501	EPA 6010	602684
50277309003	Pit 1 10-15'	EPA 3050	601501	EPA 6010	602684
50277309004	Pit 2 0-5'	EPA 3050	601501	EPA 6010	602684
50277309005	Pit 2 5-10'	EPA 3050	601501	EPA 6010	602684
50277309006	Pit 2 10-15'	EPA 3050	601501	EPA 6010	602684
50277309007	Pit 3 0-5'	EPA 3050	601501	EPA 6010	602684
50277309008	Pit 3 5-10'	EPA 3050	601501	EPA 6010	602684
50277309009	Pit 3 10-15'	EPA 3050	601501	EPA 6010	602684
50277309010	Pit 3 15-21'	EPA 3050	601501	EPA 6010	602684
50277309011	Pit 4 0-5'	EPA 3050	601501	EPA 6010	602684
50277309012	Pit 4 5-10'	EPA 3050	601501	EPA 6010	602684
50277309013	Pit 4 10-16'	EPA 3050	601501	EPA 6010	602684
50277309014	Pit 5 0-5'	EPA 3050	601501	EPA 6010	602684
50277309015	Pit 5 5-10'	EPA 3050	601501	EPA 6010	602684
50277309016	Pit 5 10-17'	EPA 3050	601501	EPA 6010	602684
50277309017	Pit 6 0-5'	EPA 3050	601501	EPA 6010	602684
50277309018	Pit 6 5-10'	EPA 3050	601501	EPA 6010	602684
50277309019	Pit 6 10-15'	EPA 3050	601501	EPA 6010	602684
50277309020	Pit 7 0-5'	EPA 3050	601501	EPA 6010	602684
50277309021	Pit 7 5-10'	EPA 3050	601843	EPA 6010	602542
50277309022	Pit 7 10-15'	EPA 3050	601843	EPA 6010	602542
50277309023	Pit 8 0-6'	EPA 3050	601843	EPA 6010	602542
50277309001	Pit 1 0-5'	EPA 7471	602075	EPA 7471	602251
50277309002	Pit 1 5-10'	EPA 7471	602075	EPA 7471	602251
50277309003	Pit 1 10-15'	EPA 7471	602075	EPA 7471	602251
50277309004	Pit 2 0-5'	EPA 7471	602075	EPA 7471	602251
50277309005	Pit 2 5-10'	EPA 7471	602075	EPA 7471	602251
50277309006	Pit 2 10-15'	EPA 7471	602075	EPA 7471	602251
50277309007	Pit 3 0-5'	EPA 7471	602075	EPA 7471	602251
50277309008	Pit 3 5-10'	EPA 7471	602075	EPA 7471	602251
50277309009	Pit 3 10-15'	EPA 7471	602075	EPA 7471	602251
50277309010	Pit 3 15-21'	EPA 7471	602075	EPA 7471	602251
50277309011	Pit 4 0-5'	EPA 7471	602342	EPA 7471	602808
50277309012	Pit 4 5-10'	EPA 7471	602342	EPA 7471	602808
50277309013	Pit 4 10-16'	EPA 7471	602342	EPA 7471	602808
50277309014	Pit 5 0-5'	EPA 7471	602342	EPA 7471	602808
50277309015	Pit 5 5-10'	EPA 7471	602342	EPA 7471	602808
50277309016	Pit 5 10-17'	EPA 7471	602342	EPA 7471	602808
50277309017	Pit 6 0-5'	EPA 7471	602342	EPA 7471	602808
50277309018	Pit 6 5-10'	EPA 7471	602342	EPA 7471	602808
50277309019	Pit 6 10-15'	EPA 7471	602342	EPA 7471	602808
50277309020	Pit 7 0-5'	EPA 7471	602342	EPA 7471	602808
50277309021	Pit 7 5-10'	EPA 7471	602342	EPA 7471	602808
50277309022	Pit 7 10-15'	EPA 7471	602342	EPA 7471	602808
50277309023	Pit 8 0-6'	EPA 7471	602342	EPA 7471	602808
50277309001	Pit 1 0-5'	EPA 3546	602501	EPA 8270 by SIM	602563

### REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Sherman Park

Pace Project No.: 50277309

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50277309002	Pit 1 5-10'	EPA 3546	602501	EPA 8270 by SIM	602563
50277309003	Pit 1 10-15'	EPA 3546	602501	EPA 8270 by SIM	602563
50277309004	Pit 2 0-5'	EPA 3546	602501	EPA 8270 by SIM	602563
50277309005	Pit 2 5-10'	EPA 3546	602501	EPA 8270 by SIM	602563
50277309006	Pit 2 10-15'	EPA 3546	602501	EPA 8270 by SIM	602563
50277309007	Pit 3 0-5'	EPA 3546	602501	EPA 8270 by SIM	602563
50277309008	Pit 3 5-10'	EPA 3546	602703	EPA 8270 by SIM	602769
50277309009	Pit 3 10-15'	EPA 3546	602703	EPA 8270 by SIM	602769
50277309010	Pit 3 15-21'	EPA 3546	602703	EPA 8270 by SIM	602769
50277309011	Pit 4 0-5'	EPA 3546	602703	EPA 8270 by SIM	602769
50277309012	Pit 4 5-10'	EPA 3546	602519	EPA 8270 by SIM	602617
50277309013	Pit 4 10-16'	EPA 3546	602519	EPA 8270 by SIM	602617
50277309014	Pit 5 0-5'	EPA 3546	602519	EPA 8270 by SIM	602617
50277309015	Pit 5 5-10'	EPA 3546	602519	EPA 8270 by SIM	602617
50277309016	Pit 5 10-17'	EPA 3546	602519	EPA 8270 by SIM	602617
50277309017	Pit 6 0-5'	EPA 3546	602519	EPA 8270 by SIM	602617
50277309018	Pit 6 5-10'	EPA 3546	602519	EPA 8270 by SIM	602617
50277309019	Pit 6 10-15'	EPA 3546	602519	EPA 8270 by SIM	602617
50277309020	Pit 7 0-5'	EPA 3546	602519	EPA 8270 by SIM	602617
50277309021	Pit 7 5-10'	EPA 3546	602519	EPA 8270 by SIM	602617
50277309022	Pit 7 10-15'	EPA 3546	602519	EPA 8270 by SIM	602617
50277309023	Pit 8 0-6'	EPA 3546	602519	EPA 8270 by SIM	602617
50277309001	Pit 1 0-5'	EPA 8260	601801		
50277309002	Pit 1 5-10'	EPA 8260	601794		
50277309003	Pit 1 10-15'	EPA 8260	601807		
50277309004	Pit 2 0-5'	EPA 8260	601807		
50277309005	Pit 2 5-10'	EPA 8260	601807		
50277309006	Pit 2 10-15'	EPA 8260	601807		
50277309007	Pit 3 0-5'	EPA 8260	601807		
50277309008	Pit 3 5-10'	EPA 8260	601807		
50277309009	Pit 3 10-15'	EPA 8260	601981		
50277309010	Pit 3 15-21'	EPA 8260	601981		
50277309011	Pit 4 0-5'	EPA 8260	601981		
50277309012	Pit 4 5-10'	EPA 8260	601981		
50277309013	Pit 4 10-16'	EPA 8260	601981		
50277309014	Pit 5 0-5'	EPA 8260	601981		
50277309015	Pit 5 5-10'	EPA 8260	601981		
50277309016	Pit 5 10-17'	EPA 8260	601981		
50277309017	Pit 6 0-5'	EPA 8260	601981		
50277309018	Pit 6 5-10'	EPA 8260	601981		
50277309019	Pit 6 10-15'	EPA 8260	601981		
50277309020	Pit 7 0-5'	EPA 8260	601981		
50277309021	Pit 7 5-10'	EPA 8260	601981		
50277309022	Pit 7 10-15'	EPA 8260	601981		
50277309023	Pit 8 0-6'	EPA 8260	601988		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Sherman Park

Pace Project No.: 50277309

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50277309001	Pit 1 0-5'	SM 2540G	602133		
50277309002	Pit 1 5-10'	SM 2540G	602133		
50277309003	Pit 1 10-15'	SM 2540G	602133		
50277309004	Pit 2 0-5'	SM 2540G	602133		
50277309005	Pit 2 5-10'	SM 2540G	602133		
50277309006	Pit 2 10-15'	SM 2540G	602133		
50277309007	Pit 3 0-5'	SM 2540G	602133		
50277309008	Pit 3 5-10'	SM 2540G	602133		
50277309009	Pit 3 10-15'	SM 2540G	602133		
50277309010	Pit 3 15-21'	SM 2540G	602133		
50277309011	Pit 4 0-5'	SM 2540G	602133		
50277309012	Pit 4 5-10'	SM 2540G	602133		
50277309013	Pit 4 10-16'	SM 2540G	602283		
50277309014	Pit 5 0-5'	SM 2540G	602283		
50277309015	Pit 5 5-10'	SM 2540G	602283		
50277309016	Pit 5 10-17'	SM 2540G	602283		
50277309017	Pit 6 0-5'	SM 2540G	602283		
50277309018	Pit 6 5-10'	SM 2540G	602283		
50277309019	Pit 6 10-15'	SM 2540G	602283		
50277309020	Pit 7 0-5'	SM 2540G	602283		
50277309021	Pit 7 5-10'	SM 2540G	602283		
50277309022	Pit 7 10-15'	SM 2540G	602317		
50277309023	Pit 8 0-6'	SM 2540G	602317		

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WO#: 50277309

Pace Analytical  
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50277309

V-OF-CUSTODY / Analytical Request Document

of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 2

2077214

**Section A**  
Required Client Information:  
Company: Heartland Env  
Address: 3410 Mishawaka Ave  
South Bend, IN 46618  
Phone: 574-289-1191 Fax: 574-289-7460  
Requested Due Date/TAT: Standard

**Section B**  
Report To: Nivas Vijay  
Copy To:  
Purchase Order No.:

**Section C**  
Invoice Information:  
Attention:  
Company Name:  
Address:  
Pace Quote Reference:  
Pace Project Manager: Mick Mayse  
Pace Profile #:

**REGULATORY AGENCY**  
NPDES  GROUND WATER  DRINKING WATER   
UST  RCRA  OTHER

**Site Location**  
STATE: IN

ITEM #	Matrix Codes MATRIX / CODE Drinking Water DW Water WT Waste Water WW Product P Soil/Solid OL Oil SL Wipe WP Air AR Tissue TS Other OT	COLLECTED		SAMPLE TYPE (G=GRAB C=COMP) MIXED (see valid codes to left)	DATE	TIME	DATE	TIME	# OF CONTAINERS	Preservatives Unpreserved H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> HCl NaOH Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> Methanol Other (H <sub>2</sub> O)	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
		COMPOSITE START	COMPOSITE END/GRAB											
1	Pit 1 0-5'			SL G	1-6-21	0840		1700	4			1-7-21	1700	
2	Pit 1 5-10'					0845			1			1/8/21	1700	
3	Pit 1 10-15'					0852			1					
4	Pit 2 0-5'					0910			1					
5	Pit 2 5-10'					0925			1					
6	Pit 2 10-15'					0941			1					
7	Pit 3 0-5'					0956			1					
8	Pit 3 5-10'					1010			1					
9	Pit 3 10-15'					1020			1					
10	Pit 3 15-21'					1030			1					
11	Pit 4 0-5'					1045			1					
12	Pit 4 5-10'					1100			1					

**Section D**  
Requested Analysis Filtered (Y/N)

Analysis Test: VOC 8260, PAH 8270.5, PCBs 8210, RCR 8210.5

Temp in °C: 20

Received on: 1/8/21

Ice (Y/N): Y

Custody (Y/N): Y

Sealed Cooler (Y/N): Y

Samples Intact (Y/N): Y

RELINQUISHED BY / AFFILIATION: Nivas Vijay/HEA

DATE: 1-7-21

TIME: 1700

RECEIVED BY / AFFILIATION: [Signature]

DATE SIGNED: 1-7-21

TIME SIGNED: 1700

PRINT Name of SAMPLER: Nivas Vijay

SIGNATURE of SAMPLER: [Signature]

DATE SIGNED (MM/DD/YY): 1-7-21

ORIGINAL



**SAMPLE CONDITION UPON RECEIPT FORM**



Date/Time and initials of person examining contents: DAP 1/9/21 0855  
 Courier: Fed Ex UPS Client Pace USPS Other \_\_\_\_\_  
 Custody Seal on Cooler/Box Present: Yes No (If yes) Seals Intact: Yes No (leave blank if no seals were present)  
 Packing Material: Bubble Wrap Bubble Bags \_\_\_\_\_  
 Thermometer: 1 2 3 4 5 6 A B C D E F Ice Type: Wet Blue None

Cooler Temperature: 1.6/2.0 If temp. is over 6°C or under 0°C, was the PM notified? Yes No  
 Temp should be above freezing to 6°C (Initial/Corrected)

All discrepancies will be written out in the comments section below.

	Yes	No	Yes	No	N/A
Are samples from West Virginia? Document any containers out of temp.		/			
USDA Regulated Soils? (HI, ID, NY, WA, OR, CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		/			/
Short Hold Time Analysis (48 hours or less)? Analysis: <u>TC</u>	/		Present	Absent	N/A
Time 5035A TC placed in Freezer or Short Holds To Lab	Time: <u>0905</u>				/
Rush TAT Requested (4 days or less):	/				/
Custody Signatures Present?	/				/
Containers Intact?:	/				/
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	/				/
Extra labels on Terracore Vials? (soils only)	/				/

COMMENTS: 1 MeOH vial for sample "Pit 2 0-5" was broken before receipt DAP 1/9/21

Sample Container Count

OC PAGE 1 of 2

SBS  
  
 Kit

Sample Line Item	WG FU	DG9H	VG9H	VOA VAL HS (-6mm)	VG9U	DG9U	DG9T	AG0U	AG1H	AG1U	AG3S	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Matrix	pH <2	pH >9	pH >10
1	1																						SL			
2																										
3																										
4																										
5																										
6																										
7																										
8																										
9																										
10																										
11																										
12																										

Container Codes

Glass		Plastic / Misc.	
DG9B	40mL Na Bisulfate amber vial	BG3U	250mL Unpres Clear Glass
DG9H	40mL HCl amber vial	BP1A	1L NaOH, Asc Acid plastic
DG9M	40mL MeOH clear vial	BP1N	1L HNO3 plastic
DG9P	40mL TSP amber vial	BP1S	1L H2SO4 plastic
DG9S	40mL H2SO4 amber vial	BP1U	1L unpreserved plastic
DG9T	40mL Na Thio amber vial	BP1Z	1L NaOH, Zn, Ac
DG9U	40mL unpreserved amber vial	BP2A	500mL NaOH, Asc Acid plastic
VG9H	40mL HCl clear vial	BP2N	500mL HNO3 plastic
VG9T	40mL Na Thio. clear vial	BP2O	500mL NaOH plastic
VG9U	40mL unpreserved clear vial	BP2S	500mL H2SO4 plastic
VGFX	40mL w/hexane wipe vial	BP2U	500mL unpreserved plastic
VSG	Headspace septa vial & HCl	BP2Z	500mL NaOH, Zn Ac
WGKU	8oz unpreserved clear jar	BP3B	250mL NaOH plastic
WGFU	4oz clear soil jar	BP3N	250mL HNO3 plastic
JGFU	4oz unpreserved amber wide	BP3F	250mL HNO3 plastic (field filtered)
CG3H	250mL clear glass HCl		
		BP3U	250mL unpreserved plastic
		BP3S	250mL H2SO4 plastic
		BP3Z	250mL NaOH, Zn Ac plastic
		AF	Air Filter
		C	Air Cassettes
		R	Terra core kit
		SP5T	120mL Coliform Na Thiosulfate
		U	Summa Can
		ZPLC	Ziploc Bag
		WT	Water
		SL	Solid
		NAL	Non-aqueous liquid
		WP	Wipe

Sample Container Count

DOC PAGE 2 of 2

SBS  
DU  
BK  
Kit

Sample Line Item	WG FU	DG9H	VG9H	VOA VIAL HS (<6mm)	VG9U	DG9U	DG9T	AG0U	AG1H	AG1U	AG3S	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Matrix	pH <2	pH >9	pH >10
1	1																						SL			
2																										
3																										
4																										
5																										
6																										
7																										
8																										
9																										
10																										
11																										
12																										

Container Codes

Glass		Plastic / Misc.	
DG9B	40mL Na Bisulfate amber vial	AG0U	100mL unpres amber glass
DG9H	40mL HCl amber vial	AG1H	1L HCl amber glass
DG9M	40mL MeOH clear vial	AG1S	1L H2SO4 amber glass
DG9P	40mL TSP amber vial	AG1T	1L Na Thiosulfate amber glass
DG9S	40mL H2SO4 amber vial	AG1U	1liter unpres amber glass
DG9T	40mL Na Thio amber vial	AG2N	500mL HNO3 amber glass
DG9U	40mL unpreserved amber vial	AG2S	500mL H2SO4 amber glass
VG9H	40mL HCl clear vial	AG2U	500mL unpres amber glass
VG9T	40mL Na Thio. clear vial	AG3S	250mL H2SO4 amber glass
VG9U	40mL unpreserved clear vial	AG3U	250mL unpres amber glass
VGFX	40mL w/hexane wipe vial	AG3C	250mL NaOH amber glass
VSG	Headspace septa vial & HCl	BG1H	1L HCl clear glass
WGKU	8oz unpreserved clear jar	BG1S	1L H2SO4 clear glass
WGFU	4oz clear soil jar	BG1T	1L Na Thiosulfate clear glass
JGFU	4oz unpreserved amber wide	BG1U	1L unpreserved glass
CG3H	250mL clear glass HCl	BG3H	250mL HCl Clear Glass
BP3U	250mL unpreserved plastic	BG3U	250mL Unpres Clear Glass
BP3S	250mL H2SO4 plastic	BP1A	1L NaOH, Asc Acid plastic
BP3Z	250mL NaOH, Zn Ac plastic	BP1N	1L HNO3 plastic
AF	Air Filter	BP1S	1L H2SO4 plastic
C	Air Cassettes	BP1U	1L unpreserved plastic
R	Terra core kit	BP1Z	1L NaOH, Zn, Ac
SP5T	120mL Coliform Na Thiosulfate	BP2A	500mL NaOH, Asc Acid plastic
U	Summa Can	BP2N	500mL HNO3 plastic
ZPLC	Ziploc Bag	BP2O	500mL NaOH plastic
WT	Water	BP2S	500mL H2SO4 plastic
SL	Solid	BP2U	500mL unpreserved plastic
NAL	Non-aqueous liquid	BP2Z	500mL NaOH, Zn Ac
WP	Wipe	BP3B	250mL NaOH plastic
		BP3N	250mL HNO3 plastic
		BP3F	250mL HNO3 plastic (field filterec)

March 9, 2021



Ms. Cassie Reiter, P.E.  
Crawford, Murphy & Tilly, Inc. (CMT)  
8790 Purdue Road  
Indianapolis, IN 46268

Re: Existing Fill and Surrounding Pavement Evaluation  
Sherman Park Infrastructure Development  
Indianapolis, Indiana  
Terracon Project No. CJ195626  
CMT Project No. 1907250100

Dear Cassie:

This report presents the results of our subsurface exploratory and laboratory testing programs and provides our opinion on the suitability of existing fill for reuse as structural fill for the proposed development. This report also provides a summary of the pavement thicknesses of the roadways surrounding the project area.

Based on our correspondence, we understand the city of Indianapolis is planning infrastructure development for Sherman Park. We understand two portions of the site (labeled Taupe Mountain and Soil Mound near northwestern portion of the project area) will require removal of the existing fill to accommodate a grading plan. The intent of our work was to evaluate the suitability of the existing fill for reuse as structural fill and to gather information on the pavement thicknesses of the roadways surrounding the project area. A summary of our field activities to evaluate the fill and pavement conditions is shown below.

<b>TABLE 1: SUMMARY OF EXPLORATORY ACTIVITES</b>			
<b>Type of Exploration</b>	<b>Number of Explorations</b>	<b>Approximate Depth<sup>1</sup></b>	<b>Area</b>
Test Pit	11	8 to 21 ft	Taupe Mountain
Test Pit	2	7 to 15 ft	Soil Mound near northwestern portion of the project area
Pavement Core	37	-	Surrounding roadways

1. Below the existing ground surface.

The observations provided in this report are based, in part, on our interpretation of the subsurface information revealed by the exploratory activities performed near the locations indicated on the attached Exploration Plans. Understandably, this report does not reflect variations in conditions between or beyond these locations. Therefore, variations in these conditions can be expected,

and fluctuation of the groundwater levels will occur with time. Other important limitations of a geotechnical report are included in the attachments.

## PAVEMENT CONDITIONS

Detailed pavement core locations and information are included in the attached Pavement Core Logs shown in the Exploration Results section of the Appendix. In general, the pavement surface and layers appeared to be in poor to fair condition. A summary of pavement thicknesses based on pavement type are presented in the following table.

TABLE 2: SUMMARY OF PAVEMENT THICKNESSES					
Pavement Type	HMA Thickness (in.)	PCCP Thickness (in.)	Brick/Granite Thickness (in.)	Subbase Type	Subbase Thickness (in.)
Composite	1.2 to 7.7	1.8 to 8	1.7 to 6 <sup>1</sup>	Sand, sand and gravel, crushed stone	2 to 3.5
HMA	3.9 to 13	-	-	Sand and gravel, crushed stone	1 to 4.5
PCCP	-	8.5 to 9.1	-	None observed	-

1. Granite was observed below the pavement at Pavement Cores PC-9, PC-13, and PC-23 performed on Michigan Street.

## GEOTECHNICAL CHARACTERIZATION

Fill consisting of both fine-grained and coarse-grained soils (USCS symbols “CL”, “CL-ML”, “SC”, “SC-SM”, and “SP”) containing construction debris (brick fragments, concrete fragments, plastic, and rebar) were observed at the test pits to depths of about 7 to 21 ft below the existing ground surface. In addition, organic matter consisting of roots and wood pieces was observed in some of the test pits. Groundwater was not observed during the relatively short timeframe of our exploratory activities. Photographs of the subsurface conditions observed at the test pits are included in the attached Test Pit Photography Log shown in the Exploration Results section of the Appendix.

A summary of laboratory test results performed on representative samples is provided in the following table. The results of the laboratory testing performed on soil samples obtained from the site during the field exploration are included on the Test Pit Logs and/or as separate graphs in the Exploration Results section of the Appendix.

