

CHICAGO TRANSIT AUTHORITY
Advertisement for Bids

Notice of Time Extension and Addendum No.1

Notice is hereby given that the opening date heretofore advertised as Wednesday, May 24, 2023 has been extended to **Thursday, June 1, 2023 no later than 2:00 P.M.** for the following items

Req No.: C23FI102850510,
Invitation for Bids (IFB) for Construction Services for All
Station Accessibility Program (ASAP) Lake Line - Austin
Station.

For additional information, please contact Joyce Connors,
Procurement Administrator, jconnors@transitchicago.com.

Any contract resulting from this advertisement will be awarded to the lowest responsive and responsible bidder.

The contractor will be required to furnish certified copies of any and all Insurance Policies required in relation to this contract prior to CTA's execution.

Chicago Transit Authority hereby notifies all bidders that it will affirmatively ensure that in regard to any contract entered into pursuant to this advertisement, Disadvantaged Business Enterprise will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

PLEASE NOTE: The right is reserved to accept any bid or any part or parts thereof or to reject any and all bids.

CHICAGO TRANSIT AUTHORITY

By: Ellen G. McCormack
Vice President
Purchasing & Supply Chain

May 8, 2023



Date: May 4, 2023

Subject: C23FI102850510 – Invitation for Bids (IFB) for Construction Services for
All Station Accessibility Program (ASAP) Lake Line – Austin Station

RE: **Notice of Time Extension and Addendum No. 1**

Dear Potential Bidders:

The Bid Due Date has been extended from Wednesday, May 24, 2023 to Thursday, June 1, 2023.

This Addendum revises the IFB Requirements and provides additional information for the official Contract Documents. Enclosed please find Addendum No. 1 that consists of 6 items and the following 7 Exhibits:

Exhibit 1 – Questions from Potential Bidders and CTA's Responses
Exhibit 2 – IFB Title Page (Revised)
Exhibit 3 – Part 0 – Instructions to Proposers (page 2 of 6 Revised)
Exhibit 4 – Part 3 – Attachment Q – Bid Deposit Requirement Form (New)
Exhibit 5 – Part 4 – Appendix 1: Project Requirements (Revised)
Exhibit 6 – Part 4 – Drawing G00-5 Project Information (Revised)
Exhibit 7 – Part 4 – Appendix 4: Reference Documents (New)

Bid Proposal packages are to be delivered through Electronic Submission to the Bid Office's e-Procurement Platform: <https://transitchicago.bonfirehub.com>.

Bid Due Date: Thursday, June 1, 2023, no later than 2:00 P.M., Central Time

Receipt of Addendum 1 must be acknowledged in the box provided at the top of IFB, Attachment L – Bidder's Signature Page. Failure to acknowledge receipt of Addendum 1 will result in bid being disqualified.

If you have any questions, please contact Joyce Connors, Procurement Administrator, at: jconnors@transitchicago.com.

Sincerely,

Ellen G. McCormack (kb)
Ellen G. McCormack, Vice President
Purchasing & Supply Chain

ADDENDUM NO. 1

1. IFB Title Page

Delete the IFB Title Page and replace with Addendum 1 – Exhibit 2.

Change: Bid Deposit Amount has changed from N/A to 5% of Bid Amount.

2. IFB Part 0 – Instructions to Proposers

Delete page 2 of 6 from IFB Part 0 – Instructions to Proposers and replace with Addendum 1 - Exhibit 3.

Change: Attachment Q – Bid Deposit Requirement Form has been added to Section 1.3 Bid Requirements.

3. IFB Part 3 – Bid Proposal Attachments

Insert Addendum 1 – Exhibit 4: Attachment Q - Bid Deposit Requirement Form into IFB Part 3 – Bid Proposal Attachments.

Include a copy of this signed form and a copy of the Bid Deposit (bond or check) when submitting your Bid Proposal via Bonfire. Deliver the physical Bid Deposit along with this signed form on June 6, 2023, between 9 AM - 4:00 PM to only:

Joyce Connors, Procurement Administrator
Chicago Transit Authority
567 W. Lake Street - Notify 1st Floor Desk to call Joyce Connors for pickup.
Chicago IL 60661

Contact Joyce Connors at 312-681-2434.

4. IFB Part 4 - Appendix 1: Project Requirements

Delete Part 4 – Appendix 1: Project Requirements and replace with Addendum 1 – Exhibit 5.

5. IFB Part 4 – Appendix 3: Drawings

Delete the following drawing from Appendix 3 and replace with Addendum No. 1 – Exhibit 6.

G00-5 Project Information

6. IFB Part 4 – Technical Appendices: Appendix 4: Reference Documents

Insert Addendum 1 – Exhibit 11 into Appendix 4.

Change: The following reports have been added:

Geotechnical Report
Soil Management Plan
Hazardous Materials Report
Hazardous Materials Design Report

ADDENDUM NO 1 - EXHIBIT 1

C23FI102850510 IFB - Construction Services for ASAP Lake Line Austin Station

ADDENDUM NO. 1 - EXHIBIT 1

#	Subject	Bidder Questions	CTA Responses
		Question	Response
1	Temporary Traffic Signals	Please provide a temporary traffic signal plan, if required to be installed by the contractor.	A temporary signal was not identified as a requirement by the Division of Electrical Operations, and therefore no temporary signal drawings are included in the contract documents. Contractor to coordinate improvements and service interruptions with the Division of Electrical Operations.
2	Temporary Street Lighting	Please provide a temporary street lighting plan, if required to be installed by the contractor.	Contractor may utilize the existing light poles as temporary lighting until proposed lighting is operational or install temporary lighting at similar locations to the existing utilizing temporary supports acceptable to the Division of Electrical Operations. A temporary lighting plan was not a requirement by the jurisdictional agency and was not included in the contract documents.
3	OUC Permit	Has CTA started the OUC permit process for this project? If so, when does CTA anticipate receiving this permit?	Process underway.
4	City of Chicago Building Permit	Has CTA started the City of Chicago building permit process for this project? If so, when does CTA anticipate receiving this permit?	The building permit process was initiated in October 2022.
5	City of Chicago Water Dept	Has the City of Chicago Water Department reviewed and approved the plans for site utilities?	CDWM has reviewed the plans.
6	MWRD Plan Review	Has the City of Chicago Water Department reviewed and approved the plans for site utilities?	CDWM has reviewed the plans.
7	Engineer's Field Office	Is a field office to be provided by the contractor for CTA / engineer use?	No.
8	Tile	Do CT 01 tile finishes end at both staircases or does each staircase receive tile?	All three staircases (east and west stair at Austin and Mason Street exit) receive CT-01 tile; See sheet A-311.
9	Tile	If staircases receive tile, what is the height?	Up to platform level, replacing current tile. See sheet A-311.
10	Tile	For Room 100 Austin Station House, are CT 01 finishes installed over old concrete walls or new drywall?	CT-01 finishes to be installed over existing concrete.

C23FI102850510 IFB - Construction Services for ASAP Lake Line Austin Station

ADDENDUM NO. 1 - EXHIBIT 1

		Bidder Questions	CTA Responses
#	Subject	Question	Response
11	Tile	What is the material selection for TB-1? Please provide manufacturer and specifications.	The project has an open product specification per spec section 093100. TB-01 to coordinate with CT-31 wall tile.
12	Geotechnical Report	Please provide the geotechnical report referenced on plan sheets C-010 & S-001.	See Addendum No. 1.
13	Hazardous Materials Survey	Has the site been surveyed for hazardous materials such as lead, asbestos, mold?	See Addendum No. 1.
14	Hazardous Materials	If the site has not been surveyed for hazardous materials, is the contractor responsible for performing the survey?	See Addendum No. 1.
15	Hazardous Materials Survey	Please confirm the contractor will be paid under the Owner's Contingency Allowance for any abatement work associated with hazardous materials.	See Addendum No. 1.
16	Contaminated Spoils	Has the soil been tested for contaminants that would require the contractor to haul off spoils to a Subtitle D landfill?	See Addendum No. 1.
17	Contaminated Spoils	If the site has not been for contaminated soils, is the contractor responsible for performing testing?	See Addendum No. 1.
18	Contaminated Spoils	Please confirm the contractor will be paid under the Owner's Contingency Allowance for any contaminated spoil removal.	See Addendum No. 1.
19	Tack Access / Flagging	Please provide a narrative of how the DOR / CTA Rail-Ops determined the allotted track access occurrences, flagger shifts, and infrastructure shifts. To complete the work at Austin Headhouse and Mason Auxiliary entrance, contractor feels that the allotted track access occurrences, flagger shifts, and infrastructure shifts are insufficient. Please consider adding additional track access occurrences, flagger shifts, and infrastructure shifts.	The bidder may bid up to 8 nightly single tracks in Attachment H, and complete work under flagging up to 600 flagger shifts. If more flagger shifts are required as contractor means and methods than provided, see SP 01 35 00 for associated costs.

C23FI102850510 IFB - Construction Services for ASAP Lake Line Austin Station

ADDENDUM NO. 1 - EXHIBIT 1

		Bidder Questions	CTA Responses
#	Subject	Question	Response
20	AISC Requirements	Please consider waiving the AISC Fabricator & Erector requirements. The AISC requirements significantly limit the pool of available contractors to bid the project.	The requirement of having an AISC certified fabricator will not be waived.
21	Elevator	Major elevator manufacturers have communicated their standard elevator models cannot meet the CTA specifications and are not able to customize their standard products to meet the specifications. Please confirm a custom elevator is required.	None of the OEM standard products are robust enough to meet high traffic demands required in a transit environment. Standard products are design for a residential or retail environment. In addition, the size required to fit within the platform dimensions is limited and does not conform to any standard products offered.
22	Temporary Platform	Can CTA please provide more detail of the ADA compliant temporary platform as s described in Appendix 1, Project Requirements, A. Contractor Scope of Work, 1. Demolition Activities, a. Demolition Work, Item 32?	If the contractor as part of their means and methods elects to leave a hole in the platform after demolition for the elevator shaft, the contractor must comply with Appendix 1, section I.A.1.a.32.
23	Bid Bond	Please advise if a bid bond is required to be submitted with the bid?	Yes. See Addendum No. 1 - Exhibit 4 Include a copy of this signed form and a copy of the Bid Deposit (bond or check) when submitting your Bid Proposal via Bonfire. Deliver the physical Bid Deposit along with this signed form on June 6, 2023, between 9 AM - 4:00 PM to only: Joyce Connors, Procurement Administrator Chicago Transit Authority 567 W. Lake Street - Notify 1st Floor Desk to call Joyce Connors for pickup. Chicago IL 60661 Contact Joyce Connors at 312-681-2434.
24	Project Funding	What is the project funding source?	This project is funded by Federal Transit Administration and Illinois Department of Transportation (Rebuild Illinois).

ADDENDUM NO. 1 - EXHIBIT 2



ADDENDUM NO. 1 – EXHIBIT 2

PROCUREMENT SPECIFICATIONS AND CONTRACT DOCUMENTS FOR:

**Invitation for Bids (IFB) – Construction Services for
All Station Accessibility Program (ASAP):
Lake Line - Austin Station**

REQUISITION NO: C23FI102850510

SPECIFICATION NO: Part 4 Appendix 2

INSURANCE REQUIRED: YES

DRAWING NO: Part 4 Appendix 3

BID DEPOSIT AMOUNT: 5% of Bid Amount

FOR INFORMATION CONTACT

Procurement Administrator:

Phone Number:

Email:

Joyce Connors

(312) 681-2434

jconnors@transitchicago.com

BID PACKAGES MUST BE RETURNED VIA ELECTRONIC SUBMISSION

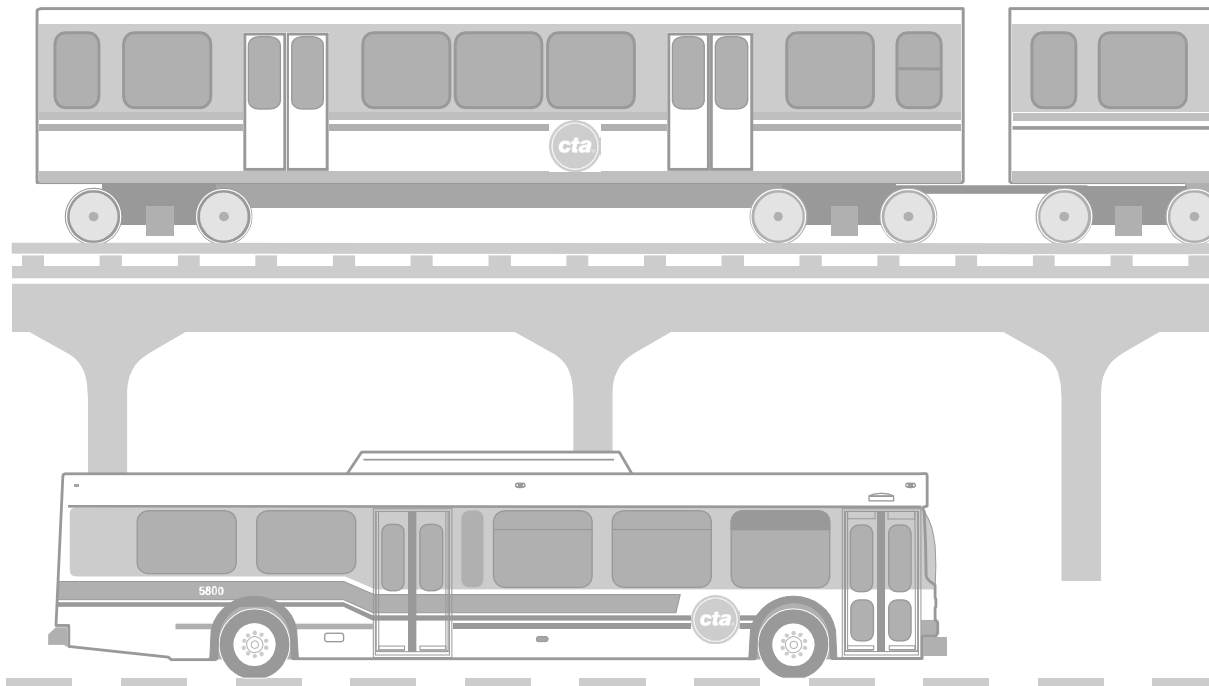
The CTA Bid Office e-Procurement Platform is located at:

<https://transitchicago.bonfirehub.com>

**Bids submitted in hard copy will not be accepted. Bids must be submitted to
E-Procurement Platform by the date and time Bids are due.**

The following documents should be submitted with the Bid:

Electronic copies of Part 3, Bid Proposal Attachments,
per IFB Section 1.3 – Bid Requirements



ISSUED BY

Purchasing Department

Chicago Transit Authority

567 W. Lake Street, Chicago, IL 60661-1465

Ellen G. McCormack, Vice President, Purchasing & Supply Chain

Lester L. Barclay, Chairman

Dorval R. Carter, Jr., President

ADDENDUM NO. 1 - EXHIBIT 3

ADDENDUM NO. 1 - EXHIBIT 3

SECTION 1: GENERAL REQUIREMENTS

1.1 Introduction

The Chicago Transit Authority (the “CTA”) is soliciting Bids for construction services with a Lump Sum Price by a contractor (hereinafter “Bidder”). The successful Bidder will provide all labor, materials, tools, construction equipment, plant, facilities, services, safety provisions, bonds and pay all permit costs, taxes, fees and other costs necessary or required in order to complete the Project in a safe, timely and workmanlike manner. The successful Bidder and CTA will enter into a Contract, in the form hereto attached as **Part 1**. The successful Bidder is required to comply with all of the terms and conditions contained in this Invitation for Bids (IFB) and related parts, as well as those terms and conditions identified in the Contract, including any attachments or exhibits to the Contract. Capitalized terms and abbreviations used herein without definition have the meanings set forth in **Part 1**.

1.2 Pre-Bid Meeting / Site Visit

CTA will conduct a pre-bid meeting VIA Zoom and site visit on the dates and times indicated in the solicitation. Attendance at the pre-bid meeting is not mandatory but is strongly encouraged, as questions may be addressed and additional information provided.

1.3 Bid Requirements

Bids are to be provided in four (4) separate submittals clearly marked by the submission due date for this IFB. Each Bidder is required to submit the following:

(1) Electronic copy of Part 3, ATTACHMENT H - Bid Proposal

(1) Electronic copy of Part 3, ATTACHMENT O - Track Access Occurrences

(1) Electronic copy of Part 3, ATTACHMENT F - Disadvantaged Business Enterprises (DBE) Forms and Schedules (as applicable); and

(1) Electronic copy of Part 3, ATTACHMENTS:

- ATTACHMENT A: Certification of Primary Participant Regarding Debarment, Suspension, and Other Responsibility Matters
- ATTACHMENT B: Certification of Lower-Tier Participant Regarding Debarment, Suspension, Ineligibility, Voluntary Exclusion, and Other Responsibility Matters
- ATTACHMENT C: Certification for Contracts, Grants, Loans, and Cooperative Agreements (Lobbying Certification) (Prime and Subcontractors)
- ATTACHMENT D: Certification Regarding a Drug Free Workplace (Prime and Subcontractors)
- ATTACHMENT G: Disclosure of Ownership and Interests Affidavit (Prime and Subcontractors)
- ATTACHMENT I: Affidavit of Minimum Wage Payment
- ATTACHMENT J: Affidavit of Prompt Payment
- ATTACHMENT L: Bidder’s Signature Page
- ATTACHMENT P: Brief History of Company
- ATTACHMENT Q: Bid Deposit Requirement

ADDENDUM NO. 1 - EXHIBIT 4

ADDENDUM NO. 1 - EXHIBIT 4

BID DEPOSIT REQUIREMENT	
Bidders must furnish a bid deposit with its Bid to assure the CTA of its adherence to its bid and the entry into the Contract if its bid is accepted. The bid deposit may be in the form of a bid bond issued by a surety, or certified treasurer's or cashier's check issued by a bank or trust company doing business in Illinois, made payable to the Chicago Transit Authority. The issuer must have a general rating of "A", as defined by A.M. Best Company Inc., Moody's Investor Services, or Standard & Poor's Corporation. For bonds, the surety must be licensed by the State of Illinois Department of Insurance and be listed in the current U.S. Treasury Circular 570. The bid deposit amount of such guaranty must be equal to 5% of the total bid price, a PDF copy must be received with the Bid per IFB, Part 0 - Instructions for Bidders, and the original received by CTA on June 6, 2023 no later than 4:00 PM.	
Project Owner	Chicago Transit Authority (CTA)
Requisition Number	C23FI102850510
Project Name	Construction Services for All Station Accessibility Program (ASAP) Lake Line – Austin Station
Project Type	Invitation for Bids (IFB)
In submitting this bid, it is understood and agreed by bidder that CTA reserves the right to reject any and all bids, or part of any bid, and it is agreed that the Bid may not be withdrawn for a period of [120] days subsequent to the opening of bids, without the written consent of CTA. It is also understood and agreed that if the undersigned bidder should withdraw any part or all of his bid within [120] days after the bid opening without the written consent of CTA, or refuses or is unable to enter into this Contract as provided above, or refuses or is unable to furnish adequate and acceptable Performance and Payment Bonds, or refuses or is unable to furnish adequate and acceptable insurance as required by the Contract Documents, it shall forfeit its bid deposit to the extent CTA's damages are occasioned by such withdrawal, or refusal, or inability to enter into an agreement, or provide adequate security thereof, without limitation of any other damages the defaulting bidder owes to CTA. The undersigned understands that any material alteration of any of the above or any of the material contained herein, other than that requested will render the bid unresponsive.	
Bid Due Date	
Bidder Name:	
Bidder Company Name	
Bidder Company Address	
Bidder Signature	
Bid Amount	\$
5% of Bid Amount	\$
Include a copy of this signed form and a copy of the Bid Deposit (bond or check) when submitting your Bid Proposal via Bonfire. Deliver the physical Bid Deposit along with this signed form on June 6, 2023, between 9 AM - 4:00 PM to only: Joyce Connors, Procurement Administrator Chicago Transit Authority 567 W. Lake Street - Notify 1st Floor Desk to call Joyce Connors for pickup. Chicago IL 60661 Contact Joyce Connors at 312-681-2434.	

ADDENDUM NO. 1 - EXHIBIT 5

ADDENDUM NO. 1 - EXHIBIT 5

APPENDIX 1

PROJECT REQUIREMENTS

I. SCOPE OF WORK

This project will be an Issued for Bid – Lump Sum contract. The work proposed herein generally includes providing all labor, material, tools, equipment and management required to complete the All Station Accessibility Program – Lake Line Austin Station project as reflected in the contract drawings and specifications.

The General Scope of Work for this project includes site work, stationhouse work, stationhouse elevator work, platform level work, and temporary work. The general summary of work is in Specification 01 11 00 Summary of Work.

The site work generally includes the removal and replacement of roadways, sidewalks, drainage, ramps, utilities, and landscaping.

The stationhouse work generally includes the preparation for and installation of ADA compliant signage, wayfinding, ramps, doors, Customer Assistance Kiosks, fare array and toilet. The work also generally includes a new addition for electrical room, communications room, elevator machine room and janitor's closet. The work also generally includes furnishing and installing new air-conditioning, heating, lights, cameras, speakers and all associated support conduit and cabling. The work also generally includes Mason Avenue stationhouse storefront, stairway work, and roof work.

The stationhouse elevator work generally includes the demolition and preparation for the furnishing and installation of a new Heavy-Duty hydraulic transit elevator with all supporting equipment, heating, ventilation and air-conditioning for the Hoistway and machine room, new elevator tower and pit, sump pump, and code compliant smoke detectors, heat detectors, and fire alarm interlocks.

The platform level work generally includes the removal and replacement of steel canopies, platform and steel structure, pre-cast concrete to support the elevator work. The work also generally includes removal of the wood framed roof and end of platform barrier, installation of new canopy, railing and storefront windbreak at the Mason Avenue exit.

The temporary work generally includes a temporary entrance at Mason Ave. during any Austin Ave stationhouse closure, requiring temporary CA kiosk, temporary toilet facilities or toilet access, temporary fare control, temporary ticket vending machine, and temporary directional signage.

The Project location is:

351 N Austin Blvd,
Chicago, IL 60644

A. Contractor Scope of Work

The Contractor will construct the project as shown in the drawings and specifications. A detailed summary of work includes but is not limited by the following:

1. Demolition Activities

a. Demolition Work

All demolition and debris is to be disposed of legally and in accordance with regulatory requirements.

- 1) Remove and Dispose of Concrete and Asphalt Sidewalks.
- 2) Remove and Dispose of Hand Rails.
- 3) Remove and Dispose of Crosswalk Pavement Markings.
- 4) Remove and Dispose of Concrete Steps.
- 5) Remove and Dispose of Concrete Catch Basins and Lateral Pipes.
- 6) Remove and Dispose of Manholes.
- 7) Remove and Dispose of B-Boxes.
- 8) Remove and Dispose of Trees.
- 9) Remove and Dispose of Water Services and Cap Water Mains.
- 10) Remove and Dispose of Median.
- 11) Remove and Dispose of Full Depth Concrete and Asphalt Pavements.
- 12) Remove and Dispose of Curb and Gutters.
- 13) Remove and Dispose of Light Poles.
- 14) Remove and Reinstall Road Signs.
- 15) Remove and Reinstall Street Lights, Mast Arms, and Anchor Base Poles.
- 16) Remove and Dispose of Signal Poles and Traffic Signal Heads.
- 17) Remove and Dispose of foundations to 24 inches below finished grade.
- 18) Remove and Dispose of Signal Cable and Junction Boxes/Harnesses.
- 19) Remove and Dispose of Austin Station Roof Overhang and Slab.
- 20) Remove and Dispose of Mason Station Roof Overhang.
- 21) Remove and Dispose of Existing Concrete Roof Slab, Concrete Beams and Columns.
- 22) Remove and Dispose of 2 foot W6 Beam Overhangs, and W10 Tapered Frame and Columns.
- 23) Remove and Dispose of Existing Canopy Roof.
- 24) Remove and Dispose of Platform.
- 25) Remove and Dispose of Station Foundation.
- 26) Remove and Dispose of Mason Station Stairs and Slab Below.
- 27) Remove and Dispose of Existing Lumber Stair Canopy.
- 28) Remove and Dispose of Concrete Walls.
- 29) Remove and Dispose of Concrete Columns and Brick Storefront Walls above Station Level.

- 30) Remove and Dispose of existing Concrete Platform Supports.
- 31) Remove and Dispose of existing lighting, conduit, and cable.
- ~~32)~~ During demolition of the elevator shaft, the Contractor must design and stamp (by a licensed Structure Engineer in the State of Illinois), submit, furnish, install and remove an ADA compliant temporary platform to maintain pedestrian traffic on the platform.
- ~~32)~~33) Provide hazardous material abatement with proper disposal for all demolition and removals as required by the inspection reports, technical specifications and limits of the work.

b. Items to be Salvaged and Reused

- 1) SCADA / Communications Cabinets

c. Items to be Salvaged and delivered to CTA West Shops.

Disassemble, catalogue / inventory, palletize and deliver to CTA West Shops the equipment listed below.

Deliver all equipment listed below to a CTA's West Shop maintenance facility located 3900 W. Maypole Avenue (herein described as West Shops).

- 1) Electrical Cabinets
- 2) Turnstiles / Tandem Rotogates

d. Items to Remain and be protected in place during demolition

- 1) Trees.
- 2) Existing platform public address speakers, CCTV cameras, and hub cabinets.
- 3) Existing communications conduit and cabling during canopy demolition and construction.

2. Construction Activities

a. General Work

- 1) Furnish, Install and Remove Temporary Power to maintain traffic signal operations.
- 2) Furnish, Install and Remove Temporary construction traffic control devices.
- 3) Furnish, Install and Remove construction fencing.
- 4) Furnish, Install and Remove temporary ADA compliant pavement during construction.
- 5) Plan, Coordinate, Permit, Furnish, Install, Maintain, and Remove all Maintenance of Traffic.
- 6) Contractor to maintain all pavements, drainage facilities, traffic control signs, lightings, pavement markings, and other appurtenances used by the public during construction.
- 7) Furnish and Install Customer Assistance Kiosk.

b. Civil Work

- 1) Water Main Work
 - i. Furnish and Install PR Water Meter Vault.
 - ii. Tap Sleeve and Valve Water Main in Vault.
 - iii. Furnish and Install PR 2" Type K Copper Water Line.
 - iv. Furnish and Install PR 2" Type L Copper Water Line.
 - v. Furnish and Install B-Box Shutoff Valves.
- 2) Drainage Work
 - i. Furnish and Install Trench Drains.
 - ii. Furnish and Install Catch Basins and Laterals.
 - iii. Furnish and Install Manholes.
 - iv. Furnish and Install Drainage Pipe.
 - v. Furnish and Install ESVCP and Fittings.
 - vi. Furnish and Install Storm Sewer.
 - vii. Adjust rims to match final pavement elevations.
- 3) Grading Work
 - i. Furnish and Install Sub-base and Base Course.
 - ii. Match existing grades at adjacent boundaries.
- 4) Pavement Work
 - i. Furnish and Install Full Depth Asphalt Pavement.
 - ii. Furnish and Install Concrete Sidewalk.
 - iii. Furnish and Install Sloped Walk with Handrails.
 - iv. Furnish and Install ADA Compliant Sidewalk Crossings with Detectable Panels.
 - v. Furnish and Install Pavement Markings including parking stalls, handicap parking, stop bars and crosswalks.
- 5) Signage Work
 - i. Furnish and Install Roadway Signage.
 - ii. Restore Existing PACE Bus Stop Signs.

c. Landscaping Work

- 1) Furnish and Install Trees, Shrubs, Bushes, Perennials, Ornamental Grasses Mulch, Rock, and Groundcover.
- 2) Furnish and Install Tree Grates.
- 3) Furnish and Install Landscape Planters, Concrete Planters, and Concrete Planters with Wall Seats.
- 4) Furnish and Install Backed Benches.
- 5) Furnish and Install Bike Racks.

d. Structural Work

- 1) Furnish and Install Concrete Stairs.
- 2) Refurbish existing stairs.
- 3) Repair Ceiling and Curbing as Required.
- 4) Furnish and Install Wall Underpinning Pile Cap
- 5) Furnish and Install Micropiles.
- 6) Furnish and Install Precast Planking.
- 7) Furnish and Install Precast Platform Concrete Footings.
- 8) Furnish and Install Steel Roof.

The Contractor is to field verify the existing concrete walls / columns that the canopy columns connect to.

- 9) Furnish and Install 6 inch Slab on Grade.
- 10) Furnish and Install Stem Walls.
- 11) Furnish and Install Concrete Columns.
- 12) Furnish and Install Concrete Roof Slabs.
- 13) Furnish and Install Platform HSS Roofs.
- 14) Furnish and Install Precast Flat Slab.
- 15) Furnish and Install Concrete Elevator Shaft Walls and Pit Foundation.
- 16) Furnish and Install Elevator Hoistway and Hoistway Access Platform.
- 17) Furnish and Install Earth Retention System (ERS).
- 18) Furnish and Install Concrete Ramps.
- 19) Furnish and Install Reinforced Masonry Walls.

e. Architectural Work

- 1) Furnish and Install Granite Tiles.
- 2) Furnish, Install, and Remove a Temporary Customer Service Assistance Kiosk with supporting utility connections.

f. Architectural Graphics Work

- 1) Furnish and Install Customer Assistance Kiosk.
- 2) Furnish and Install

g. Fire Protection Work

- 1) Furnish and Install Ordinary Hazard, Group 1 Dry System Sprinkler Coverage.
- 2) Furnish and Install Ordinary Hazard, Group 1 Wet System Sprinkler Coverage.
- 3) Furnish and Install Fire Alarm heat detection devices, smoke detection devices, audio/visual devices, visual devices, power, controls, conduits, and cables.

- 4) Furnish and Install disconnect switches, flow switches, motion sensors, and card readers.
- 5) Furnish, Install, and Remove Temporary Fire Protection heat detection devices, smoke detection devices, audio/visual devices, visual devices, power, controls, conduits, and cables.

h. Plumbing Work

- 1) Furnish and Install Water Line.
- 2) Furnish and Install Hose Bibbs.
- 3) Furnish and Install a functional mop basin.
- 4) Furnish and Install a functional Restroom with water closet and lavatory.
- 5) Furnish and Install an elevator sump pit with sump pump.
- 6) Furnish and Install a non-freeze wall hydrant.
- 7) Furnish and Install floor drains and cleanouts.
- 8) Furnish and Install an electric water cooler.
- 9) Furnish and Install electric water heater.
- 10) Furnish and Install open hub drains and roof drains.
- 11) Furnish and Install an oil water separator.

i. Mechanical Work

- 1) Furnish and Install an Elevator.
- 2) Contractor to commission the elevator in accordance with the specifications.
- 3) Contractor to coordinate with Phase 3 – Engineering, CTA Elevator Commissioning Representative (elevator consultant) as referenced in the specifications.
- 4) Contractor to provide an elevator “Burn-In” period. The burn in period includes the elevator functioning continuously at a minimum of 5 times an hour, for eighteen hours a day, fully loaded, for the full path of travel, doors opening and closing at each level, with no passengers, full functionality, and with no mechanical or electrical failures.
- 5) Furnish and Install Exhaust Fans, Supply Fans, and Roof Fans with all associated control, electrical and plumbing supports.
- 6) Furnish and Install Condensing Units with all associated control, electrical and plumbing supports.
- 7) Furnish and Install Air Conditioning Units with all associated control, electrical and plumbing supports.
- 8) Furnish and Install Diffusers and Grilles.
- 9) Furnish and Install Electrical Unit Heaters with all associated control, electrical and plumbing supports.
- 10) Furnish and Install Electrical Duct Heaters with all associated control, electrical and plumbing supports.

- 11) Furnish and Install Radiant Panels with all associated control, electrical and plumbing supports.

j. Electrical Work

Permanent Electrical Work

- 1) Relocate Light Poles.
- 2) Furnish and Install Electrical Ductbanks.
- 3) Furnish and Install Electrical Hand Holes.
- 4) Furnish and Install Electrical Service Feed Manholes.
- 5) Adjust rims to match final pavement elevations.
- 6) Furnish and Install electrical conduit.
- 7) Tie Electrical conduit and cable connections into ComEd Transformers and Poles.
- 8) Furnish and Install lighting, conduit, controls and cable.
- 9) Furnish and Install emergency lighting, conduit, controls, and cable.
- 10) Furnish and Install water-proof, lockable GFCI outlets, and the supporting conduit and cable.
- 11) Furnish and Install sill heaters.
- 12) Furnish and Install card readers.
- 13) Furnish and Install sump pump float switch.
- 14) Furnish and Install power to the fare equipment.
- 15) Furnish and Install Stainless Steel Floor Mounted Meter Cabinet Enclosure. The meter cabinet is to house the two (2) ComEd meter panels. The cabinet must have a pad lockable three point latch handle.
- 16) Furnish and Install Generator Tap Box.
- 17) Furnish and Install Customer Assistance Kiosk Switch Bank, conduit, and cable.
- 18) Furnish and Install Ground Rod, conduit, and cable.
- 19) Furnish and Install all floor mounted electrical equipment on an elevated 4 inch concrete pad with a 4 inch lip.
- 20) Furnish and Install electrical and communication stub ups, conduit, and cables for Express Vending Machines and Automatic Teller Machines.

Temporary Electrical Work

- 21) Furnish, Install and Remove Temporary Electrical for fare equipment.

k. Communication Work

- 1) Adjust Existing Communications Structure Rims to match sidewalk elevations.

- 2) Intercept and reroute public address speaker home run cabling to new Austin Stationhouse communications room.
- 3) Intercept and reroute hub cabinet backbone cabling to new Austin Stationhouse communications room.
- 4) During construction of the elevator, remove the existing public address speaker and provide a temporary speaker circuit wiring to maintain remaining public address speakers.
- 5) During construction of the elevator, remove the existing Dynamic Message Sign (DMS) and protect data cabling to the sign.
- 6) During construction of the elevator, remove the existing CCTV camera and re-install after completion of the elevator and canopy.
- 7) Intercept and extend existing CTA backbone fiber optic cables at existing fiber optic splice enclosure to the new communications room.
- 8) Intercept and extend existing CTA 50PR backbone at Mason Stationhouse Service Entrance to the new communications room.
- 9) Furnish and Install public address speakers, conduit, and cables.
- 10) Furnish and Install dual image CCTV cameras, conduit, and cables.
- 11) Relocate existing dual image CCTV cameras, conduit, and cables.
- 12) Furnish and Install blue lights, conduits and cables.
- 13) Furnish and Install new indoor, outdoor, fare area, and help point telephones, conduits, boxes, and cables.
- 14) Furnish and Install wireless local area network equipment, conduit, boxes, and cables.
- 15) Furnish and Install stainless steel enclosure with the customer assistance kiosk audio visual console, microphone, telephones, conduits, and cables. Coordinate with the CTA

I. Staging Areas

- 1) All staging areas must be configured to eliminate any interference with CTA operations.

B. Allowance work will be in accordance with Attachment H and the following:

1. Allowance No. 1 – Owner's Contingency Allowance
In accordance with Specification 01 21 16 OWNER'S CONTINGENCY ALLOWANCE.
 2. Allowance No. 2 – Commonwealth Edison Allowance
In accordance with Specification 01 21 00 ALLOWANCES Section 1.02.B.
 3. Allowance No. 3 – Union Pacific Flagging Allowance
In accordance with Specification 01 21 00 ALLOWANCES Section 1.02.C.
- If the Contractor chooses as part of their means and methods to impact Union Pacific tracks, the Contractor is subject to Union Pacific Public Project Manual,

Flagging Manual, rules, and regulations which may be found at “up.com”, this allowance has been included to offset flagging costs associated with that potential means and method election.

C. Work to be performed by CTA or other CTA Contractor.

1. Ticket Vending / Fare Array (Cubic) (Salvage), CTA to provide all temporary fare control area communications equipment – including fare control devices – contractor responsible for running power and controls cables to all necessary locations from existing electrical room panels – terminating control/power cables to be performed by CTA or fare control supplier.
2. ATM and Beverage Vending Machine Vendor to remove and replace, Contractor to coordinate through the CTA Construction Manager (CM) and the CTA PM.
3. CTA Information Technology / Communications

CTA IT will complete all temporary work, cutovers, and connections to maintain the communications systems during construction. They will remove all existing equipment from the current communications room for salvage. The work will happen prior to the contractor beginning work onsite. The temporary hubs, nodes, and cabling will be placed outside of the work zone.

For the permanent work, the Contractor will provide the new communications room build out with server racks, wall field, finishes, lights, and HVAC. Contractor will also provide all new devices with structured cabling back to the new communications room.

After the Contractor has completed contract scope, CTA IT will then install the head end equipment into the server racks and make the connections of the existing / new equipment to commission the new communications room.

D. Materials to be supplied by the CTA

Materials supplied by CTA will be available at a CTA facility for pick-up and delivery by the Contractor. For any materials not previously delivered to NTP, the Contractor is to take delivery of materials shipped by CTA, including the unloading at the Contractor's material yard or on the project site.

Remaining materials at the end of the project are to be returned to the CTA in usable condition. Any materials not specifically listed below are the responsibility of the Contractor to procure directly.

	Qty	Unit	Description
1.	N/A	N/A	Description
2.	N/A	N/A	Description

E. CTA Provided Reference Documents

1. Flagger Manual
2. Adjacent Construction Manual

II. CONTRACTOR'S QUALITY MANAGEMENT SYSTEM REQUIREMENTS

- A. Updated version of Article 4 – Contractor's Quality Management System Requirements (April 2021 – Rev. 5) provided.

III. GENERAL REQUIREMENTS

A. Construction Access, Phasing and Staging

Refer to Section 01 35 00.

Construction Access is described in the drawings.

A Construction Phasing plan has been provided in the drawing set, The Contractor may elect to use this construction phasing plan or to develop one. The Contractor is to submit a construction phasing plan as part of the Process Plan per the SP 01 35 00.

In general, the proposed project phasing (from Sheet A-002) is:

- Phase 1 – Construct a support area at the Austin Stationhouse, including communications and electrical rooms to house new equipment, and switch over services from the equipment currently located at the Mason exit.
- Phase 2 - Remove existing equipment and convert the Mason Stationhouse for temporary passenger access during subsequent construction.
- Phase 3 - Close Austin Stationhouse, open Mason Stationhouse as main passenger access to trains. Perform Austin Stationhouse upgrades.
- Phase 4 - Convert Mason Stationhouse to exit only.

Construction Material Staging / Laydown is described in the drawings.

B. Regulatory Requirements

The Contractor is to immediately notify the CTA of requirements in these specifications or drawings which do not strictly comply with the applicable laws, ordinances and rules governing the execution of the work before proceeding with any part of the work. Failure of the Contractor to do so will be understood as an agreement on the part of the Contractor to guarantee compliance with the requirements of work covered by this work order.

C. Work Sequence

The work is to be conducted in a scheduled sequence of installation so as to ensure the maintenance of safe operations and provide the least possible disruption to the CTA's operations.

IV. TIME PERIOD REQUIREMENTS

A. General

One (1) Notice To Proceed (NTP) will be issued for all work. Bidders to assume NTP in Q3 2023.

B. Milestone No.1

Achieve Substantial Completion of Phase 4 - Mason Stationhouse within four hundred and fifty (450) consecutive calendar days after NTP is issued by the CTA.

C. Punch List

Contractor is required to complete all Punch List work within thirty (30) consecutive calendar days following receipt of Milestone No. 1 Certificate of Substantial Completion from the CTA.

D. Final Completion

The Contractor is required to achieve Final Completion of the Work evidenced by receipt of a Certificate of Final Completion within sixty (60) consecutive calendar days after receipt of a Certificate of Substantial Completion for all Work issued by the CTA.

V. ALLOWABLE TRACK ACCESS OCCURRENCES (TAO)

A. NIGHTLY SINGLE TRACK

The NIGHTLY SINGLE TRACK is from Marion Interlocking to Austin Interlocking.

ALLOWABLE QUANTITY

The number of NIGHTLY SINGLE TRACK will be as bid in Attachment O – Track Access Occurrences.

One Occurrence =

2200 hrs Sunday to 0400 Monday (6hours) or
2200 hrs Monday to 0400 hrs Tuesday (6hours) or
2200 hrs Tuesday to 0400 hrs Wednesday (6hours) or
2200 hrs Wednesday to 0400 hrs Thursday (6hours) or
2200 hrs Thursday to 0400 hrs Friday (6hours) or
2200 hrs Friday to 0400 hrs Saturday (6hours) or
2200 hrs Saturday to 0400 hrs Sunday (6hours).

All Tracks will be taken out of service and power may be removed between:

- a. The adjacent Marion Interlocking to the Austin Interlocking.
- b. Power removal will be limited to the work zone limits.

B. WEEKEND TRAIN LENGTH RESTRICTION WITH RE-BERTHING

ALLOWABLE QUANTITY

The number of WEEKEND TRAIN LENGTH RESTRICTION WITH RE-BERTHING must not exceed four (4) occurrences.

One Occurrence =

0200 hrs Saturday to 0400 Monday (50hours) or

1. Standard notifications to operations is required.
2. This TAO will be provided at no additional cost to the Contractor.

VI. CONSTRAINTS

C. Payment Constraints

No payment for stored materials will be provided.

D. Construction Constraints

1. Communications including SCADA, train control, public announcement system, cameras, and speakers must be operational while Station is open to the public.
2. During any partial platform closure, safe passage between the trains, through the platform areas to the ingress/egress stairs must be maintained at all times, except during approved station closures. At a minimum, a 4'-0" wide continuous walkway adjacent to any barricaded construction area for pedestrian access.
3. All Hot Work including heat welding must be discontinued one (1) hour prior to the end of every shift.
4. The Contractor is to provide temporary restroom facilities. The Contractor is prohibited from using CTA restrooms.
5. Contractor must adhere to strict housekeeping rules – no tools or construction materials are to be left unattended.
6. All areas of construction are to be fully barricaded from the public. Graffiti within construction limit lines must be removed within twenty-four (24) hours. Barricade and boarding area wall design, construction and installation must withstand thirty (30) psf wind loads (100 mph). Contractor is required to submit detailed design prior to barricade construction for Authority review and approval. All lumber must be fire retardant treated and painted with fire resistant (rated) paint with no sharp edges.
7. Contractor must protect all existing CTA equipment and property during work, including those that are being protected in place and those to be temporarily removed and reinstalled. All materials must be fire-retardant treated. Protective barriers are to prevent deck screws, dust, debris or any other material from falling onto electrical equipment during roof demolition and installation work.
8. Contractor not permitted to receive or load out materials and/or equipment during Rush Hour (0500-0900 and 1500-1900 weekdays).
9. Contractor must provide and maintain temporary signage and wayfinding to support construction.
10. Staging and laydown areas for the project are limited. It is the Contractor's responsibility to work with adjacent property owners, obtain staging and laydown areas and provide remote parking and staging areas as needed. No additional compensation or time will be awarded due to limited staging and laydown areas. Vehicle parking on-site will be limited and no personal vehicles can be parked on-site or within a lane closure.
11. Any on street parking that the contractor would temporarily impact must be coordinated with the City of Chicago permit process.

E. Schedule Constraints

1. The elevator must be commissioned prior to the reopening of the new Austin Stationhouse at the end of Phase 3 and moving to the Mason Station for Phase 4 as shown in the phasing drawings.
2. The elevator must perform a “burn in” period as described in the scope section and function continuously without issue for at least thirty (30) calendar days after the elevator has been commissioned. Once thirty (30) calendar days has been achieved, the Certificate of Substantial Completion may be awarded. If the elevator does not function continuously for thirty (30) days after commissioning, then the Certificate of Substantial Completion may not be awarded until a full thirty (30) calendar days has been achieved. If the elevator fails to function during the thirty (30) calendar day window, a new thirty (30) calendar window will restart upon the elevator returning to functional status. If the thirty (30) calendar day functional window exceeds the Milestone No. 1 from Section IV.B, then the Contractor is subject to Liquidated Damages for delay to Contract Milestone Section VIII.A.

D. Track Access Occurrence Constraints

1. Only one (1) Track Access Occurrence, of any type, will be allowed at any given time.

E. Operations Constraints

1. During four (4) car train operations, the Contractor must maintain a minimum of two hundred twenty-five (225) feet for a boarding area.
2. During six (6) car train operations, the Contractor must maintain a minimum of three hundred twenty-five (325) feet for a boarding area.

VII. HOLD POINT/WITNESS POINTS

A. HOLD POINTS

N/A

B. WITNESS POINTS

N/A

VIII. LIQUIDATED DAMAGES FOR CONTRACTOR DELAY

A. Contract Milestones

1. Failure of the Contractor to achieve Substantial Completion as required in Section IV, B, will result in assessment of Liquidated Damages in the amount of \$4,200.00 per calendar day.

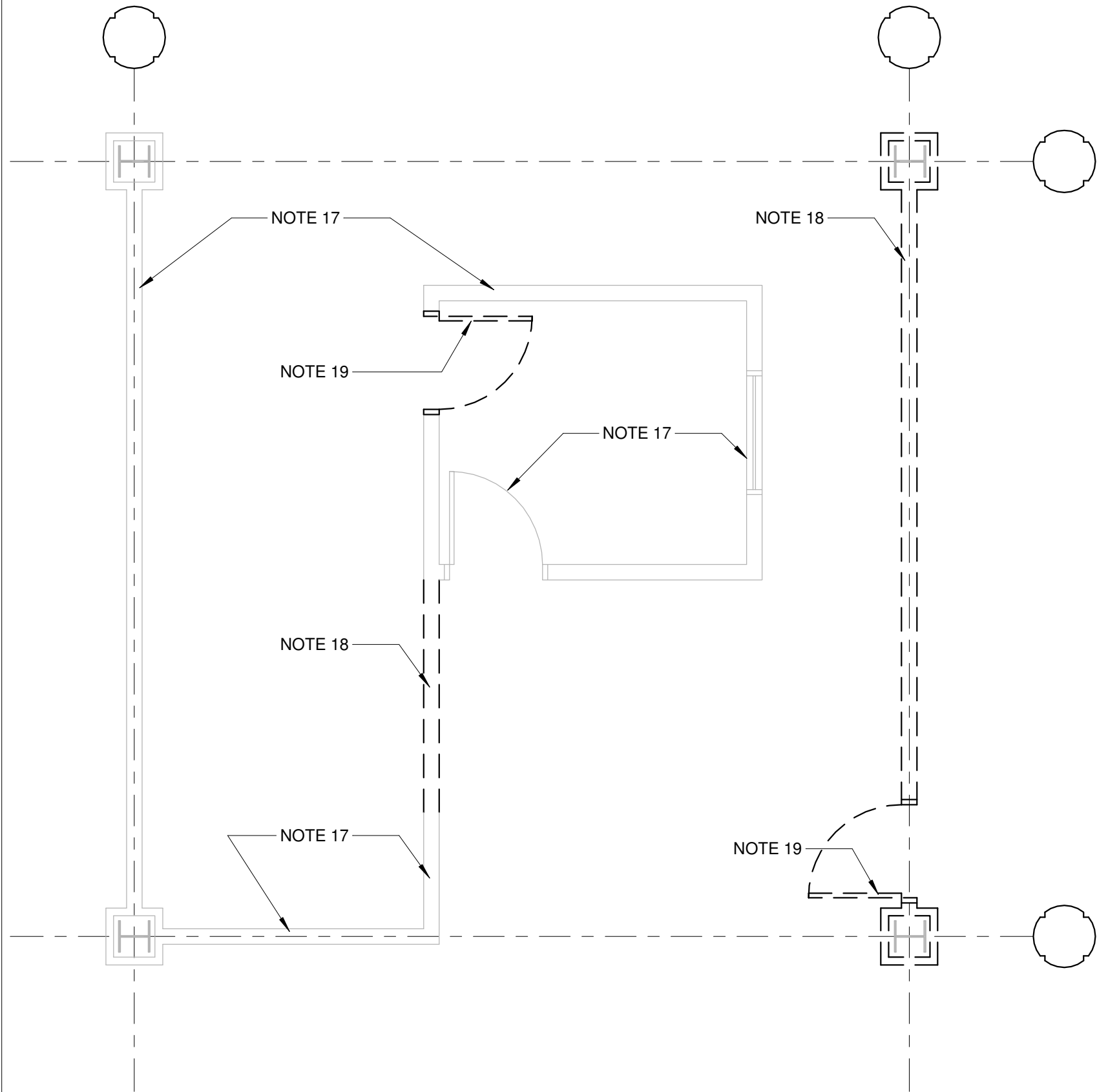
B. Late Return to Service

2. Nightly Single Track
Failure of the Contractor to return any of the tracks, or other part of CTA's system, back to service after each authorized Nightly Single Track - Track Access Occurrence scheduled for Contractor's work, will result in the assessment of Liquidated Damage as follows:
 1. From 1 minute up to the first 29 minutes delayed: \$850.00.
 2. In addition, from 30 minutes up to the first 59 minutes delayed: \$850.00.
 3. For each additional hour, or fraction thereof, thereafter delayed: \$1,700.00 per hour.

ADDENDUM NO. 1 - EXHIBIT 6

- 1 THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION BETWEEN ALL SUB-CONTRACTORS.
- 2 THE CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE SITE TO BECOME FAMILIAR WITH AND VERIFY THE EXISTING CONDITIONS. THESE DEMOLITION DRAWINGS SHALL SERVE TO AID THE CONTRACTOR IN EVALUATING THE EXTENT OF DEMOLITION, BUT SHALL NOT BE HELD TO BE ALL INCLUSIVE.
- 3 THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ALL DEMOLITION REQUIRED FOR THE INSTALLATION OF NEW CONSTRUCTION AND AS NECESSARY TO FULFILL THE PURPOSE AND INTENT OF THE FINISHED WORK, WHETHER OR NOT IT IS SPECIFICALLY SHOWN OR NOTED IN THESE DOCUMENTS.
- 4 THE CONTRACTOR SHALL FIELD INSPECT ALL DEMOLITION WORK PRIOR TO ITS REMOVAL. TO ENSURE SUCH REMOVAL DOES NOT IMPAIR THE STRUCTURAL INTEGRITY OF THE EXISTING BUILDING. IF THE INSPECTION INDICATES THAT THE STRUCTURAL INTEGRITY MAY BE IMPAIRED, NOTIFY THE ARCHITECT IMMEDIATELY.
- 5 THE CONTRACTOR SHALL VERIFY IN FIELD THE EXISTING CONDITIONS AND RELATED DIMENSIONS INDICATED IN THE DESIGN DOCUMENTS PRIOR TO IMPLEMENTING THE WORK, INCLUDING ORDERING MATERIALS. ANY DISCREPANCIES FROM THOSE INDICATED IN THE DESIGN DOCUMENTS SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW PRIOR TO IMPLEMENTING THE WORK.
- 6 THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL REQUIRED MEANS OF EGRESS CONTINUOUSLY DURING CONSTRUCTION. IF ANY MEANS OF EGRESS WILL BE AFFECTED BY CONSTRUCTION, THE CONTRACTOR IS TO SUBMIT A CONSTRUCTION PLAN TO THE ARCHITECT AND THE OWNER TO DEMONSTRATE THAT ALL MEANS OF EGRESS WILL BE MAINTAINED CONTINUOUSLY DURING CONSTRUCTION.
- 7 THE CONTRACTORS SHALL BE RESPONSIBLE FOR PROVIDING, INSTALLING AND MAINTAINING DUST-TIGHT TEMPORARY CONSTRUCTION BARRIERS TO ALL AREAS WITHIN THE CONSTRUCTION LIMIT LINES DURING THE CONSTRUCTION PROCESS. LOCATIONS SHALL BE COORDINATED WITH THE OWNER. THE BARRIERS THERMALLY PERFORM TO MATCH THAT OF THE EXISTING CONSTRUCTION WHEN BARRIER IS TO SEPARATES EXTERIOR AND INTERIOR CONDITIONS.
- 8 ANY SITUATION THAT IN THE OPINION OF THE OWNER, ITS STAFF, AND/OR REPRESENTATIVE OF THE OWNER, CONSTITUTES A HAZARD TO THE EXISTING OPERATION, WHETHER IT BE NOISE, DUST, ODOR, OR IN ANY WAY AFFECTS THE OWNERS OPERATIONS, WILL UPON REQUEST OF THE OWNER IMMEDIATELY CEASE UNTIL THE SITUATION IS RECTIFIED. NO ADDITIONAL COMPENSATION WILL BE PAID OR CONSIDERED IF WORK IS STOPPED FOR ANY OF THE ABOVE REASONS.
- 9 ALL WORK DEEMED DISRUPTIVE BECAUSE OF NOISE, DUST, ODORS, OR THAT GENERALLY AFFECTS EXISTING OPERATIONS, WILL UPON REQUEST OF THE OWNER IMMEDIATELY CEASE AND BE PERFORMED AT NIGHT. THE HOURS FOR NIGHT WORK WILL BE DETERMINED ON A CASE BY CASE BASIS AND BE APPROVED BY THE OWNER. NO ADDITIONAL COMPENSATION WILL BE PAID OR CONSIDERED IF WORK IS STOPPED FOR ANY OF THE ABOVE REASONS.
- 10 UNLESS NOTED OTHERWISE, ALL DEMOLITION AND EXCAVATED MATERIAL BECOMES THE PROPERTY OF THE CONTRACTORS AND IS TO BE REMOVED FROM THE PROPERTY IN A LEGAL MANNER. NO STOCKPILING OF THESE MATERIALS WILL BE ALLOWED ON THE PROPERTY OR WITHIN THE PROJECT AREA. THE OWNER RESERVES THE RIGHT AND SHALL BE GIVEN THE OPPORTUNITY TO CLAIM ITEMS, WHETHER OR NOT THOSE ITEMS WERE SPECIFICALLY NOTED IN THE DRAWINGS.
- 11 REFER TO DIVISION 2 SPECIFICATIONS FOR REMEDIATION OF HAZARDOUS MATERIALS FOUND ON SITE, AS ITEMIZED IN THE HAZARDOUS MATERIAL REPORT.
- 12 IN THE EVENT THAT UNEXPECTED REGULATED SUBSTANCES ARE ENCOUNTERED DURING THE WORK, THE CONTRACTOR SHALL COMPLY WITH APPLICABLE STATE AND LOCAL REGULATIONS/LAWS.
- 13 PROTECT FROM DEMOLITION AND CONSTRUCTION WORK ALL "EXISTING TO REMAIN" FIXTURES AND EQUIPMENT REQUIRED TO REMAIN IN PLACE DURING CONSTRUCTION.
- 14 REMOVE EXISTING FINISHES AS REQUIRED TO INSTALL NEW FINISHES. PREPARE SURFACES TO RECEIVE NEW FINISH AS PER MANUFACTURER'S PRINTED INSTRUCTIONS.
- 15 ALL WALLS, PARTITIONS, CEILINGS, FLOORS AND ROOFS TO REMAIN THAT NEED TO BE REMOVED TO GAIN ACCESS FOR NEW OR DEMOLITION WORK OF ANY BUILDING SYSTEM SHALL BE PATCHED TO MATCH ADJACENT EXISTING CONDITIONS. ALL WORK TO APPEAR UNNOTICEABLE AFTER COMPLETION.
- 16 OPENINGS IN WALLS, FLOORS, CEILINGS, ETC., THAT REMAIN UNUSED FROM THE REMOVAL OF DUCTS, PIPES, CONDUIT, ETC., ARE TO BE FILLED. ALL FILLED AND PATCHED WORK TO MATCH EXISTING ADJACENT MATERIAL AND FINISHES. ALL WORK TO APPEAR UNNOTICEABLE AFTER COMPLETION.
- 17 WHEN ITEMS AND/OR SYSTEMS ARE INDICATED TO BE REMOVED/DEMOLISHED, ALL COMPONENTS OF THE ITEMS AND/OR SYSTEMS (INCLUDED BUT NOT LIMITED TO ANCHORS, CLIPS, HANGERS, SUPPORT) ARE TO BE REMOVED/DEMOLISHED. CAP AS NECESSARY.
- 18 ITEMS INDICATED IN LIGHTER TONES (HALF TONES) ARE EXISTING TO REMAIN (SEE DIAGRAM BELOW).
- 19 UNLESS OTHERWISE NOTED, THE DIAGRAM BELOW REPRESENTS EXISTING WALLS/PARTITIONS TO BE REMOVED/DEMOLISHED IN THEIR ENTIRETY, INCLUDING BUT NOT LIMITED TO BASES, FASTENERS, BRACING, ANCHORS, FINISHES.
- 20 UNLESS OTHERWISE NOTED, THE DIAGRAM BELOW REPRESENTS EXISTING DOORS TO BE REMOVED/DEMOLISHED IN ITS ENTIRETY, INCLUDING BUT NOT LIMITED TO FRAMES AND ASSOCIATED HARDWARE.

GENERAL DEMOLITION NOTES



DEMOLITION DIAGRAM

	ALUMINUM		FINISH WOOD		RIGID INSULATION
	BRICK		GLASS		ROUGH WOOD
	CERAMIC TILE		GRAVEL		SAND FILL
	CONCRETE		GYPSUM BOARD		STEEL
	CONCRETE BLOCK		LOOSE OR BATT INSULATION		WATERPROOF MEMBRANE
	CONCRETE TILT-UP PANEL		PARTICLE BOARD		SPRAY FOAM INSULATION
	EARTH		PLYWOOD		MINERAL FIBER INSULATION

MATERIAL SYMBOLS

DETAIL CALLOUT

ELEVATION - INTERIOR

ELEVATION - EXTERIOR

ELEVATION - DATUM

SECTION

SPOT ELEVATION TAG

BREAK LINE

CEILING TAG

CENTER LINE

COLUMN BUBBLE

DOOR TAG

EQUIPMENT TAG

NORTH ARROW

REVISION TAG

ROOM TAG

WALL TAG

WINDOW/ LOUVER TAG

DRAWING TITLE

1 NORTH ELEVATION

SCALE: 1/8" = 1'-0"

DETAIL NUMBER

1

SHEET NUMBER

A-101

DETAIL NUMBER

2

SHEET NUMBER

A-101

DETAIL NUMBER

1

SHEET NUMBER

A101

LEVEL NAME

LOBBY LEVEL

LEVEL LINE

LEVEL ELEVATION

EL: 100'-0"

ITEM LOCATION

T/ STEEL

ELEVATION

EL: + 96'-6"

ROOM NAME

LOBBY

ROOM NUMBER

101

ROOM TEMPERATURE (IF PRESENT)

35°F

LETTERS = WINDOW TYPES (SEE SHEET A-910)

NUMBERS = LOUVER TYPES(SEE SHEET A-920)

SYMBOLS

- 1 REFER TO TECHNICAL SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS AND AVAILABLE INFORMATION.
- 2 ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE 2018 ILLINOIS ACCESSIBILITY CODE. REFER TO THE PROJECT INFORMATION SECTION FOR ADDITIONAL REQUIREMENTS.
- 3 CONTRACTOR IS RESPONSIBLE FOR COORDINATION BETWEEN ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION EQUIPMENT CONTRACTORS AND ANY SPECIALTY CONTRACTORS NECESSARY TO COMPLETE THE WORK REQUIRED BY THE THE CONTRACT DOCUMENTS, AND IS TO INFORM THE ARCHITECT OF ANY CONFLICTS OR DISCREPANCIES. IN ADDITION, ALL DEVICES SUCH AS ELECTRICAL OUTLETS, ELECTRICAL SWITCHES, THERMOSTATS, VOICE AND DATA JACKS, ETC., LOCATED IN ALL AREAS OF THE BUILDING, SHALL BE COORDINATED BY THE CONTRACTOR WITH THE ARCHITECT AND THE OWNER.
- 4 CONTRACTOR SHALL COORDINATE PLACEMENT OF ALL CEILING ELEMENTS WITH THE MECHANICAL, ELECTRICAL, FIRE ALARM, FIRE PROTECTION AND/OR SIGNAGE WORK AND CEILING INSTALLER, AND OTHERS AS NEEDED. WHERE DISCREPANCIES EXIST BETWEEN DRAWINGS AND INSTALLATION, CONSULT THE ARCHITECT PRIOR TO PROCEEDING.
- 5 SEE CIVIL DRAWINGS TO THE CONVERSION FACTOR OF ACTUAL SITE ELEVATION TO BUILDING DATUM ELEVATION SHOWN ON THE ARCHITECTURAL AND STRUCTURAL DRAWINGS.
- 6 REFER TO CIVIL, STRUCTURAL, MECHANICAL, PLUMBING, ELECTRICAL AND COMMUNICATIONS DRAWINGS FOR ADDITIONAL GENERAL NOTES, ABBREVIATIONS, AND SYMBOLS FOR THOSE SPECIFIC SECTIONS.
- 7 CONTRACTOR SHALL VISIT THE SITE AND BE KNOWLEDGEABLE OF CONDITIONS THEREIN, AND SHALL INVESTIGATE, VERIFY AND BE RESPONSIBLE FOR ALL CONDITIONS OF THE PROJECT. CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY CONDITIONS REQUIRING MODIFICATION BEFORE PROCEEDING WITH THE WORK.
- 8 CONTRACTOR SHALL PROTECT ALL EXISTING SITE ELEMENTS FROM DAMAGE DUE TO DEMOLITION AND CONSTRUCTION OPERATIONS, AND WHERE EXISTING ELEMENTS ARE REMOVED, DAMAGED, OR OTHERWISE AFFECTED BY THE NEW WORK, THEY ARE TO BE REPAIRED, REPLACED OR EXTENDED AS REQUIRED TO PROVIDE A COMPLETE OPERATIONAL SYSTEM.
- 9 REFER TO CIVIL DRAWINGS FOR NORTH-SOUTH AND EAST-WEST COORDINATES AND FOR LOCATION OF CONTROL POINTS TO ESTABLISH PROJECT GRID AND REFER TO STRUCTURAL DRAWINGS FOR LOCATION OF STRUCTURAL GRID.
- 10 CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACCURATE PLACEMENT OF ALL BUILDING ELEMENTS ON THE SITE.
- 11 ALL ELEVATIONS INDICATED ON FLOOR PLANS ARE TOP OF STRUCTURAL SLAB (U.N.O.) AND ALL ELEVATIONS INDICATED ON ROOF PLANS ARE TOP OF ROOF MEMBRANE (U.N.O.).
- 12 FOR NOTES APPLICABLE TO THE SCOPE OR WORK INDICATED ON INDIVIDUAL SHEETS, REFER TO SHEET NOTES ON THAT SHEET.
- 13 DETAILS SHOWN ARE INTENDED TO BE INDICATIVE OF THE PROFILES AND TYPE OF DETAILING REQUIRED FOR THE WORK. DETAILS NOT SHOWN ARE SIMILAR IN CHARACTER TO THOSE DETAILED. WHERE SPECIFIC DIMENSIONS, DETAILS OR DESIGN INTENT CANNOT BE DETERMINED, CONSULT THE ARCHITECT.
- 14 NOTES AND REFERENCES APPEAR ON VARIOUS SHEETS FOR DIFFERENT SYSTEMS AND CONSTRUCTION MATERIALS. ALL SHEETS ARE TO BE REVIEWED AND NOTES ON ANY ONE SHEET ARE TO BE APPLICABLE TO RELATED DRAWINGS AND DETAILS.
- 15 IF THERE ARE DISCREPANCIES BETWEEN THE DRAWINGS, NOTES, AND/ OR PROJECT MANUAL, THE CONTRACTOR SHALL CONSULT THE ARCHITECT.
- 16 ANY DETAILS, SYSTEMS, MATERIALS, ETC., PROPOSED TO BE CHANGED MUST BE SUBMITTED FOR OWNER'S APPROVAL UNDER SUBSTITUTION REQUEST PROCEDURES DESCRIBED IN SPECIFICATION SECTION 016300.
- 17 ALL JOINTS OF ANY ELEMENT OF CONSTRUCTION REQUIRED TO HAVE A FIRE RESISTANCE RATING SHALL BE INSTALLED PER THE MANUFACTURERS' PUBLISHED TESTED ASSEMBLIES AND SHALL BE TIGHT AND SHALL PREVENT THE PASSAGE OF SMOKE OR FLAME.
- 18 FLAME SPREAD RATING FOR ALL MATERIALS INCLUDING INSULATION AND FIRE SAFING SHALL COMPLY WITH LOCAL CODE REQUIREMENTS FOR FLAME SPREAD AND SMOKE DEVELOPMENT RATINGS.
- 19 ALL DISSIMILAR METALS SHALL BE EFFECTIVELY ISOLATED FROM EACH OTHER TO PREVENT MOLECULAR BREAKDOWN AND/OR ELECTROLYTIC ACTION.
- 20 PROVIDE ACCESS PANELS AS REQUIRED BY APPLICABLE CODES AND AS REQUIRED FOR BUILDING SYSTEMS. ALL ACCESS PANELS SHALL BE CONCEALED AND LOCATIONS SHALL BE REVIEWED WITH THE ARCHITECT PRIOR TO INSTALLATION.
- 21 WHETHER SHOWN ON THE DRAWINGS OR NOT, PROVIDE CONCRETE HOUSEKEEPING PADS AT ALL EQUIPMENT LOCATIONS. COORDINATE SIZE AND LOCATION REQUIREMENTS WITH EQUIPMENT MANUFACTURES FOR ACTUAL EQUIPMENT PROVIDED.
- 22 UNLESS ACCEPTED BY ARCHITECT, ALL FASTENERS AND FASTENING DEVICES ARE TO BE CONCEALED IN ALL FINISHED SPACES.
- 23 CONTRACTOR TO COORDINATE SIZE AND LOCATION OF ALL FLOOR AND WALL SLEEVES. ALL OPENINGS IN THE FLOOR SLAB AND/OR RATED WALLS, INCLUDING SPACE BETWEEN SLAB EDGE AND WALLS, SPACES BETWEEN DUCTS, CONDUITS, PIPING, ETC., (EXCEPT WHEN COMPLETELY ENCLOSED BY FIRE RATED CONSTRUCTION) SHALL BE FIRE STOPPED (SEALED) WITH APPROVED FIRE STOP MATERIAL TO MAINTAIN FIRE RATING CONTINUITY OF THE FLOOR OR WALL CONSTRUCTION, AND SHALL BE TIGHT TO PREVENT THE PASSAGE OF PRODUCTS OF COMBUSTION.
- 24 CONTRACTOR SHALL PROVIDE ALL REQUIRED CONCRETE EMBEDS, ANCHORAGE, AND DEVICES TO BE CAST-IN-PLACE IN THE STRUCTURE. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACCURACY OF THE PLACEMENT OF EMBEDS, ANCHORAGE AND DEVICES PRIOR TO THE PLACEMENT OF POURED CONCRETE SLABS, WALLS, COLUMNS, ETC. CONTRACTOR SHALL INSPECT AND ACCEPT THE PLACEMENT OF ALL CAST-IN-PLACE ELEMENTS.
- 25 CONTRACTOR SHALL PROVIDE ALL REQUIRED IN-WALL BLOCKING FOR WALL-MOUNTED ITEMS IN GYPSUM BOARD PARTITIONS.

