MCC Addendum #1 Narrative
10/11/24

Sunman-Dearborn Community Schools – BP#2
ADDENDUM #1
October 11, 2024

This Addendum is hereby made a part of the Drawings and Specifications on the subject work as though originally included therein. The following amendments, additions, and/or corrections shall govern this work.

General

1) All contractors **MUST BE** prequalified to submit a bid as a Tier-1 contractor on this project. Reach out to Maxwell Construction if you are unsure if you are pre-qualified.
2) All substitution requests and questions must be submitted to chudepohl@maxwellbuilds.com by noon on Monday 10/21/24.
3) See attached Pre-Bid Sign-in Sheet for a list of the Pre-Bid meeting attendees.
4) See attached Pre-Bid Meeting Notes for general notes from the meeting.
5) Final 01 21 00 Allowance, 00 43 22 Unit Price, and 00 43 23 Alternates Forms to be distributed with Final Addendum.
    a. Refer to bottom of Addendum 1 for additions/ clarifications to each of these forms.

Attachments

1. Pre-bid Agenda
2. Pre-bid Sign-in Sheet
3. Billing Schedule
4. Geotech Report
5. Environmental Report
    a. All areas of work as outlined in report are negative for asbestos.

General Clarifications, Questions, and Answers

1. **Q:** When are billings due each month?
    i. **A:** Refer to the attached billing schedule which goes through June ’26. An updated schedule for work extending past June ’26 will be distributed to the low and responsive contractors that are awarded for this project.
2. **Q:** The Matterport links supplied do no work. Please provide updated links for each school.
    i. **A:** See below
    ii. **East Central High School:**
    iii. Units A & B – https://link.edgepilot.com/s/ba12fb5e/ce_DuHc-2kGR1UivTkeGPA?u=https://my.matterport.com/show/?m=oT8zBc2FHeZ
    iv. Units B, C, & D – https://link.edgepilot.com/s/a1433787/LsreyfFGAEi_Ym3326iFEQ?u=https://my.matterport.com/show/?m=VaGbFritRPJ
    v. Units D & E – https://link.edgepilot.com/s/e6811083/fWIk3qIgpEiiUsVL8YUW3w?u=https://my.matterport.com/show/?m=QVDDPdF4iqZ
    vi. Units D & G – https://link.edgepilot.com/s/9a5a267a/g9MdcKDVJUCY6bwXb8pVuA?u=https://my.matterport.com/show/?m=8iuz6tGUAPc
    vii. Unit F – https://link.edgepilot.com/s/7e8fac29/6d3aQJO6d0SeScYIuToPig?u=https://my.matterport.com/show/?m=fejthVZXUCD

viii. Units G & H – https://link.edgepilot.com/s/15a4a312/-hC4P_mI4EiSE8uvLL07zw?u=https://my.matterport.com/show/?m=DWEyoPU7WgH
ix. Units H, J, & M – https://link.edgepilot.com/s/6c7a23cb/PA8Sf_eZpkOeIxgV8B03fQ?u=https://my.matterport.com/show/?m=Gk5EHMBiZpb
x. Units J, K, L, & M – https://link.edgepilot.com/s/0b73a158/SFu61GBt7kiTYnBWwTbl2Q?u=https://my.matterport.com/show/?m=U18VfsR2yZM
xi. Second Floor Units A & B – https://link.edgepilot.com/s/bbe7a011/EWrVgX6zoEGC0dNTYIIw0A?u=https://my.matterport.com/show/?m=Ddece4DUVdn

xii. Sunman-Dearborn Middle School

xiii. First Floor Classrooms – https://link.edgepilot.com/s/c50a01a6/TQiIfwUJgUy4T-F78H4Qng?u=https://my.matterport.com/show/?m=8seJVi71BZZ
xiv. First Floor Cafeteria/Gym – https://link.edgepilot.com/s/0800e3eb/cwuw-GqExUmorqr1VZTvUQ?u=https://my.matterport.com/show/?m=TGtB8HYjcfc
xv. Second Floor/Mechanical – https://link.edgepilot.com/s/c0e04734/WFJsfcYiCUSKZ2ll9HYJlQ?u=https://my.matterport.com/show/?m=qtATbpTkpac

xvi. Bright Elementary:

xvii. Area A & B – https://link.edgepilot.com/s/8c551610/S12QXKmKQUGansNW4AYOeg?u=https://my.matterport.com/show/?m=BVezeywzjKF
xviii. Area C – https://link.edgepilot.com/s/7da0c438/4AkvPpFtrUOPCftVwJGpZw?u=https://my.matterport.com/show/?m=1idEiMoKoxH
xix. Basement – https://link.edgepilot.com/s/d110f6c7/jY9VHKdcQEmH4O-tmCLgUg?u=https://my.matterport.com/show/?m=ZCfdmHVu3tf
xx. Mechanical Mezzanine – https://link.edgepilot.com/s/120c5883/zX_rZuyeaka3G1j_HU7ABg?u=https://my.matterport.com/show/?m=v9Qf4pYiDhT

xxi. North Dearborn Elementary:

xxii. First Floor Area A – https://link.edgepilot.com/s/0122b296/Iq-e1WRZnk2s1qkA-e0B6w?u=https://my.matterport.com/show/?m=rF18Md8p6KH
xxiii. First Floor Area C – https://link.edgepilot.com/s/5eb36f67/VYfyopuTS0_mtb74I5kFuQ?u=https://my.matterport.com/show/?m=RHnmBrGmvLh
xxiv. First Floor Gymnasium Area – https://link.edgepilot.com/s/25e1ae1d/cpn_c_hXB0mckPYP-2Glsw?u=https://my.matterport.com/show/?m=xNpY5xDdfWx
xxv. Second Floor – https://link.edgepilot.com/s/25c8fc44/hHEbeXwtTkeE_A0yili25Q?u=https://my.matterport.com/show/?m=hrVqY5aZKC4
xxvi. Rooftop Mezzanine – https://link.edgepilot.com/s/e3d31e9e/1z3siQYK0kKZL3s0dpjNgQ?u=https://my.matterport.com/show/?m=unBqgY79vyP

xxvii. Sunman Elementary

xxviii. North Wing – https://link.edgepilot.com/s/23ffc0ef/pd83ScDjU0u6b_oaZWgCkg?u=https://my.matterport.com/show/?m=w4VyEWMDY9G
xxix. South Wing – https://link.edgepilot.com/s/93c9605b/r_LKdMKeV0_mVhpepP51ug?u=https://my.matterport.com/show/?m=kWtULPi3z9o
xxx. ROD Area – https://link.edgepilot.com/s/b311205e/bf8cvsLxKU_Z5-76juwphA?u=https://my.matterport.com/show/?m=XGTRcEB8BtP

3. **Q:** Where are bids to be dropped off at? The Bid-form lists door 13 at ECHS while the Prebid Agenda lists Door 15 ECHS Auditorium Entrance.
    i. **A:** All bids to be dropped off at ECHS Auditorium Door 15 on 10/24/24 by 1PM.
4. **Q:** Who is responsible for permitting?

   i. **A:** CMc to take care of permitting except for fire suppression. The fire suppression contractor is responsible for submitting fire suppression drawings and associated permitting costs.
5. **Q:** Is this project subject to prevail wage rates?
   i. **A:** Project is standard wage rates.
6. **Q:** Who is responsible for fire caulking?
   i. **A:** Contractor responsible for making penetration is required to fire caulk or sound/ smoke caulk penetrations per 01 12 00 MCS Note 1.11.62 and 1.11.63.
7. **Q:** Who is responsible for temporary fencing?
   i. **A:** CMc to supply and install temporary fencing at areas as identified on logistics plan. Will also include temporary fencing around ECHS Addition as required.
8. **Q:** Who is responsible for testing?
   i. **A:** Per MCS Spec Section 01 12 00 1.4.A.11, "Owner or CMc will provide a third-party testing and inspections agency but it is up to the Bid Package Contractors to coordinate tests and inspections through CMc."
9. **Q:** Who is responsible for temporary toilets?
   i. **A:** CMc to be responsible for supplying temporary toilet facilities to be used by all Tier-1 Contractors and their subs.
10. **Q:** Who is responsible for supplying temporary fire extinguishers?
   i. **A:** CMc to supply temporary fire extinguishers for Architectural Renovation Spaces. BC-1 HVAC Contractor responsible for supplying temporary fire extinguishers in Boiler Room and areas of mechanical work.
11. **Q:** Who is responsible for temporary construction signage.
   i. CMc to supply and install temporary construction signage as needed. BC-1 HVAC Contractor is responsible for signage as required at exterior of building for setting of RTU's at ECHS.
12. **Q:** Who is responsible for protecting existing kitchen equipment that is not being demo'd?
   i. **A:** Owner to protect existing kitchen equipment that is to remain in area.
13. **Q:** Who will be responsible for leading edge protection etc. for roof work that is taking place?
   i. The contractor that is performing work on roof is responsible supplying equipment to be in adherence to OSHA requirements and standards.

Bid Category Specifications Clarifications and Questions/ Answers

1. BC-1 HVAC/ Plumbing

- **Clarifications**
  - BC-1 HVAC/ Plumbing Contractor to supply (6) additional TCP boxes to aid in phasing of controls replacement.
  - National Pro Tab, American Air Balance, National Pro Tab, and Kahoe are to be added as approved as 23 05 93 Tab Contractors.
  - Refer to Primary Engineering Narrative and updated drawings for proposed RTU curb detail at ECHS.
  - Refer to Lancer Associates Addendum #1 Narrative Note 15 for ECHS. Existing carriers at ECHS RR's are to be reused with the exception of the urinals. Most of the urinals have direct access from the rear of the wall so the block will not need to be demo'd to remove and replace the existing carriers. However, in RR's K111, K113, and C266 BC-1 HVAC/ Plumbing contractor to include removal of block 6 courses high by 1 course wide at each urinal for removal and replacement of the existing carriers. BC-3 Masonry Contractor to patch back 6 blocks at each of these urinal locations after new carriers have been installed by the BC-1 HVAC/ Plumbing Contractor.

2. BC-2 General Trades

- **Clarifications**
  - 07 27 26 Air-Water Resistive Barrier to be added to BC-2 GT's scope of work for the SES Boiler Room Opening.
  - Clarification too Playground Fencing Scope at BES.

        - BC-2 General Trades Contractor to be responsible for supplying and installing new fencing per Note D01 on Sheet L101. Contractor to connect fencing to existing posts on each corner of existing playground as shown. Contractor to also be responsible for supplying and installing a 4' gate between the newly enclosed area and the PIP surfacing.
    - Clarification too Perimeter Fencing Scope at BES.
        - For fencing that is shown to be removed and replaced at perimeters at BES: Scope to now be included via Alternate #7: (See ADDED ALTERNATE #7 in 00 43 23 Alternate Section below.)
    - Clarification to ECHS Drawing Sheet EC202.
        - BC-2 GT's contractor responsible for demo of all curbs, trees, parking bumpers, signs etc. in the Full Depth Demo Area as shown on ECHS Sheet EC202.

- **Question and Answers**
    - **Q:** BC2 scope says we are to remove casework, store and reinstall, but demolition drwg. AD101H note 20 implies they stay in place. Please clarify.
        - **A:** BC-2 General Trades MCS Note 7 is correct. Base bid will include disassembling shelving to be stored and reinstalled in space. Casework to be stored in center of room E126 after flooring in area has been removed.
    - **Q:** RCP demo drwg note 32 states remove ACT as required for MEP…. I assume that is in MEP scopes…. Verify
        - **A**: MEP Contractors are responsible for demo and replacement of any ceilings as required for their scope of work that are not otherwise noted in either the drawings or MCS.
    - **Q:** Spec 10 44 00 signage has all the allowances listed. Please clarify if there is any signage to be included in base bid outside of what is included in Allowances.
        - **A:** Contractor to carry all Signage Allowances as listed in 01 21 00 Allowances but will also need to include pricing to supply and install ADA Parking signs as shown at parking areas. (ADA Parking Signs are not included in allowance values.)
    - **Q:** What quantity of topsoil spoils should be expected to be received at golf facility from stripping of topsoil at soccer field by the BC-10 Soccer-Turf Contractor?
        - **A:** Per BC-10 Soccer - Turf MCS 01 12 00 Note 3: "BC-10 Soccer - Turf Contractor to haul 200 tons of topsoil to golf facility..." Contractor to assume that 200 tons is equivalent to 100CY.
    - **Q:** Spec 32 18 16 has base bid of wood mulch but rubber as an alternate. Alternate #5 only lists ADA wedge at BES. Please clarify.
        - **A:** Contractor to be responsible for installing engineered wood fiber surfacing at BES as base bid. Alternate #5 to include PIP surfacing at ADA route at BES per Note P2 on sheet L101 at BES. (NDES to include PIP surfacing base bid)
    - **Q:** Who is responsible for relocating shed as shown in NW corner of Sheet EC204?
        - **A:** BC-2 General Trades Contractor to be responsible for moving Storage Shed as identified on EC204 to backside of woods by baseball dugout.
    - **Q:** Are wood stairs on roof at ECHS being replaced with new wood or aluminum stairs?
        - **A:** Per Roof Plans A141H-A141L, all wood stairs and platforms to be replaced with new Aluminum, non-penetrating OSHA Compliant units similar to Erectastep per spec section 05 50 00.
    - **Q:** MCS note 18 states that the full depth pavement demo is by Paving BC. Is this accurate, or should BC-2 include demo of the full depth area of the North lot?
        - **A:** BC-2 General Trades Note 18 relating to full depth asphalt replacement to hereby be amended to read, "Demolition, saw-cutting, and asphalt replacement relating to notes as listed below are the responsibility of the BC-8 Paving and Milling Contractor."
            - ECHS/ ECMS Bus Lots: Areas shown in light grey noted as K2 on Sheet EC303.
            - SES Bus Lot: Areas shown in light grey noted as K2 on Sheet EC300.
            - BES Bus Lot: Areas shown in light grey noted as K2 on Sheet EC300.

- NDES Bus Lot: Areas shown in light grey noted as K2 on Sheet EC300.
- The areas as listed have now been added to Demo Drawings in Addendum 1. BC-8 Paving/ Milling Contractor responsible for Full Depth Demo Areas as shown on the sheets below and as previously listed in 01 12 00 Multiple Contract Summary.
    - EC203, B200, NDE200, and SES200
- **A:** BC-2 GT's Contractor to be responsible for full depth pavement demo as shown at the ECHS North Parking Lot Drawing Sheet EC202.

- **Q:** BC-2 MCS Note 7 refers to alternates #1a & 1b. But alternate #1 is for the soccer field. Should it say alternate 4?
    - **A:** Correct. BC-2 MCS Note #7 indent to hereby be changed to read, "Refer to Alternate #4 for alternate ADD for replacement of perimeter wall fixed casework."
- **Q:** Do we need to remove the post and wire fencing around bus lot on sheet EC204?
    - **A:** Yes. BC-2 GT's Contractor to be responsible for removing posts and cabling around the perimeter of the existing gravel lot.
- **Q:** Do we need to remove the post and wire fencing around bus lot on sheet EC204?
    - **A:** Yes. BC-2 GT's Contractor to be responsible for removing posts and cabling around the perimeter of the existing gravel lot.
- **Q:** Can Stone on ECHS parking lot shown on Sheet EC305 be reused for stone base in area?
    - **A:** BC-2 GT's Contractor responsible for removing stone in area down to subgrade and disposal of material from site. Upon passing a proof roll, contractor to provide, install, and compact 8" stone base per Note K2 - Heavy Duty Pavement Section.

3. BC-3 Masonry

- **Clarifications**
    - Refer to Lancer Associates Addendum #1 Narrative Note 15 for ECHS. Existing carriers at ECHS RR's are to be reused with the exception of the urinals. Most of the urinals have direct access from the rear of the wall so the block will not need to be demo'd to remove and replace the existing carriers. However, in RR's K111, K113, and C266 BC-1 HVAC/ Plumbing contractor to include removal of block 6 courses high by 1 course wide at each urinal for removal and replacement of the existing carriers. BC-3 Masonry Contractor to patch back 6 blocks at each of these urinal locations after new carriers have been installed by the BC-1 HVAC/ Plumbing Contractor.
- **Questions and Answers**
    - **Q:** Who is responsible for caulking of Masonry?
        - **A:** Per 01 12 00 MCS BC-3 Masonry Note 20: BC-3 Masonry Contractor "Responsible for caulking of all Brick/ CMU joints."
    - **Q:** Who is responsible for demo of openings in CMU walls where new lintels are being installed?
        - **A:** BC-3 Masonry contractor responsible for demo of CMU openings per BC-3 Masonry Scope of Work Note 6 on the 01 12 00 Multiple Contract Summary.
    - **Q:** BC-3 Masonry MCS 01 12 00 spec has a $20,000 Allowance for wall patching while the Allowances Form 01 21 00 lists a $15,000 Allowance. Which one is correct?
        - **A:** BC-3 Masonry Wall patching Allowance to be $15,000 as shown on Allowances Form. MCS BC-3 Masonry Note 25 to hereby be changed to read, "Include a $15,000 Masonry Patching Allowance to be used as directed by CMc for miscellaneous materials, equipment, and labor related to CMU wall patching."

4. BC-4 Flooring and Tilling

- **Clarifications**
    - Floor tile in ECHS Kitchen Area to now be demo'd rather than epoxy flooring being installed directly over tile. (Epoxy in RR's to still be installed directly over tile.)
        - Contractor responsible to demo tile by hand via chipping hammer taking care not to damage the existing mud pan under the tile. (Demo via a floor machine will not be permitted.)

        - Contractor to skim full mud pan area with ¼" layer of Mapei M20 quick patch or equivalent product with comparable shear strength after completing a moisture and Ph test.
        - Contractor to install Mapei Moisture Mitigation primer as reference is flooring specs over quick patch.
        - Contractor to install epoxy flooring directly over primer, honoring all control joints. Control joints to receive a flexible material to match epoxy flooring.
        - Contractor to be responsible for tapering of floors at transition areas.
    - Addition to Spec Section 01 21 00 Allowances: Allowance of $10,000 to be added to BC-4 Flooring and Tiling for patching of ECHS RR floors where tile is de-bonded and must demo'd and patched. Contractor still required to include demo of flooring as required for transition to terrazzo in hallways per BC-4 MCS Note 15.

5. BC-5 Framing, Drywall, and ACT

- **Questions and Answers**
    - **Q:** Who is responsible for plywood sheathing for drywall backer at Quiet Rooms at BES and NDES?
        - **A:** BC-5 Framing, Drywall, and ACT Contractor is responsible for supplying and installing fire resistant plywood behind drywall in these locations.

6. BC-6 Roofing

- **Questions and Answers**
    - **Q:** Will there be any work for the BC-6 Roofing Contractor on the RTU replacement at ECHS?
        - **A:** There is no work to be included by the BC-6 Roofing Contractor on RTU's at ECHS. These units will be set on curb adaptors on the existing HVAC curbs. BC-6 Contractor to be responsible for drying in mechanical penetrations per BC-6 MCS 01 12 00 Note 16.
    - **Q:** Who will be responsible for moving ACCU's on the roof at BES so that roof work can take place?
        - **A:** BP#1 BC#1 HVAC Contractor will remove the two ACCU's on the roof at BES that will need removed for roof work to take place at BES.
        - BC-6 Roofing Contractor to be responsible for flashing in new equipment rails being provided by HVAC contractor for ACCU-C2.
    - **Q:** Who is responsible for removal and installation of flashing, gutters, and shingles at BES where EPDM roofing is being replaced?
        - **A:** BC-6 Roofing contractor to be responsible for removing and reinstalling gutters, flashing, shingles, etc. as required to complete the roofing scope of work.
    - **Q:** Who is responsible for 2x wood blocking at roofs?
        - **A:** BC-6 Roofing Contractor responsible for supplying all wood blocking as required for roofing scope of work.

7. BC-7 Glazing and Storefronts

- **Questions and Answers**
    - **Q:** Who is responsible for the frosted film for ECHS doors/ windows?
        - **A:** BC-7 Storefronts and Glazing responsible for all frosted glass.

8. BC-8 Paving and Milling

- **Clarifications**
    - BC-8 Paving MCS Note 12 Clarification
        - The areas as listed have now been added to Demo Drawings in Addendum 1. BC-8 Paving/ Milling Contractor responsible for Full Depth Demo Areas as shown on the sheets below and as previously listed in 01 12 00 Multiple Contract Summary.
            - EC203, B200, NDE200, and SES200
- **Questions and Answers**

- **Q:** Please clarify if there is any milling/ paving at ECMS?
  - **A:** Refer to sheets EC203 and EC303 for paving and concrete scope at ECMS.

9. BC-9 Electrical

- **N/A**

10. BC-10 Soccer Turf

- **Clarifications**
  - Clarification that no voluntary alternates will be accepted. Voluntary Alternate as specified in spec section 32 91 15 - 2.1 - 12 is hereby invalid and to be disregarded. With this being a public bid, **NO** Voluntary Alternates will be accepted.
    - If a contractor has a product that they would like to propose a CSI Substitution Request is to be submitted for review and approval by Architect/ Engineer.

- **Questions and Answers**
  - **Q:** What quantity of spoils is to be hauled to the Golf - Facility from the Soccer Field?
    - **A:** Per BC-10 Soccer - Turf MCS 01 12 00 Note 3: "BC-10 Soccer - Turf Contractor to haul 200 tons of topsoil to golf facility..." Contractor to assume that 200 tons is equivalent to 100CY. Contractor to be responsible for removing remaining balance of soil off-site.

11. BC-11 Gol Turf

- **N/A**

12. BC-12 Kitchen Appliances

- **N/A**

DIV 00 and 01 Updates

- **Updates to Spec Section 00 43 22 – Unit Prices**
  1. **None**
- **Updates to Spec Section 00 43 23 – Alternates:**

1. Alternate No. 7 - for Replacement of Fencing at BES

Responsible Bid Categories: BC-2 General Trades
ADD___X___ DEDUCT_____ NO CHANGE_____ NOT APPLICABLE_____
_____ Dollars ($_____)
Base bid Description: Base bid to include NO WORK on the existing fence at BES as depicted by Detail 8 on Sheet L600. Contractor to still be responsible for installing new fence per Note D01 on Sheet L101.

Alternate #7 Description: to include ADD to demo and replace the top bars, caps, and chain-link mesh on the existing fence. The existing posts are to remain in-place and be painted black with a Sherwin Williams Industrial Enamel Paint. Scope as outlined below.