**TABLE 3: SUMMARY OF LABORATORY TEST RESULTS**

Soil Type	Plasticity Index	Optimum Moisture Content <sup>1</sup> (%)	Maximum Dry Density <sup>1</sup> (pcf)	In-Situ Moisture Content (%)	Organic Content (%)
CL	9 to 16	11 to 15	111 to 120	16 to 26	1.9 to 4.9
SC	8 to 13	10 to 12	119 to 124	12 to 19	1.6 to 2.7
SC-SM	5	9	126 to 128	14	1.1 to 1.4
CL-ML	4 to 5	10 to 12	120 to 127	14	4.3

1. Based on results from a Standard proctor test performed on representative bucket samples.

## DISCUSSION

Fill required to achieve design grade should be classified as structural fill and general fill. Structural fill is material used below, or within 10 ft of structures, pavements or constructed slopes. General fill is material used to achieve grade outside of these areas. From our observations, construction debris and organic matter was observed within the fill at a majority of the test pits. Observed construction debris at Test Pits TP-1 and TP-2 is shown in the photographs below.



Photo 1 – Excavated fill at Test Pit TP-1.



Photo 2 – Excavated fill at Test Pit TP-2.

Additional photographs of the subsurface conditions observed at the test pits are included in the attached Test Pit Photography Log shown in the Exploration Results section of the Appendix.

Based on our observations of the test pits, the construction debris observed within the fill typically consisted of brick fragments and concrete pieces. The brick and concrete pieces were generally greater than 3 inches wide and 4 inches in length. In addition, there was no discernible pattern or confined area exhibiting the presence of the construction debris as it was observed at a majority of the test pits. The fill also contained organic matter based on organic contents in the range of about 1.1 to 4.9 percent. Based on our observations, the trace amounts of organic matter do not present additional risk. An exception to this is where roots or wood fragments of 2 in. or greater in diameter are observed. However, due to the frequency and size of the construction debris observed at the test pits, it is our opinion the fine-grained and coarse-grained soils described as fill at the site are not anticipated to be suitable for reuse as structural fill without improvement of the fill. Improvement of the fill could consist of sorting the fill soils to remove the construction debris. Upon the removal of the construction debris, consideration could be given to reusing the fill soils as structural fill provided soil is conditioned via discing to its optimum moisture content.

In regard to general fill, it is our opinion the fine-grained and coarse-grained soils described as fill are suitable for reuse as general fill without improvement.

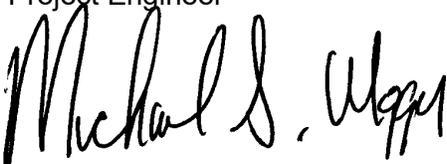
## **CONCLUDING REMARKS**

We trust this information is sufficient for your current needs. Feel free to contact on our office if you have any questions or when you need further assistance with the project.

Sincerely,  
**Terracon Consultants, Inc.**



Tanner Hill, P.E.  
Project Engineer



Michael S. Wigger, P.E.  
Principal Engineer

Appendix:      Important Information about This Geotechnical Engineering Report  
                    Site Location and Exploration Plans  
                    Exploration Results  
                    Supporting Information

Note: Refer to each individual Appendix for a listing of contents.

# Important Information about This

# Geotechnical-Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

**The Geoprofessional Business Association (GBA) has prepared this advisory to help you – assumedly a client representative – interpret and apply this geotechnical-engineering report as effectively as possible. In that way, clients can benefit from a lowered exposure to the subsurface problems that, for decades, have been a principal cause of construction delays, cost overruns, claims, and disputes. If you have questions or want more information about any of the issues discussed below, contact your GBA-member geotechnical engineer. Active involvement in the Geoprofessional Business Association exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project.**

## **Geotechnical-Engineering Services Are Performed for Specific Purposes, Persons, and Projects**

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical-engineering study conducted for a given civil engineer will not likely meet the needs of a civil-works constructor or even a different civil engineer. Because each geotechnical-engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client. *Those who rely on a geotechnical-engineering report prepared for a different client can be seriously misled.* No one except authorized client representatives should rely on this geotechnical-engineering report without first conferring with the geotechnical engineer who prepared it. *And no one – not even you – should apply this report for any purpose or project except the one originally contemplated.*

## **Read this Report in Full**

Costly problems have occurred because those relying on a geotechnical-engineering report did not read it *in its entirety*. Do not rely on an executive summary. Do not read selected elements only. *Read this report in full.*

## **You Need to Inform Your Geotechnical Engineer about Change**

Your geotechnical engineer considered unique, project-specific factors when designing the study behind this report and developing the confirmation-dependent recommendations the report conveys. A few typical factors include:

- the client's goals, objectives, budget, schedule, and risk-management preferences;
- the general nature of the structure involved, its size, configuration, and performance criteria;
- the structure's location and orientation on the site; and
- other planned or existing site improvements, such as retaining walls, access roads, parking lots, and underground utilities.

Typical changes that could erode the reliability of this report include those that affect:

- the site's size or shape;
- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light-industrial plant to a refrigerated warehouse;
- the elevation, configuration, location, orientation, or weight of the proposed structure;
- the composition of the design team; or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes – even minor ones – and request an assessment of their impact. *The geotechnical engineer who prepared this report cannot accept responsibility or liability for problems that arise because the geotechnical engineer was not informed about developments the engineer otherwise would have considered.*

## **This Report May Not Be Reliable**

*Do not rely on this report* if your geotechnical engineer prepared it:

- for a different client;
- for a different project;
- for a different site (that may or may not include all or a portion of the original site); or
- before important events occurred at the site or adjacent to it; e.g., man-made events like construction or environmental remediation, or natural events like floods, droughts, earthquakes, or groundwater fluctuations.

Note, too, that it could be unwise to rely on a geotechnical-engineering report whose reliability may have been affected by the passage of time, because of factors like changed subsurface conditions; new or modified codes, standards, or regulations; or new techniques or tools. *If your geotechnical engineer has not indicated an "apply-by" date on the report, ask what it should be, and, in general, if you are the least bit uncertain about the continued reliability of this report, contact your geotechnical engineer before applying it.* A minor amount of additional testing or analysis – if any is required at all – could prevent major problems.

## **Most of the "Findings" Related in This Report Are Professional Opinions**

Before construction begins, geotechnical engineers explore a site's subsurface through various sampling and testing procedures. *Geotechnical engineers can observe actual subsurface conditions only at those specific locations where sampling and testing were performed.* The data derived from that sampling and testing were reviewed by your geotechnical engineer, who then applied professional judgment to form opinions about subsurface conditions throughout the site. Actual sitewide-subsurface conditions may differ – maybe significantly – from those indicated in this report. Confront that risk by retaining your geotechnical engineer to serve on the design team from project start to project finish, so the individual can provide informed guidance quickly, whenever needed.

## This Report's Recommendations Are Confirmation-Dependent

The recommendations included in this report – including any options or alternatives – are confirmation-dependent. In other words, *they are not final*, because the geotechnical engineer who developed them relied heavily on judgment and opinion to do so. Your geotechnical engineer can finalize the recommendations *only after observing actual subsurface conditions* revealed during construction. If through observation your geotechnical engineer confirms that the conditions assumed to exist actually do exist, the recommendations can be relied upon, assuming no other changes have occurred. *The geotechnical engineer who prepared this report cannot assume responsibility or liability for confirmation-dependent recommendations if you fail to retain that engineer to perform construction observation.*

## This Report Could Be Misinterpreted

Other design professionals' misinterpretation of geotechnical-engineering reports has resulted in costly problems. Confront that risk by having your geotechnical engineer serve as a full-time member of the design team, to:

- confer with other design-team members,
- help develop specifications,
- review pertinent elements of other design professionals' plans and specifications, and
- be on hand quickly whenever geotechnical-engineering guidance is needed.

You should also confront the risk of constructors misinterpreting this report. Do so by retaining your geotechnical engineer to participate in prebid and preconstruction conferences and to perform construction observation.

## Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can shift unanticipated-subsurface-conditions liability to constructors by limiting the information they provide for bid preparation. To help prevent the costly, contentious problems this practice has caused, include the complete geotechnical-engineering report, along with any attachments or appendices, with your contract documents, *but be certain to note conspicuously that you've included the material for informational purposes only*. To avoid misunderstanding, you may also want to note that "informational purposes" means constructors have no right to rely on the interpretations, opinions, conclusions, or recommendations in the report, but they may rely on the factual data relative to the specific times, locations, and depths/elevations referenced. Be certain that constructors know they may learn about specific project requirements, including options selected from the report, *only* from the design drawings and specifications. Remind constructors that they may

perform their own studies if they want to, and *be sure to allow enough time* to permit them to do so. Only then might you be in a position to give constructors the information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions. Conducting prebid and preconstruction conferences can also be valuable in this respect.

## Read Responsibility Provisions Closely

Some client representatives, design professionals, and constructors do not realize that geotechnical engineering is far less exact than other engineering disciplines. That lack of understanding has nurtured unrealistic expectations that have resulted in disappointments, delays, cost overruns, claims, and disputes. To confront that risk, geotechnical engineers commonly include explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely*. Ask questions. Your geotechnical engineer should respond fully and frankly.

## Geoenvironmental Concerns Are Not Covered

The personnel, equipment, and techniques used to perform an environmental study – e.g., a "phase-one" or "phase-two" environmental site assessment – differ significantly from those used to perform a geotechnical-engineering study. For that reason, a geotechnical-engineering report does not usually relate any environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated subsurface environmental problems have led to project failures*. If you have not yet obtained your own environmental information, ask your geotechnical consultant for risk-management guidance. As a general rule, *do not rely on an environmental report prepared for a different client, site, or project, or that is more than six months old*.

## Obtain Professional Assistance to Deal with Moisture Infiltration and Mold

While your geotechnical engineer may have addressed groundwater, water infiltration, or similar issues in this report, none of the engineer's services were designed, conducted, or intended to prevent uncontrolled migration of moisture – including water vapor – from the soil through building slabs and walls and into the building interior, where it can cause mold growth and material-performance deficiencies. Accordingly, *proper implementation of the geotechnical engineer's recommendations will not of itself be sufficient to prevent moisture infiltration*. Confront the risk of moisture infiltration by including building-envelope or mold specialists on the design team. *Geotechnical engineers are not building-envelope or mold specialists*.



Telephone: 301/565-2733

e-mail: [info@geoprofessional.org](mailto:info@geoprofessional.org) [www.geoprofessional.org](http://www.geoprofessional.org)

## **SITE LOCATION AND EXPLORATION PLANS**

### **Contents:**

Site Location

Test Pit Location Plan

Pavement Core Location Plan (2 pages)

Note: All attachments are one page unless noted above.



**SITE LOCATION**

Sherman Park Infrastructure Development ■ Indianapolis, Indiana

March 9, 2021 ■ Terracon Project No. CJ195626

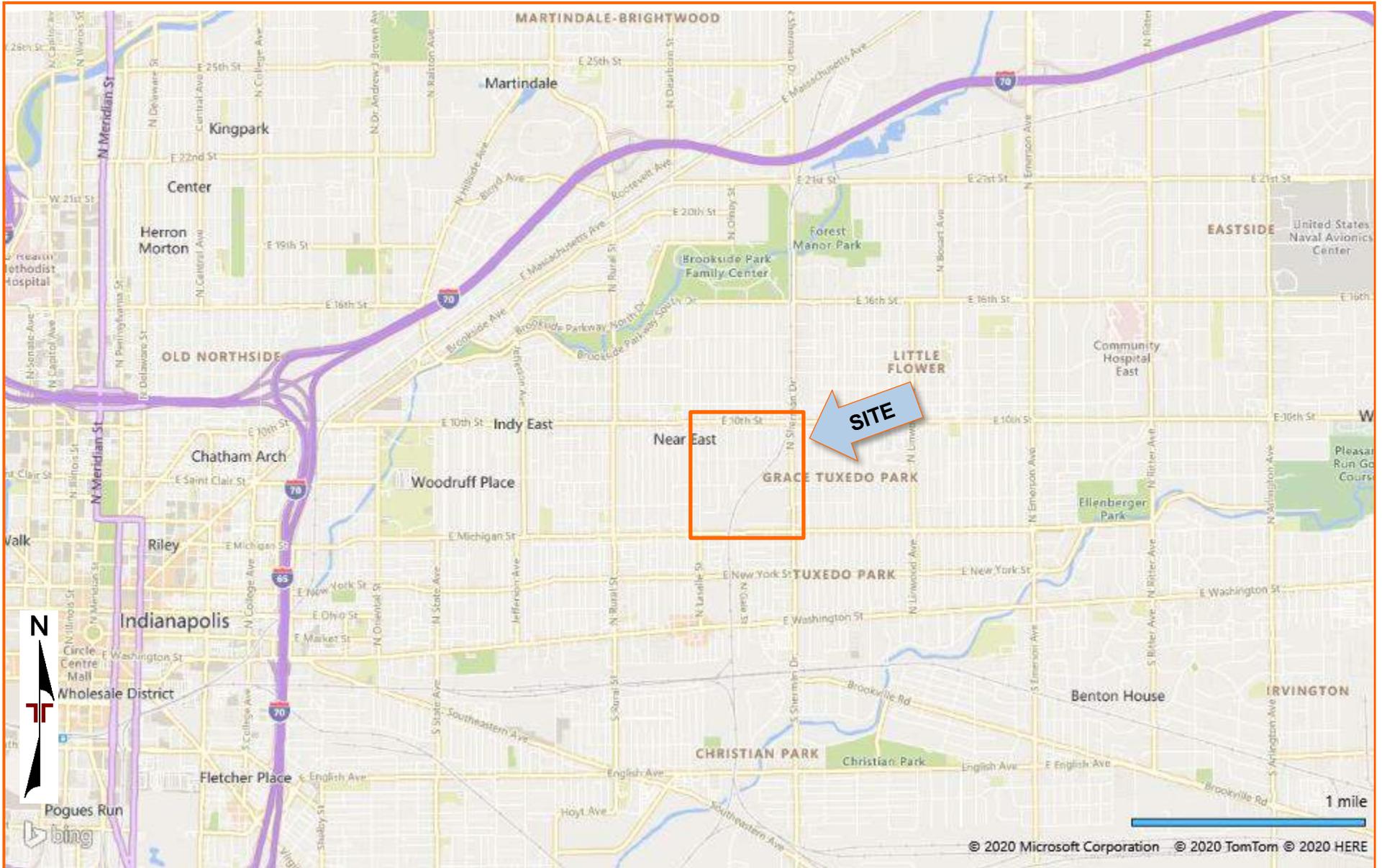


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

MAP PROVIDED BY MICROSOFT BING MAPS

**TEST PIT LOCATION PLAN**

Sherman Park Infrastructure Development ■ Indianapolis, Indiana  
March 9, 2021 ■ Terracon Project No. CJ195626



## **EXPLORATION RESULTS**

### **Contents:**

Test Pit Logs (TP-1 through TP-13)  
Test Pit Photography Log (11 pages)  
Atterberg Limit Results (2 pages)  
Grain Size Distribution (2 pages)  
Moisture-Density Relationship (21 pages)  
Pavement Core Logs (PC-1 through PC-37)

Note: All attachments are one page unless noted above.





## LOG OF TEST PIT

Project: **Sherman Park Infrastructure Development**  
 Location: **Indianapolis, Indiana**  
 Client: **Crawford, Murphy & Tilly, Inc.**  
 7770 West New York Street - Indianapolis, Indiana 46214  
 317-273-1690 / 317-273-2250 (Fax)

Test Pit No.: **TP-1**  
 Elevation: **--**  
 Datum: **--**  
 Project No.: **CJ195626**

CMT Project No.: **1907250100**      Latitude: **39.7766**      Weather: **Overcast**      Performed by: **MM**  
 Structure No.: **--**      Longitude: **-86.1041**      Temp.: **30°F**      Date Performed: **1/6/2021**

DEPTH (ft)	DESCRIPTION/CLASSIFICATION and REMARKS	Moisture Content/Organic Content (%)												
0 - 15	<b>SC, CLAYEY SAND</b> , trace gravel, brown and gray, with brick fragments (FILL)	<table border="1" style="margin-top: 10px; width: 100%; border-collapse: collapse;"> <caption>Moisture and Organic Content Data</caption> <thead> <tr> <th>Depth (ft)</th> <th>Moisture Content (%)</th> <th>Organic Content (%)</th> </tr> </thead> <tbody> <tr> <td>2.1</td> <td>16</td> <td>2.1</td> </tr> <tr> <td>7.5</td> <td>16</td> <td>2.7</td> </tr> <tr> <td>12.5</td> <td>17</td> <td>2.7</td> </tr> </tbody> </table>	Depth (ft)	Moisture Content (%)	Organic Content (%)	2.1	16	2.1	7.5	16	2.7	12.5	17	2.7
Depth (ft)	Moisture Content (%)	Organic Content (%)												
2.1	16	2.1												
7.5	16	2.7												
12.5	17	2.7												

Test Pit ended at 15 ft	<b>Groundwater: No Water Encountered</b>	REMARKS _____ _____ _____ _____
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## LOG OF TEST PIT

Project: **Sherman Park Infrastructure Development**  
 Location: **Indianapolis, Indiana**  
 Client: **Crawford, Murphy & Tilly, Inc.**  
 7770 West New York Street - Indianapolis, Indiana 46214  
 317-273-1690 / 317-273-2250 (Fax)

Test Pit No.: **TP-2**  
 Elevation: **--**  
 Datum: **--**  
 Project No.: **CJ195626**

CMT Project No.: **1907250100**      Latitude: **39.777**      Weather: **Overcast**      Performed by: **MM**  
 Structure No.: **--**      Longitude: **-86.1044**      Temp.: **30°F**      Date Performed: **1/6/2021**

DEPTH (ft)	DESCRIPTION/CLASSIFICATION and REMARKS	Moisture Content/Organic Content (%)																		
0 - 5	<b>SC, CLAYEY SAND</b> , trace gravel, brown and gray, with brick fragments (FILL)	<div style="text-align: center;"> <p>Moisture Content/Organic Content (%)</p> <table border="1" style="margin-top: 10px; font-size: small;"> <caption>Moisture and Organic Content Data</caption> <thead> <tr> <th>Depth (ft)</th> <th>Moisture Content (%)</th> <th>Organic Content (%)</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>12</td> <td>-</td> </tr> <tr> <td>2.5</td> <td>-</td> <td>3.9</td> </tr> <tr> <td>7.5</td> <td>22</td> <td>-</td> </tr> <tr> <td>13.5</td> <td>16</td> <td>-</td> </tr> <tr> <td>2.5</td> <td>-</td> <td>2</td> </tr> </tbody> </table> </div>	Depth (ft)	Moisture Content (%)	Organic Content (%)	0	12	-	2.5	-	3.9	7.5	22	-	13.5	16	-	2.5	-	2
Depth (ft)	Moisture Content (%)		Organic Content (%)																	
0	12	-																		
2.5	-	3.9																		
7.5	22	-																		
13.5	16	-																		
2.5	-	2																		
5 - 17	<b>SANDY LEAN CLAY (CL)</b> , trace gravel, brown and gray, with concrete pieces near 8 ft (FILL)																			
Test Pit ended at 17 ft	Groundwater: No Water Encountered	REMARKS _____ _____ _____ _____																		



## LOG OF TEST PIT

Project: **Sherman Park Infrastructure Development**  
 Location: **Indianapolis, Indiana**  
 Client: **Crawford, Murphy & Tilly, Inc.**  
 7770 West New York Street - Indianapolis, Indiana 46214  
 317-273-1690 / 317-273-2250 (Fax)

Test Pit No.: **TP-3**  
 Elevation: **--**  
 Datum: **--**  
 Project No.: **CJ195626**

CMT Project No.: **1907250100**      Latitude: **39.7768**      Weather: **Overcast**      Performed by: **MM**  
 Structure No.: **--**      Longitude: **-86.1034**      Temp.: **30°F**      Date Performed: **1/6/2021**

DEPTH (ft)	DESCRIPTION/CLASSIFICATION and REMARKS	Moisture Content/Organic Content (%)
0 - 14	<b>SC-SM, SILTY CLAYEY SAND</b> , trace gravel, brown, with brick fragments (FILL)	<div style="text-align: center;"> <p>0                      10                      20</p> <p style="font-size: small;">             Depth (ft) vs. Moisture/Organic Content (%)              Legend: <span style="display: inline-block; width: 10px; border-bottom: 1px solid black; margin-right: 5px;"></span> Moisture Content (diamond)  <span style="display: inline-block; width: 10px; border-bottom: 1px solid black; margin-right: 5px;"></span> Organic Content (cross)           </p> </div>
14 - 21	<b>SC, CLAYEY SAND</b> , trace gravel, brown, with brick fragments (FILL)	

Test Pit ended at 21 ft	<b>Groundwater: No Water Encountered</b>	REMARKS _____ _____ _____ _____
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## LOG OF TEST PIT

Project: **Sherman Park Infrastructure Development**  
 Location: **Indianapolis, Indiana**  
 Client: **Crawford, Murphy & Tilly, Inc.**  
 7770 West New York Street - Indianapolis, Indiana 46214  
 317-273-1690 / 317-273-2250 (Fax)

Test Pit No.: **TP-4**  
 Elevation: **--**  
 Datum: **--**  
 Project No.: **CJ195626**

CMT Project No.: **1907250100**      Latitude: **39.7765**      Weather: **Overcast**      Performed by: **MM**  
 Structure No.: **--**      Longitude: **-86.1039**      Temp.: **30°F**      Date Performed: **1/6/2021**

DEPTH (ft)	DESCRIPTION/CLASSIFICATION and REMARKS	Moisture Content/Organic Content (%)																					
0 - 16	<b>CL, SANDY LEAN CLAY</b> , trace gravel, brown and gray, with brick fragments near 8 ft (FILL)	<table border="1" style="margin: 10px auto; border-collapse: collapse;"> <caption>Moisture and Organic Content Data</caption> <thead> <tr> <th>Depth (ft)</th> <th>Moisture Content (%)</th> <th>Organic Content (%)</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>16</td> <td>2</td> </tr> <tr> <td>2.5</td> <td></td> <td>2.5</td> </tr> <tr> <td>3.2</td> <td></td> <td>3.2</td> </tr> <tr> <td>16</td> <td>24</td> <td></td> </tr> <tr> <td>24</td> <td></td> <td>25</td> </tr> <tr> <td>25</td> <td></td> <td></td> </tr> </tbody> </table>	Depth (ft)	Moisture Content (%)	Organic Content (%)	2	16	2	2.5		2.5	3.2		3.2	16	24		24		25	25		
Depth (ft)	Moisture Content (%)	Organic Content (%)																					
2	16	2																					
2.5		2.5																					
3.2		3.2																					
16	24																						
24		25																					
25																							

Test Pit ended at 16 ft	<b>Groundwater: No Water Encountered</b>	REMARKS _____ _____ _____ _____
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## LOG OF TEST PIT

Project: **Sherman Park Infrastructure Development**  
 Location: **Indianapolis, Indiana**  
 Client: **Crawford, Murphy & Tilly, Inc.**  
 7770 West New York Street - Indianapolis, Indiana 46214  
 317-273-1690 / 317-273-2250 (Fax)