GENERAL PROJECT NOTES



LOCATION MAP

ADDRESS:	351 N. AUSTIN BLVD. CHICAGO, IL 60644
PROJECT DESCRIPTION:	ACCESSIBILITY UPGRADE OF EXISTING CTA ELEVATED TRAIN STATION
AUTHORITY HAVING JURISDICTION:	CITY OF CHICAGO
SITE SIZE (IN ACRES):	2.26
SITE ZONING:	B3-2
CONSTRUCTION TYPE:	II-B
GROSS BUILDING AREA (IN SQUARE FEET):	3613 SF
NUMBER OF STORIES AT AND ABOVE GRADE:	2
NUMBER OF STORIES BELOW GRADE:	0
MAXIMUM BUILDING HEIGHT (IN FEET):	41 FT

PROJECT INFORMATION



SENSITIVE SECURITY INFORMATION

WARNING: THIS RECORD CONTAINS SENSITIVE SECURITY INFORMATION THAT IS CONTROLLED UNDER 49 CFR PARTS 15 AND 1502. NO PART OF THIS RECORD MAY BE DISCLOSED TO PERSONS WITHOUT A "NEED TO KNOW" AS DEFINED IN CFR PARTS 15 AND 1502, EXCEPT WITH THE WRITTEN PERMISSION OF THE ADMINISTRATOR OF THE TRANSPORTATION SECURITY ADMINISTRATION OR THE SECRETARY OF TRANSPORTATION. UNAUTHORIZED RELEASE MAY RESULT IN CIVIL PENALTY OR OTHER ACTION. FOR U.S. GOVERNMENT AGENCIES, PUBLIC DISCLOSURE IS GOVERNED BY 5 U.S.C. 552 AND 49 CFR PARTS 15 AND 1502.

DRAWING SCALE IS NOT GUARANTEED. CTA ASSUMES NO RISK OF LIABILITY FOR ERRORS CAUSED, DIRECTLY OR INDIRECTLY, BY SCALING OF THIS DRAWING.

ALL STATIONS ACCESSIBILITY PROGRAM

AUSTIN BLVD. GREEN LINE STATION	
351 N. AUSTIN BLVD	
IN CHARGE	T. GALL
APPROVED BY	T. GALL
CHECKED BY	L. CHANDLER
DESIGNED BY	S. CYGIELSKI
DRAWN BY	S. BUSH
PROJECT NO.	20240
FILE NAME	

9	2023.04.24	ADDENDUM NO. 1
5	2022.11.16	ISSUED FOR BID
4	2022.10.03	100% DESIGN
3	2022.08.01	ISSUED FOR PERMIT
2	2022.06.16	60% DETAILED DESIGN
1	2021.07.20	30% SCHEMATIC DESIGN

LOCATION IDENTIFIER: LKAUS

PROJECT INFORMATION

G-005

ADDENDUM NO. 1 - EXHIBIT 7

PART 4 - TECHNICAL APPENDICES

APPENDIX 4

REFERENCE DOCUMENTS

GEOTECHNICAL INVESTIGATION REPORT
CTA- All Stations Accessibility Program (ASAP)
New Elevator & Aux Entrance
Lake Line Austin Ave. Green Line Station Project
CTA Contract No. : C19FI102263676 (Task Order No. 1F)
351 North Austin Boulevard
Chicago, Illinois

PREPARED FOR:

A. Epstein and Sons International, Inc.
600 W Fulton St
Chicago, IL 60661
(312) 429-8314

PREPARED BY:

Geo Services, Inc.
805 Amherst Court
Suite 204
Naperville, Illinois 60565
(630) 305-9186

JOB NO. 20122

02/18/2021



February 18, 2021

A. Epstein and Sons International, Inc.
600 W Fulton Street
Chicago, IL 60661

Attn: Mr. Tom Smiles, P.E.

Project Number: 20122

Re: Geotechnical Investigation for the Proposed Elevator and Aux Entrance
For Lake Line Austin Ave. Green Line Station Project
Located at 351 North Austin Boulevard,
Cook County, Chicago, Illinois

Dear Mr. Smiles:

The following report presents the geotechnical analysis and recommendations for the proposed Hydraulic Elevator and Aux Entrance at Lake Line Austin Avenue Green Line Station— as a part of CTA All Stations Accessibility Program (ASAP) located at 351 North Austin Boulevard in Cook County, Chicago, Illinois. This report has been based upon the subsurface information obtained in four (04) soil borings (SB-01 thru SB-04) performed in the location of the proposed improvement. Copies of Soil borings logs, boring location diagrams and lab testing results are included in the Appendix section of this report.

If there are any questions regarding the information submitted herein, please do not hesitate to contact us.

Very truly yours,

GEO SERVICES, Inc.



Arun Tailor
Project Engineer

enc.



Andrew J. Ptak, P.E.
Principal



TABLE OF CONTENTS

<u>SECTION 01: HISTORICAL INFORMATION</u>	2
<u>SECTION 02: INTRODUCTION</u>	4
<u>SECTION 03: PROJECT DESCRIPTION</u>	4
<u>SECTION 04: GEOLOGY</u>	5
<u>SECTION 05: CLIMATIC CONDITIONS</u>	5
<u>SECTION 06: SUBSURFACE INVESTIGATION PROCEDURES</u>	6
<u>SECTION 07: LAB TESTING PROGRAM</u>	8
<u>SECTION 08: SUBSURFACE CONDITIONS</u>	9
<u>SECTION 09: WATER TABLE CONDITIONS</u>	9
<u>SECTION 10: ANALYSIS AND RECOMMENDATIONS</u>	10
<i>General</i>	10
<i>Seismic Analysis</i>	10
<i>Settlement</i>	11
<i>Slope Stability</i>	11
<i>Foundation Recommendations</i>	12
<i>Shallow Foundation Recommendations</i>	12
<i>Deep Foundation Recommendations-Micropiles</i>	13
<i>Slab-on-Grade Recommendations</i>	15
<i>Parking Area Pavement Recommendations</i>	15
<i>Temporary Sheet Pile</i>	16
<u>SECTION 11: GENERAL CONSTRUCTION CONSIDERATIONS</u>	18
<u>SECTION 12: GENERAL QUALIFICATIONS</u>	18

APPENDIX A – General Notes

APPENDIX B – Site Location Map

APPENDIX C – Boring Location Diagram

APPENDIX D – Boring Logs

APPENDIX E – Lab Test Results

APPENDIX F – APPENDIX F – Preliminary Design 10% Conceptual Drawings

SECTION 01: HISTORICAL INFORMATION

The Austin station is a station on the Chicago Transit Authority's "L" System. It is located between the Ridgeland and Central stations on the Green Line, which runs from Harlem/Lake and to Ashland/63rd and Cottage Grove. The system is located at the intersection of Austin Boulevard and Corcoran Place in the Austin neighborhood on Chicago's West Side and borders the Village of Oak Park, located at 351 North Austin Boulevard, Chicago, Illinois.

The first Austin Station was opened in 1899, as a part of the surface level extension of the Lake Street Elevated Railroad, along with Central. It was rebuilt in early 1962, as part of a project which moved the western end of the two and a half miles of the Lake Street line off of its street level alignment and onto an abandoned strip of the parallel Chicago and Northwestern Railway's embankment. As part of the reconstruction, an auxiliary entrance was constructed at Mason Avenue, a block east of the main entrance. On February 18, 1973, the Mason entrance was reduced to functioning only as an auxiliary exit due to budget cuts. It was later closed entirely in 1994.

The Green Line is a rapid transit line on the Chicago Transit Authority's "L" system. It is the only completely elevated route in the entire system; all other routes either have underground sections or sections at grade.

The station at Austin consists of a single island platform; a stairway and escalator connect the platform to a station building. The platform is located on the south side of the right of way of Metra's Union Pacific/West Line to the east of Austin Boulevard. It serves the Green Line's two tracks; the northern track serves trains to Harlem/Lake, while the southern track serves trains to Ashland/63rd and Cottage Grove.

Fare controls and a customer assistant booth are in the station house, alongside the railroad embankment at street level. Access to the platform is provided by a stairwell and an escalator. The station's lack of an elevator or a ramp means that it is not handicapped accessible.

In addition to 'L' trains, the station provides service to several bus routes.

The project is located in the City of Chicago, Cook County, Illinois with the following range/township information: T39N R13E, Section 8. Figure 1 shows the project location map. The project site location map included in the Appendix.

A map of the Chicago area showing a proposed commuter rail line. The line is highlighted in green and runs from Oak Forest in the west to Ashland/63rd in the south. Key stations marked along the route include Oak Forest, Forest Park, and Chicago. The map also shows major highways (I-55, I-90, I-94, I-54, I-290, I-55, I-90, I-94, I-54, I-290) and surrounding areas like River Grove, Wood, Lyons, Summit, Bridgeview, and Burbank. Three callout boxes with arrows point to specific locations: 'Harlem/Lake' points to the western end near Oak Forest, 'Austin Station' points to a station near Forest Park, and 'Ashland/63rd' points to the southern terminus near I-90 and I-55.

SECTION 02: INTRODUCTION

This report presents the results of the geotechnical investigation for the proposed improvement include a Hydraulic Elevator and Aux Entrance construction at CTA-Austin Ave. Green Line Station located in Cook County at 351 North Austin Boulevard, Chicago, Illinois for Chicago Transit Authority (CTA) – All Station Accessibility Program (ASAP). A total of four (4) soil borings (SB-01 through SB-04) were completed at the site by Geo Services, Inc. SB-01 and SB-03 were drilled to bedrock with 10 feet of rock coring and SB-02 and SB-04 were drilled to 30 feet depth from the surface to the completion of the borings. Copies of the as-drilled boring locations are illustrated on boring location diagram in the Appendix section along with boring logs, soil profiles and lab test results, are included with this report.

Boring locations were selected by A. Epstein and Sons International, Inc. Boring locations were finalized in the field by Geo Services, Inc. personnel after review of accessibility and utility locations. Revised boring locations were reviewed and approved by A. Epstein and Sons International, Inc. Ground elevations at the boring locations were determined using Lake Line Austin Station survey drawings dated 1/22/2021.

The purpose of this report is to describe the subsurface conditions encountered in the borings to analyze and evaluate the data obtained, and to submit recommendations regarding the proposed design of the Hydraulic Elevator and Aux Entrance, a description of soil and groundwater conditions, general construction considerations for the site.

SECTION 03: PROJECT DESCRIPTION

Based on the 10% conceptual preliminary design drawings set prepared by the design engineering consultant (A. Epstein and Sons International, Inc.), This project will improve the vertical accessibility at the Austin Green Line station located at 351 N. Austin, Chicago, IL. The original street level station opened on April 15, 1899 as a section of the “Lake Street Elevated Railroad’s” surface level extension. This station has been identified as not vertically accessible for all customers.

The project will improve the station’s accessibility, including improved sidewalks, crosswalks, curb ramps with detectable warning and signals, installation of a one (1) new elevator, elevator machine room, sidewalk ramp, an interior stationhouse ramp, accessible customer agent kiosk (CAK) and staff toilet room, lighting, new signage, and communication upgrades.

The proposed heavy-duty elevator will be design for a 3,500 lb. capacity. Elevator pit depths and overhead dimensional are based on design capacity with travel speed of 350 FPM. The elevator has inside dimension approximately 8’-8” x 5’-8”. These dimensions take into account inside dimensions and do not take into account foundation wall thickness or hoistway wall enclosure thickness. However Hydraulic

Elevator drawings, specification and foundation load details hasn't been determined during preparation of this report.

SECTION 04: GEOLOGY

The Chicago subsoils are predominantly composed of large masses of clay and silt deposited as a series of ground moraines (or glacial till sheets) lying one atop another, by the advances and retreats of the continental ice sheet during the Wisconsin Glacial period.

Based on the available Surficial Geology map of the Chicago region indicates that the project site categorized in Lake Plain which is largely floors of glacial lakes flattened by wave erosion and by minor deposition in low areas; largely underlain by glacial till; thin deposits of silt, clay and sand of the equality formation present locally. These soils are underlain by materials belonging to the Wadsworth Till Member of the Wedron Formation consisting mostly gray clayey and silty clayey till. The Wadsworth contains few pebbles and cobbles and is more clayey near Lake Michigan than till to the south and west.

Wadsworth Till Member soils were deposited during Woodfordian Substage of the Wisconsin glaciation between 12,500 to 22,000 years ago and generally consist of gray clayey and silty clay tills and the bedrock is located is in excess of 50.0-ft below ground surface. The top of bedrock was encountered in the borings at approximately elevation -30.0 to -31.0 CCD.

Based on Cook county Coal map sources, there are no documented coal mining operations in near vicinity to the project site and seismic activity is noted to be very low.

SECTION 05: CLIMATIC CONDITIONS

The climate within the area of this project site falls within the temperate warm, humid and wet in the summer and windy, cold, freezing conditions in the winter as well as partly cloudy year round. Over the course of the year, the temperature typically varies from 20°F to 84°F and is rarely below 2°F or above 92°F. The winter seasons last 3 to 4 months from November to March with an average daily high temperature is below 44°F. January is the coldest month of the year with an average low of 20°F and high of 34°F. The average seasonal snowfall for this area is 34.0 inches. The summer seasons last 3 to 4 months from June to September with an average daily high temperature is above 74° F. July is the hottest month of the year with an average daily high temperature of 84°F and low of 67°F. Rain falls throughout the year- total annual precipitation for this area is 38 inches. Most of the precipitation here falls in June, averaging 102 mm (4.0 inches) and the driest month is February, with 37 mm (1.5 inches) of rainfall.

Local Climatological Data, as measured at O'Hare International Airport (ORD), for the three (3) month period prior to and during drilling, including total precipitation, average temperature and snowfall are summarized below:

TABLE 1
CLIMATE CONDITIONS

MONTH-yr	ppt (in)		Temp (°F)		Snow (in)	
	Total	Departure From Norm	Average Temp.	Departure From Norm	Total	Monthly Norm
Sept-2020	3.18	-0.03	66.3	+1.7	0.0	0.0
Oct-2020	3.65	+0.50	51.5	-1.0	0.0	1.2
Nov-2020	1.72	-1.84	47.4	+1.99	0.0	3.2
Dec-2020	1.84	-1.16	33.9	+13.0	1.3	8.5
borings performed 12/16 to 12/21/2020						

Total precipitation during the three months preceding drilling was slightly below normal and temperatures were higher than normal. During the months of drilling operations, total precipitation was below normal and temperatures were hotter than normal. The climatic conditions encountered prior to and during drilling operations suggest that the soils should be at lower-than-normal moisture levels.

SECTION 06: SUBSURFACE INVESTIGATION PROCEDURES

The soil boring locations were selected by A. Epstein and Sons International, Inc based on the criteria described in CTA Task request. Boring locations were finalized in the field by Geo Services, Inc. personnel after review of accessibility and utility locations. Revised boring locations were reviewed and approved by A. Epstein and Sons International, Inc. Surveyed elevations were not available at the time of preparing this report, therefore estimated ground elevations at the boring locations were determined using Lake Line Austin Station survey drawings dated 1/22/2021.

TABLE 2
SOIL BORING LOCATION INFO

Boring #	Approximate Depth of Boring (ft.)	Approximate Surface Elevation (CCD)	Approximate Top of Bedrock Elevation (CCD)	Approximate Bottom of Boring Elevation (CCD)
SB-01	80.5	+37.5	-31.0	-43.0
SB-02	30.0	+37.4	n/a	+7.4
SB-03	80.5	+37.1	-30.9	-43.4
SB-04	30.0	+38.4	n/a	+8.4

- Approximate Surface elevation obtained from project survey file dated 1/22/2021.

The borings referenced for this report were drilled during the month of December, 2020. All of the borings were performed using a truck-mounted drill-rig equipped with a CME automatic hammer. The borings SB-02 and SB-04 were advanced by continuous flight hollow stem augers to 30-foot-deep below from the surface to completion of the borings. The borings SB-01 and SB-03 were performed using continuous flight hollow stem augers to a depth of 10 feet, and then switching to rotary drilling to the completion of the borings.

Representative samples were obtained employing split spoon sampling procedures in accordance with ASTM Specification D-1586. Geo services Inc. field representative inspected, visually classified and logged the soil samples during the subsurface exploration activities, and performed unconfined compressive strength tests on cohesive soil samples using a calibrated hand penetrometer. Samples obtained in the field were brought to our laboratory for further examination and testing.

Split spoon sampling involves driving a 2.0-inch outside diameter split barrel sampler into the soil with a 140 pound weight falling freely through a distance of 30 inches. Blow counts are recorded at 6" intervals and the blow counts are shown on the boring logs. The number of blows required to advance the sampler the last 12 inches is termed the Standard Penetration Resistance (N). The N value is an indication of the relative density of the soil.

Split-spoon sampling intervals were at 2.5 feet to 30 feet depth and 5 feet intervals thereafter. Samples obtained in the field were brought to our laboratory for further examination and testing.

Rock cores were obtained using an NX-size, double-tubed core barrel with a diamond impregnated bit in SB-01 and SB-03 borings. Approximately 10 feet run of rock core

were retrieved from these borings and were brought to our lab for strength testing and classification.

SECTION 07: LAB TESTING PROGRAM

The test procedures were performed in accordance with test procedures discussed in the IDOT Geotechnical Manual. All split-spoon samples obtained from the drilling operation were visually classified in the field.

The soil testing program included performing water content, density and either unconfined compression and/or calibrated penetrometer tests on the cohesive samples recovered. Water content tests were performed on the non-cohesive samples recovered. These tests were performed upon representative portions of the samples obtained in the field.

The results of all testing performed, along with a visual classification of the material are based upon both a textural analysis and the Unified Soil Classification System, and are indicated on the boring logs in Appendix.

In addition to the general soil testing program, Particle Size Analysis (ASTM D-422) and Atterberg Limit Determination (ASTM D-4318) tests were performed on selected soil samples to aid in classification. The results of these tests are summarized in Table 3 and are included in the Appendix. Also, unconfined compressive testing (ASTM D 7012) was performed on rock cores obtained from the field and are indicated on the rock core logs.

**TABLE 3
SUMMARY OF LAB RESULTS**

Boring No./ Sample No.	Sample Depth (ft.)	Material Description	Moisture Content (%)	LL	PI	P 200 (%)
SB-01 / S-13	28.5-30.0	Silty Clay with Sand (CL-ML)	13.0	22	5	81.4
SB-01 / S-16 & S-17	43.5-50.0	Silty Sand with Gravel (SM)	10.0	18	7	30.8
SB-02 / S-5 to S-7	8.5-15.0	Lean Clay with Gravel (CL)	15.0	34	21	76.9
SB-03 / S-4 to S-5	6.0-10.0	Lean Clay with Gravel (CL)	17.0	30	27	75.6
SB-03 / S-15	38.5-40.0	Silty Sand (SM)	16.0	NP	NP	22.8
SB-04 / S-3 & S-4	3.5-7.5	Lean Clay (CL)	24.0	35	26	89.5

SECTION 08: SUBSURFACE CONDITIONS

Specific soil conditions encountered in the borings are indicated on the soil boring logs included in the Attachments. General descriptions of the soil profile encountered are provided below.

Borings SB-01 thru SB-04 was performed closest to the location of the proposed improvement. Surficial soils at boring locations consisted of approximately 12 inches composite pavement section which includes 2" thick asphalt and 10" thick concrete except at soil boring SB-04 where no asphalt layer at the surface and total pavement thickness measured to 10". Immediately below the pavement 24 inch thick layer of crushed stone subbase followed by 2'-6" thick layer of poorly graded medium dense sand layer was encountered at soil boring SB-01, 24 inches thick layer of silty sand, gravel and stone layer at soil boring SB-04, there were no subbase stone encountered at soil borings SB-02 and SB-03.

At soil borings SB-02 & SB-04 immediately below the pavement or pavement section the soil stratigraphy continues with strata of stiff to very hard lean clay were noted to approximate 28 feet below the grade surface elevation in the range of +35 CCD to +10 CCD. The stratigraphy then transitions to dense silt layer at SB-02 and very stiff silty clay layer at SB-04 to termination of borings at approximate 30 feet below the grade surface elevation in the range of +7 CCD to +8 CCD.

At soil borings SB-01 & SB-03 immediately below the pavement section the soil stratigraphy continues with strata of stiff to very hard lean clay were noted to approximate 25 feet below the grade surface elevation in the range of +32 CCD to +11 CCD. The stratigraphy then transitions to dense silt /sandy silt/sandy silt with gravel stratum up to top of bedrock at an approximate 70 feet below the grade surface with the exception of few stratum of stiff to hard silty clay layer encountered interstratified within the silt stratum in boring SB-01 at 28 feet below grade surface in the range of +9 CCD to -1 CCD and at 57 feet below grade surface at boring SB-03 in the range of -20 CCD to -25 CCD. The termination of soil borings SB-01 and SB-03 at an approximate 80 feet below the grade surface elevation of -43 CCD. Bedrock is generally encountered at approximate 70 feet below the grade surface at an elevation of -31 CCD and consisted of Silurian System, Niagaran Series Dolomite-light gray and fine porous with horizontal bedding and having horizontal and vertical fractures. A Rock Quality Designations (RQD) values were determined for each core run and estimated generally in the 70's and typically higher.

SECTION 09: WATER TABLE CONDITIONS

The majority of the borings were dry to a depth of 10 feet prior to switching to wash-rotary drilling techniques, Due to the nature of rotary-wash drilling; it was not possible to obtain accurate water level readings below 10 feet of depth or after drilling. Our drilling crew obtained the water level reading during the drilling operation in soil boring SB-03

at 8 feet and soil boring SB-04 at 7.5 feet below the ground surface and this reading is shown on boring logs. Based on the coloration change in the soils from dark brown to gray, we estimate a depth of 12 to 15 feet below existing ground surface for the long-term groundwater table. The brown color of the soil is typically caused by oxidation that occurs above the long-term water level. Fluctuations in the amount of water accumulated and in the hydrostatic water table can be anticipated depending on the variations in precipitation and surface runoff.

TABLE 4
GROUND WATER OBSERVATIONS

Boring No.	Approximate Ground Surface Elevation (CCD)	Ground Water Observations While Drilling / Upon Completion	
		Depth below Ground Surface	Elevations (CCD)
SB-03	+37.10	8.5 / 18.0	+28.6 / +19.0
SB-04	+38.40	7.5 / 16.0	+30.9 / + 22.4

SECTION 10: ANALYSIS AND RECOMMENDATIONS

General

This section provides recommendations regarding foundation and design parameters for the proposed elevator and aux entrance for Lake Line Austin Ave. Green Line Station Project. The recommendations were developed based on the project information provided by A. Epstein and Sons International, Inc and the results of the site investigation. If there are any significant changes to the project characteristics or if significantly different subsurface conditions are encountered during construction, Geo Services, Inc. should be consulted so that the recommendations of this report can be reviewed.

Seismic Analysis

Based on the American Railroad Engineering and Maintenance-of-Way Association (AREMA), the project site has a Horizontal Spectral Acceleration coefficient of less than 0.063g at a period of 1.0 second and 5% critical dampening and 0.120 at a period of 0.2 seconds and 5% critical dampening, and a Site Class: D (for stiff soils) according to the soil conditions in addition, the site is classified as Seismic Performance Zone SPZ 1. The project site is considered to be in a low seismic area and liquefiable layers. The following table contains the recommended seismic design data to be used for design:

TABLE 5
SEISMIC DATA SUMMARY

Design Spectral Acceleration at 1.0-sec Period, S_{D1}	0.101 g
Design Spectral Acceleration at Short Period, S_{Ds}	0.128 g
Maximum Earthquake Spectral response at 1.0-sec Period, S_{M1}	0.152 g
Maximum Earthquake Spectral response at Short Period, S_{Ms}	0.192 g
Peak ground acceleration coefficient (PGA)	0.06
Soil Site Class	D
Site Seismic Design Category (SDC)	B

Settlement

Proposed finished grade is similar to location of the existing station house grade and little or no new fill is expected to be placed; therefore, settlement of the addition to the existing station house is not a concern.

Total settlement for shallow footing foundations situated on approved natural soils or properly compacted structural fill is estimated to be on the order of 1/2 inch or less. Differential settlement is typically 1/2 to 2/3 of the total settlement.

For deep foundation systems, we estimate settlements of 1/2 inch or less (in addition to the elastic compression of the pile itself) or micropiles founded in very stiff to hard clay /hardpan clay soils.

Down drag is also not a concern for deep foundations if selected.

It is recommended that all foundation subgrade soils be observed by an experienced geotechnical engineer or his field representative prior to placement of concrete or fill, in order to confirm that the subgrade conditions are consistent with the design assumptions and recommendations contained in this report. Periodic density testing should be performed on any fill in order to document that density requirements have been met.

Slope Stability

The existing platform alignment is considered no changes; will remain similar to existing condition or match similar to existing conditions. The existing embankment is retained by existing retaining wall. There is no slope stability issues related to the proposed improvements at the Austin station.

Foundation Recommendations

Based on the soil conditions obtained from the borings performed at the project site and the provided 10% conceptual design drawings the interior stationhouse ramp, stairs from stationhouse to platforms, stairs from Mason Street stationhouse to platforms, addition to stationhouse wall footing, elevator machine room and hydraulic elevator tower wall footing foundations may be supported on shallow spread footings, alternatively if site conditions do not provide enough room for spread footings; a deep foundation system includes; micropiles may also be considered as feasible foundation support type system for the new elevator structure; because of the restricted access and low headroom/overhead clearance, such as foundations in the existing Austin Station House, we presume micropiles will be most cost effective deep foundation type rather than steel H-pile or drilled shaft foundations.

We recommend that an economic analysis for each foundation option presented below be considered before choosing a deep foundation system for the design.

Shallow Foundation Recommendations

Shallow foundations are typically the most economical system, if site condition allows for enough space for spread footing foundations. All soil borings are performed at street grade elevation of +37.0 CCD for Austin Street station house and +38.40 CCD for Mason Street station house. Based on 10% conceptual drawings the proposed Austin station house elevation designed at an elevation of +41.5 CCD and +41.0 CCD for Mason Street station house. The Austin & the Mason Street Platform elevation designed at +57.5 CCD.

Based on specific soil condition encountered in the boring logs and type of construction the foundation for the addition to the existing station house wall, stairs, ramps and elevator foundation will be based at a minimum depth for 4-ft (based on frost depth code). The subgrade soils beneath the proposed, assumed to be stiff to very stiff lean cohesive soil. We considered suitable for support of the wall foundation for the Austin station house addition may be supported on spread footings at an elevation of +31.0 CCD on stiff lean clay, designed using a maximum, net allowable soil bearing pressure of 4,000 pounds per square foot (psf) and elevator foundation may be supported on spread footings or a mat foundation at an elevation of +28.0 CCD on hard lean clay stratum, designed using a maximum, net allowable soil bearing pressure of 4,000 pounds per square foot (psf) using Service Load Design Method, SLD, (also known as Allowable Stress Design, (ASD) method. The net allowable soil bearing pressure refers to the pressure which may be transmitted to the foundation soils in excess of the final minimum surrounding overburden pressure.

If soils with less than adequate bearing strength are noted at the foundation level during footing construction, the weaker soils encountered at the base of the footings should be undercut to reach suitable bearing soils, and the undercut area filled with lean concrete

or a suitable compacted crushed stone structural fill material. Suitable crushed stone fill materials include materials meeting the gradation requirements of IDOT CA-1, CA-7 and capped with CA-6.

Undercutting should be performed in such a manner as to minimize disturbance to the undercut subgrade, and heavy equipment traffic directly on the subgrade should be minimized. The actual extent of undercut should be determined in the field and at the time of construction by the geotechnical engineer.

Structural fill utilized to support footings should be extended at least 6 inches beyond the proposed footing limits and then one foot horizontally for each one foot of fill placed below the base of the footing. This new fill should consist of inorganic material free of debris and should be placed in maximum 8-inch loose lifts and compacted to a minimum of 95% of the maximum dry density obtained in accordance with ASTM D 1557, modified Proctor method. If CA-1 or CA-7 crushed stone materials are used, they can be compacted/consolidated by IDOT approved method. The moisture content of the fill should be controlled within +2% of the optimum moisture content.

To provide adequate frost protection, we recommend that footing foundations in non-heated areas be situated at a minimum depth of 4 feet below final grade while the perimeter footings in heated areas should be situated at a minimum depth of 3.5 feet below final outside grade. Also, in order to prevent disproportionately small footings, we recommend that continuous wall footings have a minimum width of 1.5 feet and that isolated column footings have a minimum lateral dimension of 2.5 feet.

Any foundation subgrade soils should be observed by an experienced geotechnical engineer or his field representative prior to placement of concrete or fill, in order to confirm that the subgrade conditions are consistent with the design assumptions and recommendations contained in this report. Periodic density testing should be performed on any fill in order to document that density requirements have been met.

All soils which become softened or loosened at the base of foundation excavation areas or subgrade areas should be carefully re-compacted or removed prior to placement of foundation concrete or fill material. No foundation concrete or structural fill should be placed in areas of ponded water or frozen soil.

Deep Foundation Recommendations-Micropiles

As an alternative to shallow foundation, deep foundation system consisting of drilled-in micropiles is also considered a feasible option for supporting the Austin Station Elevator. Micropiles are drilled piles that penetrate into suitable bearing strata and derive bearing capacity from skin friction between the pile grout and the surrounding soil. For Higher capacity micropiles can be advanced through hardpan and should be socketed into the bedrock, the casing should be advanced at least 4 inches into the bedrock and a 1.0 ft. rock socket should be drilled into the rock using a down hole hammer.

While many techniques are available, the installation of micropiles generally involves spinning a steel casing of designed diameter through soil to the specified or required bearing soil. Once the casing reaches the required depth, grout is pumped under pressure into the hole through the casing while casing is being withdrawn. The casing will be pulled to a specified depth and then left in place with grouting continue inside the casing until it reaches the top of the casing or cutoff point.

The micropile pipe pile should have internal flush couple threaded joints and no external couplers should be allowed. Micropiles consist of small diameter, typically less than 10-inch diameter, high-strength flush couple threaded steel pipe casing meeting API Standard for (80 ksi minimum yield), and filled and pressure grouted with neat cement grout.

Based on specific soil condition encountered in the boring logs, we recommend drilled-in micropiles bored in the very hard clay soils immediately beneath the elevator pit slab elevation of +28.0 CCD. If rock socketed micropiles select, we recommend the pile be drilled at least two feet into sound dolomite bedrock to minimize the potential for shear failure along natural bedding planes. For the typical Chicago dolomite, micropiles between about 7 and 10 inches in diameter should be expected to have socket lengths from 4 to 6 feet to fully develop the structural design capacity. It should be noted that the length of the socket may also be controlled by tension loading.

The design engineer / specialty contractor will be responsible for determining the grouted micropile diameter using an allowable side friction value of 1.0 tsf in the hard clay soils and using a side friction of 7.0 tsf in sound bedrock for the design load using factor of safety of 2.5. We recommend that micropile will need to be socketed into the bedrock.

Based on City of Chicago Department of Building memorandum pipe used of for the micropiles shall have the minimum outside diameter of 4.5 inches with minimum wall thickness of 0.300 inches. In addition City code requires a pile load test to confirm their design parameter and pile capacity. Pile load tests shall be performed in accordance with City of Chicago Building Code and ASTM 1143. The casing thickness should be oversize by 1/16 inches to account for steel pile subjected to corrosion and shall be protected by a suitable protective coating.

Micropiles shall not be drilled within the five feet of existing micropiles until the grout has had 12 hours or sufficient time for the initial set. Micropiles should be spaced no closer than 3 pile diameter (drill hole diameter on center).

The maximum pile capacity will be limited by the capacity of the micropile ($0.4 \cdot f'_c \cdot A_{\text{grout}} + 0.47 \cdot f'_{\text{steel}} \cdot A_{\text{steel}}$) as described in FHWA Micropile Design and Construction Guidelines (FHWA-SA-97-070).

The recommended minimum 28-day compression strength of the grout should be a minimum of 5,000 psi.

The total settlement (including elastic shortening) of an approximately 25 to 35 foot long micropile is estimated to be less than about 0.75 to 1-inch under its maximum allowable compression load.

Slab-on-Grade Recommendations

We understand that the proposed floor slab will be located at, or near, existing site grade. The on-site non-cohesive soils that contain no organic material, or demolition debris can be used as structural fill under slabs, around grade beams and under pavements. On-site fill should be visually observed during excavation. Any debris or concrete pieces greater than six inches in diameter should be removed from the stockpiles.

Imported fill should consist of a well-graded granular material, containing less than 15% by weight passing the No. 200 (0.075 mm) sieve. This material should be placed in thin lifts not exceeding 8 inches in loose thickness, and it should be compacted to a minimum of 95% of its maximum dry density as determined by the Modified Proctor test (ASTM D 1557). In slab-on-grade areas which support loads in excess of 500 psf, heavy concentrated loads, or masonry partition walls, the fill should be compacted to a minimum of 100 % of the maximum dry density as determined by the Modified Proctor test (ASTM D 1557). Density testing should be performed on any fill to document that density requirements have been met.

Floor slabs on grade should be isolated from foundations to permit relative displacement without cracking. Slabs of sufficient thickness should also be provided with adequate reinforcing and jointing to control minor slab cracking.

Parking Area Pavement Recommendations

The project improvements include construction of improved sidewalks, crosswalks; curb ramps, restoration of adjacent pavement for roadway and parking along the Austin station for this project. Based on the soil boring information, the subgrade should provide adequate support for the new pavement (if required).

The subgrade at the design elevation should be observed by a geotechnical engineer and any topsoil, organic, unsuitable or deleterious material removed. Proofrolling of the resultant subgrade should be performed to locate objectionable soils that should be removed. During the proofrolling procedure, the stripped soil surface is rolled with the heaviest piece of construction equipment available at the site, such as a heavily loaded tandem axle dump truck having a gross weight of not less than 25 tons. Areas exhibiting deflection or rutting over 1.25 in (32 mm) should be removed and the proofrolling continued until all unsuitable soils have been located and removed, or improved in-place. However, the on-site inspector should ensure that the finished

subgrade does not exhibit more than 0.5 inch (12.5 mm) of rutting.

Any undercutting (if needed) should be performed in such a manner as to minimize disturbance to the undercut subgrade. Heavy equipment traffic directly on the subgrade should be minimized. The actual extent of any undercut should be determined in the field and at the time of construction by the geotechnical engineer.

Any undercut areas (if needed) should extend to 1.0 foot beyond the edge of curb and should be backfilled with a compacted IDOT gradation CA-6 crushed stone or crushed concrete, or Porous Granular Embankment subgrade (PGEs). We recommend using an Illinois Bearing Ratio (IBR) of 2.0 for pavement design for the clay fill soils present onsite. Also, we recommend a shrinkage factor of 10% be used for fill volume calculations.

Where new fill is required to reach the design subgrade elevation (if any), we recommend that an approved inorganic material be utilized. This material should consist of material that is free of organic matter, topsoil, and debris. The existing sand soils will generally be suitable for use as a fill material. Fill material used in pavement subgrade should also be non-frost susceptible. New fill should be placed in maximum 9-inch loose lifts compacted to a minimum of 95% of the maximum dry density obtained in accordance with ASTM Standard D-1557, Modified Proctor method.

Care should be taken in the design and construction of paved areas to provide rapid drainage of surface water and to develop surface drainage patterns that will divert water away from the pavement edges. When water is allowed to pond on or adjacent to the pavement, the subgrade may become saturated and accelerate pavement deterioration.

Temporary Sheet Pile

Temporary Sheet pile wall will be required to maintain existing structures or other adjacent facilities. Sheet piles are also used in wide trench excavations when the use of trench boxes becomes impractical. The installation of sheet pile walls requires the use of specialty equipment to drive the piles into the ground. To provide lateral resistance against the retained soil it will require minimum embedment depth below the cut grade elevation, and the walls can be designed to act as a cantilever sheet pile walls maintain the existing site conditions with minimal disturbance to existing structures, and can be installed relatively quickly. However, due to the presence of very stiff to hard clay, we recommend using a heavier pile section with a minimum thickness of 0.4 inch to alleviate any damage to the pile section during driving. Support for the sheeting will be provided by the stiff clay soils shown on the boring logs.

For the evaluation of the lateral loads on the drilled-shaft caisson foundations and micropile foundations, design of temporary sheet-piles; we recommend that the following, soil properties located in the Lateral Earth Pressure Recommendations section of this report may be used:

TABLE 6
LATERAL EARTH PRESSURE / SOIL STRENGTH DESIGN PARAMETERS
(BORINGS SB-01 THRU SB-04)

Elevation (CCD)	Soil Type	Unit Weight (pcf)	Drained Friction Angle (°)	(Ka)	(Kp)	Cohesion (psf)	Adhesion (psf)	Lateral Soil Modulus of Subgrade Reaction (k, pci)	Strain
+34.0 to +32.0	Loose to Medium Dense Crushed stone / Sand & Gravel Fill	120	30	0.36	2.77	-	-	20	-
+32.0 to +29.0	Medium Dense Sand & Gravel Fill	120	30	0.36	2.77	-	-	20	-
+29.0 to +9.00	Stiff to Hard Lean Clay	125	28	0.36	2.80	3000	1,100	1,000	0.005
+9.0 to +7.0	Dense Silt	125	38	0.23	4.25	-	-	125	-
+7.0 to -2.00	Stiff to Hard Silty Clay	125	28	0.36	2.80	4000	1,200	1,000	0.005
-2.0 to -33.0	Medium Dense Silt	120	32	0.23	4.25	-	-	60	-

1. Lateral modulus and strain values recommended for use in design from L-pile Software Manual
2. Values for "sand with silt" soils per AREMA Table 8-5-2

TABLE 7
BEDROCK PARAMETERS FOR LATERAL RESISTANCE

Material	Unit Weight (pcf)	Young's Modulus (psi)	Uniaxial Compressive Strength (psi)	RQD (%)	Strain (k _m)
Sound Bedrock	150	2 x 10 ⁶	See Lab Data on Boring Logs	See specific values on boring logs	0.0001

SECTION 11: GENERAL CONSTRUCTION CONSIDERATIONS

It will be important to accurately locate the existing utilities in the area of the proposed improvement to avoid potential interferences during pile driving and drilled shaft installations. It is recommended that all deep foundation activity monitored by an experienced geotechnical engineer to document the conditions and check that design assumptions are met.

For the proposed improvement, the existing soils will need to be temporarily retained. If excavation for the proposed improvements is in excess of 4-feet, we recommend slopes be in accordance with OSHA safety standards and requirements for temporary side slopes. Movement of adjacent soils near the edge of and into excavation areas should be prevented.

All excavations that extend greater than 4 feet in depth should be designed in accordance with OSHA regulations with properly sloped or braced sides to prevent excavation instability. Excavation safety is the responsibility of the contractor; however, we recommend that excavation sides be sloped at 1-1/2H:1V or flatter above the water table for this purpose. Stockpiles of material or equipment should not be placed near the top of excavation slopes.

The temporary soil retention system shall be designed by the Contractor (or as directed by the Engineer) as specified in IDOT GBSP 44. All excavations should be performed in accordance with the latest Occupational Safety and Health Administration (OSHA) requirements. Allowances should be made for any surcharge loads adjacent to the excavation areas. The information provided below should not be interpreted to mean that Geo Services, Inc. (GSI) is assuming responsibility for construction site safety or the contractor's activities. Construction site safety is the sole responsibility of the contractor, who should also be solely responsible for the means, methods, and sequencing of construction operations.

SECTION 12: GENERAL QUALIFICATIONS

The analysis and recommendations presented in this report are based upon the data obtained from the soil borings performed at the indicated locations and from any other information discussed in this report. This report does not reflect any variations that may occur between borings or across the site. In addition, the soils samples cannot be relied on to accurately reflect the strata variations that usually exist between sampling locations. The nature and extent of such variations may not become evident until construction. If variations appear evident, it will be necessary to reevaluate the recommendations of the report. In addition, it is recommended that Geo Services, Inc. be retained to perform construction observation and thereby provide a complete professional geotechnical engineering service through the observational method.

This report has been prepared for the exclusive use of our client for specific application to the project discussed and has been prepared in accordance with generally accepted geotechnical engineering practices. In the event that any changes in the nature, design or location of the project as outlined in this report are planned, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed and the conclusions of this report modified or verified in writing by the geotechnical engineer. Also note that Geo Services, Inc. is not responsible for any claims, damages, or liability associated with any other party's interpretation of this report's subsurface data or reuse of the report's' subsurface data or engineering analyses without the express written authorization of Geo Services, Inc.

APPENDIX A

GENERAL NOTES

GENERAL NOTES

CLASSIFICATION

American Association of State Highway & Transportation Officials (AASHTO) System used for soil classification.

Cohesionless Soils

<u>Relative Density</u>	<u>No. of Blows per foot N</u>
Very Loose	0 to 4
Loose	4 to 10
Medium Dense	10 to 30
Dense	30 to 50
Very Dense	Over 50

TERMINOLOGY

Streaks are considered to be paper thick. **Lenses** are considered to be less than 2 inches thick. **Layers** are considered to be less than 6 inches thick. **Stratum** are considered to be greater than 6 inches thick.

Cohesive Soils

<u>Consistency</u>	<u>Unconfined Compressive Strength - qu (tsf)</u>
Very Soft	Less than 0.25
Soft	0.25 - 0.5
Medium Stiff	0.5 - 1.0
Stiff	1.0 - 2.0
Very Stiff	2.0 - 4.0
Hard	Over 4.0

DRILLING AND SAMPLING SYMBOLS

SS: Split Spoon 1-3/8" I.D., 2" O.D.	HS: Housel Sampler
ST: Shelby Tube 2" O.D., except where noted	WS: Wash Sample
AS: Auger Sample	FT: Fish Tail
DB: Diamond Bit - NX: BX: AX	RB: Rock Bit
CB: Carboloy Bit - NX: BX: AX	WO: Wash Out
OS: Osterberg Sampler	

Standard "N" Penetration: Blows per foot of a 140 lb. hammer falling 30" on a 2" O.D. Split Spoon

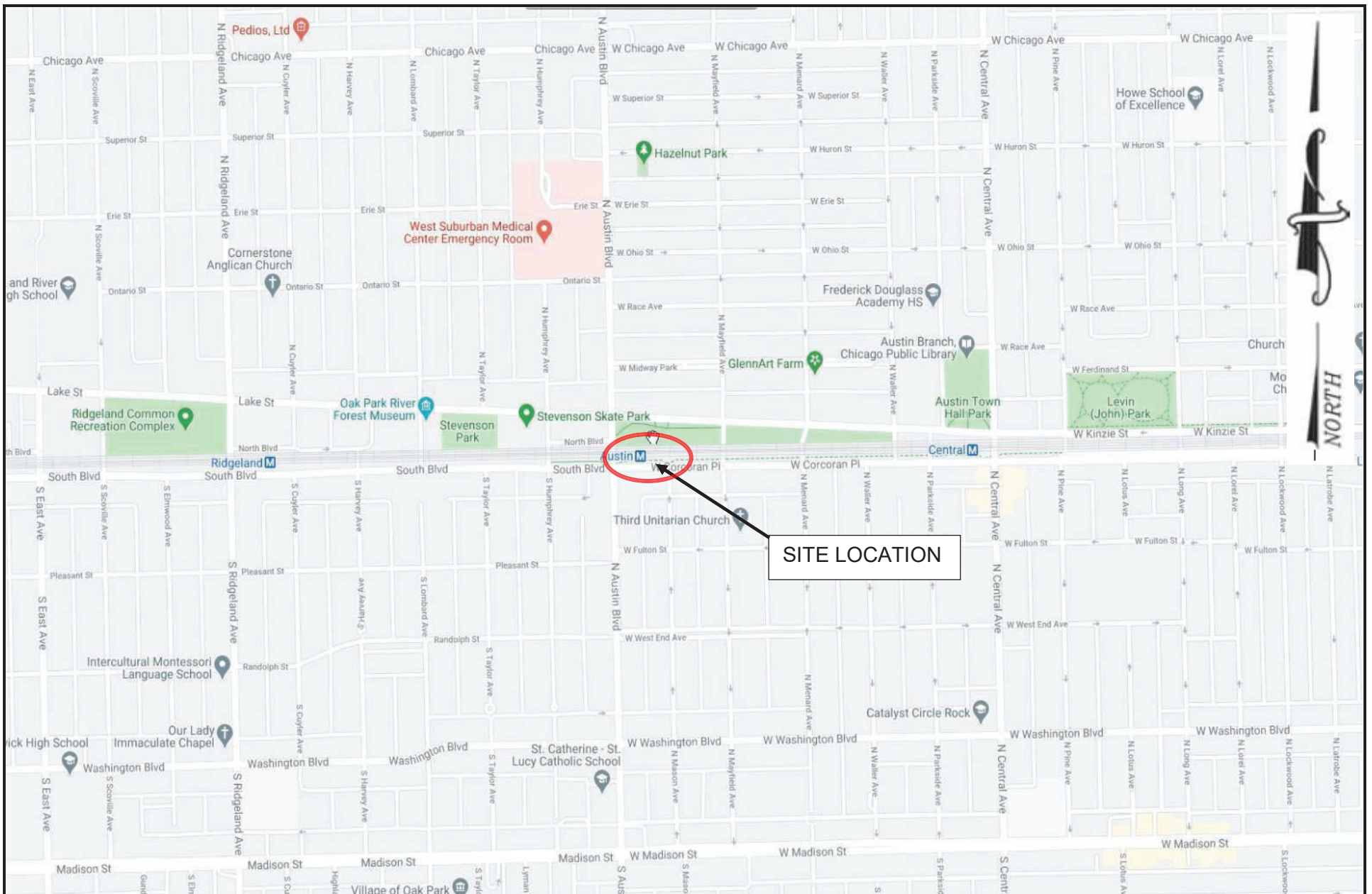
WATER LEVEL MEASUREMENT SYMBOLS

WL: Water	WD: While Drilling
WCI: Wet Cave In	BCR: Before Casing Removal
DCI: Dry Cave In	ACR: After Casing Removal
WS: While sampling	AB: After Boring

Water levels indicated on the boring logs are the levels measured in the boring at the times indicated. In pervious soils, the indicated elevations are considered reliable ground water levels. In impervious soils, the accurate determination of ground water elevations is not possible in even several days observation, and additional evidence on ground water elevations must be sought.

APPENDIX B

SITE MAP



SITE LOCATION MAP	 Geo Services, Inc. Geotechnical, Environmental & Civil Engineering 805 Amherst Court, Suite 204 Naperville, Illinois 60565 (630) 355-2838	DRAWN BY	AT
GEOTECHNICAL INVESTIGATION		APPROVED BY	AJP
CTA- All Stations Accessibility Program (ASAP)		DATE	January 29, 2021
Lake Line Austin Ave. Green Line Station		GSI JOB No.	20122
CTA Contract No. : C19FI102263676		SCALE	NTS
(Task Order No. 1F)			
351 North Austin Boulevard			
Chicago, Illinois			

APPENDIX C

SOIL BORING LOCATION DIAGRAM



SENSITIVE SECURITY INFORMATION

WARNING: THIS RECORD CONTAINS SENSITIVE SECURITY INFORMATION THAT IS CONTROLLED UNDER 48 CFR PARTS 15 AND 1502. NO PART OF THIS RECORD MAY BE DISCLOSED TO PERSONS WITHOUT A NEED-TO-KNOW AS DEFINED IN 48 CFR PARTS 15 AND 1502, EXCEPT WITH THE WRITTEN PERMISSION OF THE ADMINISTRATOR OF THE TRANSPORTATION SECURITY ADMINISTRATION OR THE SECRETARY OF TRANSPORTATION. UNAUTHORIZED RELEASE MAY RESULT IN CIVIL PENALTY OR OTHER ACTION FOR U.S. GOVERNMENT AGENCIES, PUBLIC EMPLOYEES, OR CONTRACTORS.

**ALL STATIONS
ACCESSIBILITY PROGRAM**
AUSTIN - GREEN LINE
SCHEMATIC DESIGN

[illegible]

SOIL BORING
LOCATION DIAGRAM

XXX



GRAPHICAL SCALE

APPENDIX D

SOIL BORING LOGS

SOIL BORING LOG

PROJECT CTA All Stations Accessibility Program - Lake Line Austin Station

LOCATION Chicago, IL

COUNTY Cook **DRILLING METHOD** HSA/Rotary **HAMMER TYPE** CME Automatic

CLIENT Epstein

BORING NO. SB-01
Northing 1901963.4
Easting 1136408.4
Ground Surface Elev. +37.5 CCD

	D E P T H (ft)	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)	D I S T R I B U T I O N D E N S I T Y (pcf)	Surface Water Elev. n/a ft Stream Bed Elev. n/a ft Groundwater Elev.: First Encounter Dry to -10.0' ft Upon Completion n/a ft After 24 Hrs. ft	D E P T H (ft)	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)	D I S T R I B U T I O N D E N S I T Y (pcf)
2.0" ASPHALT, 10.0" CONCRETE						LEAN CLAY with SAND-gray-very stiff to hard (CL) (continued)					
CRUSHED STONE-medium dense		10					6				
		8		10			10	2.1	14	123	
		6					13	B			
POORLY GRADED SAND-brown-medium dense (Fill)		7					5				
		6		7			7	3.0	21	108	
		7					10	P			
	-5						-25				
LEAN CLAY with SAND-gray-very stiff to hard (CL)		2				SILT-gray-dense (ML)					
		3	2.3	21			10				
		4	P				17		18		
							22				
		3				SILTY CLAY-gray-very stiff to hard (CL/ML)					
		5	2.6	15	116		12				
		8	B				15	4.0	13		
	-10						13	P			
		6									
		9	4.5	21							
		15	P								
		5					11				
		9	2.2	16	118		17	4.5	11		
	-15	13	B				23	P			
		4				SANDY SILT-gray-dense (ML)					
		7	3.5	17	115						
		12	P								
		6					22				
		9	4.5	17	117		32		18		
	-20	15	P				34				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206), GP-Geoprobe Hand Auger BBS, from 137 (Rev. 8-99)

Z:\PROJECTS\2020\20122 EPSTEIN, CTA NEW ELEVATOR AT GREEN LINE AUSTIN STATION\20122 BORING LOGS\20122 LOG.GPJ 2/12/21

SOIL BORING LOG

PROJECT CTA All Stations Accessibility Program - Lake Line Austin Station

LOCATION Chicago, IL

COUNTY Cook **DRILLING METHOD** HSA/Rotary **HAMMER TYPE** CME Automatic

CLIENT Epstein

BORING NO. SB-01
Northing 1901963.4
Easting 1136408.4
Ground Surface Elev. +37.5 CCD

DEPTH (ft)	BLOW S (/6")	UCS Qu (tsf)	MOIST (%)	DENSITY (pcf)	Surface Water Elev. n/a ft Stream Bed Elev. n/a ft Groundwater Elev.: First Encounter Dry to -10.0' ft Upon Completion n/a ft After 24 Hrs. ft	DEPTH (ft)	BLOW S (/6")	UCS Qu (tsf)	MOIST (%)	DENSITY (pcf)
SANDY SILT-gray-dense (ML) (continued)					SANDY SILT with GRAVEL-gray-very dense (ML) (continued)					
SILTY SAND & GRAVEL-gray-very dense (SM)					SANDY SILT-gray-very dense (ML)					
	34					50/5"				
	50/3"	9						16		
	-45					-65				
	50/4"				Drillers Observation: Apparent Bedrock	50/0"			NR	
		10								
	-50					-70				
					Borehole continued with rock coring.					
SILT with SAND-gray-very dense (ML)										
	43									
	50/5"	11								
	-55					-75				
SANDY SILT with GRAVEL-gray-very dense (ML)										
	20									
	37	10								
	50/5"									
	-60					-80				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206), GP-Geoprobe Hand Auger
 BBS, from 137 (Rev. 8-99)

PROJECT CTA All Stations Accessibility Program - Lake Line Austin Station

LOCATION Chicago, IL

CLIENT Epstein **CORING BARREL TYPE & SIZE** NX Double Swivel-10 ft

Northing 1901963.4

D E P T H	C O R E	O V E R Y	Q . D .	I M E	E N G T H
(ft)	(#)	(%)	(%)	(min/ft)	(tsf)

RUN 1 (-70.5' to -80.5')
SILURIAN SYSTEM, NIAGARAN SERIES DOLOMITE
Light gray & fine porous with horizontal bedding. Some horizontal & vertical fractures throughout. Some small vugs.

Light gray & fine porous with horizontal bedding. Some horizontal & vertical fractures throughout. Some small vugs.

End Of Boring @ -80.5'. Boring backfilled with cuttings. Rock sample Hole filled with Gravel.

Color pictures of the cores Yes

Cores will be stored for examination until 5 yrs after const.

The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

ROCK CORE PHOTO

PROJECT CTA All Stations Accessibility Program - Lake Line Austin Station

LOCATION Chicago, IL

COUNTY Cook **CORING METHOD** Rotary Wash

CLIENT Epstein **CORING BARREL TYPE & SIZE** NX Double Swivel-10 ft

BORING NO. SB-01
Core Diameter 2 **in**
Northing 1901963.4
Top of Rock Elev. **ft**
Easting 1136408.4
Begin Core Elev. **ft**
Ground Surface Elev. +37.5 CCD



Color pictures of the cores Yes

Cores will be stored for examination until 5 yrs after const.

The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

SOIL BORING LOG

PROJECT CTA All Stations Accessibility Program - Lake Line Austin Station

LOCATION Chicago, IL

COUNTY Cook **DRILLING METHOD** Hollow Stem Auger **HAMMER TYPE** CME Automatic

CLIENT Epstein

BORING NO. SB-02
Northing 1901963.3
Easting 1136399.8
Ground Surface Elev. +37.4 CCD

	D E P T H (ft)	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)	D E N S I T Y (pcf)	Surface Water Elev. Stream Bed Elev. Groundwater Elev.: First Encounter Upon Completion After Hrs.	n/a n/a Dry Dry ft ft ft
	D E P T H (ft)	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)	D E N S I T Y (pcf)		
2.0" ASPHALT, 10.0" CONCRETE						LEAN CLAY with SAND-brown & gray-stiff to hard (CL) (continued)	
LEAN CLAY with SAND-brown & gray-stiff to hard (CL)	4						3
	5	1.2	20	106			9 2.2 15 109
	6	B					12 B
	2						4
	3	1.0	20				10 2.3 20 105
	4	P					9 P
	-5						-25
	3						3
	5	3.5	17	111			8 3.5 18 107
	10	B					10 P
becoming gray @ -8.0'	4					SILT-gray-medium dense (ML)	4
	8	4.0	8	112			9 19
	13	P					20
	-10						-30
	4					End Of Boring @ -30.0'. Boring backfilled with cuttings	
	7	2.7	15	119			
	11	B					
	6						
	8	3.5	15	119			
	7	B					
	-15						-35
	6						
	10	3.1	16	114			
	13	B					
	7						
	12	4.0	16	111			
	15	P					
	-20						-40

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206), GP-Geoprobe Hand Auger
 BBS, from 137 (Rev. 8-99)

Z:\PROJECTS\2020\20122 EPSTEIN, CTA NEW ELEVATOR AT GREEN LINE AUSTIN STATION\20122 BORING LOGS\20122 LOG.GPJ 2/12/21

SOIL BORING LOG

PROJECT CTA All Stations Accessibility Program - Lake Line Austin Station

LOCATION Chicago, IL

COUNTY Cook **DRILLING METHOD** HSA/Rotary **HAMMER TYPE** CME Automatic

CLIENT	DEPT H	BLOW S	UCS Qu	MOIST T	DENSITY	Surface Water Elev.	Stream Bed Elev.	Groundwater Elev.:	First Encounter	Upon Completion	After Hrs.	DEPT H	BLOW S	UCS Qu	MOIST T	DENSITY
Epstein	(ft)	(/6")	(tsf)	(%)	(pcf)	n/a	n/a	ft	ft	ft	ft	(ft)	(/6")	(tsf)	(%)	(pcf)
BORING NO. SB-03																
Northing 1901965.4																
Easting 1136379.8																
Ground Surface Elev. +37.1 CCD																
2.0" ASPHALT, 10.0" CONCRETE						LEAN CLAY with SAND-brown & gray-stiff to hard (CL) (continued)										
LEAN CLAY with SAND-brown & gray-stiff (CL) Fill	4											7				
	4	1.5	19									11	3.5	25	101	
	5	P										17	P			
SILTY GRAVEL & STONE-gray-loose (Fill)	2											4				
	1		16									4	1.5	12	128	
	3											6	B			
	-5											-25				
LEAN CLAY with SAND-brown & gray-stiff to hard (CL)	3					SILT-gray-dense to very dense (ML)						24				
	6	3.1	17	117								26		17		
	8	B										37				
becoming gray @-8.0'	4											16				
	5	2.7	16	117								25		18		
	7	B										20				
	-10											-30				
	3															
	6	2.3	17	117		SILT with SAND-gray-medium dense (ML)						9				
	8	B										13		15		
	5	2.9	17	116								16				
	10	B										-35				
	-15															
	4															
	8	3.0	19			SANDY SILT-gray-very dense (ML)						25				
	13	P										36		16		
	7											41				
	12	4.5	16	118												
	18	P										-40				
	-20															

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206), GP-Geoprobe Hand Auger
 BBS, from 137 (Rev. 8-99)

SOIL BORING LOG

PROJECT CTA All Stations Accessibility Program - Lake Line Austin Station

LOCATION Chicago, IL

COUNTY Cook **DRILLING METHOD** HSA/Rotary **HAMMER TYPE** CME Automatic

CLIENT	DEPT H	BLOWS	UCS	MOIST	DENSITY	Surface Water Elev.	Stream Bed Elev.	Groundwater Elev.:	First Encounter	Upon Completion	After	Hrs.	DEPT H	BLOWS	UCS	MOIST	DENSITY
Epstein	(ft)	(/6")	(tsf)	(%)	(pcf)	n/a	n/a	ft	ft	ft	ft		(ft)	(/6")	(tsf)	(%)	(pcf)
BORING NO. SB-03																	
Northing 1901965.4																	
Easting 1136379.8																	
Ground Surface Elev. +37.1 CCD																	
SANDY SILT-gray-very dense (ML) (continued)																	
SILTY SAND & GRAVEL-gray-very dense (GM)																	
		30												50/5"			
		46		12												10	
		50/3"															
		-45															
SILT-gray-very dense (ML)																	
		34															
		50/4"		16													
		-50															
		43															
		50/5"		13													
		-55															
SILTY CLAY with GRAVEL-gray-hard (CL/ML)																	
		38															
		50/2"	6.5	9	136												
			B														
		-60															

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206), GP-Geoprobe Hand Auger
 BBS, from 137 (Rev. 8-99)


GSI Job No. 20122

ROCK CORE LOG

Page 1 of 1

Date 12/16/20

PROJECT CTA All Stations Accessibility Program - Lake Line Austin Station

LOCATION Chicago, IL

COUNTY Cook CORING METHOD Rotary Wash

CLIENT Epstein CORING BARREL TYPE & SIZE NX Double Swivel-10 ft

BORING NO.	Core Diameter	Top of Rock Elev.	Begin Core Elev.	DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
<u>SB-03</u>	<u>2</u> in	<u></u> ft	<u></u> ft						
<u>Northing 1901965.4</u>									
<u>Easting 1136379.8</u>									
<u>Ground Surface Elev. +37.1 CCD</u>									

RUN 1 (-70.5' to -80.5') SILURIAN SYSTEM, NIAGARAN SERIES DOLOMITE Light gray & fine porous with horizontal bedding. Some horizontal & vertical fractures throughout. Some small vugs.	1 100 67		
--	----------------	--	--

End Of Boring @ -80.5'. Boring backfilled with cuttings. Rock sample Hole filled with Gravel.			
---	--	--	--

Color pictures of the cores Yes

Cores will be stored for examination until 5 yrs after const.

The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

ROCK CORE PHOTO

PROJECT CTA All Stations Accessibility Program - Lake Line Austin Station

LOCATION Chicago, IL

COUNTY Cook **CORING METHOD** Rotary Wash

CLIENT Epstein **CORING BARREL TYPE & SIZE** NX Double Swivel-10 ft

BORING NO. SB-03
Core Diameter 2 **in**
Northing 1901965.4
Top of Rock Elev. **ft**
Easting 1136379.8
Begin Core Elev. **ft**
Ground Surface Elev. +37.1 CCD



Color pictures of the cores Yes

Cores will be stored for examination until 5 yrs after const.