- Lineal Footage of Fencing: 1,200LF
  - Assume fence posts to be 8’ OC.
- Top Bars and Caps: To be replaced with new black units.
- Existing Fence Posts: To remain in place and be painted black with a Sherwin Williams Industrial Enamel Paint.
- Chain-link Mesh: To be replaced with new 4’ tall black PVC coated material.
- Gates:
  - Contractor to include providing and installing Qty: 4 – 4’ wide gates in areas as directed by Owner.
  - Contractor to include replace of existing 8’ wide double gate opening.
- Posts to be Removed: Contractor to include removal of 7 existing posts (including concrete bases) that Owner would like removed.

- **Updates to Spec Section 01 21 00 - Allowances:**

1. BC-3 Masonry: (Allowance Clarification)

1. BC-3 Masonry Wall patching Allowance to be $15,000 as shown on Allowances Form. MCS BC-3 Masonry Note 25 to hereby be changed to read, "**Include a $15,000 Masonry Patching Allowance** to be used as directed by CMc for miscellaneous materials, equipment, and labor related to CMU wall patching."

2. BC-4 Flooring and Tiling: (Added Allowance)

1. Include a **$10,000 RR Floor Demo and Patching Allowance** to be used as directed by CMc for rectifying floor tile areas that fail sound test at ECHS.

MAXWELL CONSTRUCTION

PRE-BID AGENDA
10/11/24

Sunman Dearborn Community Schools – BP#2
10/7/24

1. Introductions
    a. Owner: Sunman Dearborn School Corporation
    b. A/E/CD: Lancer Associates/ Primary Engineering/ Context Design
        i. Lancer Associates: Misha Belyayev
        ii. Primary Engineering: Andrew Louderback
    c. CMc: Maxwell Construction
        i. Senior Project Manager: Chris Grabosky
        ii. Project Manager: Cody Hudepohl
2. Pre-Bid Sign-In Sheet
3. Advertisement for Prequalified Tier-1 Bidders – Summary
    a. Bid Date: Thursday 10/24/24
    b. Bid Time: 1:00PM
        i. Contractors to drop bids off at Door 15 ECHS (Auditorium Entrance)
    c. Bid Location: 1 Trojan Place, St. Leon, IN 47012
    d. Bid Openings: Bids to be read aloud publicly in ECHS Auditorium.
        i. Contractors to drop bids off at Door 15 and proceed to Auditorium to wait until bids are read aloud.
4. Description – Sunman Dearborn Additions and Renovations 2024 BP#2 includes 12 separate bid categories with work at all (5) schools in the district.
5. Drawings/ Specs: https://distribution.easternengineering.com/View/MultiPlanroomJobList.aspx
6. Matterport Links: Digital scans of all buildings
    a. Refer to Spec Section 001113 Advertisement for Bids
7. Preliminary Schedule – Refer to Spec Section 003113 Preliminary Schedules
    a. Work set to begin January ’25 with completion November ’26.
    b. Schedule is highly summer dependent for mechanical and civic work but many of the Architectural Renovations will take place throughout both the summer and school year.
    c. A detailed/ expanded schedule for each item on 003113.1 Preliminary Construction Schedule will be included via Addendum.
8. Prequalification – **MUST** be Prequalified to bid on project
    a. Non-pre-qualified bids will be returned unopened.
9. Bid Categories
    a. BC-1: HVAC/ Plumbing
    b. BC-2: General Trades

c. BC-3: Masonry
d. BC-4: Flooring and Wall Tile
e. BC-5: Drywall, Framing, and ACT
f. BC-6: Roofing
g. BC-7: Storefronts and Glazing
h. BC-8: Paving and Milling
i. BC-9: Electrical
j. BC-10: Soccer – Turf
k. BC-11: Golf – Turf
l. BC-12: Appliances and Kitchen Equipment

10. Bid Envelope Requirements – Refer to Bid Form Spec 00 41 16.1 (Checklist on final page.)
    a. 004116.1 Completed Bid Form
    b. Financial Statements
    c. Non-Collusion Affidavit
        i. Is part of bid form and needs to be notarized.
    d. Certified Check or Bid Bond
    e. 004322 Unit Price Form – Signed form **MUST** be submitted whether unit prices are or are not included with Bid-Category.
    f. 004321 Allowance Form – Be sure to include Allowances in base-bid value.
        i. All OH&P for Allowance to be included in base-bid value.
        ii. Allowance Values shown on 012100 Allowances Form and 011200 Multiple Contract Summary.
    g. 004323 Alternates Form – Contractor **MUST** turn in signed Alternates Form regardless of if there is an alternate in Bid Category or not.
    h. 004116.2 E-Verify Affidavit
    i. 004116.3 Drug Testing Policy
    j. Bid Envelope: Project Name, Date, Bid Category, Company Name.
11. Multiple Contract Summary – Specifies Scope of Work
    a. Spec Section 01 12 00 (Volume 1 Specs)
12. Notable Items
    a. All Contractors
        i. Site Logistics: Refer to 01 14 12 Access to Site
        ii. Dumpsters: To be provided by BC-1 General Trades via Allowance.
            1. Refer to MCS 01 12 00 for contractors that are to provide their own dumpsters.
        iii. Scope of Work: Refer to 01 12 00 Multiple Contract Summary
        iv. Fire/ Sound/ Smoke Caulking: All contractors to be responsible for caulking of own wall penetrations.
        v. Responsible for any blocking required for BC's scope of work unless otherwise noted.
        vi. Concrete Patching: Contractors are responsible for any required concrete floor and wall patching for their scope of work.
        vii. MEP Demo: MEP Contractors responsible for own demolition.

viii. Contractors to refer to Spec Section 01 12 00 Multiple Contract Summary for full scope of work breakdown for each Bid Category. The items below are a high level overview of important/ notable items in each BC Scope of Work.

b. BC-1 HVAC/ Plumbing

i. HVAC/ Plumbing work to only include ECHS and ECMS
   1. Other schools have been awarded via BP#1.

ii. Contract Award
   1. Low and Responsive Bidder to be given Notice of Intent to proceed with submittals and shop drawings if Owner approves after bids have been reviewed and post-bid interviews have been conducted assuming project comes in under budget.
      a. Contractor to immediately begin working on submittals and shop drawings for equipment that will be needed for Spring and Summer ' 25 Work.

iii. Drawings
   1. Portions of plumbing scope is found within the M drawings.

iv. Roofing
   1. Responsible for providing roof protection for all work on roof.
   2. BC-6 Roofing Contractor to be responsible for flashing in HVAC/ Plumbing Roofing Penetrations as outlined in BC-1 MCS Note 59.

v. Controls
   1. Controls Contractor to propose replacement plan for controls at. Will need to keep existing TC Panels functional and in-place and begin to migrate equipment over to new TC Panel to mitigate disruption to Owner.
   2. This work can be completed on off hours throughout the school year if a mutually agreeable schedule can be agreed upon.
   3. Contractor responsible for point-by-point verification of controls sequencing.

vi. Laydown/ Storage Areas
   1. Refer to Spec Section 011413 Access to Site for dedicated outdoor storage areas at ECHS. Large permanent long-term laydown area to be provided at existing gravel lot for storage of new Mechanical Equipment.

vii. Temp. Conditioning
   1. Responsibility of Owner/ CMc

viii. Brief Scope Outline (Includes but is not Limited to)
   1. RTU Removal and Replacement
   2. Boiler Replacement
   3. IDF/ MDF Roof DX Cooling Units
   4. VAV Replacement
   5. Maintenance Add. RTU, Gas Line Replacement, & Roof Drain Lines
   6. RR Fixture Replacement
   7. Locker Room Plumbing Rework
   8. ECMS FACS Renovation

9. ECMS AG Renovation

c. BC-2 General Trades

i. Scope Outline

1. Selective Demolition
2. Supplying dumpsters as noted in MCS via Allowance.
3. Cast-in-Place Concrete
4. Structural Steel as identified in S Series Drawings.
    a. To supply lintels and embed plates to BC-3 Masonry Contractor for install.
    b. Maintenance Addition to include Bar Joists and Decking.
5. Railing replacement at ECMS.
6. Ribbed metal panels, insulation, AVB, and girting at SES boiler room openings.
7. Caulking of HM Doorframes, HM Windows, and casework.
8. Supply and installation of overhead doors, coiling doors, and sliding gates.
9. Doors and Frames
    a. Supply and installation of HM and Wood Doors.
    b. Supply and installation of HM frames in stud walls.
    c. Supply of HM frames installed in masonry walls to BC-3 Masonry.
10. Division 10 Items
11. Lockers, Curtains, Playgrounds, and Window Shades.
12. Signage
    a. Multiple Allowances for signage and vinyl window graphics.
    b. To supply and install ADA Parking signs outside of allowances.
13. Fire Suppression
14. Earthwork, Site Demo, Fencing, and Site-concrete
    a. Site-concrete is highly summer dependent, and schedule will be critical.
        i. Will be responsible for establishing Stone Base for new parking lots at ECHS to +- ½".
    b. Earthwork Operations for Soccer Field to be by BC-10 Soccer – Turf Contractor.
    c. Earthwork for North Parking lot and Golf – Facility responsibility of General Trades Contractor.
        i. BC-11 Golf – Turf Contractor responsible for establishing subgrade of turf areas.

d. BC-3 Masonry

i. Scope Outline

1. Installation of lintels and embeds as shown on drawings for new and existing masonry walls.
2. Demoing CMU/ Brick openings for new openings in areas to receive lintels.

3. Cutting and toothing in brick/ block for new openings.
4. Installing and grouting new door frames in masonry walls.
    a. Frames to be supplied by BC-2 General Trades.
5. Caulking, AVB, Drainage Board, Weeps, and Accessories for CMU/ Brick.
6. CMU/ Block for all areas as shown on drawings including but not limited to.
    a. ECHS Maintenance Addition.
        i. Installation of counterflashing as described in MCS at Addition.
    b. ECHS Locker Room
    c. ECHS Restrooms (Clarification will be posted via addendum)
    d. Cafeteria Serving Area
    e. Sign bases.

e. BC-4 Flooring and Tiling

i. Scope Outline

1. Demolition of existing carpet and tiling.
2. Supply and installation of all new flooring and wall tile.
3. All new flooring and required floor prep.
    a. Epoxy in ECHS RR's and Kitchen to be installed directly over tile. Contractor to sound test and properly prep tile for installation of new epoxy.
4. At ECHS, ECMS, NDES, and BES, any required moisture mitigation or moisture barriers are to be handled via Moisture Mitigation Allowance.
    a. Disregard specification to install moisture barrier for all floors at these (4) schools.
5. Contractor to include moisture mitigation per plan and spec at SES.
6. Must use a Carpet/ VCT/ LVT glue rated at 99% RH.

f. BC-5 Drywall, Framing, and ACT

i. Scope Outline

1. Drywall hanging and finishing.
2. Supply and install of tile backer board in areas to receive wall tile.
3. Ceilings.
4. Daily clean-up of drywall dust and debris to maintain a cleanly workspace.

g. BC-6 Roofing Contractor

i. Scope Outline

1. Full membrane roof demo and replacement at BES.
    a. Responsible for own dumpsters at BES.
2. Membrane Roof at ECHS Maintenance Addition.
    a. Supply and install of roof drains.
3. Responsible for including flashing of curb curbs and penetrations per Note 16 under BC-6 Roofing scope of work.

a. Patchwork Allowance included for flashing of roof penetrations on existing roofs but not called out in Note 16.

4. No roofing work to be included at NDES or SES. These penetrations were included in separate bid package.

h. BC-7 Storefronts and Glazing Contractor

i. Scope Outline

1. Full removal and replacement of storefront systems at BES.
    a. All openings MUST BE sealed back up and secure before leaving for the day.
2. Miscellaneous storefront systems including but not limited to:
    a. SES Exterior Doors.
    b. NDES Exterior Doors.
    c. ECHS Media Center Storefronts and Sliding Doors, Gym Doors, and Teams Room Storefronts.

i. BC-8 Paving and Milling

i. Scope Outline

1. Full depth paving replacement.
2. Full milling and paving scope.
    a. BC-2 General Trades responsible for establishing stone base at new/ renovated parking areas to +- ½". BC-8 Paving Contractor responsible for final grade prior to laying down asphalt.
3. Patching of pavement along sidewalks that are being replaced.
4. Pavement Markings.

j. BC-9 Electrical

i. Scope Outline

1. Electrical per E Series drawings for all schools including the (3) elementary schools.
2. Replacement of sound systems in NDES and ECMS gymnasiums.
3. Electrical work per the AL and TL Series Drawings at ECHS.

k. BC-10 Soccer – Turf

i. Scope Outline

1. Soccer – Turf is an Alternate. Base-bid for BC-10 Soccer – Turf is $0
2. Responsible for full scope as shown for the ECHS Soccer Field.
    a. Area to be stabilized via 14" cement stabilization at a 5% cement content.
3. Proposed schedule has this work beginning Spring '25.
    a. Aim to have work complete in area prior to mill/ repave of North Parking Lot.

l. BC-11 Golf – Turf

i. Scope Outline

1. Golf – Turf is an Alternate. Base-bid for BC-10 Soccer – Turf is $0
2. To establish subgrade for turf areas, install stone base, underdrains, and turf complete.

3. Final grading of topsoil along turf areas.
4. BC-2 General Trades responsible for install of erosion fencing, sidewalks, establishing earth mounds, final grading (less areas up against turf), planting of grass, and fencing. All other work to be the responsibility of BC-11 Golf – Turf Contractor.

m. BC-12 Appliances and Kitchen Equipment

i. Scope Outline

1. Supply and install all kitchen equipment for the ECHS Kitchen Renovation.

13. Addendum Process
    a. Email all questions to Cody Hudepohl at chudepohl@maxwellbuilds.com be sure to include Chris Grabosky cgrabosky@maxwellbuilds.com on copy for all questions.
        i. All questions need to be submitted by noon on 10/21/24. (Addendums to be distributed via Eastern Engineering.)
            1. First Addendum: Tentatively Friday 10/11/24
                a. Questions need received by noon Wednesday 10/9/24.
            2. Second Addendum: Tentatively Thursday 10/17/24
                a. Questions need received by noon Tuesday 10/15/24
            3. Third and Final Addendum: Tentatively Tuesday 10/22/24
                a. Questions need received by noon Monday 10/21/24
14. Questions for Design Team/ MCC?
15. General Walkthrough

PAY APP SCHEDULE
10/11/24

MAXWELL CONSTRUCTION

Sunman-Dearborn Community Schools Additions and Renovations - BP#2 Sign-in Sheet 10/7/24

NAME	COMPANY	EMAIL	CELL PHONE
Roger Runkel	TRITON SERVICES	RKunkel@tritonservicesinc.com	513-378-6879
ANDREW LOUDERBACK	PRIMARY ENGINEERING	ALOUDERBACK@PRIMARY-ENG.COM	
Tina Glass	Hellas	tglass@hellerconstruction.ca	513.713.3928
MATTHEW CLAPP	C&T DESIGN	MCLAPP@C-TDESIGN.COM	317-412-2466
John Geerstbauer	Levensteins	jgerstbauer@levensteins.com	812-363-3306
Zack Huff	Levensteins	zhuff@levensteins.com	812-593-5355
Rob Conley	Geiler	rconley@geiler.com	513.969.7362
DALE SEHLHORST	MCC	DSEHLHORST@MAXWELLBUILDS	512-699-1828
NICK Kurzhals & John	Kurzhals INC	Kurzhals@zoomtown.com	513967-8532
DAN Gehlbach	EACI	Dgehlbach@eaciusa.com	317-902-6632
SCOTT LENKE	HKC Roofing & Sheet Metal	scottlenke@hkcroofing.com	(513) 290-3554
Noah Davis	OK INTERIORS	ndavis@okinteriors.com	(513) 430-6960
Dan Ryan	Ryan's All-Glass	danr@ryansallglass.com	513-383-8449

MAXWELL CONSTRUCTION

Sunman-Dearborn Community Schools Additions and Renovations - BP#2 Sign-in Sheet 10/7/24

NAME	COMPANY	EMAIL	CELL PHONE
Jeff Fowler	Sprinturf	JFowler@sprinturf.com	765-744-2757
Misha Belyayev	Lancer Associates	mbelyayev@lancerarchitects.com	317-748-3664
Tom Bruns	Bruns-Gutzwiller	tom@bruns-gutzwiller.com	812-212-0715
Stephen Torbeck	Mofz	storbeck@thumotzgroup.com	513-227-7786
Zach Florea	Valcom	zach.florea@veinet.com	513-335-0949
Aaron Viel	JPT	AViel@JPTurnlin.com	513-807-3263
Jake Fullenkamp	Rohe Asphalt	jake.fullenkamp@jsinet.com	812-718-6915
MATT TRAHAN	GEILER	MTRAHAN@GEILER.COM	513-383-8353
Mitchell Day	Southern Roofing	mday@Southernroofinginc.com	812-314-9798
Caleb Mershon	Stafford-Smith Inc.	Cmershon@staffordsmith.com	317-450-4763
Jeremy Capman	Spectra Contract Flooring	Jeremy.capman@spectra.com	513-305-3885
Adam Jacob	Jacob Masonry Contractors	ajacob@jacobmasonry.com	513-317-3323
Ben Vogelgesang	bvogelgesang@universalMFG.com	Universal Contracting	515 515 0520
Kyle Vang	TEKTA	KVANG@TEKTAAMERICA.com	513 623 7986
Brian Sylvia	Lancor Associates	bsylvia@lancorarchitects.com	812-390-7708
Joe Bulach	EMCOR Controls	Joe_Bulach@Emcogroup.com	513-678-3779
Kaeden Hammond	Sprinturf	KHammond@Sprinturf.com	765-437-4385
Josh Shaw	All Star Paving, Inc	josh@allstarpaving.net	812-767-1042

MAXWELL CONSTRUCTION

Sunman-Dearborn Community Schools Additions and Renovations - BP#2 Sign-in Sheet 10/7/24			
NAME	COMPANY	EMAIL	CELL PHONE
KEVIN KRAMER	WM. KRAMER & SON INC	kkramer@kramerroofing.com	517 323 7028

PRE-BID SIGN-IN
10/11/24

Building Project Pay App Schedule

Approved Pay App Received	**Board Meeting Approved**	**Check Mailed**
September 26, 2024	October 3, 2024	October 4, 2024
September 17 - November 7, 2024	November 14, 2024	November 15, 2024
November 8 - December 5, 2024	December 12, 2024	December 13, 2024
December 6 - January 2, 2025	January 9, 2025	January 10, 2025
January 3 - February 6, 2025	February 13, 2025	February 14, 2025
February 7 - March 6, 2025	March 13, 2025	March 15, 2025
March 7 - April 3, 2025	April 10, 2025	April 11, 2025
April 4 - May 1, 2025	May 8, 2025	May 9, 2025
May 2 - June 5, 2025	June 12, 2025	June 13, 2025
June 6 - July 3, 2025	July 10, 2025	July 11, 2025
July 4 - August 7, 2025	August 14, 2025	August 15, 2025
August 8 - September 4, 2025	September 11, 2025	September 12, 2025
September 5 - September 26, 2025	October 2, 2025	October 3, 2025
September 27 - November 6, 2025	November 13, 2025	November 14, 2025
November 7 - December 4, 2025	December 11, 2025	December 12, 2025
December 5 - January 1, 2026	January 8, 2026	January 9, 2026
January 2 - February 5, 2026	February 12, 2026	February 13, 2026
February 6 - March 5, 2026	March 12, 2026	March 13, 2026
March 6 - April 2, 2026	April 9, 2026	April 10, 2026
April 3 - May 7, 2026	May 14, 2026	May 15, 2026
May 8 - June 4, 2026	June 11, 2026	June 12, 2026

GEO-TECH REPORT
10/11/24

SUBSURFACE INVESTIGATION &
GEOTECHNICAL RECOMMENDATIONS

SUNMAN/DEARBORN SCHOOL IMPROVEMENTS
ST. LEON, WEST HARRISON, AND LAWRENCEBURG, INDIANA
A&W PROJECT NO.: 24IN0416

PREPARED FOR:
LANCER ASSOCIATES ARCHITECTURE
INDIANAPOLIS, INDIANA

PREPARED BY:
ALT & WITZIG ENGINEERING, INC.
GEOTECHNICAL DIVISION

AUGUST 29, 2024

Alt & Witzig Engineering, Inc.

4105 West 99th Street • Carmel, Indiana • 46032
Ph (317) 875-7000 • Fax (800) 875-6028

August 29, 2024

Lancer Associates Architecture
145 North East Street
Indianapolis, Indiana 46204
Attn: Mr. Misha Belyayev

Report of Subsurface Investigation and Geotechnical Recommendations

RE: Sunman/Dearborn School Improvements
East Central High School, North Dearborn Elementary School, and Bright Elementary School
St. Leon, West Harrison, and Lawrenceburg, Indiana
Alt & Witzig File: 24IN0416

Dear Mr. Belyayev:

In compliance with your request, we have conducted a subsurface investigation and geotechnical evaluation for the above referenced projects. It is our pleasure to transmit an electronic copy of the report.

The purpose of this subsurface investigation was to determine the various soil profile components, the engineering characteristics of the subsurface materials, and to provide criteria for use by the design engineers in assessing the site for construction, preparation of site grading plans, and determination of appropriate foundation types. A detailed discussion of our subsurface investigation results and recommendations are presented herein.

We appreciated the opportunity to work with you on this project. Often, because of design and construction details that occur on a project, questions arise concerning the soil conditions. If we can give further service in these matters, please contact us at your convenience.

Sincerely,
Alt & Witzig Engineering, Inc.

Nicholas K. Hayes, E.I.

Thomas J. Coffey, P.E.

TABLE OF CONTENTS

INTRODUCTION

This report presents the results of a subsurface investigation performed for the proposed Sunman/Dearborn School Improvements to be constructed in St. Leon, West Harrison, and Lawrenceburg, Indiana. Our investigation was conducted for Lancer Associates Architecture of Indianapolis, Indiana. Authorization to perform this investigation was in the form of a proposal prepared by Alt & Witzig, Engineering, Inc. (Alt & Witzig Proposal: *2407G011)* that was accepted by Misha Belyayev of Lancer Associates Architecture.

The scope of this investigation included a review of geological maps of the area and a review of geologic and related literature, a reconnaissance of the immediate site, a subsurface exploration, field and laboratory testing, and engineering analysis and evaluation of the materials.

The purpose of this subsurface investigation was to determine the various soils profile components, the engineering characteristics of the subsurface materials, and to provide criteria for use in assessing the site for construction and evaluating subsurface conditions.