Test Pit No.: **TP-5**  
 Elevation: **--**  
 Datum: **--**  
 Project No.: **CJ195626**

CMT Project No.: **1907250100**      Latitude: **39.7761**      Weather: **Overcast**      Performed by: **MM**  
 Structure No.: **--**      Longitude: **-86.1034**      Temp.: **30°F**      Date Performed: **1/6/2021**

DEPTH (ft)	DESCRIPTION/CLASSIFICATION and REMARKS	Moisture Content/Organic Content (%)															
0 - 10	<b>CL, SANDY LEAN CLAY</b> , trace gravel, brown (FILL)	<table border="1" style="margin-top: 10px; width: 100%; border-collapse: collapse;"> <caption>Moisture and Organic Content Data</caption> <thead> <tr> <th>Depth (ft)</th> <th>Moisture Content (%)</th> <th>Organic Content (%)</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>2.4</td> <td>1.9</td> </tr> <tr> <td>2.4</td> <td>17</td> <td>4.3</td> </tr> <tr> <td>7.5</td> <td>14</td> <td>-</td> </tr> <tr> <td>14.3</td> <td>-</td> <td>24</td> </tr> </tbody> </table>	Depth (ft)	Moisture Content (%)	Organic Content (%)	0	2.4	1.9	2.4	17	4.3	7.5	14	-	14.3	-	24
Depth (ft)	Moisture Content (%)		Organic Content (%)														
0	2.4	1.9															
2.4	17	4.3															
7.5	14	-															
14.3	-	24															
10 - 17	<b>CL-ML, SILTY CLAY</b> , with gravel, gray, with construction debris (concrete pieces and rebar) near 15 ft (FILL)																

Test Pit ended at 17 ft	<b>Groundwater: No Water Encountered</b>	REMARKS _____ _____ _____ _____
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## LOG OF TEST PIT

Project: **Sherman Park Infrastructure Development**  
 Location: **Indianapolis, Indiana**  
 Client: **Crawford, Murphy & Tilly, Inc.**  
 7770 West New York Street - Indianapolis, Indiana 46214  
 317-273-1690 / 317-273-2250 (Fax)

Test Pit No.: **TP-6**  
 Elevation: **--**  
 Datum: **--**  
 Project No.: **CJ195626**

CMT Project No.: **1907250100**      Latitude: **39.7759**      Weather: **Overcast**      Performed by: **MM**  
 Structure No.: **--**      Longitude: **-86.1041**      Temp.: **30°F**      Date Performed: **1/6/2021**

DEPTH (ft)	DESCRIPTION/CLASSIFICATION and REMARKS	Moisture Content/Organic Content (%)												
0 - 15	<b>SC, CLAYEY SAND</b> , trace gravel, brown and gray, with construction debris (plastic pieces and brick fragments) below 5 ft (FILL)	<table border="1" style="margin: 10px auto; border-collapse: collapse;"> <caption>Moisture and Organic Content Data</caption> <thead> <tr> <th>Depth (ft)</th> <th>Moisture Content (%)</th> <th>Organic Content (%)</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>19</td> <td>2</td> </tr> <tr> <td>7.5</td> <td>10</td> <td>1.6</td> </tr> <tr> <td>12.5</td> <td>17</td> <td>1.6</td> </tr> </tbody> </table>	Depth (ft)	Moisture Content (%)	Organic Content (%)	0	19	2	7.5	10	1.6	12.5	17	1.6
Depth (ft)	Moisture Content (%)	Organic Content (%)												
0	19	2												
7.5	10	1.6												
12.5	17	1.6												

Test Pit ended at 15 ft	<b>Groundwater: No Water Encountered</b>	REMARKS _____ _____ _____ _____
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## LOG OF TEST PIT

Project: **Sherman Park Infrastructure Development**  
 Location: **Indianapolis, Indiana**  
 Client: **Crawford, Murphy & Tilly, Inc.**  
 7770 West New York Street - Indianapolis, Indiana 46214  
 317-273-1690 / 317-273-2250 (Fax)

Test Pit No.: **TP-7**  
 Elevation: **--**  
 Datum: **--**  
 Project No.: **CJ195626**

CMT Project No.: **1907250100**      Latitude: **39.7778**      Weather: **Overcast**      Performed by: **MM**  
 Structure No.: **--**      Longitude: **-86.1051**      Temp.: **30°F**      Date Performed: **1/6/2021**

DEPTH (ft)	DESCRIPTION/CLASSIFICATION and REMARKS	Moisture Content/Organic Content (%)												
0 - 15	<b>CL, SANDY CLAY</b> , trace gravel, brown and gray, with brick fragments, with organic matter (roots) (FILL)	<table border="1" style="margin: 10px auto; border-collapse: collapse;"> <caption>Moisture and Organic Content Data</caption> <thead> <tr> <th>Depth (ft)</th> <th>Moisture Content (%)</th> <th>Organic Content (%)</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>22</td> <td>3.6</td> </tr> <tr> <td>7.5</td> <td>20</td> <td>3.3</td> </tr> <tr> <td>12.5</td> <td>26</td> <td>4.9</td> </tr> </tbody> </table>	Depth (ft)	Moisture Content (%)	Organic Content (%)	2	22	3.6	7.5	20	3.3	12.5	26	4.9
Depth (ft)	Moisture Content (%)	Organic Content (%)												
2	22	3.6												
7.5	20	3.3												
12.5	26	4.9												

Test Pit ended at 15 ft	<b>Groundwater: No Water Encountered</b>	REMARKS _____ _____ _____ _____
-------------------------	--	--



## LOG OF TEST PIT

Project: **Sherman Park Infrastructure Development**  
 Location: **Indianapolis, Indiana**  
 Client: **Crawford, Murphy & Tilly, Inc.**  
 7770 West New York Street - Indianapolis, Indiana 46214  
 317-273-1690 / 317-273-2250 (Fax)

Test Pit No.: **TP-8**  
 Elevation: **--**  
 Datum: **--**  
 Project No.: **CJ195626**

CMT Project No.: **1907250100**      Latitude: **39.7778**      Weather: **Overcast**      Performed by: **MM**  
 Structure No.: **--**      Longitude: **-86.1048**      Temp.: **30°F**      Date Performed: **1/6/2021**

DEPTH (ft)	DESCRIPTION/CLASSIFICATION and REMARKS	Moisture Content/Organic Content (%)
0 - 7	<b>CL, SANDY LEAN CLAY</b> , trace gravel, brown and gray, with brick fragments, with organic matter (roots) (FILL)	<div style="display: flex; justify-content: space-between; font-weight: bold; font-size: small;"> <span>0</span> <span>10</span> <span>20</span> </div>
Test Pit ended at 7 ft	Groundwater: No Water Encountered	REMARKS _____ _____ _____ _____



## LOG OF TEST PIT

Project: **Sherman Park Infrastructure Development**  
 Location: **Indianapolis, Indiana**  
 Client: **Crawford, Murphy & Tilly, Inc.**  
 7770 West New York Street - Indianapolis, Indiana 46214  
 317-273-1690 / 317-273-2250 (Fax)

Test Pit No.: **TP-9**  
 Elevation: **--**  
 Datum: **--**  
 Project No.: **CJ195626**

CMT Project No.: **1907250100**      Latitude: **39.777**      Weather: **Overcast**      Performed by: **MM**  
 Structure No.: **--**      Longitude: **-86.104**      Temp.: **30°F**      Date Performed: **1/6/2021**

DEPTH (ft)	DESCRIPTION/CLASSIFICATION and REMARKS	Moisture Content/Organic Content (%)
0 - 15	<b>CL, SANDY CLAY</b> , with sand and gravel pockets, brown and gray, with brick fragments (FILL)	<p style="margin: 0;">0                      10                      20</p>

<b>Test Pit ended at 15 ft</b>	<b>Groundwater: No Water Encountered</b>	<b>REMARKS</b> _____ _____ _____ _____
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## LOG OF TEST PIT

Project: **Sherman Park Infrastructure Development**  
 Location: **Indianapolis, Indiana**  
 Client: **Crawford, Murphy & Tilly, Inc.**  
 7770 West New York Street - Indianapolis, Indiana 46214  
 317-273-1690 / 317-273-2250 (Fax)

Test Pit No.: **TP-10**  
 Elevation: **--**  
 Datum: **--**  
 Project No.: **CJ195626**

CMT Project No.: **1907250100**      Latitude: **39.777**      Weather: **Overcast**      Performed by: **MM**  
 Structure No.: **--**      Longitude: **-86.1032**      Temp.: **30°F**      Date Performed: **1/6/2021**

DEPTH (ft)	DESCRIPTION/CLASSIFICATION and REMARKS	Moisture Content/Organic Content (%)
0 - 4	<b>CL, SANDY CLAY</b> , with sand and gravel pockets, brown and gray, with brick fragments (FILL)	<div style="text-align: center;"> <p>0                      10                      20</p> </div>
4 - 18	<b>SP, SAND with GRAVEL</b> , with clay pockets, brown and gray, with construction debris (concrete and brick fragments), with organic matter (wood pieces and roots) (FILL)	
Test Pit ended at 18 ft	Groundwater: No Water Encountered	REMARKS _____ _____ _____ _____



## LOG OF TEST PIT

Project: **Sherman Park Infrastructure Development**  
 Location: **Indianapolis, Indiana**  
 Client: **Crawford, Murphy & Tilly, Inc.**  
 7770 West New York Street - Indianapolis, Indiana 46214  
 317-273-1690 / 317-273-2250 (Fax)

Test Pit No.: **TP-11**  
 Elevation: **--**  
 Datum: **--**  
 Project No.: **CJ195626**

CMT Project No.: **1907250100**      Latitude: **39.7761**      Weather: **Overcast**      Performed by: **MM**  
 Structure No.: **--**      Longitude: **-86.103**      Temp.: **30°F**      Date Performed: **1/6/2021**

DEPTH (ft)	DESCRIPTION/CLASSIFICATION and REMARKS	Moisture Content/Organic Content (%)
0 - 18	CL, SANDY CLAY, with gravel, brown and gray (FILL)	<div style="text-align: center;"> <p>0                      10                      20</p> </div>

Test Pit ended at 18 ft	Groundwater: No Water Encountered	REMARKS _____ _____ _____ _____
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## LOG OF TEST PIT

Project: **Sherman Park Infrastructure Development**  
 Location: **Indianapolis, Indiana**  
 Client: **Crawford, Murphy & Tilly, Inc.**  
 7770 West New York Street - Indianapolis, Indiana 46214  
 317-273-1690 / 317-273-2250 (Fax)

Test Pit No.: **TP-12**  
 Elevation: **--**  
 Datum: **--**  
 Project No.: **CJ195626**

CMT Project No.: **1907250100**      Latitude: **39.7756**      Weather: **Overcast**      Performed by: **MM**  
 Structure No.: **--**      Longitude: **-86.1033**      Temp.: **30°F**      Date Performed: **1/6/2021**

DEPTH (ft)	DESCRIPTION/CLASSIFICATION and REMARKS	Moisture Content/Organic Content (%)
0 - 8	<b>CL, SANDY LEAN CLAY</b> , with gravel, brown and gray (FILL)	<div style="display: flex; justify-content: space-between; font-weight: bold; font-size: small;"> <span>0</span> <span>10</span> <span>20</span> </div>
Test Pit ended at 8 ft	Groundwater: No Water Encountered	REMARKS _____ _____ _____ _____



## LOG OF TEST PIT

Project: **Sherman Park Infrastructure Development**  
 Location: **Indianapolis, Indiana**  
 Client: **Crawford, Murphy & Tilly, Inc.**  
 7770 West New York Street - Indianapolis, Indiana 46214  
 317-273-1690 / 317-273-2250 (Fax)

Test Pit No.: **TP-13**  
 Elevation: **--**  
 Datum: **--**  
 Project No.: **CJ195626**

CMT Project No.: **1907250100**      Latitude: **39.7754**      Weather: **Overcast**      Performed by: **MM**  
 Structure No.: **--**      Longitude: **-86.1043**      Temp.: **30°F**      Date Performed: **1/6/2021**

DEPTH (ft)	DESCRIPTION/CLASSIFICATION and REMARKS	Moisture Content/Organic Content (%)
0 - 8	<b>CL, SANDY LEAN CLAY</b> , with gravel, brown, with construction debris (wood pieces and brick fragments) (FILL)	<div style="display: flex; justify-content: space-between; font-weight: bold; font-size: small;"> <span>0</span> <span>10</span> <span>20</span> </div>
Test Pit ended at 8 ft	Groundwater: No Water Encountered	REMARKS _____ _____ _____ _____



## TEST PIT PHOTOGRAPHY LOG



Photo 1 – Exposed subsurface conditions at Test Pit TP-1 facing south



Photo 2 – Excavated fill at Test Pit TP-1

**Existing Fill and Surrounding Pavement Evaluation**

Sherman Park Infrastructure Development ■ Indianapolis, Indiana

March 9, 2021 ■ Terracon Project No. CJ195626



Photo 3 – Exposed subsurface conditions at Test Pit TP-2 facing north

**Existing Fill and Surrounding Pavement Evaluation**

Sherman Park Infrastructure Development ■ Indianapolis, Indiana

March 9, 2021 ■ Terracon Project No. CJ195626



Photo 4 - Excavated fill at Test Pit TP-2

**Existing Fill and Surrounding Pavement Evaluation**

Sherman Park Infrastructure Development ■ Indianapolis, Indiana

March 9, 2021 ■ Terracon Project No. CJ195626

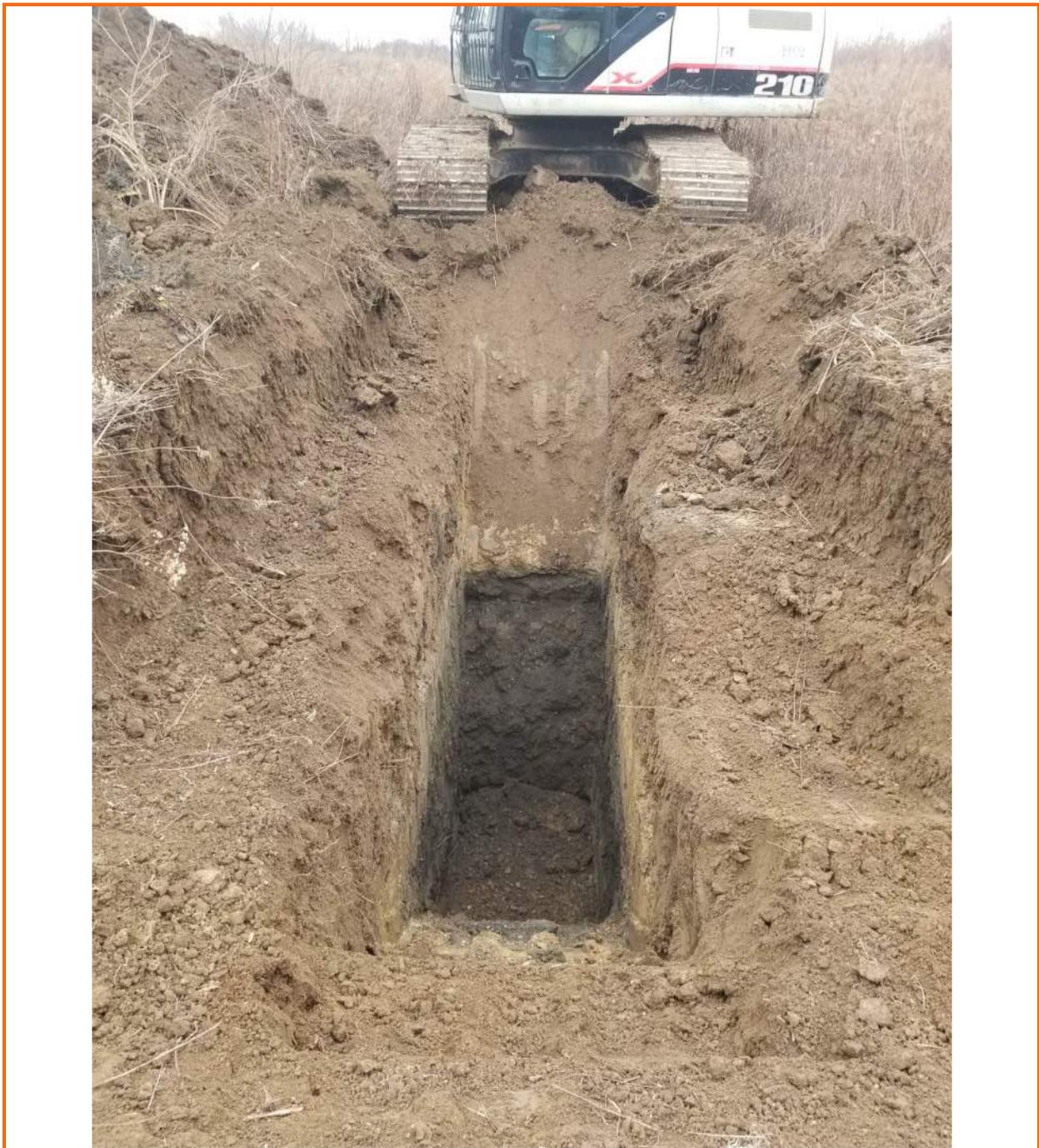


Photo 5 - Exposed subsurface conditions at Test Pit TP-5 facing north

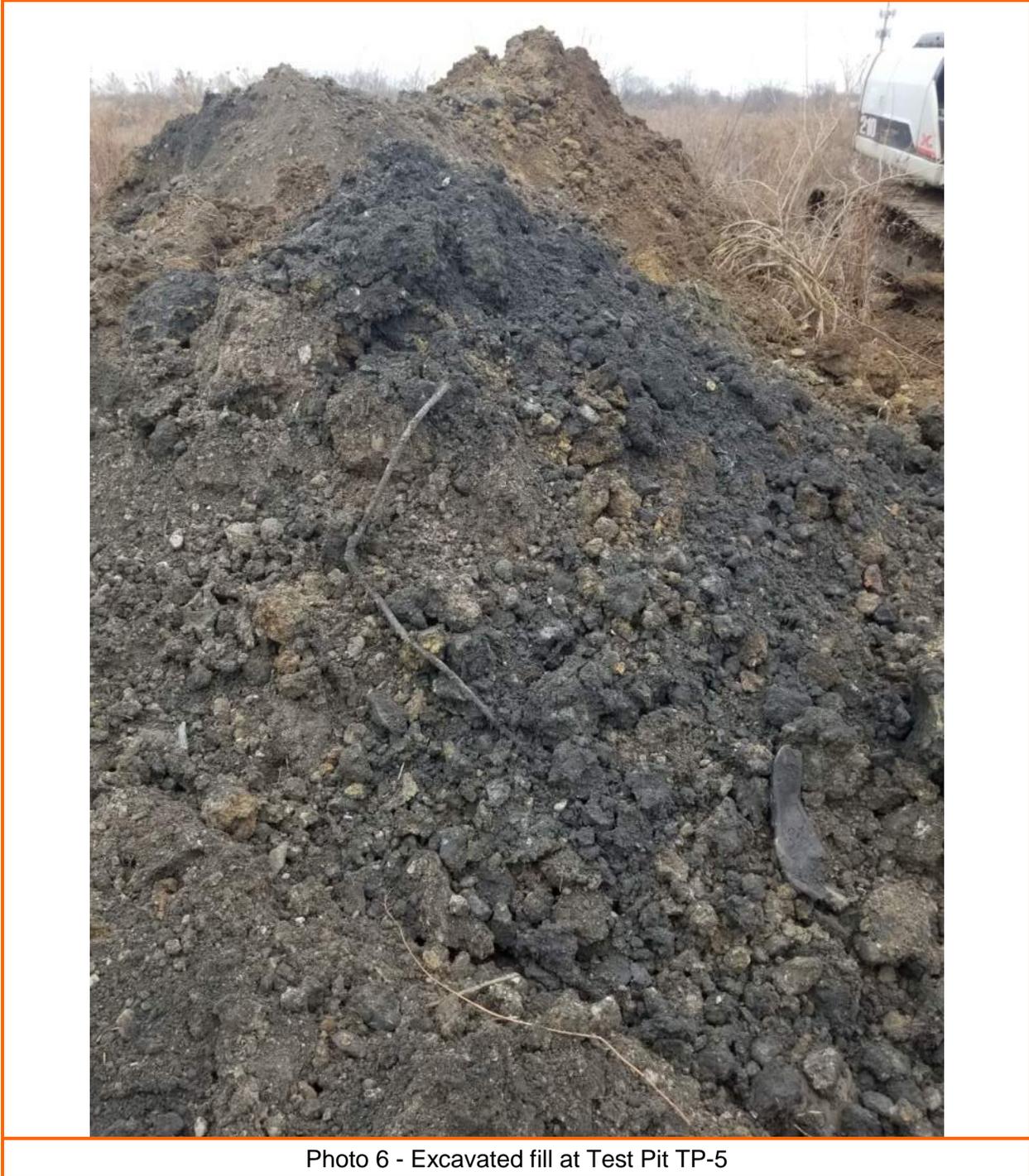




Photo 7 - Exposed subsurface conditions at Test Pit TP-7 facing north

**Existing Fill and Surrounding Pavement Evaluation**

Sherman Park Infrastructure Development ■ Indianapolis, Indiana

March 9, 2021 ■ Terracon Project No. CJ195626



Photo 8 - Exposed subsurface conditions at Test Pit TP-10 facing southwest



Photo 9 - Excavated fill at Test Pit TP-10

**Existing Fill and Surrounding Pavement Evaluation**

Sherman Park Infrastructure Development ■ Indianapolis, Indiana

March 9, 2021 ■ Terracon Project No. CJ195626



Photo 10 - Exposed subsurface conditions at Test Pit TP-12 facing east

**Existing Fill and Surrounding Pavement Evaluation**

Sherman Park Infrastructure Development ■ Indianapolis, Indiana

March 9, 2021 ■ Terracon Project No. CJ195626

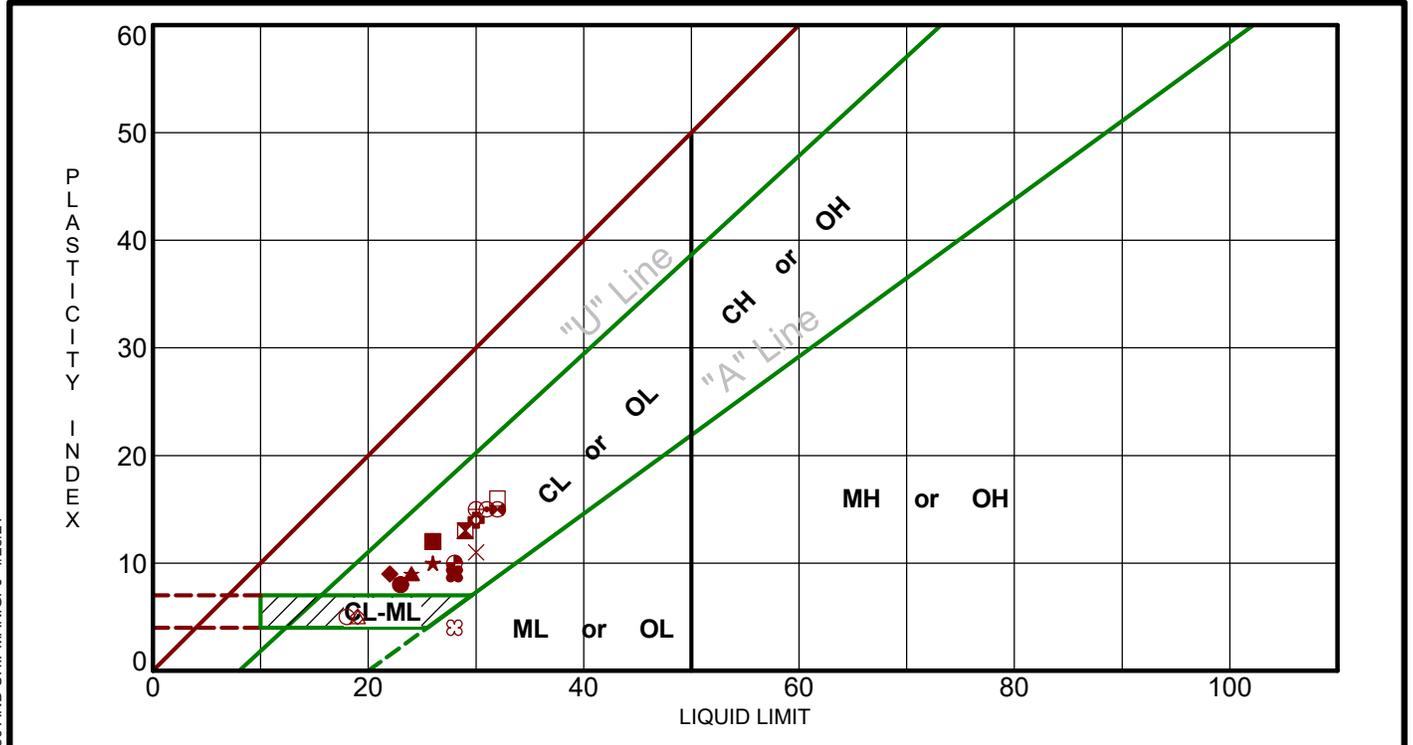


Photo 11 – Plastic bottle and wood fragments excavated fill at Test Pit TP-12



# ATTERBERG LIMITS RESULTS

ASTM D4318



LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ATTERBERG LIMITS CJ195626 SHERMAN PARK IMPR.GPJ 02195238 US 50 AND CHIPMAN.GPJ 1/25/21