The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

SOIL BORING LOG

PROJECT CTA All Stations Accessibility Program - Lake Line Austin Station

LOCATION Chicago, IL

COUNTY Cook **DRILLING METHOD** Hollow Stem Auger **HAMMER TYPE** CME Automatic

CLIENT	DEPT H	BLOW S	UCS Qu	MOIST	DENSITY	Surface Water Elev.	Stream Bed Elev.	Groundwater Elev.:	First Encounter	Upon Completion	After	Hrs.	DEPT H	BLOW S	UCS Qu	MOIST	DENSITY
Epstein	(ft)	(/6")	(tsf)	(%)	(pcf)	n/a	n/a		ft	ft	ft		(ft)	(/6")	(tsf)	(%)	(pcf)
BORING NO. SB-04																	
Northing 1901973																	
Easting 1136738.4																	
Ground Surface Elev. +38.4 CCD																	
10.0" CONCRETE								LEAN CLAY with SAND-brown & gray-stiff to hard (CL) (continued)									
SILTY SAND, GRAVEL & STONE-dark gray-medium dense (Fill)	2												12				
	6		14										24	4.5	15	112	
	4												20	P			
LEAN CLAY with SAND-brown & gray-stiff to hard (CL)	5												2				
	6	2.0	24	101									3	1.5	17		
	7	P											5	P			
	-5												-25				
	1												6				
	4	1.5	24										11	3.5	19	111	
	3	P											16	P			
becoming gray @-8.0'	4							SILTY CLAY-gray-very stiff (CL/ML)					7				
	8	2.2	17	116									15	2.5	15	119	
	9	B											20	P			
	-10												-30				
	7							End Of Boring @ -30.0'. Boring backfilled with cuttings									
	13	4.5	15	109													
	12	P															
	4																
	8	3.8	15	118													
	13	P															
	-15												-35				
	3																
	8	2.0	16														
	17	P															
	2																
	7	3.1	15	117													
	9	B															
	-20												-40				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206), GP-Geoprobe Hand Auger
BBS, from 137 (Rev. 8-99)

APPENDIX E

LAB TEST RESULTS

Liquid Limit, Plastic Limit, and Plasticity Index of Soils
AASHTO T89/T90

Project Name CTA New Elavator at Green Line at Austin Station

Job No 20122

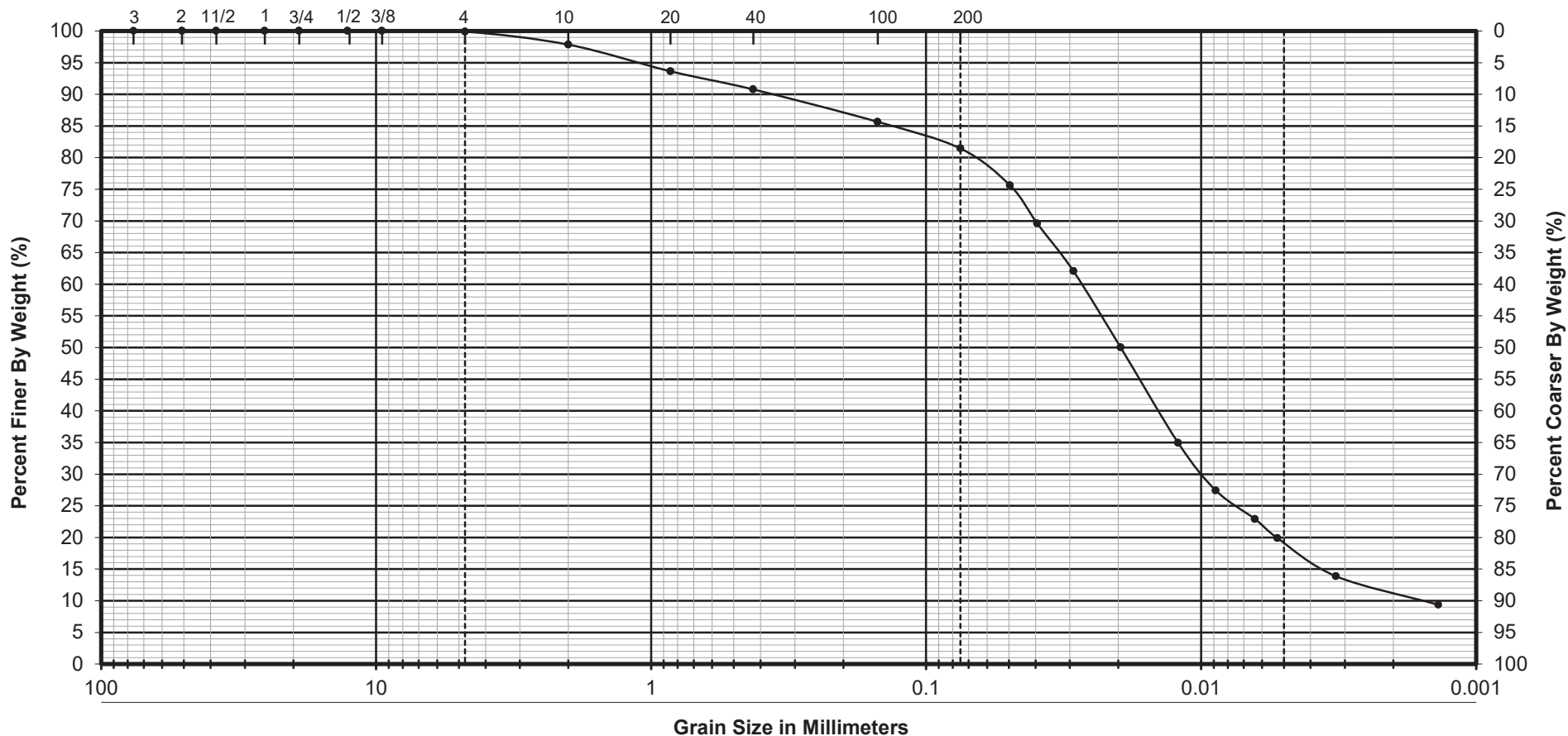
Location Chicago, IL

Date 12/23/20

Client Epstein

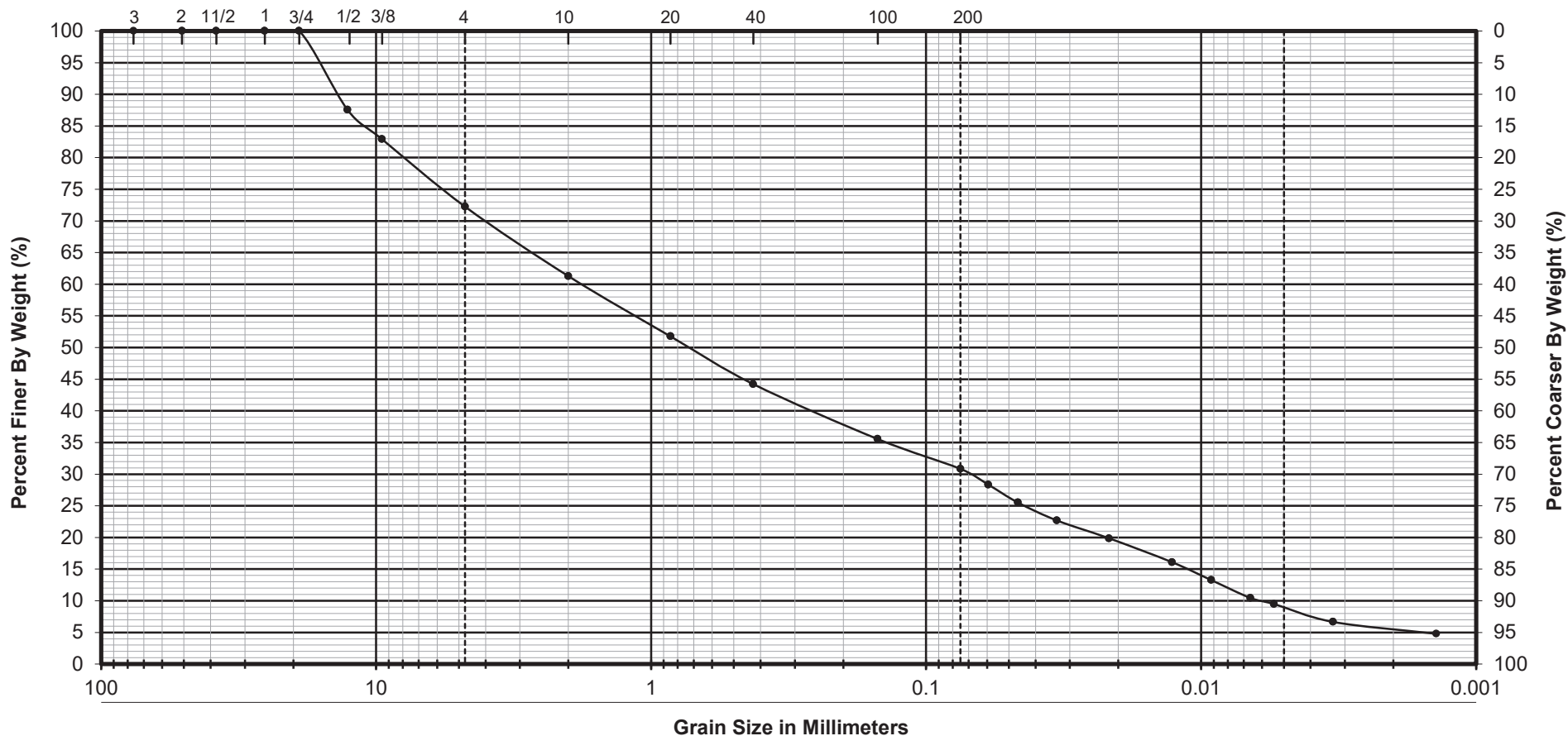
Boring No.	SB-01	SB-01	SB-02	SB-03	SB-04			
Sample No.	S-13	S-16 & 17	S-5, 6 & 7	S-4 & 5	S-3 & 4			
Depth	28.5'-30.0'	43.5'-50.0'	8.5'-15.0'	6.0'-10.0'	3.5'-7.5'			
LIQUID LIMIT (LL)	22	18	34	30	35			
PLASTIC LIMIT (PL)	17	11	13	13	19			
PLASTICITY INDEX (PI)	5	7	21	17	16			

Tested by AW



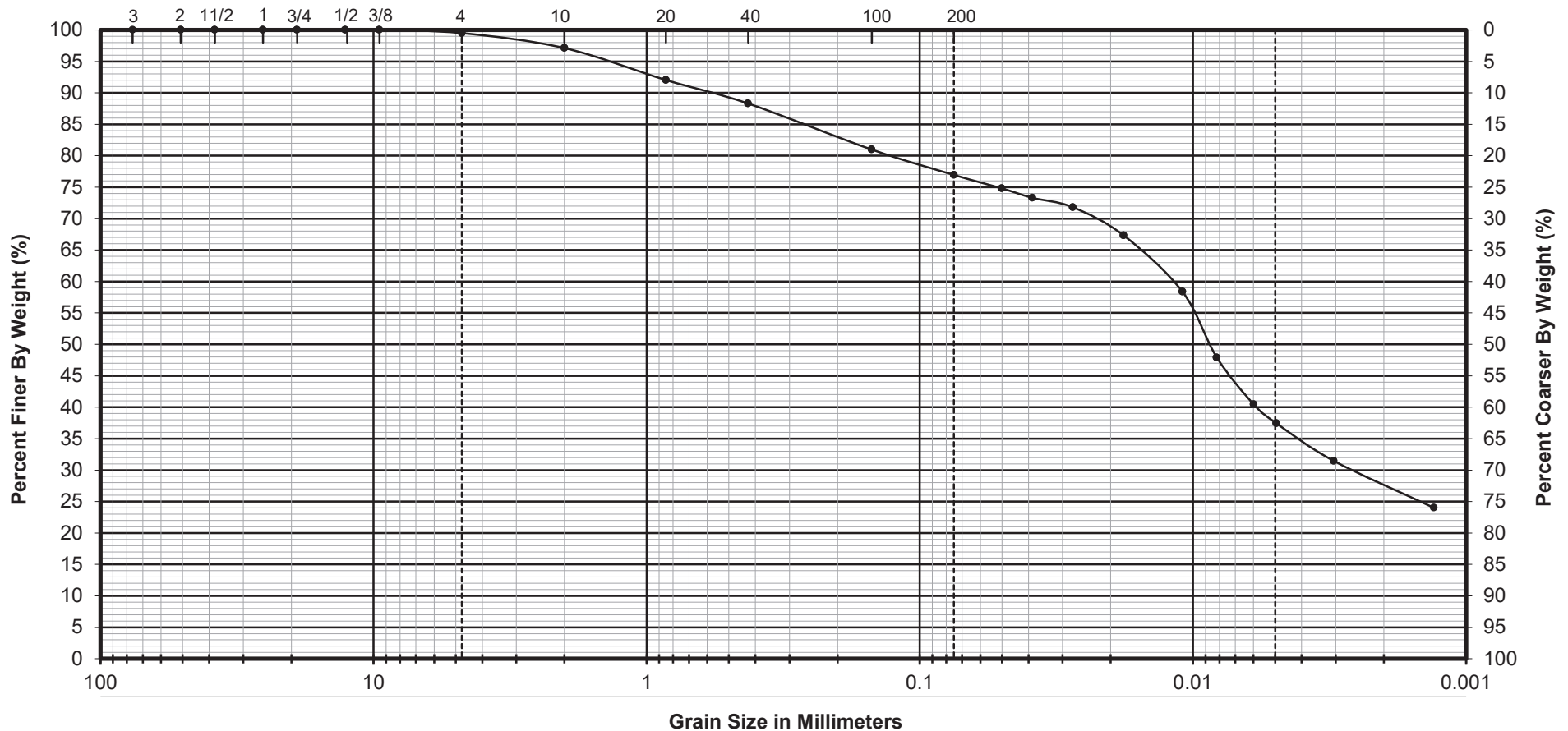
GRAVEL	SAND			SILT	CLAY
	COARSE	MEDIUM	FINE		

Boring No.	SB-01	CLASSIFICATION-ASTM D 2487		PARTICLE SIZE ANALYSIS-ASTM D 422	
Sample No.	13	SILTY CLAY with SAND (CL-ML) gray		Proposed Elevator and Aux Entrance Lake Line Austin Ave. Green Line Station Cook County, Chicago, Illinois  Geo Services, Inc. Geotechnical, Environmental and Civil Engineering An MBE - DBE Firm 1235 E. Davis St., Arlington Heights, IL 60005 Phone 847-253-3845 • Fax 847-253-0482	
Depth	28.5'-30.0'				
Liquid Limit	22				
Plastic Limit	17				
Plasticity Index	5				
Test By	MT	% Gravel	0.1		
Date	12/23/20	% Sand	18.5		
Reviewed By	AT	% Silt	58.5		
Job No	19130	% Clay	22.9		



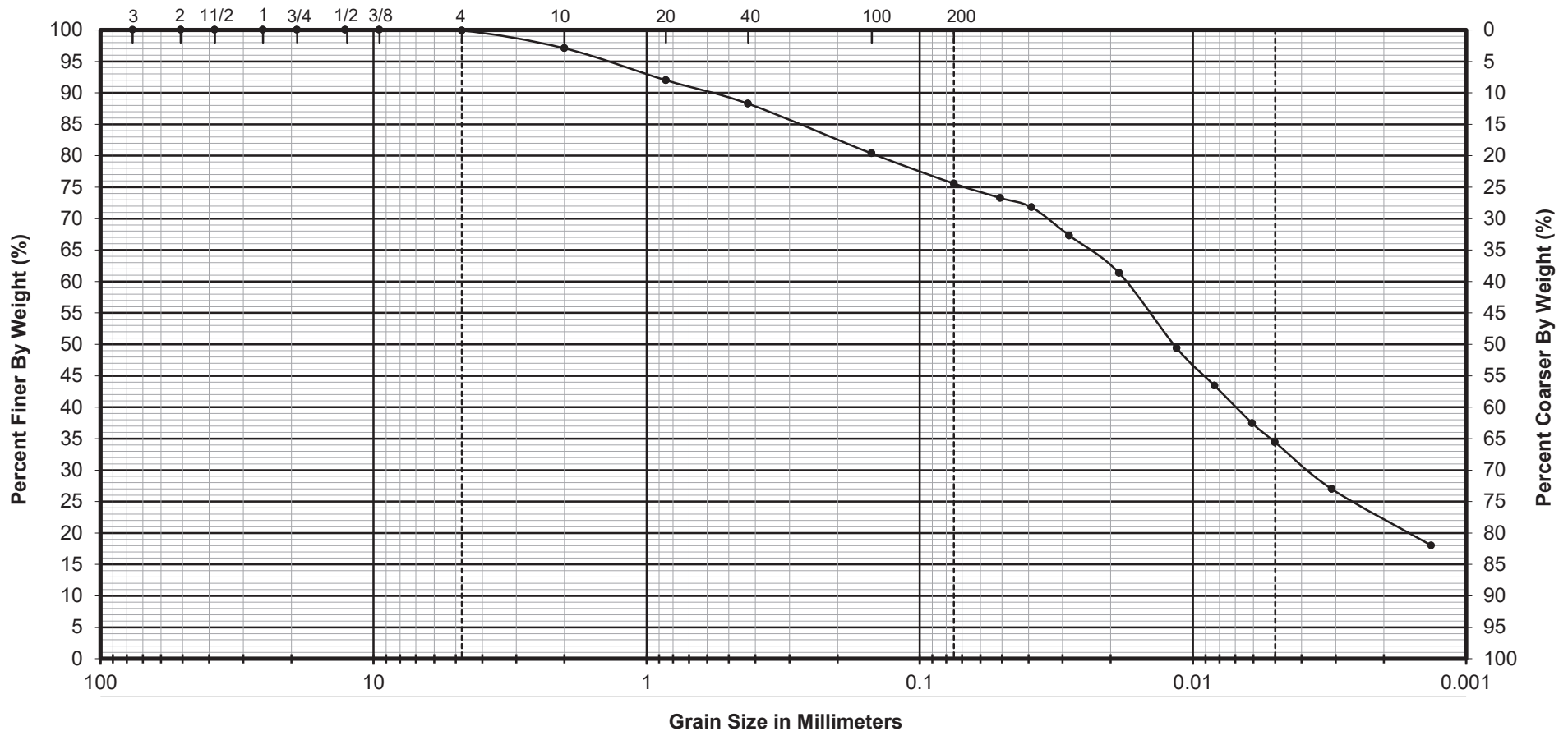
GRAVEL	SAND			SILT	CLAY
	COARSE	MEDIUM	FINE		

Boring No.	SB-01	CLASSIFICATION-ASTM D 2487		PARTICLE SIZE ANALYSIS-ASTM D 422	
Sample No.	16 & 17	SILTY SAND with GRAVEL (SM) gray		Proposed Elevator and Aux Entrance Lake Line Austin Ave. Green Line Station Cook County, Chicago, Illinois  Geo Services, Inc. Geotechnical, Environmental and Civil Engineering An MBE - DBE Firm 1235 E. Davis St., Arlington Heights, IL 60005 Phone 847-253-3845 • Fax 847-253-0482	
Depth	43.5'-50.0'				
Liquid Limit	18				
Plastic Limit	11				
Plasticity Index	7				
Test By	MT	% Gravel	27.7		
Date	12/23/20	% Sand	41.4		
Reviewed By	AT	% Silt	20.4		
Job No	19130	% Clay	10.4		



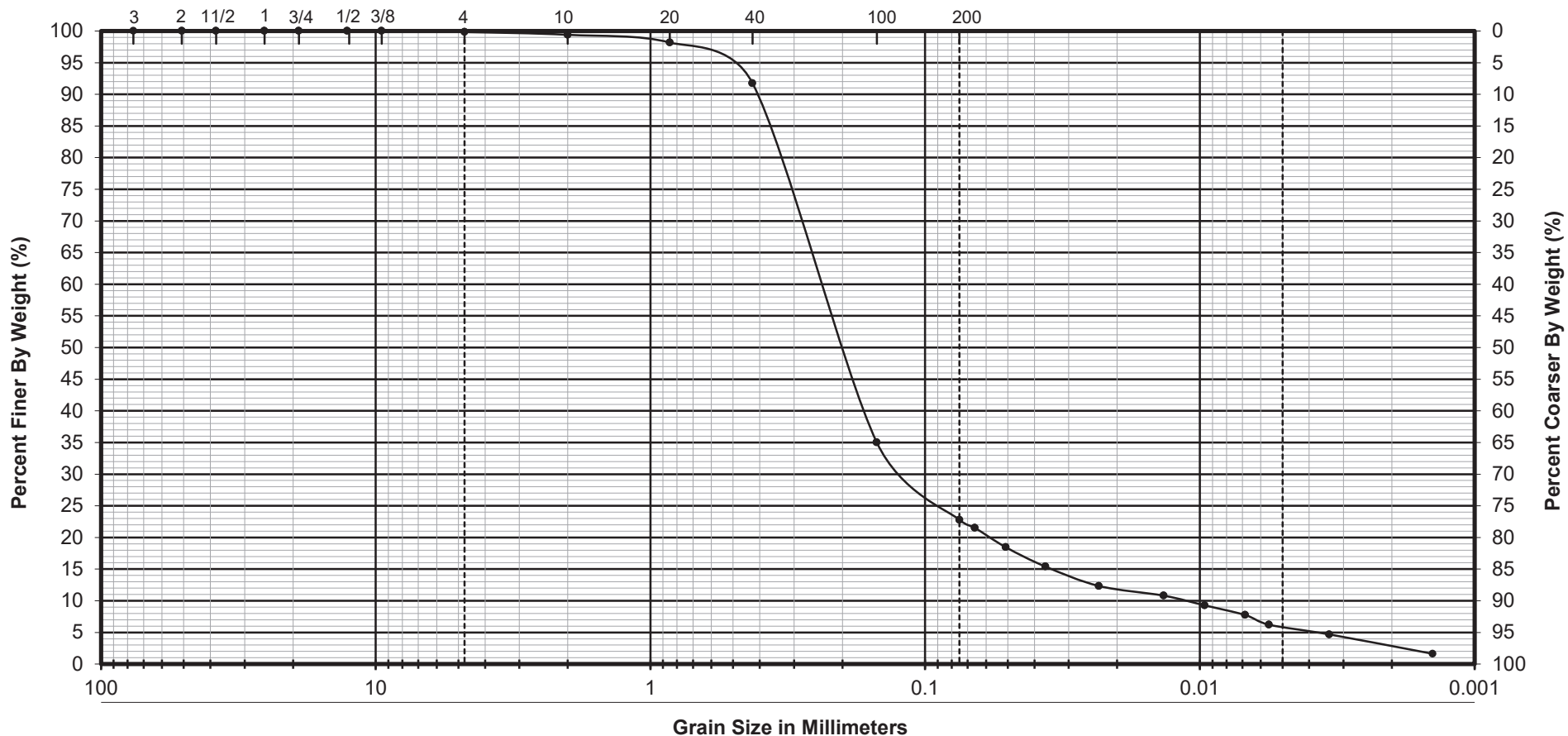
GRAVEL	SAND			SILT	CLAY
	COARSE	MEDIUM	FINE		

Boring No.	SB-02	CLASSIFICATION-ASTM D 2487		PARTICLE SIZE ANALYSIS-ASTM D 422	
Sample No.	5, 6 & 7	LEAN CLAY with SAND (CL) gray		Proposed Elevator and Aux Entrance Lake Line Austin Ave. Green Line Station Cook County, Chicago, Illinois  Geo Services, Inc. Geotechnical, Environmental and Civil Engineering An MBE - DBE Firm 1235 E. Davis St., Arlington Heights, IL 60005 Phone 847-253-3845 • Fax 847-253-0482	
Depth	8.5'-15.0'				
Liquid Limit	34				
Plastic Limit	13				
Plasticity Index	21				
Test By	MT	% Gravel	0.5		
Date	12/23/20	% Sand	22.5		
Reviewed By	AT	% Silt	36.5		
Job No	19130	% Clay	40.4		



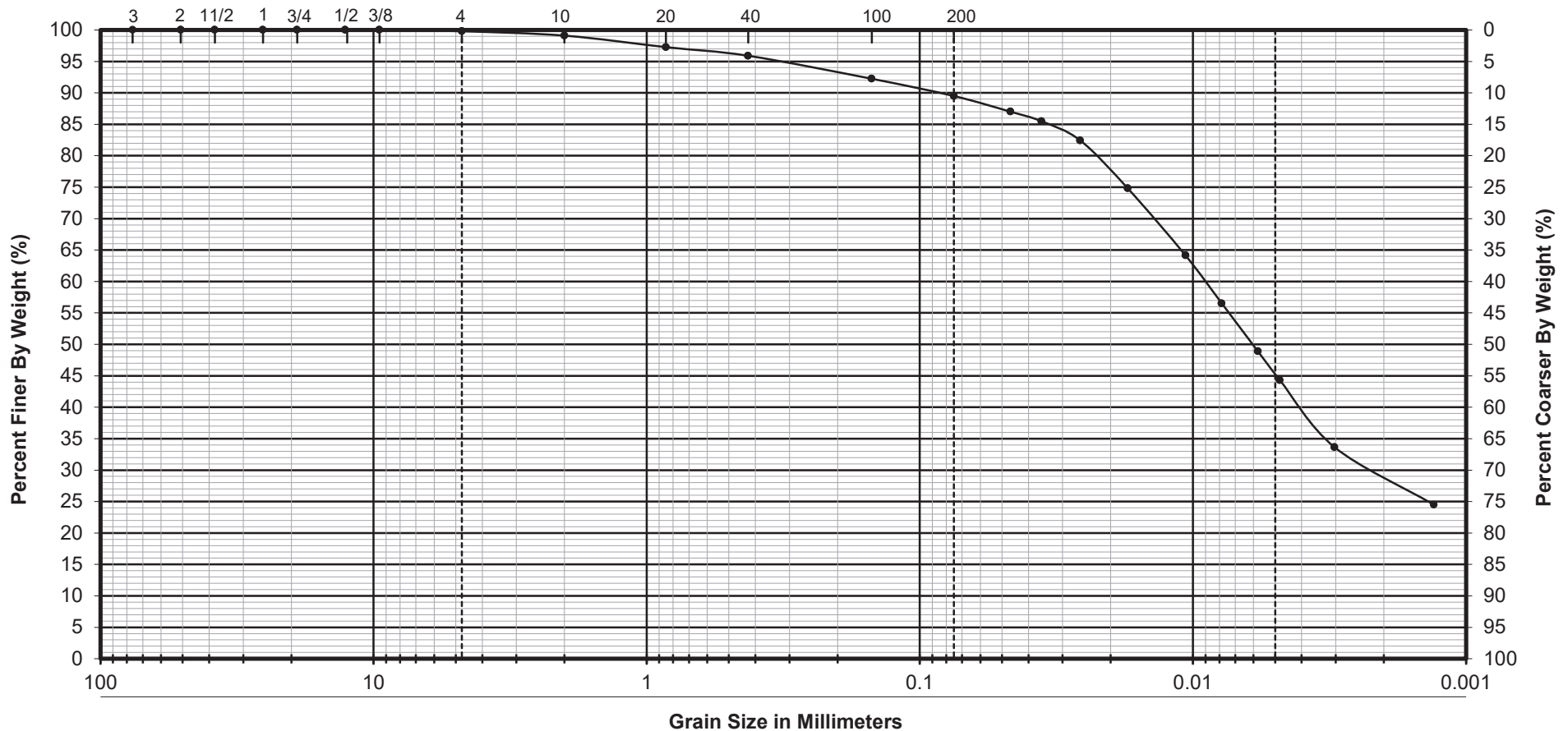
GRAVEL	SAND			SILT	CLAY
	COARSE	MEDIUM	FINE		

Boring No.	SB-03	CLASSIFICATION-ASTM D 2487		PARTICLE SIZE ANALYSIS-ASTM D 422	
Sample No.	4 & 5	LEAN CLAY with SAND (CL) gray		Proposed Elevator and Aux Entrance Lake Line Austin Ave. Green Line Station Cook County, Chicago, Illinois  Geo Services, Inc. Geotechnical, Environmental and Civil Engineering An MBE - DBE Firm 1235 E. Davis St., Arlington Heights, IL 60005 Phone 847-253-3845 • Fax 847-253-0482	
Depth	6.0'-10.0'				
Liquid Limit	30				
Plastic Limit	13				
Plasticity Index	27				
Test By	MT	% Gravel	0.1		
Date	12/23/20	% Sand	24.3		
Reviewed By	AT	% Silt	38.1		
Job No	19130	% Clay	37.4		



GRAVEL	SAND			SILT	CLAY
	COARSE	MEDIUM	FINE		

Boring No.	SB-03	CLASSIFICATION-ASTM D 2487		PARTICLE SIZE ANALYSIS-ASTM D 422	
Sample No.	15	SILTY SAND (SM) gray		Proposed Elevator and Aux Entrance Lake Line Austin Ave. Green Line Station Cook County, Chicago, Illinois  Geo Services, Inc. Geotechnical, Environmental and Civil Engineering An MBE - DBE Firm 1235 E. Davis St., Arlington Heights, IL 60005 Phone 847-253-3845 • Fax 847-253-0482	
Depth	38.5'-40.0'				
Liquid Limit					
Plastic Limit					
Plasticity Index					
Test By	MT	% Gravel	0.2		
Date	12/23/20	% Sand	77.1		
Reviewed By	AT	% Silt	15.0		
Job No	19130	% Clay	7.7		



GRAVEL	SAND			SILT	CLAY
	COARSE	MEDIUM	FINE		

Boring No.	SB-04	CLASSIFICATION-ASTM D 2487		PARTICLE SIZE ANALYSIS-ASTM D 422	
Sample No.	3 & 4	LEAN CLAY (CL) brown		Proposed Elevator and Aux Entrance Lake Line Austin Ave. Green Line Station Cook County, Chicago, Illinois  Geo Services, Inc. Geotechnical, Environmental and Civil Engineering An MBE - DBE Firm 1235 E. Davis St., Arlington Heights, IL 60005 Phone 847-253-3845 • Fax 847-253-0482	
Depth	3.5'-7.5'				
Liquid Limit	35				
Plastic Limit	19				
Plasticity Index	26				
Test By	MT	% Gravel	0.2		
Date	12/23/20	% Sand	10.3		
Reviewed By	AT	% Silt	40.6		
Job No	19130	% Clay	48.9		

1235 E. Davis Street
Arlington Heights, Illinois 60005
Phone: (847) 253-3845 Fax: (847) 253-0482

UNCONFINED COMPRESSIVE STRENGTH of INTACT ROCK CORE SPECIMENS - ASTM D 7012

Project Name	CTA New Elavator at Green Line at Austin Station
Location	351 North Austin Boulevard,Chicago, IL
County	Cook
Sample Type	Drilled Bedrock Core Sample

Date 1/27/20
Job No. 20122
Tested By: DP/RWC

[illegible]

APPENDIX F

10 % CONCEPTUAL PRELIMINARY DESIGN DRAWINGS

NOT FOR CONSTRUCTION

PROJECT SITE
351 NORTH AUSTIN BLVD.
CHICAGO, ILLINOIS 60644

LAKE
MICHIGAN

E
GAN

RME Rubinos &
Mesia
Engineers, Inc.
200 S. Michigan Avenue, Suite 1500, Chicago, IL 60604-2482



SENSITIVE SECURITY INFORMATION

DRAWING SCALE IS NOT GUARANTEED.
CTA ASSUMES NO RISK OF LIABILITY FOR
ERRORS CAUSED, DIRECTLY OR INDIRECTLY,
BY SCALING OF THIS DRAWING.

IN CHARGE
APPROVED BY
CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO
FILE NAME

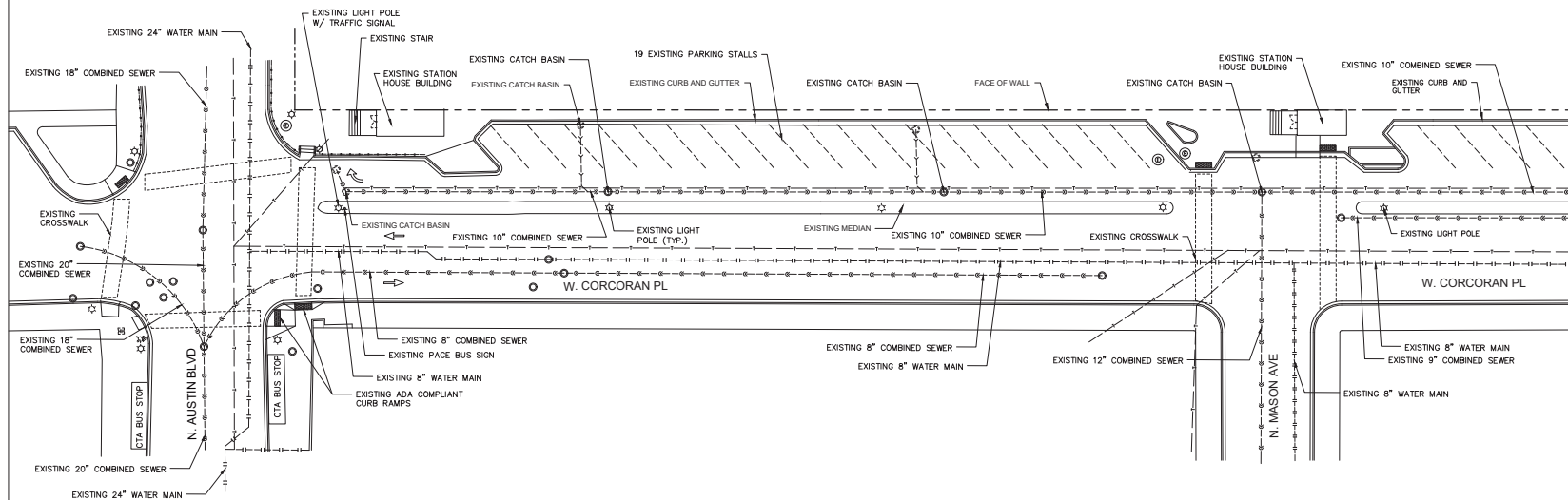
MARK	DATE	DESCRIPTION
LOCATION:	351 N. AUSTIN BLVD.	CHICAGO IL 60644

COVER SHEET

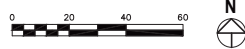
AUS - 000

LIST OF DRAWINGS	
SHEET NUMBER	SHEET TITLE
<u>CIVIL</u>	
AUS - 000	COVER SHEET
AUS - 100	EXISTING SITE CONDITIONS
AUS - 101	DEMOLITION SITE PLAN
AUS - 102	PROPOSED SITE PLAN
AUS - 103	GRADING PLAN
<u>ARCHITECTURAL</u>	
AUS - 104	STATION HOUSE LEVEL DEMOLITION PLAN
AUS - 105	STATION HOUSE LEVEL DEMOLITION PLAN
AUS - 106	PLATFORM LEVEL DEMOLITION PLANS
AUS - 107	STATION HOUSE LEVEL OVERALL PLAN
AUS - 108	PLATFORM LEVEL OVERALL PLAN
AUS - 109	STATION HOUSE LEVEL ENLARGED PLANS
AUS - 110	STATION HOUSE LEVEL ENLARGED PLANS
AUS - 111	PLATFORM LEVEL ENLARGED PLANS
AUS - 112	ELEVATIONS
AUS - 113	SECTIONS
AUS - 114	SECTIONS
<u>STRUCTURAL</u>	
AUS - 115	AUSTIN FOUNDATION PLAN
AUS - 116	AUSTIN STATION HOUSE ROOF
AUS - 117	MASON FOUNDATION AND ROOF PLANS
<u>NOTES:</u>	
AUS - 118	SCOOPING NOTES

NOT FOR CONSTRUCTION



1 EXISTING CONDITIONS
SCALE: 1" = 20'



RME Rubinos & Mesa Engineers, Inc.
200 S. Michigan Avenue, Suite 1500, Chicago, IL 60604-2682

CHICAGO TRANSIT AUTHORITY ENGINEERING

SENSITIVE SECURITY INFORMATION
WARNING: THIS RECORD CONTAINS SENSITIVE SECURITY INFORMATION THAT IS CONTROLLED UNDER 49 CFR PARTS 15 AND 158. ANY PART OF THIS RECORD MAY BE DISCLOSED TO UNAUTHORIZED PERSONS BY THE DISCLOSURE OF THIS RECORD TO AN UNAUTHORIZED PERSON. ANY DISCLOSURE OF THIS RECORD TO AN UNAUTHORIZED PERSON IS PROHIBITED. ANY DISCLOSURE OF THIS RECORD TO AN UNAUTHORIZED PERSON IS PROHIBITED. ANY DISCLOSURE OF THIS RECORD TO AN UNAUTHORIZED PERSON IS PROHIBITED.

DRAWING SCALE IS NOT GUARANTEED. CTA ASSUMES NO RISK OF LIABILITY FOR ERRORS CAUSED, DIRECTLY OR INDIRECTLY, BY SCALING OF THIS DRAWING.

ALL STATIONS ACCESSIBILITY PROGRAM
AUSTIN - GREEN LINE
10% CONCEPTUAL PLANS

IN CHARGE
APPROVED BY
CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO
FILE NAME

MARK DATE DESCRIPTION
LOCATION: 351 N. AUSTIN BLVD

EXISTING SITE CONDITIONS

AUS-100

11/15/2016 - CTA DEPARTMENTAL REVIEW

NOT FOR CONSTRUCTION

RME Rubinos & Mesa Engineers, Inc.
200 S. Michigan Avenue, Suite 1500, Chicago, IL 60604-2682

cta CHICAGO TRANSIT AUTHORITY
ENGINEERING

SENSITIVE SECURITY INFORMATION

WARNING: THIS RECORD CONTAINS SENSITIVE SECURITY INFORMATION THAT IS CONTROLLED UNDER 49 CFR PARTS 15 AND 162. ANY PART OF THIS RECORD MAY BE DISCLOSED TO ANY PERSON OR ENTITY THAT IS NOT A MEMBER OF THE CHICAGO TRANSIT AUTHORITY OR ITS AFFILIATES. ANY DISCLOSURE OF THIS INFORMATION TO ANY OTHER PERSON OR ENTITY WITHOUT THE WRITTEN PERMISSION OF THE ADMINISTRATOR OF THE TRANSPORTATION SECURITY ADMINISTRATION OF THE DEPARTMENT OF TRANSPORTATION IS A VIOLATION OF FEDERAL LAWS. THIS DOCUMENT IS FOR OFFICIAL USE ONLY. ANY DISCLOSURE OF THIS INFORMATION TO ANY OTHER PERSON OR ENTITY WITHOUT THE WRITTEN PERMISSION OF THE ADMINISTRATOR OF THE TRANSPORTATION SECURITY ADMINISTRATION OF THE DEPARTMENT OF TRANSPORTATION IS A VIOLATION OF FEDERAL LAWS.

DRAWING SCALE IS NOT GUARANTEED. CTA ASSUMES NO RISK OF LIABILITY FOR ERRORS CAUSED, DIRECTLY OR INDIRECTLY, BY SCALING OF THIS DRAWING.

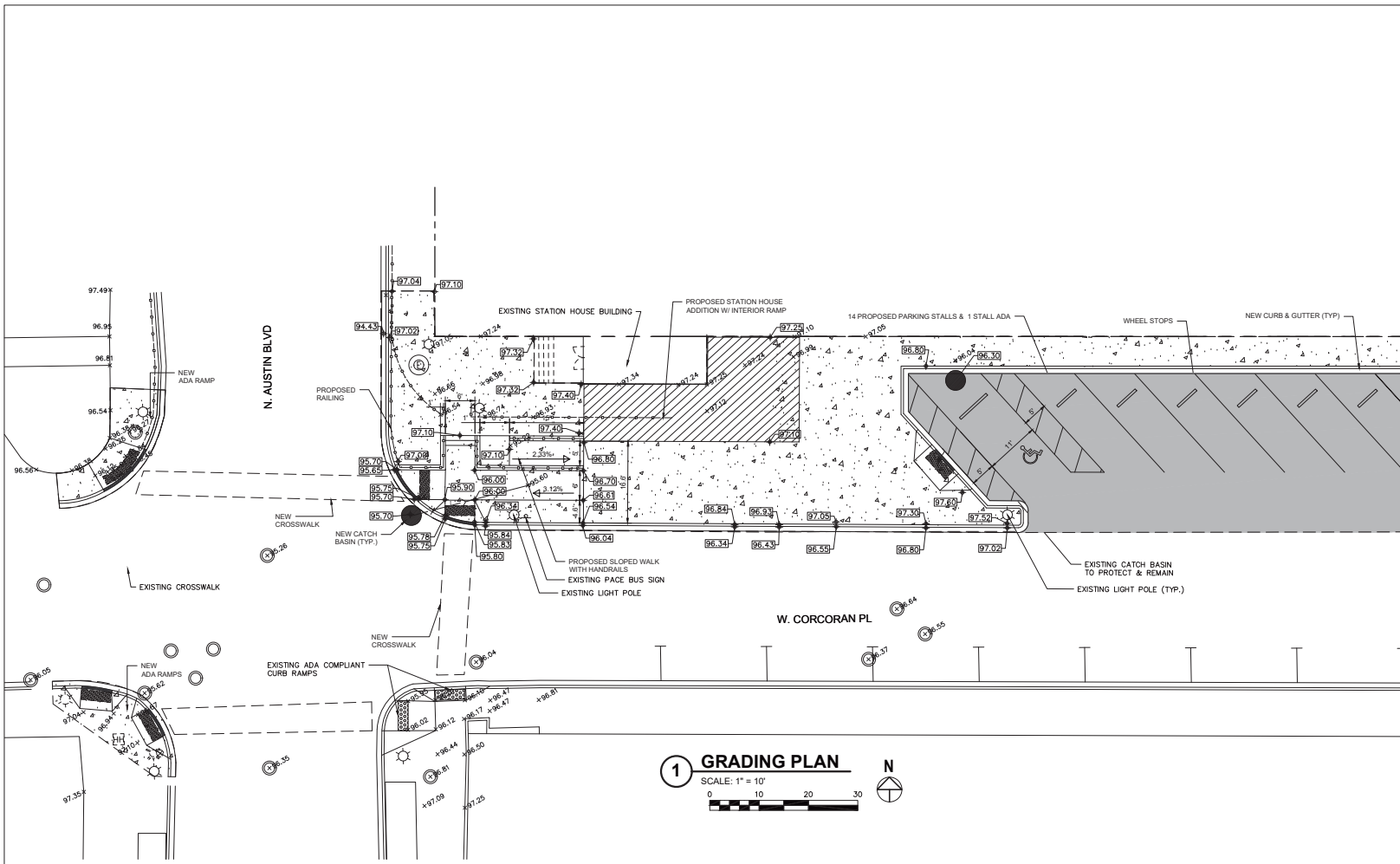
**ALL STATIONS
ACCESSIBILITY PROGRAM**
AUSTIN - GREEN LINE
10% CONCEPTUAL PLANS

IN CHARGE
APPROVED BY
CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO.
FILE NAME

MARK	DATE	DESCRIPTION
LOCATION: 351 N. AUSTIN BLVD		

GRADING PLAN

AUS-103



1 GRADING PLAN
SCALE: 1" = 10'
0 10 20 30

LEGEND:

	HEAVY DUTY BITUMINOUS PAVEMENT
	NEW CONCRETE SIDEWALK

11/15/2016 - CTA DEPARTMENTAL REVIEW



AUS-105

MARK	DATE	DESCRIPTION
LOCATION: AUSTIN - GREEN LINE		



CHICAGO TRANSIT
AUTHORITY
ENGINEERING

WARNING: THIS RECORD CONTAINS SENSITIVE SECURITY INFORMATION THAT IS CONTROLLED UNDER 49 CFR PARTS 15 AND 1520. NO PART OF THIS RECORD MAY BE DISCLOSED TO PERSONS WITHOUT A "NEED TO KNOW" AS DEFINED IN CFR PARTS 15 AND 1520, EXCEPT WITH THE WRITTEN PERMISSION OF THE ADMINISTRATOR OF THE TRANSPORTATION SECURITY ADMINISTRATION OR THE SECRETARY OF TRANSPORTATION. UNAUTHORIZED RELEASE MAY RESULT IN CIVIL PENALTY OR OTHER ACTION. FOR U.S. GOVERNMENT AGENCIES, PUBLIC DISCLOSURE IS GOVERNED BY 5 U.S.C. 352 AND 49 CFR PARTS 15 AND 1520.

DRAWING SCALE IS NOT GUARANTEED.
CTA ASSUMES NO RISK OF LIABILITY FOR
ERRORS CAUSED, DIRECTLY OR INDIRECTLY,
BY SCALING OF THIS DRAWING.

IN CHARGE
APPROVED BY
CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO
FILE NAME

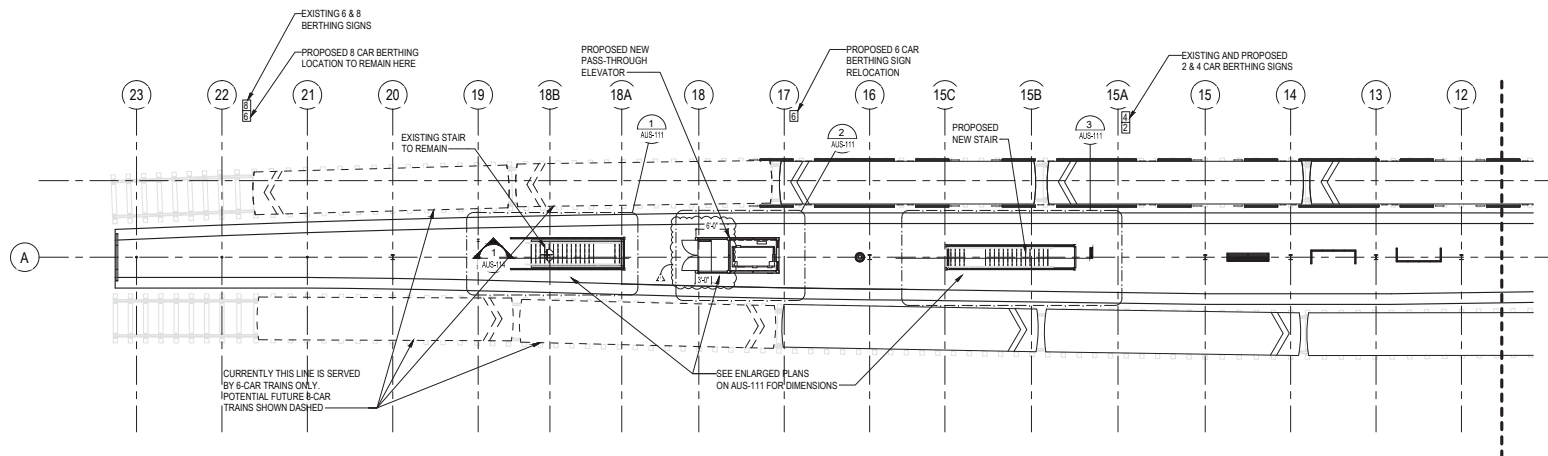
FILE NAME		
MARK	DATE	DESCRIPTION

STATION HOUSE LEVEL OVERALL PLAN

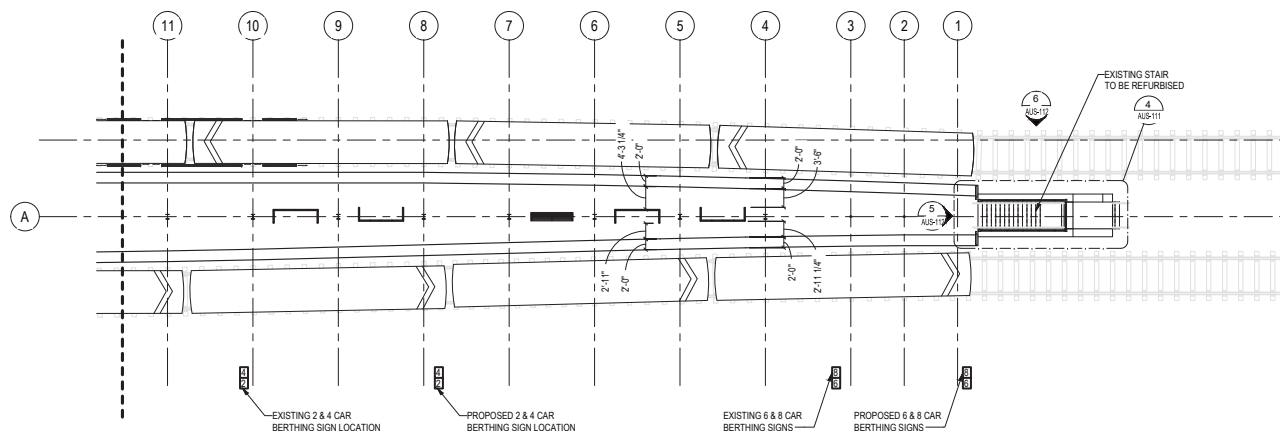
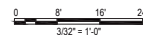
AUS-107



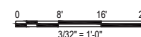
NOT FOR CONSTRUCTION



1 AUSTIN PLATFORM LEVEL
SCALE: 3/32" = 1'-0"



2 AUSTIN PLATFORM LEVEL
SCALE: 3/32" = 1'-0"



RME Rubinos &
Mesa
Engineers, Inc.
200 S. Michigan Avenue, Suite 1500, Chicago, IL 60604-2482

cta CHICAGO TRANSIT
AUTHORITY
ENGINEERING

SENSITIVE SECURITY INFORMATION

WARNING: THIS RECORD CONTAINS SENSITIVE SECURITY INFORMATION THAT IS CONTROLLED
UNDER 48 CFR PARTS 1.1 AND 1.2. NO PART OF THIS RECORD MAY BE DISCLOSED TO
PERSONS WITHOUT A NEED TO KNOW AS DEFINED IN 48 CFR PARTS 1.1 AND 1.2. EXCEPT
WITH THE WRITTEN PERMISSION OF THE ADMINISTRATOR OF THE TRANSPORTATION SECURITY
ADMINISTRATION, THE RECEIPT OR FURNISHING OF THIS RECORD TO ANY OTHER PERSON OR
AGENCY IS PROHIBITED. A VIOLATION OF THIS PROHIBITION MAY BE CAUSE FOR A CIVIL PENALTY OR OTHER ACTION FOR A VIOLATION OF THE FEDERAL INFORMATION SECURITY ACT (FISMA) OR OTHER ACTION FOR A VIOLATION OF THE FEDERAL INFORMATION SECURITY ACT (FISMA) OR OTHER ACTION FOR A VIOLATION OF THE FEDERAL INFORMATION SECURITY ACT (FISMA).

DRAWING SCALE IS NOT GUARANTEED.
CTA ASSUMES NO RISK OF LIABILITY FOR
ERRORS CAUSED, DIRECTLY OR INDIRECTLY,
BY SCALING OF THIS DRAWING.

**ALL STATIONS
ACCESSIBILITY PROGRAM**
AUSTIN STATION - GREEN LINE
10% CONCEPTUAL PLANS

IN CHARGE
APPROVED BY
CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO.
FILE NAME

03/30/2017
DATE
ELEVATOR REVISION
DESCRIPTION

LOCATION: AUSTIN - GREEN LINE

**PLATFORM LEVEL
DEMOLITION PLANS**

AUS-108

NOT FOR CONSTRUCTION

RME Rubino & Mesa
Engineers, Inc.
200 S. Michigan Avenue, Suite 1800, Chicago, IL 60604-3482



**CHICAGO TRANSIT
AUTHORITY
ENGINEERING**

SENSITIVE SECURITY INFORMATION

WARNING: THIS PROJECT CONTAINS SENSITIVE SECURITY INFORMATION THAT IS CONTROLLED
UNDER THE PROTECTIVE ORDER OF THE CHICAGO TRANSIT AUTHORITY. IT IS TO BE KEPT
CONFIDENTIAL AND NOT DISCLOSED TO THE PUBLIC OR TO ANY OTHER PERSON OR
ENTITY WITHOUT THE EXPRESS WRITTEN PERMISSION OF THE CHICAGO TRANSIT
AUTHORITY. ANY DISCLOSURE OF THIS INFORMATION TO THE PUBLIC OR TO ANY
OTHER PERSON OR ENTITY WITHOUT THE EXPRESS WRITTEN PERMISSION OF THE
CHICAGO TRANSIT AUTHORITY IS A VIOLATION OF THE PROTECTIVE ORDER AND
MAY BE SUBJECT TO PROSECUTION UNDER FEDERAL AND STATE LAWS. THIS
DRAWING IS CONTROLLED BY CTA AND IS NOT TO BE REPRODUCED, COPIED, OR
DISSEMINATED IN ANY MANNER WITHOUT THE EXPRESS WRITTEN PERMISSION OF
CTA.

DRAWING SCALE IS NOT GUARANTEED.
CTA ASSUMES NO RISK OF LIABILITY FOR
ERRORS CAUSED, DIRECTLY OR INDIRECTLY,
BY SCALING OF THIS DRAWING.

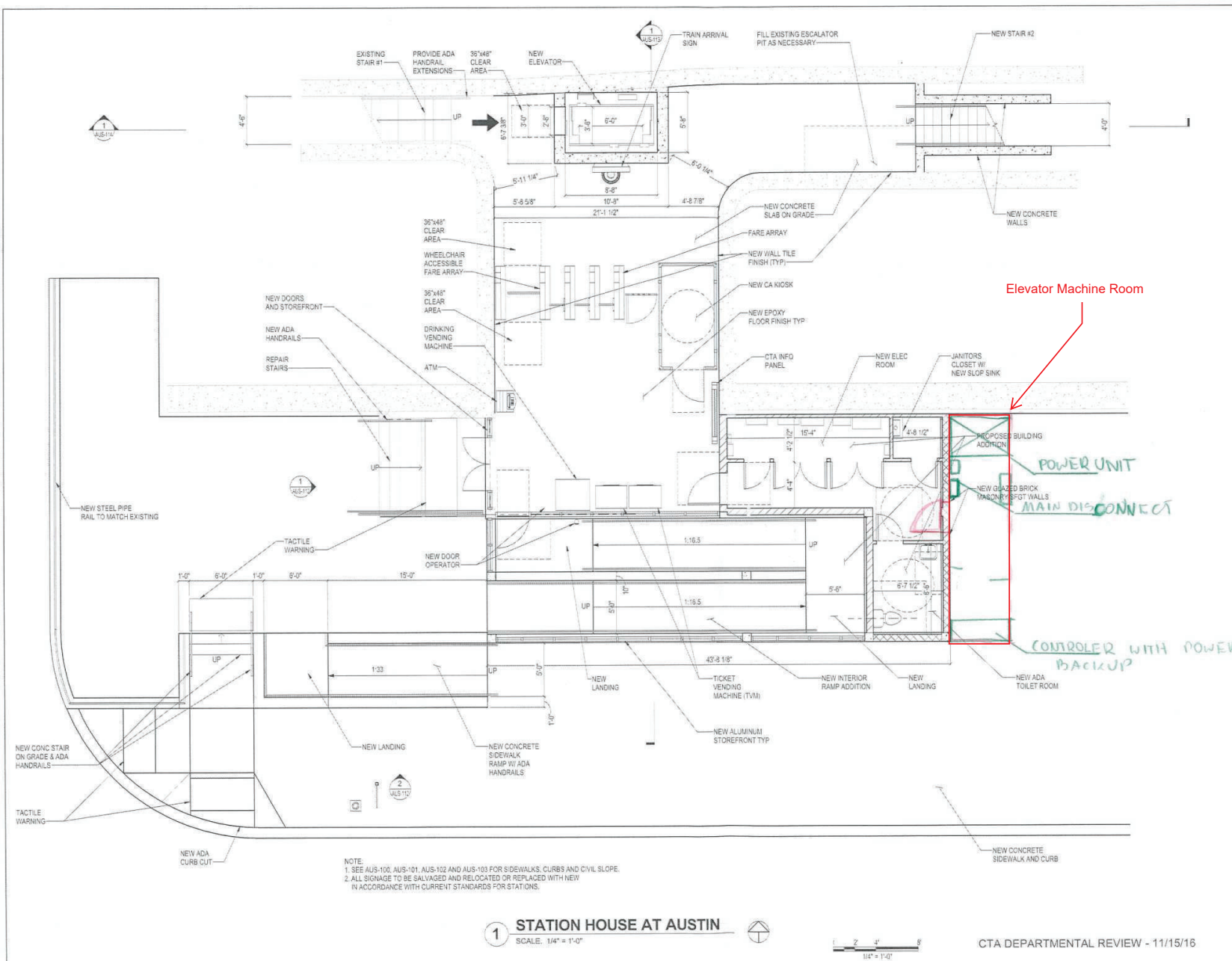
**ALL STATIONS
ACCESSIBILITY PROGRAM
AUSTIN STATION - GREEN LINE
10% CONCEPTUAL PLANS**

IN CHARGE _____
APPROVED BY _____
CHECKED BY _____
DESIGNED BY _____
DRAWN BY _____
PROJECT NO _____
FILE NAME _____

MARK DATE DESCRIPTION
LOCATION: AUSTIN - GREEN LINE

**STATION HOUSE LEVEL
ENLARGED PLANS**

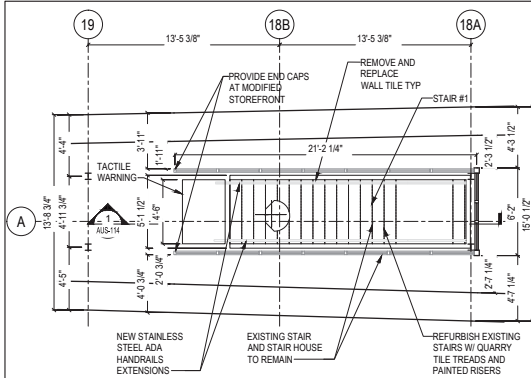
AUS-109(REV)



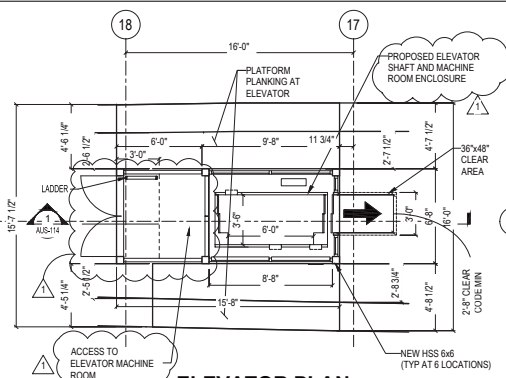
1 STATION HOUSE AT AUSTIN
SCALE: 1/4" = 1'-0"



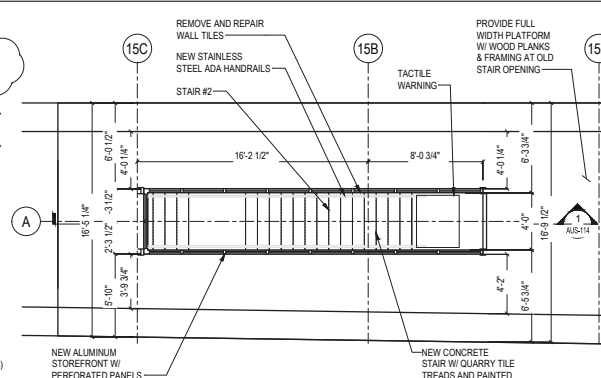
CTA DEPARTMENTAL REVIEW - 11/15/16



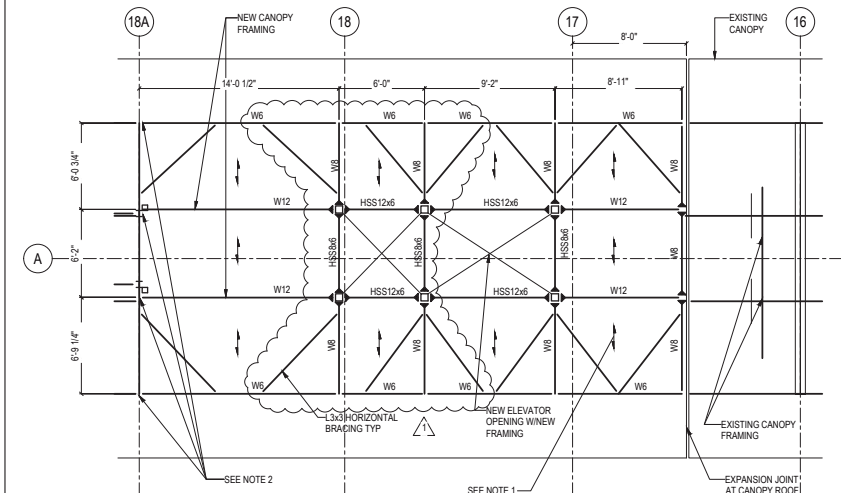
1 WEST STAIR PLAN PLATFORM LEVEL
SCALE: 1/4" = 1'-0"
EL TI PLATFORM +57'-5"



2 ELEVATOR PLAN PLATFORM LEVEL
SCALE: 1/4" = 1'-0"
EL TI PLATFORM +57'-5"

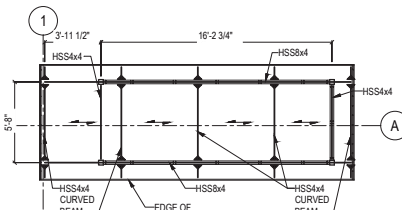


3 CENTER STAIR PLAN PLATFORM LEVEL
SCALE: 1/4" = 1'-0"
EL TI PLATFORM +57'-5"

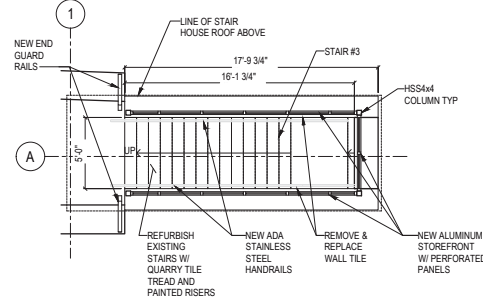


5 ROOF PLAN AT ELEVATOR
SCALE: 1/4" = 1'-0"

NOTE:
1. NEW ROOF DECK TO MATCH EXISTING.
2. CONNECT NEW BEAM TO EXISTING STRUCTURAL MEMBER (COLUMN OR BEAM).
3. THE CTA INTENDS TO UTILIZE A HYDRAULIC ELEVATOR, PLEASE REVISE DRAWINGS ACCORDINGLY.

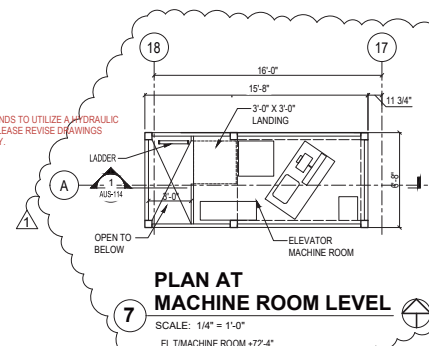


6 EAST STAIR PLAN ROOF LEVEL
SCALE: 1/4" = 1'-0"



4 EAST STAIR PLAN PLATFORM LEVEL
SCALE: 1/4" = 1'-0"
EL TI PLATFORM +57'-6 3/4"

NOTE: THE CTA INTENDS TO UTILIZE A HYDRAULIC ELEVATOR, PLEASE REVISE DRAWINGS ACCORDINGLY.



7 PLAN AT MACHINE ROOM LEVEL
SCALE: 1/4" = 1'-0"
EL TI MACHINE ROOM +72'-4"

NOT FOR CONSTRUCTION

RME Rubinos & Mesia Engineers, Inc.
200 S. Michigan Avenue, Suite 1500, Chicago, IL 60604-3482

cta CHICAGO TRANSIT AUTHORITY ENGINEERING

SENSITIVE SECURITY INFORMATION

WARNING: THIS DOCUMENT CONTAINS SENSITIVE SECURITY INFORMATION THAT IS CONTROLLED UNDER LAW. PARTS OF THIS DOCUMENT MAY BE RELEASED TO PERSONS WITHOUT A NEED TO KNOW AS DETERMINED BY PARTS 15 AND 16, EXCEPT WITH THE WRITTEN PERMISSION OF THE CHIEF OF POLICE OF THE CHICAGO POLICE DEPARTMENT. THE RELEASE OF INFORMATION FROM THIS DOCUMENT TO ANY OTHER PERSON OR ENTITY WITHOUT THE WRITTEN PERMISSION OF THE CHIEF OF POLICE OF THE CHICAGO POLICE DEPARTMENT IS PROHIBITED BY LAW. THIS DOCUMENT IS CONTROLLED BY CTA AND ITS PARTS ARE NOT TO BE RELEASED TO ANY OTHER PERSON OR ENTITY WITHOUT THE WRITTEN PERMISSION OF THE CHIEF OF POLICE OF THE CHICAGO POLICE DEPARTMENT.

DRAWING SCALE IS NOT GUARANTEED. CTA ASSUMES NO RISK OF LIABILITY FOR ERRORS CAUSED, DIRECTLY OR INDIRECTLY, BY SCALING OF THIS DRAWING.

ALL STATIONS ACCESSIBILITY PROGRAM

AUSTIN STATION - GREEN LINE
10% CONCEPTUAL PLANS

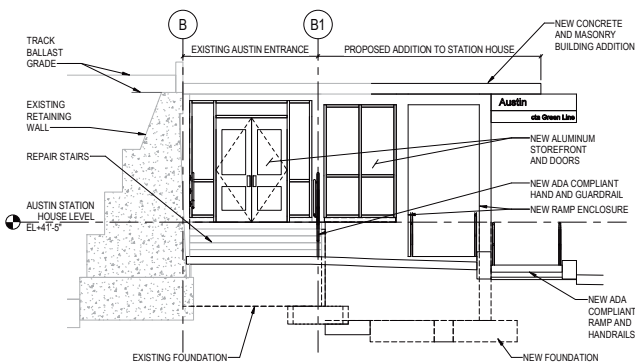
IN CHARGE
APPROVED BY
CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO
FILE NAME

03/30/2011
MARK DATE ELEVATOR REVISION DESCRIPTION

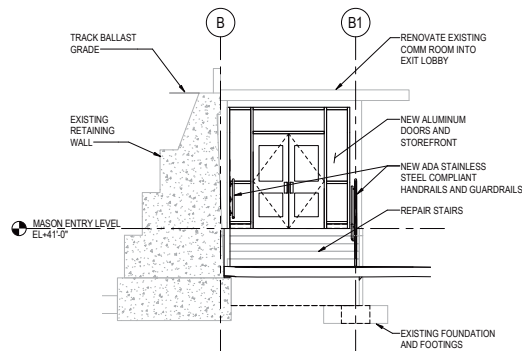
LOCATION: AUSTIN - GREEN LINE

PLATFORM LEVEL ENLARGED PLANS

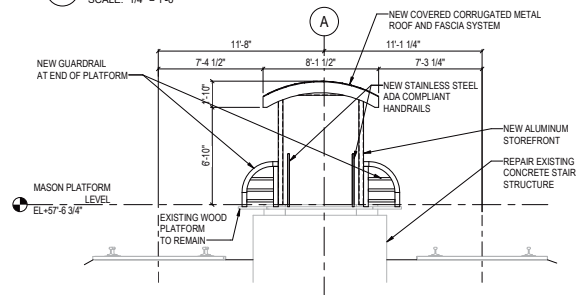
AUS-111



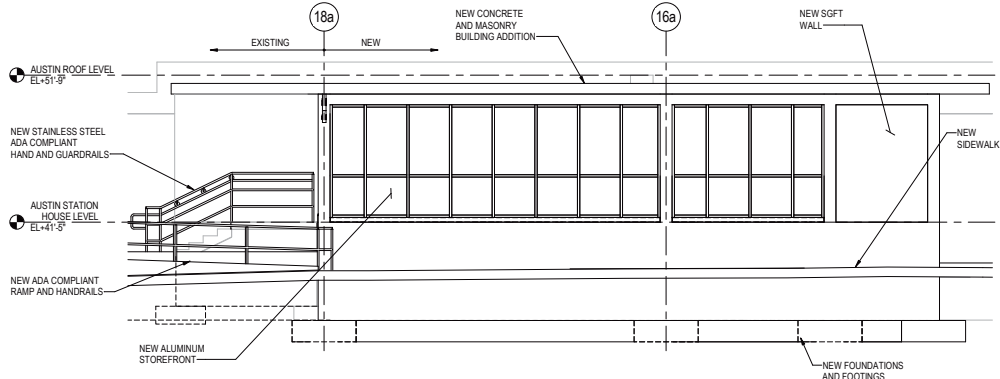
1 WEST ELEVATION AUSTIN STATION HOUSE ENTRY
SCALE: 1/4" = 1'-0"



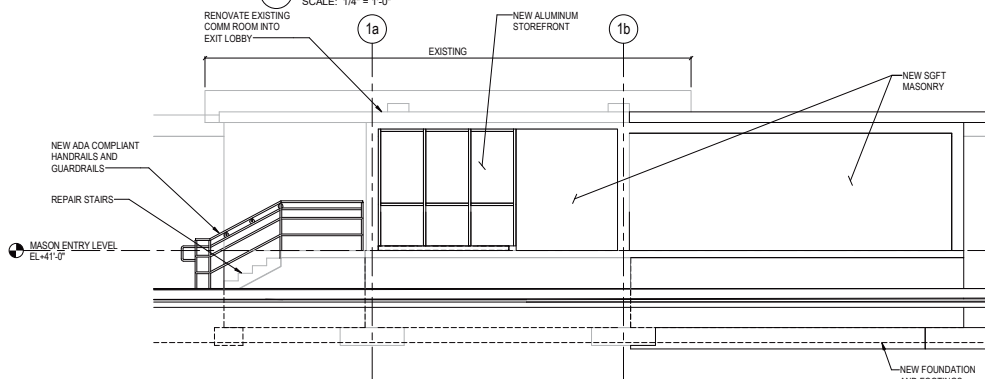
3 WEST ELEVATION MASON STAIR EXIT ENTRY
SCALE: 1/4" = 1'-0"



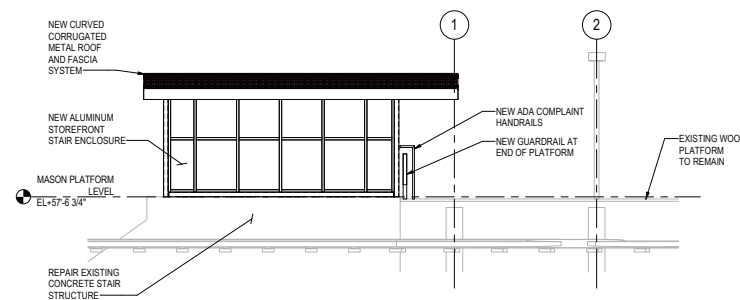
5 WEST ELEVATION MASON STAIR EXIT AT PLATFORM
SCALE: 1/4" = 1'-0"



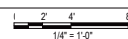
2 SOUTH ELEVATION AUSTIN STATION HOUSE
SCALE: 1/4" = 1'-0"



4 SOUTH ELEVATION MASON STAIR HOUSE ENTRY
SCALE: 1/4" = 1'-0"



6 NORTH ELEVATION MASON STAIR EXIT AT PLATFORM LEVEL
SCALE: 1/4" = 1'-0"



CTA DEPARTMENTAL REVIEW - 11/15/16

NOT FOR CONSTRUCTION

RME Rubinos & Mesa Engineers, Inc.
300 S. Michigan Avenue, Suite 1500, Chicago, IL 60604-2482

cta CHICAGO TRANSIT AUTHORITY
ENGINEERING

SENSITIVE SECURITY INFORMATION

WARNING: THIS RECORD CONTAINS SENSITIVE SECURITY INFORMATION THAT IS CONTROLLED UNDER 49 CFR PARTS 1.11 AND 1.1101. ANY DISCLOSURE OF THIS RECORD MAY BE SUBJECT TO PENALTY WITHOUT NOTICE TO AGENCY. ANY DISCLOSURE OF THIS RECORD MAY BE SUBJECT TO PENALTY WITHOUT NOTICE TO AGENCY. ANY DISCLOSURE OF THIS RECORD MAY BE SUBJECT TO PENALTY WITHOUT NOTICE TO AGENCY. ANY DISCLOSURE OF THIS RECORD MAY BE SUBJECT TO PENALTY WITHOUT NOTICE TO AGENCY.