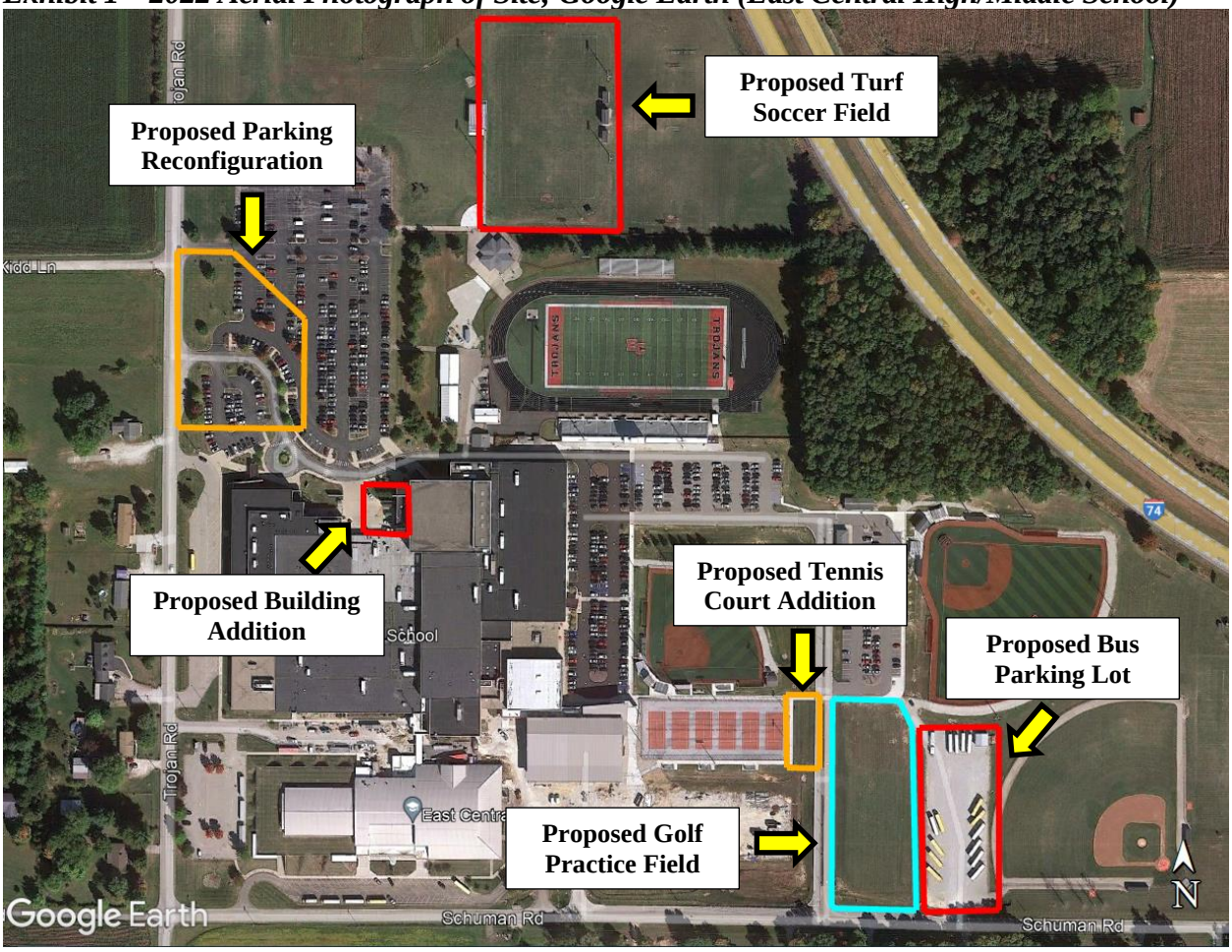
The scope or purpose of this investigation did not either specifically or by implication provide an environmental assessment of the site.

DESCRIPTION OF SITES

The site is located at the East Central High/Middle School, at the street address of 1 Trojan Road A in St. Leon, Indiana. An aerial photograph of the site taken in 2022 is provided in *Exhibit 1* below.

The proposed building addition area is relatively flat, with an estimated elevation difference of one (1) foot across the proposed area, with elevations ranging between 1006 feet to 1007 feet per Google Earth. The elevation differences across the various other locations are relatively flat as well, with elevation differences varying from one (1) to three (3) feet. Ground cover across the various areas during drilling operations consisted of grass, gravel, asphalt pavement, and concrete. The immediate surrounding areas are developed with East Central High School/Middle School along with associated infrastructure and sporting fields. The surrounding areas are developed with residential structures, paved roadways, underground/overhead utilities, and agricultural fields.

Exhibit 1 – 2022 Aerial Photograph of Site; Google Earth (East Central High/Middle School)



The site is located at the North Dearborn Elementary School, at the street address of 27650 Sawmill Road in West Harrison, Indiana. An aerial photograph of the site taken in 2022 is provided in *Exhibit 2* below.

The proposed playground site is relatively flat, with an estimated elevation difference of one (1) foot across the proposed area, with elevations ranging between 970 feet to 971 feet per Google Earth. Ground cover across the site during drilling operations consisted of mulch and playground equipment. The immediate surrounding areas are developed with North Dearborn Elementary School, along with associated infrastructure and sporting fields. The surrounding areas are developed with residential and commercial structures, paved roadways, and underground/overhead utilities.

Exhibit 2 – 2022 Aerial Photograph of Site; Google Earth (North Dearborn Elementary School)

The site is located at the Bright Elementary School in Lawrenceburg, Indiana. An aerial photograph of the site taken in 2024 is provided in *Exhibit 3* below.

The proposed playground sites are relatively flat, with an estimated elevation difference of two (2) feet across the proposed areas, with elevations ranging between 908 feet to 910 feet per Google Earth. Ground cover across the site during drilling operations consisted of mulch and playground equipment. The immediate surrounding areas are developed with Bright Elementary School, along with associated infrastructure and sporting fields. The surrounding areas are developed with residential structures, paved roadways, and underground/overhead utilities. Also, a wooded area is present to the northwest.

Exhibit 3 – 2024 Aerial Photograph of Site; Google Earth (Bright Elementary School)

FIELD INVESTIGATION

Boring Locations

Field investigations to determine the engineering characteristics of the subsurface materials included a reconnaissance of the project sites and performing a total of seventeen (17) soil borings, at locations selected by the client, located approximately as shown on the *Boring Location Plans*, performing standard penetration tests, and obtaining soil samples retained in the standard spilt-spoon sampler for further laboratory testing. The apparent groundwater level at each boring location was also determined.

Drilling and Sampling Procedures

The soil borings were drilled using a track-mounted drilling rig equipped with a rotary head. Hollow-stem augers were used to advance the holes. The advancement of the borings was temporarily stopped at regular intervals in order to perform standard penetration tests in accordance with ASTM Procedure D-1586 to obtain the standard penetration value of the soil.

The standard penetration test involves driving a split spoon soil sampler into the ground by dropping a 140-pound hammer, thirty (30) inches. The number of hammer drops required to advance the split-spoon sampler one (1) foot into the soil is defined as the standard penetration value. The soil samples retained in the split-spoon sampling device as a result of the penetration tests were obtained, classified, and labeled for further laboratory investigation.

Water Level Measurements

The apparent groundwater level at each boring location was measured during and upon completion of the drilling operations.

These water level measurements consisted of observing the depth at which water was encountered on the drilling rods during the soil sampling procedure and measuring the depth to the top of any water following removal of the hollow stem augers. It should be noted that the groundwater level measurements recorded on the individual *Boring Logs* in Appendix A of this report are accurate only for the specific dates on which the measurements were performed. It must be understood that the groundwater levels will fluctuate throughout the year and the *Boring Logs* do not indicate these fluctuations.

LABORATORY INVESTIGATION

In addition to field investigations, a supplemental laboratory investigation was conducted to ascertain additional pertinent engineering characteristics of the subsurface materials. The laboratory-testing program included:

- Classification of soils in general accordance with ASTM D-2488
- Moisture content tests in general accordance with ASTM D-2216
- Samples of the cohesive soil were frequently tested in unconfined compression by use of a calibrated spring testing machine.
- A soil Penetrometer was used as an aid in determining the strength of the soil.

The values of the unconfined compressive strength as determined on soil samples from the split-spoon sampling must be considered, recognizing the manner in which they were obtained since the split-spoon sampling techniques provide a representative but somewhat disturbed soil sample.

SUBSURFACE CONDITIONS

General

The types of foundation materials encountered have been visually classified and are described in detail on the *Boring Logs*. The results of the field penetration tests, strength tests, water level observations and laboratory water contents are presented on the *Boring Logs* in numerical form. Representative samples of the soils encountered in the field were placed in sample jars and are now stored in our laboratory for further analysis if desired. Unless notified to the contrary, all samples will be disposed of after two (2) months.

Soil Conditions

Borings B-01 and S-01 to S-10 (East Central High/Middle School)

The borings conducted in the grass areas encountered approximately three (3) to six (6) inches of topsoil at the ground surface, while the borings conducted in the stone areas encountered approximately eight (8) to eighteen (18) inches of crushed stone at the ground surface.

Beneath the surface materials, the borings generally encountered medium stiff to very stiff cohesive soils to the termination depths of the borings. The soils generally exhibited elevated moisture contents between nineteen (19) and thirty-three (33) percent. It should be noted that boring B-01 encountered auger refusal at a depth of twelve and one-half (12½) feet, which can be attributed to bedrock. Also, borings B-01, S-08, and S-09 encountered possible fill materials within the upper two and one-half (2½) feet, consisting of cohesive soils.

According to the *Soil Survey of Dearborn County, Indiana* published by the United States Department of Agriculture Soil Conservation Service, the majority of the natural shallow soil covering this site is classified as Avonburg silt loam (AvA), Cobbsfork silt loam (Ct), Nabb silt loam (RoB2), and Weisburg silt loam (WbC2).

Borings S-101 to S-103 (North Dearborn Elementary School)

The borings encountered approximately twelve (12) inches of mulch at the ground surface. Beneath the surface materials, the borings encountered cohesive soils with elevated moisture contents ranging between nineteen (19) and twenty-nine (29) percent. It should be noted that the borings encountered auger refusal due to bedrock at a depth of two (2) feet below the ground surface. The drilling crew used shovels to remove the mulch layer and encountered bedrock at the same depth as the borings.

According to the *Soil Survey of Dearborn County, Indiana* published by the United States Department of Agriculture Soil Conservation Service, the majority of the natural shallow soil covering this site is classified as Cincinnati silt loam (CnB2) and Weisburg silt loam (WbC2).

Borings S-201 to S-203 (Bright Elementary School)

The borings encountered approximately seven (7) to eight (8) inches of mulch at the ground surface. Beneath the surface materials, the borings generally soft to medium stiff cohesive soils, within the upper five (5) to seven (7) feet. It should be noted that these shallow soils exhibited elevated moisture contents between nineteen (19) and thirty-seven (37) percent. Also, these shallow soils contained traces of organic matter. Beneath this layer, the borings generally encountered stiff to very stiff cohesive soils to the termination depths of the borings.

According to the *Soil Survey of Dearborn County, Indiana* published by the United States Department of Agriculture Soil Conservation Service, the majority of the natural shallow soil covering this site is classified as Carmel silty clay loam (CcD3) and Weisburg silt loam (WbB2).

Detailed soil descriptions at each boring location have been included on the *Boring Logs* in Appendix A of this report. The Custom Soil Resource Reports for Dearborn County, Indiana has been included in Appendix B.

Bedrock Geology

East Central High/Middle School

Geologic maps published by the Indiana Geological Survey indicate the bedrock at this site consists of the Whitewater Formation, which is characterized by limestone and shale of the Ordovician age. The approximate elevation of this bedrock is 950 feet, which is estimated to be within 50 feet below the existing ground surface.

Seismic Design Considerations

Borings B-01 and S-01 to S-10 (East Central High/Middle School)

Based on the field and laboratory tests performed on the subsurface materials, the encountered auger refusal, and an assumption that the bedrock surface is within 50 feet of the existing ground surface, this site should be considered a Site Class C in accordance with the current Indiana Building Code.

The location of the site was entered into the website www.seismicmaps.org to determine seismic parameters. Maximum spectral response acceleration values of Ss=0.142 and S_1=0.080 g were generated by the program. Additional parameters are included in the printout in Appendix B.

Groundwater

Tables 1, 2, and 3 below indicate the groundwater depths as encountered during and upon completion of the boring operations. The exact location of the water table may fluctuate somewhat depending upon normal seasonal variations in precipitation and surface runoff.

Table 1– Groundwater Depths (East Central HS/MS)

Boring ID	During Drilling	Upon Completion	Boring ID	During Drilling	Upon Completion
B-01	*Dry*	*Dry*	*S-06*	*Dry*	*Dry*
S-01	*Dry*	*Dry*	*S-07*	*10.5 ft.*	*Dry*
S-02	*Dry*	*Dry*	*S-08*	*Dry*	*Dry*
S-03	*Dry*	*Dry*	*S-09*	*10.5 ft.*	*Dry*
S-04	*Dry*	*Dry*	*S-10*	*Dry*	*Dry*
S-05	*Dry*	*Dry*			

Table 2– Groundwater Depths (North Dearborn ES)

Boring ID	During Drilling	Upon Completion
S-101	*Dry*	*Dry*
S-102	*Dry*	*Dry*
S-103	*Dry*	*Dry*

Table 3– Groundwater Depths (Bright ES)

Boring ID	During Drilling	Upon Completion
S-201	*Dry*	*Dry*
S-202	*Dry*	*Dry*
S-203	*Dry*	*Dry*

The *Soil Survey of Dearborn County, Indiana* indicates a seasonal high groundwater table as shallow as the natural ground surface. Again, it should be noted that the groundwater level measurements recorded on the individual *Boring Logs* included in Appendix B of this report, are accurate **only** for the dates on which the measurements were performed.

GEOTECHNICAL ANALYSIS & RECOMMENDATIONS

Project Description

It is anticipated that the proposed addition at East Central High/Middle School will be a one-story, slab-on-grade addition, constructed on the north side of the existing building. Also, new parking lot and lanes will be constructed on the north side of the site, with a new bus parking lot on the southeast side of East Central High/Middle School. It is understood that new playground surfaces will be constructed at North Dearborn Elementary School and Bright Elementary School. The location of the soil borings in relation to the layout of the sites is shown on the enclosed *Boring Location Plans*.

Grading plans were not available at the time of this report. It is assumed that finished grade for the building addition at East Central High/Middle School will match the existing structure.

Approximate structural loads were not available at the time of this report. It is assumed that structural loads for the building will be transferred to the soils by spread footings and continuous wall footings founded at a shallow depth, if possible. It is assumed that the building will be lightly loaded, with maximum column loads of 50-75 kips and wall loads of 2-4 klf. Once final design loads and grading plans are available, they should be submitted to Alt & Witzig Engineering, Inc. for review. After a review of this information, it will be determined if changes to these recommendations are warranted.

Existing Structure/Utility Concerns

As previously mentioned, the school buildings and associated infrastructure occupy the sites. Shallow, uncontrolled fills may be evident from activities associated with past construction. Care should be taken to properly abandon any existing utilities located in the area of the structure. At no time should new foundations be placed on or above abandoned utilities. Some loose fill materials should be anticipated in areas of the utilities. It is further recommended that if backfilling is required, a representative of Alt & Witzig Engineering, Inc. be present to assure that proper compaction is achieved.

Adjacent Foundations

New foundations to be placed near or adjacent to existing foundations should be constructed such that undermining of adjacent footings and lateral loading of footings located at a different elevation is

avoided. If it is necessary to construct the new foundations within the "influence area" of the existing structures, shoring or underpinning of the existing structures will be necessary to allow for construction. The lateral loads applied by the existing footing should be considered in design of the proposed foundation. This investigation did not include the evaluation of the existing structures or foundation systems. Caution must be exercised during construction to not undermine existing foundations or jeopardize the integrity of the existing structures.

Foundation Recommendations

Considering the encountered soil conditions at the boring locations, the estimated loads of the structure, and the relative economics of the available foundation types, conventional spread and continuous wall footings founded at a shallow depth appear to represent a feasible foundation solution for this project.

East Central High/Middle School

Boring B-01 encountered medium stiff cohesive soils near the anticipated footing depth. Therefore, net allowable bearing pressures of **2,500** and **2,000 psf** are recommended for dimensioning spread footings and continuous wall footings, respectively, provided they are founded on firm natural soil or properly compacted structural fill. Isolated undercuts may be necessary if soft or unsuitable soils are encountered at or near the proposed foundation depth.

It is recommended that a representative of Alt & Witzig Engineering, Inc. inspect all foundation excavations prior to the placement of concrete. At the time of this inspection, Housel penetrometer or other approved tests may be performed in order to confirm that suitable materials are present.

The above recommended bearing pressures will help reduce differential settlements associated with footings founded on soil with varying stiffness across the building pad. Using the above-mentioned bearing pressure and recommendations for limiting settlements, total settlements of less than one (1) inch and differential settlements of one half (½) inch or less can be anticipated. In utilizing the above-mentioned net allowable pressures for dimensioning footings, it is necessary to consider only those loads applied above the finished floor elevation.

In order to alleviate the effects of seasonal variation in moisture content on the behavior of the footings and eliminate the effects of frost action, all exterior foundations should be founded a

minimum of two and one-half (2½) feet below the final grade.

Some modifications to the recommendations provided in this report may be necessary based on potential complications or modifications to the design plan. The modifications may influence the overall cost of the project and construction sequence. If complications become apparent to the design team or owner, this information should be provided to Alt & Witzig Engineering, Inc. at the earliest possible date.

Floor Slab Recommendations

It is typically desirable to place the floor slab as a slab-on-grade supported by the soil. In the areas where the existing grade is above the final floor elevation, the building area should be undercut and a well-draining granular material placed beneath the slab. In those areas where the existing grade is below the final floor elevation, a well-compacted structural fill will be necessary to raise the site to the desired grade. All fill materials may consist of approved materials if proper moisture content and compaction procedures are maintained.

Prior to elevating the sites, all surface materials should be stripped from the site. The subgrade soils must then be proofrolled with approved equipment. It is recommended that a representative of Alt & Witzig Engineering, Inc. be present to determine the exact depth of undercutting and to monitor backfilling operations if necessary. Areas of shallow unstable materials may be encountered due to elevated moisture contents in the shallow soils. The exact remediation method used will be dependent upon the size of the area and the types of materials encountered, as well as the project schedule. If weather conditions are favorable, the soils may be aerated, dried, and recompacted or undercut and replaced. However, if weather conditions or construction schedule dictate immediate improvement then undercutting and replacement or chemical modification may be necessary.

After the building area has been raised to the proper elevation, a layer of well-draining granular material should be placed immediately beneath all floor slabs. It is recommended that the materials within the subgrade area, above footing elevation, be compacted to a minimum density of 93 percent of maximum density in accordance with ASTM D-1557.

Pavement Recommendations

The strength of the subgrade soils at this site depends upon several variables including compaction and drainage. It is, therefore, extremely important that all paved areas be designed to prevent water from collecting or ponding immediately beneath the pavement. This can be accomplished by sheet draining the parking area and sloping the subgrade soils and outletting them to a drain or a ditch to allow for subgrade drainage, or by the installation of a subsurface drainage system. It is recommended that underdrains be installed at the transitions from concrete to asphalt as well.

For these soils to provide adequate support for pavement, it will also be necessary that the earthmoving contractor follow proper site work techniques. The exposed subgrade should be proof-rolled with equipment approved by a representative of Alt & Witzig Engineering, Inc. This proof-rolling will assist in identifying areas of soft unstable materials beneath exposed subgrades. As mentioned before, the borings exhibited elevated moisture contents in the shallow cohesive soils, which may cause failure, especially in the wet portions of the year. If weather conditions are favorable, the soils may be aerated, dried, and recompacted or undercut and replaced. However, if weather conditions or construction schedule dictate immediate improvement then undercutting and replacement or chemical modification or stabilization may be necessary. Remediation will be dictated by the field conditions upon construction.

In areas where fill will be required to raise the site to proposed grade, the performance of the pavements will be greatly affected by the quality of compaction achieved in the subgrade soils. Thus, it is recommended that all pavement areas be compacted to 93 percent of the material's maximum dry density as determined by ASTM D-1557.

Pavement Design Recommendations

Based on experience with soils of similar consistency, a CBR value of 3 is estimated for pavement design. It should be noted that the CBR value is a laboratory determined strength value based. The field conditions will significantly affect the soil strength and actual in situ CBR value.

Approximate traffic loading was provided by Lancer Associates Architecture. It is estimated that the proposed light duty asphalt will experience 250 passenger cars per day. Lancer Associates Architecture estimated that the heavy-duty asphalt delivery lanes and/or concrete will experience

two (2) delivery trucks per week. Also, the truck parking lot is estimated to experience twenty-four (24) buses per day.

Using a school year consisting of 180 days and a pavement design life of 20-years, structural numbers were calculated for the flexible and rigid pavement sections. Table 4 presents the recommended pavement sections. Calculations were based on installation of a subsurface drainage system as outlined previously.

Table 4: Pavement Sections

Pavement Sections					
Loading Conditions	*Design Life (Years)*	*Asphalt Thickness (in.)*		*Concrete Thickness (in.)*	*Stone Thickness (in.)*
		Surface	*Intermediate*		
Light Duty Asphalt Sections	*20*	*1.5*	*2.5*		*6.0*
Heavy Duty Asphalt Sections (Bus Lot)	*20*	*1.5*	*3.5*		*8.0*
Heavy Duty Asphalt Sections (Delivery Lanes)	*20*	*1.5*	*3.5*		*8.0*
Concrete Sections (Delivery Lanes)	*20*			*6.0*	*6.0*

All stone sections should be constructed of INDOT #53 stone.

The stone should be compacted to at least 93 percent of the maximum dry density in accordance with ASTM density test D-1557. Asphalt pavement materials and construction should comply with current INDOT Standard Specifications. Portland cement concrete should be a minimum of 4,000 psi strength, air-entrained mix. The installation of the pavement should be in compliance with current INDOT Standard Specifications.

Tennis Court Subgrade Preparation Recommendations

East Central High/Middle School

Based on the provided plans, the tennis courts will be constructed in the area of boring S-05. After the topsoil materials have been stripped from the site and prior to placing fill material or crushed stone, the exposed subgrade soils should be proofrolled with approved equipment. This proofroll will assist in identifying any soft areas within the tennis court footprint. Areas that fail the proofroll

inspection should be remediated. As mentioned, the majority of the shallow soils exhibited elevated moisture contents. Any remediation should be determined by the owner after consulting with Alt & Witzig Engineering, Inc.

It is critical that water be prevented from collecting beneath the tennis court playing surface. Thus, special consideration should be given to the site design to assure that surface and sub-drain systems have adequate capacity and gradient to allow for drainage away from the courts. Also, placement and compaction of the stone and pavement material should be carefully monitored to assure that proper placement of the material is followed. Recommendations for proper placement of fills and backfills are provided in Appendix A of this report.