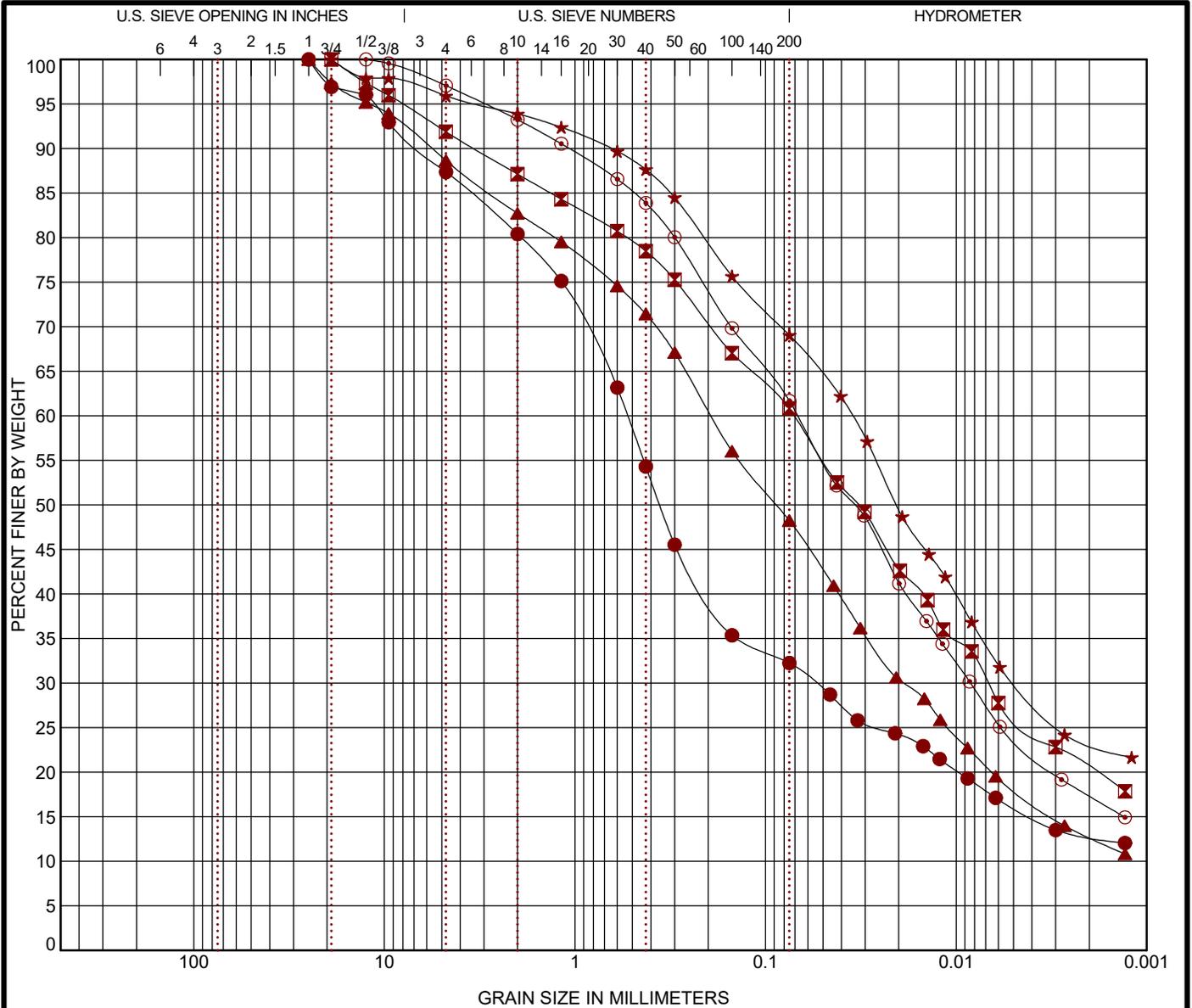
Boring ID	Depth	LL	PL	PI	Fines	USCS	Description
● TP-1	0 - 5	23	15	8		SC	CLAYEY SAND
⊠ TP-1	5 - 10	29	16	13	32.3	SC	CLAYEY SAND
▲ TP-1	10 - 15	24	15	9		SC	CLAYEY SAND
★ TP-2	0 - 5	26	16	10		SC	CLAYEY SAND
⊙ TP-2	5 - 10	31	16	15	60.8	CL	SANDY LEAN CLAY
⊕ TP-2	10 - 17	30	16	14		CL	SANDY LEAN CLAY
○ TP-3	0 - 7	18	13	5		SC-SM	SILTY CLAYEY SAND
△ TP-3	7 - 14	19	14	5	48.2	SC-SM	SILTY, CLAYEY SAND
⊗ TP-3	14 - 21	23	15	8		SC	CLAYEY SAND
⊕ TP-4	0 - 5	30	15	15		CL	SANDY LEAN CLAY
□ TP-4	5 - 10	32	16	16	69.1	CL	SANDY LEAN CLAY
⊕ TP-4	10 - 16	32	17	15		CL	SANDY LEAN CLAY
⊕ TP-5	0 - 5	28	18	10		CL	SANDY LEAN CLAY
★ TP-5	5 - 10	24	15	9	61.7	CL	SANDY LEAN CLAY
⊗ TP-5	10 - 17	28	24	4		CL-ML	SILTY CLAY
■ TP-6	0 - 5	26	14	12		SC	CLAYEY SAND
◆ TP-6	5 - 10	22	13	9	47.6	SC	CLAYEY SAND
◇ TP-6	10 - 15	19	14	5		CL-ML	SILTY CLAY
× TP-7	0 - 5	30	19	11		CL	SANDY LEAN CLAY
⊕ TP-7	5 - 10	28	19	9	63.1	CL	SANDY LEAN CLAY

PROJECT: Sherman Park Infrastructure Development	 7770 W New York St Indianapolis, IN	PROJECT NUMBER: CJ195626
SITE: Indianapolis, IN		CLIENT: Crawford Murphy & Tilly, Inc. Indianapolis, IN



# GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



COBBLES	GRAVEL		SAND			SILT OR CLAY			
	coarse	fine	coarse	medium	fine				

Boring ID	Depth	USCS Classification				WC (%)	LL	PL	PI	Cc	Cu
● TP-1	5 - 10	CLAYEY SAND (SC)				16.3	29	16	13		
☒ TP-2	5 - 10	SANDY LEAN CLAY (CL)				21.6	31	16	15		
▲ TP-3	7 - 14	SILTY, CLAYEY SAND (SC-SM)				13.9	19	14	5		
★ TP-4	5 - 10	SANDY LEAN CLAY (CL)				24.2	32	16	16		
⊙ TP-5	5 - 10	SANDY LEAN CLAY (CL)				16.5	24	15	9		
Boring ID	Depth	D <sub>100</sub>	D <sub>60</sub>	D <sub>30</sub>	D <sub>10</sub>	%Cobbles	%Gravel	%Sand	%Silt	%Fines	%Clay
● TP-1	5 - 10	25	0.531	0.055		0.0	12.6	55.1	16.2		16.0
☒ TP-2	5 - 10	19	0.071	0.007		0.0	8.1	31.1	34.3		26.5
▲ TP-3	7 - 14	25	0.192	0.019		0.0	11.3	40.4	30.1		18.1
★ TP-4	5 - 10	19	0.035	0.005		0.0	4.1	26.9	38.9		30.2
⊙ TP-5	5 - 10	12.5	0.068	0.008		0.0	2.9	35.4	37.9		23.8

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GRAIN SIZE: USCS-2 CJ195626 SHERMAN PARK IMPR.GPJ 02195238 US 50 AND CHIPMAN.GPJ 1/25/21

PROJECT: Sherman Park Infrastructure Development

SITE: Indianapolis, IN

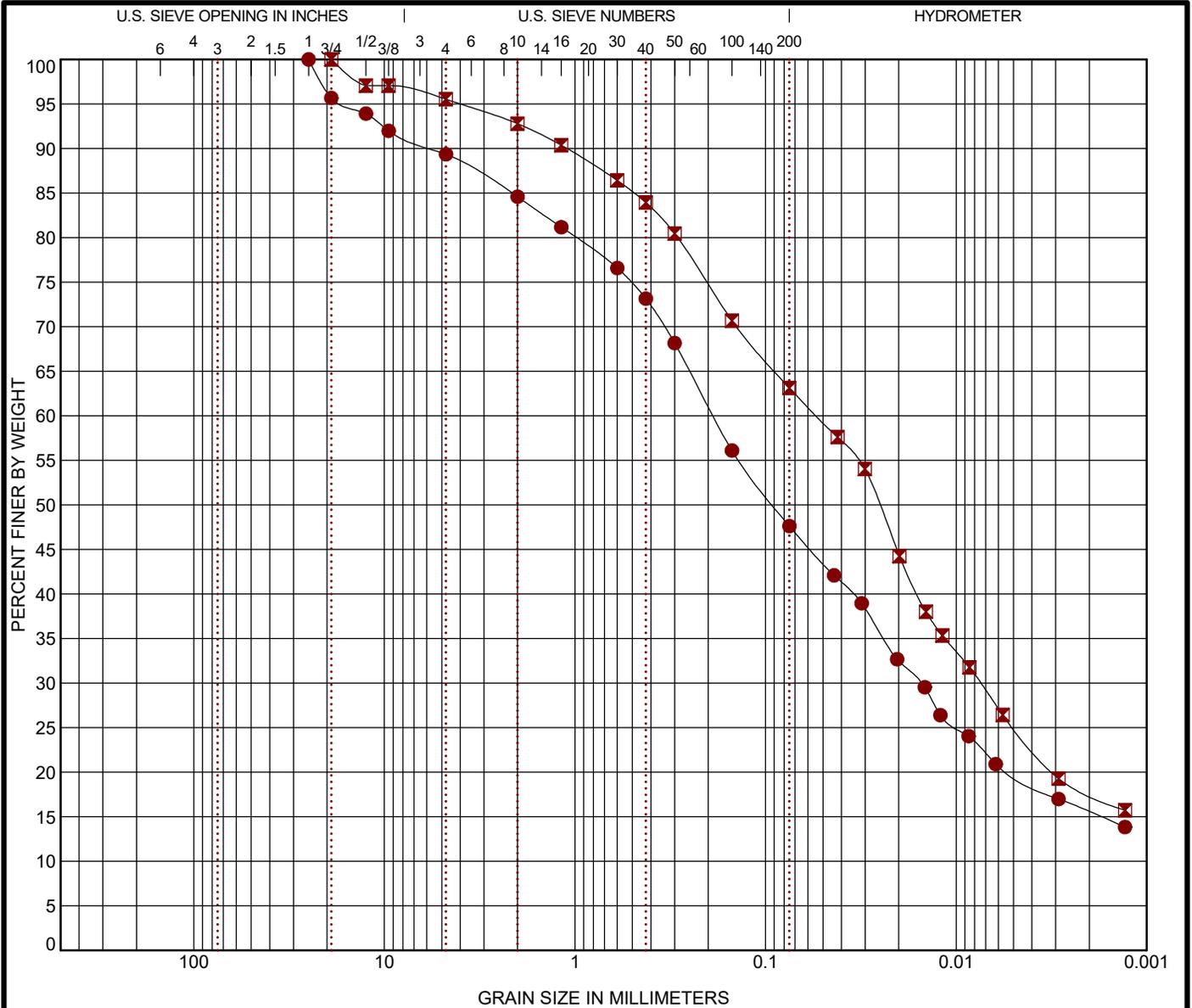


PROJECT NUMBER: CJ195626

CLIENT: Crawford Murphy & Tilly, Inc. Indianapolis, IN

# GRAIN SIZE DISTRIBUTION

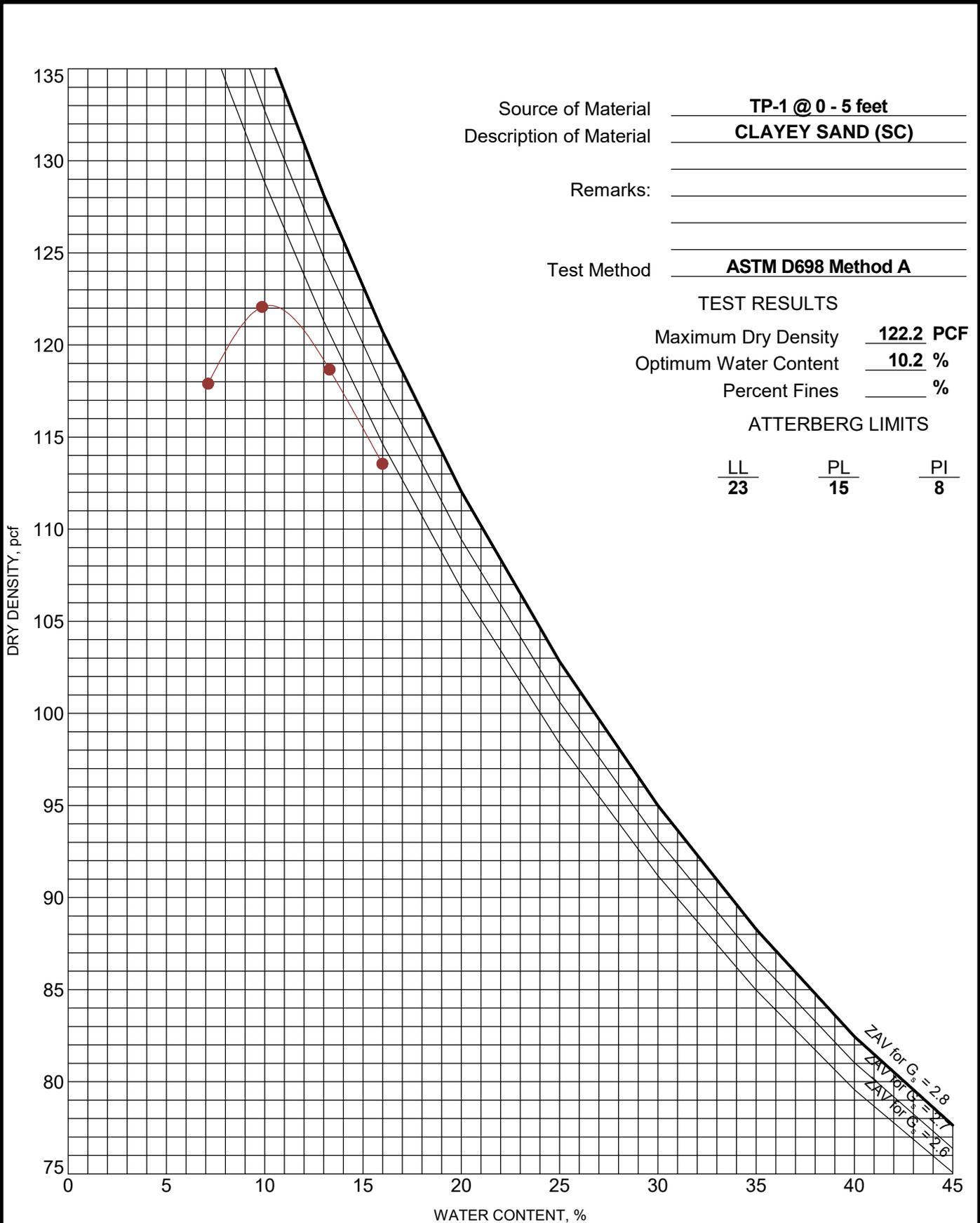
ASTM D422 / ASTM C136



# MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. COMPACTION - V2 CJ195626 SHERMAN PARK IMPR.GPJ 02195238 US 50 AND CHIPMAN.GPJ 1/25/21



Source of Material TP-1 @ 0 - 5 feet  
 Description of Material CLAYEY SAND (SC)

Remarks: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Test Method ASTM D698 Method A

**TEST RESULTS**

Maximum Dry Density 122.2 PCF  
 Optimum Water Content 10.2 %  
 Percent Fines \_\_\_\_\_ %

**ATTERBERG LIMITS**

LL      PL      PI  
23      15      8

ZAV for G<sub>s</sub> = 2.8  
 ZAV for G<sub>s</sub> = 2.65  
 ZAV for G<sub>s</sub> = 2.5

PROJECT: Sherman Park Infrastructure Development

SITE: Indianapolis, IN



PROJECT NUMBER: CJ195626

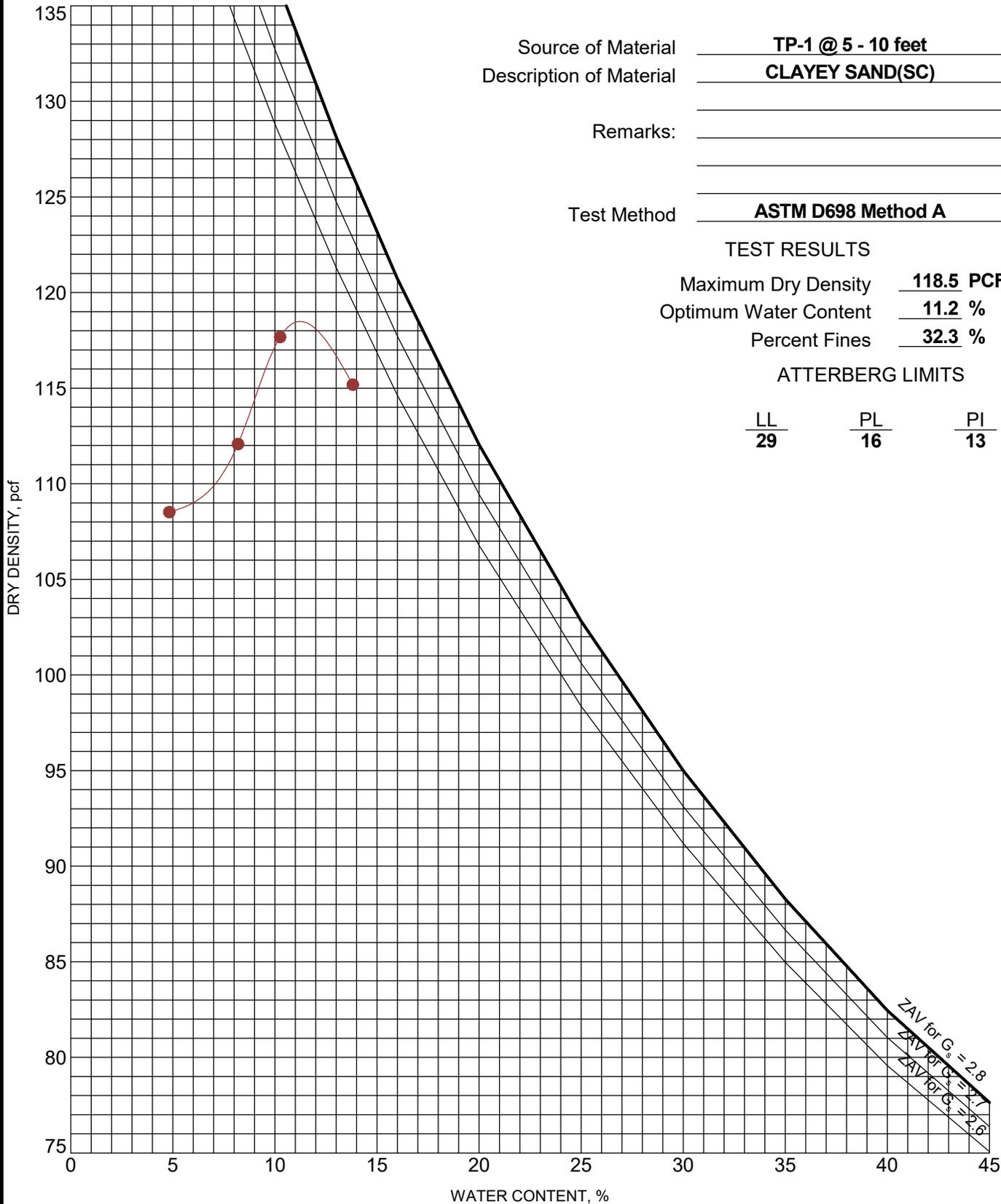
CLIENT: Crawford Murphy & Tilly, Inc.  
 Indianapolis, IN

EXHIBIT: B-1

# MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. COMPACTION - V2 CJ195626 SHERMAN PARK IMPR.GPJ 02195238 US 50 AND CHIPMAN.GPJ 1/25/21