DRAWING SCALE IS NOT GUARANTEED. CTA ASSUMES NO RISK OF LIABILITY FOR ERRORS CAUSED, DIRECTLY OR INDIRECTLY, BY SCALING OF THIS DRAWING.

ALL STATIONS ACCESSIBILITY PROGRAM
AUSTIN STATION - GREEN LINE
10% CONCEPTUAL PLANS

IN CHARGE		
APPROVED BY		
CHECKED BY		
DESIGNED BY		
DRAWN BY		
PROJECT NO		
FILE NAME		
MARK	DATE	DESCRIPTION
LOCATION: AUSTIN - GREEN LINE		

ELEVATIONS

AUS-112

NOT FOR CONSTRUCTION

RME Rubinos & Mesia Engineers, Inc.
200 N. Michigan Avenue, Suite 1500, Chicago, IL 60604-2482

cta CHICAGO TRANSIT AUTHORITY
ENGINEERING

SENSITIVE SECURITY INFORMATION

WARNING: THIS RECORD CONTAINS SENSITIVE SECURITY INFORMATION THAT IS CONTROLLED UNDER 48 CFR PARTS 1 AND 101. REPRODUCTION OR DISSEMINATION OF THIS INFORMATION TO PERSONS WITHOUT A NEED TO KNOW AS DETERMINED BY CTA PARTS 1 AND 101, EXCEPT WITH THE WRITTEN PERMISSION OF THE ADMINISTRATOR OF THE TRANSPORTATION SECURITY ADMINISTRATION OR THE SECRETARY OF TRANSPORTATION, IS PROHIBITED. RELEASE MAY RESULT IN CIVIL PENALTY FOR OTHER ACTS FOR A FOIA REQUEST. ASSIGNED: PUBLIC EXCLUSION IS DERIVED BY 48 C.F.R. 1.01 AND 101.01. CTA PARTS 1 AND 101.

DRAWING SCALE IS NOT GUARANTEED. CTA ASSUMES NO RISK OF LIABILITY FOR ERRORS CAUSED, DIRECTLY OR INDIRECTLY, BY SCALING OF THIS DRAWING.

**ALL STATIONS
ACCESSIBILITY PROGRAM**
AUSTIN STATION - GREEN LINE
10% CONCEPTUAL PLANS

IN CHARGE
APPROVED BY
CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO
FILE NAME

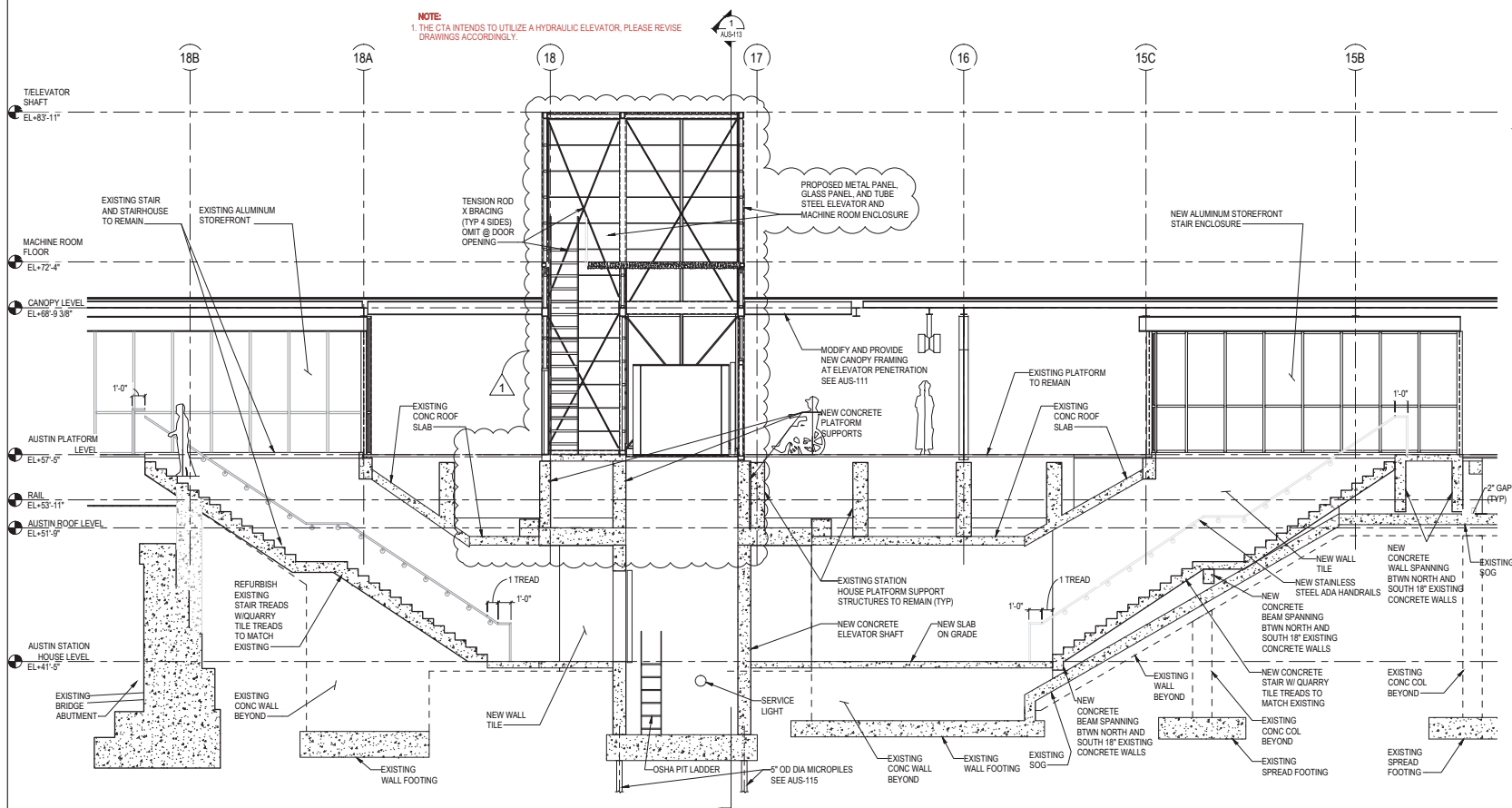
03/30/2011
ELEVATOR REVISION
MARK DATE DESCRIPTION

LOCATION: AUSTIN - GREEN LINE

SECTIONS

AUS-114

NOTE:
1. THE CTA INTENDS TO UTILIZE A HYDRAULIC ELEVATOR, PLEASE REVISE DRAWINGS ACCORDINGLY.



EAST-WEST SECTION AT AUSTIN STATION HOUSE & PLATFORM

1
SCALE: 1/4" = 1'-0"

0 2' 4' 8'
1/4" = 1'-0"

SCOPING NOTES:

NOTE:

1. THE CTA INTENDS TO UTILIZE A HYDRAULIC ELEVATOR, PLEASE REVISE DRAWINGS ACCORDINGLY.

ELEVATORS

1. PROVIDE HEAVY DUTY ~~TRANSIT TRACTION~~ POWER ELEVATOR MACHINE ROOM PER ASME. THE ELEVATOR SHAFT ABOVE THE ELEVATOR MACHINE EQUIPMENT SHALL NOT BE LOCATED IN THE PIT.
2. PROVIDE NEW ELEVATOR TOWER WITH PIT.
3. ~~DESIGN OF THE ELEVATOR EQUIPMENT FOR A 150 LB CAPACITY.~~
4. DESIGN OF THE ELEVATOR SHALL PROVIDE A MINIMUM SPEED OF 200 FEET PER MINUTE (FPM).
5. ELEVATOR EQUIPMENT SHALL BE CAPABLE OF OPERATING WHEN EXPOSED TO SUNLIGHT, RAIN, SNOW, ICE, DUST AND TEMPERATURES RANGING FROM -20 DEGREES TO +120 DEGREES F.
6. BECAUSE OF EXISTING CONDITIONS AND EXTREMELY TIGHT AND COMPLEX SPECIAL CONDITIONS, ADA CLEARANCES FOR LIMITED USE LIMITED APPLICATION (LULA) ELEVATOR CAB CONFIGURATIONS WILL BE ACCEPTABLE FOR THE ASAP PROJECT BUT NOT LESS THAN AS INDICATED ON THE DRAWINGS.
7. PASS-THRU LULA ELEVATOR CAB CONFIGURATIONS PERMITTED WITH THE FOLLOWING CRITERIA: 32 INCH MIN. CLEAR DOOR OPENINGS, 42 INCH MINIMUM CLEAR FLOOR WIDTH, CTA INDICATES THE LENGTH OF THE INTERIOR OF THE CAB SHALL EXCEED LULA STANDARDS AND BE 72 INCHES (LULA PERMITS 54 INCH MIN.) TO PERMIT A WHEELCHAIR AND A COMPANION TO FIT IN THE ELEVATOR AT THE SAME TIME. CONTROLS FOR THIS TYPE OF ELEVATOR SHALL BE CENTERED ON ONE OF THE SIDE WALLS OR TWO CONTROL PANELS ARE TO BE PROVIDED, ONE AT EACH END OF THE CAB SO THEY CAN BE OPERATED WITHOUT NEEDING TO TURN THE WHEELCHAIR.
8. RIGHT ANGLE LULA ELEVATOR CAB CONFIGURATIONS WILL BE PERMITTED WITH 36 INCH MINIMUM CLEAR WIDTH DOORS AND 51 INCH CLEAR MINIMUM CAB FLOORS IN BOTH DIRECTIONS AS INDICATED.
9. THE CAB CLEARANCES OF THE LULA CRITERIA WHICH MAY BE UTILIZED FOR THIS PROJECT WILL BE LIMITED, FOR THE MOST PART, TO THE DIMENSIONAL AND CLEARANCE ASPECTS OF THOSE PERMITTED BY LULA, BECAUSE OF VERY TIGHT SPACE CONSTRAINTS OF THE EXISTING CTA STATIONS AND TRACK ALIGNMENTS WHICH CANNOT BE FEASIBLY ALTERED. WHILE LULA REGULATIONS WOULD PERMIT LESS ROBUST ELEVATOR EQUIPMENT SPECIFICATIONS AND PERFORMANCE CRITERIA THE ELEVATORS PROPOSED FOR THIS CTA ASAP PROJECT ARE TO MEET THE ROBUST COMMERCIAL HIGH USE STANDARDS AND PERFORMANCE CRITERIA INDICATED ON THESE DOCUMENTS AND ADHERE THEREIN TO THE INTENT IS TO PROVIDE HIGH GRADE, COMMERICAL ELEVATORS OF HIGH DURABILITY AND LOWER MAINTENANCE NEEDS, WHICH BECAUSE OF SITE CONSTRAINTS MAY BE MORE COMPACT IN SIZE AND WILL PROVIDE RELIABLE 24 HOUR A DAY A WEEK OPERATIONS.
10. ELEVATOR PIT DEPTH AND OVERHEAD DIMENSIONAL REQUIREMENTS FOR THIS PHASE OF THE CONCEPT DESIGN ARE BASED ON AN ELEVATOR HAVING A 3,500 LB CAPACITY WITH A TRAVEL SPEED OF 350 FPM. THIS RESULTED IN A 5'-4" DEEP INSIDE DIMENSION PIT DEPTH AND CLEAR OVERHEAD FROM TOP FLOOR SILL TO BOTTOM OF HOIST BEAM OF 19'-4". AS THE DESIGN IS REFINED IN FUTURE PHASES THESE DIMENSIONS MAY BE ABLE TO BE REDUCED.
11. THE WORK RELATED TO THE ELEVATOR INSTALLATION SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:
 - a. HOISTING BEAMS AND SUPPORTS USED FOR HOISTING.
 - b. ELEVATOR PITS INCLUDING THE PIT LADDERS, SERVICE LIGHT, ACCESS DOORS, SUMP PITS, AND RELATED PIPING AND PUMPS.
 - c. MACHINERY ROOMS ARE TO INCLUDE LIGHTING, CONVENIENCE OUTLETS, HEATING AND VENTILATION.
 - d. BRANCH WIRING CIRCUITS FOR CONTROLLERS, SIGNAL SYSTEMS AND POWER-OPERATED DOORS.
 - e. ELECTRICAL AND COMMUNICATIONS SERVICES CONNECTIONS.
12. GIVEN THE UNUSUAL SITE CONSTRAINTS, THE DOOR SHOULD NOT RELY ON A GENERIC SPECIFICATION FOR THE ELEVATOR. THE ALL THE ELEVATOR COMPONENTS INCLUDING BUT NOT LIMITED TO THE CAB, CONTROLS, SHAFTS AND EQUIPMENT NEED TO BE DEVELOPED TO A HIGHER LEVEL DETAIL THAN A SPECULATIVE PROJECT APPROACH MIGHT TAKE. CTA REQUIRES THE DESIGN BE CUSTOMIZE SPECIFICALLY TO THE INDIVIDUAL SITE CONDITIONS AND CONSTRAINTS.
13. ELEVATOR COMMUNICATION CONNECTIONS SHOULD BE COORDINATED WITH THE CTA AND SHOULD BE DESIGNED IN ACCORDANCE WITH CTA REQUIREMENTS.
14. ASME A17.1, THE SAFETY CODE FOR ELEVATORS AND ESCALATORS, IS DIRECTLY REFERENCED IN THE CHICAGO BUILDING CODE AND SHOULD BE THE KEY GOVERNING STANDARD FOR THE ELEVATOR DESIGN ISSUES THAT ARISE FOR THIS PROJECT. THE ELEVATOR EQUIPMENT OF THIS PROJECT SHOULD BE SPECIFIED TO COMPLY WITH THE SAFETY CODE FOR ELEVATORS AND ESCALATORS.
15. ONLY EQUIPMENT USED IN CONJUNCTION WITH THE FUNCTION OF ELEVATORS SHALL BE PERMITTED IN ELEVATOR MACHINE ROOMS.
16. ONLY WIRING, RACEWAYS, AND CABLES USED DIRECTLY IN CONNECTION WITH THE ELEVATOR SHALL BE PERMITTED TO BE INSTALLED INSIDE THE HOISTWAYS.
17. DUCTS SHALL BE PERMITTED TO BE INSTALLED IN THE HOISTWAY, MACHINE ROOM, AND MACHINERY SPACES FOR THE PURPOSE OF HEATING, COOLING, VENTILATING, AND VENTING THESE AREAS ONLY AND SHALL NOT ENCROACH UPON THE REQUIRED CLEARANCES.
18. A SUMP PIT SHALL BE PROVIDED FOR EACH ELEVATOR.
19. PERMANENT PROVISIONS SHALL BE MADE TO PREVENT ACCUMULATION OF GROUND WATER IN THE SUMP PIT.
20. PROVIDE SILL HEATERS AT THE OPENINGS OF THE CABS CONTROLLED BY A THERMOSTAT.
21. PROVIDE A SYSTEM OF TWO-WAY COMMUNICATION BETWEEN PASSENGERS AND CTA STAFF.
22. PROVIDE REMOTE MONITORING FEATURE FOR ALL CRITICAL FUNCTIONS IN THE EVENT OF A ELEVATOR MALFUNCTION. THE SYSTEM SHOULD REPORT AND STORE DATE-STAMPED ALARM CONDITIONS INCLUDING, BUT NOT LIMITED TO LOSS OF POWER, OPEN STOP SWITCH, OPEN SAFETY SWITCH, OPEN DOOR LOCK, STUCK PASSENGER, ELEVATOR TIMED-OUT SERVICE AND EMERGENCY STOP.
23. PROVIDE A REMOTE MONITORING COMPUTER IN THE ELEVATOR CONTROLLER CABINET OF EACH ELEVATOR. EACH REMOTE MONITORING STATION COMPUTER SHOULD HAVE A MODEM FOR CONNECTION TO THE CTA'S TELEPHONE SYSTEM AND SHOULD HAVE SUITABLE SOFTWARE TO PERFORM REQUIRED MONITORING AND COMMUNICATION FUNCTIONS.
24. PROVIDE PROGRAMMABLE LOGIC CONTROLLER (PLC) BASED SELECTIVE COLLECTIVE AUTOMATIC OPERATION SHALL BE USED FOR EACH ELEVATOR.
25. ELEVATOR EMERGENCY POWER OPERATIONS SHALL INCLUDE, BUT NOT BE LIMITED TO, ONE HOUR OF EMERGENCY VENTILATION, FIREFIGHTERS OPERATION, EMERGENCY RETURN OPERATIONS AND FLOODED PIT TRAVEL LIMIT.
26. PROVIDE ELEVATORS COMPLIANT WITH THE "BUY AMERICA ACT" (49 CFR PART 661).
 - a. INCLUDE THE FOLLOWING MAINTENANCE AND TESTING REQUIREMENTS INTO THE DESIGN OF THE PROJECT:
 - i. DOCUMENTING THE REQUIRED TESTING STRATEGY AND INCORPORATING THIS STRATEGY INTO THE DESIGNS OF THE PROJECT.
 - ii. REQUIRING RECORD-KEEPING PROCEDURES ON THE PART OF THE CONTRACTOR THAT ARE COORDINATED WITH EXISTING OVERALL FACILITY MANAGES.
 - iii. SPECIFYING THAT MAINTENANCE CONTRACTS BE A PART OF THE CONTRACTOR'S PROPOSAL PACKAGE TO BE REVIEWED BY THE OWNER.
 - iv. REQUIRING THAT SPECIALTY TOOLS BE SUPPLIED TO THE OWNER BY THE CONTRACTOR AT THE END OF THE CONSTRUCTION PHASE.
 - v. REQUIRING AN UP-TO-DATE WIRING DIAGRAM DETAILING CIRCUITS OF ALL ELECTRICAL PROTECTIVE DEVICES AND CRITICAL OPERATING CIRCUITS IN THE MACHINE ROOM.
 - vi. SPECIFYING TESTING AND COMMISSIONING OF THE ALTERNATIVE POWER SYSTEMS PERIODICALLY OVER TIME TO ENSURE THAT NO UNFORESEEN INTERACTIONS HAVE DEVELOPED IN THESE ELECTRICAL SYSTEMS.
 - vii. WORKING WITH THE MAINTENANCE STAFF, THE DESIGNER SHOULD COORDINATE REVIEWS OF THE FACILITIES OPERATION AND PERFORMANCE ONE MONTH BEFORE THE END OF THE WARRANTY PERIOD.
 - viii. PROVIDE A SYSTEM OF TWO-WAY COMMUNICATION BETWEEN PASSENGERS AND CTA STAFF.
 - b. PROVIDE HEAVY DUTY GLASS PANEL ELEVATOR SHAFT ENCLOSURE, IN LIEU OF METAL PANELS, FROM TOP OF PLATFORM TO PLATFORM-LEVEL ELEVATOR DOOR FRAME HEAD.

SCOPING NOTES (CONT):

ELEVATOR WIRING COORDINATION

1. WIRING REQUIREMENTS OF ELEVATORS ARE ADDRESSED IN CHICAGO ELECTRICAL CODE ARTICLE 620. INDICATE THAT THE ELEVATOR CONTRACTOR IS RESPONSIBLE FOR FURNISHING AND INSTALLING THE UNGROUNDED MAIN POWER SUPPLY DISCONNECTING MEANS THAT IS REQUIRED IN CEC 18-27-420.51. OTHER WIRING IN THE ELEVATOR SHAFT AS WELL AS THE WIRING OF THE ELEVATOR CAR AND CONTROLS ARE ALSO THE RESPONSIBILITY OF THE ELEVATOR CONTRACTOR.
2. FEEDERS FOR THE ELEVATORS SHOULD BE SUPPLIED FROM A PANEL BOARD THAT WILL IN-TURN BE SUPPLIED BY AN AUTOMATIC TRANSFER SWITCH, WITH THIS CONFIGURATION, ELECTRIC POWER WILL STILL BE AVAILABLE FOR THE ELEVATORS IN THE EVENT OF AN OUTAGE OF THE ELECTRIC UTILITY COMPANY.
3. THE DISCONNECTING MEANS FOR THE ELEVATOR IS REQUIRED TO BE AN ENCLOSED, EXTERNALLY-OPERABLE FUSED MOTOR CIRCUIT SWITCH OR CIRCUIT BREAKER CAPABLE OF BEING LOCKED IN THE OPEN POSITION PER CEC 18-27-420.51(A).
4. A SEPARATE BRANCH CIRCUIT IS REQUIRED FOR THE LIGHTING OUTLET AND RECEPTACLE OUTLET IN THE HOISTWAY (ELEVATOR) PIT. THE SWITCH FOR THE LIGHTING IS REQUIRED TO BE READILY ACCESSIBLE FROM THE PIT ACCESS DOOR, AND THE LIGHT IS NOT PERMITTED TO BE CONNECTED ON THE LOAD SIDE OF A GFCI DEVICE. PER CEC 18-27-520.24.
5. A SEPARATE BRANCH CIRCUIT IS REQUIRED FOR LIGHTING, EXHAUST FAN, AND OTHER SERVICES IN THE ELEVATOR CAR. AN ADDITIONAL BRANCH CIRCUIT IS REQUIRED FOR HEATING AND AIR-CONDITIONING IF THESE ARE PROVIDED FOR THE ELEVATORS. REFER TO CEC 18-27-420.22.
6. RECEPTACLES IN HOISTWAYS, PITS, AND ELEVATOR TOPS ARE REQUIRED TO BE 15- OR 20-AMPERE, 125-VOLT RECEPTACLES OF THE SINGLE-POLE TYPE. REFER TO CEC 18-27-420.45.
7. THE NEW ELEVATORS SHOULD BE DESIGNED AS THREE-PHASE POWER SUPPLY OF THE PROPER CAPACITY FOR THE EQUIPMENT IN THE ELEVATOR CONTROL ROOM WITH FUSED-DISCONNECT SWITCHES OR CIRCUIT BREAKERS IN EACH MACHINE ROOM.
8. PROVIDE AN ALTERNATIVE POWER SUPPLY TO FUSED-DISCONNECT SWITCHES OR CIRCUIT BREAKERS IN THE ELEVATOR MACHINE ROOMS.
9. PROVIDE A DEDICATED 120 VOLT CIRCUIT IN THE CONTROL ROOM FOR EACH ELEVATOR CONTROLLER.
10. PROVIDE FIRE DETECTION AND FIRE-ALARM SYSTEM CONNECTIONS TO ELEVATOR CONTROLLERS.
11. PROVIDE 120 VOLT POWER FOR CAB LIGHTING, TELEPHONE/INTERCOM, AND FAN.

MECHANICAL

1. PROVIDE NATURAL OR MECHANICAL MEANS TO KEEP LOCAL AIR TEMPERATURES AND HUMIDITY WITHIN RANGES SPECIFIED BY THE ELEVATOR MANUFACTURER IN ACCORDANCE WITH SAFETY CODE FOR ELEVATORS AND ESCALATORS, ASME A17.1, PARAGRAPH 2.5.2.2. POST THE SPECIFIED TEMPERATURE AND HUMIDITY RANGES PERMANENTLY IN THE ROOM.
2. ENSURED THAT COOLING IS PROVIDED AT THE ELEVATOR ELECTRICAL ROOMS TO MAINTAIN ADEQUATE WORKING TEMPERATURES FOR THE MICROPROCESSOR CONTROLS. AT THE VERY LEAST, THE EQUIPMENT IN THE ELECTRICAL ROOMS SHOULD BE ABLE TO NORMALLY FUNCTION AND STAY WITHIN WARRANTY WITH TEMPERATURES BETWEEN 50 AND 100 DEG. F. IF SPACE TEMPERATURES BELOW 90 DEG. F. ARE REQUIRED FOR THE EQUIPMENT, AIR CONDITIONING OF THE SPACE MAY BE REQUIRED.
3. WHEN THE TEMPERATURE OF A SPACE IS HIGHER THAN THE AMBIENT OUTDOOR TEMPERATURE, DESIGN THE SYSTEM FOR GENERAL VENTILATION TO BE USED TO PROVIDE COOLING: CFM REQUIRED = (HEAT REMOVAL IN BTU/Hr) / (1.10 X TMP. DIFF.).
4. TYPICAL ELECTRICAL ROOM HVAC REQUIREMENTS: 2.0 CFM / SQ. FT., (10 AIR CHANGES)/HR., 5 CFM/KVA OF TRANSFORMER.

Electrical

1. PROVIDE NEW POWER SERVICE LINES FROM THE UTILITY PROVIDER.
2. A VALUE OF 25% OF MINIMUM SPARE CAPACITY SHOULD BE INCLUDED IN EACH SYSTEM DESIGNED UNLESS OTHERWISE INDICATED BY THE CTA.
3. CIRCUITS SHOULD NOT BE LOADED TO MORE THAN 70% OF THEIR RATING TO ALLOW FOR FUTURE ADDITIONS TO THE CIRCUITS.
4. ALL NEW EQUIPMENT AND COMPONENTS SHOULD BE OF THE SAME TYPE AND MANUFACTURE TO THE GREATEST EXTENT POSSIBLE AS THE EXISTING ONES, TO PERMIT EASE OF MAINTENANCE AND STANDARDIZATION OF REPLACEMENT PARTS.
5. ELECTRICAL FIXTURES AT CTA FACILITIES ARE OFTEN SUBJECT TO POWER-WASHING OPERATIONS AND WEATHER CONDITIONS. ALL FIXTURES, PARTICULARLY THOSE INSTALLED IN DAMP OR WET CONDITIONS, SHOULD BE SPECIFIED TO INCLUDE THE RESPECTIVE UL LABEL AS APPLICABLE.
6. ALL ELECTRICAL HARDWARE SHOULD BE SPECIFIED TO BE OF STAINLESS STEEL EXCEPT IN DRY INTERIOR LOCATIONS, WHERE GALVANIZED HARDWARE MAY BE USED.
7. ALL CONDUITS USED IN THE ELEVATOR SHAFTS AND MACHINE ROOMS SHALL BE HEAVY WALL RIGID HOT-DIPPED GALVANIZED STEEL.
8. ALL ELECTRICAL SUPPORT METHODS SHOULD BE DETAILED AND CLEARLY DEFINED.
9. LAYOUT ELECTRICAL ROOMS TO COMPLY WITH THE CHICAGO ELECTRICAL CODE PARAGRAPH 18-27-110.26, THE DEPTH OF THE WORKING SPACE SHOULD NOT BE LESS THAN 3 FT. THE WIDTH OF THE WORKING SPACE IN FRONT OF ELECTRIC EQUIPMENT SHALL BE THE WIDTH OF THE EQUIPMENT OR 30 IN., WHICHEVER IS GREATER. THE MINIMUM CEILING HEIGHT OF WORKING SPACES FOR SERVICE EQUIPMENT, SWITCHBOARDS, PANEL BOARDS, OR MOTOR CONTROL CENTERS SHOULD BE 6-1/2 FEET MINIMUM.
10. MOTOR INFORMATION ON THE SCHEDULES OF THE DRAWINGS SHOULD BE COORDINATED AND CROSS REFERENCED WITH MOTOR INFORMATION THAT IS ON THE CONTROL DIAGRAMS OF THE DRAWINGS.
11. COORDINATE THE LOCATIONS OF THE ELEVATORS WITH THE MOTOR DISCONNECT-DEVICE LOCATIONS.
12. ALARMS SHOULD BE PROVIDED FOR MOTORS, PUMPS, AND OTHER ITEMS AS REQUIRED BY THE CTA.
13. SPARE EQUIPMENT AND CIRCUITS WHICH ARE FOUND DURING FIELD SURVEYS SHOULD BE COORDINATED WITH THE CTA PRIOR TO USE BY THE CONTRACTOR TO VERIFY THAT SUCH EQUIPMENT HAS NOT BEEN RESERVED FOR ANOTHER PURPOSE.
14. WHERE ELECTRICAL ITEMS ARE DEMOLISHED, THE CONTRACTOR SHOULD REMOVE ALL ASSOCIATED CONDUIT, WIRING, AND SUPPORTS BACK TO THE PANEL BOARD SERVING THE DEVICE. CONCEALED CONDUITS MAY BE EMPTIED, PLUGGED ABANDONED IN-PLACE ONLY WITH CTA CONCURRENCE.

ELECTRICAL POWER FOR THE PROJECT STATION

1. BASED ON THE PROPOSED SQUARE FOOTAGE OF THE PROJECT CTA FACILITIES AND THEIR ELECTRICAL USAGES, TOTAL ELECTRICAL USING THE FOLLOWING EQUIPMENT CATEGORIES: (1) LIGHTING, (2) RECEPTACLES, (3) HVAC, (4) ELEVATORS, AND (5) OTHER POWER REQUIREMENTS, THE RESULTS OF THESE CALCULATIONS ARE AS FOLLOWS:
 - a. AUSTIN CTA FACILITY FEEDER = 197 MINIMUM AMPS REQUIRED
 - b. MONROVIE CTA FACILITY FEEDER = 238 MINIMUM AMPS REQUIRED
 - c. CALIFORNIA CTA FACILITY FEEDER = 142 MINIMUM AMPS REQUIRED
 - d. IRVING PARK CTA FACILITY-EXISTING IRVING PARK STATION HOUSE FEEDER = 25 MINIMUM AMPS REQUIRED
 - e. IRVING PARK CTA FACILITY-NEW IRVING PARK STATION HOUSE FEEDER = 101 MINIMUM AMPS REQUIRED
 - f. IRVING PARK CTA FACILITY-EXISTING PULASKI STATION HOUSE FEEDER = 23 MINIMUM AMPS REQUIRED
 - g. IRVING PARK CTA FACILITY-EXISTING PULASKI STATION HOUSE FEEDER = 101 MINIMUM AMPS REQUIRED
2. REPLACE THE EXISTING FEEDERS SUPPLYING POWER TO THE CTA FACILITIES WITH FEEDERS OF SUFFICIENT CAPACITY.
3. AT EACH OF THE CTA FACILITIES OF THIS PROJECT, THERE IS A MIX OF OLD AND NEW ELECTRICAL EQUIPMENT. REPLACE THE OLDER ELECTRICAL AT THE SAME TIME WHEN THE FEEDERS ARE BEING REPLACED. CORRECT PRESENT-DAY CODE VIOLATIONS, SUCH AS INADEQUATE CLEARANCE FOR SOME OF THE ELECTRICAL PANELS.

SCOPING NOTES (CONT):

4. PROVIDE THE NEW ELEVATORS WITH AN ALTERNATIVE SOURCE OF ELECTRICAL POWER THAT OPERATES IN THE EVENT THAT THE NORMAL SOURCE OF ELECTRICAL POWER FAILS. AS A MINIMUM, PROVIDE EACH NEW ELEVATOR TO BE EQUIPPED WITH A BATTERY-POWERED EMERGENCY RETURN SYSTEM PER NFPA 70.
5. PROVIDE ALTERNATIVE POWER SYSTEMS OF THE EPSS LEVEL 1 CATEGORY TO BE USED FOR ESSENTIAL ELECTRICAL SYSTEMS THAT ARE POWERED BY THE ALTERNATIVE ELECTRICAL SYSTEM. FOR THE PROJECT CTA FACILITIES, ESSENTIAL ELECTRICAL SYSTEMS INCLUDE:
 - a. ELEVATORS
 - b. LIFE-SAFETY ILLUMINATION
 - c. FIRE DETECTION AND ALARM SYSTEMS
 - d. PUBLIC SAFETY COMMUNICATIONS SYSTEMS
 - e. ESSENTIAL VENTILATING AND SMOKE REMOVAL SYSTEMS
6. PROVIDE PROJECT DESIGN DOCUMENTS WHICH STATE THAT DOCUMENTATION SHOWING COMPLIANCE WITH NFPA STANDARD 110, EPSS LEVEL 1 REQUIREMENTS WILL BE A DELIVERABLE REQUIRED OF THE CONTRACTOR MEETING THE REQUIREMENTS OF NFPA CODES AND STANDARDS AS TESTING CRITERIA FOR LIFE SAFETY SYSTEMS.
7. PROVIDE POWER FOR OTHER SERVICES AS REQUIRED BY THE CTA FOR INTERNET, STATUS MONITORING, SECURITY SYSTEMS AND CLOSE-CIRCUIT TV.

GENERAL FACILITIES UPDATES - STATE OF GOOD REPAIRS

1. PROVIDE NEW WALL FINISHES FOR ALL THE PUBLIC SPACES AS INDICATED ON THE DRAWINGS.
2. ALL EXISTING PAINTED SURFACES AND NEW SURFACES TO BE PAINTED AS PART OF THE SCOPE OF THIS WORK, UNLESS NOTED OTHERWISE, INCLUDING BUT NOT LIMITED TO STOREFRONT SYSTEMS, WINDOW FRAMES, DOORS, COLUMNS AND STRUCTURAL ELEMENTS WITHIN THE PROJECT AREA ETC.
3. PROVIDE SURFACE TREATMENTS FOR FLOORS AS INDICATED.
4. REPAIR ALL SURFACES EXHIBITING DAMAGE TO MATCH ADJACENT SURFACES.
5. RETAIN AND CLEAN EXISTING LIGHT FIXTURES. COORDINATE LIGHTING UPGRADES WITH ONGOING CTA LIGHTING PROGRAMS.
6. PROVIDE COMPLETE ROOF REPLACEMENT AT STATIONS WHERE ADDITIONS TO THE STRUCTURES IMPACT THE EXISTING.
7. PROVIDE NEW ROOFS AT NEW STRUCTURES.
8. CLEAN ALL EXISTING SURFACES TO REMAIN (SGFT, MASONRY, GLASS ETC.)
9. MODIFY EXISTING HANDRAILS TO REMAIN TO MAKE THEM ADA COMPLIANT. PROVIDE NEW ADA COMPLIANT HANDRAILS WHERE EXISTING HANDRAILS CANNOT BE MADE COMPLIANT OR WHERE NEW HANDRAILS ARE INDICATED ON THE DRAWINGS.
10. MODIFICATION TO ANY HISTORIC ELEMENTS ARE TO BE AVOIDED. IF REQUIRED, THE PROPOSED MODIFICATIONS ARE TO BE REVIEWED WITH THE CITY OF CHICAGO'S LANDMARKS REVIEW PRIOR TO PERMIT AND ALTERATION. NOTE: THE CALIFORNIA STATION IS ON THE CITY OF CHICAGO'S HISTORIC STRUCTURES LIST.

NOT FOR CONSTRUCTION

RME Rubinos & Mosia Engineers, Inc.
200 S. Michigan Avenue, Suite 1500, Chicago, IL 60604-2482

cta CHICAGO TRANSIT AUTHORITY
ENGINEERING

SENSITIVE SECURITY INFORMATION

WARNING: THIS DOCUMENT CONTAINS SENSITIVE SECURITY INFORMATION THAT IS CONTROLLED BY THE CHICAGO TRANSIT AUTHORITY. IT IS THE PROPERTY OF THE CHICAGO TRANSIT AUTHORITY AND IS LOANED TO YOU FOR YOUR USE ONLY. IT IS NOT TO BE REPRODUCED, COPIED, OR DISSEMINATED WITHOUT THE WRITTEN PERMISSION OF THE CHICAGO TRANSIT AUTHORITY. IT IS TO BE DESTROYED WHEN NO LONGER REQUIRED. THE CHICAGO TRANSIT AUTHORITY IS NOT RESPONSIBLE FOR THE LOSS OF OR DAMAGE TO THIS DOCUMENT. THIS DOCUMENT IS CONTROLLED BY CTA'S CTSI AND IS NOT TO BE RELEASED TO THE PUBLIC.

DRAWING SCALE IS NOT GUARANTEED. CTA ASSUMES NO RISK OF LIABILITY FOR ERRORS CAUSED, DIRECTLY OR INDIRECTLY, BY SCALING OF THIS DRAWING.

ALL STATIONS ACCESSIBILITY PROGRAM

AUSTIN STATION - GREEN LINE
10% CONCEPTUAL PLANS

IN CHARGE
APPROVED BY
CHECKED BY
DESIGNED BY
DRAWN BY
PROJECT NO
FILE NAME

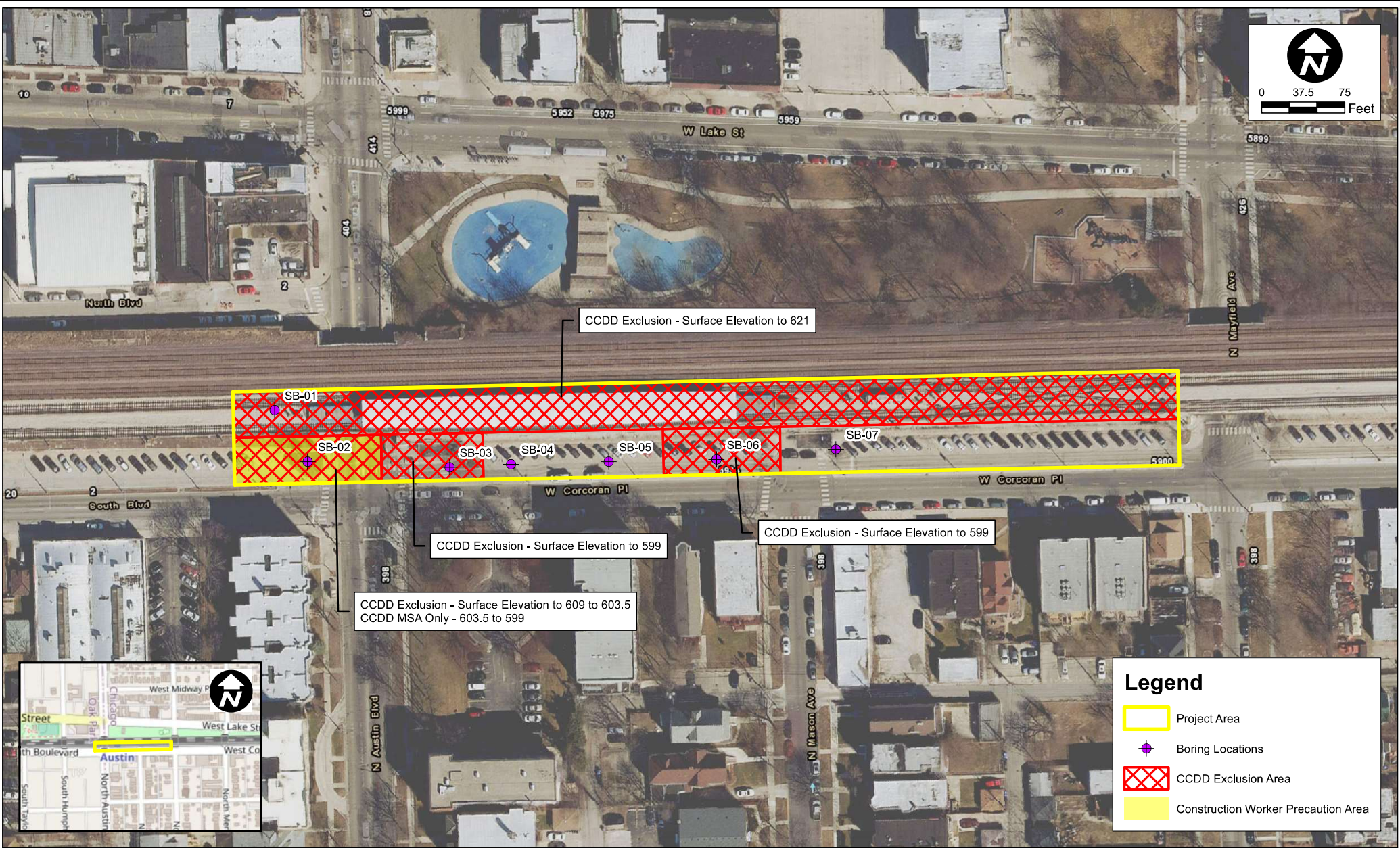
1	3/30/2011	ELEVATOR REVISION
MARK	DATE	DESCRIPTION

LOCATION: AUSTIN - GREEN LINE

SCOPING NOTES

AUS-118

SOIL MANAGEMENT PLAN



DRAWN BY NJB		DATE 6/4/2022			REVISIONS			CTA GREEN LINE - AUSTIN STATION		SHT NO. 1
CHECKED BY TC		DATE 6/4/2022			NO. DATE DESCRIPTION			EXHIBIT 4		DRAWING NO.
								SOIL MANAGEMENT PLAN		1 OF 1

PRELIMINARY SITE INVESTIGATION REPORT

CTA All Stations Accessibility Program

CTA Austin Station

351 N. Austin Blvd

Chicago, Illinois 60644

Prepared for:



Chicago Transit Authority

567 W. Lake Street

Chicago, IL 60661

Submitted to:



Epstein and Sons International, Inc.

600 West Fulton

Chicago, Illinois 60661

July 2021

GSG Project # 20-1052

Prepared by:



PRELIMINARY SITE INVESTIGATION REPORT

CTA All Stations Accessibility Program

CTA Austin Station

351 N. Austin Blvd

Chicago, Illinois 60644

Prepared for:

Chicago Transit Authority

567 W. Lake Street

Chicago, IL 60661

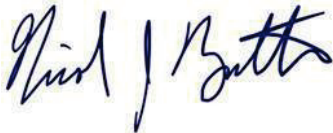
Submitted to:

Epstein Global

600 West Fulton

Chicago, Illinois 60661

WRITTEN BY:



Nicole Butkus, Project Geologist

July 19, 2021

Date

REVIEWED BY:



Ted Cagney, L.P.G., Project Manager

July 19, 2021

Date

APPROVED BY:



Ala Sassila, PhD, P.E., QC Manager

July 19, 2021

Date

TABLE OF CONTENTS

ACRONYMS	1
1.0 INTRODUCTION.....	1
1.1 SITE BACKGROUND	1
1.2 OBJECTIVES	1
1.3 ORGANIZATION	2
2.0 FIELD INVESTIGATION PROCEDURES.....	3
2.1 SOIL SAMPLING PROTOCOL.....	3
2.2 UTILITY CLEARANCE.....	3
2.3 SOIL SAMPLING PROCEDURES	3
2.4 GROUNDWATER SAMPLING PROCEDURES	4
2.5 SAMPLING AND ANALYSES PROGRAM	4
3.0 INVESTIGATION RESULTS	5
3.1 GENERAL FIELD OBSERVATIONS	5
3.2 PROJECT AREA GEOLOGY	5
3.3 STRATIGRAPHY.....	6
3.4 SAMPLE RATIONALE AND ANALYSES	6
3.5 ANALYTICAL DATA EVALUATIONS	7
3.5.1 Comparison to TACO Tier 1 Soil Remediation Objectives	7
3.5.2 Comparison to CCDD Maximum Allowable Concentration Values	7
3.5.3 Comparison to TACO Tier 1 Construction Worker Soil Remediation Objectives.....	10
3.5.4 Waste Characterization	10
3.6 SOIL MANAGEMENT EVALUATION	10
3.6.1 EXTENT OF SOIL IMPACTS.....	11
4.0 CONCLUSIONS AND RECOMMENDATIONS	14
4.1 CONCLUSIONS.....	14
4.2 RECOMMENDATIONS.....	14
4.2.1 Further Investigation	15
4.2.2 Prevention of Contaminant Migration	15
4.2.3 Construction Worker Exposure Monitoring	15
4.2.4 Conditions and Restrictions	16
5.0 REFERENCES.....	17

TABLES

Table 1-1	Sites Along the Project Area Containing RECs.....	1
Table 3-1	Taco Tier 1 Residential SROs And CCDD MAC Exceedances	9
Table 3-2	TACO Tier 1 Construction Worker SRO Exceedances	10
Table 3-3	Summary of Soil Impacts	13

EXHIBITS

Exhibit 1	Project Layout Map
Exhibit 2	RECs Map
Exhibit 3	Boring Location Map
Exhibit 4	Soil Management Plan

APPENDICES

Appendix A	Soil Boring Logs
Appendix B	Laboratory Analytical Reports

ACRONYMS

ACM	Asbestos Containing Material	PNA	Polynuclear Aromatic Hydrocarbon
bsg	Below Surface Grade	ppm	Parts per Million
CCDD	Clean Construction or Demolition Debris	PSI	Preliminary Site Investigation
COC	Contaminant of Concern	QA/QC	Quality Assurance/Quality Control
CCD	Chicago City Datum (579.88 ft. above mean tide New York)	RCRA	Resource Conservation and Recovery Act
CW	Construction Worker	REC	Recognized Environmental Condition
GPS	Global Positioning System	ROW	Right-of-Way
GRO	Groundwater Remediation Objective	SCGW	Soil Component of the Groundwater Ingestion Exposure Route
IAC	Illinois Administrative Code	SRO	Soil Remediation Objective
IEPA	Illinois Environmental Protection Agency	STAT	STAT Analysis Corporation
ILCS	Illinois Compiled Statutes	SVOC	Semi-Volatile Organic Compound
LBP	Lead Based Paint	TACO	Tiered Approach to Corrective Action Objectives
MAC	Maximum Allowable Concentration	TAL	Target Analyte List
MSA	Metropolitan Statistical Area	TCL	Target Compound List
NELAP	National Environmental Laboratory Accreditation Program	USCS	Unified Soil Classification System
NRCS	Natural Resources Conservation Service	USFO	Uncontaminated Soil Fill Operation
PESA	Preliminary Environmental Site Assessment	UST	Underground Storage Tank
PID	Photoionization Detector	VOC	Volatile Organic Compound

1.0 INTRODUCTION

GSG Consultants, Inc. (GSG) completed a Preliminary Site Investigation (PSI) for the proposed CTA Austin station upgrades located at 351 N. Austin Boulevard in Chicago, Cook County, Illinois. **Exhibit 1, Project Layout Map**, shows the PESA sites within and adjacent to the Project Area.

The Project Area is generally situated in the Austin neighborhood in the City of Chicago, in the western portion of Cook County. This PSI encompasses CTA Austin Station, and the associated parking lot south of the elevated CTA Green Line tracks.

1.1 SITE BACKGROUND

GSG completed a Preliminary Environmental Site Assessment PESA (PESA) for the Project Area in February 2021. The PESA identified six (6) sites within and/or immediately adjacent to the Project Area. Recognized Environmental Conditions (RECs) were identified on the following two (2) sites and located within or adjacent to the Project Area:

Table 1-1
Sites Along the Project Area Containing RECs

Property Name	PESA Site	REC(s) including <i>de minimis</i> Condition(s)	Regulatory Database(s)	Land Use
Austin Station (CTA Green Line) (Project Area)	1	Railroad tracks, unknown fill; <i>potential LBP, Railroad signal boxes</i>	None	Railroad
Union Pacific West Railroad Tracks (Project Area)	2	Railroad tracks, unknown fill; <i>potential LBP, Railroad signal boxes</i>	None	Railroad

Exhibit 2, RECs Map, shows the location of RECs / PIPs associated with the Project Area.

1.2 OBJECTIVES

The objectives of the PSI investigation were as follows:

- Determine areas of soil impacted by special waste or regulated substances associated with Recognized Environmental Concerns (RECs)/Potentially impacted Properties (PIPs) identified in the PESA report.
- Evaluate soils laboratory analytical data and determine location of materials exceeding Illinois Environmental Protection Agency (IEPA) Tiered Approach to Corrective Action

Objectives (TACO) Tier 1 Soil Remediation Objectives for Industrial/Commercial Properties (35 Ill. Admin. Code 742), and/or the most stringent maximum allowable concentration (MAC) for chemical constituents in uncontaminated soil established pursuant to Subpart F of 35 Ill. Admin. Code 1100.605.

- Provide recommendations regarding soil management and disposal options and identify locations of impacted soils where Construction Worker Precautions will be required during construction activities of the proposed improvement.

1.3 ORGANIZATION

This PSI Report is organized into the following sections:

- **Section 1.0 – Introduction**

This section presents a brief description of the Project Area location, the primary objectives of the investigation, the findings of the PESAs performed within the Project Area and organization of this report.

- **Section 2.0 – Field Investigation Procedures**

This section outlines the rationale for sampling and field activities associated with the Project Area investigation and field observations.

- **Section 3.0 – Investigation Results**

This section provides a summary of soil analytical results, an evaluation and interpretation of the data obtained, an analysis of applicable regulatory requirements, and an evaluation of soil reuse and management options.

- **Section 4.0 – Conclusions and Recommendations**

This section presents relevant findings and conclusions of the investigation along with recommendations for further actions.

- **Section 5.0 – References**

This section presents a list of references used in the preparation of this report.

2.0 FIELD INVESTIGATION PROCEDURES

This section describes the soil boring procedures, utility clearance, sample identification protocol, sampling and analyses program, quality control, and soil sampling procedures. **Exhibit 1, Project Layout Map**, shows the Project Area and the boring locations.

Field investigation activities were conducted under the direct supervision of the GSG Field Manager. All properties on which field investigation activities were performed are under the jurisdiction of the Chicago Transit Authority (CTA).

2.1 SOIL SAMPLING PROTOCOL

GSG developed a soil sampling plan based on the proposed improvement and location of the RECs identified in relation to the Project Area. The sampling plan included advancement of a total seven (7) soil borings. Borings were placed in areas where the proposed work is to be located.

2.2 UTILITY CLEARANCE

Prior to drilling, GSG notified the Chicago DIGGER one-call system for utility locates within the public right-of-way (ROW) and the CTA for utility locates within the Project Area. Boring locations were adjusted as needed based on utility conflicts, site conditions, and other access issues.

2.3 SOIL SAMPLING PROCEDURES

GSG advanced a total seven (7) borings to a maximum depth of 10 feet bsg under the direction of the GSG Field Manager. The six (6) soil borings at street level were performed using a track-mounted Geoprobe 7822 drill rig with a 2.25" Dual-Tube sampling system. The Dual-Tube method does not require the introduction of water for borehole advancement or sampling and allows samples to be obtained which have not been impacted by drilling fluids. The borings were continuously sampled from existing ground surface to termination depth in each boring using a 60-inch long by 1-inch wide acetate sampler. Field equipment was either new or decontaminated and cleaned prior to each use. The sample collected at track level was collected utilizing hand equipment.

GSG's Field Manager inspected each soil sample interval for the presence of soil staining and/or olfactory impacts, and color and texture were classified per the Unified Soil Classification System (USCS). Soil samples were screened in 1-foot intervals using a calibrated Photoionization Detector (PID) for the presence of VOCs using the headspace procedure. PID readings above ambient air, recorded in parts per million (ppm), were measured and recorded on the field boring logs. Soil samples for VOC analysis were collected immediately after sample retrieval in accordance with *SW-846 Method 5035* using an Encore™ sampler and transported to the laboratory in a separate cooler.

Following the collection of the VOC samples, soil samples to be analyzed for SVOCs/PNAs, PCBs, Pesticides, TAL Metals, Total Cyanide, and pH were collected. Soil samples were taken directly from



2.0 FIELD INVESTIGATION PROCEDURES

the acetate liners and placed in clean laboratory-supplied sampling containers with Teflon®-lined lids. A new pair of clean disposable gloves were worn while collecting samples and were changed at each new boring location to prevent any cross-contamination of the samples.

All soil samples were labeled with a unique identifier, placed in a cooler packed with ice, stabilized to a temperature of between 1 and 4 degrees Celsius (°C), transported to STAT Analysis Corporation (STAT), a National Environmental Laboratory Accreditation Program (NELAP) certified laboratory, and received under standard chain-of-custody procedures.

Detailed descriptions of the subsurface soils and PID readings recorded during the field investigation are provided in **Appendix A, Soil Boring Logs**. The stratifications shown on the boring logs represent the conditions only at the actual boring locations and the approximate boundary between subsurface materials; however, the actual transition may be gradual.

2.4 GROUNDWATER SAMPLING PROCEDURES

No water was present after drilling activities were completed; therefore, groundwater samples were not collected.

2.5 SAMPLING AND ANALYSES PROGRAM

GSG developed analytical testing program for the PSI based on the nature of the RECs identified in the PESA. The soil samples collected during the PSI investigation were submitted for analysis to STAT in accordance with the procedures outlined in *SW-846, Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods*. STAT reported that all laboratory analysis and quality control/quality assurance procedures were performed in accordance with the requirements of *35 Illinois Administrative Code (IAC) 186, Accreditation of Environmental Laboratories*. The **Laboratory Analytical Reports**, including the Chains of Custody, are included in **Appendix B**.

Soil samples were analyzed for the following parameters:

- Volatile Organic Compounds (VOCs) (US EPA Methods 5035/8260B);
- Semi-volatile Organic Compounds (SVOCs)/Polynuclear Aromatic Hydrocarbons (PNAs) (US EPA Method 8270D);
- Polychlorinated Biphenyls (PCBs): US EPA Method SW8082A
- Pesticides: US EPA Method SW8081B
- Target Analyte List (TAL) Total Metals (US EPA Methods 3050B/6010D/7470A);
- Total Cyanide (US EPA Method 9012A); and
- pH (US EPA Method 9045C).

3.0 INVESTIGATION RESULTS

This section presents the results of GSG's field investigation and includes a discussion of laboratory analytical results compared to applicable screening criteria, significant field observations, Project Area geology and topography, a review of applicable regulatory requirements, and an evaluation of soil management options.

Samples were analyzed for the parameters listed in **Section 2.5**. Laboratory results were reviewed by GSG for field and laboratory precision, accuracy, and completeness in accordance with procedures and QC limits. Laboratory data packages are included as **Appendix B**.

3.1 GENERAL FIELD OBSERVATIONS

General observations made during GSG's site investigation are summarized as follows:

- Fill was observed in all seven (7) borings, consisting of gravel and black or black and brown, sand and gravel or black and brown sand and/or glass fragments, extending to a maximum depth of five (5) feet below surface grade (bsg);
- Native materials encountered during the investigation typically consisted of brown, mottled-gray, and/or gray silty clay, with trace gravel below the fill layer to the maximum boring termination depth of ten (10) feet bsg. A layer of gray, poorly graded gravel was observed in boring SB-03 below the brown silty clay material and above the gray silty clay layer, at depths ranging from six (6) feet bsg to six and one-half (6.5) feet bgs;
- No water was present once drilling activities were completed;
- Petroleum odors were not observed; and
- PID readings were not observed above ambient air.

3.2 PROJECT AREA GEOLOGY

GSG reviewed published geologic information to develop an understanding of site geology and anticipated groundwater flow direction. Groundwater flow can be locally impacted by utilities, wells, or other man-induced changes, but generally corresponds with surface topography. The 2018 USGS 7.5-minute River Forest Quadrangle shows the Project Area to be sloping generally from west to east, generally toward Lake Michigan.

According to the "Potential for Contamination of Shallow Aquifers in Illinois (Plate 1)," (Richard C. Berg, John P. Kempton, ISGS, 1984), the Project Area is located within the E and C1 rating areas. The geologic materials in the E rating area consist of "uniform, relatively impermeable silty or clayey till or other fine-grained materials more than 50 feet thick; no sand and gravel identified." The potential for contamination is "low" because of low hydraulic conductivity, 1×10^{-9} to 1×10^{-7} cm/sec and good attenuation capacities. The geologic materials in the C1 rating area consist of "Permeable bedrock of Ordovician, Silurian, and Mississippian age between 20 and 50 feet deep. This sequence of geologic materials is similar to A1; but more than 20 feet of till or other fine-grained material overlies the

bedrock.” The contamination potential is the highest of all C ratings, although till or fine-grained materials may give considerable protection to underlying water supplies.

Based on the “Potential for Contamination of Shallow Aquifers by Surface and Near-Surface Waste Disposal (Plate 2)”, the Project Area is located within the D2, B2, and AX rating area. The geologic materials in the D2 rating area consist of “uniform, relatively impermeable silty or clayey till or other fine-grained materials more than 20 feet thick; no sand and gravel identified.” The potential for contamination is “low” because of low hydraulic conductivity, 1×10^{-9} to 1×10^{-7} cm/sec and good attenuation capacities. The geologic materials in the B2 rating area consist of “jointed bedrock 5 to 20 feet deep; overlain by loess and/or clayey or silty till, which may contain a relatively impermeable weathered zone [paleosol].” The contamination potential is high; however, B2 sequences are rated lower than B1 for two reasons. First, underlying aquifers are protected better by silty or clayey till, with hydraulic conductivities ranging from 1×10^{-9} to 1×10^{-7} cm/sec, than by sandy till. Second, although silt has a lower attenuation capacity than sandy till, in the B2 sequences the loess (silt) is so thick – at least 15 feet thick – that attenuation may mitigate the effects of leachates. The geologic materials in the AX rating area consist of “modern river alluvium consisting of unconsolidated, variably textured materials ranging from clay to gravel (Cahokia Alluvium). These areas also include narrow terraces of sand and gravel (Henry Formation) as well as small deposits of peat (Grayslake Peat) and lacustrine silt and clay (Carmi Member, Equality Formation). The potential for contaminating both surface-and-groundwater is high. With seasonal flooding and erosion due to proximity to waterways, these materials are highly unsuitable for surface and near-surface waste-disposal facilities.

3.3 STRATIGRAPHY

Evaluation of the stratigraphy of the boreholes advanced during the investigation revealed fill material at all locations consisting of gravel and black or black and brown, sand and gravel with glass fragments, extending to a maximum depth of five (5) feet below surface grade (bsg). Native materials encountered during the investigation typically consisted of brown/mottled gray, and gray silty clay with trace gravel below the fill layer to the maximum boring termination depth of ten (10) feet bsg. A layer of gray poorly graded gravel was observed in boring SB-03 below the brown silty clay material and above the gray silty clay layer, at depths ranging from six (6) feet bsg to six and one half (6.5) feet bgs. Detailed descriptions of the subsurface soils and PID readings recorded during the site investigation are provided in **Appendix A, Soil Boring Logs**.

3.4 SAMPLE RATIONALE AND ANALYSES

GSG collected thirteen (13) soil samples during the field investigation from the seven (7) boring locations. Soil samples were selected for laboratory analysis based on the soil classification, sample interval, visual and olfactory observations, and PID readings.

3.5 ANALYTICAL DATA EVALUATIONS

3.5.1 COMPARISON TO TACO TIER 1 SOIL REMEDIATION OBJECTIVES

Soil analytical results were compared to the Tiered Approach to Corrective Action Objectives (TACO) Tier 1 Soil Remediation Objectives (SROs) for Industrial/Commercial Properties for the Ingestion, Inhalation, and the Soil Component of the Groundwater (SCGW) (Class I) Ingestion exposure routes listed in *35 IAC Part 742, Appendix B, Table A [Illinois Pollution Control Board (IPCB), 2013]*.

As part of this evaluation, Ionizable Organics [*Appendix B, Table A, footnote (i)*] and Inorganics [*Appendix B, Table A, footnote (m)*] with pH-dependent solubility were compared to pH-specific SROs for the SCGW (Class I) Ingestion exposure route, presented in *35 IAC Part 742, Appendix B, Tables C and D (IPCB, 2013)*.

The evaluation of the five (5) PNAs (Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Dibenzo(a,h)anthracene, and Indeno(1,2,3-c,d)pyrene), per *Appendix B, Table A, footnote w*, may be compared to the concentrations of Polynuclear Aromatic Hydrocarbon Chemicals in Background Soils (in any populated area), presented in *35 IAC Part 742, Appendix A, Table H*.

As an alternative in the evaluation of Inorganics [*Appendix B, Table A, footnote (m)*], soil sample extraction results from either the TCLP or SPLP analyses may be compared to the SCGW (Class I) Ingestion exposure routes listed in *35 IAC Part 742, Appendix B, Table A (IPCB, 2013)*.

Soil analytical results compared to TACO Tier 1 Soil Remediation Objectives (SROs) for Residential Properties for the Ingestion, Inhalation, and the Soil Component of the Groundwater (SCGW) (Class I) Ingestion exposure routes are shown in **Table 1, Soil Analytical Results Compared to TACO Tier 1 Residential SROs**, which are provided at the end of this report.

Following a comparison review of the data, five (5) of the 13 samples only exceeded the TACO Tier 1 Residential Ingestion exposure route SROs, one (1) of the 13 samples exceeded only the TACO Tier 1 SCGW Ingestion exposure route SROs, and five (5) of the 13 samples exceeded the TACO Tier 1 SCGW Ingestion exposure route and Tier 1 Residential Ingestion exposure route SROs.

Table 3-1, TACO Tier 1 Residential SRO and CCDD MAC Exceedances, presented below, summarizes the sample locations and soil results that exceeded the TACO Tier 1 Residential exposure route SROs, Soil Component of the Groundwater (Class I) SROs, and CCDD MAC Values.

3.5.2 COMPARISON TO CCDD MAXIMUM ALLOWABLE CONCENTRATION VALUES

GSG compared the soil analytical results to the most stringent CCDD Maximum Allowable Concentration (MAC) values listed in *35 IAC Part 1100.605, Subpart F [IPCB, 2012]*.

As an alternative to the MAC value for Inorganics [*footnote (m) MAC Table*], soil sample extraction results from either the TCLP or SPLP analyses may be compared to the SCGW (Class I) Ingestion exposure routes listed in *35 IAC Part 742, Appendix B, Table A [IPCB, 2013]*.

Soil samples with detections of Inorganics shall be determined to meet the CCDD requirements if any of the following analyses meet the screening criteria:

1. Total concentration is below the MAC value;
2. TCLP result is below the TACO Tier 1 SCGW (Class I) SRO; or
3. SPLP result is below the TACO Tier 1 SCGW (Class I) SRO.

Soil analytical results compared to most stringent CCDD Maximum Allowable Concentration (MAC) values listed in *35 IAC Part 1100.605, Subpart F*, are shown in **Table 2, Soil Analytical Results Compared to CCDD MAC Values**, which are provided at the end of this report.

GSG compared the soil analytical results to most stringent CCDD Maximum Allowable Concentration (MAC) values listed in *35 IAC Part 1100.605, Subpart F*. Following a comparison review of the data, below is a summary of the findings:

- Six (6) of the thirteen (13) samples exceeded the CCDD most stringent MAC Values;
- Five (5) of the thirteen (13) samples exceeded the City of Chicago MAC Values;
- Five (5) of the thirteen (13) samples exceeded the MSA MAC Values; and
- Four (4) of the thirteen (13) samples were outside of the CCDD-acceptable pH range.

Following a comparison review of the data, seven (7) soil samples for this PSI exceeded the total metal CCDD MAC Values or the Soil Component of Groundwater (SCGW) for Chromium, Cobalt, Iron, Lead, and/or Manganese. A representative soil sample for each of the COC's previously listed were submitted for TCLP and/or SPLP analysis. The results were below CCDD MAC Values for TCLP Chromium, TCLP Iron, SPLP Cobalt, and SPLP Manganese; therefore, all samples with lower total metal results for Chromium, Iron, Cobalt, and Manganese do not exceed the applicable CCDD MAC Values. The representative Lead sample, SB-02-01, however, exceeded the SCGW values.

Table 3-1, TACO Tier 1 Residential SRO and CCDD MAC Exceedances, presented earlier in this section, lists COCs with concentrations exceeding the corresponding CCDD MAC screening criteria.

**TABLE 3-1
TACO TIER 1 RESIDENTIAL SROS AND CCDD MAC EXCEEDANCES**

Sample ID	Exceeding Constituent	Result	Residential SROs		SCGW SROs	CCDD MAC Values	Elevation Range of Impacted Soil
			Ingestion	Inhalation	Class I	MSA/Chicago/Non-MSA (Non-Pop)	
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(ft. bsg)
SB-01							
SB-01-01	Benzo(a)pyrene	0.49	1.3 ^b	NC	8	2.1/1.3/0.98 (0.09)	624.0 to 621.0*
	Dibenzo(a,h)anthracene	0.23	0.2 ^b	NC	2	0.42/0.2/0.15 (0.09)	
	Arsenic	20	13	750	32 ^a	13/13/11.3	
	Lead	300	400	NC	107	107/107/107	
SB-02							
SB-02-01	Benzo(a)pyrene	0.73	1.3 ^b	NC	8	2.1/1.3/0.98 (0.09)	609 to 603.5
	Dibenzo(a,h)anthracene	0.23	0.2 ^b	NC	2	0.42/0.2/0.15 (0.09)	
	Arsenic	19	13	750	33 ^a	13/13/11.3	
	Lead	580	800	NC	107	107/107/107	
	SPLP Lead	0.044	NC	NC	0.0075	0.0075/0.0075/0.0075	
SB-02-02	Arsenic	13	13	750	33 ^a	13/13/11.3	603.5 to 599*
SB-03							
SB-03-01	Arsenic	22	13	750	33	13/13/11.3	609 to 603.5
	pH	9.35	NC	NC	NC	6.25-9.0	
SB-03-02	pH	9.70	NC	NC	NC	6.25-9.0	603.5 to 599*
SB-06							
SB-06-01	Arsenic	31	13	750	33 ^a	13/13/11.3	609 to 603.5
	pH	9.07	NC	NC	NC	6.25-9.0	
SB-06-02	Arsenic	15	13	750	33 ^a	13/13/11.3	603.5 to 599*
	pH	9.14	NC	NC	NC	6.25-9.0	
Bold Regulatory Value Exceeded ^a pH specific SROs, 35 IAC 742, Appendix B, Table C ^b Location specific background value NC No toxicity criteria set for this exposure route * Impacted soil extends below the limits of the boring; Contractor should field verify extent of impacted soils for disposal purpose.							

3.5.3 COMPARISON TO TACO TIER 1 CONSTRUCTION WORKER SOIL REMEDIATION OBJECTIVES

GSG compared soil analytical data to the TACO Tier 1 Construction Worker (CW) SROs for the Soil Ingestion and Soil Inhalation exposure routes, listed in *35 IAC Part 742, Appendix B, Table B (IPCB, 2013)*, to determine locations within the Project Area that pose a potential health risk to workers involved in construction activities. Soil analytical results as compared to Construction Worker SROs are shown in **Table 3, Soil Analytical Results Compared to Construction Worker SROs** included at the back of this report. Following a comparison review of the data, six (6) of the 22 samples exceeded the TACO Tier 1 Construction Worker SROs.

Table 3-2, TACO Tier 1 Construction Worker SRO Exceedances, presented below, lists COCs with concentrations exceeding the TACO Tier 1 CW SROs. Construction Worker Precautions will need to be implemented at the impacted boring locations.