It is recommended that four (4) inch perforated drains be placed around the perimeter and between each court. These drains should be outletted away from the subgrade. The drainage course should also be allowed to drain freely around the perimeter of the courts. A seasonal high-water groundwater table as shallow the ground surface may be expected during portions of the year.

Tennis courts are expected to perform to a higher standard than vehicular pavements. However, the tennis courts are not subjected to traffic, which tends to have a kneading action and work some cracks together. Also, the tennis courts are considerably wider than most pavements. Some cracking due to expansion at the pavement surface must be expected. It may be possible to control these cracks to some degree by cutting joints between courts and under the nets. After cutting joints, the joint should be sealed. Also, planning of construction activities will minimize the number of construction joints within the playing area. Construction joints are typically the area where thermal expansion is first evident.

Additionally, it is recommended that net posts and fence posts be founded a minimum of three and one-half (3½) feet below final grade.

Turf Soccer Field Recommendations

East Central High/Middle School

It is understood that the existing grass soccer field will be reconstructed with artificial turf. From prior knowledge of turf field construction, it is anticipated that the turf will be underlain by crushed stone and a geotextile. Also, an underdrain system is anticipated for the turf field.

After the existing grass and topsoil is cut from the site and prior to the placement any crushed stone, the exposed subgrade should be proofrolled witnessed by a representative of Alt & Witzig Engineering, Inc. to verify the presence of suitable soil. This proofrolling will determine where areas of soft unsuitable materials are encountered. Due to the elevated moisture contents encountered in the shallow soils, it is anticipated that some of subgrade soils will not favorably pass a proofroll inspection in many areas. If weather conditions are favorable, the soils may be aerated, dried, and recompacted. However, if weather conditions or construction schedule dictate immediate improvement then chemical modification may be necessary.

Based on experience with soils of similar consistency, a CBR value of 3 is estimated for soils passing a proofroll inspection. It should be noted that the CBR value is a laboratory determined strength value based. The field conditions will significantly affect the soil strength and actual in situ CBR value.

As previously mentioned, the soils at this site consisting of cohesive soil throughout the full depth of the borings. Therefore, the soils have a relatively low infiltration rate. Based upon the findings within our borings and information obtained from the *Custom Soil Survey for Dearborn County, Indiana,* hydraulic conductivities of approximately 0.01 to 0.20 in/hr or less should be anticipated for the shallow subgrade soils at this site.

Playground Subgrade Recommendations

As mentioned, it is understood that new playground surfaces will be constructed at North Dearborn Elementary School and Bright Elementary School. At the time of this report, the type of surface was not known. At the time of the drilling operations, both playgrounds had mulch surfaces.

As mentioned, the borings encountered approximately seven (7) to twelve (12) inches of mulch at the ground surface. It is recommended that these surface materials be removed prior to placement of a new surface. Also, any organic materials directly beneath the mulch layer should be removed.

Grading plans were not available at the time of this report, but we anticipated that less than two (2) feet of cut/fill earthwork will be conducted at each site. If hard surfaces, such as a rubber surface, it is recommended that a granular fill material be utilized beneath the surface.

As mentioned previously, borings S-101 and S-102 at North Dearborn Elementary School,

encountered the bedrock surface at a depth of two (2) feet below the existing ground surface. Depending on final grading plans, rock excavation may be necessary. Rock excavation is expensive and should be carefully considered when final elevations are selected. The nature of the bedrock at this site is such that jack-hammering will be necessary for removal.

CONSTRUCTION CONSIDERATIONS

Site Preparation

Excessively organic topsoil and loose dumped fill materials will generally undergo high volume changes that are detrimental to the behavior of floor slabs, structural fills, and foundations placed upon them. It is recommended that all topsoil and/or loose materials be stripped from the construction areas and wasted or stockpiled for later use.

The depth and consistency of these materials will vary across the site. It should be noted that the soil borings only indicate the apparent topsoil, asphalt, concrete, and stone thickness at their specific locations. Borings do not indicate variations in the thickness of these layers between selected locations. Thus, borings only provide a general indication of the amount of stripping.

The condition of the subgrade at the time of earthmoving operations and the methods used by the contractor will influence the depth of stripping. A representative of Alt & Witzig Engineering, Inc. in the field should determine the exact depth of stripping and undercutting at the time of stripping operations.

It is recommended that after the above-mentioned stripping procedures have been performed, the exposed subgrade should be proofrolled with approved equipment. This proofrolling will determine where areas of soft unsuitable materials are encountered. Due to the elevated moisture contents encountered in natural cohesive soils and the possible fill materials, it is anticipated that some subgrade soils will not favorably pass a proofroll inspection. It is recommended that a representative of Alt & Witzig Engineering, Inc. be present for this phase of this project.

After the existing subgrade soils are excavated to design grade, proper control of subgrade compaction and fill, and structural fill replacement should be maintained in accordance with the *Recommended Specifications for Compacted Fills and Backfills*, presented in Appendix A of this report; thus minimizing volume changes and differential settlements which are detrimental to behavior of shallow foundations, floor slabs, and pavements.

Groundwater

Depending upon the time of the year and the weather conditions when the excavations are made, seepage from surface runoff may occur into shallow excavations or soften the subgrade soils. Since these foundation materials tend to loosen when exposed to free water, every effort should be made to keep the excavations dry should water be encountered. Sump pumps or other conventional dewatering procedures should be sufficient for this purpose within the cohesive soils.

It is also recommended that all concrete for footings be poured the same day as the excavation is made.

STATEMENT OF LIMITATIONS

This report is solely for the use of Lancer Associates Architecture and any reliance of this report by third parties shall be at such party's sole risk and may not contain sufficient information for purposes of other parties for other uses. This report shall only be presented in full and may not be used to support any other objectives than those set out in the scope of work, except where written approval and consent are provided by Lancer Associates Architecture and Alt & Witzig Engineering, Inc.

An inherent limitation of any geotechnical engineering study is that conclusions must be drawn based on data collected at a limited number of discrete locations. The geotechnical parameters provided in this report were developed from the information obtained from the test borings that depict subsurface conditions only at these specific locations and on the date indicated on the boring logs. Soil conditions at other locations may differ from conditions encountered at these boring locations and groundwater levels shall be expected to vary with time. The nature and extent of variations between the borings may not become evident until the course of construction.

The exploration and analysis reported herein is considered in sufficient detail and scope to form a reasonable basis for initial design. The recommendations submitted are based on the available soil information and assumed design details enumerated in this report. If actual design details differ from those specified in this report, this information should be brought to the attention of Alt & Witzig Engineering, Inc. so that it may be determined if changes in the foundation recommendations are required.

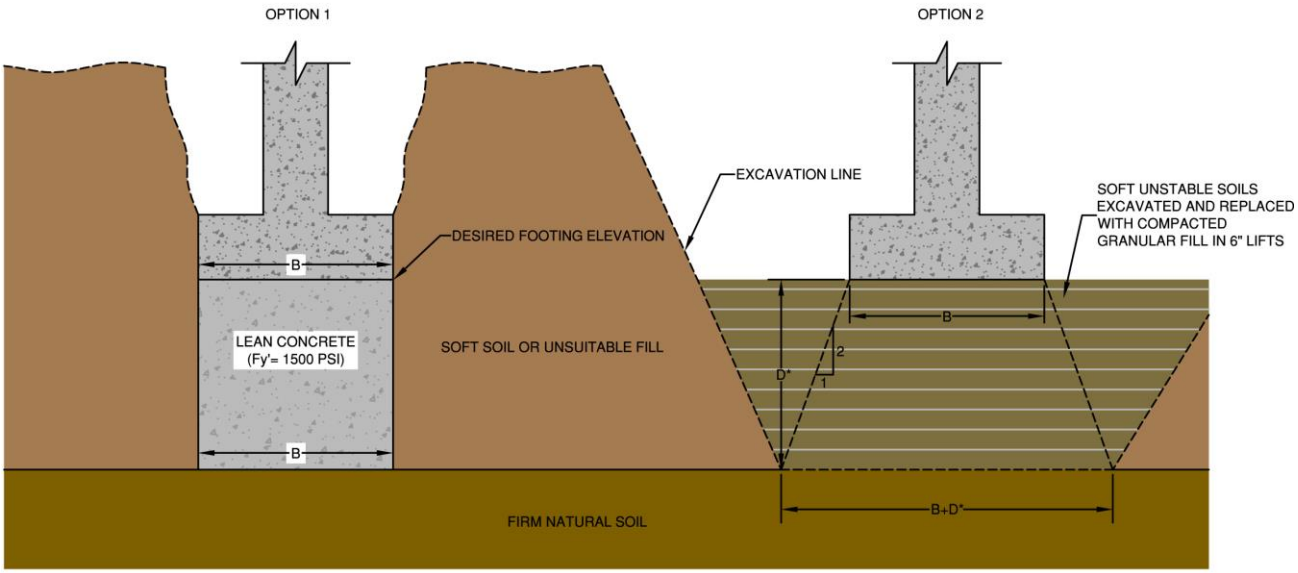
APPENDIX A

Recommended Specifications for Compacted Fills and Backfills
Undercut Detail for Footing Excavation in Unstable Materials
Boring Location Plans
Boring Logs
General Notes

RECOMMENDED SPECIFICATIONS FOR COMPACTED FILLS AND BACKFILLS

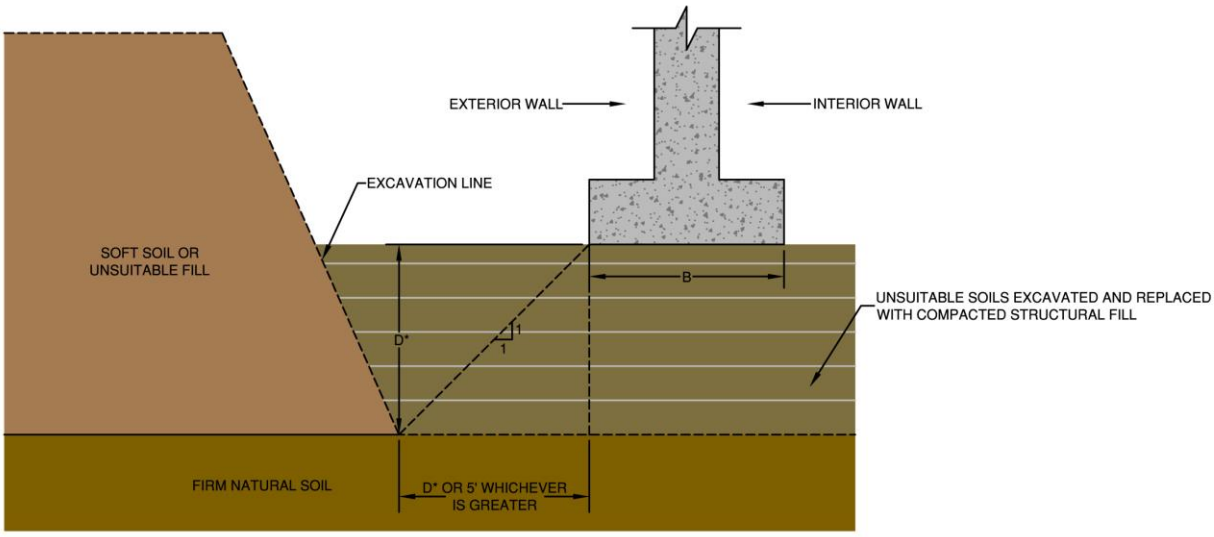
All fill shall be formed from material free of vegetable matter, rubbish, large rock, and other deleterious material. Prior to placement of fill, a sample of the proposed fill material should be submitted to Alt & Witzig Engineering, Inc. for approval. The surface of each layer will be approximately horizontal but will be provided with sufficient longitudinal and transverse slope to provide for runoff of surface water from every point. The fill material should be placed in layers not to exceed eight (8) inches in loose thickness. Each layer should be uniformly compacted by means of suitable equipment of the type required by the materials composing the fill. Under no circumstances should a bulldozer or similar tracked vehicles be used as compacting equipment. Material containing an excess of water so the specified compaction limits cannot be attained should be spread and dried to a moisture content that will permit proper compaction. The addition of water may be required if the fill is below moisture content that will permit compaction. All fill should be compacted to the specified percent of the maximum density obtained in accordance with ASTM density Test D-1557 (95 percent of maximum dry density below the base of footing elevation, 93 percent of maximum dry density beneath floor slabs and pavements). Should the results of the in-place density tests indicate that the specified compaction limits are not obtained; the areas represented by such tests should be reworked and retested as required until the specified limits are reached.

UNDERCUT EXCAVATION FOR ISOLATED FOOTINGS IN UNSTABLE MATERIALS



D* IS DEPTH FOR SUITABLE SOILS

MASS EXCAVATION FOR FOOTINGS IN UNSTABLE MATERIALS

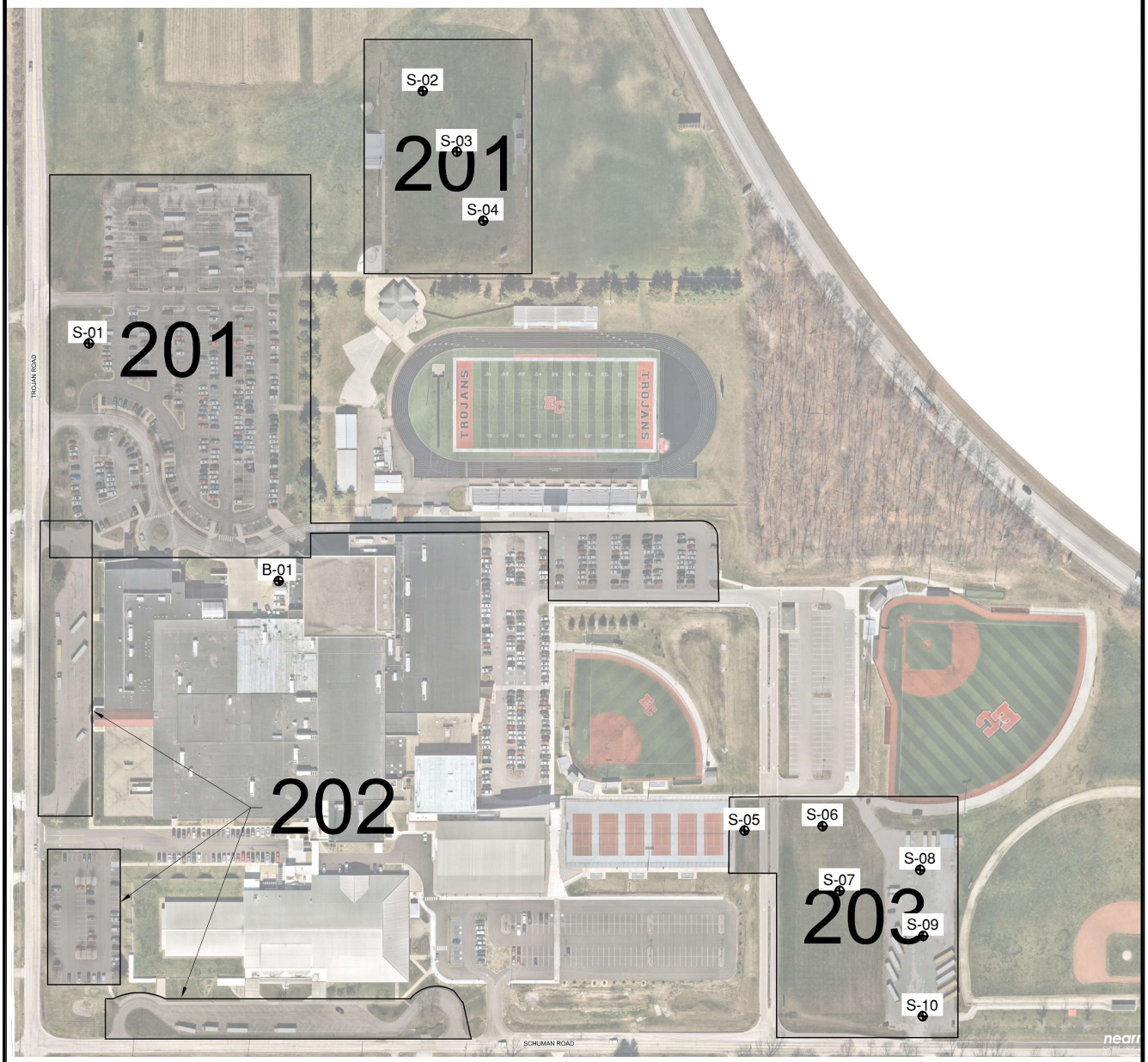


D* IS DEPTH FOR SUITABLE SOILS

Undercut Detail for Footing Excavation in Unstable Material

PROJECT: **Sunman/Dearborn School Improvements**
LOCATION: Lawrenceburg/West Harrison/St. Leon, IN
CLIENT: **Tri-County School Corporation**
A&W File No.: 24IN0416

Alt & Witzig Engineering Inc.
4105 W. 99th Street ·Carmel, IN 46032
TEL (317)875-7000 · FAX (317) 876-3705
www.altwitzig.com



N

Scale: 1" = 300'

0 150 300

BORING LOCATION PLAN 1

PROJECT: Sunman/Dearborn School Improvements
LOCATION: St. Leon, IN
PREPARED FOR: Tri-County School Corporation
PROJECT NO: 24IN0416

Project Manager: NH
Checked By: TC
Drawn By: JT
Date: 07/24

Alt & Witzig Engineering, Inc.
4105 West 99th Street • Carmel, IN 46032
Telephone: (317) 875-7000 • Fax (800) 875-6028

N

Scale: 1" = 100'

0 50 100

BORING LOCATION PLAN 2

PROJECT: Sunman/Dearborn School Improvements

LOCATION: West Harrison, IN

PREPARED FOR: Tri-County School Corporation

PROJECT NO: 24IN0416

Project Manager: NH

Checked By: TC

Drawn By: JT

Date: 07/24

Alt & Witzig Engineering, Inc.

4105 West 99th Street • Carmel, IN 46032

Telephone: (317) 875-7000 • Fax (800) 875-6028

N

Scale: 1" = 100'

0 50 100

BORING LOCATION PLAN 3

PROJECT: Sunman/Dearborn School Improvements
LOCATION: Lawrenceburg, IN
PREPARED FOR: Tri-County School Corporation
PROJECT NO: 24IN0416

Project Manager: NH
Checked By: TC
Drawn By: JT
Date: 07/24

Alt & Witzig Engineering, Inc.
4105 West 99th Street • Carmel, IN 46032
Telephone: (317) 875-7000 • Fax (800) 875-6028

BORING LOG

Alt & Witzig Engineering, Inc.

CLIENT **Lancer Associates Architecture**

PROJECT NAME **Sunman/Dearborn School Improvements**

PROJECT LOCATION **St. Leon, IN**

BORING # **B-01**

ALT & WITZIG FILE # **24IN0416**

DRILLING and SAMPLING INFORMATION

Date Started **7/31/24**

Date Completed **7/31/24**

Boring Method **HSA**

Driller **M. Winkler**

Hammer Wt. **140** lbs.

Hammer Drop **30** in.

Spoon Sampler OD **2** in.

Rig Type **D-50 Track ATV**

STRATA ELEV. / SOIL CLASSIFICATION / SURFACE ELEVATION	Strata Depth	Depth Scale	Sample No.	Sample Type	Sampler Graphics / Recovery Graphics	Ground Water	TEST DATA: Standard Penetration Test, N - blows/foot	TEST DATA: Qu-tsf Unconfined Compressive Strength	TEST DATA: PP-tsf Pocket Penetrometer	TEST DATA: Moisture Content % / *Dry Unit Weight (pcf)*	Remarks
TOPSOIL	0.5										
Dark Brown Silty Sandy CLAY *(Possible Fill)*	2.5		1	SS			13		4.5	17.0	
Brown and Gray Silty CLAY		5	2	SS			6	2.3	1.8	18.9	
	8.0		3	SS			17		3.5	19.1	
Brown Silty CLAY with Sand Seams	10.5	10	4	SS			17			16.1	
Brown and Gray Sandy Silty CLAY with Rock Fragments	12.5		5	SS			50/3"				
Auger Refusal at 12.5 Feet End of Boring at 12.5 feet											

Sample Type

SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Groundwater

○ During Drilling *Dry ft.*
▽ At Completion *Dry ft.*

Boring Method

HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
DC - Driving Casing
MD - Mud Drilling

BORING LOG

Alt & Witzig Engineering, Inc.

CLIENT **Lancer Associates Architecture**

PROJECT NAME **Sunman/Dearborn School Improvements**

PROJECT LOCATION **St. Leon, IN**

BORING # **S-01**

ALT & WITZIG FILE # **24IN0416**

DRILLING and SAMPLING INFORMATION

Date Started **7/31/24**

Date Completed **7/31/24**

Boring Method **HSA**

Driller **M. Winkler**

Hammer Wt. **140** lbs.

Hammer Drop **30** in.

Spoon Sampler OD **2** in.

Rig Type **D-50 Track ATV**

TEST DATA

STRATA ELEV.	SOIL CLASSIFICATION / SURFACE ELEVATION	Strata Depth	Depth Scale	Sample No.	Sample Type	Sampler Graphics Recovery Graphics	Ground Water	Standard Penetration Test, N - blows/foot	Qu-tsf Unconfined Compressive Strength	PP-tsf Pocket Penetrometer	Moisture Content % *Dry Unit Weight (pcf)*	Remarks
	TOPSOIL	0.3										
	Dark Brown Silty CLAY	2.5		1	SS			6		0.5	25.7	
			5	2	SS			7	1.9	2.0	24.7	
	Brown and Gray Silty CLAY			3	SS			9	3.0		18.9	
			10	4	SS			8	3.2	2.3	20.5	
	End of Boring at 11 feet	11.0										

Sample Type

SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Groundwater

○ During Drilling *Dry ft.*
▽ At Completion *Dry ft.*

Boring Method

HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
DC - Driving Casing
MD - Mud Drilling

BORING LOG

Alt & Witzig Engineering, Inc.

CLIENT **Lancer Associates Architecture**

PROJECT NAME **Sunman/Dearborn School Improvements**

PROJECT LOCATION **St. Leon, IN**

BORING # **S-02**

ALT & WITZIG FILE # **24IN0416**

DRILLING and SAMPLING INFORMATION

Date Started **7/31/24**

Date Completed **7/31/24**

Boring Method **HSA**

Driller **M. Winkler**

Hammer Wt. **140** lbs.

Hammer Drop **30** in.

Spoon Sampler OD **2** in.