Source of Material TP-1 @ 5 - 10 feet  
 Description of Material CLAYEY SAND(SC)

Remarks: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Test Method ASTM D698 Method A

**TEST RESULTS**

Maximum Dry Density 118.5 PCF  
 Optimum Water Content 11.2 %  
 Percent Fines 32.3 %

**ATTERBERG LIMITS**

LL      PL      PI  
29      16      13

ZAV for G<sub>s</sub> = 2.8  
 ZAV for G<sub>s</sub> = 2.65  
 ZAV for G<sub>s</sub> = 2.5

PROJECT: Sherman Park Infrastructure Development

SITE: Indianapolis, IN



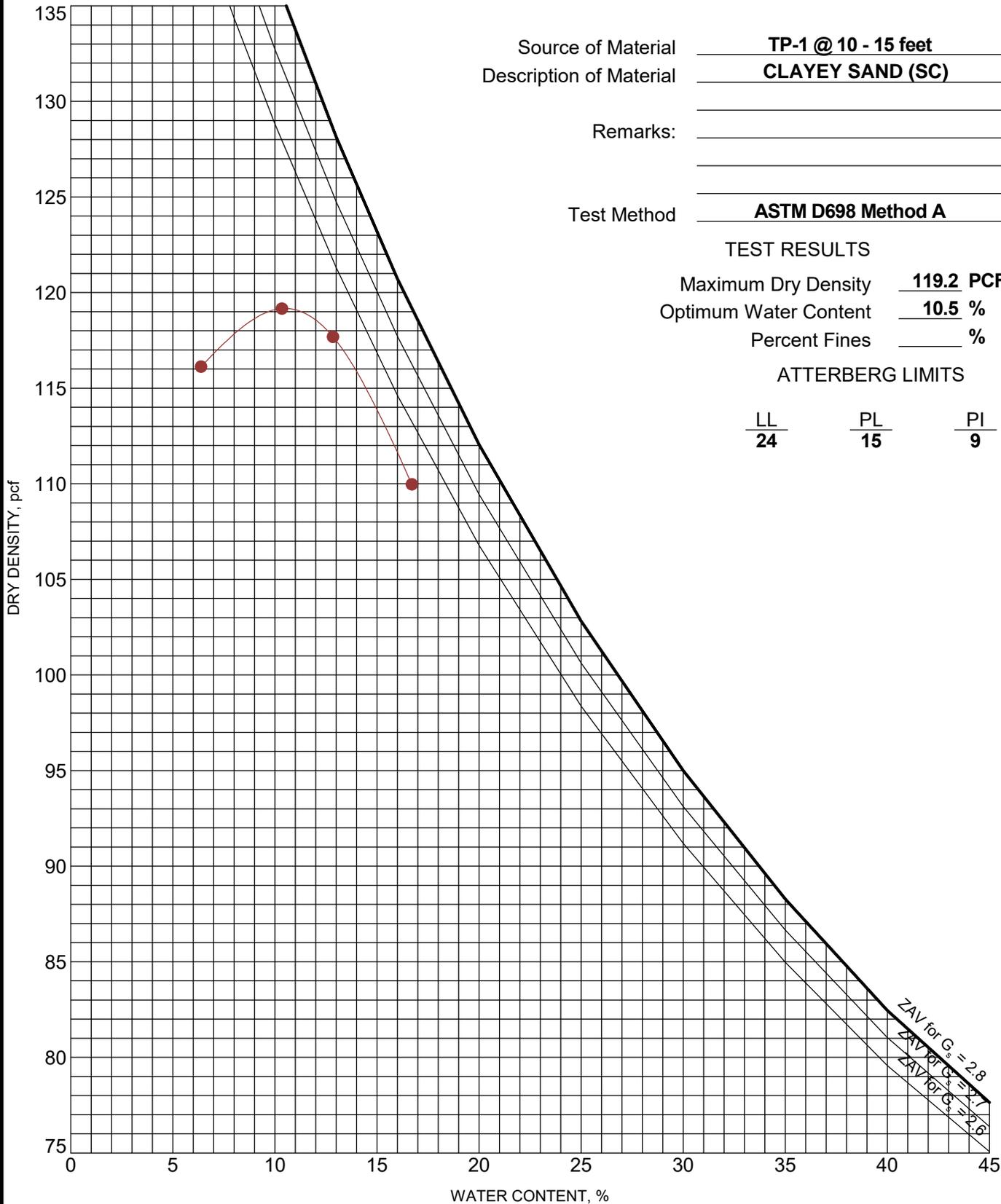
PROJECT NUMBER: CJ195626

CLIENT: Crawford Murphy & Tilly, Inc. Indianapolis, IN

# MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. COMPACTION - V2 CJ195626 SHERMAN PARK IMPR.GPJ 02195238 US 50 AND CHIPMAN.GPJ 1/25/21



Source of Material TP-1 @ 10 - 15 feet  
 Description of Material CLAYEY SAND (SC)  
 Remarks: \_\_\_\_\_  
 Test Method ASTM D698 Method A

**TEST RESULTS**

Maximum Dry Density 119.2 PCF  
 Optimum Water Content 10.5 %  
 Percent Fines \_\_\_\_\_ %

**ATTERBERG LIMITS**

LL      PL      PI  
24      15      9

PROJECT: Sherman Park Infrastructure Development

SITE: Indianapolis, IN



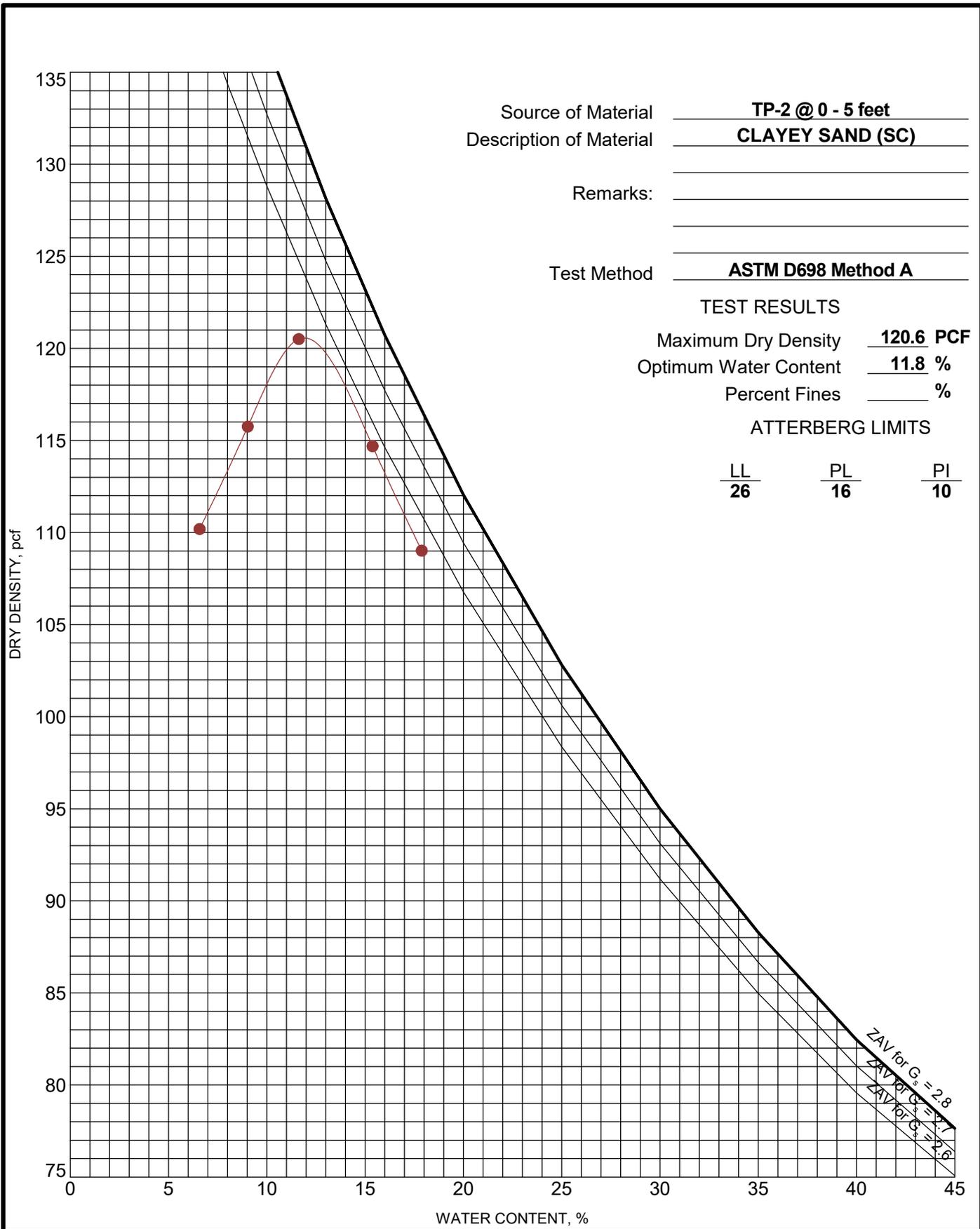
PROJECT NUMBER: CJ195626

CLIENT: Crawford Murphy & Tilly, Inc. Indianapolis, IN

# MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. COMPACTION - V2 CJ195626 SHERMAN PARK IMPR.GPJ 02195238 US 50 AND CHIPMAN.GPJ 1/25/21



Source of Material TP-2 @ 0 - 5 feet  
 Description of Material CLAYEY SAND (SC)

Remarks: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Test Method ASTM D698 Method A

**TEST RESULTS**

Maximum Dry Density 120.6 PCF  
 Optimum Water Content 11.8 %  
 Percent Fines \_\_\_\_\_ %

**ATTERBERG LIMITS**

LL      PL      PI  
26      16      10

ZAV for  $G_s = 2.8$   
 ZAV for  $G_s = 2.7$   
 ZAV for  $G_s = 2.6$

PROJECT: Sherman Park Infrastructure Development

SITE: Indianapolis, IN



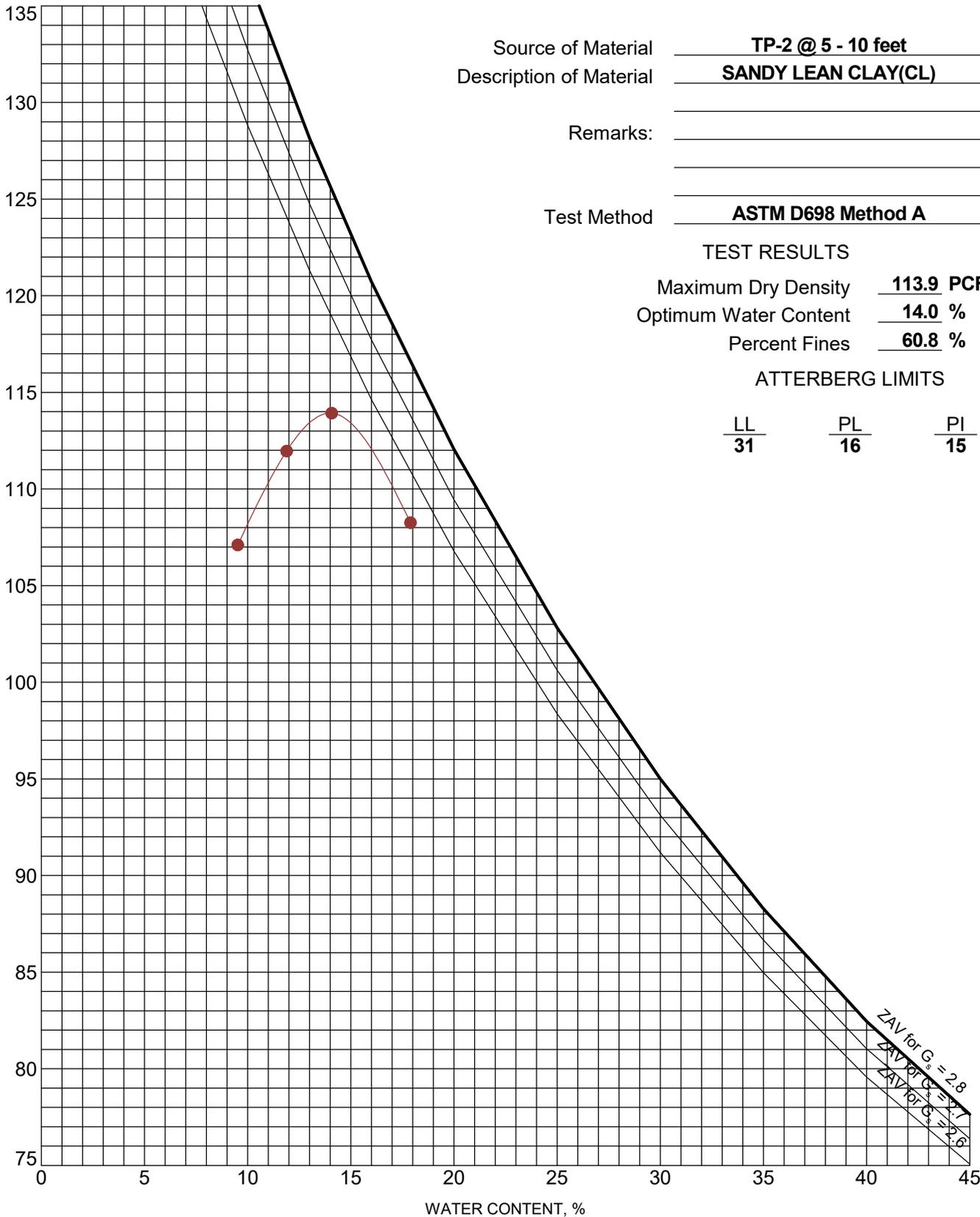
PROJECT NUMBER: CJ195626

CLIENT: Crawford Murphy & Tilly, Inc. Indianapolis, IN

# MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. COMPACTION - V2 CJ195626 SHERMAN PARK IMPR.GPJ 02195238 US 50 AND CHIPMAN.GPJ 1/25/21



Source of Material TP-2 @ 5 - 10 feet  
 Description of Material SANDY LEAN CLAY(CL)

Remarks: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Test Method ASTM D698 Method A

**TEST RESULTS**

Maximum Dry Density 113.9 PCF  
 Optimum Water Content 14.0 %  
 Percent Fines 60.8 %

**ATTERBERG LIMITS**

LL      PL      PI  
31      16      15

PROJECT: Sherman Park Infrastructure Development

SITE: Indianapolis, IN



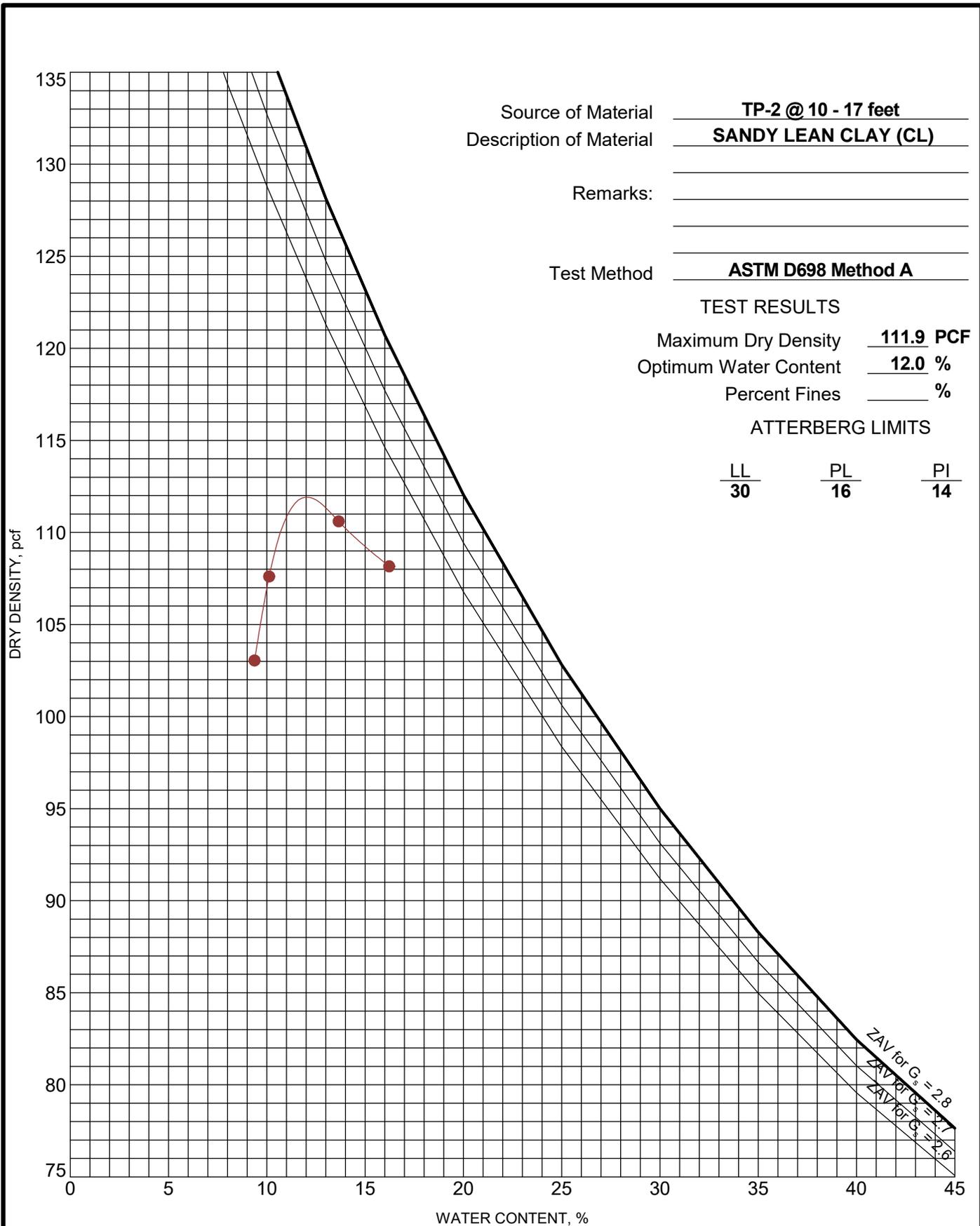
PROJECT NUMBER: CJ195626

CLIENT: Crawford Murphy & Tilly, Inc. Indianapolis, IN

# MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. COMPACTION - V2 CJ195626 SHERMAN PARK IMPR.GPJ 02195238 US 50 AND CHIPMAN.GPJ 1/25/21



Source of Material TP-2 @ 10 - 17 feet  
 Description of Material SANDY LEAN CLAY (CL)  
 Remarks: \_\_\_\_\_  
 Test Method ASTM D698 Method A

PROJECT: Sherman Park Infrastructure Development  
 SITE: Indianapolis, IN

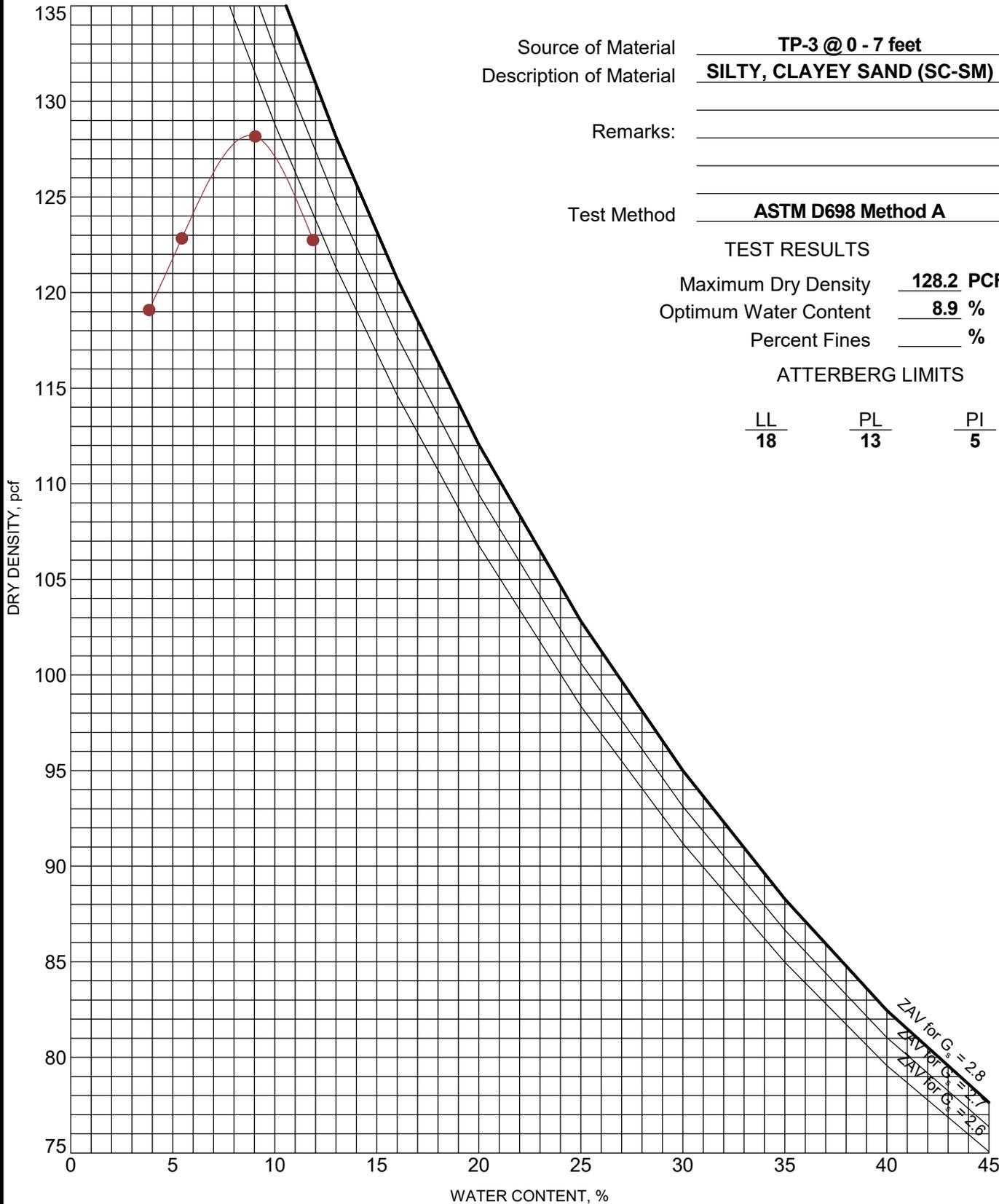


PROJECT NUMBER: CJ195626  
 CLIENT: Crawford Murphy & Tilly, Inc. Indianapolis, IN

# MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. COMPACTION - V2 CJ195626 SHERMAN PARK IMPR.GPJ 02195238 US 50 AND CHIPMAN.GPJ 1/25/21