TABLE 3-2 TACO TIER 1 CONSTRUCTION WORKER SRO EXCEEDANCES					
Sample ID	Exceeding Constituent	Result	Construction Worker SROs		Elevation Range of Impacted Soil
			Ingestion	Inhalation	
		(mg/kg)	(mg/kg)	(mg/kg)	(ft. bsg)
SB-2					
SB-2-1	Mercury	0.36	61	0.1	609 to 603.5
Bold Regulatory Value Exceeded					
* Impacted soil extends below the limits of the boring; Contractor should assume impacted soil extends to full depth of excavation.					

3.5.4 WASTE CHARACTERIZATION

A Waste Characterization sample was collected. GSG collected a representative soil sample for analysis for Waste Characterization analysis (Green Sheet) requirements for Soil Disposal purposes from the site. The sample collected was taken to STAT Analytical laboratory and analyzed for "Green Sheet" parameters. The laboratory analytical results did not indicate the presence of any chemical constituents above the hazardous waste characteristics, and such soils require removal from the site could be disposed of at a permitted Subtitle D landfill facility.

3.6 SOIL MANAGEMENT EVALUATION

In accordance with applicable regulations, GSG evaluated the soil analytical results to determine soil management options within the Project Area. Soil management options include reuse on site; disposal at an off-site approved USFO or CCDD facility, or Subtitle D non-hazardous disposal facility; and placement of construction worker safety precautions on reused soils to protect workers in these areas.

Soils that were determined to exceed the TACO Tier 1 Residential Ingestion Exposure Route cannot be reused on site and must be disposed of at a licensed Subtitle D facility. Soils that exceeded the CCDD MAC values and/or the acceptable pH range may be reused on site, but any excess and/or unsuitable soils that need to be removed from the site must be disposed of at a licensed Subtitle D facility.

Based on the results of the Phase II ESA, the **fill materials** at four (4) boring locations exceeded the TACO Tier 1 Ingestion exposure route. The fill materials cannot be reused on site and must be disposed of at a Subtitle D facility as solid waste.

Soils that exceeded the Most Stringent CCDD MAC values, but do not exceed the CCDD MAC values for the City of Chicago and/or an MSA county, may be reused on site and any excess or unsuitable material may be disposed of at an appropriate CCDD facility.

Based on the results of the Phase II ESA, the **native soils** at three (3) exceeded the Most Stringent and City of Chicago CCDD MAC values. Material from this location may be reused on site if suitable, and any unsuitable or excess material may be removed from the site and disposed of at a CCDD facility in an MSA county or disposed of at a Subtitle D facility as solid waste.

All other soils may be reused on site, if suitable, or disposed of at a licensed CCDD facility or an Uncontaminated Soil Fill Operation (USFO).

Discussions regarding soil suitability for reuse in this report are based on environmental considerations only. The design engineer, and/or contractor, should refer to the project geotechnical reports for geotechnical considerations and recommendations.

GSG determined the location of impacted soil exceeding the TACO Tier 1 Construction Worker SROs, as presented in **Table 3-2**, *"TACO Tier 1 Construction Worker SRO Exceedances"*, and **Exhibit 4, Soil Management Plan**. Construction Worker Precautions will need to be implemented in these locations during construction activities. T

3.6.1 EXTENT OF SOIL IMPACTS

The extent of impacted soil at each boring location was calculated using the following methodology:

- Horizontal: The extent of impacted soil was measured at one-half the distance between borings with nearest clean sample location that does not exceed the applicable TACO Tier 1 SROs or CCDD MAC values; where there were no adjacent borings, the extent of impacted soil will extend to the existing/proposed ROW line, or the limits of construction, whichever distance is greater.
- Vertical: The extent of impacted soil was measured to the next clean sample elevation or the boring termination depths, whichever was shallower.

Table 3-3, “*Summary of Soil Impacts*”, below, is a summary of the soil impacts and lists the soil disposal options for each sample collected within the Project Area. **Exhibit 4**, Soil Management Plan, shows the locations and depths of the various soil classifications and management options for the Project Area.



3.0 INVESTIGATION RESULTS

TABLE 3-3 SUMMARY OF SOIL IMPACTS								
Boring ID	Sample ID	PID Readings Above Background (ppm)	pH	Contaminants of Concern		Soil Management		
				Above All Applicable Comparison Criteria	Above Most Stringent MAC, Chicago MAC, or SCGW Criteria Only	Eligible for CCDD or USFO	Soil Disposal Classification	Construction Worker Precautions
SB-01	SB-01-01	None detected	8.54	Dibenzo(a,h)anthracene	Benzo(a)pyrene, Arsenic	No	Non-Special Waste	No
SB-02	SB-02-01	None detected	7.50	Dibenzo(a,h)anthracene, Arsenic	Benzo(a)pyrene, Lead	No	Non-Special Waste	Yes
	SB-02-02	None detected	8.75	None	Arsenic	Yes (MSA Only)	Unrestricted	No
SB-03	SB-03-01	None detected	9.35	Arsenic	None	No	Non-Special Waste	No
	SB-03-02	None detected	9.70	None	None	No	Non-Special Waste	No
SB-04	SB-04-01	None detected	8.57	None	None	Yes	Unrestricted	No
SB-05	SB-05-01	None detected	7.81	None	None	Yes	Unrestricted	No
SB-06	SB-06-01	None detected	9.07	Arsenic	None	No	Non-Special Waste	No
	SB-06-02	None detected	9.14	Arsenic	None	No	Non-Special Waste	No
SB-07	SB-07-01	None detected	8.63	None	None	Yes	Unrestricted	No

4.0 CONCLUSIONS AND RECOMMENDATIONS

4.1 CONCLUSIONS

GSG collected soil samples from two (2) PESA sites in the Project Area, located at 313 E. 63rd Street and 336 E. 63rd Street in Chicago, Cook County, Illinois. Samples were analyzed for chemical constituents and analytical results were compared to applicable TACO Tier 1 Industrial/Commercial SROs, the most stringent CCDD MAC Values and TACO Tier 1 Construction Worker SROs. An evaluation of sample results to screening criteria revealed that soils with concentrations above the SROs or CCDD MAC Values exist and must be managed accordingly. Based on this evaluation, GSG provided recommendations for soil management options.

4.2 RECOMMENDATIONS

Special Provisions for Removal and Disposal of Regulated Substances (IDOT, 2018) specifies conditions for the removal and disposal of regulated materials. GSG recommends the reuse of on-site materials that meet applicable regulations to the largest extent practicable.

Following a comparison review of the data, five (5) of the 13 samples only exceeded the TACO Tier 1 Ingestion exposure route SROs, one (1) of the 13 samples exceeded only the TACO Tier 1 SCGW Ingestion exposure route SROs, and five (5) of the 13 samples exceeded the TACO Tier 1 SCGW Ingestion exposure route and Tier 1 Residential Ingestion exposure route SROs. These soils cannot be reused on-site and must be disposed of at a Subtitle D facility. Soil sample results compared to TACO Tier 1 Industrial/Commercial SROs are presented in **Table 1, Soil Analytical Results Compared to TACO Tier 1 Residential SROs**, and are provided as at the end of this report.

GSG compared the soil analytical results to most stringent CCDD Maximum Allowable Concentration (MAC) values listed in 35 IAC Part 1100.605, Subpart F. Following a comparison review of the data, below is a summary of the findings:

- Six (6) of the thirteen (13) samples exceeded the CCDD most stringent MAC Values;
- Five (5) of the thirteen (13) samples exceeded the City of Chicago MAC Values;
- Five (5) of the thirteen (13) samples exceeded the MSA MAC Values; and
- Four (4) of the thirteen (13) samples were outside of the CCDD-acceptable pH range.

These soils may be reused on-site; but if they are removed from the site, they must be disposed of at a Subtitle D facility.

Following a comparison review of the data against the TACO Tier 1 Construction Worker SROs, it was revealed that one (1) of the 13 samples exceeded the TACO Tier 1 Construction Worker SROs. Construction Worker Precautions will be necessary when working in the affected areas. Soil sample results compared to Tier 1 Construction Worker SROs are presented in **Table 3, Soil Analytical Results Compared to Construction Worker SROs**, which are provided at the end of this report.



Soils at all other locations within the Project Area are classified as “Unrestricted” and may be managed on site or disposed of at a CCDD facility or a USFO, as long as the soils fall in the range of pH values for acceptance at a CCDD facility or a USFO and do not exhibit any PID readings above ambient air levels.

If groundwater is encountered within trenches during construction activities, it may be managed on site and allowed to infiltrate back into the ground. If managed off site, the groundwater must be sampled, analyzed, and characterized to determine how the groundwater will be collected, containerized, and transported to an off-site facility. Off-site disposal of groundwater requires treatment and testing, prior to any discharge. Off-site disposal of groundwater would require proper waste characterization and acceptance at an approved Special Waste disposal facility.

4.2.1 FURTHER INVESTIGATION

GSG does not recommend further investigation of the Project Area since soil has been fully characterized. However, if evidence of soil contamination such as visual and/or olfactory are discovered during the construction phase, or if work is performed outside the bounds of the Project Area, soil should be tested and evaluated.

4.2.2 PREVENTION OF CONTAMINANT MIGRATION

GSG recommends implementing soil containment and stormwater runoff control measures during construction to prevent the potential of contaminants migration from any impacted soils that are stockpiled within the Project Area. If soil must be stockpiled, GSG recommends that the Contractor containerize or place any non-special waste, special waste, non-hazardous waste, or hazardous waste soils, if encountered, on plastic sheeting, covered with plastic sheeting, and protect with 12-inch to 18-inch berms until subsequent loading, transportation, and disposal. The Contractor shall not allow runoff from stockpiled soil or material to enter storm drains or leave the site.

4.2.3 CONSTRUCTION WORKER EXPOSURE MONITORING

Areas with COC concentrations above the Tier 1 Construction Worker SROs will require Construction Worker exposure notifications. COC concentrations at six (6) boring locations were above the Tier 1 Construction Worker SROs, as presented in **Table 3, Soil Analytical Results Compared to Construction Worker SROs**, which are provided at the end of this report.

During the site investigation, elevated PID readings were encountered. Therefore, if soil unearthed during excavation activities exhibits PID readings, odors, or discoloration indicative of contamination, GSG recommends that the soil is sampled to determine appropriate worker protection during construction work in these areas. Construction worker health and safety is the responsibility of the construction contractor.

4.2.4 CONDITIONS AND RESTRICTIONS

Discussions in this report regarding soil and groundwater management, including suitability for reuse and disposal, are based on environmental considerations only. The design engineer, and/or contractor, should refer to the project geotechnical reports for geotechnical considerations regarding soil suitability for reuse within the Project Area.

This report is intended for use by the CTA and its representatives for the sole purpose of evaluating the conditions and proposed soil and groundwater management at the Project Area in anticipation of future construction activities. GSG is not responsible for the use of this report, its findings, conclusions, and recommendations, by those parties outside CTA jurisdiction or beyond its intended purpose.

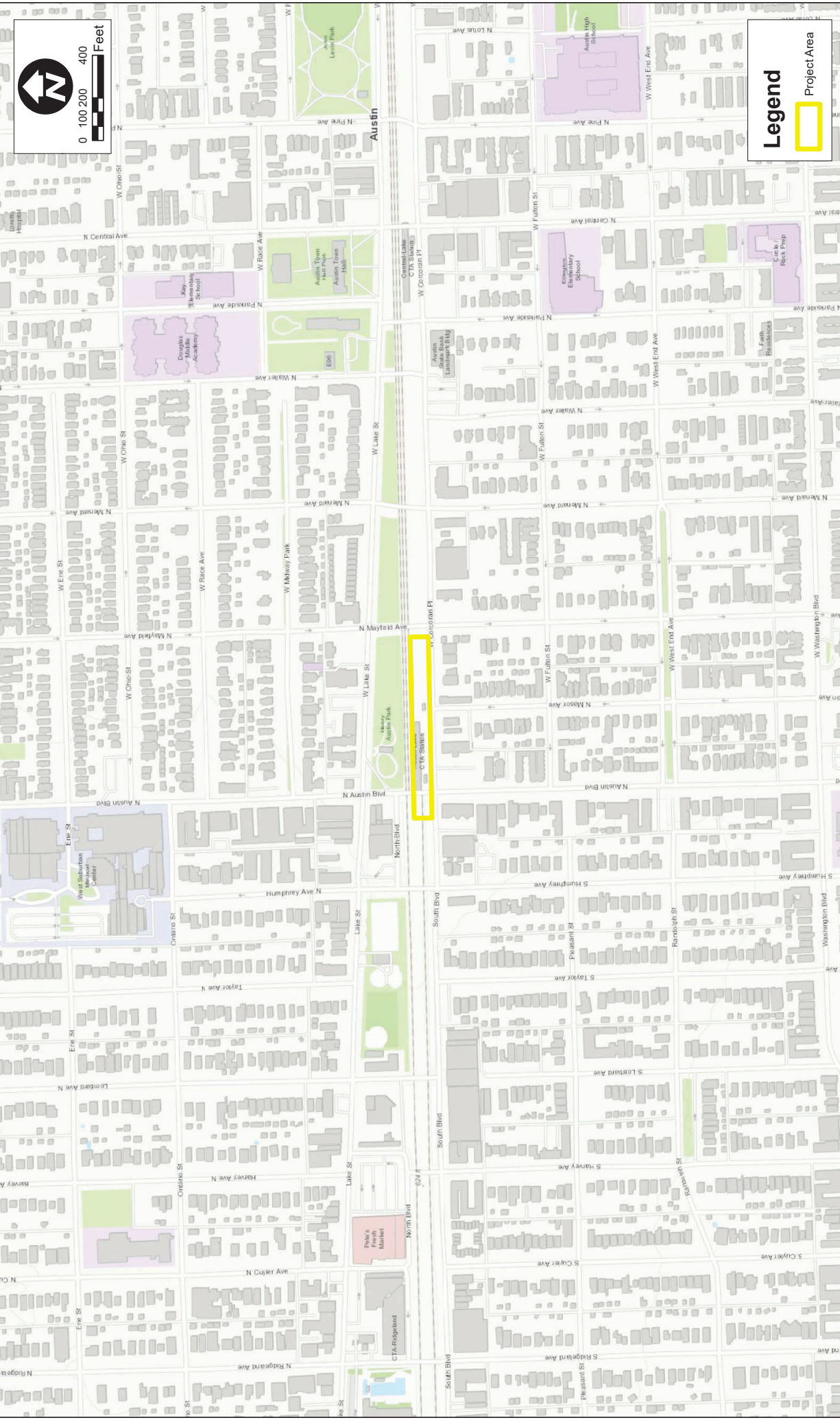
Any soils that exhibit hazardous waste characteristics upon completion of waste characterization testing would require disposal at a Subtitle C landfill. GSG does not anticipate any soils would be classified as hazardous waste based on the available analytical data.

5.0 REFERENCES

- Berg, Richard C., Kempton, John P., and Cartwright, Keros, 1984, *Potential for Contamination of Shallow Aquifers from Land Burial of Municipal Wastes*, Illinois State Geological Survey (ISGS), Champaign-Urbana, Illinois.
- GSG Consultants, Inc., June 2021, Preliminary Environmental Site Assessment, prepared for Chicago Transit Authority, Chicago, Illinois.
- Illinois Pollution Control Board (IPCB), July 15, 2013, FINAL, *35 Illinois Administrative Code, Part 742, Tiered Approach to Corrective Action Objectives*, Amended.
- IPCB, August 27, 2012, FINAL, *35 Illinois Administrative Code, Part 1100, Clean Construction or Demolition Debris Fill Operations and Uncontaminated Soil Fill Operations*, Amended.
- United States Environmental Protection Agency. (US EPA), August 13, 2015, FINAL *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, U S EPA publication SW-846, Update V, Federal Register Vol. 80, No. 156, pp. 48522 - 48528.
- Willman, H.B., 1971, *Summary of the Geology of the Chicago Area*, Illinois State Geological Survey (ISGS), Urbana, Illinois.

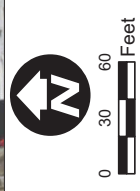
EXHIBITS

EXHIBIT 1	Project Layout Map
EXHIBIT 2	RECs Map
EXHIBIT 3	Project Layout Map
EXHIBIT 4	Soil Management Plan



DRAWN BY	NJB	DATE	7/12/2021
CHECKED BY	TC	DATE	7/12/2021
		 831 Copart Court • Schaumburg, IL 60173 Tel: 630.994.2606 • Fax: 312.733.5012	
CTA GREEN LINE - AUSTIN STATION - PSI			
SHT NO.	1		
DRAWING NO.	PROJECT LOCATION MAP		
	EXHIBIT 1		
	1 OF 1		

[illegible]



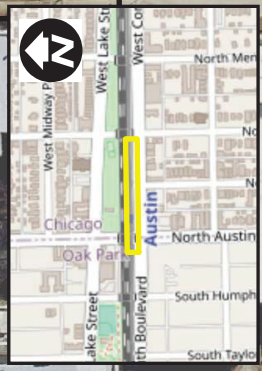
Legend

Boring Locations

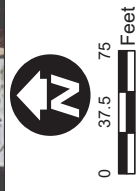
Project Area

PESA Sites

RECs



CTA GREEN LINE - AUSTIN STATION		SHT NO. 1
EXHIBIT 2		DRAWING NO.
REC MAP		1 OF 1
REVISIONS		
NO.	DATE	DESCRIPTION
EPSTEIN		
323 Cooper Court • Schaumburg, IL 60193		
Tel: 630.994.2600 • Fax: 312.733.6012		
PROFESSIONAL SEAL		
DRAWN BY	NJB	DATE 7/15/2021
CHECKED BY	TC	DATE 7/15/2021



Legend

- Project Area
- Boring Locations
- CCDD - MSA Only
- CCDD Exclusion Area
- Construction Worker Precaution Area

CTA GREEN LINE - AUSTIN STATION		SHT NO. 1
EXHIBIT 4		DRAWING NO.
SOIL MANAGEMENT PLAN		1 OF 1
REVISIONS		
NO.	DATE	DESCRIPTION



DRAWN BY	NJB	DATE	7/15/2021
CHECKED BY	TC	DATE	7/15/2021



APPENDICES

APPENDIX A	Analytical Tables
APPENDIX B	Soil Boring Logs
APPENDIX C	Laboratory Analytical Reports

TABLES

TABLE 1	Soil Analytical Results Compared to TACO Tier 1 Residential SROs
TABLE 2	Soil Analytical Results Compared to CCDD MAC Values
TABLE 3	Soil Analytical Results Compared to Construction Worker SROs

TABLE 1

Soil Analytical Results Compared to TACO Tier 1 Residential SROs

TABLE 1a
Soil Analytical Results
VOCs Compared to TACO Tier I Residential Ingestion, Inhalation, and SCGW SROs
CTA Austin Station
Chicago, Illinois

	RESIDENTIAL		SCGW	Sample Date	Depth (ft)	SB-01-01	SB-02-1	SB-02-02	SB-03-01	SB-03-02	SB-04-01	SB-05-01	SB-06-01	SB-06-02
	Ingestion	Inhalation				1-2	2-3	8-9	2-3	6-7	1-2	1-2	2-3	6-7
VOCs														
Acetone	70,000	100,000	25			< 0.16	< 0.15	N/A	< 0.080	N/A	< 0.075	< 0.077	< 0.093	N/A
Benzene	12	0.8	0.03			< 0.010	< 0.0098	N/A	< 0.0053	N/A	< 0.0050	< 0.0051	< 0.0062	N/A
Bromodichloromethane	10	3,000	0.6			< 0.010	< 0.0098	N/A	< 0.0053	N/A	< 0.0050	< 0.0051	< 0.0062	N/A
Bromoform	81	53	0.8			< 0.010	< 0.0098	N/A	< 0.0053	N/A	< 0.0050	< 0.0051	< 0.0062	N/A
Bromomethane	110	10	0.2			< 0.021	< 0.020	N/A	< 0.011	N/A	< 0.010	< 0.010	< 0.012	N/A
2-Butanone	NC	NC	NC			< 0.16	< 0.15	N/A	< 0.080	N/A	< 0.075	< 0.077	< 0.093	N/A
Carbon disulfide	7,800	720	32			< 0.10	< 0.098	N/A	< 0.053	N/A	< 0.050	< 0.051	< 0.062	N/A
Carbon tetrachloride	44	0.64	0.07			< 0.010	< 0.0098	N/A	< 0.0053	N/A	< 0.0050	< 0.0051	< 0.0062	N/A
Chlorobenzene	1,600	130	1			< 0.010	< 0.0098	N/A	< 0.0053	N/A	< 0.0050	< 0.0051	< 0.0062	N/A
Chloroethane	NC	NC	NC			< 0.021	< 0.020	N/A	< 0.011	N/A	< 0.010	< 0.010	< 0.012	N/A
Chloroform	100	0.3	0.6			< 0.010	< 0.0098	N/A	< 0.0053	N/A	< 0.0050	< 0.0051	< 0.0062	N/A
Chloromethane	NC	NC	NC			< 0.021	< 0.020	N/A	< 0.011	N/A	< 0.010	< 0.010	< 0.012	N/A
Dibromochloromethane	1,600	1,300	0.4			< 0.010	< 0.0098	N/A	< 0.0053	N/A	< 0.0050	< 0.0051	< 0.0062	N/A
1,1-Dichloroethane	7,800	1,300	23			< 0.010	< 0.0098	N/A	< 0.0053	N/A	< 0.0050	< 0.0051	< 0.0062	N/A
1,1-Dichloroethene	7	0.4	0.02			< 0.010	< 0.0098	N/A	< 0.0053	N/A	< 0.0050	< 0.0051	< 0.0062	N/A
1,1-Dichloroethene	3,900	290	0.06			< 0.010	< 0.0098	N/A	< 0.0053	N/A	< 0.0050	< 0.0051	< 0.0062	N/A
cis-1,2-Dichloroethene	780	1,200	0.4			< 0.010	< 0.0098	N/A	< 0.0053	N/A	< 0.0050	< 0.0051	< 0.0062	N/A
trans-1,2-Dichloroethene	1,600	3,100	0.7			< 0.010	< 0.0098	N/A	< 0.0053	N/A	< 0.0050	< 0.0051	< 0.0062	N/A
1,2-Dichloropropane	9	15	0.03			< 0.010	< 0.0098	N/A	< 0.0053	N/A	< 0.0050	< 0.0051	< 0.0062	N/A
cis-1,3-Dichloropropene	6.4	1.1	0.004			< 0.0042	< 0.0039	N/A	< 0.0021	N/A	< 0.0020	< 0.0021	< 0.0025	N/A
trans-1,3-Dichloropropene	6.4	1.1	0.004			< 0.0042	< 0.0039	N/A	< 0.0021	N/A	< 0.0020	< 0.0021	< 0.0025	N/A
Ethylbenzene	7,800	400	13			< 0.010	< 0.0098	N/A	< 0.0053	N/A	< 0.0050	< 0.0051	< 0.0062	N/A
2-Hexanone	NC	NC	NC			< 0.042	< 0.039	N/A	< 0.021	N/A	< 0.020	< 0.021	< 0.025	N/A
4-Methyl-2-pentanone	NC	NC	NC			< 0.042	< 0.039	N/A	< 0.021	N/A	< 0.020	< 0.021	< 0.025	N/A
Methylene chloride	85	13	0.02			< 0.010	< 0.020	N/A	< 0.011	N/A	< 0.010	< 0.010	< 0.012	N/A
Methyl tert-butyl ether	780	8,800	0.32			< 0.010	< 0.0098	N/A	< 0.0053	N/A	< 0.0050	< 0.0051	< 0.0062	N/A
Styrene	16,000	1,500	4			< 0.010	< 0.0098	N/A	< 0.0053	N/A	< 0.0050	< 0.0051	< 0.0062	N/A
1,1,2,2-Tetrachloroethane	NC	NC	NC			< 0.010	< 0.0098	N/A	< 0.0053	N/A	< 0.0050	< 0.0051	< 0.0062	N/A
Tetrachloroethene	12	11	0.06			< 0.010	< 0.0098	N/A	< 0.0053	N/A	< 0.0050	< 0.0051	< 0.0062	N/A
Toluene	16,000	650	12			< 0.010	< 0.0098	N/A	< 0.0053	N/A	< 0.0050	< 0.0051	< 0.0062	N/A
1,1,1-Trichloroethane	NC	1,200	2			< 0.010	< 0.0098	N/A	< 0.0053	N/A	< 0.0050	< 0.0051	< 0.0062	N/A
1,1,2-Trichloroethane	310	1,800	0.02			< 0.010	< 0.0098	N/A	< 0.0053	N/A	< 0.0050	< 0.0051	< 0.0062	N/A
Trichloroethene	58	5	0.06			< 0.010	< 0.0098	N/A	< 0.0053	N/A	< 0.0050	< 0.0051	< 0.0062	N/A
Vinyl chloride	0.46	0.28	0.01			< 0.010	< 0.0098	N/A	< 0.0053	N/A	< 0.0050	< 0.0051	< 0.0062	N/A
Xylenes, Total	16,000	320	150			< 0.031	< 0.029	N/A	< 0.016	N/A	< 0.015	< 0.015	< 0.019	N/A

NOTES

- All results expressed in milligrams per kilogram (mg/kg)
- NC = No toxicity criteria for this exposure route
- NA = Not Analyzed
- SCGW = Soil Component of the Groundwater
- Bold Shaded Values = Exceeds TACO Tier 1 SRO

TABLE 1a

Soil Analytical Results
 VOCs Compared to TACO Tier I Residential Ingestion, Inhalation, and SCGW SROs
 CTA Austin Station
 Chicago, Illinois

	RESIDENTIAL		SCGW	Sample Date	SB-07-01 6/16/2021	
	Ingestion	Inhalation				Depth (ft)
VOCs						
Acetone	70,000	100,000	25		< 0.073	
Benzene	12	0.8	0.03		< 0.0049	
Bromodichloromethane	10	3,000	0.6		< 0.0049	
Bromoform	81	53	0.8		< 0.0049	
Bromomethane	110	10	0.2		< 0.0097	
2-Butanone	NC	NC	NC		< 0.073	
Carbon disulfide	7,800	720	32		< 0.049	
Carbon tetrachloride	44	0.64	0.07		< 0.0049	
Chlorobenzene	1,600	130	1		< 0.0049	
Chloroethane	NC	NC	NC		< 0.0097	
Chloroform	100	0.3	0.6		< 0.0049	
Chloromethane	NC	NC	NC		< 0.0097	
Dibromochloromethane	1,600	1,300	0.4		< 0.0049	
1,1-Dichloroethane	7,800	1,300	23		< 0.0049	
1,2-Dichloroethane	7	0.4	0.02		< 0.0049	
1,1-Dichloroethene	3,900	290	0.06		< 0.0049	
cis-1,2-Dichloroethene	780	1,200	0.4		< 0.0049	
trans-1,2-Dichloroethene	1,600	3,100	0.7		< 0.0049	
1,2-Dichloropropane	9	15	0.03		< 0.0049	
cis-1,3-Dichloropropene	6.4	1.1	0.004		< 0.0019	
trans-1,3-Dichloropropene	6.4	1.1	0.004		< 0.0019	
Ethylbenzene	7,800	400	13		< 0.0049	
2-Hexanone	NC	NC	NC		< 0.019	
4-Methyl-2-pentanone	NC	NC	NC		< 0.019	
Methylene chloride	85	13	0.02		< 0.0097	
Methyl tert-butyl ether	780	8,800	0.32		< 0.0049	
Styrene	16,000	1,500	4		< 0.0049	
1,1,2,2-Tetrachloroethane	NC	NC	NC		< 0.0049	
Tetrachloroethene	12	11	0.06		< 0.0049	
Toluene	16,000	650	12		< 0.0049	
1,1,1-Trichloroethane	NC	1,200	2		< 0.0049	
1,1,2-Trichloroethane	310	1,800	0.02		< 0.0049	
Trichloroethene	58	5	0.06		< 0.0049	
Vinyl chloride	0.46	0.28	0.01		< 0.0049	
Xylenes, Total	16,000	320	150		< 0.015	

NOTES

1. All results expressed in milligrams per kilogram (mg/kg)
2. NC = No toxicity criteria for this exposure route
3. NA = Not Analyzed
4. SCGW = Soil Component of the Groundwater
5. Bold Shaded Values = Exceeds TACO Tier 1 SRO

TABLE 1b
Soil Analytical Results
SVOCs Compared to TACO Tier I Residential Ingestion and Inhalation and SCGW SROs
CTA Austin Station
Chicago, Illinois

	RESIDENTIAL		SCGW	Sample	SB-01-01	SB-02-1	SB-02-02	SB-03-01	SB-03-02
	Ingestion	Inhalation	Class I	Date	6/10/2021	6/16/2021	6/16/2021	6/16/2021	6/16/2021
				Depth (ft)	1-2	2-3	8-9	2-3	6-7
				pH	8.54	7.50	NA	9.35	NA
SVOCs									
Aniline	NC	NC	NC		< 0.36	< 0.38	N/A	< 0.37	N/A
Benzidine	NC	NC	NC		< 0.35	< 0.37	N/A	< 0.37	N/A
Benzoic acid	310,000	NC	400 - 440*		< 0.89	< 0.94	N/A	< 0.93	N/A
Benzyl alcohol	NC	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A
Bis(2-chloroethoxy)methane	NC	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A
Bis(2-chloroethyl)ether	0.6	0.2	0.0004		< 0.18	< 0.19	N/A	< 0.19	N/A
Bis(2-ethylhexyl)phthalate	46	31,000	3,600		< 0.89	< 0.94	N/A	< 0.93	N/A
4-Bromophenyl phenyl ether	NC	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A
Butyl benzyl phthalate	16,000	930	930		< 0.18	< 0.19	N/A	< 0.19	N/A
Carbazole	32	NC	0.6		0.2	< 0.19	N/A	< 0.19	N/A
4-Chloroaniline	310	NC	0.7		< 0.18	< 0.19	N/A	< 0.19	N/A
4-Chloro-3-methylphenol	NC	NC	NC		< 0.35	< 0.37	N/A	< 0.37	N/A
2-Chloronaphthalene	NC	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A
2-Chlorophenol	390	53,000	1.5 - 4*		< 0.18	< 0.19	N/A	< 0.19	N/A
4-Chlorophenyl phenyl ether	NC	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A
Dibenzofuran	NC	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A
1,2-Dichlorobenzene	7,000	560	17		< 0.18	< 0.19	N/A	< 0.19	N/A
1,3-Dichlorobenzene	NC	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A
1,4-Dichlorobenzene	NC	11,000	2		< 0.18	< 0.19	N/A	< 0.19	N/A
3,3'-Dichlorobenzidine	1	NC	0.007		< 0.18	< 0.19	N/A	< 0.19	N/A
2,4-Dichlorophenol	230	NC	0.48 - 1*		< 0.18	< 0.19	N/A	< 0.19	N/A
Diethyl phthalate	63,000	2,000	470		< 0.18	< 0.19	N/A	< 0.19	N/A
2,4-Dimethylphenol	1,600	NC	9		< 0.18	< 0.19	N/A	< 0.19	N/A
Dimethyl phthalate	NC	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A
4,6-Dinitro-2-methylphenol	NC	NC	NC		< 0.35	< 0.37	N/A	< 0.37	N/A
2,4-Dinitrophenol	160	NC	0.2		< 0.89	< 0.94	N/A	< 0.93	N/A
2,4-Dinitrotoluene	0.9	NC	0.0008		< 0.035	< 0.037	N/A	< 0.037	N/A
2,6-Dinitrotoluene	0.9	NC	0.0007		< 0.035	< 0.037	N/A	< 0.037	N/A
Di-n-butyl phthalate	7,800	2,300	2,300		< 0.18	< 0.19	N/A	< 0.19	N/A
Di-n-octyl phthalate	1,600	10,000	10,000		< 0.18	< 0.19	N/A	< 0.19	N/A
Hexachlorobenzene	0.4	1	2		< 0.18	< 0.19	N/A	< 0.19	N/A
Hexachlorobutadiene	NC	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A
Hexachlorocyclopentadiene	550	10	400		< 0.18	< 0.19	N/A	< 0.19	N/A
Hexachloroethane	78	NC	0.5		< 0.18	< 0.19	N/A	< 0.19	N/A
Isophorone	15,600	4,600	8		< 0.18	< 0.19	N/A	< 0.19	N/A
2-Methylnaphthalene	NC	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A
2-Methylphenol	3,900	NC	15		< 0.18	< 0.19	N/A	< 0.19	N/A
4-Methylphenol	NC	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A
2-Nitroaniline	NC	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A
3-Nitroaniline	NC	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A
4-Nitroaniline	NC	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A
2-Nitrophenol	NC	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A
4-Nitrophenol	NC	NC	NC		< 0.35	< 0.37	N/A	< 0.37	N/A
Nitrobenzene	39	92	0.1		< 0.035	< 0.037	N/A	< 0.037	N/A
N-Nitrosodi-n-propylamine	0.09	NC	0.00005		< 0.035	< 0.037	N/A	< 0.037	N/A
N-Nitrosodimethylamine	NC	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A
N-Nitrosodiphenylamine	130	NC	1		< 0.035	< 0.037	N/A	< 0.037	N/A
2, 2'-oxybis(1-Chloropropane)	NC	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A
Pentachlorophenol	3	NC	0.02 - 0.54*		< 0.035	< 0.037	N/A	< 0.037	N/A
Phenol	23,000	NC	100		< 0.18	< 0.19	N/A	< 0.19	N/A
Pyridine	NC	NC	NC		< 0.72	< 0.76	N/A	< 0.75	N/A
1,2,4-Trichlorobenzene	780	3,200	5		< 0.18	< 0.19	N/A	< 0.19	N/A
2,4,5-Trichlorophenol	7,800	NC	26 - 400*		< 0.18	< 0.19	N/A	< 0.19	N/A
2,4,6-Trichlorophenol	58	200	0.07 - 0.37*		< 0.18	< 0.19	N/A	< 0.19	N/A

NOTES

1. All results expressed in milligrams per kilogram (mg/kg)
2. NC = No toxicity criteria for this exposure route
3. NA = Not Analyzed
4. * = Appendix B, Table C, pH specific SROs
5. SCGW = Soil Component of the Groundwater
6. Bold Shaded Values = Exceeds TACO Tier 1 SRO



TABLE 1b
Soil Analytical Results
SVOCs Compared to TACO Tier I Residential Ingestion and Inhalation and SCGW SROs
CTA Austin Station
Chicago, Illinois

	RESIDENTIAL		SCGW	Sample	SB-04-01	SB-05-01	SB-06-01	SB-06-02	SB-07-01
	Ingestion	Inhalation	Class I	Date	6/16/2021	6/16/2021	6/16/2021	6/16/2021	6/16/2021
				Depth (ft)	1-2	1-2	2-3	6-7	3-4
				pH	8.57	7.81	9.07		8.63
SVOCs									
Aniline	NC	NC	NC		< 0.38	< 0.39	< 0.39	N/A	< 0.38
Benzidine	NC	NC	NC		< 0.38	< 0.38	< 0.39	N/A	< 0.38
Benzoic acid	310,000	NC	400 - 440*		< 0.96	< 0.96	< 0.98	N/A	< 0.96
Benzyl alcohol	NC	NC	NC		< 0.20	< 0.20	< 0.20	N/A	< 0.20
Bis(2-chloroethoxy)methane	NC	NC	NC		< 0.20	< 0.20	< 0.20	N/A	< 0.20
Bis(2-chloroethyl)ether	0.6	0.2	0.0004		< 0.20	< 0.20	< 0.20	N/A	< 0.20
Bis(2-ethylhexyl)phthalate	46	31,000	3,600		< 0.96	< 0.96	< 0.98	N/A	< 0.96
4-Bromophenyl phenyl ether	NC	NC	NC		< 0.20	< 0.20	< 0.20	N/A	< 0.20
Butyl benzyl phthalate	16,000	930	930		< 0.20	< 0.20	< 0.20	N/A	< 0.20
Carbazole	32	NC	0.6		< 0.20	< 0.20	< 0.20	N/A	< 0.20
4-Chloroaniline	310	NC	0.7		< 0.20	< 0.20	< 0.20	N/A	< 0.20
4-Chloro-3-methylphenol	NC	NC	NC		< 0.38	< 0.38	< 0.39	N/A	< 0.38
2-Chloronaphthalene	NC	NC	NC		< 0.20	< 0.20	< 0.20	N/A	< 0.20
2-Chlorophenol	390	53,000	1.5 - 4*		< 0.20	< 0.20	< 0.20	N/A	< 0.20
4-Chlorophenyl phenyl ether	NC	NC	NC		< 0.20	< 0.20	< 0.20	N/A	< 0.20
Dibenzofuran	NC	NC	NC		< 0.20	< 0.20	< 0.20	N/A	< 0.20
1,2-Dichlorobenzene	7,000	560	17		< 0.20	< 0.20	< 0.20	N/A	< 0.20
1,3-Dichlorobenzene	NC	NC	NC		< 0.20	< 0.20	< 0.20	N/A	< 0.20
1,4-Dichlorobenzene	NC	11,000	2		< 0.20	< 0.20	< 0.20	N/A	< 0.20
3,3'-Dichlorobenzidine	1	NC	0.007		< 0.20	< 0.20	< 0.20	N/A	< 0.20
2,4-Dichlorophenol	230	NC	0.48 - 1*		< 0.20	< 0.20	< 0.20	N/A	< 0.20
Diethyl phthalate	63,000	2,000	470		< 0.20	< 0.20	< 0.20	N/A	< 0.20
2,4-Dimethylphenol	1,600	NC	9		< 0.20	< 0.20	< 0.20	N/A	< 0.20
Dimethyl phthalate	NC	NC	NC		< 0.20	< 0.20	< 0.20	N/A	< 0.20
4,6-Dinitro-2-methylphenol	NC	NC	NC		< 0.38	< 0.38	< 0.39	N/A	< 0.38
2,4-Dinitrophenol	160	NC	0.2		< 0.96	< 0.96	< 0.98	N/A	< 0.96
2,4-Dinitrotoluene	0.9	NC	0.0008		< 0.038	< 0.038	< 0.039	N/A	< 0.038
2,6-Dinitrotoluene	0.9	NC	0.0007		< 0.038	< 0.038	< 0.039	N/A	< 0.038
Di-n-butyl phthalate	7,800	2,300	2,300		< 0.20	< 0.20	< 0.20	N/A	< 0.20
Di-n-octyl phthalate	1,600	10,000	10,000		< 0.20	< 0.20	< 0.20	N/A	< 0.20
Hexachlorobenzene	0.4	1	2		< 0.20	< 0.20	< 0.20	N/A	< 0.20
Hexachlorobutadiene	NC	NC	NC		< 0.20	< 0.20	< 0.20	N/A	< 0.20
Hexachlorocyclopentadiene	550	10	400		< 0.20	< 0.20	< 0.20	N/A	< 0.20
Hexachloroethane	78	NC	0.5		< 0.20	< 0.20	< 0.20	N/A	< 0.20
Isophorone	15,600	4,600	8		< 0.20	< 0.20	< 0.20	N/A	< 0.20
2-Methylnaphthalene	NC	NC	NC		< 0.20	< 0.20	< 0.20	N/A	< 0.20
2-Methylphenol	3,900	NC	15		< 0.20	< 0.20	< 0.20	N/A	< 0.20
4-Methylphenol	NC	NC	NC		< 0.20	< 0.20	< 0.20	N/A	< 0.20
2-Nitroaniline	NC	NC	NC		< 0.20	< 0.20	< 0.20	N/A	< 0.20
3-Nitroaniline	NC	NC	NC		< 0.20	< 0.20	< 0.20	N/A	< 0.20
4-Nitroaniline	NC	NC	NC		< 0.20	< 0.20	< 0.20	N/A	< 0.20
2-Nitrophenol	NC	NC	NC		< 0.20	< 0.20	< 0.20	N/A	< 0.20
4-Nitrophenol	NC	NC	NC		< 0.38	< 0.38	< 0.39	N/A	< 0.38
Nitrobenzene	39	92	0.1		< 0.038	< 0.038	< 0.039	N/A	< 0.038
N-Nitrosodi-n-propylamine	0.09	NC	0.00005		< 0.038	< 0.038	< 0.039	N/A	< 0.038
N-Nitrosodimethylamine	NC	NC	NC		< 0.20	< 0.20	< 0.20	N/A	< 0.20
N-Nitrosodiphenylamine	130	NC	1		< 0.038	< 0.038	< 0.039	N/A	< 0.038
2, 2'-oxybis(1-Chloropropane)	NC	NC	NC		< 0.20	< 0.20	< 0.20	N/A	< 0.20
Pentachlorophenol	3	NC	0.02 - 0.54*		< 0.038	< 0.038	< 0.039	N/A	< 0.038
Phenol	23,000	NC	100		< 0.20	< 0.20	< 0.20	N/A	< 0.20
Pyridine	NC	NC	NC		< 0.77	< 0.78	< 0.79	N/A	< 0.77
1,2,4-Trichlorobenzene	780	3,200	5		< 0.20	< 0.20	< 0.20	N/A	< 0.20
2,4,5-Trichlorophenol	7,800	NC	26 - 400*		< 0.20	< 0.20	< 0.20	N/A	< 0.20
2,4,6-Trichlorophenol	58	200	0.07 - 0.37*		< 0.20	< 0.20	< 0.20	N/A	< 0.20

NOTES

1. All results expressed in milligrams per kilogram (mg/kg)
2. NC = No toxicity criteria for this exposure route
3. NA = Not Analyzed
4. * = Appendix B, Table C, pH specific SROs
5. SCGW = Soil Component of the Groundwater
6. Bold Shaded Values = Exceeds TACO Tier 1 SRO



TABLE 1c
Soil Analytical Results
PNAs Compared to TACO Tier I Residential Ingestion and Inhalation and SCGW SROs
CTA Austin Station
Chicago, Illinois

	RESIDENTIAL		SCGW	Sample Date	Depth (ft)	SB-01-01	SB-02-1	SB-02-02	SB-03-01	SB-03-02	SB-04-01	SB-05-01	SB-06-01	SB-06-02
	Ingestion	Inhalation				6/10/2021	6/16/2021	6/16/2021	6/16/2021	6/16/2021	6/16/2021	6/16/2021	6/16/2021	6/16/2021
PNAs			Class I			1-2	2-3	8-9	2-3	6-7	1-2	1-2	2-3	6-7
Acenaphthene	4,700	NC	570			< 0.035	< 0.037	N/A	< 0.037	N/A	< 0.038	< 0.038	< 0.039	N/A
Acenaphthylene	NC	NC	NC			0.25	0.056	N/A	< 0.037	N/A	< 0.038	< 0.038	< 0.039	N/A
Anthracene	23,000	NC	12,000			0.35	0.12	N/A	< 0.037	N/A	< 0.038	< 0.038	< 0.039	N/A
Benzo(a)anthracene	1.1*	NC	2			0.39	0.53	N/A	< 0.037	N/A	< 0.038	< 0.038	< 0.039	N/A
Benzo(a)pyrene	1.3*	NC	8			0.49	0.73	< 0.037	< 0.037	N/A	< 0.038	< 0.038	< 0.039	N/A
Benzo(b)fluoranthene	1.5*	NC	5			0.88	0.63	N/A	< 0.037	N/A	< 0.038	< 0.038	< 0.039	N/A
Benzo(g,h,i)perylene	NC	NC	NC			0.72	0.48	N/A	< 0.037	N/A	< 0.038	< 0.038	< 0.039	N/A
Benzo(k)fluoranthene	9	NC	49			0.63	0.53	N/A	< 0.037	N/A	< 0.038	< 0.038	< 0.039	N/A
Chrysene	88	NC	160			0.71	0.58	N/A	< 0.037	N/A	< 0.038	< 0.038	< 0.039	N/A
Dibenz(a,h)anthracene	0.2*	NC	2			0.23	0.23	< 0.037	< 0.037	N/A	< 0.038	< 0.038	< 0.039	N/A
Fluoranthene	3,100	NC	4,300			0.87	0.98	N/A	< 0.037	N/A	< 0.038	< 0.038	< 0.039	N/A
Fluorene	3,100	NC	560			< 0.035	< 0.037	N/A	< 0.037	N/A	< 0.038	< 0.038	< 0.039	N/A
Indeno(1,2,3-cd)pyrene	0.9	NC	14			0.53	0.4	N/A	< 0.037	N/A	< 0.038	< 0.038	< 0.039	N/A
Naphthalene	1,600	270	12			< 0.035	< 0.037	N/A	< 0.037	N/A	< 0.038	< 0.038	< 0.039	N/A
Phenanthrene	NC	NC	NC			0.33	0.35	N/A	< 0.037	N/A	< 0.038	< 0.038	< 0.039	N/A
Pyrene	2,300	NC	4,200			0.76	0.88	N/A	< 0.037	N/A	< 0.038	< 0.038	< 0.039	N/A

NOTES

1. All results expressed in milligrams per kilogram (mg/kg)
2. NC = No toxicity criteria for this exposure route
3. NA = Not Analyzed
4. * = Location specific background value
5. SCGW = Soil Component of the Groundwater
6. Bold Shaded Values = Exceeds TACO Tier I SRO

TABLE 1c
Soil Analytical Results
PNAs Compared to TACO Tier I Residential Ingestion and Inhalation and SCGW SROs
CTA Austin Station
Chicago, Illinois

	RESIDENTIAL		SCGW	Sample Date	SB-07-01 6/16/2021
	Ingestion	Inhalation	Class I	Depth (ft)	3-4
PNAs					
Acenaphthene	4,700	NC	570		< 0.038
Acenaphthylene	NC	NC	NC		< 0.038
Anthracene	23,000	NC	12,000		< 0.038
Benzo(a)anthracene	1.1*	NC	2		< 0.038
Benzo(a)pyrene	1.3*	NC	8		< 0.038
Benzo(b)fluoranthene	1.5*	NC	5		< 0.038
Benzo(g,h,i)perylene	NC	NC	NC		< 0.038
Benzo(k)fluoranthene	9	NC	49		< 0.038
Chrysene	88	NC	160		< 0.038
Dibenz(a,h)anthracene	0.2*	NC	2		< 0.038
Fluoranthene	3,100	NC	4,300		< 0.038
Fluorene	3,100	NC	560		< 0.038
Indeno(1,2,3-cd)pyrene	0.9	NC	14		< 0.038
Naphthalene	1,600	270	12		< 0.038
Phenanthrene	NC	NC	NC		< 0.038
Pyrene	2,300	NC	4,200		< 0.038

NOTES

1. All results expressed in milligrams per kilogram (mg/kg)
2. NC = No toxicity criteria for this exposure route
3. NA = Not Analyzed
4. * = Location specific background value
5. SCGW = Soil Component of the Groundwater
6. Bold Shaded Values = Exceeds TACO Tier 1 SRO

TABLE 1d

Soil Analytical Results
Inorganics and pH Compared to TACO Tier 1 Residential Ingestion and Inhalation and SCGW SROs
CTA Austin Station
Chicago, Illinois

Inorganics (mg/kg)	RESIDENTIAL		SCGW (CLASS I)					Sample Date	Depth (ft)								
	Ingestion	Inhalation	pH 7.25 to 7.74		pH 7.75 to 8.24		pH 8.25 to 8.74		pH 8.75 to 9.0								
			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Aluminum	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Antimony	31	NC	NC	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Arsenic	13	750	30	31	31	31	32	33	33	33	33	33	33	33	33	33	33
Barium	5,500	690,000	1,800	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100
Beryllium	160	1,300	1,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000
Cadmium	78	1,800	59	430	430	430	430	430	430	430	430	430	430	430	430	430	430
Calcium	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Chromium	230	270	32	28	28	28	24	21	21	21	21	21	21	21	21	21	21
Cobalt	4,700	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Copper	2,900	NC	330,000	330,000	330,000	330,000	330,000	330,000	330,000	330,000	330,000	330,000	330,000	330,000	330,000	330,000	330,000
Cyanide	1,600	NC	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Iron	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Lead	400	NC	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107
Magnesium	325,000	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Manganese	1,600	91,000	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Mercury ^c (Total)	23	10	6.4	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Nickel	1,600	13,000	700	3,800	3,800	3,800	3,800	3,800	3,800	3,800	3,800	3,800	3,800	3,800	3,800	3,800	3,800
Potassium	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Selenium	390	NC	3.3	2.4	2.4	2.4	1.8	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Silver	390	NC	39	110	110	110	110	110	110	110	110	110	110	110	110	110	110
Sodium	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Thallium	6.3	NC	3.4	3.8	3.8	3.8	4.4	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Vanadium	550	NC	980	980	980	980	980	980	980	980	980	980	980	980	980	980	980
Zinc	23,000	NC	16,000	53,000	53,000	53,000	53,000	53,000	53,000	53,000	53,000	53,000	53,000	53,000	53,000	53,000	53,000
pH	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
TCLP (mg/L)	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Chromium	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Iron	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SPLP (mg/L)	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Lead	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC

NOTES

1. Total Metal results expressed in milligrams per kilogram (mg/kg). TCLP/SPLP results expressed in milligrams per kilogram (mg/L).
2. NC = No toxicity criteria for this exposure route
3. NA = Not Analyzed
4. SCGW = Soil Component of the Groundwater
5. c = Inhalation Exposure Routes for Mercury excluded under footnote s of TACO Section 742, Appendix B, Table B. Inhalation remediation objective only applies at sites where elemental mercury is a contaminant of concern.
6. * = SCGW exposure route excluded under footnote "m" of TACO Section 742, Appendix B, Table B.
7. Bold Shaded Values = Exceeds TACO Tier 1 SRO

TABLE 1d

Soil Analytical Results
Inorganics and pH Compared to TACO Tier 1 Residential Ingestion and Inhalation and SCGW SROs
CTA Austin Station
Chicago, Illinois

	RESIDENTIAL		SCGW (CLASS I)						Sample	SB-06-02 6/16/2021	SB-07-01 6/16/2021
	Ingestion	Inhalation	pH 7.25 to 7.74	pH 7.75 to 8.24	pH 8.25 to 8.74	pH 8.75 to 9.0	mg/L	Date Depth (ft)			
Inorganics (mg/kg)											
Aluminum	NC	NC	NC	NC	NC	NC	NC	NC	N/A	N/A	9100
Antimony	31	NC	5	5	5	5	5	NC	N/A	N/A	<2.1
Arsenic	13	750	30	31	32	32	33	NC	15	15	10
Barium	5,500	690,000	1,800	2,100	2,100	2,100	2,100	NC	N/A	N/A	24
Beryllium	160	1,300	1,000	8,000	NC	NC	NC	NC	N/A	N/A	<0.53
Cadmium	78	1,800	59	430	430	430	430	NC	N/A	N/A	<0.53
Calcium	NC	NC	NC	NC	NC	NC	NC	NC	N/A	N/A	53000
Chromium	230	270	32	28	24	24	21	NC	N/A	N/A	16
Cobalt	4,700	NC	NC	NC	NC	NC	NC	NC	N/A	N/A	15
Copper	2,900	NC	330,000	330,000	NC	NC	NC	NC	N/A	N/A	36
Cyanide	1,600	NC	40	40	40	40	40	NC	N/A	N/A	<0.29
Iron	NC	NC	NC	NC	NC	NC	NC	NC	N/A	N/A	25000
Lead	400	NC	107	107	107	107	282	NC	N/A	N/A	17
Magnesium	325,000	NC	NC	NC	NC	NC	NC	NC	N/A	N/A	33000
Manganese	1,600	91,000	NC	NC	NC	NC	NC	NC	N/A	N/A	700
Mercury ^c (Total)	23	10	6.4	8	8	8	8	NC	N/A	N/A	0.034
Nickel	1,600	13,000	700	3,800	NC	NC	NC	NC	N/A	N/A	35*
Potassium	NC	NC	NC	NC	NC	NC	NC	NC	N/A	N/A	2100
Selenium	390	NC	3.3	2.4	1.8	1.8	1.3	NC	N/A	N/A	< 1.1
Silver	390	NC	39	110	110	110	110	NC	N/A	N/A	< 1.1
Sodium	NC	NC	NC	NC	NC	NC	NC	NC	N/A	N/A	760
Thallium	6.3	NC	3.4	3.8	4.4	4.4	4.9	NC	N/A	N/A	< 1.1
Vanadium	550	NC	980	980	980	980	980	NC	N/A	N/A	17
Zinc	23,000	NC	16,000	53,000	NC	NC	NC	NC	N/A	N/A	56
pH	NC	NC	NC	NC	NC	NC	NC	NC	9.14	9.14	8.63
TCLP (mg/L)											
Chromium	NC	NC	NC	NC	NC	NC	NC	NC	NA	NA	NA
Iron	NC	NC	NC	NC	NC	NC	NC	NC	NA	NA	NA
SPLP (mg/L)											
Lead	NC	NC	NC	NC	NC	NC	NC	NC	NA	NA	NA

NOTES

1. Total Metal results expressed in milligrams per kilogram (mg/kg). TCLP/SPLP results expressed in milligrams per kilogram (mg/L).
2. NC = No toxicity criteria for this exposure route
3. NA = Not Analyzed
4. SCGW = Soil Component of the Groundwater
5. c = Inhalation Exposure Routes for Mercury excluded under footnote s of TACO Section 742, Appendix B, Table B. Inhalation remediation objective only applies at sites where elemental mercury is a contaminant of concern.
6. * = SCGW exposure route excluded under footnote "m" of TACO Section 742, Appendix B, Table B.
7. Bold Shaded Values = Exceeds TACO Tier 1 SRO

TABLE 1e
Soil Analytical Results
Pesticides and PCBs Compared to TACO Tier I Residential and SCGW
CTA Austin Station
Chicago, Illinois

	RESIDENTIAL		SCGW	Sample Date	Depth (ft)	pH	SB-01-01	SB-02-1	SB-02-02	SB-03-01	SB-03-02	SB-04-01	SB-05-01	SB-06-01	SB-06-02	SB-07-01
	Ingestion	Inhalation					6/10/2021	6/16/2021	6/16/2021	6/16/2021	6/16/2021	6/16/2021	6/16/2021	6/16/2021	6/16/2021	6/16/2021
			Class I				1-2	2-3	8-9	2-3	6-7	1-2	2-3	6-7	3-4	8.63
							8.54	7.5	8.75	9.35	9.7	8.57	7.81	9.07	9.14	8.63
Pesticides																
4,4'-DDD	3	NC	16				< 0.0017	< 0.0018	N/A	< 0.0018	N/A	< 0.0019	< 0.0019	< 0.0019	N/A	< 0.0019
4,4'-DDE	2	NC	54				< 0.0017	< 0.0018	N/A	< 0.0018	N/A	< 0.0019	< 0.0019	< 0.0019	N/A	< 0.0019
4,4'-DDT	2	1,500	32				< 0.0017	< 0.0018	N/A	< 0.0018	N/A	< 0.0019	< 0.0019	< 0.0019	N/A	< 0.0019
Aldrin	0.04	3	0.5				< 0.0017	< 0.0018	N/A	< 0.0018	N/A	< 0.0019	< 0.0019	< 0.0019	N/A	< 0.0019
alpha-BHC	0.1	0.8	0.0005				< 0.0017	< 0.0018	N/A	< 0.0018	N/A	< 0.0019	< 0.0019	< 0.0019	N/A	< 0.0019
alpha-Chlordane	NC	NC	NC				< 0.0017	< 0.0018	N/A	< 0.0018	N/A	< 0.0019	< 0.0019	< 0.0019	N/A	< 0.0019
beta-BHC	NC	NC	NC				< 0.0017	< 0.0018	N/A	< 0.0018	N/A	< 0.0019	< 0.0019	< 0.0019	N/A	< 0.0019
Chlordane	1.8	72	10				< 0.017	< 0.018	N/A	< 0.018	N/A	< 0.019	< 0.019	< 0.019	N/A	< 0.019
delta-BHC	NC	NC	NC				< 0.0017	< 0.0018	N/A	< 0.0018	N/A	< 0.0019	< 0.0019	< 0.0019	N/A	< 0.0019
Dieldrin	0.04	1	0.004				< 0.0017	< 0.0018	N/A	< 0.0018	N/A	< 0.0019	< 0.0019	< 0.0019	N/A	< 0.0019
Endosulfan I	470	NC	18				< 0.0017	< 0.0018	N/A	< 0.0018	N/A	< 0.0019	< 0.0019	< 0.0019	N/A	< 0.0019
Endosulfan II	470	NC	18				< 0.0017	< 0.0018	N/A	< 0.0018	N/A	< 0.0019	< 0.0019	< 0.0019	N/A	< 0.0019
Endosulfan sulfate	NC	NC	NC				< 0.0017	< 0.0018	N/A	< 0.0018	N/A	< 0.0019	< 0.0019	< 0.0019	N/A	< 0.0019
Endrin	23	NC	1				< 0.0017	< 0.0018	N/A	< 0.0018	N/A	< 0.0019	< 0.0019	< 0.0019	N/A	< 0.0019
Endrin aldehyde	NC	NC	NC				< 0.0017	< 0.0018	N/A	< 0.0018	N/A	< 0.0019	< 0.0019	< 0.0019	N/A	< 0.0019
Endrin ketone	NC	NC	NC				< 0.0017	< 0.0018	N/A	< 0.0018	N/A	< 0.0019	< 0.0019	< 0.0019	N/A	< 0.0019
gamma-BHC	0.5	NC	0.009				< 0.0017	< 0.0018	N/A	< 0.0018	N/A	< 0.0019	< 0.0019	< 0.0019	N/A	< 0.0019
gamma-Chlordane	NC	NC	NC				< 0.0017	< 0.0018	N/A	< 0.0018	N/A	< 0.0019	< 0.0019	< 0.0019	N/A	< 0.0019
Heptachlor	0.1	0.1	23				< 0.0017	< 0.0018	N/A	< 0.0018	N/A	< 0.0019	< 0.0019	< 0.0019	N/A	< 0.0019
Heptachlor epoxide	0.07	5	0.7				< 0.0017	< 0.0018	N/A	< 0.0018	N/A	< 0.0019	< 0.0019	< 0.0019	N/A	< 0.0019
Methoxychlor	390	NC	160				< 0.0017	< 0.0018	N/A	< 0.0018	N/A	< 0.0019	< 0.0019	< 0.0019	N/A	< 0.0019
Toxaphene	0.6	89	31				< 0.035	< 0.038	N/A	< 0.037	N/A	< 0.037	< 0.039	< 0.039	N/A	< 0.038
PCBs																
Aroclor 1016	NC	NC	NC				< 0.086	< 0.092	N/A	< 0.089	N/A	< 0.091	< 0.095	< 0.094	N/A	< 0.093
Aroclor 1221	NC	NC	NC				< 0.086	< 0.092	N/A	< 0.089	N/A	< 0.091	< 0.095	< 0.094	N/A	< 0.093
Aroclor 1232	NC	NC	NC				< 0.086	< 0.092	N/A	< 0.089	N/A	< 0.091	< 0.095	< 0.094	N/A	< 0.093
Aroclor 1242	NC	NC	NC				< 0.086	< 0.092	N/A	< 0.089	N/A	< 0.091	< 0.095	< 0.094	N/A	< 0.093
Aroclor 1248	NC	NC	NC				< 0.086	< 0.092	N/A	< 0.089	N/A	< 0.091	< 0.095	< 0.094	N/A	< 0.093
Aroclor 1254	NC	NC	NC				< 0.086	< 0.092	N/A	< 0.089	N/A	< 0.091	< 0.095	< 0.094	N/A	< 0.093
Aroclor 1260	NC	NC	NC				< 0.086	< 0.092	N/A	< 0.089	N/A	< 0.091	< 0.095	< 0.094	N/A	< 0.093
Total PCBs	1	NC	NC				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

NOTES

1. All results expressed in milligrams per kilogram (mg/kg)
2. NC = No toxicity criteria for this exposure route
3. NA = Not Analyzed
4. ND = Not Detected at the reporting limit
5. * = Appendix B, Table C, pH specific SROs
6. SCGW = Soil Component of the Groundwater
7. Bold Shaded Values = Exceeds TACO Tier 1 SRO

TABLE 2

Soil Analytical Results Compared to CCDD MAV Values

TABLE 2a
Soil Analytical Results
VOCs Compared to CCDD MAC Values
CTA Austin Station
Chicago, Illinois

VOCs	CCDD MAC Values			Sample Date	Depth (ft)	SB-01-01	SB-02-01	SB-02-02	SB-03-01	SB-03-02	SB-04-01	SB-05-01	SB-06-01	SB-06-02
	MSA County	City of Chicago	Non-MSA County			6/10/2021	6/16/2021	6/16/2021	6/16/2021	6/16/2021	6/16/2021	6/16/2021	6/16/2021	6/16/2021
						1-2	2-3	8-9	2-3	6-7	1-2	1-2	2-3	6-7
Acetone	25	25	25			<0.16	<0.15	N/A	<0.080	N/A	<0.075	<0.077	<0.093	N/A
Benzene	0.03	0.03	0.03			<0.010	<0.0098	N/A	<0.0053	N/A	<0.0050	<0.0051	<0.0062	N/A
Bromodichloromethane	0.6	0.6	0.6			<0.010	<0.0098	N/A	<0.0053	N/A	<0.0050	<0.0051	<0.0062	N/A
Bromoform	0.8	0.8	0.8			<0.010	<0.0098	N/A	<0.0053	N/A	<0.0050	<0.0051	<0.0062	N/A
Bromomethane	0.2	0.2	0.2			<0.021	<0.020	N/A	<0.011	N/A	<0.010	<0.010	<0.012	N/A
2-Butanone	NC	NC	NC			<0.16	<0.15	N/A	<0.080	N/A	<0.075	<0.077	<0.093	N/A
Carbon disulfide	9	9	9			<0.10	<0.098	N/A	<0.053	N/A	<0.050	<0.051	<0.062	N/A
Carbon tetrachloride	0.07	0.07	0.07			<0.010	<0.0098	N/A	<0.0053	N/A	<0.0050	<0.0051	<0.0062	N/A
Chlorobenzene	1	1	1			<0.010	<0.0098	N/A	<0.0053	N/A	<0.0050	<0.0051	<0.0062	N/A
Chloroethane	NC	NC	NC			<0.021	<0.020	N/A	<0.011	N/A	<0.010	<0.010	<0.012	N/A
Chloroform	0.3	0.3	0.3			<0.010	<0.0098	N/A	<0.0053	N/A	<0.0050	<0.0051	<0.0062	N/A
Chloromethane	NC	NC	NC			<0.021	<0.020	N/A	<0.011	N/A	<0.010	<0.010	<0.012	N/A
Dibromochloromethane	0.4	0.4	0.4			<0.010	<0.0098	N/A	<0.0053	N/A	<0.0050	<0.0051	<0.0062	N/A
1,1-Dichloroethane	23	23	23			<0.010	<0.0098	N/A	<0.0053	N/A	<0.0050	<0.0051	<0.0062	N/A
1,2-Dichloroethane	0.02	0.02	0.02			<0.010	<0.0098	N/A	<0.0053	N/A	<0.0050	<0.0051	<0.0062	N/A
1,1-Dichloroethene	0.06	0.06	0.06			<0.010	<0.0098	N/A	<0.0053	N/A	<0.0050	<0.0051	<0.0062	N/A
cis-1,2-Dichloroethene	0.4	0.4	0.4			<0.010	<0.0098	N/A	<0.0053	N/A	<0.0050	<0.0051	<0.0062	N/A
trans-1,2-Dichloroethene	0.7	0.7	0.7			<0.010	<0.0098	N/A	<0.0053	N/A	<0.0050	<0.0051	<0.0062	N/A
1,2-Dichloropropane	0.03	0.03	0.03			<0.010	<0.0098	N/A	<0.0053	N/A	<0.0050	<0.0051	<0.0062	N/A
cis-1,3-Dichloropropene	0.005	0.005	0.005			<0.0042	<0.0039	N/A	<0.0021	N/A	<0.0020	<0.0021	<0.0025	N/A
trans-1,3-Dichloropropene	0.005	0.005	0.005			<0.0042	<0.0039	N/A	<0.0021	N/A	<0.0020	<0.0021	<0.0025	N/A
Ethylbenzene	13	13	13			<0.010	<0.0098	N/A	<0.0053	N/A	<0.0050	<0.0051	<0.0062	N/A
2-Hexanone	NC	NC	NC			<0.042	<0.039	N/A	<0.021	N/A	<0.020	<0.021	<0.025	N/A
4-Methyl-2-pentanone	NC	NC	NC			<0.042	<0.039	N/A	<0.021	N/A	<0.020	<0.021	<0.025	N/A
Methylene chloride	0.02	0.02	0.02			<0.010	<0.020	N/A	<0.011	N/A	<0.010	<0.010	<0.012	N/A
Methyl tert-butyl ether	0.32	0.32	0.32			<0.010	<0.0098	N/A	<0.0053	N/A	<0.0050	<0.0051	<0.0062	N/A
Styrene	4	4	4			<0.010	<0.0098	N/A	<0.0053	N/A	<0.0050	<0.0051	<0.0062	N/A
1,1,2,2-Tetrachloroethane	NC	NC	NC			<0.010	<0.0098	N/A	<0.0053	N/A	<0.0050	<0.0051	<0.0062	N/A
Tetrachloroethene	0.06	0.06	0.06			<0.010	<0.0098	N/A	<0.0053	N/A	<0.0050	<0.0051	<0.0062	N/A
Toluene	12	12	12			<0.010	<0.0098	N/A	<0.0053	N/A	<0.0050	<0.0051	<0.0062	N/A
1,1,1-Trichloroethane	2	2	2			<0.010	<0.0098	N/A	<0.0053	N/A	<0.0050	<0.0051	<0.0062	N/A
1,1,2-Trichloroethane	0.02	0.02	0.02			<0.010	<0.0098	N/A	<0.0053	N/A	<0.0050	<0.0051	<0.0062	N/A
Trichloroethene	0.06	0.06	0.06			<0.010	<0.0098	N/A	<0.0053	N/A	<0.0050	<0.0051	<0.0062	N/A
Vinyl chloride	0.01	0.01	0.01			<0.010	<0.0098	N/A	<0.0053	N/A	<0.0050	<0.0051	<0.0062	N/A
Xylenes, Total	5.6	5.6	5.6			<0.031	<0.029	N/A	<0.016	N/A	<0.015	<0.015	<0.019	N/A

NOTES

1. All results expressed in milligrams per kilogram (mg/kg)
2. NC = No toxicity criteria for this exposure route
3. NA = Not Analyzed
4. Metropolitan Statistical Areas (MSA) as defined in Board Note, 35 IAC 742.
Appendix A, Table G)

Sample result above CCDD Metropolitan Statistical Areas (MSA) County MAC Values.
Sample result above CCDD City of Chicago MAC Values.
Sample result above CCDD Non-MSA County MAC Values.