Rig Type **D-50 Track ATV**

TEST DATA

STRATA ELEV. / SOIL CLASSIFICATION / SURFACE ELEVATION	Strata Depth	Depth Scale	Sample No.	Sample Type	Sampler Graphics / Recovery Graphics	Ground Water	Standard Penetration Test, N - blows/foot	Qu-tsf Unconfined Compressive Strength	PP-tsf Pocket Penetrometer	Moisture Content % / *Dry Unit Weight (pcf)*	Remarks
TOPSOIL	0.4										
Dark Brown Silty CLAY	2.5		1	SS			8	2.7	2.0	18.2	
		5	2	SS			9	2.8	1.5	20.6	
Brown and Gray Silty CLAY			3	SS			10		1.8	23.0	
		10	4	SS			21			19.6	
	10.5										
Brown and Gray Sandy Silty CLAY with Sand Seams	11.0										
End of Boring at 11 feet											

Sample Type

SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Groundwater

○ During Drilling *Dry ft.*
▽ At Completion *Dry ft.*

Boring Method

HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
DC - Driving Casing
MD - Mud Drilling

BORING LOG

Alt & Witzig Engineering, Inc.

CLIENT **Lancer Associates Architecture**

PROJECT NAME **Sunman/Dearborn School Improvements**

PROJECT LOCATION **St. Leon, IN**

BORING # **S-03**

ALT & WITZIG FILE # **24IN0416**

DRILLING and SAMPLING INFORMATION

Date Started **7/31/24**

Date Completed **7/31/24**

Boring Method **HSA**

Driller **M. Winkler**

Hammer Wt. **140** lbs.

Hammer Drop **30** in.

Spoon Sampler OD **2** in.

Rig Type **D-50 Track ATV**

TEST DATA

STRATA ELEV. / SOIL CLASSIFICATION / SURFACE ELEVATION	Strata Depth	Depth Scale	Sample No.	Sample Type	Sampler Graphics / Recovery Graphics	Ground Water	Standard Penetration Test, N - blows/foot	Qu-tsf Unconfined Compressive Strength	PP-tsf Pocket Penetrometer	Moisture Content % / *Dry Unit Weight (pcf)*	Remarks
TOPSOIL	0.4										
Dark Brown Silty CLAY	2.5		1	SS			8	4.4	4.3	18.2	
		5	2	SS			7	2.5	1.5	20.9	
Brown and Gray Silty CLAY			3	SS			9	3.1	2.5	20.2	
		10	4	SS			22		2.0	19.9	
Brown and Gray Silty CLAY with Rock Fragments	10.5										
End of Boring at 11 feet	11.0										

Sample Type

SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Groundwater

○ During Drilling *Dry ft.*
▽ At Completion *Dry ft.*

Boring Method

HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
DC - Driving Casing
MD - Mud Drilling

BORING LOG

Alt & Witzig Engineering, Inc.

CLIENT **Lancer Associates Architecture**

PROJECT NAME **Sunman/Dearborn School Improvements**

PROJECT LOCATION **St. Leon, IN**

BORING # **S-04**

ALT & WITZIG FILE # **24IN0416**

DRILLING and SAMPLING INFORMATION

Date Started **7/31/24**

Date Completed **7/31/24**

Boring Method **HSA**

Driller **M. Winkler**

Hammer Wt. **140** lbs.

Hammer Drop **30** in.

Spoon Sampler OD **2** in.

Rig Type **D-50 Track ATV**

TEST DATA

STRATA ELEV. / SOIL CLASSIFICATION / SURFACE ELEVATION	Strata Depth	Depth Scale	Sample No.	Sample Type	Sampler Graphics Recovery Graphics	Ground Water	Standard Penetration Test, N - blows/foot	Qu-tsf Unconfined Compressive Strength	PP-tsf Pocket Penetrometer	Moisture Content % *Dry Unit Weight (pcf)*	Remarks
TOPSOIL	0.4										
Dark Brown Silty CLAY	2.5		1	SS			9		3.3	18.6	
		5	2	SS			12	3.8	3.8	18.6	
Brown and Gray Silty CLAY			3	SS			9	3.0		24.3	
		10	4	SS			50/0"				Driving on a Rock
	11.0										
End of Boring at 11 feet											

Sample Type

SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Groundwater

○ During Drilling *Dry ft.*
▽ At Completion *Dry ft.*

Boring Method

HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
DC - Driving Casing
MD - Mud Drilling

BORING LOG

Alt & Witzig Engineering, Inc.

CLIENT **Lancer Associates Architecture**
PROJECT NAME **Sunman/Dearborn School Improvements**
PROJECT LOCATION **St. Leon, IN**

BORING # **S-05**
ALT & WITZIG FILE # **24IN0416**

DRILLING and SAMPLING INFORMATION

Date Started **7/31/24**
Date Completed **7/31/24**
Boring Method **HSA**
Driller **M. Winkler**

Hammer Wt. **140** lbs.
Hammer Drop **30** in.
Spoon Sampler OD **2** in.
Rig Type **D-50 Track ATV**

TEST DATA

STRATA ELEV.	SOIL CLASSIFICATION / SURFACE ELEVATION	Strata Depth	Depth Scale	Sample No.	Sample Type	Sampler Graphics Recovery Graphics	Ground Water	Standard Penetration Test, N - blows/foot	Qu-tsf Unconfined Compressive Strength	PP-tsf Pocket Penetrometer	Moisture Content % Dry Unit Weight (pcf)	Remarks
	TOPSOIL	0.4										
	Dark Brown Silty CLAY	2.5		1	SS			8	3.1	3.5	19.7	
			5	2	SS			11		2.5	20.9	
	Brown and Gray Silty CLAY			3	SS			24				2 Attempts, No Recovery
			10	4	SS			15		2.8	10.8	
	End of Boring at 11 feet	11.0										

Sample Type
SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Groundwater
○ During Drilling *Dry ft.*
▽ At Completion *Dry ft.*

Boring Method
HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
DC - Driving Casing
MD - Mud Drilling

BORING LOG

Alt & Witzig Engineering, Inc.

CLIENT **Lancer Associates Architecture**

PROJECT NAME **Sunman/Dearborn School Improvements**

PROJECT LOCATION **St. Leon, IN**

BORING # **S-06**

ALT & WITZIG FILE # **24IN0416**

DRILLING and SAMPLING INFORMATION

Date Started **7/31/24**

Date Completed **7/31/24**

Boring Method **HSA**

Driller **M. Winkler**

Hammer Wt. **140** lbs.

Hammer Drop **30** in.

Spoon Sampler OD **2** in.

Rig Type **D-50 Track ATV**

TEST DATA

STRATA ELEV. / SOIL CLASSIFICATION / SURFACE ELEVATION	Strata Depth	Depth Scale	Sample No.	Sample Type	Sampler Graphics Recovery Graphics	Ground Water	Standard Penetration Test, N - blows/foot	Qu-tsf Unconfined Compressive Strength	PP-tsf Pocket Penetrometer	Moisture Content % *Dry Unit Weight (pcf)*	Remarks
TOPSOIL	0.4										
Dark Brown Silty CLAY	2.5		1	SS			5		2.3	18.3	
		5	2	SS			11	3.4	2.5	19.9	
Brown and Gray Clayey SILT			3	SS			11	3.8	2.5	19.4	
	10.0	10	4	SS			9		1.0	20.7	
Brown and Gray Silty CLAY with Sand Seams	11.0										
End of Boring at 11 feet											

Sample Type

SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Groundwater

○ During Drilling *Dry ft.*
▽ At Completion *Dry ft.*

Boring Method

HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
DC - Driving Casing
MD - Mud Drilling

BORING LOG

Alt & Witzig Engineering, Inc.

CLIENT **Lancer Associates Architecture**

PROJECT NAME **Sunman/Dearborn School Improvements**

PROJECT LOCATION **St. Leon, IN**

BORING # **S-07**

ALT & WITZIG FILE # **24IN0416**

DRILLING and SAMPLING INFORMATION

Date Started **7/31/24**

Date Completed **7/31/24**

Boring Method **HSA**

Driller **M. Winkler**

Hammer Wt. **140** lbs.

Hammer Drop **30** in.

Spoon Sampler OD **2** in.

Rig Type **D-50 Track ATV**

TEST DATA

STRATA ELEV.	SOIL CLASSIFICATION / SURFACE ELEVATION	Strata Depth	Depth Scale	Sample No.	Sample Type	Sampler Graphics / Recovery Graphics	Ground Water	Standard Penetration Test, N - blows/foot	Qu-tsf Unconfined Compressive Strength	PP-tsf Pocket Penetrometer	Moisture Content % / *Dry Unit Weight (pcf)*	Remarks
	TOPSOIL	0.4										
	Dark Brown Silty Sandy CLAY	2.5		1	SS			4		1.0	18.4	
	Brown Clayey SILT	4.0										
	Brown and Gray Silty CLAY		5	2	SS			12		4.0	17.3	
				3	SS			12	1.5	1.8	32.9	
		10.0	10	4	SS		○	7				
	Brown Sandy SILT	11.0										
	End of Boring at 11 feet											

Sample Type

SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Groundwater

○ During Drilling *10.5 ft.*
▽ At Completion *Dry ft.*

Boring Method

HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
DC - Driving Casing
MD - Mud Drilling

BORING LOG

Alt & Witzig Engineering, Inc.

CLIENT **Lancer Associates Architecture**

PROJECT NAME **Sunman/Dearborn School Improvements**

PROJECT LOCATION **St. Leon, IN**

BORING # **S-08**

ALT & WITZIG FILE # **24IN0416**

DRILLING and SAMPLING INFORMATION

Date Started **7/31/24**

Date Completed **7/31/24**

Boring Method **HSA**

Driller **M. Winkler**

Hammer Wt. **140** lbs.

Hammer Drop **30** in.

Spoon Sampler OD **2** in.

Rig Type **D-50 Track ATV**

TEST DATA

STRATA ELEV.	SOIL CLASSIFICATION / SURFACE ELEVATION	Strata Depth	Depth Scale	Sample No.	Sample Type	Sampler Graphics Recovery Graphics	Ground Water	Standard Penetration Test, N - blows/foot	Qu-tsf Unconfined Compressive Strength	PP-tsf Pocket Penetrometer	Moisture Content % *Dry Unit Weight (pcf)*	Remarks
	9" Crushed Stone	0.8										
	Dark Brown Silty CLAY *(Possible Fill)*	2.5		1	SS			9	3.2	3.0	16.2	
	Brown and Gray Silty CLAY		5	2	SS			11		2.5	17.8	
		7.5		3	SS			6		0.3	25.9	
	Brown Silty CLAY	10.0	10	4	SS			7		1.5	19.2	
	Brown SILT with Sand Seams	11.0										
	End of Boring at 11 feet											

Sample Type

SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Groundwater

○ During Drilling *Dry ft.*
▽ At Completion *Dry ft.*

Boring Method

HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
DC - Driving Casing
MD - Mud Drilling

BORING LOG

Alt & Witzig Engineering, Inc.

CLIENT **Lancer Associates Architecture**

PROJECT NAME **Sunman/Dearborn School Improvements**

PROJECT LOCATION **St. Leon, IN**

BORING # **S-09**

ALT & WITZIG FILE # **24IN0416**

DRILLING and SAMPLING INFORMATION

Date Started **7/31/24**

Date Completed **7/31/24**

Boring Method **HSA**

Driller **M. Winkler**

Hammer Wt. **140** lbs.

Hammer Drop **30** in.

Spoon Sampler OD **2** in.

Rig Type **D-50 Track ATV**

TEST DATA

STRATA ELEV.	SOIL CLASSIFICATION / SURFACE ELEVATION	Strata Depth	Depth Scale	Sample No.	Sample Type	Sampler Graphics / Recovery Graphics	Ground Water	Standard Penetration Test, N - blows/foot	Qu-tsf Unconfined Compressive Strength	PP-tsf Pocket Penetrometer	Moisture Content % / *Dry Unit Weight (pcf)*	Remarks
	18" Crushed Stone	1.5										
	Dark Brown Silty CLAY *(Possible Fill)*	2.5		1	SS			8	2.8	2.5	17.7	
	Gray Silty CLAY		5	2	SS			10	2.9	2.0	15.3	
		7.5		3	SS			9	1.8	1.8	20.5	
	Brown and Gray Silty CLAY		10	4	SS		○	6			23.2	
		11.0										
	End of Boring at 11 feet											

Sample Type

SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Groundwater

○ During Drilling *10.5 ft.*
▽ At Completion *Dry ft.*

Boring Method

HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
DC - Driving Casing
MD - Mud Drilling

BORING LOG

Alt & Witzig Engineering, Inc.

CLIENT **Lancer Associates Architecture**

PROJECT NAME **Sunman/Dearborn School Improvements**

PROJECT LOCATION **St. Leon, IN**

BORING # **S-10**

ALT & WITZIG FILE # **24IN0416**

DRILLING and SAMPLING INFORMATION

Date Started **7/31/24**

Date Completed **7/31/24**

Boring Method **HSA**

Driller **M. Winkler**

Hammer Wt. **140** lbs.

Hammer Drop **30** in.

Spoon Sampler OD **2** in.

Rig Type **D-50 Track ATV**

TEST DATA

STRATA ELEV.	SOIL CLASSIFICATION / SURFACE ELEVATION	Strata Depth	Depth Scale	Sample No.	Sample Type	Sampler Graphics Recovery Graphics	Ground Water	Standard Penetration Test, N - blows/foot	Qu-tsf Unconfined Compressive Strength	PP-tsf Pocket Penetrometer	Moisture Content % *Dry Unit Weight (pcf)*	Remarks
0	8" Crushed Stone	0.7										
	Dark Brown Silty CLAY	2.5		1	SS			8		3.3	17.4	
			5	2	SS			13	2.7	1.3	16.1	
	Brown and Gray Silty CLAY			3	SS			10		2.8	22.8	
			10	4	SS			14	2.6	1.3	22.5	
		11.0										
	End of Boring at 11 feet											

Sample Type

SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Groundwater

○ During Drilling *Dry ft.*
▽ At Completion *Dry ft.*

Boring Method

HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
DC - Driving Casing
MD - Mud Drilling

BORING LOG

Alt & Witzig Engineering, Inc.

CLIENT **Lancer Associates Architecture**

PROJECT NAME **Sunman/Dearborn School Improvements**

PROJECT LOCATION **St. Leon, IN**

BORING # **S-101**

ALT & WITZIG FILE # **24IN0416**

DRILLING and SAMPLING INFORMATION

Date Started **7/31/24**

Date Completed **7/31/24**

Boring Method **HSA**

Driller **M. Winkler**

Hammer Wt. **140** lbs.

Hammer Drop **30** in.

Spoon Sampler OD **2** in.

Rig Type **D-50 Track ATV**

TEST DATA

STRATA ELEV.	SOIL CLASSIFICATION / SURFACE ELEVATION	Strata Depth	Depth Scale	Sample No.	Sample Type	Sampler Graphics / Recovery Graphics	Ground Water	Standard Penetration Test, N - blows/foot	Qu-tsf Unconfined Compressive Strength	PP-tsf Pocket Penetrometer	Moisture Content % / *Dry Unit Weight (pcf)*	Remarks
	Mulch	1.0										
	Brown and Gray Silty CLAY with Rock Fragments	2.0										
	Auger Refusal at 2.0 Feet End of Boring at 2 feet			1	SS			50/0"			21.7	

Sample Type

SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Groundwater

○ During Drilling *Dry ft.*
▽ At Completion *Dry ft.*

Boring Method

HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
DC - Driving Casing
MD - Mud Drilling

BORING LOG

Alt & Witzig Engineering, Inc.

CLIENT **Lancer Associates Architecture**

PROJECT NAME **Sunman/Dearborn School Improvements**

PROJECT LOCATION **St. Leon, IN**

BORING # **S-102**

ALT & WITZIG FILE # **24IN0416**

DRILLING and SAMPLING INFORMATION

Date Started **7/31/24**

Date Completed **7/31/24**

Boring Method **HSA**

Driller **M. Winkler**

Hammer Wt. **140** lbs.

Hammer Drop **30** in.

Spoon Sampler OD **2** in.

Rig Type **D-50 Track ATV**

TEST DATA

STRATA ELEV.	SOIL CLASSIFICATION / SURFACE ELEVATION	Strata Depth	Depth Scale	Sample No.	Sample Type	Sampler Graphics Recovery Graphics	Ground Water	Standard Penetration Test, N - blows/foot	Qu-tsf Unconfined Compressive Strength	PP-tsf Pocket Penetrometer	Moisture Content % *Dry Unit Weight (pcf)*	Remarks
	Mulch	1.0										
	Brown Silty CLAY *(Possible Fill)*	2.0		1	SS			50/1"			28.9	
	Auger Refusal at 2.0 Feet End of Boring at 2 feet											

Sample Type

SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Groundwater

○ During Drilling *Dry ft.*
▽ At Completion *Dry ft.*

Boring Method

HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
DC - Driving Casing
MD - Mud Drilling

BORING LOG

Alt & Witzig Engineering, Inc.

CLIENT **Lancer Associates Architecture**

PROJECT NAME **Sunman/Dearborn School Improvements**

PROJECT LOCATION **St. Leon, IN**

BORING # **S-103**

ALT & WITZIG FILE # **24IN0416**

DRILLING and SAMPLING INFORMATION

Date Started **7/31/24**

Date Completed **7/31/24**

Boring Method **HSA**

Driller **M. Winkler**

Hammer Wt. **140** lbs.

Hammer Drop **30** in.

Spoon Sampler OD **2** in.

Rig Type **D-50 Track ATV**

TEST DATA

STRATA ELEV.	SOIL CLASSIFICATION / SURFACE ELEVATION	Strata Depth	Depth Scale	Sample No.	Sample Type	Sampler Graphics / Recovery Graphics	Ground Water	Standard Penetration Test, N - blows/foot	Qu-tsf Unconfined Compressive Strength	PP-tsf Pocket Penetrometer	Moisture Content % / *Dry Unit Weight (pcf)*	Remarks
	Mulch	1.0										
	Brown and Gray Silty CLAY	2.0										
	Auger Refusal at 2.0 Feet End of Boring at 2 feet			1	SS			50/0"			19.2	

Sample Type

SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Groundwater

○ During Drilling *Dry ft.*
▽ At Completion *Dry ft.*

Boring Method

HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
DC - Driving Casing
MD - Mud Drilling

BORING LOG

Alt & Witzig Engineering, Inc.

CLIENT **Lancer Associates Architecture**

PROJECT NAME **Sunman/Dearborn School Improvements**

PROJECT LOCATION **St. Leon, IN**

BORING # **S-201**

ALT & WITZIG FILE # **24IN0416**

DRILLING and SAMPLING INFORMATION

Date Started **7/31/24**

Date Completed **7/31/24**

Boring Method **HSA**

Driller **M. Winkler**

Hammer Wt. **140** lbs.

Hammer Drop **30** in.

Spoon Sampler OD **2** in.

Rig Type **D-50 Track ATV**

TEST DATA

STRATA ELEV. / SOIL CLASSIFICATION / SURFACE ELEVATION	Strata Depth	Depth Scale	Sample No.	Sample Type	Sampler Graphics / Recovery Graphics	Ground Water	Standard Penetration Test, N - blows/foot	Qu-tsf Unconfined Compressive Strength	PP-tsf Pocket Penetrometer	Moisture Content % / *Dry Unit Weight (pcf)*	Remarks
Mulch	0.7										
Brown and Gray Silty CLAY with Organics *(Possible Fill)*			1	SS			5		0.5	26.3	
	5.0	5	2	SS			7	3.1	4.3	23.8	
Gray Silty CLAY with a Trace of Organics *(Possible Fill)*	7.5		3	SS			17		3.0	27.8	
Brown Silty Sandy CLAY with Rock Fragments		10	4	SS			31			15.3	
	11.0										
End of Boring at 11 feet											

Sample Type

SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Groundwater

○ During Drilling *Dry ft.*
▽ At Completion *Dry ft.*

Boring Method

HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
DC - Driving Casing
MD - Mud Drilling

BORING LOG

Alt & Witzig Engineering, Inc.

CLIENT **Lancer Associates Architecture**

PROJECT NAME **Sunman/Dearborn School Improvements**

PROJECT LOCATION **St. Leon, IN**

BORING # **S-202**

ALT & WITZIG FILE # **24IN0416**

DRILLING and SAMPLING INFORMATION

Date Started **7/31/24**

Date Completed **7/31/24**

Boring Method **HSA**

Driller **M. Winkler**

Hammer Wt. **140** lbs.

Hammer Drop **30** in.

Spoon Sampler OD **2** in.

Rig Type **D-50 Track ATV**

STRATA ELEV. / SOIL CLASSIFICATION / SURFACE ELEVATION	Strata Depth	Depth Scale	Sample No.	Sample Type	Sampler Graphics / Recovery Graphics	Ground Water	TEST DATA: Standard Penetration Test, N - blows/foot	TEST DATA: Qu-tsf Unconfined Compressive Strength	TEST DATA: PP-tsf Pocket Penetrometer	TEST DATA: Moisture Content % / *Dry Unit Weight (pcf)*	Remarks
Mulch	0.6										
Dark Brown Silty CLAY *(Possible Fill)*	2.5		1	SS			4		1.3	25.3	
Brown Silty CLAY *(Possible Fill)*	5.0	5	2	SS			7	1.6	1.3	32.7	
Brown Silty Sandy CLAY with Rock Fragments			3	SS			26		4.5	14.5	
		10	4	SS			33		2.8	14.5	
	11.0										
End of Boring at 11 feet											

Sample Type

SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Groundwater

○ During Drilling *Dry ft.*
▽ At Completion *Dry ft.*

Boring Method

HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
DC - Driving Casing
MD - Mud Drilling

BORING LOG

Alt & Witzig Engineering, Inc.

CLIENT **Lancer Associates Architecture**

PROJECT NAME **Sunman/Dearborn School Improvements**

PROJECT LOCATION **St. Leon, IN**

BORING # **S-203**

ALT & WITZIG FILE # **24IN0416**

DRILLING and SAMPLING INFORMATION

Date Started **7/31/24**

Date Completed **7/31/24**

Boring Method **HSA**

Driller **M. Winkler**

Hammer Wt. **140** lbs.

Hammer Drop **30** in.

Spoon Sampler OD **2** in.