Source of Material TP-3 @ 0 - 7 feet  
 Description of Material SILTY, CLAYEY SAND (SC-SM)

Remarks: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Test Method ASTM D698 Method A

**TEST RESULTS**

Maximum Dry Density 128.2 PCF  
 Optimum Water Content 8.9 %  
 Percent Fines \_\_\_\_\_ %

**ATTEBERG LIMITS**

LL      PL      PI  
18      13      5

ZAV for G<sub>s</sub> = 2.8  
 ZAV for G<sub>s</sub> = 2.65  
 ZAV for G<sub>s</sub> = 2.5

PROJECT: Sherman Park Infrastructure Development

SITE: Indianapolis, IN



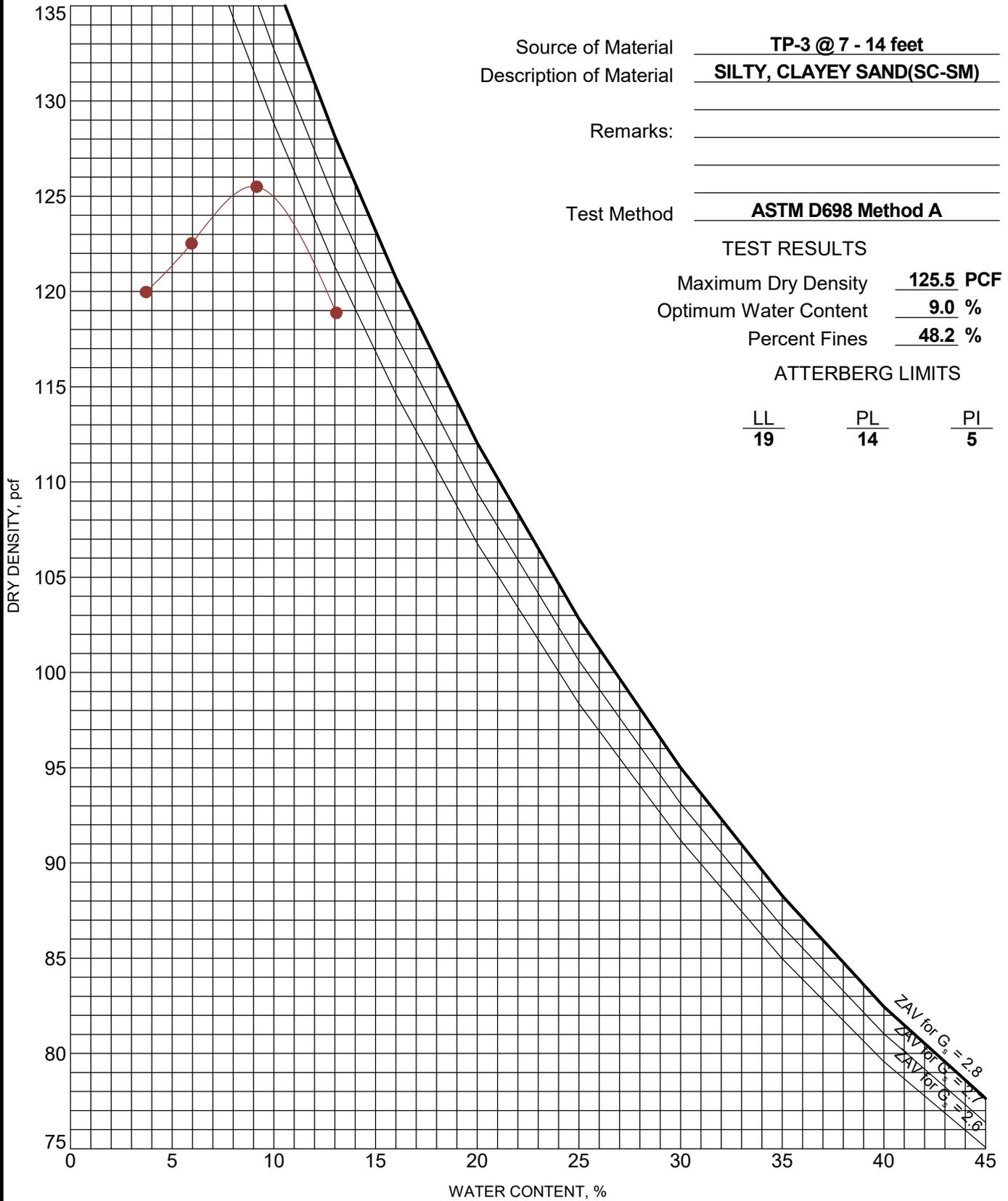
PROJECT NUMBER: CJ195626

CLIENT: Crawford Murphy & Tilly, Inc. Indianapolis, IN

# MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. COMPACTION - V2 CJ195626 SHERMAN PARK IMPR.GPJ 02195238 US 50 AND CHIPMAN.GPJ 1/25/21



Source of Material TP-3 @ 7 - 14 feet  
 Description of Material SILTY, CLAYEY SAND(SC-SM)

Remarks: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Test Method ASTM D698 Method A

**TEST RESULTS**

Maximum Dry Density 125.5 PCF  
 Optimum Water Content 9.0 %  
 Percent Fines 48.2 %

**ATTERBERG LIMITS**

LL      PL      PI  
19      14      5

PROJECT: Sherman Park Infrastructure Development  
 SITE: Indianapolis, IN

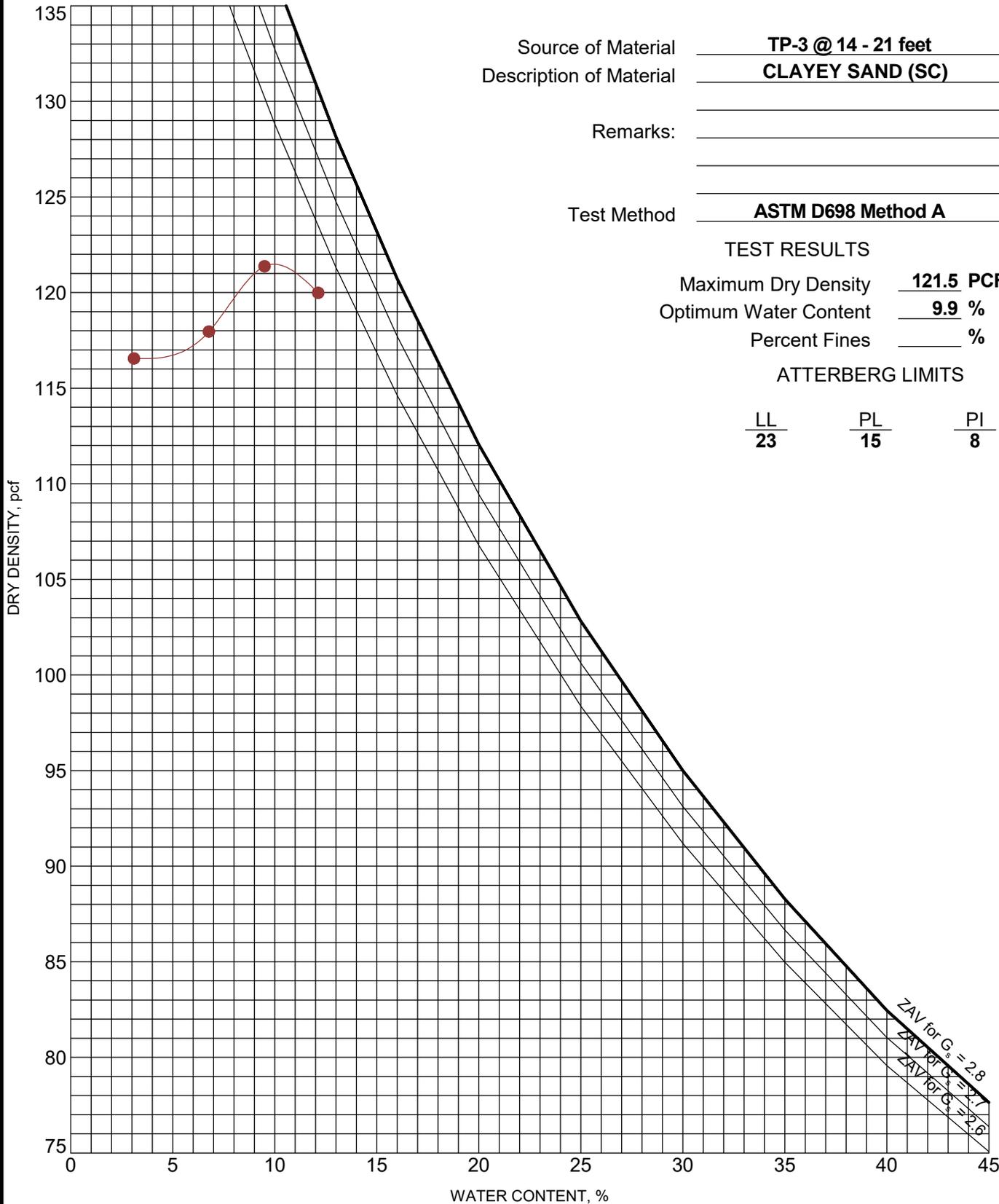


PROJECT NUMBER: CJ195626  
 CLIENT: Crawford Murphy & Tilly, Inc. Indianapolis, IN

# MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. COMPACTION - V2 CJ195626 SHERMAN PARK IMPR.GPJ 02195238 US 50 AND CHIPMAN.GPJ 1/25/21



Source of Material TP-3 @ 14 - 21 feet  
 Description of Material CLAYEY SAND (SC)  
 Remarks: \_\_\_\_\_  
 Test Method ASTM D698 Method A

PROJECT: Sherman Park Infrastructure Development

SITE: Indianapolis, IN



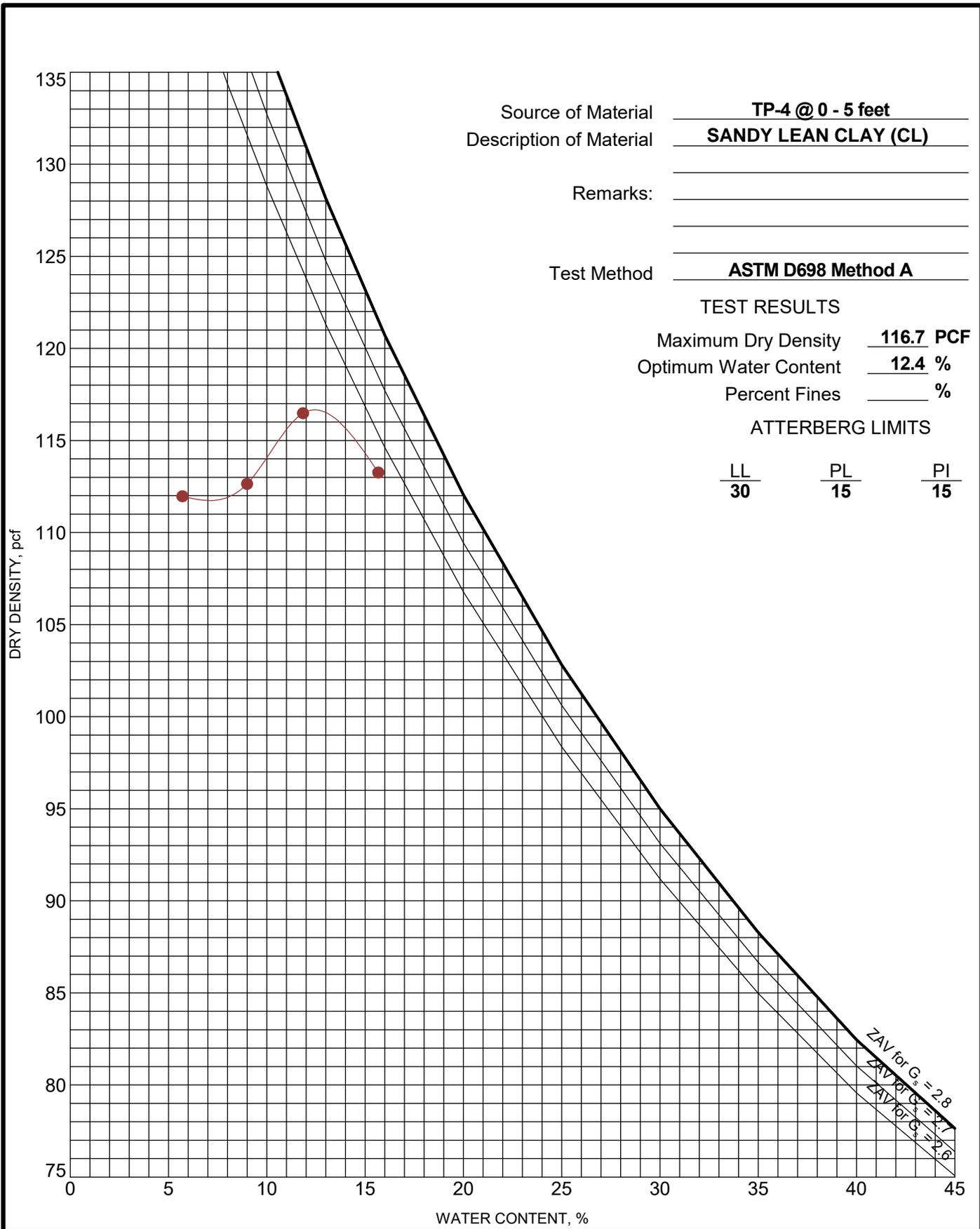
PROJECT NUMBER: CJ195626

CLIENT: Crawford Murphy & Tilly, Inc. Indianapolis, IN

# MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. COMPACTION - V2 CJ195626 SHERMAN PARK IMPR.GPJ 02195238 US 50 AND CHIPMAN.GPJ 1/25/21



Source of Material TP-4 @ 0 - 5 feet  
 Description of Material SANDY LEAN CLAY (CL)

Remarks: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Test Method ASTM D698 Method A

**TEST RESULTS**

Maximum Dry Density 116.7 PCF  
 Optimum Water Content 12.4 %  
 Percent Fines \_\_\_\_\_ %

**ATTERBERG LIMITS**

LL      PL      PI  
30      15      15

ZAV for G<sub>s</sub> = 2.8  
 ZAV for G<sub>s</sub> = 2.65  
 ZAV for G<sub>s</sub> = 2.5

PROJECT: Sherman Park Infrastructure Development

SITE: Indianapolis, IN



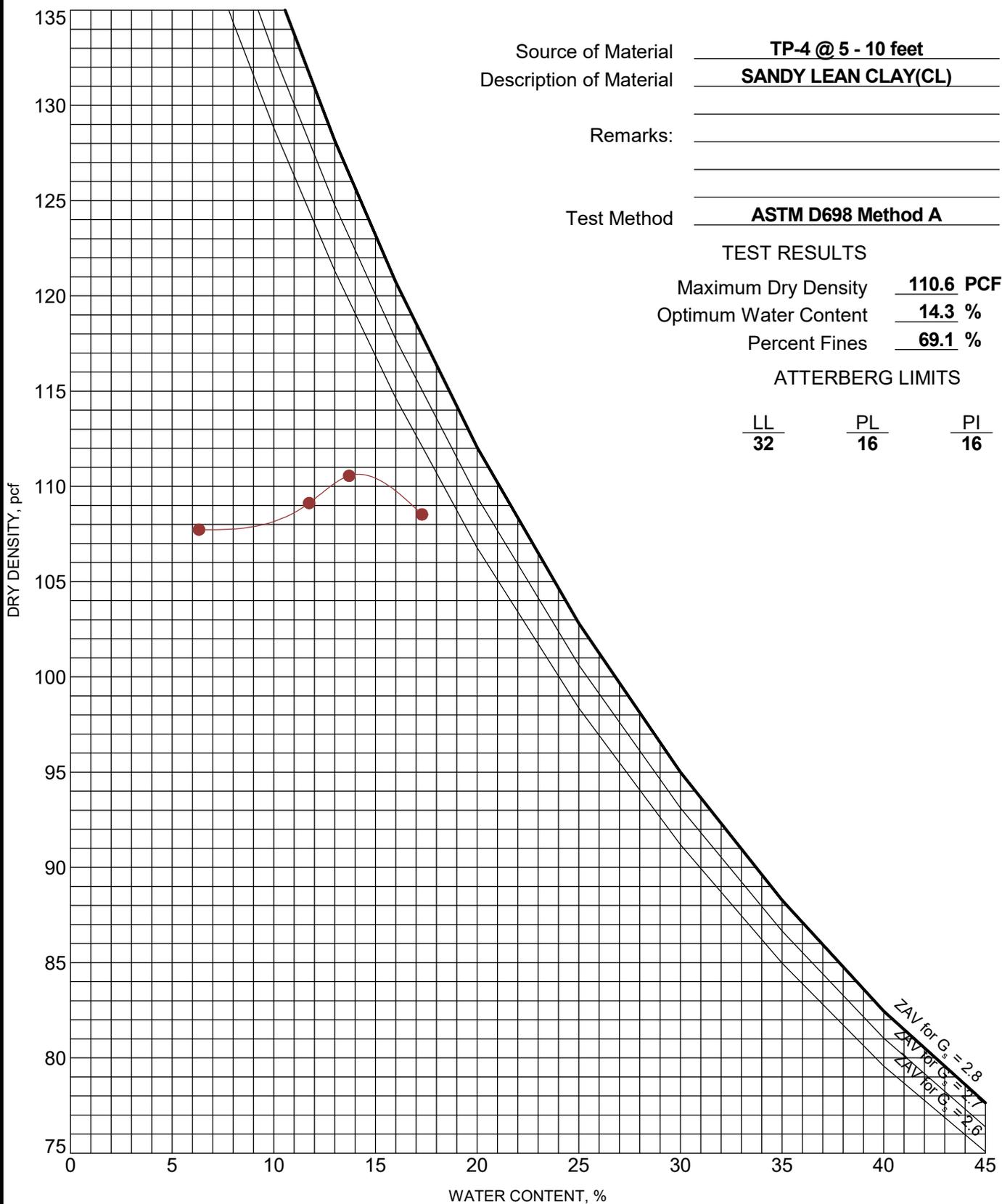
PROJECT NUMBER: CJ195626

CLIENT: Crawford Murphy & Tilly, Inc. Indianapolis, IN

# MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. COMPACTION - V2 CJ195626 SHERMAN PARK IMPR.GPJ 02195238 US 50 AND CHIPMAN.GPJ 1/25/21



Source of Material TP-4 @ 5 - 10 feet  
 Description of Material SANDY LEAN CLAY(CL)  
 Remarks: \_\_\_\_\_  
 Test Method ASTM D698 Method A

**TEST RESULTS**

Maximum Dry Density 110.6 PCF  
 Optimum Water Content 14.3 %  
 Percent Fines 69.1 %

**ATTERBERG LIMITS**

LL	PL	PI
<u>32</u>	<u>16</u>	<u>16</u>

PROJECT: Sherman Park Infrastructure Development  
 SITE: Indianapolis, IN

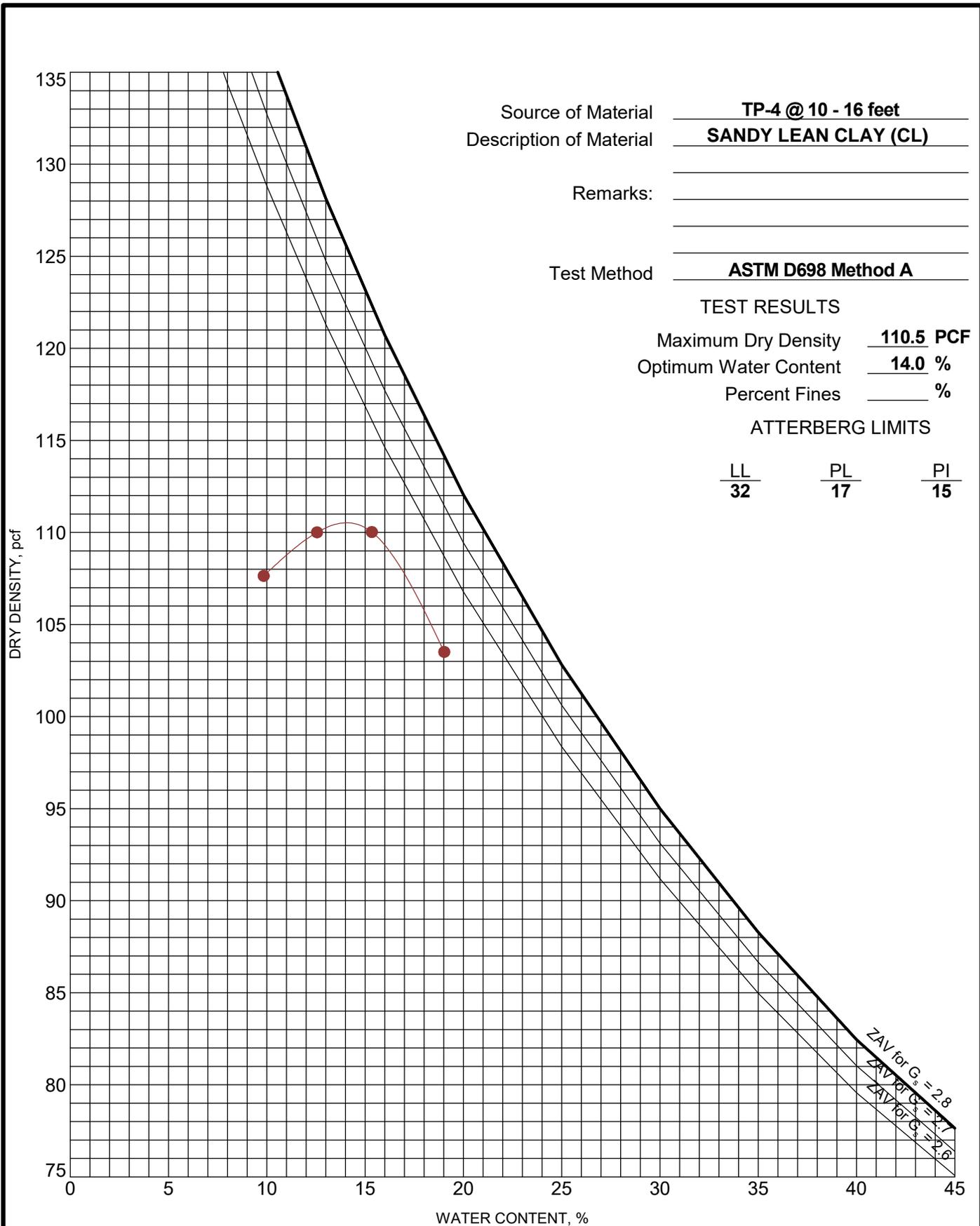


PROJECT NUMBER: CJ195626  
 CLIENT: Crawford Murphy & Tilly, Inc. Indianapolis, IN

# MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. COMPACTION - V2 CJ195626 SHERMAN PARK IMPR.GPJ 02195238 US 50 AND CHIPMAN.GPJ 1/25/21