TABLE 2a
Soil Analytical Results
VOCs Compared to CCDD MAC Values
CTA Austin Station
Chicago, Illinois

VOCs	CCDD MAC Values			Sample Date	SB-07-01 6/16/2021
	MSA County	City of Chicago	Non-MSA County	Depth (ft)	3-4
Acetone	25	25	25		< 0.073
Benzene	0.03	0.03	0.03		< 0.0049
Bromodichloromethane	0.6	0.6	0.6		< 0.0049
Bromoform	0.8	0.8	0.8		< 0.0049
Bromomethane	0.2	0.2	0.2		< 0.0097
2-Butanone	NC	NC	NC		< 0.073
Carbon disulfide	9	9	9		< 0.049
Carbon tetrachloride	0.07	0.07	0.07		< 0.0049
Chlorobenzene	1	1	1		< 0.0049
Chloroethane	NC	NC	NC		< 0.0097
Chloroform	0.3	0.3	0.3		< 0.0049
Chloromethane	NC	NC	NC		< 0.0097
Dibromochloromethane	0.4	0.4	0.4		< 0.0049
1,1-Dichloroethane	23	23	23		< 0.0049
1,2-Dichloroethane	0.02	0.02	0.02		< 0.0049
1,1-Dichloroethene	0.06	0.06	0.06		< 0.0049
cis-1,2-Dichloroethene	0.4	0.4	0.4		< 0.0049
trans-1,2-Dichloroethene	0.7	0.7	0.7		< 0.0049
1,2-Dichloropropane	0.03	0.03	0.03		< 0.0049
cis-1,3-Dichloropropene	0.005	0.005	0.005		< 0.0019
trans-1,3-Dichloropropene	0.005	0.005	0.005		< 0.0019
Ethylbenzene	13	13	13		< 0.0049
2-Hexanone	NC	NC	NC		< 0.019
4-Methyl-2-pentanone	NC	NC	NC		< 0.019
Methylene chloride	0.02	0.02	0.02		< 0.0097
Methyl tert-butyl ether	0.32	0.32	0.32		< 0.0049
Styrene	4	4	4		< 0.0049
1,1,2,2-Tetrachloroethane	NC	NC	NC		< 0.0049
Tetrachloroethene	0.06	0.06	0.06		< 0.0049
Toluene	12	12	12		< 0.0049
1,1,1-Trichloroethane	2	2	2		< 0.0049
1,1,2-Trichloroethane	0.02	0.02	0.02		< 0.0049
Trichloroethene	0.06	0.06	0.06		< 0.0049
Vinyl chloride	0.01	0.01	0.01		< 0.0049
Xylenes, Total	5.6	5.6	5.6		< 0.015

NOTES

1. All results expressed in milligrams per kilogram (mg/kg)
2. NC = No toxicity criteria for this exposure route
3. NA = Not Analyzed
4. Metropolitan Statistical Areas (MSA) as defined in Board Note, 35 IAC 742.
Appendix A, Table G)

<i>Bold Italicized</i>	Sample result above CCDD Metropolitan Statistical Areas (MSA) County MAC Values.
Bold	Sample result above CCDD City of Chicago MAC Values.
<i>Bold Italicized</i>	Sample result above CCDD Non-MSA County MAC Values.

TABLE 2b
Soil Analytical Results
SVOCs Compared to CCDD MAC Values
CTA Austin Station
Chicago, Illinois

	CCDD MAC Values			Sample	SB-01-01	SB-02-1	SB-02-02	SB-03-01	SB-03-02	SB-04-01
	MSA County	City of Chicago	Non-MSA County	Date	6/10/2021	6/16/2021	6/16/2021	6/16/2021	6/16/2021	6/16/2021
				Depth (ft)	1-2	2-3	8-9	2-3	6-7	1-2
SVOCs										
Aniline	NC	NC	NC		< 0.36	< 0.38	N/A	< 0.37	N/A	< 0.38
Benzidine	NC	NC	NC		< 0.35	< 0.37	N/A	< 0.37	N/A	< 0.38
Benzoic acid	400	400	400		< 0.89	< 0.94	N/A	< 0.93	N/A	< 0.96
Benzyl alcohol	NC	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20
Bis(2-chloroethoxy)methane	NC	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20
Bis(2-chloroethyl)ether	0.66	0.66	0.66		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20
Bis(2-ethylhexyl)phthalate	46	46	46		< 0.89	< 0.94	N/A	< 0.93	N/A	< 0.96
4-Bromophenyl phenyl ether	NC	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20
Butyl benzyl phthalate	930	930	930		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20
Carbazole	0.6	0.6	0.6		0.2	< 0.19	N/A	< 0.19	N/A	< 0.20
4-Chloroaniline	0.7	0.7	0.7		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20
4-Chloro-3-methylphenol	NC	NC	NC		< 0.35	< 0.37	N/A	< 0.37	N/A	< 0.38
2-Chloronaphthalene	NC	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20
2-Chlorophenol	1.5	1.5	1.5		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20
4-Chlorophenyl phenyl ether	NC	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20
Dibenzofuran	NC	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20
1,2-Dichlorobenzene	17	17	17		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20
1,3-Dichlorobenzene	NC	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20
1,4-Dichlorobenzene	2	2	2		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20
3,3'-Dichlorobenzidine	1.3	1.3	1.3		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20
2,4-Dichlorophenol	0.48	0.48	0.48		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20
Diethyl phthalate	470	470	470		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20
2,4-Dimethylphenol	9	9	9		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20
Dimethyl phthalate	NC	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20
4,6-Dinitro-2-methylphenol	NC	NC	NC		< 0.35	< 0.37	N/A	< 0.37	N/A	< 0.38
2,4-Dinitrophenol	3.3	3.3	3.3		< 0.89	< 0.94	N/A	< 0.93	N/A	< 0.96
2,4-Dinitrotoluene	0.25	0.25	0.25		< 0.035	< 0.037	N/A	< 0.037	N/A	< 0.038
2,6-Dinitrotoluene	0.26	0.26	0.26		< 0.035	< 0.037	N/A	< 0.037	N/A	< 0.038
Di-n-butyl phthalate	2,300	2,300	2,300		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20
Di-n-octyl phthalate	1,600	1,600	1,600		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20
Hexachlorobenzene	0.4	0.4	0.4		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20
Hexachlorobutadiene	NC	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20
Hexachlorocyclopentadiene	1.1	1.1	1.1		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20
Hexachloroethane	0.5	0.5	0.5		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20
Isophorone	8	8	8		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20
2-Methylnaphthalene	NC	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20
2-Methylphenol	15	15	15		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20
4-Methylphenol	NC	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20
2-Nitroaniline	NC	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20
3-Nitroaniline	NC	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20
4-Nitroaniline	NC	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20
2-Nitrophenol	NC	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20
4-Nitrophenol	NC	NC	NC		< 0.35	< 0.37	N/A	< 0.37	N/A	< 0.38
Nitrobenzene	0.26	0.26	0.26		< 0.035	< 0.037	N/A	< 0.037	N/A	< 0.038
N-Nitrosodi-n-propylamine	0.0018	0.0018	0.0018		< 0.035	< 0.037	N/A	< 0.037	N/A	< 0.038
N-Nitrosodimethylamine	NC	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20
N-Nitrosodiphenylamine	1	1	1		< 0.035	< 0.037	N/A	< 0.037	N/A	< 0.038
2, 2'-oxybis(1-Chloropropane)	NC	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20
Pentachlorophenol	0.02	0.02	0.02		< 0.035	< 0.037	N/A	< 0.037	N/A	< 0.038
Phenol	100	100	100		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20
Pyridine	NC	NC	NC		< 0.72	< 0.76	N/A	< 0.75	N/A	< 0.77
1,2,4-Trichlorobenzene	5	5	5		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20
2,4,5-Trichlorophenol	26	26	26		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20
2,4,6-Trichlorophenol	0.66	0.66	0.66		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20

NOTES

1. All results expressed in milligrams per kilogram (mg/kg)
2. NC = No toxicity criteria for this exposure route
3. NA = Not Analyzed
4. Metropolitan Statistical Areas (MSA) as defined in Board Note, 35 IAC 742. Appendix A, Table G)

Bold Italicized	Sample result above CCDD Metropolitan Statistical Areas (MSA) County MAC Values.
Bold	Sample result above CCDD City of Chicago MAC Values.
Bold Italicized	Sample result above CCDD Non-MSA County MAC Values.



TABLE 2b
Soil Analytical Results
SVOCs Compared to CCDD MAC Values
CTA Austin Station
Chicago, Illinois

	CCDD MAC Values			Sample	SB-05-01	SB-06-01	SB-06-02	SB-07-01
	MSA County	City of Chicago	Non-MSA County	Date	6/16/2021	6/16/2021	6/16/2021	6/16/2021
				Depth (ft)	1-2	2-3	6-7	3-4
SVOCs								
Aniline	NC	NC	NC		< 0.39	< 0.39	N/A	< 0.38
Benzidine	NC	NC	NC		< 0.38	< 0.39	N/A	< 0.38
Benzoic acid	400	400	400		< 0.96	< 0.98	N/A	< 0.96
Benzyl alcohol	NC	NC	NC		< 0.20	< 0.20	N/A	< 0.20
Bis(2-chloroethoxy)methane	NC	NC	NC		< 0.20	< 0.20	N/A	< 0.20
Bis(2-chloroethyl)ether	0.66	0.66	0.66		< 0.20	< 0.20	N/A	< 0.20
Bis(2-ethylhexyl)phthalate	46	46	46		< 0.96	< 0.98	N/A	< 0.96
4-Bromophenyl phenyl ether	NC	NC	NC		< 0.20	< 0.20	N/A	< 0.20
Butyl benzyl phthalate	930	930	930		< 0.20	< 0.20	N/A	< 0.20
Carbazole	0.6	0.6	0.6		< 0.20	< 0.20	N/A	< 0.20
4-Chloroaniline	0.7	0.7	0.7		< 0.20	< 0.20	N/A	< 0.20
4-Chloro-3-methylphenol	NC	NC	NC		< 0.38	< 0.39	N/A	< 0.38
2-Chloronaphthalene	NC	NC	NC		< 0.20	< 0.20	N/A	< 0.20
2-Chlorophenol	1.5	1.5	1.5		< 0.20	< 0.20	N/A	< 0.20
4-Chlorophenyl phenyl ether	NC	NC	NC		< 0.20	< 0.20	N/A	< 0.20
Dibenzofuran	NC	NC	NC		< 0.20	< 0.20	N/A	< 0.20
1,2-Dichlorobenzene	17	17	17		< 0.20	< 0.20	N/A	< 0.20
1,3-Dichlorobenzene	NC	NC	NC		< 0.20	< 0.20	N/A	< 0.20
1,4-Dichlorobenzene	2	2	2		< 0.20	< 0.20	N/A	< 0.20
3,3'-Dichlorobenzidine	1.3	1.3	1.3		< 0.20	< 0.20	N/A	< 0.20
2,4-Dichlorophenol	0.48	0.48	0.48		< 0.20	< 0.20	N/A	< 0.20
Diethyl phthalate	470	470	470		< 0.20	< 0.20	N/A	< 0.20
2,4-Dimethylphenol	9	9	9		< 0.20	< 0.20	N/A	< 0.20
Dimethyl phthalate	NC	NC	NC		< 0.20	< 0.20	N/A	< 0.20
4,6-Dinitro-2-methylphenol	NC	NC	NC		< 0.38	< 0.39	N/A	< 0.38
2,4-Dinitrophenol	3.3	3.3	3.3		< 0.96	< 0.98	N/A	< 0.96
2,4-Dinitrotoluene	0.25	0.25	0.25		< 0.038	< 0.039	N/A	< 0.038
2,6-Dinitrotoluene	0.26	0.26	0.26		< 0.038	< 0.039	N/A	< 0.038
Di-n-butyl phthalate	2,300	2,300	2,300		< 0.20	< 0.20	N/A	< 0.20
Di-n-octyl phthalate	1,600	1,600	1,600		< 0.20	< 0.20	N/A	< 0.20
Hexachlorobenzene	0.4	0.4	0.4		< 0.20	< 0.20	N/A	< 0.20
Hexachlorobutadiene	NC	NC	NC		< 0.20	< 0.20	N/A	< 0.20
Hexachlorocyclopentadiene	1.1	1.1	1.1		< 0.20	< 0.20	N/A	< 0.20
Hexachloroethane	0.5	0.5	0.5		< 0.20	< 0.20	N/A	< 0.20
Isophorone	8	8	8		< 0.20	< 0.20	N/A	< 0.20
2-Methylnaphthalene	NC	NC	NC		< 0.20	< 0.20	N/A	< 0.20
2-Methylphenol	15	15	15		< 0.20	< 0.20	N/A	< 0.20
4-Methylphenol	NC	NC	NC		< 0.20	< 0.20	N/A	< 0.20
2-Nitroaniline	NC	NC	NC		< 0.20	< 0.20	N/A	< 0.20
3-Nitroaniline	NC	NC	NC		< 0.20	< 0.20	N/A	< 0.20
4-Nitroaniline	NC	NC	NC		< 0.20	< 0.20	N/A	< 0.20
2-Nitrophenol	NC	NC	NC		< 0.20	< 0.20	N/A	< 0.20
4-Nitrophenol	NC	NC	NC		< 0.38	< 0.39	N/A	< 0.38
Nitrobenzene	0.26	0.26	0.26		< 0.038	< 0.039	N/A	< 0.038
N-Nitrosodi-n-propylamine	0.0018	0.0018	0.0018		< 0.038	< 0.039	N/A	< 0.038
N-Nitrosodimethylamine	NC	NC	NC		< 0.20	< 0.20	N/A	< 0.20
N-Nitrosodiphenylamine	1	1	1		< 0.038	< 0.039	N/A	< 0.038
2, 2'-oxybis(1-Chloropropane)	NC	NC	NC		< 0.20	< 0.20	N/A	< 0.20
Pentachlorophenol	0.02	0.02	0.02		< 0.038	< 0.039	N/A	< 0.038
Phenol	100	100	100		< 0.20	< 0.20	N/A	< 0.20
Pyridine	NC	NC	NC		< 0.78	< 0.79	N/A	< 0.77
1,2,4-Trichlorobenzene	5	5	5		< 0.20	< 0.20	N/A	< 0.20
2,4,5-Trichlorophenol	26	26	26		< 0.20	< 0.20	N/A	< 0.20
2,4,6-Trichlorophenol	0.66	0.66	0.66		< 0.20	< 0.20	N/A	< 0.20

NOTES

1. All results expressed in milligrams per kilogram (mg/kg)
2. NC = No toxicity criteria for this exposure route
3. NA = Not Analyzed
4. Metropolitan Statistical Areas (MSA) as defined in Board Note, 35 IAC 742. Appendix A, Table G)

<i>Bold Italicized</i>	Sample result above CCDD Metropolitan Statistical Areas (MSA) County MAC Values.
<i>Bold</i>	Sample result above CCDD City of Chicago MAC Values.
<i>Bold Italicized</i>	Sample result above CCDD Non-MSA County MAC Values.

TABLE 2c
Soil Analytical Results
PNAs Compared to CCDD MAC Values
CTA Austin Station
Chicago, Illinois

	CCDD MAC Values				Sample Date	Depth (ft)	SB-01-01 6/10/2021	SB-02-01 6/16/2021	SB-02-02 6/16/2021	SB-03-01 6/16/2021	SB-03-02 6/16/2021	SB-04-01 6/16/2021	SB-04-02 6/16/2021	SB-05-01 6/16/2021	SB-05-02 6/16/2021
	Populated MSA ⁴	City of Chicago ⁵	Populated Non-MSA ⁶	Non-Populated ⁷											
PNAs	570	570	570	570			< 0.035	< 0.037	N/A	< 0.037	N/A	< 0.038	N/A	< 0.038	N/A
Acenaphthene	NC	NC	NC	NC			0.25	0.056	N/A	< 0.037	N/A	< 0.038	N/A	< 0.038	N/A
Acenaphthylene	12,000	12,000	12,000	12,000			0.35	0.12	N/A	< 0.037	N/A	< 0.038	N/A	< 0.038	N/A
Anthracene	1.8	1.1	0.9	0.9			0.39	0.53	N/A	< 0.037	N/A	< 0.038	N/A	< 0.038	N/A
Benzo(a)anthracene	2.1	1.3	0.98	0.09			0.49	0.73	< 0.037	< 0.037	N/A	< 0.038	N/A	< 0.038	N/A
Benzo(a)pyrene	2.1	1.5	0.9	0.9			0.88	0.63	N/A	< 0.037	N/A	< 0.038	N/A	< 0.038	N/A
Benzo(b)fluoranthene	NC	NC	NC	NC			0.72	0.48	N/A	< 0.037	N/A	< 0.038	N/A	< 0.038	N/A
Benzo(k)fluoranthene	9	9	9	9			0.63	0.53	N/A	< 0.037	N/A	< 0.038	N/A	< 0.038	N/A
Chrysene	88	88	88	88			0.71	0.58	N/A	< 0.037	N/A	< 0.038	N/A	< 0.038	N/A
Dibenz(a,h)anthracene	0.42	0.2	0.15	0.09			0.23	0.23	< 0.037	< 0.037	N/A	< 0.038	N/A	< 0.038	N/A
Fluoranthene	3,100	3,100	3,100	3,100			0.87	0.98	N/A	< 0.037	N/A	< 0.038	N/A	< 0.038	N/A
Fluorene	560	560	560	560			< 0.035	< 0.037	N/A	< 0.037	N/A	< 0.038	N/A	< 0.038	N/A
Indeno(1,2,3-cd)pyrene	1.6	0.9	0.9	0.9			0.53	0.4	N/A	< 0.037	N/A	< 0.038	N/A	< 0.038	N/A
Naphthalene	1.8	1.8	1.8	1.8			< 0.035	< 0.037	N/A	< 0.037	N/A	< 0.038	N/A	< 0.038	N/A
Phenanthrene	NC	NC	NC	NC			0.33	0.35	N/A	< 0.037	N/A	< 0.038	N/A	< 0.038	N/A
Pyrene	2,300	2,300	2,300	2,300			0.76	0.88	N/A	< 0.037	N/A	< 0.038	N/A	< 0.038	N/A

NOTES

1. All results expressed in milligrams per kilogram (mg/kg)
2. NC = No toxicity criteria for this exposure route
3. NA = Not Analyzed
4. Populated MSA = populated area in a MSA excluding Chicago
5. City of Chicago = Chicago corporate limits
6. Populated Non-MSA = populated area in a non-MSA county
7. Non-Populated = outside a populated area
8. Metropolitan Statistical Areas (MSA) as defined in Board Note, 35 IAC 742.

Appendix A, Table G)

<i>Bold Italicized</i>	Sample result above CCDD Populated Metropolitan Statistical Areas (MSA) County MAC Values.
<i>Italicized</i>	Sample result above CCDD City of Chicago MAC Values.
Bold	Sample result above CCDD Populated Non-MSA County MAC Values.
<i>Bold Italicized</i>	Sample result above CCDD Non-Populated Area MAC Values.

TABLE 2c
Soil Analytical Results
PNAs Compared to CCDD MAC Values
CTA Austin Station
Chicago, Illinois

	CCDD MAC Values				Sample Date	SB-06-01 6/16/2021	SB-06-02 6/16/2021	SB-07-01 6/16/2021	SB-07-02 6/16/2021
	Populated MSA ⁴	City of Chicago ⁵	Populated Non-MSA ⁶	Non-Populated ⁷					
PNAs									
Acenaphthene	570	570	570	570		< 0.039	N/A	< 0.038	N/A
Acenaphthylene	NC	NC	NC	NC		< 0.039	N/A	< 0.038	N/A
Anthracene	12,000	12,000	12,000	12,000		< 0.039	N/A	< 0.038	N/A
Benzo(a)anthracene	1.8	1.1	0.9	0.9		< 0.039	N/A	< 0.038	N/A
Benzo(a)pyrene	2.1	1.3	0.98	0.09		< 0.039	N/A	< 0.038	N/A
Benzo(b)fluoranthene	2.1	1.5	0.9	0.9		< 0.039	N/A	< 0.038	N/A
Benzo(g,h,i)perylene	NC	NC	NC	NC		< 0.039	N/A	< 0.038	N/A
Benzo(k)fluoranthene	9	9	9	9		< 0.039	N/A	< 0.038	N/A
Chrysene	88	88	88	88		< 0.039	N/A	< 0.038	N/A
Dibenzo(a,h)anthracene	0.42	0.2	0.15	0.09		< 0.039	N/A	< 0.038	N/A
Fluoranthene	3,100	3,100	3,100	3,100		< 0.039	N/A	< 0.038	N/A
Fluorene	560	560	560	560		< 0.039	N/A	< 0.038	N/A
Indeno(1,2,3-cd)pyrene	1.6	0.9	0.9	0.9		< 0.039	N/A	< 0.038	N/A
Naphthalene	1.8	1.8	1.8	1.8		< 0.039	N/A	< 0.038	N/A
Phenanthrene	NC	NC	NC	NC		< 0.039	N/A	< 0.038	N/A
Pyrene	2,300	2,300	2,300	2,300		< 0.039	N/A	< 0.038	N/A

NOTES

1. All results expressed in milligrams per kilogram (mg/kg)
2. NC = No toxicity criteria for this exposure route
3. NA = Not Analyzed
4. Populated MSA = populated area in a MSA excluding Chicago
5. City of Chicago = Chicago corporate limits
6. Populated Non-MSA = populated area in a non-MSA county
7. Non-Populated = outside a populated area
8. Metropolitan Statistical Areas (MSA) as defined in Board Note, 35 IAC 742, Appendix A, Table G)

<i>Bold Italicized</i>	Sample result above CCDD Populated Metropolitan Statistical Areas (MSA) County MAC Values.
<i>Italicized</i>	Sample result above CCDD City of Chicago MAC Values.
Bold	Sample result above CCDD Populated Non-MSA County MAC Values.
<i>Bold Italicized</i>	Sample result above CCDD Non-Populated Area MAC Values.

TABLE 2d
Soil Analytical Results
Inorganics and pH Compared to CCDD MAC Values
CTA Austin Station
Chicago, Illinois

	CCDD MAC Values			Sample Date	Depth (ft)										
	MSA County	City of Chicago	Non-MSA County			SB-01-01 6/10/2021	SB-02-1 6/16/2021	SB-02-2 6/16/2021	SB-03-01 6/16/2021	SB-03-02 6/16/2021	SB-04-01 6/16/2021	SB-05-01 6/16/2021	SB-06-01 6/16/2021	SB-06-02 6/16/2021	SB-07-01 6/16/2021
Inorganics (mg/kg)															
Aluminum	NC	NC	NC			3200	11000	N/A	11000	N/A	18000	18000	9000	N/A	9100
Antimony	5	5	5			2.6	<2.2	N/A	<2.2	<2.2	<2.2	<2.2	<2.3	N/A	<2.1
Arsenic	13	13	11.3			20	19	13	22	2.8	9	10	31	15	10
Barium	1,500	1,500	1,500			52	83	N/A	320	N/A	64	75	160	N/A	24
Beryllium	22	22	22			<0.49	0.95	N/A	0.68	N/A	1	1.1	0.67	N/A	<0.53
Cadmium	5.2	5.2	5.2			5.1	1.2	N/A	0.58	N/A	<0.55	<0.56	<0.57	N/A	<0.53
Calcium	NC	NC	NC			100000	44000	N/A	39000	N/A	2200	2800	46000	N/A	53000
Chromium	21	21	21			34	19	N/A	19	N/A	27*	26	16	N/A	16
Cobalt	20	20	20			6.8	11	N/A	43*	N/A	15	15	38	N/A	15
Copper	2,900	2,900	2,900			150	230	N/A	46	N/A	42	37	65	N/A	36
Cyanide	40	40	40			<0.27	<0.29	N/A	<0.28	N/A	<0.29	<0.30	<0.30	N/A	<0.29
Iron	15,900	15,900	15,000			43000	31000	N/A	40000	N/A	31000	32000	42000*	N/A	25000
Lead	107	107	107			300	580	N/A	29	N/A	19	19	45	N/A	17
Magnesium	325,000	325,000	325,000			57000	19000	N/A	24000	N/A	6000	5800	29000	N/A	33000
Manganese	636	636	630			540	380	N/A	3800*	N/A	270	410	1900	N/A	700
Mercury (Total)	0.89	0.89	0.89			0.094	0.36	N/A	0.03	N/A	0.037	0.032	0.028	N/A	0.034
Nickel	100	100	100			27	29	N/A	66	N/A	44	41	54	N/A	35
Potassium	NC	NC	NC			540	1600	N/A	1900	N/A	2100	2100	1500	N/A	2100
Selenium	1.3	1.3	1.3			<0.98	<1.1	N/A	<1.0	N/A	<1.1	<1.1	<1.1	N/A	<1.1
Silver	4.4	4.4	4.4			<0.98	<1.1	N/A	<1.0	N/A	<1.1	<1.1	<1.1	N/A	<1.1
Sodium	NC	NC	NC			140	340	N/A	960	N/A	2900	1500	810	N/A	760
Thallium	2.6	2.6	2.6			<0.98	<1.1	N/A	<1.0	N/A	<1.1	<1.1	<1.1	N/A	<1.1
Vanadium	550	550	550			14	25	N/A	27	N/A	32	31	25	N/A	17
Zinc	5,100	5,100	5,100			250	360	N/A	57	N/A	72	66	76	N/A	56
pH		6.25-9.0				8.54	7.50	8.75	9.35	9.70	8.57	7.81	9.07	9.14	8.63
TCLP (mg/L)															
Chromium	0.1	0.1	0.1			NA	NA	NA	NA	NA	<0.010	NA	NA	NA	NA
Iron	5	5	5			NA	NA	NA	NA	NA	NA	NA	<0.25	NA	NA
SPLP (mg/L)															
Cobalt	1	1	1			NA	NA	NA	0.009	NA	NA	NA	NA	NA	NA
Lead	0.0075	0.0075	0.0075			NA	0.044	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	0.15	0.15	0.15			NA	NA	NA	0.12	NA	NA	NA	NA	NA	NA

NOTES

1. NC = No toxicity criteria for this exposure route
2. NA = Not Analyzed
3. **Bold*** = Excluded under footnote m of the MAC Table
5. * = SCGW exposure route excluded under footnote "m" of TACO Section 742, Appendix B, Table B.

Sample result above CCDD Metropolitan Statistical Areas (MSA)
County MAC Values.

Sample result above CCDD City of Chicago MAC Values.

Sample result above CCDD Non-MSA County MAC Values.



TABLE 3

Soil Analytical Results Compared to Construction Worker SROs

TABLE 3a
Soil Analytical Results
VOCs Compared to Construction Worker SROs
CTA Austin Station
Chicago, Illinois

	CONSTRUCTION WORKER		Sample Date	Depth (ft)	SB-01-01 6/10/2021	SB-02-1 6/16/2021	SB-02-02 6/16/2021	SB-03-01 6/16/2021	SB-03-02 6/16/2021	SB-04-01 6/16/2021	SB-05-01 6/16/2021	SB-06-01 6/16/2021	SB-06-02 6/16/2021	SB-07-01 6/16/2021
	Ingestion	Inhalation												
VOC's														
Acetone	NC	100,000			< 0.16	< 0.15	N/A	< 0.080	N/A	< 0.075	< 0.077	< 0.093	N/A	< 0.073
Benzene	2,300	2.2			< 0.10	< 0.0098	N/A	< 0.0053	N/A	< 0.0050	< 0.0051	< 0.0062	N/A	< 0.0049
Bromodichloromethane	2,000	3,000			< 0.10	< 0.0098	N/A	< 0.0053	N/A	< 0.0050	< 0.0051	< 0.0062	N/A	< 0.0049
Bromoform	16,000	140			< 0.10	< 0.0098	N/A	< 0.0053	N/A	< 0.0050	< 0.0051	< 0.0062	N/A	< 0.0049
Bromomethane	1,000	3.9			< 0.021	< 0.020	N/A	< 0.011	N/A	< 0.010	< 0.010	< 0.012	N/A	< 0.0097
2-Butanone	NC	NC			< 0.16	< 0.15	N/A	< 0.080	N/A	< 0.075	< 0.077	< 0.093	N/A	< 0.073
Carbon disulfide	20,000	9			< 0.10	< 0.098	N/A	< 0.053	N/A	< 0.050	< 0.051	< 0.062	N/A	< 0.049
Carbon tetrachloride	410	0.9			< 0.10	< 0.0098	N/A	< 0.0053	N/A	< 0.0050	< 0.0051	< 0.0062	N/A	< 0.0049
Chlorobenzene	4,100	1.3			< 0.10	< 0.0098	N/A	< 0.0053	N/A	< 0.0050	< 0.0051	< 0.0062	N/A	< 0.0049
Chloroethane	NC	NC			< 0.021	< 0.020	N/A	< 0.011	N/A	< 0.010	< 0.010	< 0.012	N/A	< 0.0097
Chloroform	2,000	0.76			< 0.10	< 0.0098	N/A	< 0.0053	N/A	< 0.0050	< 0.0051	< 0.0062	N/A	< 0.0049
Chloromethane	NC	NC			< 0.021	< 0.020	N/A	< 0.011	N/A	< 0.010	< 0.010	< 0.012	N/A	< 0.0097
Dibromochloromethane	41,000	1,300			< 0.10	< 0.0098	N/A	< 0.0053	N/A	< 0.0050	< 0.0051	< 0.0062	N/A	< 0.0049
1,1-Dichloroethane	200,000	130			< 0.10	< 0.0098	N/A	< 0.0053	N/A	< 0.0050	< 0.0051	< 0.0062	N/A	< 0.0049
1,2-Dichloroethane	1,400	0.99			< 0.10	< 0.0098	N/A	< 0.0053	N/A	< 0.0050	< 0.0051	< 0.0062	N/A	< 0.0049
1,1,1-Dichloroethene	10,000	3			< 0.10	< 0.0098	N/A	< 0.0053	N/A	< 0.0050	< 0.0051	< 0.0062	N/A	< 0.0049
cis-1,2-Dichloroethene	20,000	1,200			< 0.10	< 0.0098	N/A	< 0.0053	N/A	< 0.0050	< 0.0051	< 0.0062	N/A	< 0.0049
trans-1,2-Dichloroethene	41,000	3,100			< 0.10	< 0.0098	N/A	< 0.0053	N/A	< 0.0050	< 0.0051	< 0.0062	N/A	< 0.0049
1,2-Dichloropropane	1,800	0.5			< 0.10	< 0.0098	N/A	< 0.0053	N/A	< 0.0050	< 0.0051	< 0.0062	N/A	< 0.0049
cis-1,3-Dichloropropene	1,200	0.39			< 0.0042	< 0.0039	N/A	< 0.0021	N/A	< 0.0020	< 0.0021	< 0.0025	N/A	< 0.0019
trans-1,3-Dichloropropene	1,200	0.39			< 0.0042	< 0.0039	N/A	< 0.0021	N/A	< 0.0020	< 0.0021	< 0.0025	N/A	< 0.0019
Ethylbenzene	20,000	58			< 0.10	< 0.0098	N/A	< 0.0053	N/A	< 0.0050	< 0.0051	< 0.0062	N/A	< 0.0049
2-Hexanone	NC	NC			< 0.042	< 0.039	N/A	< 0.021	N/A	< 0.020	< 0.021	< 0.025	N/A	< 0.019
4-Methyl-2-pentanone	NC	NC			< 0.042	< 0.039	N/A	< 0.021	N/A	< 0.020	< 0.021	< 0.025	N/A	< 0.019
Methylene chloride	12,000	34			< 0.10	< 0.020	N/A	< 0.011	N/A	< 0.010	< 0.010	< 0.012	N/A	< 0.0097
Methyl tert-butyl ether	2,000	140			< 0.10	< 0.0098	N/A	< 0.0053	N/A	< 0.0050	< 0.0051	< 0.0062	N/A	< 0.0049
Styrene	41,000	430			< 0.10	< 0.0098	N/A	< 0.0053	N/A	< 0.0050	< 0.0051	< 0.0062	N/A	< 0.0049
1,1,1,2,2-Tetrachloroethane	NC	NC			< 0.10	< 0.0098	N/A	< 0.0053	N/A	< 0.0050	< 0.0051	< 0.0062	N/A	< 0.0049
Tetrachloroethene	2,400	28			< 0.10	< 0.0098	N/A	< 0.0053	N/A	< 0.0050	< 0.0051	< 0.0062	N/A	< 0.0049
Toluene	410,000	42			< 0.10	< 0.0098	N/A	< 0.0053	N/A	< 0.0050	< 0.0051	< 0.0062	N/A	< 0.0049
1,1,1-Trichloroethane	NC	1,200			< 0.10	< 0.0098	N/A	< 0.0053	N/A	< 0.0050	< 0.0051	< 0.0062	N/A	< 0.0049
1,1,2-Trichloroethane	8,200	1,800			< 0.10	< 0.0098	N/A	< 0.0053	N/A	< 0.0050	< 0.0051	< 0.0062	N/A	< 0.0049
Trichloroethene	1,200	12			< 0.10	< 0.0098	N/A	< 0.0053	N/A	< 0.0050	< 0.0051	< 0.0062	N/A	< 0.0049
Vinyl chloride	170	1.1			< 0.10	< 0.0098	N/A	< 0.0053	N/A	< 0.0050	< 0.0051	< 0.0062	N/A	< 0.0049
Xylenes, Total	41,000	5.6			< 0.031	< 0.029	N/A	< 0.016	N/A	< 0.015	< 0.015	< 0.019	N/A	< 0.015

NOTES

1. All results expressed in milligrams per kilogram (mg/kg)
2. NC = No toxicity criteria for this exposure route
3. NA = Not Analyzed
4. Bold Shaded Values = Exceeds TACO Tier 1 SRO

TABLE 3b
Soil Analytical Results
SVOCs Compared to Construction Worker SROs
CTA Austin Station
Chicago, Illinois

	CONSTRUCTION WORKER		Sample	SB-01-01	SB-02-1	SB-02-02	SB-03-01	SB-03-02	SB-04-01	SB-05-01
			Date	6/10/2021	6/16/2021	6/16/2021	6/16/2021	6/16/2021	6/16/2021	6/16/2021
	Ingestion	Inhalation	Depth (ft)	1-2	2-3	8-9	2-3	6-7	1-2	1-2
SVOCs										
Aniline	NC	NC		< 0.36	< 0.38	N/A	< 0.37	N/A	< 0.38	< 0.39
Benzidine	NC	NC		< 0.35	< 0.37	N/A	< 0.37	N/A	< 0.38	< 0.38
Benzoic acid	820,000	NC		< 0.89	< 0.94	N/A	< 0.93	N/A	< 0.96	< 0.96
Benzyl alcohol	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20	< 0.20
Bis(2-chloroethoxy)methane	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20	< 0.20
Bis(2-chloroethyl)ether	75	0.66		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20	< 0.20
Bis(2-ethylhexyl)phthalate	4,100	31,000		< 0.89	< 0.94	N/A	< 0.93	N/A	< 0.96	< 0.96
4-Bromophenyl phenyl ether	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20	< 0.20
Butyl benzyl phthalate	410,000	930		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20	< 0.20
Carbazole	6,200	NC		0.2	< 0.19	N/A	< 0.19	N/A	< 0.20	< 0.20
4-Chloroaniline	820	NC		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20	< 0.20
4-Chloro-3-methylphenol	NC	NC		< 0.35	< 0.37	N/A	< 0.37	N/A	< 0.38	< 0.38
2-Chloronaphthalene	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20	< 0.20
2-Chlorophenol	10,000	53,000		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20	< 0.20
4-Chlorophenyl phenyl ether	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20	< 0.20
Dibenzofuran	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20	< 0.20
1,2-Dichlorobenzene	18,000	310		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20	< 0.20
1,3-Dichlorobenzene	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20	< 0.20
1,4-Dichlorobenzene	NC	340		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20	< 0.20
3,3'-Dichlorobenzidine	280	NC		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20	< 0.20
2,4-Dichlorophenol	610	NC		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20	< 0.20
Diethyl phthalate	1,000,000	2,000		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20	< 0.20
2,4-Dimethylphenol	41,000	NC		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20	< 0.20
Dimethyl phthalate	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20	< 0.20
4,6-Dinitro-2-methylphenol	NC	NC		< 0.35	< 0.37	N/A	< 0.37	N/A	< 0.38	< 0.38
2,4-Dinitrophenol	410	NC		< 0.89	< 0.94	N/A	< 0.93	N/A	< 0.96	< 0.96
2,4-Dinitrotoluene	180	NC		< 0.035	< 0.037	N/A	< 0.037	N/A	< 0.038	< 0.038
2,6-Dinitrotoluene	180	NC		< 0.035	< 0.037	N/A	< 0.037	N/A	< 0.038	< 0.038
Di-n-butyl phthalate	200,000	2,300		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20	< 0.20
Di-n-octyl phthalate	4,100	10,000		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20	< 0.20
Hexachlorobenzene	78	2.6		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20	< 0.20
Hexachlorobutadiene	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20	< 0.20
Hexachlorocyclopentadiene	14,000	1.1		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20	< 0.20
Hexachloroethane	2,000	NC		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20	< 0.20
Isophorone	410,000	4,600		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20	< 0.20
2-Methylnaphthalene	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20	< 0.20
2-Methylphenol	100,000	NC		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20	< 0.20
4-Methylphenol	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20	< 0.20
2-Nitroaniline	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20	< 0.20
3-Nitroaniline	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20	< 0.20
4-Nitroaniline	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20	< 0.20
2-Nitrophenol	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20	< 0.20
4-Nitrophenol	NC	NC		< 0.35	< 0.37	N/A	< 0.37	N/A	< 0.38	< 0.38
Nitrobenzene	1,000	9.4		< 0.035	< 0.037	N/A	< 0.037	N/A	< 0.038	< 0.038
N-Nitrosodi-n-propylamine	18	NC		< 0.035	< 0.037	N/A	< 0.037	N/A	< 0.038	< 0.038
N-Nitrosodimethylamine	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20	< 0.20
N-Nitrosodiphenylamine	25,000	NC		< 0.035	< 0.037	N/A	< 0.037	N/A	< 0.038	< 0.038
2, 2'-oxybis(1-Chloropropane)	NC	NC		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20	< 0.20
Pentachlorophenol	520	NC		< 0.035	< 0.037	N/A	< 0.037	N/A	< 0.038	< 0.038
Phenol	61,000	NC		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20	< 0.20
Pyridine	NC	NC		< 0.72	< 0.76	N/A	< 0.75	N/A	< 0.77	< 0.78
1,2,4-Trichlorobenzene	2,000	920		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20	< 0.20
2,4,5-Trichlorophenol	200,000	NC		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20	< 0.20
2,4,6-Trichlorophenol	11,000	540		< 0.18	< 0.19	N/A	< 0.19	N/A	< 0.20	< 0.20

NOTES

1. All results expressed in milligrams per kilogram (mg/kg)
2. NC = No toxicity criteria for this exposure route
3. NA = Not Analyzed
4. Bold Shaded Values = Exceeds TACO Tier 1 SRO



TABLE 3b
Soil Analytical Results
SVOCs Compared to Construction Worker SROs
CTA Austin Station
Chicago, Illinois

	CONSTRUCTION WORKER		Sample	SB-06-01	SB-06-02	SB-07-01
			Date	6/16/2021	6/16/2021	6/16/2021
	Ingestion	Inhalation	Depth (ft)	2-3	6-7	3-4
SVOCs						
Aniline	NC	NC		< 0.39	N/A	< 0.38
Benidine	NC	NC		< 0.39	N/A	< 0.38
Benzoic acid	820,000	NC		< 0.98	N/A	< 0.96
Benzyl alcohol	NC	NC		< 0.20	N/A	< 0.20
Bis(2-chloroethoxy)methane	NC	NC		< 0.20	N/A	< 0.20
Bis(2-chloroethyl)ether	75	0.66		< 0.20	N/A	< 0.20
Bis(2-ethylhexyl)phthalate	4,100	31,000		< 0.98	N/A	< 0.96
4-Bromophenyl phenyl ether	NC	NC		< 0.20	N/A	< 0.20
Butyl benzyl phthalate	410,000	930		< 0.20	N/A	< 0.20
Carbazole	6,200	NC		< 0.20	N/A	< 0.20
4-Chloroaniline	820	NC		< 0.20	N/A	< 0.20
4-Chloro-3-methylphenol	NC	NC		< 0.39	N/A	< 0.38
2-Chloronaphthalene	NC	NC		< 0.20	N/A	< 0.20
2-Chlorophenol	10,000	53,000		< 0.20	N/A	< 0.20
4-Chlorophenyl phenyl ether	NC	NC		< 0.20	N/A	< 0.20
Dibenzofuran	NC	NC		< 0.20	N/A	< 0.20
1,2-Dichlorobenzene	18,000	310		< 0.20	N/A	< 0.20
1,3-Dichlorobenzene	NC	NC		< 0.20	N/A	< 0.20
1,4-Dichlorobenzene	NC	340		< 0.20	N/A	< 0.20
3,3'-Dichlorobenzidine	280	NC		< 0.20	N/A	< 0.20
2,4-Dichlorophenol	610	NC		< 0.20	N/A	< 0.20
Diethyl phthalate	1,000,000	2,000		< 0.20	N/A	< 0.20
2,4-Dimethylphenol	41,000	NC		< 0.20	N/A	< 0.20
Dimethyl phthalate	NC	NC		< 0.20	N/A	< 0.20
4,6-Dinitro-2-methylphenol	NC	NC		< 0.39	N/A	< 0.38
2,4-Dinitrophenol	410	NC		< 0.98	N/A	< 0.96
2,4-Dinitrotoluene	180	NC		< 0.039	N/A	< 0.038
2,6-Dinitrotoluene	180	NC		< 0.039	N/A	< 0.038
Di-n-butyl phthalate	200,000	2,300		< 0.20	N/A	< 0.20
Di-n-octyl phthalate	4,100	10,000		< 0.20	N/A	< 0.20
Hexachlorobenzene	78	2.6		< 0.20	N/A	< 0.20
Hexachlorobutadiene	NC	NC		< 0.20	N/A	< 0.20
Hexachlorocyclopentadiene	14,000	1.1		< 0.20	N/A	< 0.20
Hexachloroethane	2,000	NC		< 0.20	N/A	< 0.20
Isophorone	410,000	4,600		< 0.20	N/A	< 0.20
2-Methylnaphthalene	NC	NC		< 0.20	N/A	< 0.20
2-Methylphenol	100,000	NC		< 0.20	N/A	< 0.20
4-Methylphenol	NC	NC		< 0.20	N/A	< 0.20
2-Nitroaniline	NC	NC		< 0.20	N/A	< 0.20
3-Nitroaniline	NC	NC		< 0.20	N/A	< 0.20
4-Nitroaniline	NC	NC		< 0.20	N/A	< 0.20
2-Nitrophenol	NC	NC		< 0.20	N/A	< 0.20
4-Nitrophenol	NC	NC		< 0.39	N/A	< 0.38
Nitrobenzene	1,000	9.4		< 0.039	N/A	< 0.038
N-Nitrosodi-n-propylamine	18	NC		< 0.039	N/A	< 0.038
N-Nitrosodimethylamine	NC	NC		< 0.20	N/A	< 0.20
N-Nitrosodiphenylamine	25,000	NC		< 0.039	N/A	< 0.038
2, 2'-oxybis(1-Chloropropane)	NC	NC		< 0.20	N/A	< 0.20
Pentachlorophenol	520	NC		< 0.039	N/A	< 0.038
Phenol	61,000	NC		< 0.20	N/A	< 0.20
Pyridine	NC	NC		< 0.79	N/A	< 0.77
1,2,4-Trichlorobenzene	2,000	920		< 0.20	N/A	< 0.20
2,4,5-Trichlorophenol	200,000	NC		< 0.20	N/A	< 0.20
2,4,6-Trichlorophenol	11,000	540		< 0.20	N/A	< 0.20

NOTES

1. All results expressed in milligrams per kilogram (mg/kg)
2. NC = No toxicity criteria for this exposure route
3. NA = Not Analyzed
4. Bold Shaded Values = Exceeds TACO Tier 1 SRO

TABLE 3c
Soil Analytical Results
PNAs Compared to Construction Worker SROs
CTA Austin Station
Chicago, Illinois

	CONSTRUCTION WORKER		Sample Date	SB-01-01	SB-02-1	SB-02-2	SB-03-01	SB-03-02	SB-04-01	SB-05-01	SB-06-01	SB-06-02	SB-07-01
	Ingestion	Inhalation	Depth (ft)	6/10/2021	6/16/2021	8-9	6/16/2021	6/16/2021	6/16/2021	6/16/2021	6/16/2021	6/16/2021	6/16/2021
PNAs				1-2	2-3		2-3	6-7	1-2	1-2	2-3	6-7	3-4
Acenaphthene	120,000	NC		<0.035	<0.037	N/A	<0.037	N/A	<0.038	<0.038	<0.039	N/A	<0.038
Acenaphthylene	NC	NC		0.25	0.056	N/A	<0.037	N/A	<0.038	<0.038	<0.039	N/A	<0.038
Anthracene	610,000	NC		0.35	0.12	N/A	<0.037	N/A	<0.038	<0.038	<0.039	N/A	<0.038
Benzo(a)anthracene	170	NC		0.39	0.53	N/A	<0.037	N/A	<0.038	<0.038	<0.039	N/A	<0.038
Benzo(a)pyrene	17	NC		0.49	0.73	<0.037	<0.037	N/A	<0.038	<0.038	<0.039	N/A	<0.038
Benzo(b)fluoranthene	170	NC		0.88	0.63	N/A	<0.037	N/A	<0.038	<0.038	<0.039	N/A	<0.038
Benzo(g,h,i)perylene	NC	NC		0.72	0.48	N/A	<0.037	N/A	<0.038	<0.038	<0.039	N/A	<0.038
Benzo(k)fluoranthene	1,700	NC		0.63	0.53	N/A	<0.037	N/A	<0.038	<0.038	<0.039	N/A	<0.038
Chrysene	17,000	NC		0.71	0.58	N/A	<0.037	N/A	<0.038	<0.038	<0.039	N/A	<0.038
Dibenz(a,h)anthracene	17	NC		0.23	0.23	<0.037	<0.037	N/A	<0.038	<0.038	<0.039	N/A	<0.038
Fluoranthene	82,000	NC		0.87	0.98	N/A	<0.037	N/A	<0.038	<0.038	<0.039	N/A	<0.038
Fluorene	82,000	NC		<0.035	<0.037	N/A	<0.037	N/A	<0.038	<0.038	<0.039	N/A	<0.038
Indeno(1,2,3-cd)pyrene	170	NC		0.53	0.4	N/A	<0.037	N/A	<0.038	<0.038	<0.039	N/A	<0.038
Naphthalene	4,100	1.8		<0.035	<0.037	N/A	<0.037	N/A	<0.038	<0.038	<0.039	N/A	<0.038
Phenanthrene	NC	NC		0.33	0.35	N/A	<0.037	N/A	<0.038	<0.038	<0.039	N/A	<0.038
Pyrene	61,000	NC		0.76	0.88	N/A	<0.037	N/A	<0.038	<0.038	<0.039	N/A	<0.038

NOTES

1. All results expressed in milligrams per kilogram (mg/kg)
2. NC = No toxicity criteria for this exposure route
3. NA = Not Analyzed
4. Bold Shaded Values = Exceeds TACO Tier 1 SRO

TABLE 3d

Soil Analytical Results
Inorganics and pH Compared to Construction Worker SROs
CTA Austin Station
Chicago, Illinois

	CONSTRUCTION WORKER		Sample Date	Depth (ft)	SB-01-01 6/10/2021	SB-02-1 6/16/2021	SB-02-02 6/16/2021	SB-03-01 6/16/2021	SB-03-02 6/16/2021	SB-04-01 6/16/2021	SB-05-01 6/16/2021	SB-06-01 6/16/2021	SB-06-02 6/16/2021	SB-07-01 6/16/2021
	Ingestion	Inhalation			1-2	2-3	8-9	2-3	6-7	1-2	1-2	2-3	6-7	3-4
Inorganics (mg/kg)														
Antimony	82	NC			2.6	<2.2	N/A	<2.0	N/A	<2.2	<2.2	<2.3	N/A	<2.1
Arsenic	61	25,000			19	13	13	22	2.8	9	10	31	15	10
Barium	14,000	870,000			52	83	N/A	320	N/A	64	75	160	N/A	24
Beryllium	410	44,000			<0.49	0.95	N/A	0.68	N/A	1	1.1	0.67	N/A	<0.53
Cadmium	200	59,000			5.1	1.2	N/A	0.58	N/A	<0.55	<0.56	<0.57	N/A	<0.53
Calcium	NC	NC			100000	44000	N/A	39000	N/A	2200	2800	46000	N/A	53000
Chromium	4,100	690			34	19	N/A	19	N/A	27	26	16	N/A	16
Cobalt	12,000	NC			6.8	11	N/A	43	N/A	15	15	38	N/A	15
Copper	8,200	NC			150	230	N/A	46	N/A	42	37	65	N/A	36
Cyanide	4,100	NC			<0.27	<0.29	N/A	<0.28	N/A	<0.29	<0.30	<0.30	N/A	<0.29
Iron	NC	NC			43000	31000	N/A	40000	N/A	31000	32000	42000	N/A	25000
Lead	700	NC			300	580	N/A	29	N/A	19	19	45	N/A	17
Magnesium	730,000	NC			57000	19000	N/A	24000	N/A	6000	5800	29000	N/A	33000
Manganese	4,100	8,700			540	380	N/A	3800	N/A	270	410	1900	N/A	700
Mercury (Total) ⁵	61	0.1			0.094	0.36	N/A	0.03	N/A	0.037	0.032	0.028	N/A	0.034
Nickel	4,100	440,000			27	29	N/A	66	N/A	44	41	54	N/A	35
Potassium	NC	NC			540	1600	N/A	1900	N/A	2100	2100	1500	N/A	2100
Selenium	1,000	NC			<0.98	<1.1	N/A	<1.0	N/A	<1.1	<1.1	<1.1	N/A	<1.1
Silver	1,000	NC			<0.98	<1.1	N/A	<1.0	N/A	<1.1	<1.1	<1.1	N/A	<1.1
Sodium	NC	NC			140	340	N/A	960	N/A	2900	1500	810	N/A	760
Thallium	160	NC			<0.98	<1.1	N/A	<1.0	N/A	<1.1	<1.1	<1.1	N/A	<1.1
Vanadium	1,400	NC			14	25	N/A	27	N/A	32	31	25	N/A	17
Zinc	61,000	NC			250	360	N/A	57	N/A	72	66	76	N/A	56
pH		NC			8.54	7.50	8.75	9.35	9.70	8.57	7.81	9.07	9.14	8.63
TCLP (mg/L)														
Chromium	NC	NC			NA	NA	NA	NA	NA	<0.010	NA	NA	NA	NA
Iron	NC	NC			NA	NA	NA	NA	NA	NA	NA	<0.25	NA	NA
SPLP (mg/L)														
Cobalt	NC	NC			NA	NA	NA	0.009	NA	NA	NA	NA	NA	NA
Lead	NC	NC			NA	0.044	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	NC	NC			NA	NA	NA	0.12	NA	NA	NA	NA	NA	NA

NOTES

1. Total Metal results expressed in milligrams per kilogram (mg/kg). TCLP/SPLP results expressed in milligrams per kilogram (mg/L).
2. NC = No toxicity criteria for this exposure route
3. NA = Not Analyzed
4. Bold Shaded Values = Exceeds TACO Tier 1 SRO
5. ⁵ = Inhalation Exposure Routes for Mercury excluded under footnote s of the TACO Appendix B Table B of Section 742. Inhalation remediation objective only applies at sites where elemental mercury is a contaminant of concern.

TABLE 3e
Soil Analytical Results
PCBs Compared to Construction Worker SROs
CTA Austin Station
Chicago, Illinois

	CONSTRUCTION WORKER		Sample Date	Depth (ft)	SB-01-01	SB-02-1	SB-02-02	SB-03-01	SB-03-02	SB-04-01	SB-05-01	SB-06-01	SB-06-02	SB-07-01
	Ingestion	Inhalation			1-2	2-3	8-9	2-3	6-7	1-2	1-2	2-3	6-7	3-4
Pesticides														
4,4'-DDD	520	NC			< 0.0017	< 0.0018	N/A	< 0.0018	N/A	< 0.0019	< 0.0019	< 0.0019	N/A	< 0.0019
4,4'-DDE	370	NC			< 0.0017	< 0.0018	N/A	< 0.0018	N/A	< 0.0019	< 0.0019	< 0.0019	N/A	< 0.0019
4,4'-DDT	100	2,100			< 0.0017	< 0.0018	N/A	< 0.0018	N/A	< 0.0019	< 0.0019	< 0.0019	N/A	< 0.0019
Aldrin	6.1	9.3			< 0.0017	< 0.0018	N/A	< 0.0018	N/A	< 0.0019	< 0.0019	< 0.0019	N/A	< 0.0019
alpha-BHC	20	2.1			< 0.0017	< 0.0018	N/A	< 0.0018	N/A	< 0.0019	< 0.0019	< 0.0019	N/A	< 0.0019
alpha-Chlordane	NC	NC			< 0.0017	< 0.0018	N/A	< 0.0018	N/A	< 0.0019	< 0.0019	< 0.0019	N/A	< 0.0019
beta-BHC	NC	NC			< 0.0017	< 0.0018	N/A	< 0.0018	N/A	< 0.0019	< 0.0019	< 0.0019	N/A	< 0.0019
Chlordane	100	22			< 0.0017	< 0.0018	N/A	< 0.0018	N/A	< 0.0019	< 0.0019	< 0.0019	N/A	< 0.0019
delta-BHC	NC	NC			< 0.0017	< 0.0018	N/A	< 0.0018	N/A	< 0.0019	< 0.0019	< 0.0019	N/A	< 0.0019
Dieldrin	7.8	3.1			< 0.0017	< 0.0018	N/A	< 0.0018	N/A	< 0.0019	< 0.0019	< 0.0019	N/A	< 0.0019
Endosulfan I	1,200	NC			< 0.0017	< 0.0018	N/A	< 0.0018	N/A	< 0.0019	< 0.0019	< 0.0019	N/A	< 0.0019
Endosulfan II	1,200	NC			< 0.0017	< 0.0018	N/A	< 0.0018	N/A	< 0.0019	< 0.0019	< 0.0019	N/A	< 0.0019
Endosulfan sulfate	NC	NC			< 0.0017	< 0.0018	N/A	< 0.0018	N/A	< 0.0019	< 0.0019	< 0.0019	N/A	< 0.0019
Endrin	61	NC			< 0.0017	< 0.0018	N/A	< 0.0018	N/A	< 0.0019	< 0.0019	< 0.0019	N/A	< 0.0019
Endrin aldehyde	NC	NC			< 0.0017	< 0.0018	N/A	< 0.0018	N/A	< 0.0019	< 0.0019	< 0.0019	N/A	< 0.0019
Endrin ketone	NC	NC			< 0.0017	< 0.0018	N/A	< 0.0018	N/A	< 0.0019	< 0.0019	< 0.0019	N/A	< 0.0019
gamma-BHC	96	NC			< 0.0017	< 0.0018	N/A	< 0.0018	N/A	< 0.0019	< 0.0019	< 0.0019	N/A	< 0.0019
gamma-Chlordane	NC	NC			< 0.0017	< 0.0018	N/A	< 0.0018	N/A	< 0.0019	< 0.0019	< 0.0019	N/A	< 0.0019
Heptachlor	28	16			< 0.0017	< 0.0018	N/A	< 0.0018	N/A	< 0.0019	< 0.0019	< 0.0019	N/A	< 0.0019
Heptachlor epoxide	2.7	13			< 0.0017	< 0.0018	N/A	< 0.0018	N/A	< 0.0019	< 0.0019	< 0.0019	N/A	< 0.0019
Methoxychlor	1,000	NC			< 0.0017	< 0.0018	N/A	< 0.0018	N/A	< 0.0019	< 0.0019	< 0.0019	N/A	< 0.0019
Toxaphene	110	240			< 0.0035	< 0.0038	N/A	< 0.0037	N/A	< 0.0037	< 0.0039	< 0.0039	N/A	< 0.0038
PCBs														
Aroclor 1016	NC	NC			< 0.086	< 0.092	N/A	< 0.089	N/A	< 0.091	< 0.095	< 0.094	N/A	< 0.093
Aroclor 1221	NC	NC			< 0.086	< 0.092	N/A	< 0.089	N/A	< 0.091	< 0.095	< 0.094	N/A	< 0.093
Aroclor 1232	NC	NC			< 0.086	< 0.092	N/A	< 0.089	N/A	< 0.091	< 0.095	< 0.094	N/A	< 0.093
Aroclor 1242	NC	NC			< 0.086	< 0.092	N/A	< 0.089	N/A	< 0.091	< 0.095	< 0.094	N/A	< 0.093
Aroclor 1248	NC	NC			< 0.086	< 0.092	N/A	< 0.089	N/A	< 0.091	< 0.095	< 0.094	N/A	< 0.093
Aroclor 1254	NC	NC			< 0.086	< 0.092	N/A	< 0.089	N/A	< 0.091	< 0.095	< 0.094	N/A	< 0.093
Aroclor 1260	NC	NC			< 0.086	< 0.092	N/A	< 0.089	N/A	< 0.091	< 0.095	< 0.094	N/A	< 0.093
Total PCBs	1	NC			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

NOTES

1. All results expressed in milligrams per kilogram (mg/kg)
2. NC = No toxicity criteria for this exposure route
3. NA = Not Analyzed
4. ND = Not Detected at the reporting limit
5. Bold Shaded Values = Exceeds TACO Tier 1 SRO

APPENDIX B

Soil Boring Logs



GSG Consultants Inc
623 Cooper Court
Schaumburg, IL 60173
Telephone: 630.994.2600

BORING NUMBER SB-1

PAGE 1 OF 1

CLIENT	Epstein	PROJECT NAME	CTA Austin Station Upgrades
PROJECT NUMBER	20-2052	PROJECT LOCATION	Austin Station, Chicago, IL
DATE STARTED	6/10/21	COMPLETED	6/10/21
DRILLING CONTRACTOR	GSG Drilling	GROUND ELEVATION	624.00 ft
DRILLING METHOD	Hand Auger	HOLE SIZE	2"
LOGGED BY	JEB	CHECKED BY	GK
NOTES			
		GROUND WATER LEVELS:	
		AT TIME OF DRILLING	---
		AT END OF DRILLING	---
		AFTER DRILLING	---

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Environmental Data
0							
				GP-GC		(GP-GC) FILL: GRAVEL - White	
						0.3 623.8	
						(GP-GC) FILL: SAND and GRAVEL - Brown/Black	
1							PID = 0
	DT 1	100	Sample SB -1-1	GP-GC			PID = 0
2							
							PID = 0
3						3.0 621.0	

Bottom of borehole at 3.0 feet.



GSG Consultants Inc
623 Cooper Court
Schaumburg, IL 60173
Telephone: 630.994.2600

BORING NUMBER SB-2

PAGE 1 OF 1

CLIENT	Epstein	PROJECT NAME	CTA Austin Station Upgrades
PROJECT NUMBER	20-2052	PROJECT LOCATION	Austin Station, Chicago, IL
DATE STARTED	6/16/21	COMPLETED	6/16/21
DRILLING CONTRACTOR	GSG Drilling	GROUND ELEVATION	609.00 ft
DRILLING METHOD	GeoProbe Dual-Tube (7822DT)	HOLE SIZE	2"
LOGGED BY	JEB	CHECKED BY	GK
NOTES			
		GROUND WATER LEVELS:	
		AT TIME OF DRILLING	---
		AT END OF DRILLING	---
		AFTER DRILLING	---

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Environmental Data
0.0							
0.3						TOPSOIL (GP-GC) FILL: SAND and GRAVEL - Brown/Black	PID = 0
2.5	DT 1	80	Glass Fragments Sample SB-2-1	GP- GC			PID = 0
3.0						(CL-ML) SILTY CLAY, trace gravel (CL/ML) - Brown/Mottled Gray	PID = 0
5.0				CL- ML			PID = 0
7.5	DT 2	80					PID = 0
8.0			Sample SB-2-2	CL- ML		(CL-ML) SILTY CLAY, trace gravel (CL/ML) - Gray	PID = 0
10.0							PID = 0
10.0							

Bottom of borehole at 10.0 feet.

CLIENT Epstein

PROJECT NAME CTA Austin Station Upgrades

PROJECT NUMBER 20-2052

PROJECT LOCATION Austin Station, Chicago, IL

DATE STARTED 6/16/21 **COMPLETED** 6/16/21

GROUND ELEVATION 609.00 ft **HOLE SIZE** 2"

DRILLING CONTRACTOR GSG Drilling

GROUND WATER LEVELS:

DRILLING METHOD GeoProbe Dual-Tube (7822DT)

AT TIME OF DRILLING ---

LOGGED BY JEB CHECKED BY GK

AT END OF DRILLING _____

NOTES

AFTER DRILLING

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Environmental Data
0.0							
						CONCRETE	
						608.3	PID = 0
				GW		(GW) FILL: Gravel, with sand - White	
						607.5	PID = 0
						(CL-ML) SILTY CLAY, trace gravel (CL/ML) - Brown/Mottled Gray	
2.5	DT 1	83	2" Gravel Seam Root fragments Sample SB-3-1				PID = 0
				CL- ML			PID = 0
							PID = 0
5.0							PID = 0
						603.0	PID = 0
				GP		(GP) GRAVEL, with sand - Gray	
						602.5	PID = 0
						(CL-ML) SILTY CLAY, trace gravel (CL/ML) - Gray	
7.5	DT 2	100	Sample SB-3-2				PID = 0
				CL- ML			PID = 0
							PID = 0
10.0						599.0	PID = 0



GSG Consultants Inc
623 Cooper Court
Schaumburg, IL 60173
Telephone: 630.994.2600

BORING NUMBER SB-4

PAGE 1 OF 1

CLIENT	Epstein	PROJECT NAME	CTA Austin Station Upgrades
PROJECT NUMBER	20-2052	PROJECT LOCATION	Austin Station, Chicago, IL
DATE STARTED	6/16/21	COMPLETED	6/16/21
DRILLING CONTRACTOR	GSG Drilling	GROUND ELEVATION	609.00 ft
DRILLING METHOD	GeoProbe Dual-Tube (7822DT)	HOLE SIZE	2"
LOGGED BY	JEB	CHECKED BY	GK
NOTES			
GROUND WATER LEVELS:		AT TIME OF DRILLING ---	
		AT END OF DRILLING ---	
		AFTER DRILLING ---	

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Environmental Data
0.0						CONCRETE	
0.7						608.3	PID = 0
0.8				GW-GC		(GW-GC) FILL: Gravel, with sand - White	PID = 0
			Sample SB-4-1			(CL-ML) SILTY CLAY, trace gravel (CL/ML) - Brown/Mottled Gray	PID = 0
2.5	DT 1	83		CL-ML			PID = 0
5.0							PID = 0
7.5	DT 2	100	Sample SB-4-2	CL-ML			PID = 0
7.0						602.0	PID = 0
						(CL-ML) SILTY CLAY, trace gravel (CL/ML) - Gray	PID = 0
10.0						599.0	PID = 0

Bottom of borehole at 10.0 feet.



GSG Consultants Inc
623 Cooper Court
Schaumburg, IL 60173
Telephone: 630.994.2600

BORING NUMBER SB-6

PAGE 1 OF 1

CLIENT	Epstein	PROJECT NAME	CTA Austin Station Upgrades
PROJECT NUMBER	20-2052	PROJECT LOCATION	Austin Station, Chicago, IL
DATE STARTED	6/16/21	COMPLETED	6/16/21
DRILLING CONTRACTOR	GSG Drilling	GROUND ELEVATION	609.00 ft
DRILLING METHOD	GeoProbe Dual-Tube (7822DT)	HOLE SIZE	2"
LOGGED BY	JEB	CHECKED BY	GK
NOTES			
		GROUND WATER LEVELS:	
		AT TIME OF DRILLING	9.00 ft / Elev 600.00 ft
		AT END OF DRILLING	---
		AFTER DRILLING	---

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Environmental Data
0.0						CONCRETE	
0.7						608.3	PID = 0
0.8				GP-GC		(GP-GC) FILL: Gravel, with sand - White	608.3
						(CL-ML) SILTY CLAY, trace gravel (CL/ML) - Brown/Mottled Gray	
2.5	DT 1	53	Sample SB-6-1	CL-ML			PID = 0
5.0							PID = 0
6.0						603.0	PID = 0
						(CL-ML) SILTY CLAY, trace gravel (CL/ML) - Gray	
7.5	DT 2	100	Sample SB-6-2	CL-ML			PID = 0
							PID = 0
			Saturated				PID = 0
10.0						599.0	PID = 0

Bottom of borehole at 10.0 feet.



GSG Consultants Inc
623 Cooper Court
Schaumburg, IL 60173
Telephone: 630.994.2600

BORING NUMBER SB-7

PAGE 1 OF 1

CLIENT	Epstein	PROJECT NAME	CTA Austin Station Upgrades
PROJECT NUMBER	20-2052	PROJECT LOCATION	Austin Station, Chicago, IL
DATE STARTED	6/16/21	COMPLETED	6/16/21
DRILLING CONTRACTOR	GSG Drilling	GROUND ELEVATION	609.00 ft
DRILLING METHOD	GeoProbe Dual-Tube (7822DT)	HOLE SIZE	2"
LOGGED BY	JEB	CHECKED BY	GK
NOTES			
GROUND WATER LEVELS:		AT TIME OF DRILLING ---	
		AT END OF DRILLING ---	
		AFTER DRILLING ---	

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY %	REMARKS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	Environmental Data
0.0						CONCRETE	
0.7						608.3	PID = 0
0.8				GW-GC		(GW-GC) FILL: GRAVEL, with sand - White	PID = 0
						(CL-ML) SILTY CLAY, trace gravel (CL/ML) - Brown/Mottled Gray	PID = 0
2.5	DT 1	100	Sample SB-7-1	CL-ML			PID = 0
5.0							PID = 0
7.5	DT 2	100	Sample SB-7-2	CL-ML			PID = 0
8.0						601.0	PID = 0
						(CL-ML) SILTY CLAY, trace gravel (CL/ML) - Gray	PID = 0
10.0						599.0	PID = 0

Bottom of borehole at 10.0 feet.