Rig Type **D-50 Track ATV**

TEST DATA

STRATA ELEV.	SOIL CLASSIFICATION / SURFACE ELEVATION	Strata Depth	Depth Scale	Sample No.	Sample Type	Sampler Graphics Recovery Graphics	Ground Water	Standard Penetration Test, N - blows/foot	Qu-tsf Unconfined Compressive Strength	PP-tsf Pocket Penetrometer	Moisture Content % Dry Unit Weight (pcf)	Remarks
	Mulch	0.7										
	Dark Brown Silty Sandy CLAY *(Possible Fill)*	2.5		1	SS			4		0.5	19.4	
			5	2	SS			3		0.5	23.6	
	Gray Silty CLAY with a Trace of Organics *(Possible Fill)*			3	SS			6	1.6	1.0	36.6	
		9.0										
	Brown Silty CLAY		10	4	SS			13	2.3	2.3	25.9	
		11.0										
	End of Boring at 11 feet											

Sample Type

SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

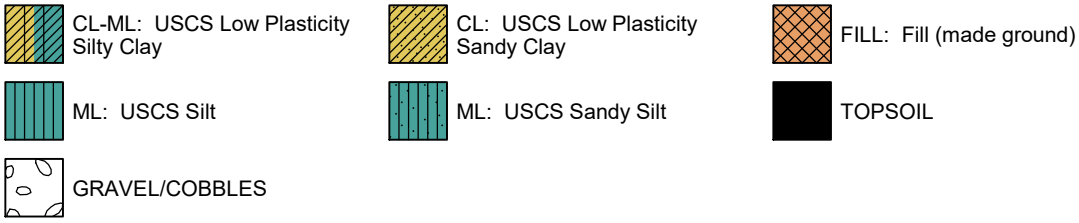
Groundwater

○ During Drilling *Dry ft.*
▽ At Completion *Dry ft.*

Boring Method

HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
DC - Driving Casing
MD - Mud Drilling

MATERIAL GRAPHICS LEGEND



SOIL PROPERTY SYMBOLS

N: *Standard "N" penetration value. Blows per foot of a 140-lb hammer falling 30" on a 2" O.D. split-spoon.*

Qu: *Unconfined Compressive Strength, tsf* PP: *Pocket Penetrometer, tsf*

LL: *Liquid Limit, %* PL: *Plastic Limit, %* PI: *Plasticity Index, %*

DRILLING AND SAMPLING SYMBOLS

GROUNDWATER SYMBOLS

- ○ *Apparent water level noted while drilling.*
- ▽ *Apparent water level noted upon completion.*
- ▼ *Apparent water level noted upon delayed time.*

SAMPLER SYMBOLS

- ⊠ SS: Split Spoon

RELATIVE DENSITY & CONSISTANCY CLASSIFICATION (NON-COHESIVE SOILS)

TERM	*BLOWS PER FOOT*
Very Loose	0 - 5
Loose	6 - 10
Medium Dense	11 - 30
Dense	31 - 50
Very Dense	>51

RELATIVE DENSITY & CONSISTANCY CLASSIFICATION (COHESIVE SOILS)

TERM	*BLOWS PER FOOT*
Very Soft	0 - 3
Soft	4 - 5
Medium Stiff	6 - 10
Stiff	11 - 15
Very Stiff	16 - 30
Hard	>31

Alt & Witzig

Telephone:
Fax:

GENERAL NOTES

Project: Sunman/Dearborn School Improvements

Location: St. Leon, IN

Number: 24IN0416

APPENDIX B

Seismic Design Parameters
Custom Soil Resource Reports for Dearborn County, Indiana

USGS web services were down for some period of time and as a result this tool wasn't operational, resulting in *timeout* error.
USGS web services are now operational so this tool should work as expected.

24IN0416

Latitude, Longitude: 39.279876, -84.973935

Date	8/22/2024, 11:19:14 AM
Design Code Reference Document	IBC-2015
Risk Category	III
Site Class	C - Very Dense Soil and Soft Rock

Type	Value	Description
S_S	0.142	MCE_R ground motion. (for 0.2 second period)
S_1	0.08	MCE_R ground motion. (for 1.0s period)
S_{MS}	0.17	Site-modified spectral acceleration value
S_{M1}	0.136	Site-modified spectral acceleration value
S_{DS}	0.114	Numeric seismic design value at 0.2 second SA
S_{D1}	0.091	Numeric seismic design value at 1.0 second SA

Type	Value	Description
SDC	B	Seismic design category
F_a	1.2	Site amplification factor at 0.2 second
F_v	1.7	Site amplification factor at 1.0 second
PGA	0.065	MCE_G peak ground acceleration
F_{PGA}	1.2	Site amplification factor at PGA
PGA_M	0.078	Site modified peak ground acceleration
T_L	12	Long-period transition period in seconds
SsRT	0.142	Probabilistic risk-targeted ground motion. (0.2 second)
SsUH	0.155	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration
SsD	1.5	Factored deterministic acceleration value. (0.2 second)
S1RT	0.08	Probabilistic risk-targeted ground motion. (1.0 second)
S1UH	0.091	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration.
S1D	0.6	Factored deterministic acceleration value. (1.0 second)
PGAd	0.6	Factored deterministic acceleration value. (Peak Ground Acceleration)

Type	Value	Description
PGA_{UH}	0.065	Uniform-hazard (2% probability of exceedance in 50 years) Peak Ground Acceleration
C_{RS}	0.916	Mapped value of the risk coefficient at short periods
C_{R1}	0.874	Mapped value of the risk coefficient at a period of 1 s
C_V		Vertical coefficient

DISCLAIMER

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United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Dearborn County, Indiana

24IN0416 - (Bright ES)

July 10, 2024

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

Map Scale: 1:870 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 10 20 40 60

Feet: 0 40 80 160 240

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Dearborn County, Indiana
Survey Area Data: Version 24, Sep 1, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 19, 2022—Jun 21, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CcD3	Carmel silty clay loam, 12 to 18 percent slopes, severely eroded	0.7	50.4%
EdE3	Eden flaggy silty clay loam, 15 to 25 percent slopes, severely eroded	0.0	0.2%
WbB2	Weisburg silt loam, 2 to 6 percent slopes, eroded	0.7	49.5%
Totals for Area of Interest		**1.4**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate

pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Dearborn County, Indiana

CcD3—Carmel silty clay loam, 12 to 18 percent slopes, severely eroded

Map Unit Setting

National map unit symbol: 1qqln
Elevation: 420 to 1,020 feet
Mean annual precipitation: 40 to 46 inches
Mean annual air temperature: 52 to 55 degrees F
Frost-free period: 150 to 190 days
Farmland classification: Not prime farmland

Map Unit Composition

Carmel, severely eroded, and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Carmel, Severely Eroded

Setting

Landform: Hills
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loess over clayey residuum over ordovician limestone and shale

Typical profile

Ap - 0 to 6 inches: silty clay loam
2Bt - 6 to 27 inches: silty clay
2CB - 27 to 41 inches: very flaggy silty clay
2Cr - 41 to 60 inches: weathered bedrock

Properties and qualities

Slope: 12 to 18 percent
Depth to restrictive feature: 40 to 60 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Available water supply, 0 to 60 inches: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: D
Ecological site: F121XY017KY - SWPD Fragipan Terrace
Other vegetative classification: Trees/Timber (Woody Vegetation)
Hydric soil rating: No

EdE3—Eden flaggy silty clay loam, 15 to 25 percent slopes, severely eroded

Map Unit Setting

National map unit symbol: 1qqlz
Elevation: 420 to 1,020 feet
Mean annual precipitation: 40 to 46 inches
Mean annual air temperature: 51 to 56 degrees F
Frost-free period: 150 to 200 days
Farmland classification: Not prime farmland

Map Unit Composition

Eden, severely eroded, and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Eden, Severely Eroded

Setting

Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Clayey residuum over ordovician limestone and shale

Typical profile

A - 0 to 4 inches: flaggy silty clay loam
Bt - 4 to 24 inches: flaggy silty clay
Cr - 24 to 60 inches: weathered bedrock

Properties and qualities

Slope: 15 to 25 percent
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Available water supply, 0 to 60 inches: Very low (about 2.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: D
Ecological site: F121XY006KY - Ordovician Limestone Upland
Other vegetative classification: Trees/Timber (Woody Vegetation)
Hydric soil rating: No

WbB2—Weisburg silt loam, 2 to 6 percent slopes, eroded

Map Unit Setting

National map unit symbol: 1qqmy
Elevation: 420 to 1,020 feet
Mean annual precipitation: 40 to 46 inches
Mean annual air temperature: 51 to 56 degrees F
Frost-free period: 150 to 200 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Weisburg and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Weisburg

Setting

Landform: Till plains
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loess over loamy till over clayey residuum

Typical profile

Ap - 0 to 7 inches: silt loam
Bt - 7 to 24 inches: silty clay loam
2Btx - 24 to 39 inches: loam
2Bt2 - 39 to 69 inches: clay
3BC - 69 to 80 inches: clay

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: 20 to 34 inches to fragipan; 72 to 96 inches to paralithic bedrock
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 20 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Low (about 4.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: F114XB804IN - Silty Eolian Forest
Other vegetative classification: Trees/Timber (Woody Vegetation)

Hydric soil rating: No

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United States Department of Agriculture

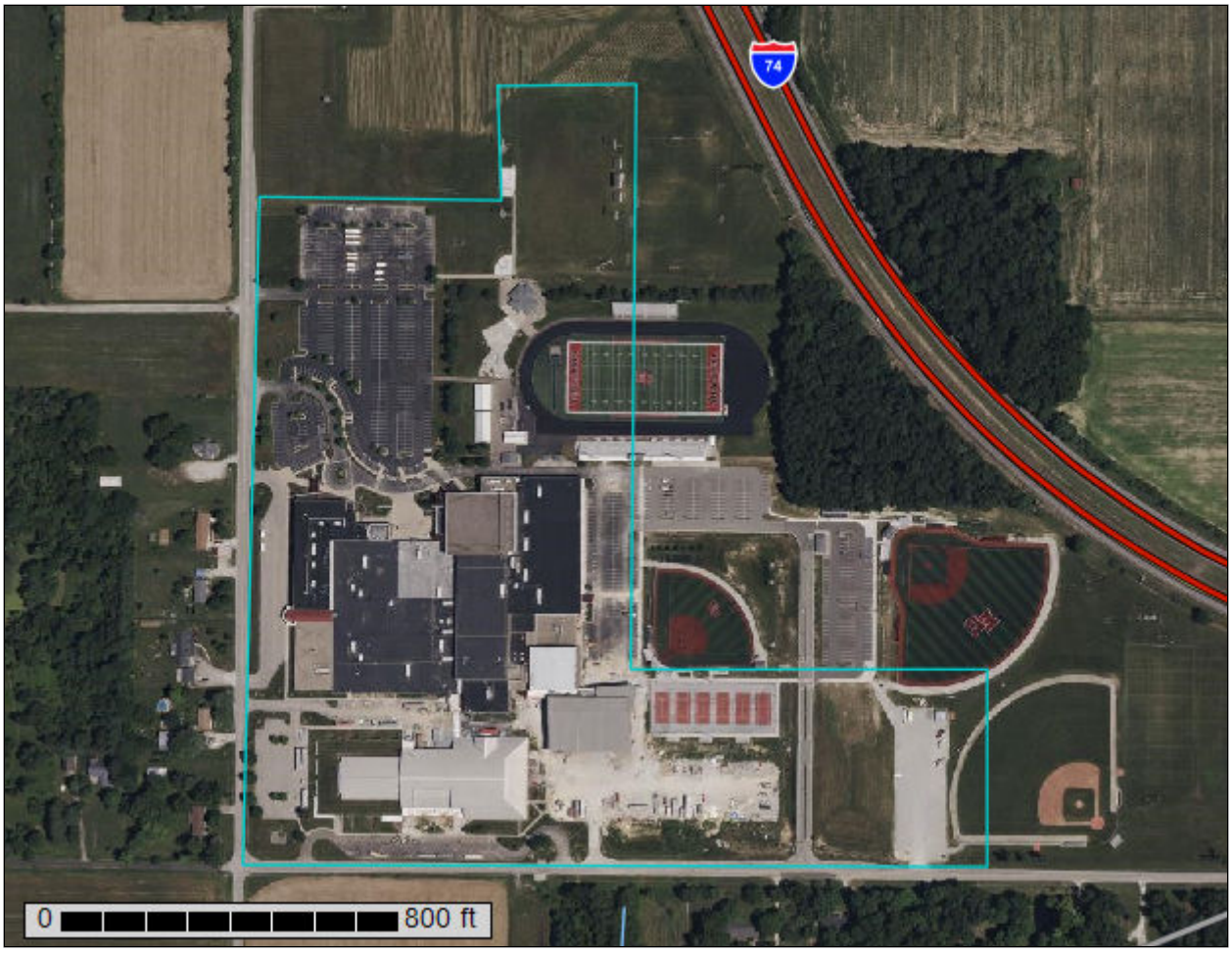
NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Dearborn County, Indiana

24IN0416 - (East Central HS/MS)



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Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

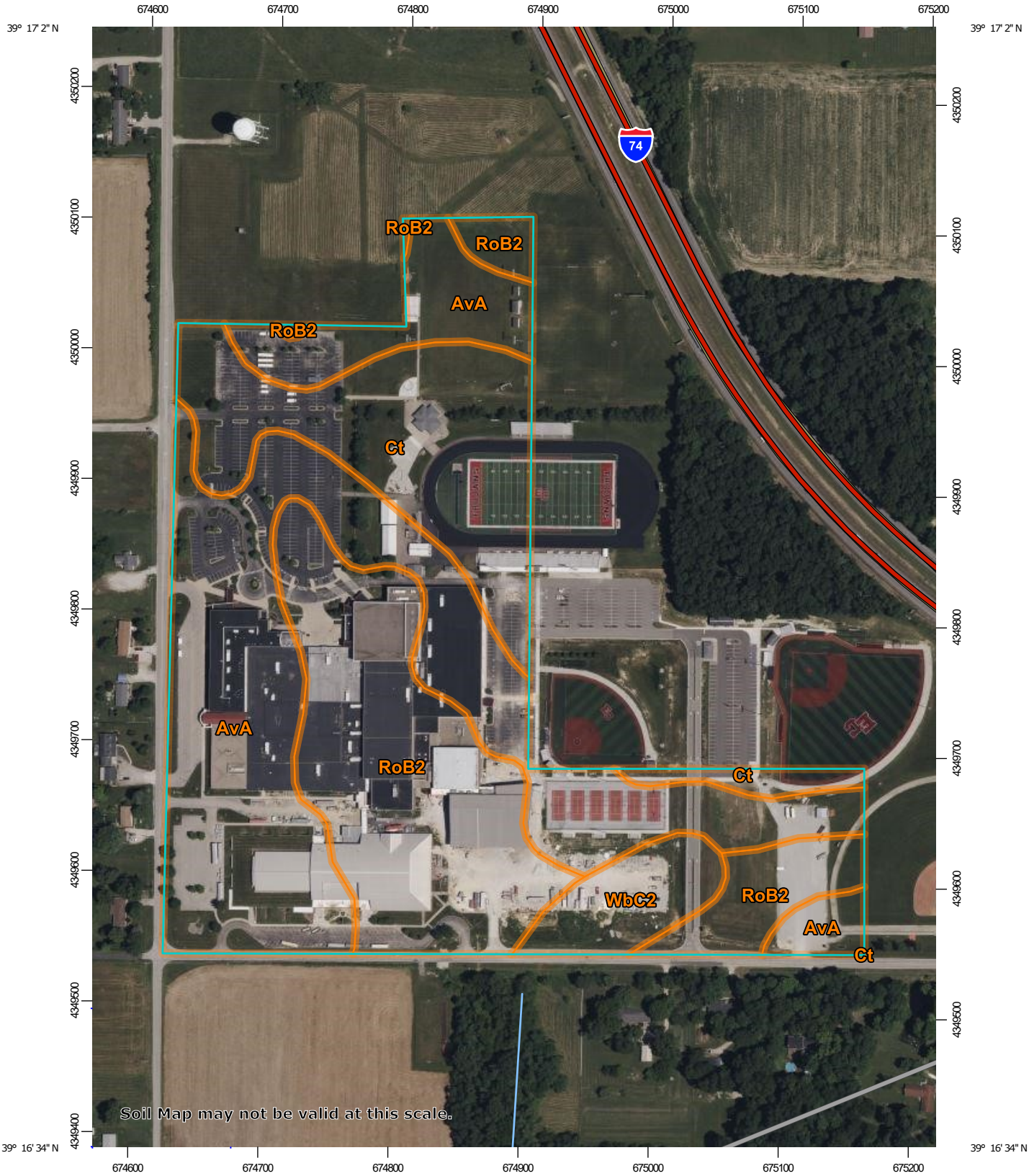
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



Map Scale: 1:4,180 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 200 400 800 1200

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Dearborn County, Indiana
Survey Area Data: Version 24, Sep 1, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 19, 2022—Jun 21, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AvA	Avonburg silt loam, 0 to 2 percent slopes	20.3	46.0%
Ct	Cobbsfork silt loam, 0 to 1 percent slopes	8.6	19.6%
RoB2	Nabb silt loam, 2 to 6 percent slopes, eroded	13.0	29.4%
WbC2	Weisburg silt loam, 6 to 12 percent slopes, eroded	2.2	5.0%
Totals for Area of Interest		**44.1**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Dearborn County, Indiana

AvA—Avonburg silt loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2t684
Elevation: 350 to 1,000 feet
Mean annual precipitation: 38 to 47 inches
Mean annual air temperature: 52 to 56 degrees F
Frost-free period: 170 to 200 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Avonburg and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Avonburg

Setting

Landform: Till plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loess over loamy till

Typical profile

Ap - 0 to 11 inches: silt loam
BE - 11 to 21 inches: silt loam
Btg - 21 to 40 inches: silty clay loam
2Btgx/E - 40 to 52 inches: silt loam
2Btx - 52 to 83 inches: silt loam
3Btb - 83 to 90 inches: clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: 40 to 60 inches to fragipan
Drainage class: Somewhat poorly drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high (0.01 to 0.20 in/hr)
Depth to water table: About 6 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 9.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C/D
Ecological site: F111XA008IN - Wet Till Ridge, F114XB803IN - Wet Silty Eolian Forest
Hydric soil rating: No

Minor Components

Cobbsfork

Percent of map unit: 10 percent
Landform: Flats on till plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Talf
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Hydric soil rating: Yes

Nabb

Percent of map unit: 5 percent
Landform: Till plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Ct—Cobbsfork silt loam, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2t68l
Elevation: 350 to 1,000 feet
Mean annual precipitation: 38 to 47 inches
Mean annual air temperature: 48 to 57 degrees F
Frost-free period: 145 to 180 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Cobbsfork and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cobbsfork

Setting

Landform: Flats on till plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Talf
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Parent material: Loess over loamy till

Typical profile

Ap - 0 to 12 inches: silt loam
BEg - 12 to 18 inches: silt loam
Btg/E - 18 to 38 inches: silt loam
2E/Btgx - 38 to 50 inches: silt loam

2Btx - 50 to 85 inches: silt loam
3Btb - 85 to 90 inches: clay loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately low (0.01 to 0.06 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 9.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Ecological site: F111XA008IN - Wet Till Ridge, F114XB803IN - Wet Silty Eolian Forest
Hydric soil rating: Yes

Minor Components

Cobbsfork, undrained

Percent of map unit: 10 percent
Landform: Flats on till plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Talf
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Hydric soil rating: Yes

Avonburg

Percent of map unit: 5 percent
Landform: Till plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

RoB2—Nabb silt loam, 2 to 6 percent slopes, eroded

Map Unit Setting

National map unit symbol: 2t68x
Elevation: 350 to 1,000 feet
Mean annual precipitation: 38 to 47 inches
Mean annual air temperature: 48 to 57 degrees F

Frost-free period: 145 to 180 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Nabb, eroded, and similar soils: 78 percent
Minor components: 22 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Nabb, Eroded

Setting

Landform: Till plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loess over gritty loess over till

Typical profile

Ap - 0 to 7 inches: silt loam
BE - 7 to 13 inches: silt loam
Bt - 13 to 33 inches: silty clay loam
2Btx - 33 to 71 inches: silt loam
3Btb - 71 to 79 inches: clay loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: 32 to 34 inches to fragipan
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately low (0.01 to 0.06 in/hr)
Depth to water table: About 18 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 6.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C/D
Ecological site: F111XA009IN - Till Ridge, F114XB804IN - Silty Eolian Forest
Hydric soil rating: No

Minor Components

Cincinnati, eroded

Percent of map unit: 10 percent
Landform: Till plains
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Avonburg

Percent of map unit: 8 percent
Landform: Till plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Wakeland

Percent of map unit: 4 percent
Landform: Flood plains, flood-plain steps
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Talf
Down-slope shape: Linear, convex
Across-slope shape: Linear
Hydric soil rating: No

WbC2—Weisburg silt loam, 6 to 12 percent slopes, eroded

Map Unit Setting

National map unit symbol: 1qqmz
Elevation: 420 to 1,020 feet
Mean annual precipitation: 40 to 46 inches
Mean annual air temperature: 51 to 56 degrees F
Frost-free period: 150 to 200 days
Farmland classification: Not prime farmland

Map Unit Composition

Weisburg and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Weisburg

Setting

Landform: Till plains
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loess over loamy till over clayey residuum

Typical profile

Ap - 0 to 7 inches: silt loam
Bt - 7 to 24 inches: silty clay loam
2Btx - 24 to 39 inches: loam
2Bt2 - 39 to 69 inches: clay
3BC - 69 to 80 inches: clay

Properties and qualities

Slope: 6 to 12 percent
Depth to restrictive feature: 20 to 34 inches to fragipan; 72 to 96 inches to paralithic bedrock
Drainage class: Moderately well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 20 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Low (about 4.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: F114XB804IN - Silty Eolian Forest
Other vegetative classification: Trees/Timber (Woody Vegetation)
Hydric soil rating: No

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United States Department of Agriculture