Source of Material TP-4 @ 10 - 16 feet  
 Description of Material SANDY LEAN CLAY (CL)  
 Remarks: \_\_\_\_\_  
 Test Method ASTM D698 Method A

**TEST RESULTS**

Maximum Dry Density 110.5 PCF  
 Optimum Water Content 14.0 %  
 Percent Fines \_\_\_\_\_ %

**ATTERBERG LIMITS**

LL      PL      PI  
32      17      15

ZAV for G<sub>s</sub> = 2.8  
 ZAV for G<sub>s</sub> = 2.65  
 ZAV for G<sub>s</sub> = 2.5

PROJECT: Sherman Park Infrastructure Development

SITE: Indianapolis, IN



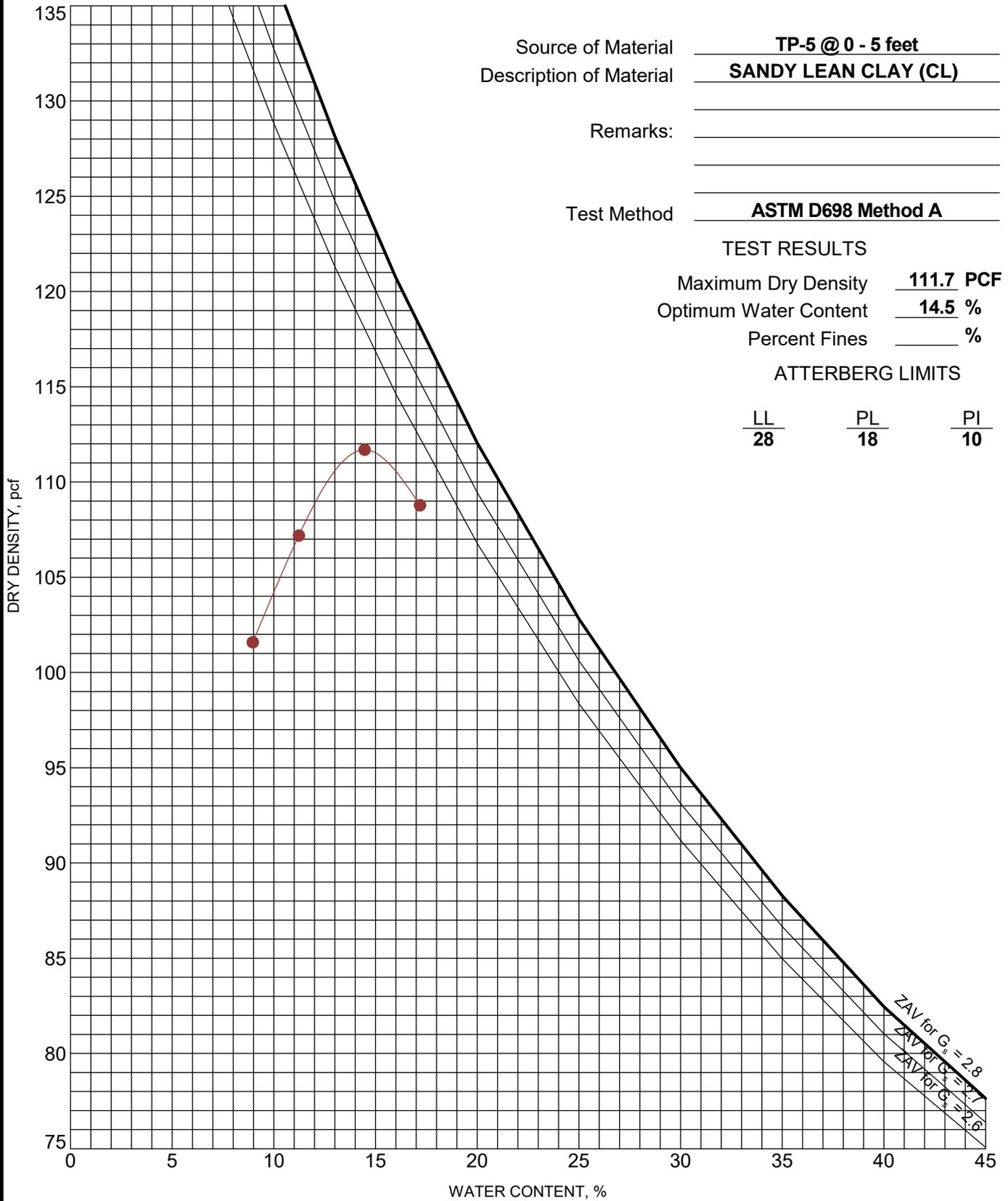
PROJECT NUMBER: CJ195626

CLIENT: Crawford Murphy & Tilly, Inc. Indianapolis, IN

# MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. COMPACTION - V2 CJ195626 SHERMAN PARK IMPR.GPJ 02195238 US 50 AND CHIPMAN.GPJ 1/25/21



Source of Material TP-5 @ 0 - 5 feet  
 Description of Material SANDY LEAN CLAY (CL)

Remarks: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Test Method ASTM D698 Method A

### TEST RESULTS

Maximum Dry Density 111.7 PCF  
 Optimum Water Content 14.5 %  
 Percent Fines \_\_\_\_\_ %

### ATTERBERG LIMITS

LL      PL      PI  
28      18      10

PROJECT: Sherman Park Infrastructure Development

SITE: Indianapolis, IN



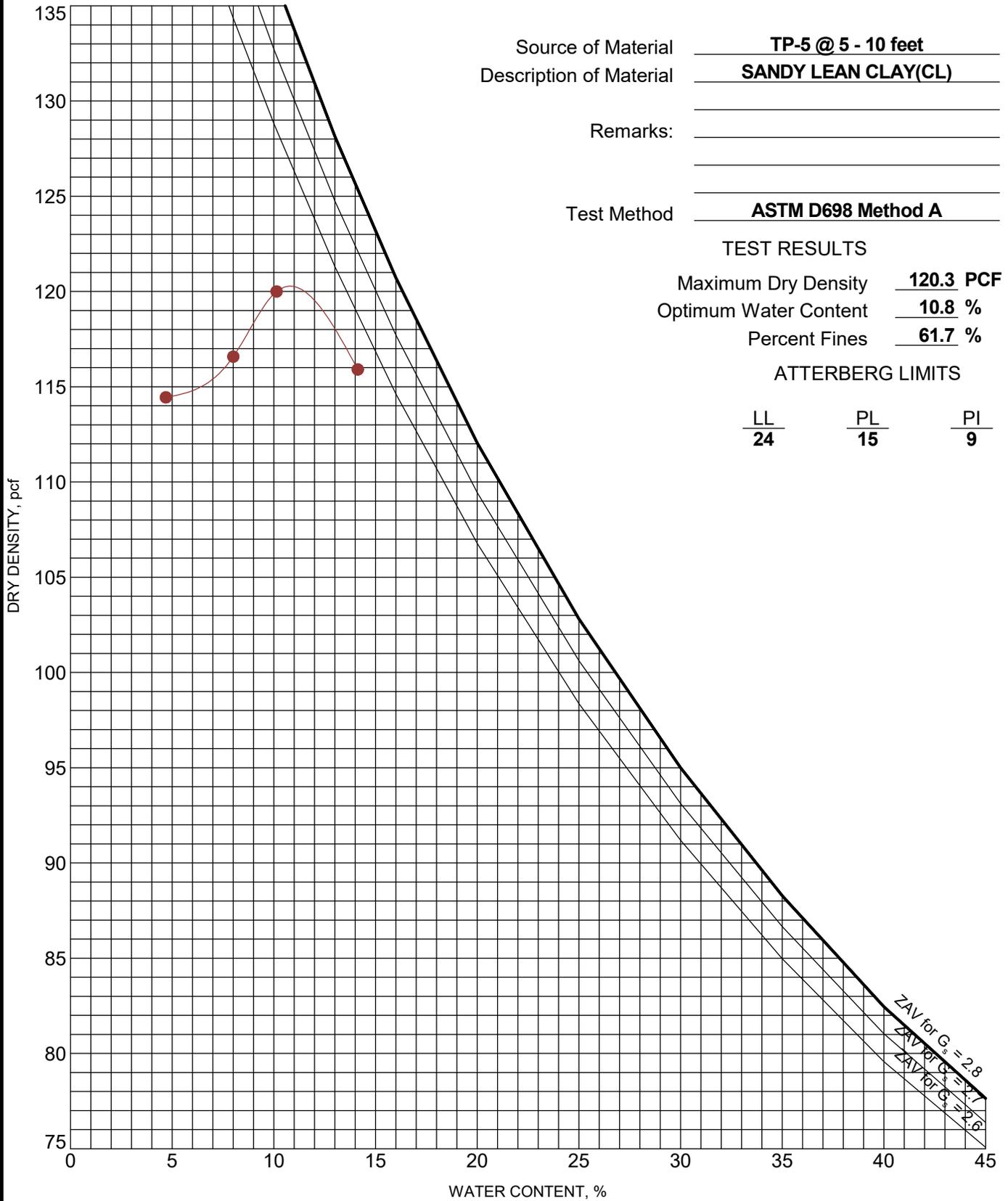
PROJECT NUMBER: CJ195626

CLIENT: Crawford Murphy & Tilly, Inc.  
 Indianapolis, IN

# MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. COMPACTION - V2 CJ195626 SHERMAN PARK IMPR.GPJ 02195238 US 50 AND CHIPMAN.GPJ 1/25/21



Source of Material TP-5 @ 5 - 10 feet  
 Description of Material SANDY LEAN CLAY(CL)

Remarks: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Test Method ASTM D698 Method A

### TEST RESULTS

Maximum Dry Density 120.3 PCF  
 Optimum Water Content 10.8 %  
 Percent Fines 61.7 %

### ATTERBERG LIMITS

LL      PL      PI  
24      15      9

ZAV for G<sub>s</sub> = 2.8  
 ZAV for G<sub>s</sub> = 2.65  
 ZAV for G<sub>s</sub> = 2.5

PROJECT: Sherman Park Infrastructure Development

SITE: Indianapolis, IN



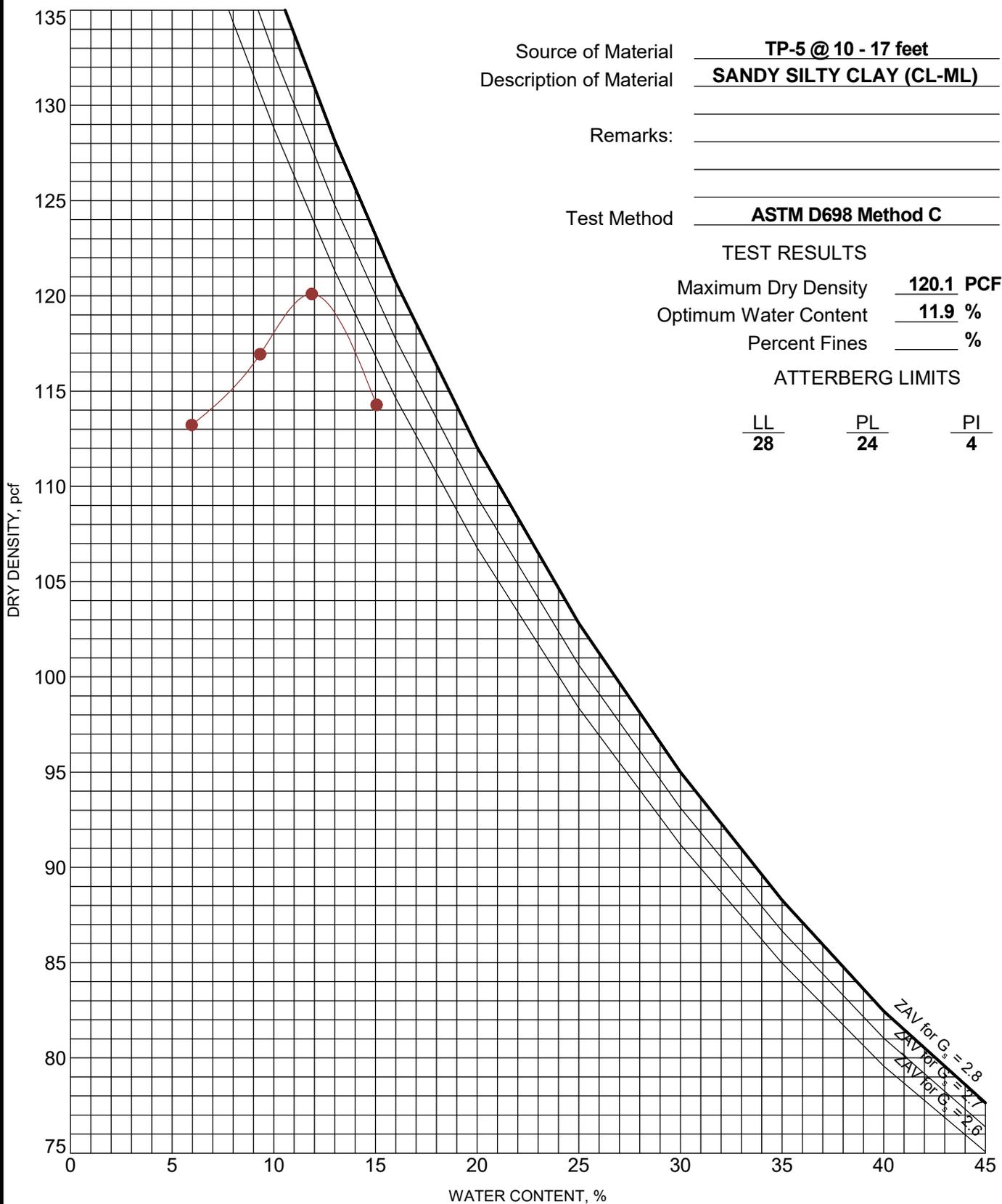
PROJECT NUMBER: CJ195626

CLIENT: Crawford Murphy & Tilly, Inc. Indianapolis, IN

# MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. COMPACTION - V2 CJ195626 SHERMAN PARK IMPR.GPJ 02195238 US 50 AND CHIPMAN.GPJ 1/25/21



Source of Material TP-5 @ 10 - 17 feet  
 Description of Material SANDY SILTY CLAY (CL-ML)  
 Remarks: \_\_\_\_\_  
 Test Method ASTM D698 Method C

**TEST RESULTS**

Maximum Dry Density 120.1 PCF  
 Optimum Water Content 11.9 %  
 Percent Fines \_\_\_\_\_ %

**ATTERBERG LIMITS**

LL      PL      PI  
28      24      4

PROJECT: Sherman Park Infrastructure Development  
 SITE: Indianapolis, IN

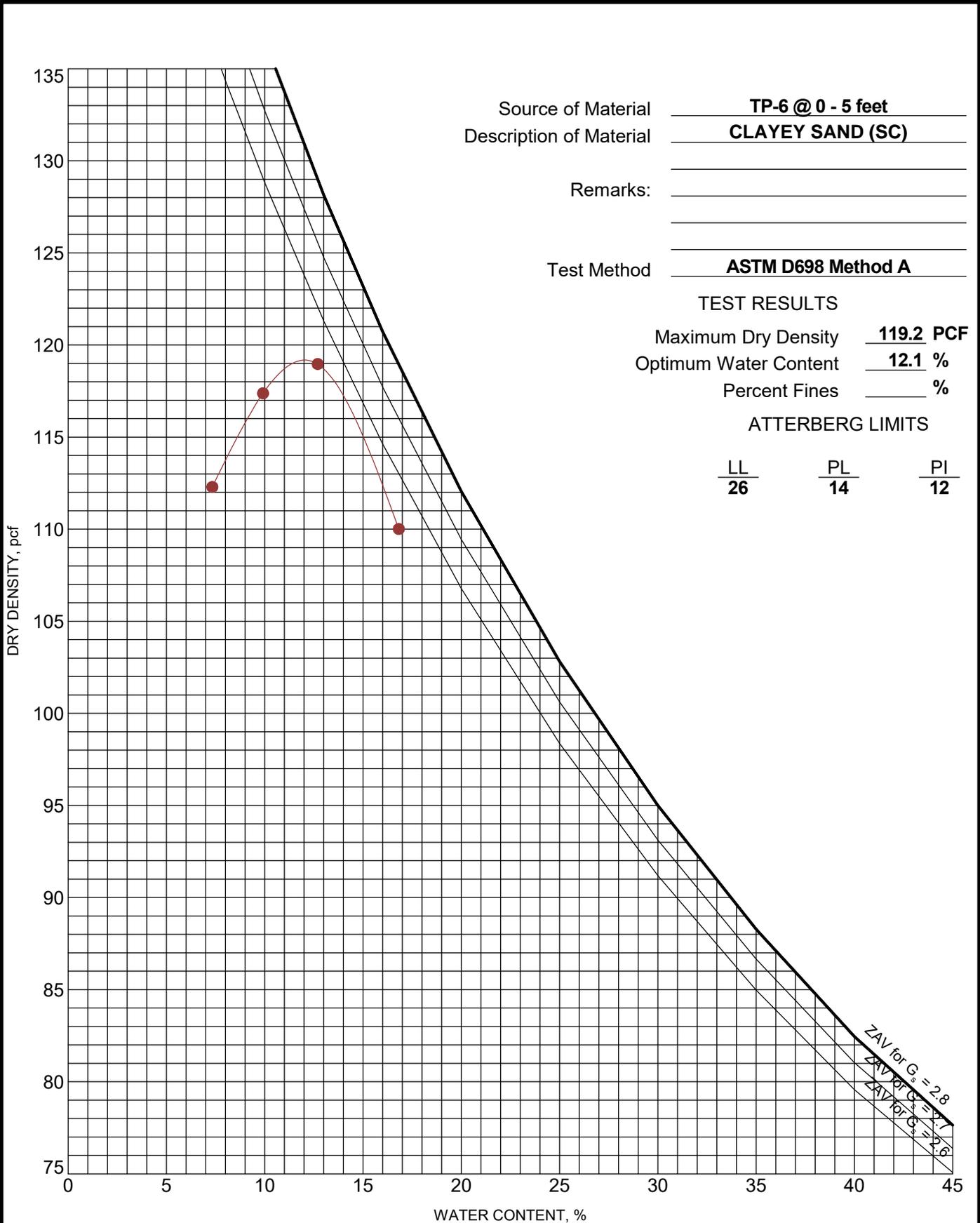


PROJECT NUMBER: CJ195626  
 CLIENT: Crawford Murphy & Tilly, Inc. Indianapolis, IN

# MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. COMPACTION - V2 CJ195626 SHERMAN PARK IMPR.GPJ 02195238 US 50 AND CHIPMAN.GPJ 1/25/21



Source of Material TP-6 @ 0 - 5 feet  
 Description of Material CLAYEY SAND (SC)  
 Remarks: \_\_\_\_\_  
 Test Method ASTM D698 Method A

**TEST RESULTS**

Maximum Dry Density 119.2 PCF  
 Optimum Water Content 12.1 %  
 Percent Fines \_\_\_\_\_ %

**ATTERBERG LIMITS**

LL	PL	PI
<u>26</u>	<u>14</u>	<u>12</u>

PROJECT: Sherman Park Infrastructure Development  
 SITE: Indianapolis, IN

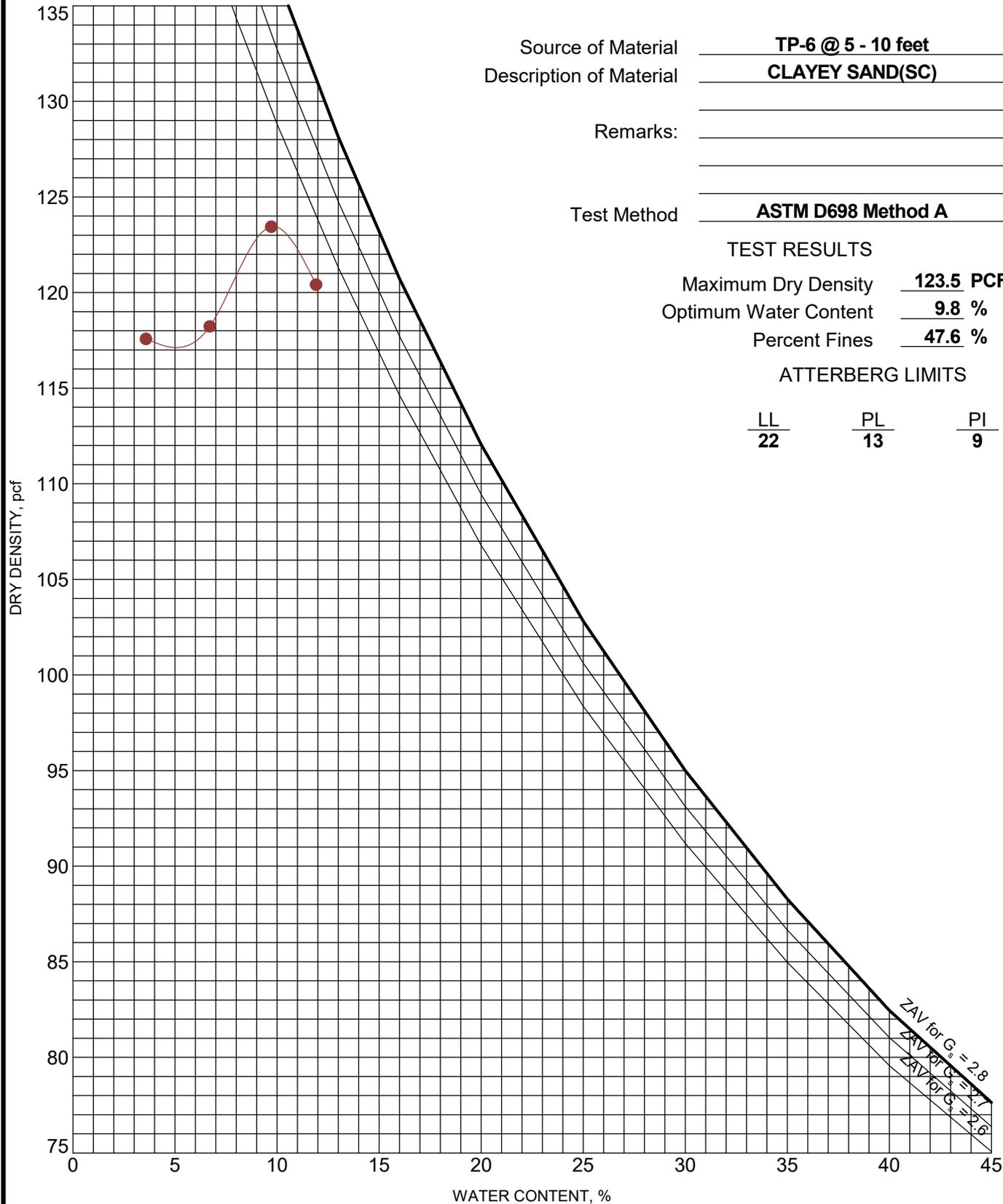


PROJECT NUMBER: CJ195626  
 CLIENT: Crawford Murphy & Tilly, Inc. Indianapolis, IN

# MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. COMPACTION - V2 CJ195626 SHERMAN PARK IMPR.GPJ 02195238 US 50 AND CHIPMAN.GPJ 1/25/21



Source of Material TP-6 @ 5 - 10 feet  
 Description of Material CLAYEY SAND(SC)

Remarks: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Test Method ASTM D698 Method A

### TEST RESULTS

Maximum Dry Density 123.5 PCF  
 Optimum Water Content 9.8 %  
 Percent Fines 47.6 %

### ATTERBERG LIMITS

LL      PL      PI  
22      13      9

PROJECT: Sherman Park Infrastructure Development

SITE: Indianapolis, IN



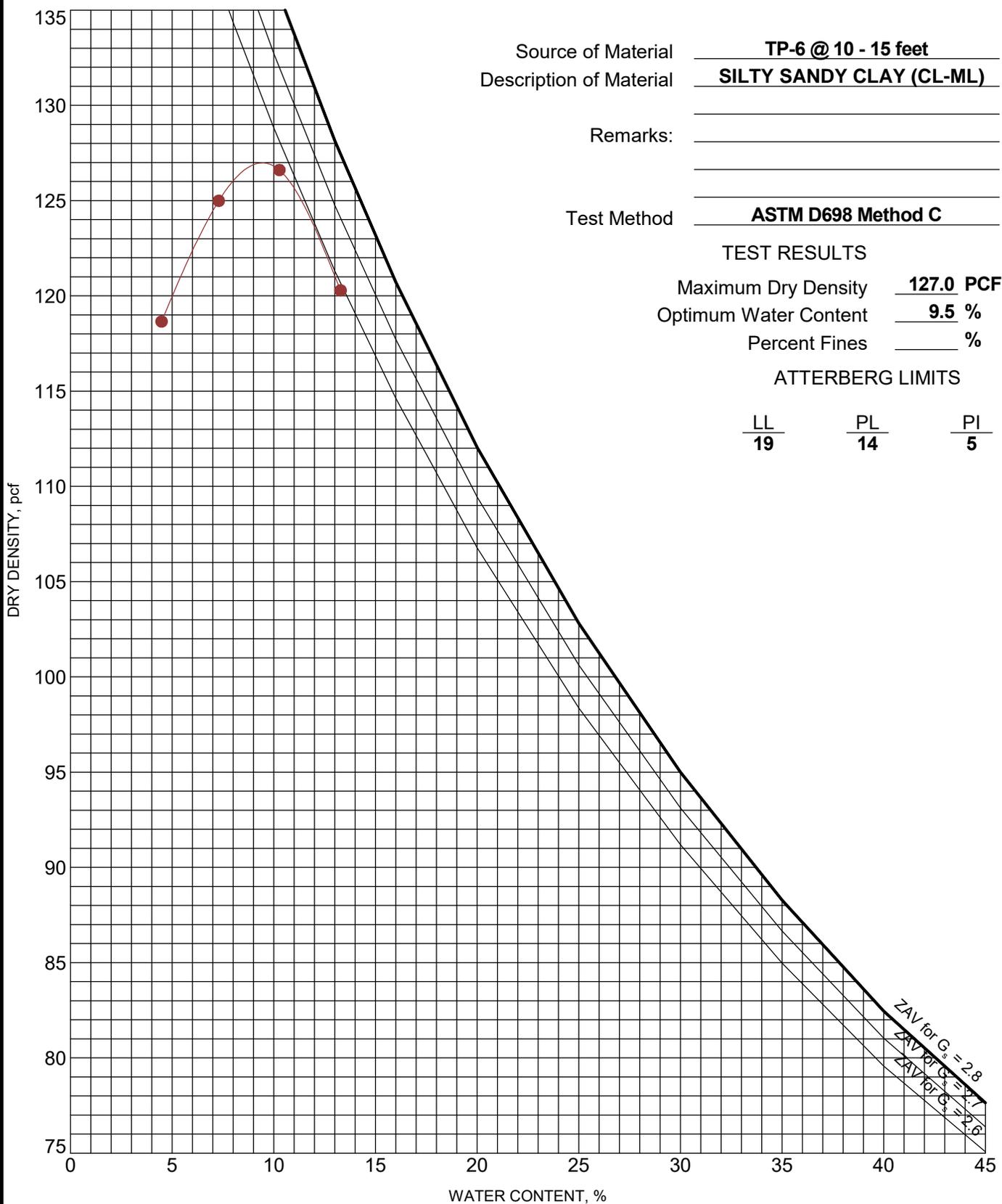
PROJECT NUMBER: CJ195626

CLIENT: Crawford Murphy & Tilly, Inc. Indianapolis, IN

# MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. COMPACTION - V2 CJ195626 SHERMAN PARK IMPR.GPJ 02195238 US 50 AND CHIPMAN.GPJ 1/25/21



Source of Material TP-6 @ 10 - 15 feet  
 Description of Material SILTY SANDY CLAY (CL-ML)  
 Remarks: \_\_\_\_\_  
 Test Method ASTM D698 Method C

**TEST RESULTS**

Maximum Dry Density 127.0 PCF  
 Optimum Water Content 9.5 %  
 Percent Fines \_\_\_\_\_ %

**ATTERBERG LIMITS**

LL      PL      PI  
19      14      5

PROJECT: Sherman Park Infrastructure Development  
 SITE: Indianapolis, IN

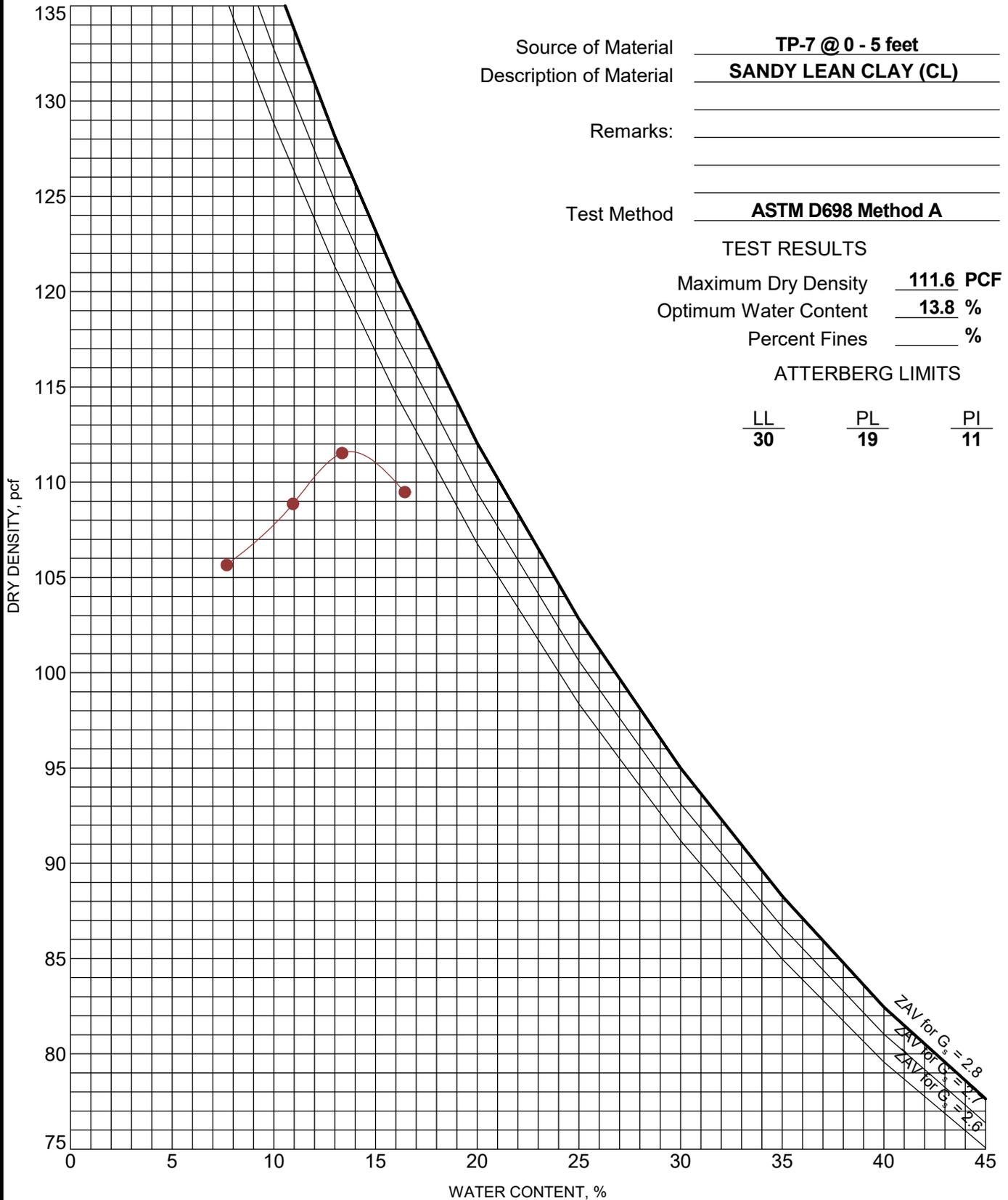


PROJECT NUMBER: CJ195626  
 CLIENT: Crawford Murphy & Tilly, Inc. Indianapolis, IN

# MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557

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Source of Material TP-7 @ 0 - 5 feet  
 Description of Material SANDY LEAN CLAY (CL)

Remarks: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Test Method ASTM D698 Method A

### TEST RESULTS

Maximum Dry Density 111.6 PCF  
 Optimum Water Content 13.8 %  
 Percent Fines \_\_\_\_\_ %

### ATTERBERG LIMITS

LL	PL	PI
<u>30</u>	<u>19</u>	<u>11</u>

PROJECT: Sherman Park Infrastructure Development

SITE: Indianapolis, IN



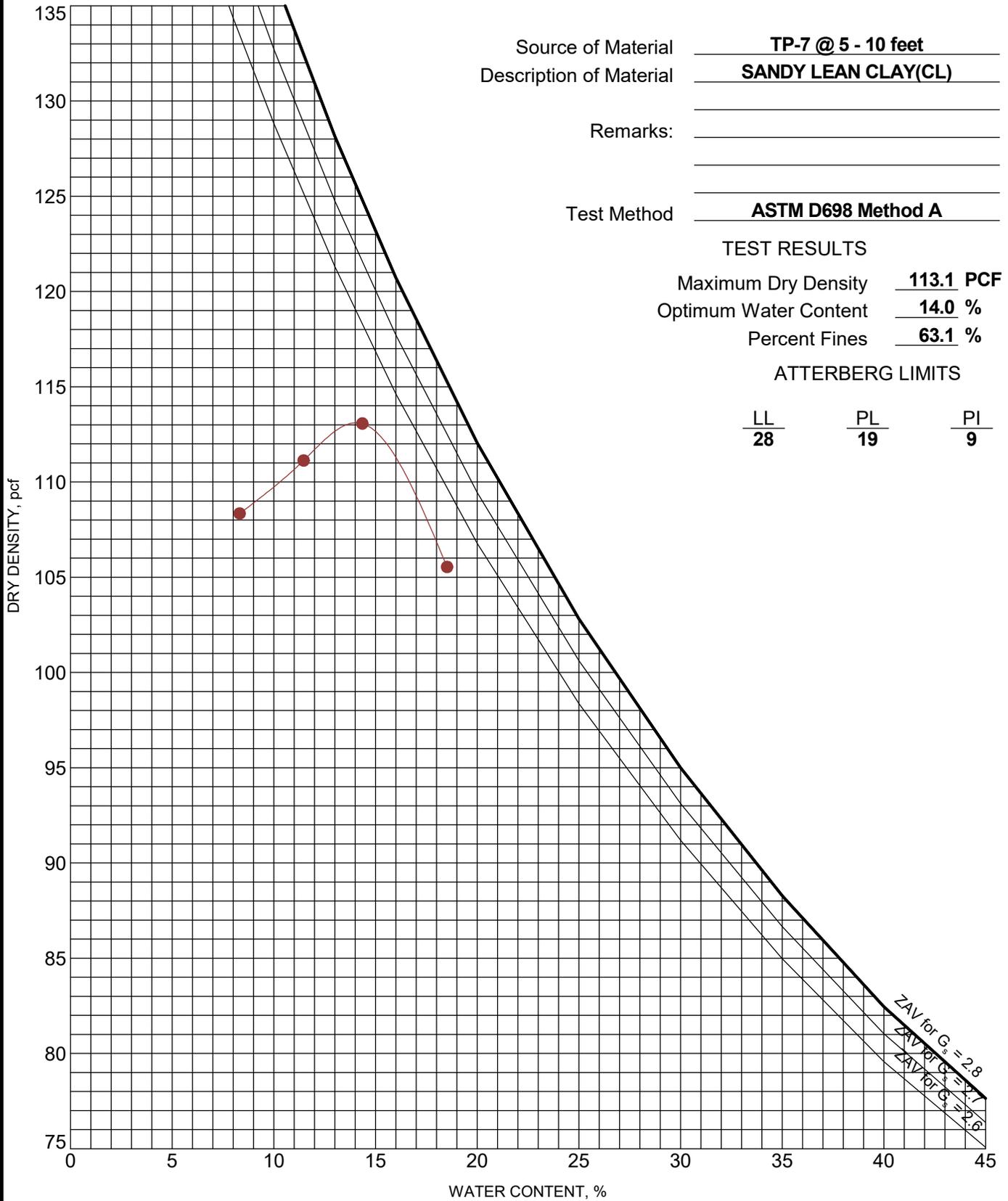
PROJECT NUMBER: CJ195626

CLIENT: Crawford Murphy & Tilly, Inc. Indianapolis, IN

# MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557

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Source of Material TP-7 @ 5 - 10 feet  
 Description of Material SANDY LEAN CLAY(CL)  
 Remarks: \_\_\_\_\_  
 Test Method ASTM D698 Method A

PROJECT: Sherman Park Infrastructure Development  
 SITE: Indianapolis, IN

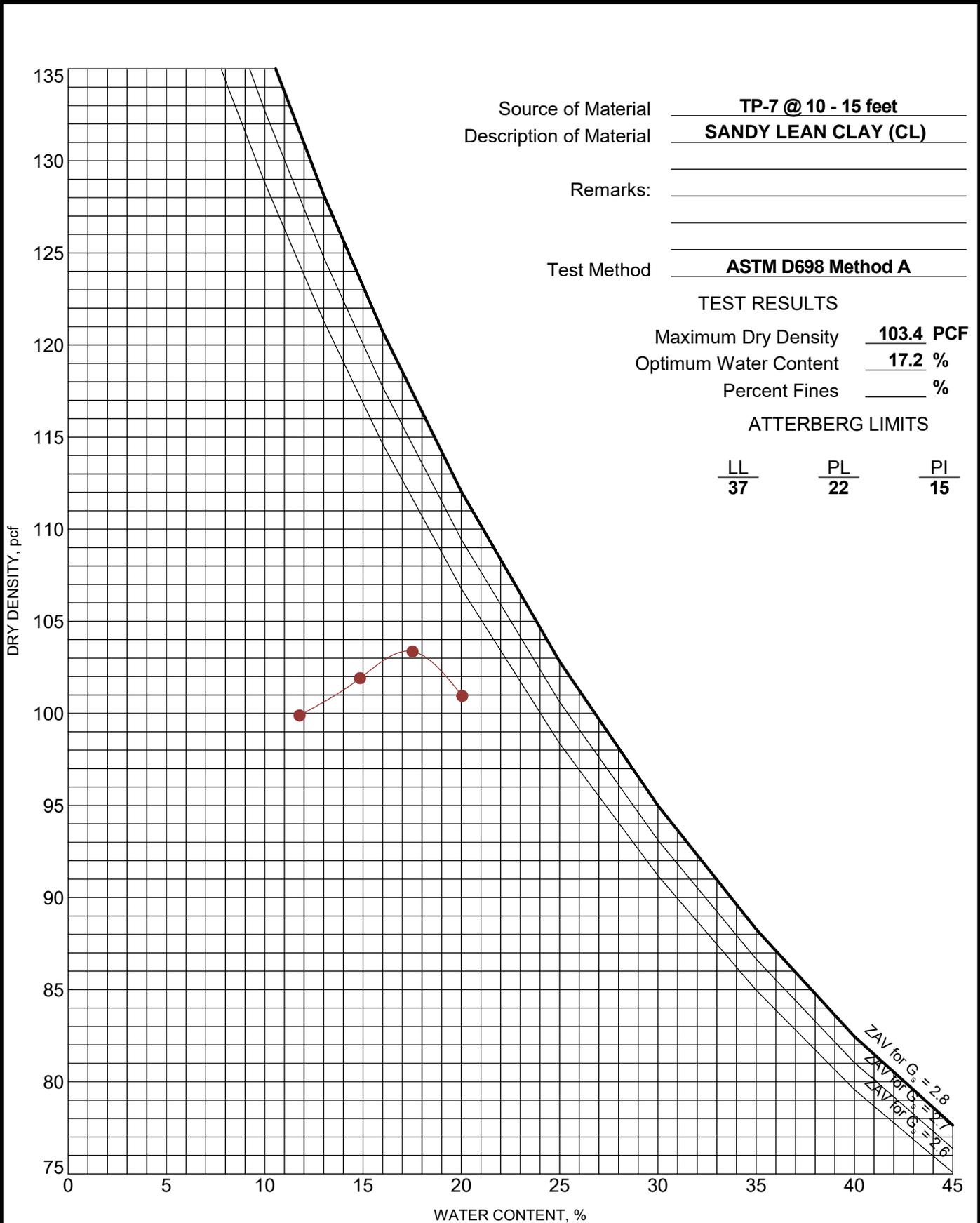


PROJECT NUMBER: CJ195626  
 CLIENT: Crawford Murphy & Tilly, Inc.  
 Indianapolis, IN

# MOISTURE-DENSITY RELATIONSHIP

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LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. COMPACTION - V2 CJ195626 SHERMAN PARK IMPR.GPJ 02195238 US 50 AND CHIPMAN.GPJ 1/25/21



Source of Material TP-7 @ 10 - 15 feet  
 Description of Material SANDY LEAN CLAY (CL)  
 Remarks: \_\_\_\_\_  
 Test Method ASTM D698 Method A

PROJECT: Sherman Park Infrastructure Development  
 SITE: Indianapolis, IN



PROJECT NUMBER: CJ195626  
 CLIENT: Crawford Murphy & Tilly, Inc.  
 Indianapolis, IN



## **SUPPORTING INFORMATION**

### **Contents:**

Unified Soil Classification System

Note: All attachments are one page unless noted above.

# UNIFIED SOIL CLASSIFICATION SYSTEM

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests <sup>A</sup>				Soil Classification		
				Group Symbol	Group Name <sup>B</sup>	
<b>Coarse-Grained Soils:</b> More than 50% retained on No. 200 sieve	<b>Gravels:</b> More than 50% of coarse fraction retained on No. 4 sieve	<b>Clean Gravels:</b> Less than 5% fines <sup>C</sup>	$Cu \geq 4$ and $1 \leq Cc \leq 3$ <sup>E</sup>	GW	Well-graded gravel <sup>F</sup>	
			$Cu < 4$ and/or $[Cc < 1 \text{ or } Cc > 3.0]$ <sup>E</sup>	GP	Poorly graded gravel <sup>F</sup>	
		<b>Gravels with Fines:</b> More than 12% fines <sup>C</sup>	Fines classify as ML or MH	GM	Silty gravel <sup>F, G, H</sup>	
			Fines classify as CL or CH	GC	Clayey gravel <sup>F, G, H</sup>	
	<b>Sands:</b> 50% or more of coarse fraction passes No. 4 sieve	<b>Clean Sands:</b> Less than 5% fines <sup>D</sup>	$Cu \geq 6$ and $1 \leq Cc \leq 3$ <sup>E</sup>	SW	Well-graded sand <sup>I</sup>	
			$Cu < 6$ and/or $[Cc < 1 \text{ or } Cc > 3.0]$ <sup>E</sup>	SP	Poorly graded sand <sup>I</sup>	
		<b>Sands with Fines:</b> More than 12% fines <sup>D</sup>	Fines classify as ML or MH	SM	Silty sand <sup>G, H, I</sup>	
			Fines classify as CL or CH	SC	Clayey sand <sup>G, H, I</sup>	
<b>Fine-Grained Soils:</b> 50% or more passes the No. 200 sieve	<b>Silts and Clays:</b> Liquid limit less than 50	<b>Inorganic:</b>	$PI > 7$ and plots on or above "A" line	CL	Lean clay <sup>K, L, M</sup>	
			$PI < 4$ or plots below "A" line <sup>J</sup>	ML	Silt <sup>K, L, M</sup>	
		<b>Organic:</b>	Liquid limit - oven dried	< 0.75	OL	Organic clay <sup>K, L, M, N</sup>
			Liquid limit - not dried			Organic silt <sup>K, L, M, O</sup>
	<b>Silts and Clays:</b> Liquid limit 50 or more	<b>Inorganic:</b>	$PI$ plots on or above "A" line	CH	Fat clay <sup>K, L, M</sup>	
			$PI$ plots below "A" line	MH	Elastic Silt <sup>K, L, M</sup>	
		<b>Organic:</b>	Liquid limit - oven dried	< 0.75	OH	Organic clay <sup>K, L, M, P</sup>
			Liquid limit - not dried			Organic silt <sup>K, L, M, Q</sup>
	<b>Highly organic soils:</b>	Primarily organic matter, dark in color, and organic odor			PT	Peat

<sup>A</sup> Based on the material passing the 3-inch (75-mm) sieve.

<sup>B</sup> If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

<sup>C</sup> Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.

<sup>D</sup> Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay.

$$E \quad Cu = D_{60}/D_{10} \quad Cc = \frac{(D_{30})^2}{D_{10} \times D_{60}}$$

<sup>F</sup> If soil contains  $\geq 15\%$  sand, add "with sand" to group name.

<sup>G</sup> If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

<sup>H</sup> If fines are organic, add "with organic fines" to group name.

<sup>I</sup> If soil contains  $\geq 15\%$  gravel, add "with gravel" to group name.

<sup>J</sup> If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.

<sup>K</sup> If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.

<sup>L</sup> If soil contains  $\geq 30\%$  plus No. 200 predominantly sand, add "sandy" to group name.

<sup>M</sup> If soil contains  $\geq 30\%$  plus No. 200, predominantly gravel, add "gravelly" to group name.

<sup>N</sup>  $PI \geq 4$  and plots on or above "A" line.

<sup>O</sup>  $PI < 4$  or plots below "A" line.

<sup>P</sup>  $PI$  plots on or above "A" line.

<sup>Q</sup>  $PI$  plots below "A" line.