APPENDIX C

Laboratory Analytical Reports

STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

June 17, 2021

GSG Consultants, Inc.
2942 W. Van Buren St.
Chicago, IL 60612
Telephone: (312) 733-6262
Fax: (312) 733-5612

Analytical Report for STAT Work Order: 21060324 Revision 0

RE: CTA Austin Station

Dear GSG Consultants, Inc.:

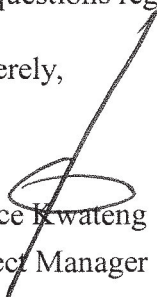
STAT Analysis received 1 sample for the referenced project on 6/10/2021 10:40:00 AM. The analytical results are presented in the following report.

All analyses were performed in accordance with the requirements of 35 IAC Part 186 / NELAP standards. Analyses were performed in accordance with methods as referenced on the analytical report. Those analytical results expressed on a dry weight basis are also noted on the analytical report.

All analyses were performed within established holding time criteria, and all Quality Control criteria met EPA or laboratory specifications except when noted in the Case Narrative or Analytical Report. If required, an estimate of uncertainty for the analyses can be provided. A listing of accredited methods/parameters can also be provided.

Thank you for the opportunity to serve you and I look forward to working with you in the future. If you have any questions regarding the enclosed materials, please contact me at (312) 733-0551.

Sincerely,



Justice Kwateng
Project Manager

The information contained in this report and any attachments is confidential information intended only for the use of the individual or entities named above. The results of this report relate only to the samples as received and tested. If you have received this report in error, please notify us immediately by phone. This report shall not be reproduced, except in its entirety, unless written approval has been obtained from the laboratory. This analytical report shall become property of the Customer upon payment in full. Otherwise, STAT will be under no obligation to support, defend or discuss the analytical report.

Client: GSG Consultants, Inc.
Project: CTA Austin Station
Work Order: 21060324 Revision 0

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
21060324-001A	Austin-1		6/10/2021 10:00:00 AM	6/10/2021
21060324-001B	Austin-1		6/10/2021 10:00:00 AM	6/10/2021

STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 17, 2021

Date Printed: June 17, 2021

ANALYTICAL RESULTS

Client: GSG Consultants, Inc.

Client Sample ID: Austin-1

Work Order: 21060324 Revision 0

Collection Date: 6/10/2021 10:00:00 AM

Project: CTA Austin Station

Matrix: Soil

Lab ID: 21060324-001

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Volatile Organic Compounds by GC/MS						
	SW5035/8260B		Prep Date: 6/11/2021		Analyst: CBG	
Acetone	ND	0.16		mg/Kg-dry	1	6/15/2021
Benzene	ND	0.010		mg/Kg-dry	1	6/15/2021
Bromodichloromethane	ND	0.010		mg/Kg-dry	1	6/15/2021
Bromoform	ND	0.010		mg/Kg-dry	1	6/15/2021
Bromomethane	ND	0.021		mg/Kg-dry	1	6/15/2021
2-Butanone	ND	0.16		mg/Kg-dry	1	6/15/2021
Carbon disulfide	ND	0.10		mg/Kg-dry	1	6/15/2021
Carbon tetrachloride	ND	0.010		mg/Kg-dry	1	6/15/2021
Chlorobenzene	ND	0.010		mg/Kg-dry	1	6/15/2021
Chloroethane	ND	0.021		mg/Kg-dry	1	6/15/2021
Chloroform	ND	0.010		mg/Kg-dry	1	6/15/2021
Chloromethane	ND	0.021		mg/Kg-dry	1	6/15/2021
Dibromochloromethane	ND	0.010		mg/Kg-dry	1	6/15/2021
1,1-Dichloroethane	ND	0.010		mg/Kg-dry	1	6/15/2021
1,2-Dichloroethane	ND	0.010		mg/Kg-dry	1	6/15/2021
1,1-Dichloroethene	ND	0.010		mg/Kg-dry	1	6/15/2021
cis-1,2-Dichloroethene	ND	0.010		mg/Kg-dry	1	6/15/2021
trans-1,2-Dichloroethene	ND	0.010		mg/Kg-dry	1	6/15/2021
1,2-Dichloropropane	ND	0.010		mg/Kg-dry	1	6/15/2021
cis-1,3-Dichloropropene	ND	0.0042		mg/Kg-dry	1	6/15/2021
trans-1,3-Dichloropropene	ND	0.0042		mg/Kg-dry	1	6/15/2021
Ethylbenzene	ND	0.010		mg/Kg-dry	1	6/15/2021
2-Hexanone	ND	0.042		mg/Kg-dry	1	6/15/2021
4-Methyl-2-pentanone	ND	0.042		mg/Kg-dry	1	6/15/2021
Methylene chloride	ND	0.010		mg/Kg-dry	1	6/15/2021
Methyl tert-butyl ether	ND	0.010		mg/Kg-dry	1	6/15/2021
Styrene	ND	0.010		mg/Kg-dry	1	6/15/2021
1,1,2,2-Tetrachloroethane	ND	0.010		mg/Kg-dry	1	6/15/2021
Tetrachloroethene	ND	0.010		mg/Kg-dry	1	6/15/2021
Toluene	ND	0.010		mg/Kg-dry	1	6/15/2021
1,1,1-Trichloroethane	ND	0.010		mg/Kg-dry	1	6/15/2021
1,1,2-Trichloroethane	ND	0.010		mg/Kg-dry	1	6/15/2021
Trichloroethene	ND	0.010		mg/Kg-dry	1	6/15/2021
Vinyl chloride	ND	0.010		mg/Kg-dry	1	6/15/2021
Xylenes, Total	ND	0.031		mg/Kg-dry	1	6/15/2021
Semivolatile Organic Compounds by GC/MS						
	SW8270C (SW3550B)		Prep Date: 6/11/2021		Analyst: TEM	
Acenaphthene	ND	0.035		mg/Kg-dry	1	6/13/2021
Acenaphthylene	0.25	0.035		mg/Kg-dry	1	6/13/2021

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

H - Holding time exceeded

STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 17, 2021

Date Printed: June 17, 2021

ANALYTICAL RESULTS

Client: GSG Consultants, Inc.

Client Sample ID: Austin-1

Work Order: 21060324 Revision 0

Collection Date: 6/10/2021 10:00:00 AM

Project: CTA Austin Station

Matrix: Soil

Lab ID: 21060324-001

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Semivolatile Organic Compounds by GC/MS						
SW8270C (SW3550B)		Prep Date: 6/11/2021		Analyst: TEM		
Aniline	ND	0.36		mg/Kg-dry	1	6/13/2021
Anthracene	0.35	0.035		mg/Kg-dry	1	6/13/2021
Benz(a)anthracene	0.39	0.035		mg/Kg-dry	1	6/13/2021
Benzidine	ND	0.35		mg/Kg-dry	1	6/13/2021
Benzo(a)pyrene	0.49	0.035		mg/Kg-dry	1	6/13/2021
Benzo(b)fluoranthene	0.88	0.035		mg/Kg-dry	1	6/13/2021
Benzo(g,h,i)perylene	0.72	0.035		mg/Kg-dry	1	6/13/2021
Benzo(k)fluoranthene	0.63	0.035		mg/Kg-dry	1	6/13/2021
Benzoic acid	ND	0.89		mg/Kg-dry	1	6/13/2021
Benzyl alcohol	ND	0.18		mg/Kg-dry	1	6/13/2021
Bis(2-chloroethoxy)methane	ND	0.18		mg/Kg-dry	1	6/13/2021
Bis(2-chloroethyl)ether	ND	0.18		mg/Kg-dry	1	6/13/2021
Bis(2-ethylhexyl)phthalate	ND	0.89		mg/Kg-dry	1	6/13/2021
4-Bromophenyl phenyl ether	ND	0.18		mg/Kg-dry	1	6/13/2021
Butyl benzyl phthalate	ND	0.18		mg/Kg-dry	1	6/13/2021
Carbazole	0.20	0.18		mg/Kg-dry	1	6/13/2021
4-Chloroaniline	ND	0.18		mg/Kg-dry	1	6/13/2021
4-Chloro-3-methylphenol	ND	0.35		mg/Kg-dry	1	6/13/2021
2-Chloronaphthalene	ND	0.18		mg/Kg-dry	1	6/13/2021
2-Chlorophenol	ND	0.18		mg/Kg-dry	1	6/13/2021
4-Chlorophenyl phenyl ether	ND	0.18		mg/Kg-dry	1	6/13/2021
Chrysene	0.71	0.035		mg/Kg-dry	1	6/13/2021
Dibenz(a,h)anthracene	0.23	0.035		mg/Kg-dry	1	6/13/2021
Dibenzofuran	ND	0.18		mg/Kg-dry	1	6/13/2021
1,2-Dichlorobenzene	ND	0.18		mg/Kg-dry	1	6/13/2021
1,3-Dichlorobenzene	ND	0.18		mg/Kg-dry	1	6/13/2021
1,4-Dichlorobenzene	ND	0.18		mg/Kg-dry	1	6/13/2021
3,3'-Dichlorobenzidine	ND	0.18		mg/Kg-dry	1	6/13/2021
2,4-Dichlorophenol	ND	0.18		mg/Kg-dry	1	6/13/2021
Diethyl phthalate	ND	0.18		mg/Kg-dry	1	6/13/2021
2,4-Dimethylphenol	ND	0.18		mg/Kg-dry	1	6/13/2021
Dimethyl phthalate	ND	0.18		mg/Kg-dry	1	6/13/2021
4,6-Dinitro-2-methylphenol	ND	0.35		mg/Kg-dry	1	6/13/2021
2,4-Dinitrophenol	ND	0.89		mg/Kg-dry	1	6/13/2021
2,4-Dinitrotoluene	ND	0.035		mg/Kg-dry	1	6/13/2021
2,6-Dinitrotoluene	ND	0.035		mg/Kg-dry	1	6/13/2021
Di-n-butyl phthalate	ND	0.18		mg/Kg-dry	1	6/13/2021
Di-n-octyl phthalate	ND	0.18		mg/Kg-dry	1	6/13/2021

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

* - Non-accredited parameter

H - Holding time exceeded

STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 17, 2021

Date Printed: June 17, 2021

ANALYTICAL RESULTS

Client: GSG Consultants, Inc.
Work Order: 21060324 Revision 0
Project: CTA Austin Station
Lab ID: 21060324-001

Client Sample ID: Austin-1
Collection Date: 6/10/2021 10:00:00 AM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Semivolatile Organic Compounds by GC/MS						
	SW8270C (SW3550B)		Prep Date: 6/11/2021		Analyst: TEM	
Fluoranthene	0.87	0.035		mg/Kg-dry	1	6/13/2021
Fluorene	ND	0.035		mg/Kg-dry	1	6/13/2021
Hexachlorobenzene	ND	0.18		mg/Kg-dry	1	6/13/2021
Hexachlorobutadiene	ND	0.18		mg/Kg-dry	1	6/13/2021
Hexachlorocyclopentadiene	ND	0.18		mg/Kg-dry	1	6/13/2021
Hexachloroethane	ND	0.18		mg/Kg-dry	1	6/13/2021
Indeno(1,2,3-cd)pyrene	0.53	0.035		mg/Kg-dry	1	6/13/2021
Isophorone	ND	0.18		mg/Kg-dry	1	6/13/2021
2-Methylnaphthalene	ND	0.18		mg/Kg-dry	1	6/13/2021
2-Methylphenol	ND	0.18		mg/Kg-dry	1	6/13/2021
4-Methylphenol	ND	0.18		mg/Kg-dry	1	6/13/2021
Naphthalene	ND	0.035		mg/Kg-dry	1	6/13/2021
2-Nitroaniline	ND	0.18		mg/Kg-dry	1	6/13/2021
3-Nitroaniline	ND	0.18		mg/Kg-dry	1	6/13/2021
4-Nitroaniline	ND	0.18		mg/Kg-dry	1	6/13/2021
2-Nitrophenol	ND	0.18		mg/Kg-dry	1	6/13/2021
4-Nitrophenol	ND	0.35		mg/Kg-dry	1	6/13/2021
Nitrobenzene	ND	0.035		mg/Kg-dry	1	6/13/2021
N-Nitrosodi-n-propylamine	ND	0.035		mg/Kg-dry	1	6/13/2021
N-Nitrosodimethylamine	ND	0.18		mg/Kg-dry	1	6/13/2021
N-Nitrosodiphenylamine	ND	0.035		mg/Kg-dry	1	6/13/2021
2, 2'-oxybis(1-Chloropropane)	ND	0.18		mg/Kg-dry	1	6/13/2021
Pentachlorophenol	ND	0.035		mg/Kg-dry	1	6/13/2021
Phenanthrene	0.33	0.035		mg/Kg-dry	1	6/13/2021
Phenol	ND	0.18		mg/Kg-dry	1	6/13/2021
Pyrene	0.76	0.035		mg/Kg-dry	1	6/13/2021
Pyridine	ND	0.72		mg/Kg-dry	1	6/13/2021
1,2,4-Trichlorobenzene	ND	0.18		mg/Kg-dry	1	6/13/2021
2,4,5-Trichlorophenol	ND	0.18		mg/Kg-dry	1	6/13/2021
2,4,6-Trichlorophenol	ND	0.18		mg/Kg-dry	1	6/13/2021
PCBs						
	SW8082A (SW3550B)		Prep Date: 6/11/2021		Analyst: GVC	
Aroclor 1016	ND	0.086		mg/Kg-dry	1	6/11/2021
Aroclor 1221	ND	0.086		mg/Kg-dry	1	6/11/2021
Aroclor 1232	ND	0.086		mg/Kg-dry	1	6/11/2021
Aroclor 1242	ND	0.086		mg/Kg-dry	1	6/11/2021
Aroclor 1248	ND	0.086		mg/Kg-dry	1	6/11/2021
Aroclor 1254	ND	0.086		mg/Kg-dry	1	6/11/2021
Aroclor 1260	ND	0.086		mg/Kg-dry	1	6/11/2021

Qualifiers:
 ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 HT - Sample received past holding time
 * - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 E - Value above quantitation range
 H - Holding time exceeded

STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 17, 2021

Date Printed: June 17, 2021

ANALYTICAL RESULTS

Client: GSG Consultants, Inc.
Work Order: 21060324 Revision 0
Project: CTA Austin Station
Lab ID: 21060324-001

Client Sample ID: Austin-1
Collection Date: 6/10/2021 10:00:00 AM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Pesticides						
	SW8081B (SW3550B)			Prep Date: 6/11/2021		Analyst: GVC
4,4'-DDD	ND	0.0017		mg/Kg-dry	1	6/11/2021
4,4'-DDE	ND	0.0017		mg/Kg-dry	1	6/11/2021
4,4'-DDT	ND	0.0017		mg/Kg-dry	1	6/11/2021
Aldrin	ND	0.0017		mg/Kg-dry	1	6/11/2021
alpha-BHC	ND	0.0017		mg/Kg-dry	1	6/11/2021
alpha-Chlordane	ND	0.0017		mg/Kg-dry	1	6/11/2021
beta-BHC	ND	0.0017		mg/Kg-dry	1	6/11/2021
Chlordane	ND	0.017		mg/Kg-dry	1	6/11/2021
delta-BHC	ND	0.0017		mg/Kg-dry	1	6/11/2021
Dieldrin	ND	0.0017		mg/Kg-dry	1	6/11/2021
Endosulfan I	ND	0.0017		mg/Kg-dry	1	6/11/2021
Endosulfan II	ND	0.0017		mg/Kg-dry	1	6/11/2021
Endosulfan sulfate	ND	0.0017		mg/Kg-dry	1	6/11/2021
Endrin	ND	0.0017		mg/Kg-dry	1	6/11/2021
Endrin aldehyde	ND	0.0017		mg/Kg-dry	1	6/11/2021
Endrin ketone	ND	0.0017		mg/Kg-dry	1	6/11/2021
gamma-BHC	ND	0.0017		mg/Kg-dry	1	6/11/2021
gamma-Chlordane	ND	0.0017		mg/Kg-dry	1	6/11/2021
Heptachlor	ND	0.0017		mg/Kg-dry	1	6/11/2021
Heptachlor epoxide	ND	0.0017		mg/Kg-dry	1	6/11/2021
Methoxychlor	ND	0.0017		mg/Kg-dry	1	6/11/2021
Toxaphene	ND	0.035		mg/Kg-dry	1	6/11/2021
Metals by ICP/MS						
	SW6020A (SW3050B)			Prep Date: 6/15/2021		Analyst: JG
Aluminum	3200	20		mg/Kg-dry	10	6/15/2021
Antimony	2.6	2.0		mg/Kg-dry	10	6/15/2021
Arsenic	20	0.98		mg/Kg-dry	10	6/15/2021
Barium	52	0.98		mg/Kg-dry	10	6/15/2021
Beryllium	ND	0.49		mg/Kg-dry	10	6/15/2021
Cadmium	5.1	0.49		mg/Kg-dry	10	6/15/2021
Calcium	100000	59		mg/Kg-dry	10	6/15/2021
Chromium	34	0.98		mg/Kg-dry	10	6/15/2021
Cobalt	6.8	0.98		mg/Kg-dry	10	6/15/2021
Copper	150	2.4		mg/Kg-dry	10	6/15/2021
Iron	43000	29		mg/Kg-dry	10	6/15/2021
Lead	300	0.49		mg/Kg-dry	10	6/15/2021
Magnesium	57000	29		mg/Kg-dry	10	6/15/2021
Manganese	540	0.98		mg/Kg-dry	10	6/15/2021
Nickel	27	0.98		mg/Kg-dry	10	6/15/2021

Qualifiers:
 ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 HT - Sample received past holding time
 * - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 E - Value above quantitation range
 H - Holding time exceeded

STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 17, 2021

Date Printed: June 17, 2021

ANALYTICAL RESULTS

Client: GSG Consultants, Inc.

Work Order: 21060324 Revision 0

Project: CTA Austin Station

Lab ID: 21060324-001

Client Sample ID: Austin-1

Collection Date: 6/10/2021 10:00:00 AM

Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Metals by ICP/MS	SW6020A (SW3050B)					Prep Date: 6/15/2021 Analyst: JG
Potassium	540	29		mg/Kg-dry	10	6/15/2021
Selenium	ND	0.98		mg/Kg-dry	10	6/15/2021
Silver	ND	0.98		mg/Kg-dry	10	6/15/2021
Sodium	140	59		mg/Kg-dry	10	6/15/2021
Thallium	ND	0.98		mg/Kg-dry	10	6/15/2021
Vanadium	14	0.98		mg/Kg-dry	10	6/15/2021
Zinc	250	4.9		mg/Kg-dry	10	6/15/2021
Mercury	SW7471B					Prep Date: 6/16/2021 Analyst: LB
Mercury	0.094	0.020		mg/Kg-dry	1	6/16/2021
Cyanide, Total	SW9012A					Prep Date: 6/11/2021 Analyst: AJR
Cyanide	ND	0.27		mg/Kg-dry	1	6/11/2021
pH (25 °C)	SW9045C					Prep Date: 6/17/2021 Analyst: AJR
pH	8.54			pH Units	1	6/17/2021
Percent Moisture	D2974					Prep Date: 6/10/2021 Analyst: ZPT
Percent Moisture	7.6	0.2	*	wt%	1	6/11/2021

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
HT - Sample received past holding time
* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H - Holding time exceeded

Page 8 of 9

Sample Receipt Checklist

Client Name GSG

Date and Time Received: 6/10/2021 10:40:00 AM

Work Order Number 21060324

Received by: SAS

Checklist completed by: ed 6/10/21
Signature Date

Reviewed by: CJS 6/11/21
Initials Date

Matrix:

Carrier name: Client Delivered

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☒
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels/containers?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container or Temp Blank temperature in compliance?	Yes ☒	No ☐	Temperature On Ice °C
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☐	No ☐
Water - Samples pH checked?	Yes ☐	No ☐	Checked by: _____
Water - Samples properly preserved?	Yes ☐	No ☐	pH Adjusted? _____

Any No response must be detailed in the comments section below.

Comments:

Client / Person

contacted: _____ Date contacted: _____ Contacted by: _____

Response:

STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

June 28, 2021

GSG Consultants, Inc.
2942 W. Van Buren St.
Chicago, IL 60612
Telephone: (312) 733-6262
Fax: (312) 733-5612

Analytical Report for STAT Work Order: 21060542 Revision 0

RE: CTA Austin

Dear GSG Consultants, Inc.:

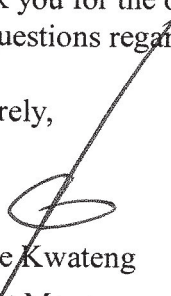
STAT Analysis received 12 samples for the referenced project on 6/16/2021 11:06:00 AM. The analytical results are presented in the following report.

All analyses were performed in accordance with the requirements of 35 IAC Part 186 / NELAP standards. Analyses were performed in accordance with methods as referenced on the analytical report. Those analytical results expressed on a dry weight basis are also noted on the analytical report.

All analyses were performed within established holding time criteria, and all Quality Control criteria met EPA or laboratory specifications except when noted in the Case Narrative or Analytical Report. If required, an estimate of uncertainty for the analyses can be provided. A listing of accredited methods/parameters can also be provided.

Thank you for the opportunity to serve you and I look forward to working with you in the future. If you have any questions regarding the enclosed materials, please contact me at (312) 733-0551.

Sincerely,



Justice Kwateng
Project Manager

The information contained in this report and any attachments is confidential information intended only for the use of the individual or entities named above. The results of this report relate only to the samples as received and tested. If you have received this report in error, please notify us immediately by phone. This report shall not be reproduced, except in its entirety, unless written approval has been obtained from the laboratory. This analytical report shall become property of the Customer upon payment in full. Otherwise, STAT will be under no obligation to support, defend or discuss the analytical report.

Client: GSG Consultants, Inc.
Project: CTA Austin
Work Order: 21060542 Revision 0

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
21060542-001A	SB-02-1		6/16/2021 9:50:00 AM	6/16/2021
21060542-001B	SB-02-1		6/16/2021 9:50:00 AM	6/16/2021
21060542-002A	SB-03-1		6/16/2021 9:40:00 AM	6/16/2021
21060542-002B	SB-03-1		6/16/2021 9:40:00 AM	6/16/2021
21060542-003A	SB-4-1		6/16/2021 9:30:00 AM	6/16/2021
21060542-003B	SB-4-1		6/16/2021 9:30:00 AM	6/16/2021
21060542-004A	SB-5-1		6/16/2021 9:20:00 AM	6/16/2021
21060542-004B	SB-5-1		6/16/2021 9:20:00 AM	6/16/2021
21060542-005A	SB-6-1		6/16/2021 9:10:00 AM	6/16/2021
21060542-005B	SB-6-1		6/16/2021 9:10:00 AM	6/16/2021
21060542-006A	SB-7-1		6/16/2021 9:00:00 AM	6/16/2021
21060542-006B	SB-7-1		6/16/2021 9:00:00 AM	6/16/2021
21060542-007A	SB-02-2		6/16/2021 9:55:00 AM	6/16/2021
21060542-007B	SB-02-2		6/16/2021 9:55:00 AM	6/16/2021
21060542-008A	SB-03-2		6/16/2021 9:45:00 AM	6/16/2021
21060542-008B	SB-03-2		6/16/2021 9:45:00 AM	6/16/2021
21060542-009A	SB-4-2		6/16/2021 9:35:00 AM	6/16/2021
21060542-009B	SB-4-2		6/16/2021 9:35:00 AM	6/16/2021
21060542-010A	SB-5-2		6/16/2021 9:25:00 AM	6/16/2021
21060542-010B	SB-5-2		6/16/2021 9:25:00 AM	6/16/2021
21060542-011A	SB-6-2		6/16/2021 9:15:00 AM	6/16/2021
21060542-011B	SB-6-2		6/16/2021 9:15:00 AM	6/16/2021
21060542-012A	SB-7-2		6/16/2021 9:05:00 AM	6/16/2021
21060542-012B	SB-7-2		6/16/2021 9:05:00 AM	6/16/2021

STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 28, 2021

Date Printed: June 28, 2021

ANALYTICAL RESULTS

Client: GSG Consultants, Inc.
Work Order: 21060542 Revision 0
Project: CTA Austin
Lab ID: 21060542-001

Client Sample ID: SB-02-1
Collection Date: 6/16/2021 9:50:00 AM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Volatile Organic Compounds by GC/MS						
	SW5035/8260B		Prep Date: 6/16/2021		Analyst: JDT	
Acetone	ND	0.15		mg/Kg-dry	1	6/21/2021
Benzene	ND	0.0098		mg/Kg-dry	1	6/21/2021
Bromodichloromethane	ND	0.0098		mg/Kg-dry	1	6/21/2021
Bromoform	ND	0.0098		mg/Kg-dry	1	6/21/2021
Bromomethane	ND	0.020		mg/Kg-dry	1	6/21/2021
2-Butanone	ND	0.15		mg/Kg-dry	1	6/21/2021
Carbon disulfide	ND	0.098		mg/Kg-dry	1	6/21/2021
Carbon tetrachloride	ND	0.0098		mg/Kg-dry	1	6/21/2021
Chlorobenzene	ND	0.0098		mg/Kg-dry	1	6/21/2021
Chloroethane	ND	0.020		mg/Kg-dry	1	6/21/2021
Chloroform	ND	0.0098		mg/Kg-dry	1	6/21/2021
Chloromethane	ND	0.020		mg/Kg-dry	1	6/21/2021
Dibromochloromethane	ND	0.0098		mg/Kg-dry	1	6/21/2021
1,1-Dichloroethane	ND	0.0098		mg/Kg-dry	1	6/21/2021
1,2-Dichloroethane	ND	0.0098		mg/Kg-dry	1	6/21/2021
1,1-Dichloroethene	ND	0.0098		mg/Kg-dry	1	6/21/2021
cis-1,2-Dichloroethene	ND	0.0098		mg/Kg-dry	1	6/21/2021
trans-1,2-Dichloroethene	ND	0.0098		mg/Kg-dry	1	6/21/2021
1,2-Dichloropropane	ND	0.0098		mg/Kg-dry	1	6/21/2021
cis-1,3-Dichloropropene	ND	0.0039		mg/Kg-dry	1	6/21/2021
trans-1,3-Dichloropropene	ND	0.0039		mg/Kg-dry	1	6/21/2021
Ethylbenzene	ND	0.0098		mg/Kg-dry	1	6/21/2021
2-Hexanone	ND	0.039		mg/Kg-dry	1	6/21/2021
4-Methyl-2-pentanone	ND	0.039		mg/Kg-dry	1	6/21/2021
Methylene chloride	ND	0.020		mg/Kg-dry	1	6/21/2021
Methyl tert-butyl ether	ND	0.0098		mg/Kg-dry	1	6/21/2021
Styrene	ND	0.0098		mg/Kg-dry	1	6/21/2021
1,1,2,2-Tetrachloroethane	ND	0.0098		mg/Kg-dry	1	6/21/2021
Tetrachloroethene	ND	0.0098		mg/Kg-dry	1	6/21/2021
Toluene	ND	0.0098		mg/Kg-dry	1	6/21/2021
1,1,1-Trichloroethane	ND	0.0098		mg/Kg-dry	1	6/21/2021
1,1,2-Trichloroethane	ND	0.0098		mg/Kg-dry	1	6/21/2021
Trichloroethene	ND	0.0098		mg/Kg-dry	1	6/21/2021
Vinyl chloride	ND	0.0098		mg/Kg-dry	1	6/21/2021
Xylenes, Total	ND	0.029		mg/Kg-dry	1	6/21/2021
Semivolatile Organic Compounds by GC/MS						
	SW8270C (SW3550B)		Prep Date: 6/21/2021		Analyst: DM	
Acenaphthene	ND	0.037		mg/Kg-dry	1	6/23/2021
Acenaphthylene	0.056	0.037		mg/Kg-dry	1	6/23/2021

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

H - Holding time exceeded

STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 28, 2021

Date Printed: June 28, 2021

ANALYTICAL RESULTS

Client: GSG Consultants, Inc.

Client Sample ID: SB-02-1

Work Order: 21060542 Revision 0

Collection Date: 6/16/2021 9:50:00 AM

Project: CTA Austin

Matrix: Soil

Lab ID: 21060542-001

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Semivolatile Organic Compounds by GC/MS						
	SW8270C (SW3550B)				Prep Date: 6/21/2021	Analyst: DM
Aniline	ND	0.38		mg/Kg-dry	1	6/23/2021
Anthracene	0.12	0.037		mg/Kg-dry	1	6/23/2021
Benz(a)anthracene	0.53	0.037		mg/Kg-dry	1	6/23/2021
Benzidine	ND	0.37		mg/Kg-dry	1	6/23/2021
Benzo(a)pyrene	0.73	0.037		mg/Kg-dry	1	6/23/2021
Benzo(b)fluoranthene	0.63	0.037		mg/Kg-dry	1	6/23/2021
Benzo(g,h,i)perylene	0.48	0.037		mg/Kg-dry	1	6/23/2021
Benzo(k)fluoranthene	0.53	0.037		mg/Kg-dry	1	6/23/2021
Benzoic acid	ND	0.94		mg/Kg-dry	1	6/23/2021
Benzyl alcohol	ND	0.19		mg/Kg-dry	1	6/23/2021
Bis(2-chloroethoxy)methane	ND	0.19		mg/Kg-dry	1	6/23/2021
Bis(2-chloroethyl)ether	ND	0.19		mg/Kg-dry	1	6/23/2021
Bis(2-ethylhexyl)phthalate	ND	0.94		mg/Kg-dry	1	6/23/2021
4-Bromophenyl phenyl ether	ND	0.19		mg/Kg-dry	1	6/23/2021
Butyl benzyl phthalate	ND	0.19		mg/Kg-dry	1	6/23/2021
Carbazole	ND	0.19		mg/Kg-dry	1	6/23/2021
4-Chloroaniline	ND	0.19		mg/Kg-dry	1	6/23/2021
4-Chloro-3-methylphenol	ND	0.37		mg/Kg-dry	1	6/23/2021
2-Chloronaphthalene	ND	0.19		mg/Kg-dry	1	6/23/2021
2-Chlorophenol	ND	0.19		mg/Kg-dry	1	6/23/2021
4-Chlorophenyl phenyl ether	ND	0.19		mg/Kg-dry	1	6/23/2021
Chrysene	0.58	0.037		mg/Kg-dry	1	6/23/2021
Dibenz(a,h)anthracene	0.23	0.037		mg/Kg-dry	1	6/23/2021
Dibenzofuran	ND	0.19		mg/Kg-dry	1	6/23/2021
1,2-Dichlorobenzene	ND	0.19		mg/Kg-dry	1	6/23/2021
1,3-Dichlorobenzene	ND	0.19		mg/Kg-dry	1	6/23/2021
1,4-Dichlorobenzene	ND	0.19		mg/Kg-dry	1	6/23/2021
3,3'-Dichlorobenzidine	ND	0.19		mg/Kg-dry	1	6/23/2021
2,4-Dichlorophenol	ND	0.19		mg/Kg-dry	1	6/23/2021
Diethyl phthalate	ND	0.19		mg/Kg-dry	1	6/23/2021
2,4-Dimethylphenol	ND	0.19		mg/Kg-dry	1	6/23/2021
Dimethyl phthalate	ND	0.19		mg/Kg-dry	1	6/23/2021
4,6-Dinitro-2-methylphenol	ND	0.37		mg/Kg-dry	1	6/23/2021
2,4-Dinitrophenol	ND	0.94		mg/Kg-dry	1	6/23/2021
2,4-Dinitrotoluene	ND	0.037		mg/Kg-dry	1	6/23/2021
2,6-Dinitrotoluene	ND	0.037		mg/Kg-dry	1	6/23/2021
Di-n-butyl phthalate	ND	0.19		mg/Kg-dry	1	6/23/2021
Di-n-octyl phthalate	ND	0.19		mg/Kg-dry	1	6/23/2021

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

* - Non-accredited parameter

H - Holding time exceeded

STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 28, 2021

Date Printed: June 28, 2021

ANALYTICAL RESULTS

Client: GSG Consultants, Inc.
Work Order: 21060542 Revision 0
Project: CTA Austin
Lab ID: 21060542-001

Client Sample ID: SB-02-1
Collection Date: 6/16/2021 9:50:00 AM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Semivolatile Organic Compounds by GC/MS						
	SW8270C (SW3550B)				Prep Date: 6/21/2021	Analyst: DM
Fluoranthene	0.98	0.037		mg/Kg-dry	1	6/23/2021
Fluorene	ND	0.037		mg/Kg-dry	1	6/23/2021
Hexachlorobenzene	ND	0.19		mg/Kg-dry	1	6/23/2021
Hexachlorobutadiene	ND	0.19		mg/Kg-dry	1	6/23/2021
Hexachlorocyclopentadiene	ND	0.19		mg/Kg-dry	1	6/23/2021
Hexachloroethane	ND	0.19		mg/Kg-dry	1	6/23/2021
Indeno(1,2,3-cd)pyrene	0.40	0.037		mg/Kg-dry	1	6/23/2021
Isophorone	ND	0.19		mg/Kg-dry	1	6/23/2021
2-Methylnaphthalene	ND	0.19		mg/Kg-dry	1	6/23/2021
2-Methylphenol	ND	0.19		mg/Kg-dry	1	6/23/2021
4-Methylphenol	ND	0.19		mg/Kg-dry	1	6/23/2021
Naphthalene	ND	0.037		mg/Kg-dry	1	6/23/2021
2-Nitroaniline	ND	0.19		mg/Kg-dry	1	6/23/2021
3-Nitroaniline	ND	0.19		mg/Kg-dry	1	6/23/2021
4-Nitroaniline	ND	0.19		mg/Kg-dry	1	6/23/2021
2-Nitrophenol	ND	0.19		mg/Kg-dry	1	6/23/2021
4-Nitrophenol	ND	0.37		mg/Kg-dry	1	6/23/2021
Nitrobenzene	ND	0.037		mg/Kg-dry	1	6/23/2021
N-Nitrosodi-n-propylamine	ND	0.037		mg/Kg-dry	1	6/23/2021
N-Nitrosodimethylamine	ND	0.19		mg/Kg-dry	1	6/23/2021
N-Nitrosodiphenylamine	ND	0.037		mg/Kg-dry	1	6/23/2021
2, 2'-oxybis(1-Chloropropane)	ND	0.19		mg/Kg-dry	1	6/23/2021
Pentachlorophenol	ND	0.037		mg/Kg-dry	1	6/23/2021
Phenanthrene	0.35	0.037		mg/Kg-dry	1	6/23/2021
Phenol	ND	0.19		mg/Kg-dry	1	6/23/2021
Pyrene	0.88	0.037		mg/Kg-dry	1	6/23/2021
Pyridine	ND	0.76		mg/Kg-dry	1	6/23/2021
1,2,4-Trichlorobenzene	ND	0.19		mg/Kg-dry	1	6/23/2021
2,4,5-Trichlorophenol	ND	0.19		mg/Kg-dry	1	6/23/2021
2,4,6-Trichlorophenol	ND	0.19		mg/Kg-dry	1	6/23/2021
PCBs						
	SW8082A (SW3550B)				Prep Date: 6/18/2021	Analyst: GVC
Aroclor 1016	ND	0.092		mg/Kg-dry	1	6/20/2021
Aroclor 1221	ND	0.092		mg/Kg-dry	1	6/20/2021
Aroclor 1232	ND	0.092		mg/Kg-dry	1	6/20/2021
Aroclor 1242	ND	0.092		mg/Kg-dry	1	6/20/2021
Aroclor 1248	ND	0.092		mg/Kg-dry	1	6/20/2021
Aroclor 1254	ND	0.092		mg/Kg-dry	1	6/20/2021
Aroclor 1260	ND	0.092		mg/Kg-dry	1	6/20/2021

Qualifiers:
 ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 HT - Sample received past holding time
 * - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 E - Value above quantitation range
 H - Holding time exceeded

STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 28, 2021

Date Printed: June 28, 2021

ANALYTICAL RESULTS

Client: GSG Consultants, Inc.

Client Sample ID: SB-02-1

Work Order: 21060542 Revision 0

Collection Date: 6/16/2021 9:50:00 AM

Project: CTA Austin

Matrix: Soil

Lab ID: 21060542-001

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Pesticides						
SW8081B (SW3550B)		Prep Date: 6/18/2021		Analyst: GVC		
4,4'-DDD	ND	0.0018		mg/Kg-dry	1	6/20/2021
4,4'-DDE	ND	0.0018		mg/Kg-dry	1	6/20/2021
4,4'-DDT	ND	0.0018		mg/Kg-dry	1	6/20/2021
Aldrin	ND	0.0018		mg/Kg-dry	1	6/20/2021
alpha-BHC	ND	0.0018		mg/Kg-dry	1	6/20/2021
alpha-Chlordane	ND	0.0018		mg/Kg-dry	1	6/20/2021
beta-BHC	ND	0.0018		mg/Kg-dry	1	6/20/2021
Chlordane	ND	0.018		mg/Kg-dry	1	6/20/2021
delta-BHC	ND	0.0018		mg/Kg-dry	1	6/20/2021
Dieldrin	ND	0.0018		mg/Kg-dry	1	6/20/2021
Endosulfan I	ND	0.0018		mg/Kg-dry	1	6/20/2021
Endosulfan II	ND	0.0018		mg/Kg-dry	1	6/20/2021
Endosulfan sulfate	ND	0.0018		mg/Kg-dry	1	6/20/2021
Endrin	ND	0.0018		mg/Kg-dry	1	6/20/2021
Endrin aldehyde	ND	0.0018		mg/Kg-dry	1	6/20/2021
Endrin ketone	ND	0.0018		mg/Kg-dry	1	6/20/2021
gamma-BHC	ND	0.0018		mg/Kg-dry	1	6/20/2021
gamma-Chlordane	ND	0.0018		mg/Kg-dry	1	6/20/2021
Heptachlor	ND	0.0018		mg/Kg-dry	1	6/20/2021
Heptachlor epoxide	ND	0.0018		mg/Kg-dry	1	6/20/2021
Methoxychlor	ND	0.0018		mg/Kg-dry	1	6/20/2021
Toxaphene	ND	0.038		mg/Kg-dry	1	6/20/2021
Metals by ICP/MS						
SW6020A (SW3050B)		Prep Date: 6/22/2021		Analyst: JG		
Aluminum	11000	22		mg/Kg-dry	10	6/22/2021
Antimony	ND	2.2		mg/Kg-dry	10	6/22/2021
Arsenic	19	1.1		mg/Kg-dry	10	6/22/2021
Barium	83	1.1		mg/Kg-dry	10	6/22/2021
Beryllium	0.95	0.55		mg/Kg-dry	10	6/22/2021
Cadmium	1.2	0.55		mg/Kg-dry	10	6/22/2021
Calcium	44000	66		mg/Kg-dry	10	6/22/2021
Chromium	19	1.1		mg/Kg-dry	10	6/22/2021
Cobalt	11	1.1		mg/Kg-dry	10	6/22/2021
Copper	230	2.7		mg/Kg-dry	10	6/22/2021
Iron	31000	33		mg/Kg-dry	10	6/22/2021
Lead	580	0.55		mg/Kg-dry	10	6/22/2021
Magnesium	19000	33		mg/Kg-dry	10	6/22/2021
Manganese	380	1.1		mg/Kg-dry	10	6/22/2021
Nickel	29	1.1		mg/Kg-dry	10	6/22/2021

Qualifiers:

ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 HT - Sample received past holding time
 * - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 E - Value above quantitation range
 H - Holding time exceeded

STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 28, 2021

Date Printed: June 28, 2021

ANALYTICAL RESULTS

Client: GSG Consultants, Inc.

Work Order: 21060542 Revision 0

Project: CTA Austin

Lab ID: 21060542-001

Client Sample ID: SB-02-1

Collection Date: 6/16/2021 9:50:00 AM

Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Metals by ICP/MS	SW6020A (SW3050B)					Prep Date: 6/22/2021 Analyst: JG
Potassium	1600	33		mg/Kg-dry	10	6/22/2021
Selenium	ND	1.1		mg/Kg-dry	10	6/22/2021
Silver	ND	1.1		mg/Kg-dry	10	6/22/2021
Sodium	340	66		mg/Kg-dry	10	6/22/2021
Thallium	ND	1.1		mg/Kg-dry	10	6/22/2021
Vanadium	25	1.1		mg/Kg-dry	10	6/22/2021
Zinc	360	5.5		mg/Kg-dry	10	6/22/2021
Mercury	SW7471B					Prep Date: 6/24/2021 Analyst: LB
Mercury	0.36	0.018		mg/Kg-dry	1	6/25/2021
Cyanide, Total	SW9012A					Prep Date: 6/17/2021 Analyst: AJR
Cyanide	ND	0.29		mg/Kg-dry	1	6/17/2021
pH (25 °C)	SW9045C					Prep Date: 6/22/2021 Analyst: AJR
pH	7.50			pH Units	1	6/22/2021
Percent Moisture	D2974					Prep Date: 6/21/2021 Analyst: ZPT
Percent Moisture	12.6	0.2	*	wt%	1	6/22/2021

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
HT - Sample received past holding time
* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H - Holding time exceeded

STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 28, 2021

Date Printed: June 28, 2021

ANALYTICAL RESULTS

Client: GSG Consultants, Inc.
Work Order: 21060542 Revision 0
Project: CTA Austin
Lab ID: 21060542-002

Client Sample ID: SB-03-1
Collection Date: 6/16/2021 9:40:00 AM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Volatile Organic Compounds by GC/MS						
	SW5035/8260B		Prep Date: 6/16/2021		Analyst: JDT	
Acetone	ND	0.080		mg/Kg-dry	1	6/21/2021
Benzene	ND	0.0053		mg/Kg-dry	1	6/21/2021
Bromodichloromethane	ND	0.0053		mg/Kg-dry	1	6/21/2021
Bromoform	ND	0.0053		mg/Kg-dry	1	6/21/2021
Bromomethane	ND	0.011		mg/Kg-dry	1	6/21/2021
2-Butanone	ND	0.080		mg/Kg-dry	1	6/21/2021
Carbon disulfide	ND	0.053		mg/Kg-dry	1	6/21/2021
Carbon tetrachloride	ND	0.0053		mg/Kg-dry	1	6/21/2021
Chlorobenzene	ND	0.0053		mg/Kg-dry	1	6/21/2021
Chloroethane	ND	0.011		mg/Kg-dry	1	6/21/2021
Chloroform	ND	0.0053		mg/Kg-dry	1	6/21/2021
Chloromethane	ND	0.011		mg/Kg-dry	1	6/21/2021
Dibromochloromethane	ND	0.0053		mg/Kg-dry	1	6/21/2021
1,1-Dichloroethane	ND	0.0053		mg/Kg-dry	1	6/21/2021
1,2-Dichloroethane	ND	0.0053		mg/Kg-dry	1	6/21/2021
1,1-Dichloroethene	ND	0.0053		mg/Kg-dry	1	6/21/2021
cis-1,2-Dichloroethene	ND	0.0053		mg/Kg-dry	1	6/21/2021
trans-1,2-Dichloroethene	ND	0.0053		mg/Kg-dry	1	6/21/2021
1,2-Dichloropropane	ND	0.0053		mg/Kg-dry	1	6/21/2021
cis-1,3-Dichloropropene	ND	0.0021		mg/Kg-dry	1	6/21/2021
trans-1,3-Dichloropropene	ND	0.0021		mg/Kg-dry	1	6/21/2021
Ethylbenzene	ND	0.0053		mg/Kg-dry	1	6/21/2021
2-Hexanone	ND	0.021		mg/Kg-dry	1	6/21/2021
4-Methyl-2-pentanone	ND	0.021		mg/Kg-dry	1	6/21/2021
Methylene chloride	ND	0.011		mg/Kg-dry	1	6/21/2021
Methyl tert-butyl ether	ND	0.0053		mg/Kg-dry	1	6/21/2021
Styrene	ND	0.0053		mg/Kg-dry	1	6/21/2021
1,1,2,2-Tetrachloroethane	ND	0.0053		mg/Kg-dry	1	6/21/2021
Tetrachloroethene	ND	0.0053		mg/Kg-dry	1	6/21/2021
Toluene	ND	0.0053		mg/Kg-dry	1	6/21/2021
1,1,1-Trichloroethane	ND	0.0053		mg/Kg-dry	1	6/21/2021
1,1,2-Trichloroethane	ND	0.0053		mg/Kg-dry	1	6/21/2021
Trichloroethene	ND	0.0053		mg/Kg-dry	1	6/21/2021
Vinyl chloride	ND	0.0053		mg/Kg-dry	1	6/21/2021
Xylenes, Total	ND	0.016		mg/Kg-dry	1	6/21/2021
Semivolatile Organic Compounds by GC/MS						
	SW8270C (SW3550B)		Prep Date: 6/21/2021		Analyst: TEM	
Acenaphthene	ND	0.037		mg/Kg-dry	1	6/23/2021
Acenaphthylene	ND	0.037		mg/Kg-dry	1	6/23/2021

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

H - Holding time exceeded

STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 28, 2021

Date Printed: June 28, 2021

ANALYTICAL RESULTS

Client: GSG Consultants, Inc.

Client Sample ID: SB-03-1

Work Order: 21060542 Revision 0

Collection Date: 6/16/2021 9:40:00 AM

Project: CTA Austin

Matrix: Soil

Lab ID: 21060542-002

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Semivolatile Organic Compounds by GC/MS						
	SW8270C (SW3550B)				Prep Date: 6/21/2021	Analyst: TEM
Aniline	ND	0.37		mg/Kg-dry	1	6/23/2021
Anthracene	ND	0.037		mg/Kg-dry	1	6/23/2021
Benz(a)anthracene	ND	0.037		mg/Kg-dry	1	6/23/2021
Benzidine	ND	0.37		mg/Kg-dry	1	6/23/2021
Benzo(a)pyrene	ND	0.037		mg/Kg-dry	1	6/23/2021
Benzo(b)fluoranthene	ND	0.037		mg/Kg-dry	1	6/23/2021
Benzo(g,h,i)perylene	ND	0.037		mg/Kg-dry	1	6/23/2021
Benzo(k)fluoranthene	ND	0.037		mg/Kg-dry	1	6/23/2021
Benzoic acid	ND	0.93		mg/Kg-dry	1	6/23/2021
Benzyl alcohol	ND	0.19		mg/Kg-dry	1	6/23/2021
Bis(2-chloroethoxy)methane	ND	0.19		mg/Kg-dry	1	6/23/2021
Bis(2-chloroethyl)ether	ND	0.19		mg/Kg-dry	1	6/23/2021
Bis(2-ethylhexyl)phthalate	ND	0.93		mg/Kg-dry	1	6/23/2021
4-Bromophenyl phenyl ether	ND	0.19		mg/Kg-dry	1	6/23/2021
Butyl benzyl phthalate	ND	0.19		mg/Kg-dry	1	6/23/2021
Carbazole	ND	0.19		mg/Kg-dry	1	6/23/2021
4-Chloroaniline	ND	0.19		mg/Kg-dry	1	6/23/2021
4-Chloro-3-methylphenol	ND	0.37		mg/Kg-dry	1	6/23/2021
2-Chloronaphthalene	ND	0.19		mg/Kg-dry	1	6/23/2021
2-Chlorophenol	ND	0.19		mg/Kg-dry	1	6/23/2021
4-Chlorophenyl phenyl ether	ND	0.19		mg/Kg-dry	1	6/23/2021
Chrysene	ND	0.037		mg/Kg-dry	1	6/23/2021
Dibenz(a,h)anthracene	ND	0.037		mg/Kg-dry	1	6/23/2021
Dibenzofuran	ND	0.19		mg/Kg-dry	1	6/23/2021
1,2-Dichlorobenzene	ND	0.19		mg/Kg-dry	1	6/23/2021
1,3-Dichlorobenzene	ND	0.19		mg/Kg-dry	1	6/23/2021
1,4-Dichlorobenzene	ND	0.19		mg/Kg-dry	1	6/23/2021
3,3'-Dichlorobenzidine	ND	0.19		mg/Kg-dry	1	6/23/2021
2,4-Dichlorophenol	ND	0.19		mg/Kg-dry	1	6/23/2021
Diethyl phthalate	ND	0.19		mg/Kg-dry	1	6/23/2021
2,4-Dimethylphenol	ND	0.19		mg/Kg-dry	1	6/23/2021
Dimethyl phthalate	ND	0.19		mg/Kg-dry	1	6/23/2021
4,6-Dinitro-2-methylphenol	ND	0.37		mg/Kg-dry	1	6/23/2021
2,4-Dinitrophenol	ND	0.93		mg/Kg-dry	1	6/23/2021
2,4-Dinitrotoluene	ND	0.037		mg/Kg-dry	1	6/23/2021
2,6-Dinitrotoluene	ND	0.037		mg/Kg-dry	1	6/23/2021
Di-n-butyl phthalate	ND	0.19		mg/Kg-dry	1	6/23/2021
Di-n-octyl phthalate	ND	0.19		mg/Kg-dry	1	6/23/2021

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

* - Non-accredited parameter

H - Holding time exceeded

STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 28, 2021

Date Printed: June 28, 2021

ANALYTICAL RESULTS

Client: GSG Consultants, Inc.

Client Sample ID: SB-03-1

Work Order: 21060542 Revision 0

Collection Date: 6/16/2021 9:40:00 AM

Project: CTA Austin

Matrix: Soil

Lab ID: 21060542-002

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Semivolatile Organic Compounds by GC/MS						
	SW8270C (SW3550B)				Prep Date: 6/21/2021	Analyst: TEM
Fluoranthene	ND	0.037		mg/Kg-dry	1	6/23/2021
Fluorene	ND	0.037		mg/Kg-dry	1	6/23/2021
Hexachlorobenzene	ND	0.19		mg/Kg-dry	1	6/23/2021
Hexachlorobutadiene	ND	0.19		mg/Kg-dry	1	6/23/2021
Hexachlorocyclopentadiene	ND	0.19		mg/Kg-dry	1	6/23/2021
Hexachloroethane	ND	0.19		mg/Kg-dry	1	6/23/2021
Indeno(1,2,3-cd)pyrene	ND	0.037		mg/Kg-dry	1	6/23/2021
Isophorone	ND	0.19		mg/Kg-dry	1	6/23/2021
2-Methylnaphthalene	ND	0.19		mg/Kg-dry	1	6/23/2021
2-Methylphenol	ND	0.19		mg/Kg-dry	1	6/23/2021
4-Methylphenol	ND	0.19		mg/Kg-dry	1	6/23/2021
Naphthalene	ND	0.037		mg/Kg-dry	1	6/23/2021
2-Nitroaniline	ND	0.19		mg/Kg-dry	1	6/23/2021
3-Nitroaniline	ND	0.19		mg/Kg-dry	1	6/23/2021
4-Nitroaniline	ND	0.19		mg/Kg-dry	1	6/23/2021
2-Nitrophenol	ND	0.19		mg/Kg-dry	1	6/23/2021
4-Nitrophenol	ND	0.37		mg/Kg-dry	1	6/23/2021
Nitrobenzene	ND	0.037		mg/Kg-dry	1	6/23/2021
N-Nitrosodi-n-propylamine	ND	0.037		mg/Kg-dry	1	6/23/2021
N-Nitrosodimethylamine	ND	0.19		mg/Kg-dry	1	6/23/2021
N-Nitrosodiphenylamine	ND	0.037		mg/Kg-dry	1	6/23/2021
2, 2'-oxybis(1-Chloropropane)	ND	0.19		mg/Kg-dry	1	6/23/2021
Pentachlorophenol	ND	0.037		mg/Kg-dry	1	6/23/2021
Phenanthrene	ND	0.037		mg/Kg-dry	1	6/23/2021
Phenol	ND	0.19		mg/Kg-dry	1	6/23/2021
Pyrene	ND	0.037		mg/Kg-dry	1	6/23/2021
Pyridine	ND	0.75		mg/Kg-dry	1	6/23/2021
1,2,4-Trichlorobenzene	ND	0.19		mg/Kg-dry	1	6/23/2021
2,4,5-Trichlorophenol	ND	0.19		mg/Kg-dry	1	6/23/2021
2,4,6-Trichlorophenol	ND	0.19		mg/Kg-dry	1	6/23/2021
PCBs						
	SW8082A (SW3550B)				Prep Date: 6/18/2021	Analyst: GVC
Aroclor 1016	ND	0.089		mg/Kg-dry	1	6/20/2021
Aroclor 1221	ND	0.089		mg/Kg-dry	1	6/20/2021
Aroclor 1232	ND	0.089		mg/Kg-dry	1	6/20/2021
Aroclor 1242	ND	0.089		mg/Kg-dry	1	6/20/2021
Aroclor 1248	ND	0.089		mg/Kg-dry	1	6/20/2021
Aroclor 1254	ND	0.089		mg/Kg-dry	1	6/20/2021
Aroclor 1260	ND	0.089		mg/Kg-dry	1	6/20/2021

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

H - Holding time exceeded

STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 28, 2021

Date Printed: June 28, 2021

ANALYTICAL RESULTS

Client: GSG Consultants, Inc.
Work Order: 21060542 Revision 0
Project: CTA Austin
Lab ID: 21060542-002

Client Sample ID: SB-03-1
Collection Date: 6/16/2021 9:40:00 AM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Pesticides						
	SW8081B (SW3550B)			Prep Date: 6/18/2021		Analyst: GVC
4,4'-DDD	ND	0.0018		mg/Kg-dry	1	6/20/2021
4,4'-DDE	ND	0.0018		mg/Kg-dry	1	6/20/2021
4,4'-DDT	ND	0.0018		mg/Kg-dry	1	6/20/2021
Aldrin	ND	0.0018		mg/Kg-dry	1	6/20/2021
alpha-BHC	ND	0.0018		mg/Kg-dry	1	6/20/2021
alpha-Chlordane	ND	0.0018		mg/Kg-dry	1	6/20/2021
beta-BHC	ND	0.0018		mg/Kg-dry	1	6/20/2021
Chlordane	ND	0.018		mg/Kg-dry	1	6/20/2021
delta-BHC	ND	0.0018		mg/Kg-dry	1	6/20/2021
Dieldrin	ND	0.0018		mg/Kg-dry	1	6/20/2021
Endosulfan I	ND	0.0018		mg/Kg-dry	1	6/20/2021
Endosulfan II	ND	0.0018		mg/Kg-dry	1	6/20/2021
Endosulfan sulfate	ND	0.0018		mg/Kg-dry	1	6/20/2021
Endrin	ND	0.0018		mg/Kg-dry	1	6/20/2021
Endrin aldehyde	ND	0.0018		mg/Kg-dry	1	6/20/2021
Endrin ketone	ND	0.0018		mg/Kg-dry	1	6/20/2021
gamma-BHC	ND	0.0018		mg/Kg-dry	1	6/20/2021
gamma-Chlordane	ND	0.0018		mg/Kg-dry	1	6/20/2021
Heptachlor	ND	0.0018		mg/Kg-dry	1	6/20/2021
Heptachlor epoxide	ND	0.0018		mg/Kg-dry	1	6/20/2021
Methoxychlor	ND	0.0018		mg/Kg-dry	1	6/20/2021
Toxaphene	ND	0.037		mg/Kg-dry	1	6/20/2021
Metals by ICP/MS						
	SW6020A (SW3050B)			Prep Date: 6/22/2021		Analyst: JG
Aluminum	11000	20		mg/Kg-dry	10	6/22/2021
Antimony	ND	2.0		mg/Kg-dry	10	6/22/2021
Arsenic	22	1.0		mg/Kg-dry	10	6/22/2021
Barium	320	1.0		mg/Kg-dry	10	6/22/2021
Beryllium	0.68	0.50		mg/Kg-dry	10	6/22/2021
Cadmium	0.58	0.50		mg/Kg-dry	10	6/22/2021
Calcium	39000	60		mg/Kg-dry	10	6/22/2021
Chromium	19	1.0		mg/Kg-dry	10	6/22/2021
Cobalt	43	1.0		mg/Kg-dry	10	6/22/2021
Copper	46	2.5		mg/Kg-dry	10	6/22/2021
Iron	40000	30		mg/Kg-dry	10	6/22/2021
Lead	29	0.50		mg/Kg-dry	10	6/22/2021
Magnesium	24000	30		mg/Kg-dry	10	6/22/2021
Manganese	3800	1.0		mg/Kg-dry	10	6/22/2021
Nickel	66	1.0		mg/Kg-dry	10	6/22/2021

Qualifiers:
 ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 HT - Sample received past holding time
 * - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 E - Value above quantitation range
 H - Holding time exceeded

STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 28, 2021

Date Printed: June 28, 2021

ANALYTICAL RESULTS

Client: GSG Consultants, Inc.

Work Order: 21060542 Revision 0

Project: CTA Austin

Lab ID: 21060542-002

Client Sample ID: SB-03-1

Collection Date: 6/16/2021 9:40:00 AM

Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Metals by ICP/MS	SW6020A (SW3050B)					Prep Date: 6/22/2021 Analyst: JG
Potassium	1900	30		mg/Kg-dry	10	6/22/2021
Selenium	ND	1.0		mg/Kg-dry	10	6/22/2021
Silver	ND	1.0		mg/Kg-dry	10	6/22/2021
Sodium	960	60		mg/Kg-dry	10	6/22/2021
Thallium	ND	1.0		mg/Kg-dry	10	6/22/2021
Vanadium	27	1.0		mg/Kg-dry	10	6/22/2021
Zinc	57	5.0		mg/Kg-dry	10	6/22/2021
Mercury	SW7471B					Prep Date: 6/24/2021 Analyst: LB
Mercury	0.030	0.018		mg/Kg-dry	1	6/25/2021
Cyanide, Total	SW9012A					Prep Date: 6/17/2021 Analyst: AJR
Cyanide	ND	0.28		mg/Kg-dry	1	6/17/2021
pH (25 °C)	SW9045C					Prep Date: 6/22/2021 Analyst: AJR
pH	9.35			pH Units	1	6/22/2021
Percent Moisture	D2974					Prep Date: 6/21/2021 Analyst: ZPT
Percent Moisture	11.4	0.2	*	wt%	1	6/22/2021

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
HT - Sample received past holding time
* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H - Holding time exceeded

STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 28, 2021

Date Printed: June 28, 2021

ANALYTICAL RESULTS

Client: GSG Consultants, Inc.
 Work Order: 21060542 Revision 0
 Project: CTA Austin
 Lab ID: 21060542-003

Client Sample ID: SB-4-1
 Collection Date: 6/16/2021 9:30:00 AM
 Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Volatile Organic Compounds by GC/MS						
	SW5035/8260B			Prep Date: 6/16/2021		Analyst: JDT
Acetone	ND	0.075		mg/Kg-dry	1	6/21/2021
Benzene	ND	0.0050		mg/Kg-dry	1	6/21/2021
Bromodichloromethane	ND	0.0050		mg/Kg-dry	1	6/21/2021
Bromoform	ND	0.0050		mg/Kg-dry	1	6/21/2021
Bromomethane	ND	0.010		mg/Kg-dry	1	6/21/2021
2-Butanone	ND	0.075		mg/Kg-dry	1	6/21/2021
Carbon disulfide	ND	0.050		mg/Kg-dry	1	6/21/2021
Carbon tetrachloride	ND	0.0050		mg/Kg-dry	1	6/21/2021
Chlorobenzene	ND	0.0050		mg/Kg-dry	1	6/21/2021
Chloroethane	ND	0.010		mg/Kg-dry	1	6/21/2021
Chloroform	ND	0.0050		mg/Kg-dry	1	6/21/2021
Chloromethane	ND	0.010		mg/Kg-dry	1	6/21/2021
Dibromochloromethane	ND	0.0050		mg/Kg-dry	1	6/21/2021
1,1-Dichloroethane	ND	0.0050		mg/Kg-dry	1	6/21/2021
1,2-Dichloroethane	ND	0.0050		mg/Kg-dry	1	6/21/2021
1,1-Dichloroethene	ND	0.0050		mg/Kg-dry	1	6/21/2021
cis-1,2-Dichloroethene	ND	0.0050		mg/Kg-dry	1	6/21/2021
trans-1,2-Dichloroethene	ND	0.0050		mg/Kg-dry	1	6/21/2021
1,2-Dichloropropane	ND	0.0050		mg/Kg-dry	1	6/21/2021
cis-1,3-Dichloropropene	ND	0.0020		mg/Kg-dry	1	6/21/2021
trans-1,3-Dichloropropene	ND	0.0020		mg/Kg-dry	1	6/21/2021
Ethylbenzene	ND	0.0050		mg/Kg-dry	1	6/21/2021
2-Hexanone	ND	0.020		mg/Kg-dry	1	6/21/2021
4-Methyl-2-pentanone	ND	0.020		mg/Kg-dry	1	6/21/2021
Methylene chloride	ND	0.010		mg/Kg-dry	1	6/21/2021
Methyl tert-butyl ether	ND	0.0050		mg/Kg-dry	1	6/21/2021
Styrene	ND	0.0050		mg/Kg-dry	1	6/21/2021
1,1,2,2-Tetrachloroethane	ND	0.0050		mg/Kg-dry	1	6/21/2021
Tetrachloroethene	ND	0.0050		mg/Kg-dry	1	6/21/2021
Toluene	ND	0.0050		mg/Kg-dry	1	6/21/2021
1,1,1-Trichloroethane	ND	0.0050		mg/Kg-dry	1	6/21/2021
1,1,2-Trichloroethane	ND	0.0050		mg/Kg-dry	1	6/21/2021
Trichloroethene	ND	0.0050		mg/Kg-dry	1	6/21/2021
Vinyl chloride	ND	0.0050		mg/Kg-dry	1	6/21/2021
Xylenes, Total	ND	0.015		mg/Kg-dry	1	6/21/2021
Semivolatile Organic Compounds by GC/MS						
	SW8270C (SW3550B)			Prep Date: 6/21/2021		Analyst: TEM
Acenaphthene	ND	0.038		mg/Kg-dry	1	6/22/2021
Acenaphthylene	ND	0.038		mg/Kg-dry	1	6/22/2021

Qualifiers:
 ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 HT - Sample received past holding time
 * - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 E - Value above quantitation range
 H - Holding time exceeded

STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 28, 2021

Date Printed: June 28, 2021

ANALYTICAL RESULTS

Client: GSG Consultants, Inc.

Client Sample ID: SB-4-1

Work Order: 21060542 Revision 0

Collection Date: 6/16/2021 9:30:00 AM

Project: CTA Austin

Matrix: Soil

Lab ID: 21060542-003

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Semivolatile Organic Compounds by GC/MS	SW8270C (SW3550B)				Prep Date: 6/21/2021	Analyst: TEM
Aniline	ND	0.38		mg/Kg-dry	1	6/22/2021
Anthracene	ND	0.038		mg/Kg-dry	1	6/22/2021
Benz(a)anthracene	ND	0.038		mg/Kg-dry	1	6/22/2021
Benzidine	ND	0.38		mg/Kg-dry	1	6/22/2021
Benzo(a)pyrene	ND	0.038		mg/Kg-dry	1	6/22/2021
Benzo(b)fluoranthene	ND	0.038		mg/Kg-dry	1	6/22/2021
Benzo(g,h,i)perylene	ND	0.038		mg/Kg-dry	1	6/22/2021
Benzo(k)fluoranthene	ND	0.038		mg/Kg-dry	1	6/22/2021
Benzoic acid	ND	0.96		mg/Kg-dry	1	6/22/2021
Benzyl alcohol	ND	0.20		mg/Kg-dry	1	6/22/2021
Bis(2-chloroethoxy)methane	ND	0.20		mg/Kg-dry	1	6/22/2021
Bis(2-chloroethyl)ether	ND	0.20		mg/Kg-dry	1	6/22/2021
Bis(2-ethylhexyl)phthalate	ND	0.96		mg/Kg-dry	1	6/22/2021
4-Bromophenyl phenyl ether	ND	0.20		mg/Kg-dry	1	6/22/2021
Butyl benzyl phthalate	ND	0.20		mg/Kg-dry	1	6/22/2021
Carbazole	ND	0.20		mg/Kg-dry	1	6/22/2021
4-Chloroaniline	ND	0.20		mg/Kg-dry	1	6/22/2021
4-Chloro-3-methylphenol	ND	0.38		mg/Kg-dry	1	6/22/2021
2-Chloronaphthalene	ND	0.20		mg/Kg-dry	1	6/22/2021
2-Chlorophenol	ND	0.20		mg/Kg-dry	1	6/22/2021
4-Chlorophenyl phenyl ether	ND	0.20		mg/Kg-dry	1	6/22/2021
Chrysene	ND	0.038		mg/Kg-dry	1	6/22/2021
Dibenz(a,h)anthracene	ND	0.038		mg/Kg-dry	1	6/22/2021
Dibenzofuran	ND	0.20		mg/Kg-dry	1	6/22/2021
1,2-Dichlorobenzene	ND	0.20		mg/Kg-dry	1	6/22/2021
1,3-Dichlorobenzene	ND	0.20		mg/Kg-dry	1	6/22/2021
1,4-Dichlorobenzene	ND	0.20		mg/Kg-dry	1	6/22/2021
3,3'-Dichlorobenzidine	ND	0.20		mg/Kg-dry	1	6/22/2021
2,4-Dichlorophenol	ND	0.20		mg/Kg-dry	1	6/22/2021
Diethyl phthalate	ND	0.20		mg/Kg-dry	1	6/22/2021
2,4-Dimethylphenol	ND	0.20		mg/Kg-dry	1	6/22/2021
Dimethyl phthalate	ND	0.20		mg/Kg-dry	1	6/22/2021
4,6-Dinitro-2-methylphenol	ND	0.38		mg/Kg-dry	1	6/22/2021
2,4-Dinitrophenol	ND	0.96		mg/Kg-dry	1	6/22/2021
2,4-Dinitrotoluene	ND	0.038		mg/Kg-dry	1	6/22/2021
2,6-Dinitrotoluene	ND	0.038		mg/Kg-dry	1	6/22/2021
Di-n-butyl phthalate	ND	0.20		mg/Kg-dry	1	6/22/2021
Di-n-octyl phthalate	ND	0.20		mg/Kg-dry	1	6/22/2021

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

* - Non-accredited parameter

H - Holding time exceeded

STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 28, 2021

Date Printed: June 28, 2021

ANALYTICAL RESULTS

Client: GSG Consultants, Inc.