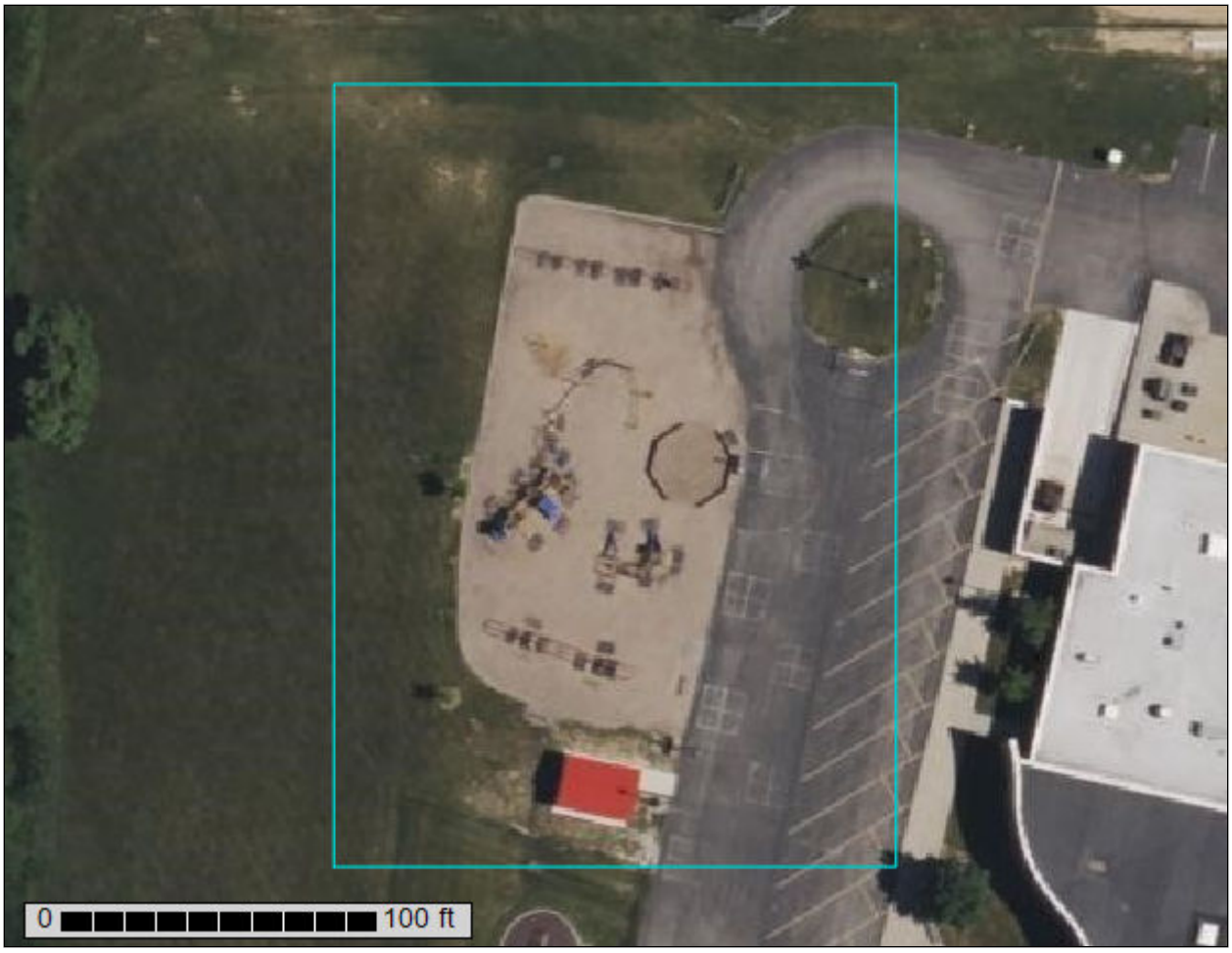
NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Dearborn County, Indiana

24IN0416 - (North Dearborn ES)



July 10, 2024

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

Map Scale: 1:441 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 5 10 20 30

Feet: 0 20 40 80 120

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Dearborn County, Indiana
Survey Area Data: Version 24, Sep 1, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 19, 2022—Jun 21, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CcD3	Carmel silty clay loam, 12 to 18 percent slopes, severely eroded	0.0	0.1%
CnB2	Cincinnati silt loam, 2 to 6 percent slopes, eroded	0.7	71.1%
WbB2	Weisburg silt loam, 2 to 6 percent slopes, eroded	0.0	0.6%
WbC2	Weisburg silt loam, 6 to 12 percent slopes, eroded	0.3	28.1%
Totals for Area of Interest		**1.0**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Dearborn County, Indiana

CcD3—Carmel silty clay loam, 12 to 18 percent slopes, severely eroded

Map Unit Setting

National map unit symbol: 1qqln
Elevation: 420 to 1,020 feet
Mean annual precipitation: 40 to 46 inches
Mean annual air temperature: 52 to 55 degrees F
Frost-free period: 150 to 190 days
Farmland classification: Not prime farmland

Map Unit Composition

Carmel, severely eroded, and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Carmel, Severely Eroded

Setting

Landform: Hills
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loess over clayey residuum over ordovician limestone and shale

Typical profile

Ap - 0 to 6 inches: silty clay loam
2Bt - 6 to 27 inches: silty clay
2CB - 27 to 41 inches: very flaggy silty clay
2Cr - 41 to 60 inches: weathered bedrock

Properties and qualities

Slope: 12 to 18 percent
Depth to restrictive feature: 40 to 60 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Available water supply, 0 to 60 inches: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: D
Ecological site: F121XY017KY - SWPD Fragipan Terrace
Other vegetative classification: Trees/Timber (Woody Vegetation)
Hydric soil rating: No

CnB2—Cincinnati silt loam, 2 to 6 percent slopes, eroded

Map Unit Setting

National map unit symbol: 2t991
Elevation: 350 to 1,020 feet
Mean annual precipitation: 38 to 47 inches
Mean annual air temperature: 48 to 57 degrees F
Frost-free period: 170 to 200 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Cincinnati, eroded, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cincinnati, Eroded

Setting

Landform: Till plains
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loess over pedisediment over paleosol in till

Typical profile

Ap - 0 to 8 inches: silt loam
Bt - 8 to 31 inches: silt loam
2Btx - 31 to 72 inches: silt loam
3Bt - 72 to 79 inches: clay loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: 19 to 34 inches to fragipan
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high (0.01 to 0.20 in/hr)
Depth to water table: About 20 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 5.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: F114XB503IN - Till Upland Forest, F111XD010IN - Till Ridge
Hydric soil rating: No

Minor Components

Nabb, eroded

Percent of map unit: 10 percent
Landform: Till plains
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Blocher, eroded

Percent of map unit: 5 percent
Landform: Till plains
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

WbB2—Weisburg silt loam, 2 to 6 percent slopes, eroded

Map Unit Setting

National map unit symbol: 1qqmy
Elevation: 420 to 1,020 feet
Mean annual precipitation: 40 to 46 inches
Mean annual air temperature: 51 to 56 degrees F
Frost-free period: 150 to 200 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Weisburg and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Weisburg

Setting

Landform: Till plains
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loess over loamy till over clayey residuum

Typical profile

Ap - 0 to 7 inches: silt loam
Bt - 7 to 24 inches: silty clay loam
2Btx - 24 to 39 inches: loam
2Bt2 - 39 to 69 inches: clay
3BC - 69 to 80 inches: clay

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: 20 to 34 inches to fragipan; 72 to 96 inches to paralithic bedrock
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 20 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Low (about 4.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: F114XB804IN - Silty Eolian Forest
Other vegetative classification: Trees/Timber (Woody Vegetation)
Hydric soil rating: No

WbC2—Weisburg silt loam, 6 to 12 percent slopes, eroded

Map Unit Setting

National map unit symbol: 1qqmz
Elevation: 420 to 1,020 feet
Mean annual precipitation: 40 to 46 inches
Mean annual air temperature: 51 to 56 degrees F
Frost-free period: 150 to 200 days
Farmland classification: Not prime farmland

Map Unit Composition

Weisburg and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Weisburg

Setting

Landform: Till plains
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loess over loamy till over clayey residuum

Typical profile

Ap - 0 to 7 inches: silt loam
Bt - 7 to 24 inches: silty clay loam
2Btx - 24 to 39 inches: loam
2Bt2 - 39 to 69 inches: clay

3BC - 69 to 80 inches: clay

Properties and qualities

Slope: 6 to 12 percent
Depth to restrictive feature: 20 to 34 inches to fragipan; 72 to 96 inches to paralithic bedrock
Drainage class: Moderately well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 20 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Low (about 4.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: F114XB804IN - Silty Eolian Forest
Other vegetative classification: Trees/Timber (Woody Vegetation)
Hydric soil rating: No

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ENVIRONMENTAL REPORT
10/11/24

2024

NESHAP Compliant Asbestos Inspection Report

Of

East Central High School
1 Trojan Place, Suite A
Saint Leon, Indiana 47012

(Proposed Remodel Areas)

Prepared For:

Maxwell Construction
440 Nowlin Avenue
Greendale, Indiana 47025
Attn: Mr. Cody Hudepohl; Project Manager

Prepared By:

Micro Air, Inc.
6320 La Pas Trail
Indianapolis, Indiana 46268

Micro Air, Inc. Job #20-19981-D

September 9th, 2024

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TAB 1

ASBESTOS TESTING REPORT

micro air inc.
6320 LA PAS TRAIL, INDIANAPOLIS, INDIANA 46268
TELEPHONE: (317) 293-1533 FAX: (317) 290-3566
E-MAIL: microair@microair.com
WEB SITE: http://www.microair.com

September 9th, 2024

Mr. Cody Hudepohl
Project Manager
Maxwell Construction
440 Nowlin Avenue
Greendale, Indiana 47025

RE: NESHAP Compliant Asbestos Survey
East Central High School
1 Trojan Place, Suite A
Saint Leon, IN 47012
(Proposed Remodel Areas)
Micro Air, Inc. Job #20-19981-D

Dear Mr. Hudepohl:

Micro Air, Inc. was contracted by the Maxwell Construction to conduct a limited NESHAP complaint asbestos survey of East Central High School located at 1 Trojan Place, Suite A in Saint Leon, Indiana. Mr. Anthony Bolanos of Micro Air, Inc. conducted the inspection on August 21st, 2024 (State of Indiana asbestos inspector certification #190202101, Exp. Date: 12/20/24). **The inspection was conducted in order to accommodate renovations planned within the building and was limited to the interior of the structure. The testing was limited to finishes potentially impacted on the drawings forwarded to Micro Air, Inc. by Maxwell Construction. Limited destructive sampling was conducted during the course of the inspection.** All survey work was conducted following guidelines established under the EPA National Emission Standard for Asbestos (40 CFR 61 Subpart M). All bulk samples collected during the inspection were submitted to Micro Air, Inc.'s laboratory located at 6320 La Pas Trail in Indianapolis, Indiana for analysis. All bulk samples were analyzed utilizing the EPA approved Polarized Light Microscopy method. The following is a summary of the findings of the survey:

East Central High School
1 Trojan Place, Suite A
Saint Leon, Indiana

Information obtained from the school corporation indicates that the school was originally constructed in 1973. The school contains approximately 380,693 square feet of finished floor

space. The following additions have been constructed since the building's original construction date:

1) Natatorium (1980)

2) "C" wing classrooms (1985)

3) Auxiliary Gym/Activity Center (1994)

4) North Administrative Offices/Auditorium (2006)

The building underwent major interior renovations during the course of a 2006 and 2021-2023 remodel. The building consists of brick, concrete block and cut limestone fascia and aluminum door/window systems. Interior finishes consist of terrazzo, carpet, vinyl floor tile and ceramic tile floors, drywall and concrete block demising walls and drop acoustical tile and drywall ceilings. Structural steel supports a corrugated metal roof deck. Wood floors were identified in the original gymnasium. Solid wood core doors were identified throughout the building. The building is heated and cooled by a heating water/chilled water forced air and radiated system. **Non-suspect fiberglass insulation and zeston fittings and armaflex pipe insulation was identified lining the heating water, chilled water, roof drain and domestic water lines throughout the building.**

Areas included in the scope of testing are listed as follows:

1) North administrative offices
2) High school offices
3) Classrooms 110 through 120
4) Staff/student restrooms
5) Media center/offices
6) Kitchen/kitchen office

During the course of the inspection, the following potential asbestos-containing materials, were identified in the areas denotated as "Scope of Work" and sampled for asbestos content:

1) Drywall and associated joint compound
2) Carpet mastic
3) Black vinyl cove base molding and mastic
4) 12" x 12" cream and grey check pattern floor tile and mastic

5) Expansion joint at concrete floors
6) Ceramic tile grout
7) Ceramic tile adhesive
8) 2' x 2' drywall type ceiling tile
9) 12" x 12" grey chip pattern floor tile and mastic
10) 12" x 12" grey speck pattern floor tile and mastic

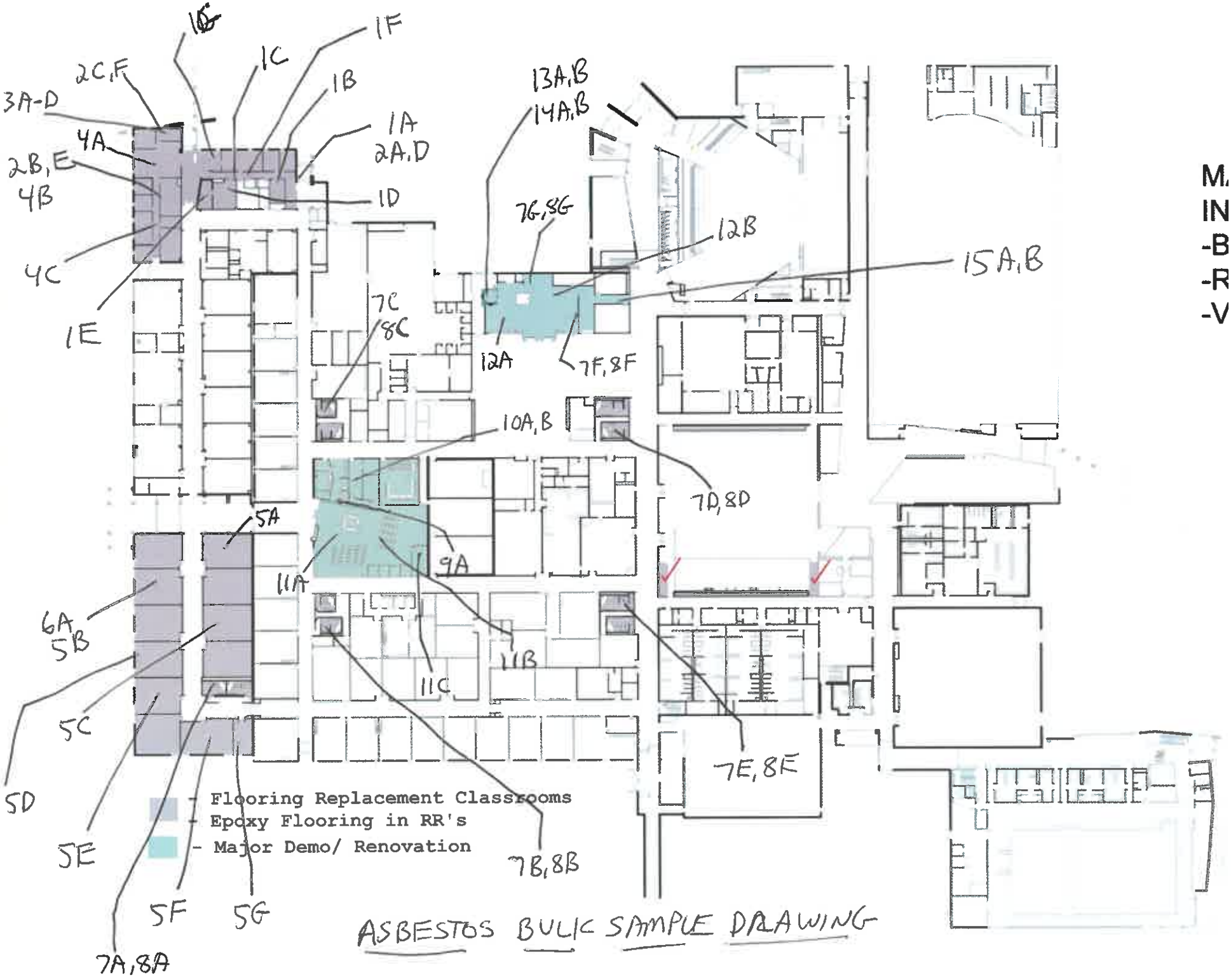
The results of laboratory analysis indicated no detectable levels of asbestos present in any of the samples collected during the survey. Renovations within the planned remodel areas may proceed without concerns for disturbance of asbestos-containing materials.

Thank you for the opportunity to provide our asbestos related services. Copies of the laboratory report, photographs of materials sampled during the inspection, a bulk sample location drawing and copies of personnel and laboratory certifications have been included. If you have any questions concerning this report or need additional information, please do not hesitate to contact me.

Respectfully submitted,

Anthony Bolanos

Anthony Bolanos, MPA, CHMM
Asbestos/Lead Division Manager
Micro Air, Inc.


1G
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4C
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- Epoxy Flooring in RR's
- Major Demo/ Renovation
ASBESTOS BULK SAMPLE DRAWING
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IN
-B
-R
-V

TAB 2

ASBESTOS BULK SAMPLE LABORATORY REPORT /CHAIN OF CUSTODY

micro air inc.

6320 La Pas Trail, Indianapolis, IN 46268 * Phone: (317) 293-1533 * lab@microair.com * www.microair.com

August 29, 2024

Maxwell Construction
Cody Hudepohl
440 Nowlin Ave
Greendale, IN 47025

Polarized Light Microscopy (PLM) Bulk Sample Results

Project Name:	East Central High School	Location:	1 Trojan Road A - Saint Leon, IN 47012
Project Number:	20-19981-D	Date Received:	August 23, 2024

Enclosed please find the results of samples analyzed by the Micro Air, Inc. laboratory.

Samples were analyzed by 40 CFR Part 763 Appendix E to Subpart E - Interim Method for the Determination of Asbestos in Bulk Insulation Samples using Polarized Light Microscopy (PLM) with Dispersion Staining. Where appropriate, analytical procedures outlined in the EPA Method/600/R-93/116, Method for the Determination of Asbestos in Bulk Building Materials (July 1993) may also be used during analysis. All samples may be heated to release fibrous material.

Samples are considered asbestos-containing material (ACM), as defined by the EPA, when asbestos is found in greater than 1% of the sample. Sample percentages are calculated using comparative visual estimation (CVES). Asbestos regulations and EPA methods state that distinct layers must be analyzed and reported separately. If composite analysis is requested and performed on multi-layered samples, the sample is considered ACM if any quantity of asbestos is found. This report should not be used to imply product or service endorsement by NVLAP, NIST, or any agency of the U.S. Government.

Disclaimer: PLM results of non-friable organic bound (NOB) materials, such as floor tiles and roofing materials, can be inconclusive due to analytical difficulties in standard bulk sample analysis techniques. If desired, results can be confirmed with transmission electron microscopy (TEM) to ensure that asbestos has not been missed during PLM analysis.

This report may not be reproduced, except in full, without written approval from Micro Air, Inc. These results only relate to the items tested and are only as accurate as the sampling information submitted by the customer (e.g. air volumes). Samples are received in good condition unless otherwise noted.

Please consult your Project Manager, Tony Bolanos, with any questions regarding these results.

Analyzed By:

Darren A. Parsons

Authorized By:

Betsie L McAfee

Betsie L. McAfee
Technical Manager

Client: Maxwell Construction
Report Date: 8/29/2024
Lab Number: 188687

Project Number: 20-19981-D
Project Name: East Central High School

Polarized Light Microscopy (PLM) Bulk Sample Results

Location: 1 Trojan Road A - Saint Leon, IN 47012

Sample ID	Client Sample ID	Date Collected	Date Analyzed	Sample Description	Asbestos Present?	Color	Homogeneous	Sample Composition	
								Asbestos	Non-Asbestos
001	1A	8/21/2024	8/26/2024	Carpet Mastic; Ground Floor - Admin Reception	NO	GR	YES	N/A	Cellulose <1% Binder 100%
002	1B	8/21/2024	8/26/2024	Carpet Mastic; Ground Floor - Financial Operations	NO	GR-Y	YES	N/A	Binder 100%
003	1C	8/21/2024	8/26/2024	Carpet Mastic; Ground Floor - Hall at Men's Restroom	NO	BL	YES	N/A	Cellulose <1% Hair <1% Binder 100%
004	1D	8/21/2024	8/26/2024	Carpet Mastic; Ground Floor - Business Office	NO	BL	YES	N/A	Cellulose <1% Binder 100%
005	1E	8/21/2024	8/26/2024	Carpet Mastic; Ground Floor - Records Room	NO	GR	YES	N/A	Binder 100%
006	1F	8/21/2024	8/26/2024	Carpet Mastic; Ground Floor - Hall at Human Resources	NO	GR	YES	N/A	Cellulose <1% Binder 100%
007	1G	8/21/2024	8/26/2024	Carpet Mastic; Ground Floor - Human Resources	NO	GR	YES	N/A	Cellulose 2% Binder 98%

Client: Maxwell Construction
Report Date: 8/29/2024
Lab Number: 188687

Project Number: 20-19981-D
Project Name: East Central High School

Polarized Light Microscopy (PLM) Bulk Sample Results

Location: 1 Trojan Road A - Saint Leon, IN 47012

Sample ID	Client Sample ID	Date Collected	Date Analyzed	Sample Description	Asbestos Present?	Color	Homogeneous	Sample Composition	
								Asbestos	Non-Asbestos
008	2A	8/21/2024	8/26/2024	Black Cove Base; Ground Floor - Admin Reception	NO	B	YES	N/A	Cellulose <1% Binder 100%
009	2B	8/21/2024	8/26/2024	Black Cove Base; Ground Floor - Records Room	NO	B	YES	N/A	Binder 100%
010	2C	8/21/2024	8/26/2024	Black Cove Base; Ground Floor - High School Break Room	NO	B	YES	N/A	Binder 100%
011	2D	8/21/2024	8/26/2024	Black Cove Base Mastic; Ground Floor - Admin Reception	NO	T	YES	N/A	Cellulose <1% Binder 100%
012	2E	8/21/2024	8/26/2024	Black Cove Base Mastic; Ground Floor - Records Room	NO	T	YES	N/A	Binder 100%
013	2F	8/21/2024	8/26/2024	Black Cove Base Mastic; Ground Floor - High School Break Room	NO	T	YES	N/A	Cellulose <1% Binder 100%
014	3A	8/21/2024	8/26/2024	12" x 12" Cream and Grey Tile; Ground Floor - High School Break Room	NO	G	YES	N/A	Binder 100%

Client: Maxwell Construction
Report Date: 8/29/2024
Lab Number: 188687

Project Number: 20-19981-D
Project Name: East Central High School

Polarized Light Microscopy (PLM) Bulk Sample Results

Location: 1 Trojan Road A - Saint Leon, IN 47012

Sample ID	Client Sample ID	Date Collected	Date Analyzed	Sample Description	Asbestos Present?	Color	Homogeneous	Sample Composition	
								Asbestos	Non-Asbestos
015	3B	8/21/2024	8/26/2024	12" x 12" Cream and Grey Tile; Ground Floor - High School Break Room	NO	G	YES	N/A	Binder 100%
016	3C	8/21/2024	8/26/2024	12" x 12" Cream and Grey Tile Mastic; Ground Floor - High School Break Room	NO	Y	YES	N/A	Cellulose <1% Binder 100%
017	3D	8/21/2024	8/26/2024	12" x 12" Cream and Grey Tile Mastic; Ground Floor - High School Break Room	NO	Y	YES	N/A	Cellulose <1% Hair <1% Binder 100%
018	4A	8/21/2024	8/26/2024	Carpet Mastic; Ground Floor - High School Office Reception	NO	BL	YES	N/A	Cellulose <1% Binder 100%
019	4B	8/21/2024	8/26/2024	Carpet Mastic; Ground Floor - Records Room	NO	BR-O	YES	N/A	Cellulose <1% Fiberglass <1% Synthetics 3% Binder 97%
020	4C	8/21/2024	8/26/2024	Carpet Mastic; Ground Floor - Hall at Principal's Office	NO	BL	YES	N/A	Cellulose <1% Binder 100%
021	5A	8/21/2024	8/27/2024	Carpet Mastic; Ground Floor - Room 111	NO	O	YES	N/A	Cellulose 3% Synthetics 3% Binder 94%

Client: Maxwell Construction
Report Date: 8/29/2024
Lab Number: 188687

Project Number: 20-19981-D
Project Name: East Central High School

Polarized Light Microscopy (PLM) Bulk Sample Results

Location: 1 Trojan Road A - Saint Leon, IN 47012

Sample ID	Client Sample ID	Date Collected	Date Analyzed	Sample Description	Asbestos Present?	Color	Homogeneous	Sample Composition	
								Asbestos	Non-Asbestos
022	5B	8/21/2024	8/27/2024	Carpet Mastic; Ground Floor - Room 112	NO	O-G	YES	N/A	Cellulose 2% Synthetics <1% Binder 98%
023	5C	8/21/2024	8/27/2024	Carpet Mastic; Ground Floor - Room 115	NO	B-O	YES	N/A	Cellulose <1% Synthetics 10% Binder 90%
024	5D	8/21/2024	8/27/2024	Carpet Mastic; Ground Floor - Room 116	NO	O	YES	N/A	Cellulose <1% Synthetics <1% Binder 100%
025	5E	8/21/2024	8/27/2024	Carpet Mastic; Ground Floor - Room 118	NO	O	YES	N/A	Cellulose <1% Synthetics <1% Binder 100%
026	5F	8/21/2024	8/27/2024	Carpet Mastic; Ground Floor - Room 120	NO	O	YES	N/A	Cellulose 2% Synthetics <1% Binder 98%
027	5G	8/21/2024	8/28/2024	Carpet Mastic; Ground Floor - Office at Room 120	NO	O-G	YES	N/A	Cellulose <1% Binder 100%
028	6A	8/21/2024	8/28/2024	Expansion Joint at Perimeter; Ground Floor - Room 112	NO	B-BR	YES	N/A	Cellulose 80% Binder 20%

Client: Maxwell Construction
Report Date: 8/29/2024
Lab Number: 188687

Project Number: 20-19981-D
Project Name: East Central High School

Polarized Light Microscopy (PLM) Bulk Sample Results

Location: 1 Trojan Road A - Saint Leon, IN 47012

Sample ID	Client Sample ID	Date Collected	Date Analyzed	Sample Description	Asbestos Present?	Color	Homogeneous	Sample Composition	
								Asbestos	Non-Asbestos
029	7A	8/21/2024	8/28/2024	Ceramic Tile Grout; Ground Floor - Men's Staff Restroom	NO	G	YES	N/A	Binder 100%
030	7B	8/21/2024	8/28/2024	Ceramic Tile Grout; Ground Floor - Men's Restroom at Room 123	NO	R-G	YES	N/A	Binder 100%
031	7C	8/21/2024	8/28/2024	Ceramic Tile Grout; Ground Floor - Women's Restroom at Room 130	NO	G	YES	N/A	Binder 100%
032	7D	8/21/2024	8/28/2024	Ceramic Tile Grout; Ground Floor - Women's Restroom at Cafe	NO	G	YES	N/A	Binder 100%
033	7E	8/21/2024	8/28/2024	Ceramic Tile Grout; Ground Floor - Men's Restroom at Gym	NO	G	YES	N/A	Binder 100%
034	7F	8/21/2024	8/28/2024	Ceramic Tile Grout; Ground Floor - Kitchen	NO	R-G	YES	N/A	Binder 100%
035	7G	8/21/2024	8/28/2024	Ceramic Tile Grout; Ground Floor - Kitchen	NO	G	YES	N/A	Binder 100%

Client: Maxwell Construction
Report Date: 8/29/2024
Lab Number: 188687

Project Number: 20-19981-D
Project Name: East Central High School

Polarized Light Microscopy (PLM) Bulk Sample Results

Location: 1 Trojan Road A - Saint Leon, IN 47012

Sample ID	Client Sample ID	Date Collected	Date Analyzed	Sample Description	Asbestos Present?	Color	Homogeneous	Sample Composition	
								Asbestos	Non-Asbestos
036	8A	8/21/2024	8/28/2024	Ceramic Tile Adhesive; Ground Floor - Men's Staff Restroom	NO	G	YES	N/A	Binder 100%
037	8B	8/21/2024	8/28/2024	Ceramic Tile Adhesive; Ground Floor - Men's Restroom at Room 123	NO	G-R	YES	N/A	Binder 100%
038	8C	8/21/2024	8/28/2024	Ceramic Tile Adhesive; Ground Floor - Women's Restroom at Room 130	NO	G	YES	N/A	Binder 100%
039	8D	8/21/2024	8/28/2024	Ceramic Tile Adhesive; Ground Floor - Women's Restroom at Cafe	NO	G	YES	N/A	Binder 100%
040	8E	8/21/2024	8/28/2024	Ceramic Tile Adhesive; Ground Floor - Men's Restroom at Gym	NO	G	YES	N/A	Binder 100%
041	8F	8/21/2024	8/28/2024	Ceramic Tile Adhesive; Ground Floor - Kitchen	NO	G-R	YES	N/A	Binder 100%
042	8G	8/21/2024	8/28/2024	Ceramic Tile Adhesive; Ground Floor - Kitchen	NO	T-G-W	YES	N/A	Binder 100%

Client: Maxwell Construction
Report Date: 8/29/2024
Lab Number: 188687

Project Number: 20-19981-D
Project Name: East Central High School

Polarized Light Microscopy (PLM) Bulk Sample Results

Location: 1 Trojan Road A - Saint Leon, IN 47012

Sample ID	Client Sample ID	Date Collected	Date Analyzed	Sample Description	Asbestos Present?	Color	Homogeneous	Sample Composition	
								Asbestos	Non-Asbestos
043	9A	8/21/2024	8/28/2024	Drywall and Joint Compound; Ground Floor - Media Center	NO	BR-W	NO	N/A	Cellulose 2% Binder 98%
044	10A	8/21/2024	8/28/2024	12" x 12" Cream and Grey Tile; Ground Floor - Media Work Room	NO	W	YES	N/A	Binder 100%
045	10B	8/21/2024	8/28/2024	12" x 12" Cream and Grey Tile Mastic; Ground Floor - Media Work Room	NO	BR-Y	YES	N/A	Cellulose 10% Binder 90%
046	11A	8/21/2024	8/28/2024	Carpet Mastic; Ground Floor - Media Center	NO	O	YES	N/A	Cellulose <1% Binder 100%
047	11B	8/21/2024	8/28/2024	Carpet Mastic; Ground Floor - Media Center	NO	W-O	YES	N/A	Synthetics 45% Binder 55%
048	11C	8/21/2024	8/28/2024	Carpet Mastic; Ground Floor - Media Office	NO	O	YES	N/A	Cellulose <1% Binder 100%
049	12A	8/21/2024	8/28/2024	2' x 2' Smooth Ceiling Tile; Ground Floor - Kitchen	NO	W	YES	N/A	Cellulose <1% Binder 100%

Client: Maxwell Construction
Report Date: 8/29/2024
Lab Number: 188687

Project Number: 20-19981-D
Project Name: East Central High School

Polarized Light Microscopy (PLM) Bulk Sample Results

Location: 1 Trojan Road A - Saint Leon, IN 47012

Sample ID	Client Sample ID	Date Collected	Date Analyzed	Sample Description	Asbestos Present?	Color	Homogeneous	Sample Composition	
								Asbestos	Non-Asbestos
050	12B	8/21/2024	8/28/2024	2' x 2' Smooth Ceiling Tile; Ground Floor - Kitchen	NO	W-T	NO	N/A	Cellulose 5% Binder 95%
051	13A	8/21/2024	8/28/2024	12" x 12" Grey Chip Tile; Ground Floor - Kitchen Office	NO	G	YES	N/A	Binder 100%
052	13B	8/21/2024	8/28/2024	12" x 12" Grey Chip Tile Mastic; Ground Floor - Kitchen Office	NO	BR	YES	N/A	Cellulose <1% Binder 100%
053	14A	8/21/2024	8/28/2024	Black Cove Base; Ground Floor - Kitchen Office	NO	B	YES	N/A	Binder 100%
054	14B	8/21/2024	8/28/2024	Black Cove Base Mastic; Ground Floor - Kitchen Office	NO	W-T	YES	N/A	Cellulose <1% Binder 100%
055	15A	8/21/2024	8/28/2024	12" x 12" Grey Speck Tile; Ground Floor - Kitchen Hall at Coolers	NO	G	YES	N/A	Binder 100%
056	15B	8/21/2024	8/28/2024	12" x 12" Grey Speck Tile Mastic; Ground Floor - Kitchen Hall at Coolers	NO	BR	YES	N/A	Cellulose <1% Binder 100%

Color: B-Black, BL-Blue, BR-Brown, CL-Clear, GL-Gold, G-Gray, GR-Green, O-Orange, P-Pink, PR-Purple, R-Red, S-Silver, T-Tan, W-White, Y-Yellow

Betsie L. McAfee has reviewed this final report and has taken overall technical responsibility for the data.

188687

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WEB SITE: www.microair.com

DAILY BULK SAMPLE LOG

TECHNICIAN JONY BOLANOS DATE 8/21/24 JOB # 20-19981-D

LOCATION 1 TROJAN ROAD A, ST. LEON, IN PAGE 1 OF 3

	SAMPLE NUMBER	SAMPLE LOCATION	MATERIAL CONDITION	PHOTO NUMBER	SAMPLE DESCRIPTION
-001	1A	GROUND FLOOR- ADMIN RECEPTION			CARPET MASTIC
-002	1B	FINANCIAL OPERATIONS			
-003	1C	HALL AT MENS RM			
-004	1D	BUISNESS OFFICE			
-005	1E	RECORDS Room			
-006	1F	HALL AT HUMAN RESOURCES			
-007	1G	HUMAN RESOURCES			
-008	2A	ADMIN RECEPTION			BLACK COVE BASE
-009	2B	RECORDS ROOM			
-010	2C	HIGH SCHOOL BREAK RM			"
-011	2D	ADMIN RECEPTION			MASTIC ON ABOVE
-012	2E	RECORDS ROOM			
-013	2F	HIGH SCHOOL BREAK RM			"
-014	3A	HIGH SCHOOL BREAK RM			12" x 12" CREAM AND GREY TILE
-015	3B				
-016	3C				MASTIC ON ABOVE
-017	3D				
					CARPET MASTIC
-018	4A	HIGH SCHOOL OFFICE RECEPTION			
-019	4B	RECORDS RM			
-020	4C	HALL AT PRINCIPALS OFFICE			

White – Office Yellow – Laboratory

CHAIN OF CUSTODY CHRONICLE:

COLLECTED BY:		CUSTODY TRANSFERRED TO:		RECEIVED IN LABORATORY BY:	
NAME	DATE	NAME	DATE	NAME	DATE
	8/21/24			8-22-24@11:05a	

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DAILY BULK SAMPLE LOG

TECHNICIAN TONY BOLANOS DATE 8/21/24 JOB # 20-1998-D

LOCATION 1 TROJAN ROAD A, ST LEON, IN PAGE 2 OF 3

	SAMPLE NUMBER	SAMPLE LOCATION	MATERIAL CONDITION	PHOTO NUMBER	SAMPLE DESCRIPTION
-021	5A	GROUND FLOOR – RM 111			CARPET
-022	5B	RM 112			MASTIC
-023	5C	RM 115			
-024	5D	RM 116			
-025	5E	RM 118			
-026	5F	RM 120			
-027	5G	OFFICE AT RM 120			
-028	6A	RM 112			EXPANSION JOINT AT PERIMETER
-029	7A	MENS STAFF RR			CERAMIC
-030	7B	MENS RR AT RM 123			TILE & GROUT
-031	7C	WOMENS RR AT RM 130			
-032	7D	WOMENS RR AT CAFE			
-033	7E	MENS RR AT GYM			
-034	7F	KITCHEN			
-035	7G	"			
-036	8A	MENS STAFF RR			CERAMIC
-037	8B	MENS RR AT RM 123			TILE
-038	8C	WOMENS RR AT RM 130			ADHESIVE
-039	8D	WOMENS RR AT CAFE			
-040	8E	MENS RR AT GYM			
-041	8F	KITCHEN			
-042	8G				

White – Office Yellow – Laboratory

CHAIN OF CUSTODY CHRONICLE:

COLLECTED BY:		CUSTODY TRANSFERRED TO:		RECEIVED IN LABORATORY BY:	
[signature]	8/21/24			[signature] 8-22-24 @ 11:05a	
NAME	DATE	NAME	DATE	NAME	DATE

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DAILY BULK SAMPLE LOG

TECHNICIAN TONY BOCANOS DATE 8/21/24 JOB # 20-1998-HD

LOCATION 1 TROJAN ROAD A, ST LEON, IN PAGE 3 OF 3

	SAMPLE NUMBER	SAMPLE LOCATION	MATERIAL CONDITION	PHOTO NUMBER	SAMPLE DESCRIPTION
-043	9A	GROUND FLOOR - MEDIA CENTER			DRYWALL AND JOINT COMPOUND
-044	10A	MEDIA WORK ROOM			12"x12" CREAM AND GREY TILE AND MASTIC
-045	10B				
-046	11A	MEDIA CENTER			CARPET MASTIC
-047	11B				
-048	11C	MEDIA OFFICE			
-049	12A	KITCHEN			2'x2' SMOOTH CEILING TILE
-050	12B				
-051	13A	KITCHEN	OFFICE		12"x12" GREY CHIP TILE AND MASTIC
-052	13B				
-053	14A				BLACK CAVE BASE AND MASTIC
-054	14B				
-055	15A	KITCHEN	HALL AT	COOLER	12"x12" GREY SPECK TILE AND MASTIC
-056	15B				

White – Office Yellow – Laboratory

CHAIN OF CUSTODY CHRONICLE:

COLLECTED BY:		CUSTODY TRANSFERRED TO:		RECEIVED IN LABORATORY BY:	
NAME	DATE	NAME	DATE	NAME	DATE
		8/21/24		8-22-24 @ 11:05a	

TAB 3

PHOTOGRAPHS

East Central High School

Ground Floor (School Corporation Offices)

Black Cove Base Molding and Mastic

Carpet Mastic

No Asbestos Detected

East Central High School

Ground Floor (Financial Operations Office)

Carpet Mastic

No Asbestos Detected

East Central High School

Ground Floor (Hall at School Corporation Offices)

Carpet Mastic

No Asbestos Detected

East Central High School

Ground Floor (High School Offices)

Carpet Mastic

No Asbestos Detected

East Central High School

Ground Floor (High School Office Break Room)

Black Cove Base Molding and Mastic

12” x 12” Cream and Grey Check Pattern Floor Tile and Mastic

No Asbestos Detected

East Central High School

Ground Floor (Hall at High School Offices)

Carpet Mastic

No Asbestos Detected

East Central High School

Ground Floor (Records Room)

Carpet Mastic

Black Cove Base Molding and Mastic

No Asbestos Detected

East Central High School

Ground Floor (Classrooms 110-120)

Carpet Mastic

No Asbestos Detected

East Central High School

Ground Floor (Classrooms 110-120)

Carpet Mastic

No Asbestos Detected

East Central High School

Ground Floor (Classroom 112)

Expansion Joint Caulk

No Asbestos Detected

East Central High School

Ground Floor (Staff Restrooms at Classrooms 110-120)

Ceramic Tile Grout

No Asbestos Detected

East Central High School

Ground Floor (Staff Restrooms at Classrooms 110-120)

Ceramic Tile Grout

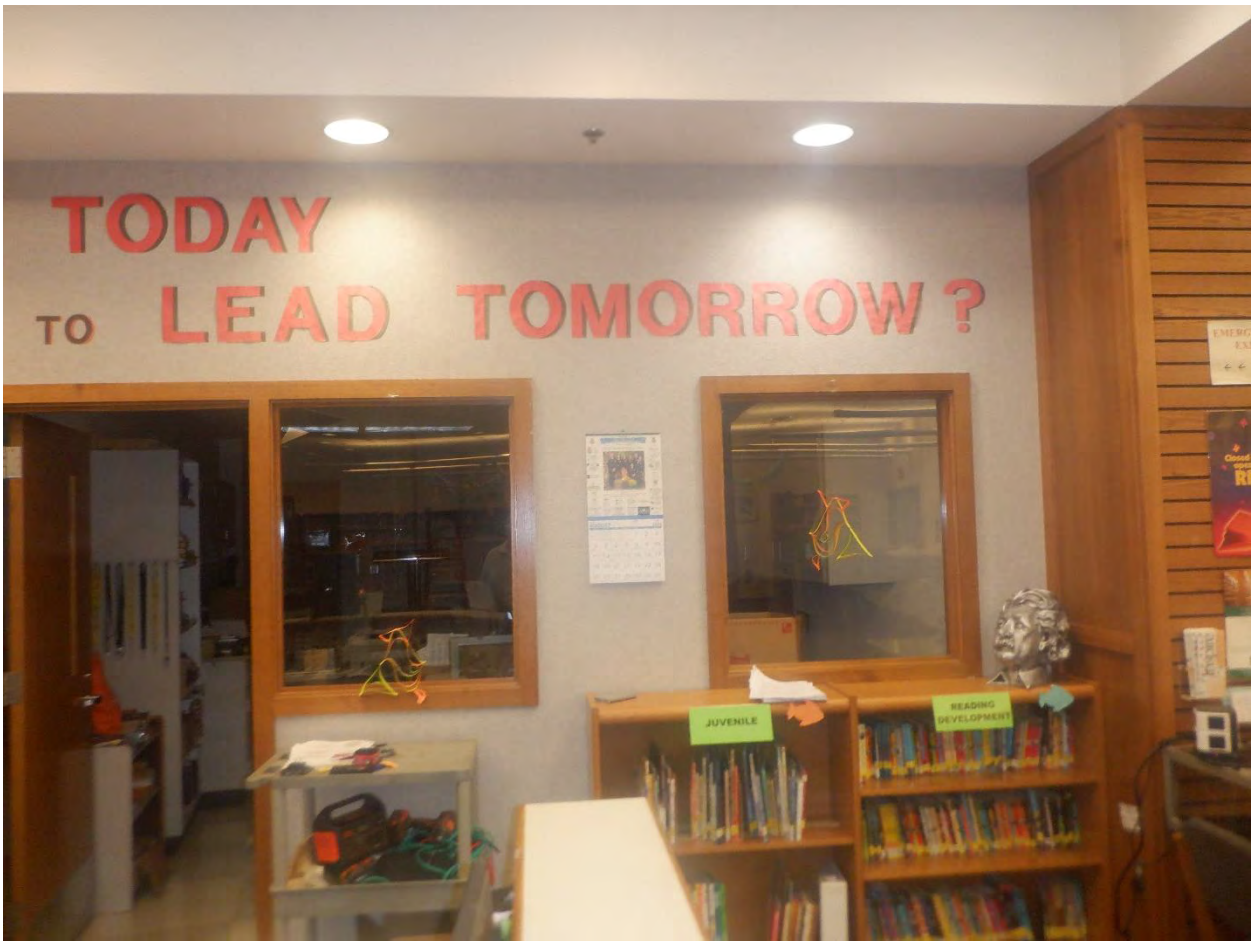
No Asbestos Detected

East Central High School

Ground Floor (Media Center/Offices)

Carpet Mastic

No Asbestos Detected



East Central High School

Ground Floor (Media Center/Offices)

Drywall and Associated Joint Compound

No Asbestos Detected

East Central High School

Ground Floor (Media Work Room)

12” x 12” Cream and Grey Check Pattern Floor Tile and Mastic

No Asbestos Detected

East Central High School

Ground Floor (Kitchen)

2’ x 2’ Smooth Pattern Ceiling Tile

No Asbestos Detected

East Central High School

Ground Floor (Kitchen)

Ceramic Tile Grout/Adhesive

No Asbestos Detected

East Central High School

Ground Floor (Kitchen)

Ceramic Tile Grout/Adhesive

No Asbestos Detected

East Central High School

Ground Floor (Kitchen Office)

12” x 12” Grey Chip Pattern Floor Tile and Mastic

Black Cove Base Molding and Mastic

No Asbestos Detected

East Central High School

Ground Floor (Hallway at Kitchen Coolers)

12” x 12” Grey Speck Pattern Floor Tile and Mastic

No Asbestos Detected

TAB 4

CERTIFICATIONS

Indiana Dept. of Environmental Management

Anthony E. Bolanos

Asbestos Inspector License #: 190202101

Effective: **12/20/2023**	Expiration: **12/20/2024**
Birth Date: **09/21/1961**	Gender: **M**
Height: **6-00**	Eye Color: **Green**
Weight: **200**	Hair Color: **Brown**

Indiana Dept. of Environmental Management

Anthony E. Bolanos

Asbestos Management Planner License #: 190202101

Effective: **12/13/2023**	Expiration: **12/13/2024**
Birth Date: **09/21/1961**	Gender: **M**
Height: **6-00**	Eye Color: **Green**
Weight: **200**	Hair Color: **Brown**

United States Department of Commerce
National Institute of Standards and Technology

Certificate of Accreditation to ISO/IEC 17025:2017

NVLAP LAB CODE: 101221-0

Micro Air, Inc.
Indianapolis, IN

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

Asbestos Fiber Analysis

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2024-04-01 through 2025-03-31
Effective Dates

For the National Voluntary Laboratory Accreditation Program

National Voluntary
Laboratory Accreditation Program

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

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ASBESTOS FIBER ANALYSIS

NVLAP LAB CODE 101221-0

Bulk Asbestos Analysis

Code	*Description*
18/A01	EPA – 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples
18/A03	EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

For the National Voluntary Laboratory Accreditation Program

Effective 2024-04-01 through 2025-03-31