Client Sample ID: SB-4-1

Work Order: 21060542 Revision 0

Collection Date: 6/16/2021 9:30:00 AM

Project: CTA Austin

Matrix: Soil

Lab ID: 21060542-003

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Semivolatile Organic Compounds by GC/MS						
	SW8270C (SW3550B)		Prep Date: 6/21/2021		Analyst: TEM	
Fluoranthene	ND	0.038		mg/Kg-dry	1	6/22/2021
Fluorene	ND	0.038		mg/Kg-dry	1	6/22/2021
Hexachlorobenzene	ND	0.20		mg/Kg-dry	1	6/22/2021
Hexachlorobutadiene	ND	0.20		mg/Kg-dry	1	6/22/2021
Hexachlorocyclopentadiene	ND	0.20		mg/Kg-dry	1	6/22/2021
Hexachloroethane	ND	0.20		mg/Kg-dry	1	6/22/2021
Indeno(1,2,3-cd)pyrene	ND	0.038		mg/Kg-dry	1	6/22/2021
Isophorone	ND	0.20		mg/Kg-dry	1	6/22/2021
2-Methylnaphthalene	ND	0.20		mg/Kg-dry	1	6/22/2021
2-Methylphenol	ND	0.20		mg/Kg-dry	1	6/22/2021
4-Methylphenol	ND	0.20		mg/Kg-dry	1	6/22/2021
Naphthalene	ND	0.038		mg/Kg-dry	1	6/22/2021
2-Nitroaniline	ND	0.20		mg/Kg-dry	1	6/22/2021
3-Nitroaniline	ND	0.20		mg/Kg-dry	1	6/22/2021
4-Nitroaniline	ND	0.20		mg/Kg-dry	1	6/22/2021
2-Nitrophenol	ND	0.20		mg/Kg-dry	1	6/22/2021
4-Nitrophenol	ND	0.38		mg/Kg-dry	1	6/22/2021
Nitrobenzene	ND	0.038		mg/Kg-dry	1	6/22/2021
N-Nitrosodi-n-propylamine	ND	0.038		mg/Kg-dry	1	6/22/2021
N-Nitrosodimethylamine	ND	0.20		mg/Kg-dry	1	6/22/2021
N-Nitrosodiphenylamine	ND	0.038		mg/Kg-dry	1	6/22/2021
2, 2'-oxybis(1-Chloropropane)	ND	0.20		mg/Kg-dry	1	6/22/2021
Pentachlorophenol	ND	0.038		mg/Kg-dry	1	6/22/2021
Phenanthrene	ND	0.038		mg/Kg-dry	1	6/22/2021
Phenol	ND	0.20		mg/Kg-dry	1	6/22/2021
Pyrene	ND	0.038		mg/Kg-dry	1	6/22/2021
Pyridine	ND	0.77		mg/Kg-dry	1	6/22/2021
1,2,4-Trichlorobenzene	ND	0.20		mg/Kg-dry	1	6/22/2021
2,4,5-Trichlorophenol	ND	0.20		mg/Kg-dry	1	6/22/2021
2,4,6-Trichlorophenol	ND	0.20		mg/Kg-dry	1	6/22/2021
PCBs						
	SW8082A (SW3550B)		Prep Date: 6/18/2021		Analyst: GVC	
Aroclor 1016	ND	0.091		mg/Kg-dry	1	6/20/2021
Aroclor 1221	ND	0.091		mg/Kg-dry	1	6/20/2021
Aroclor 1232	ND	0.091		mg/Kg-dry	1	6/20/2021
Aroclor 1242	ND	0.091		mg/Kg-dry	1	6/20/2021
Aroclor 1248	ND	0.091		mg/Kg-dry	1	6/20/2021
Aroclor 1254	ND	0.091		mg/Kg-dry	1	6/20/2021
Aroclor 1260	ND	0.091		mg/Kg-dry	1	6/20/2021

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

* - Non-accredited parameter

H - Holding time exceeded

STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 28, 2021

Date Printed: June 28, 2021

ANALYTICAL RESULTS

Client: GSG Consultants, Inc.
Work Order: 21060542 Revision 0
Project: CTA Austin
Lab ID: 21060542-003

Client Sample ID: SB-4-1
Collection Date: 6/16/2021 9:30:00 AM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Pesticides						
	SW8081B (SW3550B)			Prep Date: 6/18/2021		Analyst: GVC
4,4'-DDD	ND	0.0019		mg/Kg-dry	1	6/20/2021
4,4'-DDE	ND	0.0019		mg/Kg-dry	1	6/20/2021
4,4'-DDT	ND	0.0019		mg/Kg-dry	1	6/20/2021
Aldrin	ND	0.0019		mg/Kg-dry	1	6/20/2021
alpha-BHC	ND	0.0019		mg/Kg-dry	1	6/20/2021
alpha-Chlordane	ND	0.0019		mg/Kg-dry	1	6/20/2021
beta-BHC	ND	0.0019		mg/Kg-dry	1	6/20/2021
Chlordane	ND	0.019		mg/Kg-dry	1	6/20/2021
delta-BHC	ND	0.0019		mg/Kg-dry	1	6/20/2021
Dieldrin	ND	0.0019		mg/Kg-dry	1	6/20/2021
Endosulfan I	ND	0.0019		mg/Kg-dry	1	6/20/2021
Endosulfan II	ND	0.0019		mg/Kg-dry	1	6/20/2021
Endosulfan sulfate	ND	0.0019		mg/Kg-dry	1	6/20/2021
Endrin	ND	0.0019		mg/Kg-dry	1	6/20/2021
Endrin aldehyde	ND	0.0019		mg/Kg-dry	1	6/20/2021
Endrin ketone	ND	0.0019		mg/Kg-dry	1	6/20/2021
gamma-BHC	ND	0.0019		mg/Kg-dry	1	6/20/2021
gamma-Chlordane	ND	0.0019		mg/Kg-dry	1	6/20/2021
Heptachlor	ND	0.0019		mg/Kg-dry	1	6/20/2021
Heptachlor epoxide	ND	0.0019		mg/Kg-dry	1	6/20/2021
Methoxychlor	ND	0.0019		mg/Kg-dry	1	6/20/2021
Toxaphene	ND	0.037		mg/Kg-dry	1	6/20/2021
Metals by ICP/MS						
	SW6020A (SW3050B)			Prep Date: 6/22/2021		Analyst: JG
Aluminum	18000	22		mg/Kg-dry	10	6/22/2021
Antimony	ND	2.2		mg/Kg-dry	10	6/22/2021
Arsenic	9.0	1.1		mg/Kg-dry	10	6/22/2021
Barium	64	1.1		mg/Kg-dry	10	6/22/2021
Beryllium	1.0	0.55		mg/Kg-dry	10	6/22/2021
Cadmium	ND	0.55		mg/Kg-dry	10	6/22/2021
Calcium	2200	66		mg/Kg-dry	10	6/22/2021
Chromium	27	1.1		mg/Kg-dry	10	6/22/2021
Cobalt	15	1.1		mg/Kg-dry	10	6/22/2021
Copper	42	2.7		mg/Kg-dry	10	6/22/2021
Iron	31000	33		mg/Kg-dry	10	6/22/2021
Lead	19	0.55		mg/Kg-dry	10	6/22/2021
Magnesium	6000	33		mg/Kg-dry	10	6/22/2021
Manganese	270	1.1		mg/Kg-dry	10	6/22/2021
Nickel	44	1.1		mg/Kg-dry	10	6/22/2021

Qualifiers:
 ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 HT - Sample received past holding time
 * - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 E - Value above quantitation range
 H - Holding time exceeded

STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 28, 2021

Date Printed: June 28, 2021

ANALYTICAL RESULTS

Client: GSG Consultants, Inc.

Work Order: 21060542 Revision 0

Project: CTA Austin

Lab ID: 21060542-003

Client Sample ID: SB-4-1

Collection Date: 6/16/2021 9:30:00 AM

Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Metals by ICP/MS	SW6020A (SW3050B)					Prep Date: 6/22/2021 Analyst: JG
Potassium	2100	33		mg/Kg-dry	10	6/22/2021
Selenium	ND	1.1		mg/Kg-dry	10	6/22/2021
Silver	ND	1.1		mg/Kg-dry	10	6/22/2021
Sodium	2900	66		mg/Kg-dry	10	6/22/2021
Thallium	ND	1.1		mg/Kg-dry	10	6/22/2021
Vanadium	32	1.1		mg/Kg-dry	10	6/22/2021
Zinc	72	5.5		mg/Kg-dry	10	6/22/2021
Mercury	SW7471B					Prep Date: 6/24/2021 Analyst: LB
Mercury	0.037	0.022		mg/Kg-dry	1	6/25/2021
Cyanide, Total	SW9012A					Prep Date: 6/17/2021 Analyst: AJR
Cyanide	ND	0.29		mg/Kg-dry	1	6/17/2021
pH (25 °C)	SW9045C					Prep Date: 6/22/2021 Analyst: AJR
pH	8.57			pH Units	1	6/22/2021
Percent Moisture	D2974					Prep Date: 6/21/2021 Analyst: ZPT
Percent Moisture	14.5	0.2	*	wt%	1	6/22/2021

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
HT - Sample received past holding time
* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H - Holding time exceeded

STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 28, 2021

Date Printed: June 28, 2021

ANALYTICAL RESULTS

Client: GSG Consultants, Inc.
Work Order: 21060542 Revision 0
Project: CTA Austin
Lab ID: 21060542-004

Client Sample ID: SB-5-1
Collection Date: 6/16/2021 9:20:00 AM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Volatile Organic Compounds by GC/MS						
	SW5035/8260B			Prep Date: 6/16/2021		Analyst: JDT
Acetone	ND	0.077		mg/Kg-dry	1	6/21/2021
Benzene	ND	0.0051		mg/Kg-dry	1	6/21/2021
Bromodichloromethane	ND	0.0051		mg/Kg-dry	1	6/21/2021
Bromoform	ND	0.0051		mg/Kg-dry	1	6/21/2021
Bromomethane	ND	0.010		mg/Kg-dry	1	6/21/2021
2-Butanone	ND	0.077		mg/Kg-dry	1	6/21/2021
Carbon disulfide	ND	0.051		mg/Kg-dry	1	6/21/2021
Carbon tetrachloride	ND	0.0051		mg/Kg-dry	1	6/21/2021
Chlorobenzene	ND	0.0051		mg/Kg-dry	1	6/21/2021
Chloroethane	ND	0.010		mg/Kg-dry	1	6/21/2021
Chloroform	ND	0.0051		mg/Kg-dry	1	6/21/2021
Chloromethane	ND	0.010		mg/Kg-dry	1	6/21/2021
Dibromochloromethane	ND	0.0051		mg/Kg-dry	1	6/21/2021
1,1-Dichloroethane	ND	0.0051		mg/Kg-dry	1	6/21/2021
1,2-Dichloroethane	ND	0.0051		mg/Kg-dry	1	6/21/2021
1,1-Dichloroethene	ND	0.0051		mg/Kg-dry	1	6/21/2021
cis-1,2-Dichloroethene	ND	0.0051		mg/Kg-dry	1	6/21/2021
trans-1,2-Dichloroethene	ND	0.0051		mg/Kg-dry	1	6/21/2021
1,2-Dichloropropane	ND	0.0051		mg/Kg-dry	1	6/21/2021
cis-1,3-Dichloropropene	ND	0.0021		mg/Kg-dry	1	6/21/2021
trans-1,3-Dichloropropene	ND	0.0021		mg/Kg-dry	1	6/21/2021
Ethylbenzene	ND	0.0051		mg/Kg-dry	1	6/21/2021
2-Hexanone	ND	0.021		mg/Kg-dry	1	6/21/2021
4-Methyl-2-pentanone	ND	0.021		mg/Kg-dry	1	6/21/2021
Methylene chloride	ND	0.010		mg/Kg-dry	1	6/21/2021
Methyl tert-butyl ether	ND	0.0051		mg/Kg-dry	1	6/21/2021
Styrene	ND	0.0051		mg/Kg-dry	1	6/21/2021
1,1,2,2-Tetrachloroethane	ND	0.0051		mg/Kg-dry	1	6/21/2021
Tetrachloroethene	ND	0.0051		mg/Kg-dry	1	6/21/2021
Toluene	ND	0.0051		mg/Kg-dry	1	6/21/2021
1,1,1-Trichloroethane	ND	0.0051		mg/Kg-dry	1	6/21/2021
1,1,2-Trichloroethane	ND	0.0051		mg/Kg-dry	1	6/21/2021
Trichloroethene	ND	0.0051		mg/Kg-dry	1	6/21/2021
Vinyl chloride	ND	0.0051		mg/Kg-dry	1	6/21/2021
Xylenes, Total	ND	0.015		mg/Kg-dry	1	6/21/2021
Semivolatile Organic Compounds by GC/MS						
	SW8270C (SW3550B)			Prep Date: 6/21/2021		Analyst: TEM
Acenaphthene	ND	0.038		mg/Kg-dry	1	6/22/2021
Acenaphthylene	ND	0.038		mg/Kg-dry	1	6/22/2021

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
HT - Sample received past holding time
* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H - Holding time exceeded

STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 28, 2021

Date Printed: June 28, 2021

ANALYTICAL RESULTS

Client: GSG Consultants, Inc.

Client Sample ID: SB-5-1

Work Order: 21060542 Revision 0

Collection Date: 6/16/2021 9:20:00 AM

Project: CTA Austin

Matrix: Soil

Lab ID: 21060542-004

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Semivolatile Organic Compounds by GC/MS						
	SW8270C (SW3550B)				Prep Date: 6/21/2021	Analyst: TEM
Aniline	ND	0.39		mg/Kg-dry	1	6/22/2021
Anthracene	ND	0.038		mg/Kg-dry	1	6/22/2021
Benz(a)anthracene	ND	0.038		mg/Kg-dry	1	6/22/2021
Benzidine	ND	0.38		mg/Kg-dry	1	6/22/2021
Benzo(a)pyrene	ND	0.038		mg/Kg-dry	1	6/22/2021
Benzo(b)fluoranthene	ND	0.038		mg/Kg-dry	1	6/22/2021
Benzo(g,h,i)perylene	ND	0.038		mg/Kg-dry	1	6/22/2021
Benzo(k)fluoranthene	ND	0.038		mg/Kg-dry	1	6/22/2021
Benzoic acid	ND	0.96		mg/Kg-dry	1	6/22/2021
Benzyl alcohol	ND	0.20		mg/Kg-dry	1	6/22/2021
Bis(2-chloroethoxy)methane	ND	0.20		mg/Kg-dry	1	6/22/2021
Bis(2-chloroethyl)ether	ND	0.20		mg/Kg-dry	1	6/22/2021
Bis(2-ethylhexyl)phthalate	ND	0.96		mg/Kg-dry	1	6/22/2021
4-Bromophenyl phenyl ether	ND	0.20		mg/Kg-dry	1	6/22/2021
Butyl benzyl phthalate	ND	0.20		mg/Kg-dry	1	6/22/2021
Carbazole	ND	0.20		mg/Kg-dry	1	6/22/2021
4-Chloroaniline	ND	0.20		mg/Kg-dry	1	6/22/2021
4-Chloro-3-methylphenol	ND	0.38		mg/Kg-dry	1	6/22/2021
2-Chloronaphthalene	ND	0.20		mg/Kg-dry	1	6/22/2021
2-Chlorophenol	ND	0.20		mg/Kg-dry	1	6/22/2021
4-Chlorophenyl phenyl ether	ND	0.20		mg/Kg-dry	1	6/22/2021
Chrysene	ND	0.038		mg/Kg-dry	1	6/22/2021
Dibenz(a,h)anthracene	ND	0.038		mg/Kg-dry	1	6/22/2021
Dibenzofuran	ND	0.20		mg/Kg-dry	1	6/22/2021
1,2-Dichlorobenzene	ND	0.20		mg/Kg-dry	1	6/22/2021
1,3-Dichlorobenzene	ND	0.20		mg/Kg-dry	1	6/22/2021
1,4-Dichlorobenzene	ND	0.20		mg/Kg-dry	1	6/22/2021
3,3'-Dichlorobenzidine	ND	0.20		mg/Kg-dry	1	6/22/2021
2,4-Dichlorophenol	ND	0.20		mg/Kg-dry	1	6/22/2021
Diethyl phthalate	ND	0.20		mg/Kg-dry	1	6/22/2021
2,4-Dimethylphenol	ND	0.20		mg/Kg-dry	1	6/22/2021
Dimethyl phthalate	ND	0.20		mg/Kg-dry	1	6/22/2021
4,6-Dinitro-2-methylphenol	ND	0.38		mg/Kg-dry	1	6/22/2021
2,4-Dinitrophenol	ND	0.96		mg/Kg-dry	1	6/22/2021
2,4-Dinitrotoluene	ND	0.038		mg/Kg-dry	1	6/22/2021
2,6-Dinitrotoluene	ND	0.038		mg/Kg-dry	1	6/22/2021
Di-n-butyl phthalate	ND	0.20		mg/Kg-dry	1	6/22/2021
Di-n-octyl phthalate	ND	0.20		mg/Kg-dry	1	6/22/2021

Qualifiers:

ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 HT - Sample received past holding time
 * - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 E - Value above quantitation range
 H - Holding time exceeded

STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 28, 2021

Date Printed: June 28, 2021

ANALYTICAL RESULTS

Client: GSG Consultants, Inc.

Client Sample ID: SB-5-1

Work Order: 21060542 Revision 0

Collection Date: 6/16/2021 9:20:00 AM

Project: CTA Austin

Matrix: Soil

Lab ID: 21060542-004

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Semivolatile Organic Compounds by GC/MS						
	SW8270C (SW3550B)		Prep Date: 6/21/2021		Analyst: TEM	
Fluoranthene	ND	0.038		mg/Kg-dry	1	6/22/2021
Fluorene	ND	0.038		mg/Kg-dry	1	6/22/2021
Hexachlorobenzene	ND	0.20		mg/Kg-dry	1	6/22/2021
Hexachlorobutadiene	ND	0.20		mg/Kg-dry	1	6/22/2021
Hexachlorocyclopentadiene	ND	0.20		mg/Kg-dry	1	6/22/2021
Hexachloroethane	ND	0.20		mg/Kg-dry	1	6/22/2021
Indeno(1,2,3-cd)pyrene	ND	0.038		mg/Kg-dry	1	6/22/2021
Isophorone	ND	0.20		mg/Kg-dry	1	6/22/2021
2-Methylnaphthalene	ND	0.20		mg/Kg-dry	1	6/22/2021
2-Methylphenol	ND	0.20		mg/Kg-dry	1	6/22/2021
4-Methylphenol	ND	0.20		mg/Kg-dry	1	6/22/2021
Naphthalene	ND	0.038		mg/Kg-dry	1	6/22/2021
2-Nitroaniline	ND	0.20		mg/Kg-dry	1	6/22/2021
3-Nitroaniline	ND	0.20		mg/Kg-dry	1	6/22/2021
4-Nitroaniline	ND	0.20		mg/Kg-dry	1	6/22/2021
2-Nitrophenol	ND	0.20		mg/Kg-dry	1	6/22/2021
4-Nitrophenol	ND	0.38		mg/Kg-dry	1	6/22/2021
Nitrobenzene	ND	0.038		mg/Kg-dry	1	6/22/2021
N-Nitrosodi-n-propylamine	ND	0.038		mg/Kg-dry	1	6/22/2021
N-Nitrosodimethylamine	ND	0.20		mg/Kg-dry	1	6/22/2021
N-Nitrosodiphenylamine	ND	0.038		mg/Kg-dry	1	6/22/2021
2, 2'-oxybis(1-Chloropropane)	ND	0.20		mg/Kg-dry	1	6/22/2021
Pentachlorophenol	ND	0.038		mg/Kg-dry	1	6/22/2021
Phenanthrene	ND	0.038		mg/Kg-dry	1	6/22/2021
Phenol	ND	0.20		mg/Kg-dry	1	6/22/2021
Pyrene	ND	0.038		mg/Kg-dry	1	6/22/2021
Pyridine	ND	0.78		mg/Kg-dry	1	6/22/2021
1,2,4-Trichlorobenzene	ND	0.20		mg/Kg-dry	1	6/22/2021
2,4,5-Trichlorophenol	ND	0.20		mg/Kg-dry	1	6/22/2021
2,4,6-Trichlorophenol	ND	0.20		mg/Kg-dry	1	6/22/2021
PCBs						
	SW8082A (SW3550B)		Prep Date: 6/18/2021		Analyst: GVC	
Aroclor 1016	ND	0.095		mg/Kg-dry	1	6/20/2021
Aroclor 1221	ND	0.095		mg/Kg-dry	1	6/20/2021
Aroclor 1232	ND	0.095		mg/Kg-dry	1	6/20/2021
Aroclor 1242	ND	0.095		mg/Kg-dry	1	6/20/2021
Aroclor 1248	ND	0.095		mg/Kg-dry	1	6/20/2021
Aroclor 1254	ND	0.095		mg/Kg-dry	1	6/20/2021
Aroclor 1260	ND	0.095		mg/Kg-dry	1	6/20/2021

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

* - Non-accredited parameter

H - Holding time exceeded

STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 28, 2021

Date Printed: June 28, 2021

ANALYTICAL RESULTS

Client: GSG Consultants, Inc.

Client Sample ID: SB-5-1

Work Order: 21060542 Revision 0

Collection Date: 6/16/2021 9:20:00 AM

Project: CTA Austin

Matrix: Soil

Lab ID: 21060542-004

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Pesticides						
	SW8081B (SW3550B)			Prep Date: 6/18/2021		Analyst: GVC
4,4'-DDD	ND	0.0019		mg/Kg-dry	1	6/20/2021
4,4'-DDE	ND	0.0019		mg/Kg-dry	1	6/20/2021
4,4'-DDT	ND	0.0019		mg/Kg-dry	1	6/20/2021
Aldrin	ND	0.0019		mg/Kg-dry	1	6/20/2021
alpha-BHC	ND	0.0019		mg/Kg-dry	1	6/20/2021
alpha-Chlordane	ND	0.0019		mg/Kg-dry	1	6/20/2021
beta-BHC	ND	0.0019		mg/Kg-dry	1	6/20/2021
Chlordane	ND	0.019		mg/Kg-dry	1	6/20/2021
delta-BHC	ND	0.0019		mg/Kg-dry	1	6/20/2021
Dieldrin	ND	0.0019		mg/Kg-dry	1	6/20/2021
Endosulfan I	ND	0.0019		mg/Kg-dry	1	6/20/2021
Endosulfan II	ND	0.0019		mg/Kg-dry	1	6/20/2021
Endosulfan sulfate	ND	0.0019		mg/Kg-dry	1	6/20/2021
Endrin	ND	0.0019		mg/Kg-dry	1	6/20/2021
Endrin aldehyde	ND	0.0019		mg/Kg-dry	1	6/20/2021
Endrin ketone	ND	0.0019		mg/Kg-dry	1	6/20/2021
gamma-BHC	ND	0.0019		mg/Kg-dry	1	6/20/2021
gamma-Chlordane	ND	0.0019		mg/Kg-dry	1	6/20/2021
Heptachlor	ND	0.0019		mg/Kg-dry	1	6/20/2021
Heptachlor epoxide	ND	0.0019		mg/Kg-dry	1	6/20/2021
Methoxychlor	ND	0.0019		mg/Kg-dry	1	6/20/2021
Toxaphene	ND	0.039		mg/Kg-dry	1	6/20/2021
Metals by ICP/MS						
	SW6020A (SW3050B)			Prep Date: 6/22/2021		Analyst: JG
Aluminum	18000	22		mg/Kg-dry	10	6/22/2021
Antimony	ND	2.2		mg/Kg-dry	10	6/22/2021
Arsenic	10	1.1		mg/Kg-dry	10	6/22/2021
Barium	75	1.1		mg/Kg-dry	10	6/22/2021
Beryllium	1.1	0.56		mg/Kg-dry	10	6/22/2021
Cadmium	ND	0.56		mg/Kg-dry	10	6/22/2021
Calcium	2800	67		mg/Kg-dry	10	6/22/2021
Chromium	26	1.1		mg/Kg-dry	10	6/22/2021
Cobalt	15	1.1		mg/Kg-dry	10	6/22/2021
Copper	37	2.8		mg/Kg-dry	10	6/22/2021
Iron	32000	34		mg/Kg-dry	10	6/22/2021
Lead	19	0.56		mg/Kg-dry	10	6/22/2021
Magnesium	5800	34		mg/Kg-dry	10	6/22/2021
Manganese	410	1.1		mg/Kg-dry	10	6/22/2021
Nickel	41	1.1		mg/Kg-dry	10	6/22/2021

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

* - Non-accredited parameter

H - Holding time exceeded

STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 28, 2021

Date Printed: June 28, 2021

ANALYTICAL RESULTS

Client: GSG Consultants, Inc.

Work Order: 21060542 Revision 0

Project: CTA Austin

Lab ID: 21060542-004

Client Sample ID: SB-5-1

Collection Date: 6/16/2021 9:20:00 AM

Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Metals by ICP/MS	SW6020A (SW3050B)					Prep Date: 6/22/2021 Analyst: JG
Potassium	2100	34		mg/Kg-dry	10	6/22/2021
Selenium	ND	1.1		mg/Kg-dry	10	6/22/2021
Silver	ND	1.1		mg/Kg-dry	10	6/22/2021
Sodium	1500	67		mg/Kg-dry	10	6/22/2021
Thallium	ND	1.1		mg/Kg-dry	10	6/22/2021
Vanadium	31	1.1		mg/Kg-dry	10	6/22/2021
Zinc	66	5.6		mg/Kg-dry	10	6/22/2021
Mercury	SW7471B					Prep Date: 6/24/2021 Analyst: LB
Mercury	0.032	0.022		mg/Kg-dry	1	6/25/2021
Cyanide, Total	SW9012A					Prep Date: 6/17/2021 Analyst: AJR
Cyanide	ND	0.30		mg/Kg-dry	1	6/17/2021
pH (25 °C)	SW9045C					Prep Date: 6/22/2021 Analyst: AJR
pH	7.81			pH Units	1	6/22/2021
Percent Moisture	D2974					Prep Date: 6/21/2021 Analyst: ZPT
Percent Moisture	15.4	0.2	*	wt%	1	6/22/2021

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
HT - Sample received past holding time
* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H - Holding time exceeded

STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 28, 2021

Date Printed: June 28, 2021

ANALYTICAL RESULTS

Client: GSG Consultants, Inc.

Client Sample ID: SB-6-1

Work Order: 21060542 Revision 0

Collection Date: 6/16/2021 9:10:00 AM

Project: CTA Austin

Matrix: Soil

Lab ID: 21060542-005

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Volatile Organic Compounds by GC/MS						
	SW5035/8260B		Prep Date: 6/16/2021		Analyst: CBG	
Acetone	ND	0.093		mg/Kg-dry	1	6/22/2021
Benzene	ND	0.0062		mg/Kg-dry	1	6/22/2021
Bromodichloromethane	ND	0.0062		mg/Kg-dry	1	6/22/2021
Bromoform	ND	0.0062		mg/Kg-dry	1	6/22/2021
Bromomethane	ND	0.012		mg/Kg-dry	1	6/22/2021
2-Butanone	ND	0.093		mg/Kg-dry	1	6/22/2021
Carbon disulfide	ND	0.062		mg/Kg-dry	1	6/22/2021
Carbon tetrachloride	ND	0.0062		mg/Kg-dry	1	6/22/2021
Chlorobenzene	ND	0.0062		mg/Kg-dry	1	6/22/2021
Chloroethane	ND	0.012		mg/Kg-dry	1	6/22/2021
Chloroform	ND	0.0062		mg/Kg-dry	1	6/22/2021
Chloromethane	ND	0.012		mg/Kg-dry	1	6/22/2021
Dibromochloromethane	ND	0.0062		mg/Kg-dry	1	6/22/2021
1,1-Dichloroethane	ND	0.0062		mg/Kg-dry	1	6/22/2021
1,2-Dichloroethane	ND	0.0062		mg/Kg-dry	1	6/22/2021
1,1-Dichloroethene	ND	0.0062		mg/Kg-dry	1	6/22/2021
cis-1,2-Dichloroethene	ND	0.0062		mg/Kg-dry	1	6/22/2021
trans-1,2-Dichloroethene	ND	0.0062		mg/Kg-dry	1	6/22/2021
1,2-Dichloropropane	ND	0.0062		mg/Kg-dry	1	6/22/2021
cis-1,3-Dichloropropene	ND	0.0025		mg/Kg-dry	1	6/22/2021
trans-1,3-Dichloropropene	ND	0.0025		mg/Kg-dry	1	6/22/2021
Ethylbenzene	ND	0.0062		mg/Kg-dry	1	6/22/2021
2-Hexanone	ND	0.025		mg/Kg-dry	1	6/22/2021
4-Methyl-2-pentanone	ND	0.025		mg/Kg-dry	1	6/22/2021
Methylene chloride	ND	0.012		mg/Kg-dry	1	6/22/2021
Methyl tert-butyl ether	ND	0.0062		mg/Kg-dry	1	6/22/2021
Styrene	ND	0.0062		mg/Kg-dry	1	6/22/2021
1,1,2,2-Tetrachloroethane	ND	0.0062		mg/Kg-dry	1	6/22/2021
Tetrachloroethene	ND	0.0062		mg/Kg-dry	1	6/22/2021
Toluene	ND	0.0062		mg/Kg-dry	1	6/22/2021
1,1,1-Trichloroethane	ND	0.0062		mg/Kg-dry	1	6/22/2021
1,1,2-Trichloroethane	ND	0.0062		mg/Kg-dry	1	6/22/2021
Trichloroethene	ND	0.0062		mg/Kg-dry	1	6/22/2021
Vinyl chloride	ND	0.0062		mg/Kg-dry	1	6/22/2021
Xylenes, Total	ND	0.019		mg/Kg-dry	1	6/22/2021
Semivolatile Organic Compounds by GC/MS						
	SW8270C (SW3550B)		Prep Date: 6/21/2021		Analyst: TEM	
Acenaphthene	ND	0.039		mg/Kg-dry	1	6/22/2021
Acenaphthylene	ND	0.039		mg/Kg-dry	1	6/22/2021

Qualifiers:

ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 HT - Sample received past holding time
 * - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 E - Value above quantitation range
 H - Holding time exceeded

STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 28, 2021

Date Printed: June 28, 2021

ANALYTICAL RESULTS

Client: GSG Consultants, Inc.

Client Sample ID: SB-6-1

Work Order: 21060542 Revision 0

Collection Date: 6/16/2021 9:10:00 AM

Project: CTA Austin

Matrix: Soil

Lab ID: 21060542-005

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Semivolatile Organic Compounds by GC/MS						
	SW8270C (SW3550B)		Prep Date: 6/21/2021		Analyst: TEM	
Aniline	ND	0.39		mg/Kg-dry	1	6/22/2021
Anthracene	ND	0.039		mg/Kg-dry	1	6/22/2021
Benz(a)anthracene	ND	0.039		mg/Kg-dry	1	6/22/2021
Benzidine	ND	0.39		mg/Kg-dry	1	6/22/2021
Benzo(a)pyrene	ND	0.039		mg/Kg-dry	1	6/22/2021
Benzo(b)fluoranthene	ND	0.039		mg/Kg-dry	1	6/22/2021
Benzo(g,h,i)perylene	ND	0.039		mg/Kg-dry	1	6/22/2021
Benzo(k)fluoranthene	ND	0.039		mg/Kg-dry	1	6/22/2021
Benzoic acid	ND	0.98		mg/Kg-dry	1	6/22/2021
Benzyl alcohol	ND	0.20		mg/Kg-dry	1	6/22/2021
Bis(2-chloroethoxy)methane	ND	0.20		mg/Kg-dry	1	6/22/2021
Bis(2-chloroethyl)ether	ND	0.20		mg/Kg-dry	1	6/22/2021
Bis(2-ethylhexyl)phthalate	ND	0.98		mg/Kg-dry	1	6/22/2021
4-Bromophenyl phenyl ether	ND	0.20		mg/Kg-dry	1	6/22/2021
Butyl benzyl phthalate	ND	0.20		mg/Kg-dry	1	6/22/2021
Carbazole	ND	0.20		mg/Kg-dry	1	6/22/2021
4-Chloroaniline	ND	0.20		mg/Kg-dry	1	6/22/2021
4-Chloro-3-methylphenol	ND	0.39		mg/Kg-dry	1	6/22/2021
2-Chloronaphthalene	ND	0.20		mg/Kg-dry	1	6/22/2021
2-Chlorophenol	ND	0.20		mg/Kg-dry	1	6/22/2021
4-Chlorophenyl phenyl ether	ND	0.20		mg/Kg-dry	1	6/22/2021
Chrysene	ND	0.039		mg/Kg-dry	1	6/22/2021
Dibenz(a,h)anthracene	ND	0.039		mg/Kg-dry	1	6/22/2021
Dibenzofuran	ND	0.20		mg/Kg-dry	1	6/22/2021
1,2-Dichlorobenzene	ND	0.20		mg/Kg-dry	1	6/22/2021
1,3-Dichlorobenzene	ND	0.20		mg/Kg-dry	1	6/22/2021
1,4-Dichlorobenzene	ND	0.20		mg/Kg-dry	1	6/22/2021
3,3'-Dichlorobenzidine	ND	0.20		mg/Kg-dry	1	6/22/2021
2,4-Dichlorophenol	ND	0.20		mg/Kg-dry	1	6/22/2021
Diethyl phthalate	ND	0.20		mg/Kg-dry	1	6/22/2021
2,4-Dimethylphenol	ND	0.20		mg/Kg-dry	1	6/22/2021
Dimethyl phthalate	ND	0.20		mg/Kg-dry	1	6/22/2021
4,6-Dinitro-2-methylphenol	ND	0.39		mg/Kg-dry	1	6/22/2021
2,4-Dinitrophenol	ND	0.98		mg/Kg-dry	1	6/22/2021
2,4-Dinitrotoluene	ND	0.039		mg/Kg-dry	1	6/22/2021
2,6-Dinitrotoluene	ND	0.039		mg/Kg-dry	1	6/22/2021
Di-n-butyl phthalate	ND	0.20		mg/Kg-dry	1	6/22/2021
Di-n-octyl phthalate	ND	0.20		mg/Kg-dry	1	6/22/2021

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

* - Non-accredited parameter

H - Holding time exceeded

STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 28, 2021

Date Printed: June 28, 2021

ANALYTICAL RESULTS

Client: GSG Consultants, Inc.

Client Sample ID: SB-6-1

Work Order: 21060542 Revision 0

Collection Date: 6/16/2021 9:10:00 AM

Project: CTA Austin

Matrix: Soil

Lab ID: 21060542-005

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Semivolatile Organic Compounds by GC/MS						
	SW8270C (SW3550B)		Prep Date: 6/21/2021		Analyst: TEM	
Fluoranthene	ND	0.039		mg/Kg-dry	1	6/22/2021
Fluorene	ND	0.039		mg/Kg-dry	1	6/22/2021
Hexachlorobenzene	ND	0.20		mg/Kg-dry	1	6/22/2021
Hexachlorobutadiene	ND	0.20		mg/Kg-dry	1	6/22/2021
Hexachlorocyclopentadiene	ND	0.20		mg/Kg-dry	1	6/22/2021
Hexachloroethane	ND	0.20		mg/Kg-dry	1	6/22/2021
Indeno(1,2,3-cd)pyrene	ND	0.039		mg/Kg-dry	1	6/22/2021
Isophorone	ND	0.20		mg/Kg-dry	1	6/22/2021
2-Methylnaphthalene	ND	0.20		mg/Kg-dry	1	6/22/2021
2-Methylphenol	ND	0.20		mg/Kg-dry	1	6/22/2021
4-Methylphenol	ND	0.20		mg/Kg-dry	1	6/22/2021
Naphthalene	ND	0.039		mg/Kg-dry	1	6/22/2021
2-Nitroaniline	ND	0.20		mg/Kg-dry	1	6/22/2021
3-Nitroaniline	ND	0.20		mg/Kg-dry	1	6/22/2021
4-Nitroaniline	ND	0.20		mg/Kg-dry	1	6/22/2021
2-Nitrophenol	ND	0.20		mg/Kg-dry	1	6/22/2021
4-Nitrophenol	ND	0.39		mg/Kg-dry	1	6/22/2021
Nitrobenzene	ND	0.039		mg/Kg-dry	1	6/22/2021
N-Nitrosodi-n-propylamine	ND	0.039		mg/Kg-dry	1	6/22/2021
N-Nitrosodimethylamine	ND	0.20		mg/Kg-dry	1	6/22/2021
N-Nitrosodiphenylamine	ND	0.039		mg/Kg-dry	1	6/22/2021
2, 2'-oxybis(1-Chloropropane)	ND	0.20		mg/Kg-dry	1	6/22/2021
Pentachlorophenol	ND	0.039		mg/Kg-dry	1	6/22/2021
Phenanthrene	ND	0.039		mg/Kg-dry	1	6/22/2021
Phenol	ND	0.20		mg/Kg-dry	1	6/22/2021
Pyrene	ND	0.039		mg/Kg-dry	1	6/22/2021
Pyridine	ND	0.79		mg/Kg-dry	1	6/22/2021
1,2,4-Trichlorobenzene	ND	0.20		mg/Kg-dry	1	6/22/2021
2,4,5-Trichlorophenol	ND	0.20		mg/Kg-dry	1	6/22/2021
2,4,6-Trichlorophenol	ND	0.20		mg/Kg-dry	1	6/22/2021
PCBs						
	SW8082A (SW3550B)		Prep Date: 6/18/2021		Analyst: GVC	
Aroclor 1016	ND	0.094		mg/Kg-dry	1	6/20/2021
Aroclor 1221	ND	0.094		mg/Kg-dry	1	6/20/2021
Aroclor 1232	ND	0.094		mg/Kg-dry	1	6/20/2021
Aroclor 1242	ND	0.094		mg/Kg-dry	1	6/20/2021
Aroclor 1248	ND	0.094		mg/Kg-dry	1	6/20/2021
Aroclor 1254	ND	0.094		mg/Kg-dry	1	6/20/2021
Aroclor 1260	ND	0.094		mg/Kg-dry	1	6/20/2021

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

* - Non-accredited parameter

H - Holding time exceeded

STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 28, 2021

Date Printed: June 28, 2021

ANALYTICAL RESULTS

Client: GSG Consultants, Inc.

Client Sample ID: SB-6-1

Work Order: 21060542 Revision 0

Collection Date: 6/16/2021 9:10:00 AM

Project: CTA Austin

Matrix: Soil

Lab ID: 21060542-005

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Pesticides	SW8081B (SW3550B)		Prep Date: 6/18/2021		Analyst: GVC	
4,4'-DDD	ND	0.0019		mg/Kg-dry	1	6/20/2021
4,4'-DDE	ND	0.0019		mg/Kg-dry	1	6/20/2021
4,4'-DDT	ND	0.0019		mg/Kg-dry	1	6/20/2021
Aldrin	ND	0.0019		mg/Kg-dry	1	6/20/2021
alpha-BHC	ND	0.0019		mg/Kg-dry	1	6/20/2021
alpha-Chlordane	ND	0.0019		mg/Kg-dry	1	6/20/2021
beta-BHC	ND	0.0019		mg/Kg-dry	1	6/20/2021
Chlordane	ND	0.019		mg/Kg-dry	1	6/20/2021
delta-BHC	ND	0.0019		mg/Kg-dry	1	6/20/2021
Dieldrin	ND	0.0019		mg/Kg-dry	1	6/20/2021
Endosulfan I	ND	0.0019		mg/Kg-dry	1	6/20/2021
Endosulfan II	ND	0.0019		mg/Kg-dry	1	6/20/2021
Endosulfan sulfate	ND	0.0019		mg/Kg-dry	1	6/20/2021
Endrin	ND	0.0019		mg/Kg-dry	1	6/20/2021
Endrin aldehyde	ND	0.0019		mg/Kg-dry	1	6/20/2021
Endrin ketone	ND	0.0019		mg/Kg-dry	1	6/20/2021
gamma-BHC	ND	0.0019		mg/Kg-dry	1	6/20/2021
gamma-Chlordane	ND	0.0019		mg/Kg-dry	1	6/20/2021
Heptachlor	ND	0.0019		mg/Kg-dry	1	6/20/2021
Heptachlor epoxide	ND	0.0019		mg/Kg-dry	1	6/20/2021
Methoxychlor	ND	0.0019		mg/Kg-dry	1	6/20/2021
Toxaphene	ND	0.039		mg/Kg-dry	1	6/20/2021
Metals by ICP/MS	SW6020A (SW3050B)		Prep Date: 6/22/2021		Analyst: JG	
Aluminum	9000	23		mg/Kg-dry	10	6/22/2021
Antimony	ND	2.3		mg/Kg-dry	10	6/22/2021
Arsenic	31	1.1		mg/Kg-dry	10	6/22/2021
Barium	160	1.1		mg/Kg-dry	10	6/22/2021
Beryllium	0.67	0.57		mg/Kg-dry	10	6/22/2021
Cadmium	ND	0.57		mg/Kg-dry	10	6/22/2021
Calcium	46000	69		mg/Kg-dry	10	6/22/2021
Chromium	16	1.1		mg/Kg-dry	10	6/22/2021
Cobalt	38	1.1		mg/Kg-dry	10	6/22/2021
Copper	65	2.9		mg/Kg-dry	10	6/22/2021
Iron	42000	34		mg/Kg-dry	10	6/22/2021
Lead	45	0.57		mg/Kg-dry	10	6/22/2021
Magnesium	29000	34		mg/Kg-dry	10	6/22/2021
Manganese	1900	1.1		mg/Kg-dry	10	6/22/2021
Nickel	54	1.1		mg/Kg-dry	10	6/22/2021

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

* - Non-accredited parameter

H - Holding time exceeded

STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 28, 2021

Date Printed: June 28, 2021

ANALYTICAL RESULTS

Client: GSG Consultants, Inc.

Work Order: 21060542 Revision 0

Project: CTA Austin

Lab ID: 21060542-005

Client Sample ID: SB-6-1

Collection Date: 6/16/2021 9:10:00 AM

Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Metals by ICP/MS	SW6020A (SW3050B)					Prep Date: 6/22/2021 Analyst: JG
Potassium	1500	34		mg/Kg-dry	10	6/22/2021
Selenium	ND	1.1		mg/Kg-dry	10	6/22/2021
Silver	ND	1.1		mg/Kg-dry	10	6/22/2021
Sodium	810	69		mg/Kg-dry	10	6/22/2021
Thallium	ND	1.1		mg/Kg-dry	10	6/22/2021
Vanadium	25	1.1		mg/Kg-dry	10	6/22/2021
Zinc	76	5.7		mg/Kg-dry	10	6/22/2021
Mercury	SW7471B					Prep Date: 6/24/2021 Analyst: LB
Mercury	0.028	0.019		mg/Kg-dry	1	6/25/2021
Cyanide, Total	SW9012A					Prep Date: 6/17/2021 Analyst: AJR
Cyanide	ND	0.30		mg/Kg-dry	1	6/17/2021
pH (25 °C)	SW9045C					Prep Date: 6/22/2021 Analyst: AJR
pH	9.07			pH Units	1	6/22/2021
Percent Moisture	D2974					Prep Date: 6/21/2021 Analyst: ZPT
Percent Moisture	15.8	0.2	*	wt%	1	6/22/2021

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
HT - Sample received past holding time
* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H - Holding time exceeded

STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 28, 2021

Date Printed: June 28, 2021

ANALYTICAL RESULTS

Client: GSG Consultants, Inc.

Work Order: 21060542 Revision 0

Project: CTA Austin

Lab ID: 21060542-006

Client Sample ID: SB-7-1

Collection Date: 6/16/2021 9:00:00 AM

Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Volatile Organic Compounds by GC/MS						
SW5035/8260B		Prep Date: 6/16/2021		Analyst: JDT		
Acetone	ND	0.073		mg/Kg-dry	1	6/22/2021
Benzene	ND	0.0049		mg/Kg-dry	1	6/22/2021
Bromodichloromethane	ND	0.0049		mg/Kg-dry	1	6/22/2021
Bromoform	ND	0.0049		mg/Kg-dry	1	6/22/2021
Bromomethane	ND	0.0097		mg/Kg-dry	1	6/22/2021
2-Butanone	ND	0.073		mg/Kg-dry	1	6/22/2021
Carbon disulfide	ND	0.049		mg/Kg-dry	1	6/22/2021
Carbon tetrachloride	ND	0.0049		mg/Kg-dry	1	6/22/2021
Chlorobenzene	ND	0.0049		mg/Kg-dry	1	6/22/2021
Chloroethane	ND	0.0097		mg/Kg-dry	1	6/22/2021
Chloroform	ND	0.0049		mg/Kg-dry	1	6/22/2021
Chloromethane	ND	0.0097		mg/Kg-dry	1	6/22/2021
Dibromochloromethane	ND	0.0049		mg/Kg-dry	1	6/22/2021
1,1-Dichloroethane	ND	0.0049		mg/Kg-dry	1	6/22/2021
1,2-Dichloroethane	ND	0.0049		mg/Kg-dry	1	6/22/2021
1,1-Dichloroethene	ND	0.0049		mg/Kg-dry	1	6/22/2021
cis-1,2-Dichloroethene	ND	0.0049		mg/Kg-dry	1	6/22/2021
trans-1,2-Dichloroethene	ND	0.0049		mg/Kg-dry	1	6/22/2021
1,2-Dichloropropane	ND	0.0049		mg/Kg-dry	1	6/22/2021
cis-1,3-Dichloropropene	ND	0.0019		mg/Kg-dry	1	6/22/2021
trans-1,3-Dichloropropene	ND	0.0019		mg/Kg-dry	1	6/22/2021
Ethylbenzene	ND	0.0049		mg/Kg-dry	1	6/22/2021
2-Hexanone	ND	0.019		mg/Kg-dry	1	6/22/2021
4-Methyl-2-pentanone	ND	0.019		mg/Kg-dry	1	6/22/2021
Methylene chloride	ND	0.0097		mg/Kg-dry	1	6/22/2021
Methyl tert-butyl ether	ND	0.0049		mg/Kg-dry	1	6/22/2021
Styrene	ND	0.0049		mg/Kg-dry	1	6/22/2021
1,1,2,2-Tetrachloroethane	ND	0.0049		mg/Kg-dry	1	6/22/2021
Tetrachloroethene	ND	0.0049		mg/Kg-dry	1	6/22/2021
Toluene	ND	0.0049		mg/Kg-dry	1	6/22/2021
1,1,1-Trichloroethane	ND	0.0049		mg/Kg-dry	1	6/22/2021
1,1,2-Trichloroethane	ND	0.0049		mg/Kg-dry	1	6/22/2021
Trichloroethene	ND	0.0049		mg/Kg-dry	1	6/22/2021
Vinyl chloride	ND	0.0049		mg/Kg-dry	1	6/22/2021
Xylenes, Total	ND	0.015		mg/Kg-dry	1	6/22/2021
Semivolatile Organic Compounds by GC/MS						
SW8270C (SW3550B)		Prep Date: 6/21/2021		Analyst: TEM		
Acenaphthene	ND	0.038		mg/Kg-dry	1	6/22/2021
Acenaphthylene	ND	0.038		mg/Kg-dry	1	6/22/2021

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

H - Holding time exceeded

STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 28, 2021

Date Printed: June 28, 2021

ANALYTICAL RESULTS

Client: GSG Consultants, Inc.

Client Sample ID: SB-7-1

Work Order: 21060542 Revision 0

Collection Date: 6/16/2021 9:00:00 AM

Project: CTA Austin

Matrix: Soil

Lab ID: 21060542-006

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Semivolatile Organic Compounds by GC/MS						
	SW8270C (SW3550B)				Prep Date: 6/21/2021	Analyst: TEM
Aniline	ND	0.38		mg/Kg-dry	1	6/22/2021
Anthracene	ND	0.038		mg/Kg-dry	1	6/22/2021
Benz(a)anthracene	ND	0.038		mg/Kg-dry	1	6/22/2021
Benzidine	ND	0.38		mg/Kg-dry	1	6/22/2021
Benzo(a)pyrene	ND	0.038		mg/Kg-dry	1	6/22/2021
Benzo(b)fluoranthene	ND	0.038		mg/Kg-dry	1	6/22/2021
Benzo(g,h,i)perylene	ND	0.038		mg/Kg-dry	1	6/22/2021
Benzo(k)fluoranthene	ND	0.038		mg/Kg-dry	1	6/22/2021
Benzoic acid	ND	0.96		mg/Kg-dry	1	6/22/2021
Benzyl alcohol	ND	0.20		mg/Kg-dry	1	6/22/2021
Bis(2-chloroethoxy)methane	ND	0.20		mg/Kg-dry	1	6/22/2021
Bis(2-chloroethyl)ether	ND	0.20		mg/Kg-dry	1	6/22/2021
Bis(2-ethylhexyl)phthalate	ND	0.96		mg/Kg-dry	1	6/22/2021
4-Bromophenyl phenyl ether	ND	0.20		mg/Kg-dry	1	6/22/2021
Butyl benzyl phthalate	ND	0.20		mg/Kg-dry	1	6/22/2021
Carbazole	ND	0.20		mg/Kg-dry	1	6/22/2021
4-Chloroaniline	ND	0.20		mg/Kg-dry	1	6/22/2021
4-Chloro-3-methylphenol	ND	0.38		mg/Kg-dry	1	6/22/2021
2-Chloronaphthalene	ND	0.20		mg/Kg-dry	1	6/22/2021
2-Chlorophenol	ND	0.20		mg/Kg-dry	1	6/22/2021
4-Chlorophenyl phenyl ether	ND	0.20		mg/Kg-dry	1	6/22/2021
Chrysene	ND	0.038		mg/Kg-dry	1	6/22/2021
Dibenz(a,h)anthracene	ND	0.038		mg/Kg-dry	1	6/22/2021
Dibenzofuran	ND	0.20		mg/Kg-dry	1	6/22/2021
1,2-Dichlorobenzene	ND	0.20		mg/Kg-dry	1	6/22/2021
1,3-Dichlorobenzene	ND	0.20		mg/Kg-dry	1	6/22/2021
1,4-Dichlorobenzene	ND	0.20		mg/Kg-dry	1	6/22/2021
3,3'-Dichlorobenzidine	ND	0.20		mg/Kg-dry	1	6/22/2021
2,4-Dichlorophenol	ND	0.20		mg/Kg-dry	1	6/22/2021
Diethyl phthalate	ND	0.20		mg/Kg-dry	1	6/22/2021
2,4-Dimethylphenol	ND	0.20		mg/Kg-dry	1	6/22/2021
Dimethyl phthalate	ND	0.20		mg/Kg-dry	1	6/22/2021
4,6-Dinitro-2-methylphenol	ND	0.38		mg/Kg-dry	1	6/22/2021
2,4-Dinitrophenol	ND	0.96		mg/Kg-dry	1	6/22/2021
2,4-Dinitrotoluene	ND	0.038		mg/Kg-dry	1	6/22/2021
2,6-Dinitrotoluene	ND	0.038		mg/Kg-dry	1	6/22/2021
Di-n-butyl phthalate	ND	0.20		mg/Kg-dry	1	6/22/2021
Di-n-octyl phthalate	ND	0.20		mg/Kg-dry	1	6/22/2021

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

* - Non-accredited parameter

H - Holding time exceeded

STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 28, 2021

Date Printed: June 28, 2021

ANALYTICAL RESULTS

Client: GSG Consultants, Inc.
Work Order: 21060542 Revision 0
Project: CTA Austin
Lab ID: 21060542-006

Client Sample ID: SB-7-1
Collection Date: 6/16/2021 9:00:00 AM
Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Semivolatile Organic Compounds by GC/MS						
	SW8270C (SW3550B)				Prep Date: 6/21/2021	Analyst: TEM
Fluoranthene	ND	0.038		mg/Kg-dry	1	6/22/2021
Fluorene	ND	0.038		mg/Kg-dry	1	6/22/2021
Hexachlorobenzene	ND	0.20		mg/Kg-dry	1	6/22/2021
Hexachlorobutadiene	ND	0.20		mg/Kg-dry	1	6/22/2021
Hexachlorocyclopentadiene	ND	0.20		mg/Kg-dry	1	6/22/2021
Hexachloroethane	ND	0.20		mg/Kg-dry	1	6/22/2021
Indeno(1,2,3-cd)pyrene	ND	0.038		mg/Kg-dry	1	6/22/2021
Isophorone	ND	0.20		mg/Kg-dry	1	6/22/2021
2-Methylnaphthalene	ND	0.20		mg/Kg-dry	1	6/22/2021
2-Methylphenol	ND	0.20		mg/Kg-dry	1	6/22/2021
4-Methylphenol	ND	0.20		mg/Kg-dry	1	6/22/2021
Naphthalene	ND	0.038		mg/Kg-dry	1	6/22/2021
2-Nitroaniline	ND	0.20		mg/Kg-dry	1	6/22/2021
3-Nitroaniline	ND	0.20		mg/Kg-dry	1	6/22/2021
4-Nitroaniline	ND	0.20		mg/Kg-dry	1	6/22/2021
2-Nitrophenol	ND	0.20		mg/Kg-dry	1	6/22/2021
4-Nitrophenol	ND	0.38		mg/Kg-dry	1	6/22/2021
Nitrobenzene	ND	0.038		mg/Kg-dry	1	6/22/2021
N-Nitrosodi-n-propylamine	ND	0.038		mg/Kg-dry	1	6/22/2021
N-Nitrosodimethylamine	ND	0.20		mg/Kg-dry	1	6/22/2021
N-Nitrosodiphenylamine	ND	0.038		mg/Kg-dry	1	6/22/2021
2, 2'-oxybis(1-Chloropropane)	ND	0.20		mg/Kg-dry	1	6/22/2021
Pentachlorophenol	ND	0.038		mg/Kg-dry	1	6/22/2021
Phenanthrene	ND	0.038		mg/Kg-dry	1	6/22/2021
Phenol	ND	0.20		mg/Kg-dry	1	6/22/2021
Pyrene	ND	0.038		mg/Kg-dry	1	6/22/2021
Pyridine	ND	0.77		mg/Kg-dry	1	6/22/2021
1,2,4-Trichlorobenzene	ND	0.20		mg/Kg-dry	1	6/22/2021
2,4,5-Trichlorophenol	ND	0.20		mg/Kg-dry	1	6/22/2021
2,4,6-Trichlorophenol	ND	0.20		mg/Kg-dry	1	6/22/2021
PCBs						
	SW8082A (SW3550B)				Prep Date: 6/18/2021	Analyst: GVC
Aroclor 1016	ND	0.093		mg/Kg-dry	1	6/20/2021
Aroclor 1221	ND	0.093		mg/Kg-dry	1	6/20/2021
Aroclor 1232	ND	0.093		mg/Kg-dry	1	6/20/2021
Aroclor 1242	ND	0.093		mg/Kg-dry	1	6/20/2021
Aroclor 1248	ND	0.093		mg/Kg-dry	1	6/20/2021
Aroclor 1254	ND	0.093		mg/Kg-dry	1	6/20/2021
Aroclor 1260	ND	0.093		mg/Kg-dry	1	6/20/2021

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
HT - Sample received past holding time
* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H - Holding time exceeded

STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 28, 2021

Date Printed: June 28, 2021

ANALYTICAL RESULTS

Client: GSG Consultants, Inc.

Client Sample ID: SB-7-1

Work Order: 21060542 Revision 0

Collection Date: 6/16/2021 9:00:00 AM

Project: CTA Austin

Matrix: Soil

Lab ID: 21060542-006

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Pesticides	SW8081B (SW3550B)		Prep Date: 6/18/2021		Analyst: GVC	
4,4'-DDD	ND	0.0019		mg/Kg-dry	1	6/20/2021
4,4'-DDE	ND	0.0019		mg/Kg-dry	1	6/20/2021
4,4'-DDT	ND	0.0019		mg/Kg-dry	1	6/20/2021
Aldrin	ND	0.0019		mg/Kg-dry	1	6/20/2021
alpha-BHC	ND	0.0019		mg/Kg-dry	1	6/20/2021
alpha-Chlordane	ND	0.0019		mg/Kg-dry	1	6/20/2021
beta-BHC	ND	0.0019		mg/Kg-dry	1	6/20/2021
Chlordane	ND	0.019		mg/Kg-dry	1	6/20/2021
delta-BHC	ND	0.0019		mg/Kg-dry	1	6/20/2021
Dieldrin	ND	0.0019		mg/Kg-dry	1	6/20/2021
Endosulfan I	ND	0.0019		mg/Kg-dry	1	6/20/2021
Endosulfan II	ND	0.0019		mg/Kg-dry	1	6/20/2021
Endosulfan sulfate	ND	0.0019		mg/Kg-dry	1	6/20/2021
Endrin	ND	0.0019		mg/Kg-dry	1	6/20/2021
Endrin aldehyde	ND	0.0019		mg/Kg-dry	1	6/20/2021
Endrin ketone	ND	0.0019		mg/Kg-dry	1	6/20/2021
gamma-BHC	ND	0.0019		mg/Kg-dry	1	6/20/2021
gamma-Chlordane	ND	0.0019		mg/Kg-dry	1	6/20/2021
Heptachlor	ND	0.0019		mg/Kg-dry	1	6/20/2021
Heptachlor epoxide	ND	0.0019		mg/Kg-dry	1	6/20/2021
Methoxychlor	ND	0.0019		mg/Kg-dry	1	6/20/2021
Toxaphene	ND	0.038		mg/Kg-dry	1	6/20/2021
Metals by ICP/MS	SW6020A (SW3050B)		Prep Date: 6/22/2021		Analyst: JG	
Aluminum	9100	21		mg/Kg-dry	10	6/22/2021
Antimony	ND	2.1		mg/Kg-dry	10	6/22/2021
Arsenic	10	1.1		mg/Kg-dry	10	6/22/2021
Barium	24	1.1		mg/Kg-dry	10	6/22/2021
Beryllium	ND	0.53		mg/Kg-dry	10	6/22/2021
Cadmium	ND	0.53		mg/Kg-dry	10	6/22/2021
Calcium	53000	63		mg/Kg-dry	10	6/22/2021
Chromium	16	1.1		mg/Kg-dry	10	6/22/2021
Cobalt	15	1.1		mg/Kg-dry	10	6/22/2021
Copper	36	2.6		mg/Kg-dry	10	6/22/2021
Iron	25000	32		mg/Kg-dry	10	6/22/2021
Lead	17	0.53		mg/Kg-dry	10	6/22/2021
Magnesium	33000	32		mg/Kg-dry	10	6/22/2021
Manganese	700	1.1		mg/Kg-dry	10	6/22/2021
Nickel	35	1.1		mg/Kg-dry	10	6/22/2021

ND - Not Detected at the Reporting Limit

RL - Reporting / Quantitation Limit for the analysis

Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

HT - Sample received past holding time

E - Value above quantitation range

* - Non-accredited parameter

H - Holding time exceeded

STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditations: IEPA ELAP 100445; ORELAP IL300001; AIHA-LAP, LLC 101160; NVLAP LabCode 101202-0

Date Reported: June 28, 2021

Date Printed: June 28, 2021

ANALYTICAL RESULTS

Client: GSG Consultants, Inc.

Client Sample ID: SB-7-1

Work Order: 21060542 Revision 0

Collection Date: 6/16/2021 9:00:00 AM

Project: CTA Austin

Matrix: Soil

Lab ID: 21060542-006

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Metals by ICP/MS	SW6020A (SW3050B)					Prep Date: 6/22/2021 Analyst: JG
Potassium	2100	32		mg/Kg-dry	10	6/22/2021
Selenium	ND	1.1		mg/Kg-dry	10	6/22/2021
Silver	ND	1.1		mg/Kg-dry	10	6/22/2021
Sodium	760	63		mg/Kg-dry	10	6/22/2021
Thallium	ND	1.1		mg/Kg-dry	10	6/22/2021
Vanadium	17	1.1		mg/Kg-dry	10	6/22/2021
Zinc	56	5.3		mg/Kg-dry	10	6/22/2021
Mercury	SW7471B					Prep Date: 6/24/2021 Analyst: LB
Mercury	0.034	0.022		mg/Kg-dry	1	6/25/2021
Cyanide, Total	SW9012A					Prep Date: 6/17/2021 Analyst: AJR
Cyanide	ND	0.29		mg/Kg-dry	1	6/17/2021
pH (25 °C)	SW9045C					Prep Date: 6/22/2021 Analyst: AJR
pH	8.63			pH Units	1	6/22/2021
Percent Moisture	D2974					Prep Date: 6/21/2021 Analyst: ZPT
Percent Moisture	13.6	0.2	*	wt%	1	6/22/2021

Qualifiers:

ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 HT - Sample received past holding time
 * - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 E - Value above quantitation range
 H - Holding time exceeded

CHAIN OF CUSTODY RECORD

Company: <u>ISG Consultants Inc</u>		Client Tracking No.:	
Project Number:			
Project Name: <u>CTA Austin</u>			
Project Location:			
Sampler(s): <u>James Dono Nicole Butkus</u>			
Report To: <u>Ted Cagney</u>		Phone: _____ Fax: _____	
QC Level: 1 2 3 4		e-mail: <u>tcagney@isg-consultants.com</u>	

Client Sample Number/Description:	Date Taken	Time Taken	Matrix	Comp.	Grab	Preserv.	No. of Containers
SB-02-1	06/16/21	0930	S		X		4
SB-03-1	↑	0940	↑	↑	↑		↑
SB-04-1	↓	0930	↓	↓	↓		↓
SB-05-1	↓	0920	↓	↓	↓		↓
SB-06-1	↓	0910	↓	↓	↓		↓
SB-07-1	06/16/21	0900	S		X		4

Turn Around Time (Days): 1 2 3 4 5-7 10

Results Needed: _____

Additional Information: _____

Lab No.: 001 002 003 004 005 006

Quote No.: _____

P.O. No.: _____

Laboratory Work Order No.: 21060542

Received on Ice: Yes ☒ No ☐

Temperature: On Ice

CHAIN OF CUSTODY RECORD

[illegible]

Sample Receipt Checklist

Client Name GSG

Date and Time Received: 6/16/2021 11:06:00 AM

Work Order Number 21060542

Received by: JOK

Checklist completed by:

ed 6/16/21
Signature Date

Reviewed by:

tt 6/17/2021
Initials Date

Matrix:

Carrier name: Client Delivered

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☒
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels/containers?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container or Temp Blank temperature in compliance?	Yes ☒	No ☐	Temperature On Ice °C
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☐	No ☐
Water - Samples pH checked?	Yes ☐	No ☐	Checked by: _____
Water - Samples properly preserved?	Yes ☐	No ☐	pH Adjusted? _____

Any No response must be detailed in the comments section below.

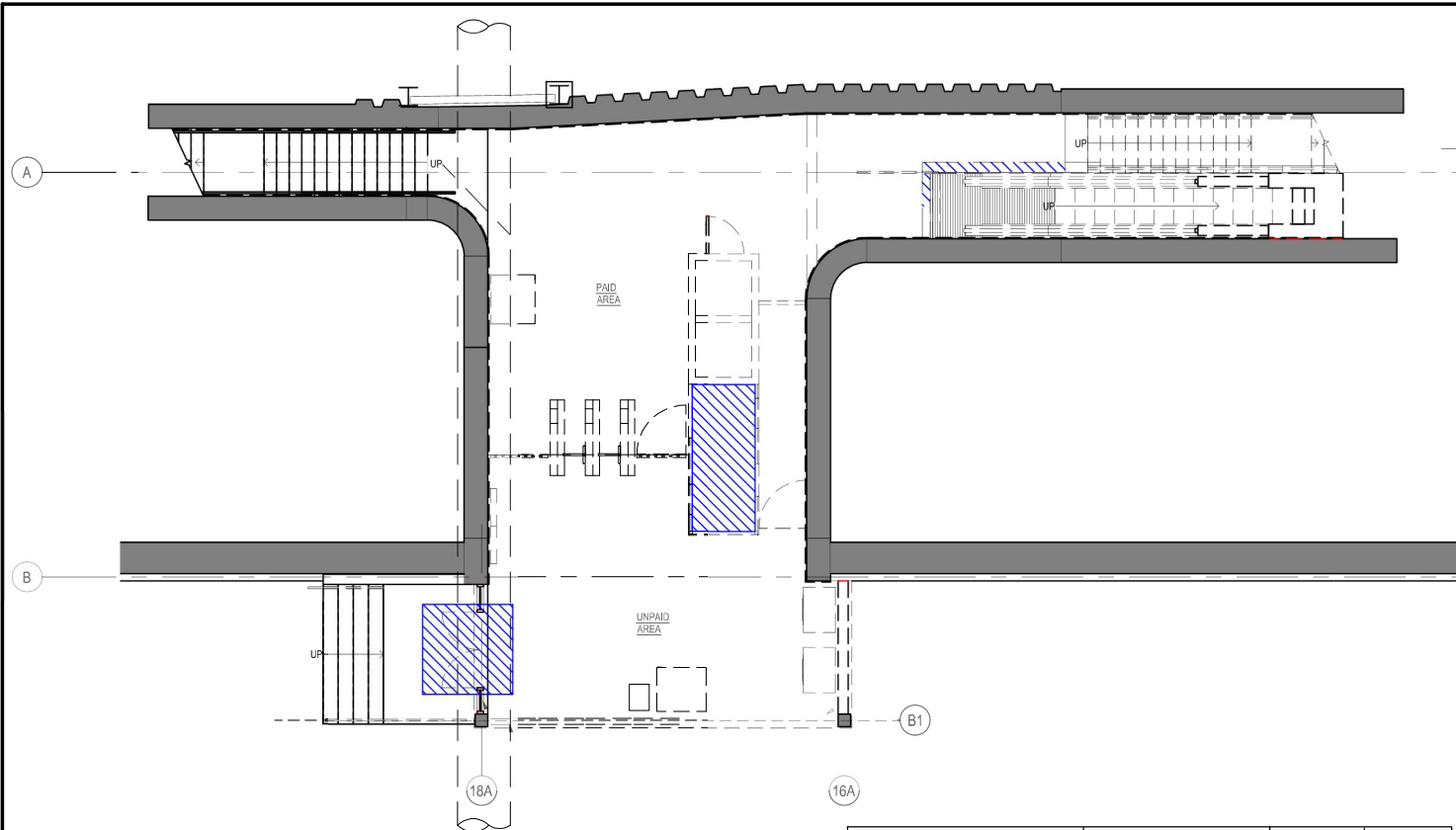
Comments:

Client / Person
contacted: _____

Date contacted: _____

Contacted by: _____

Response:



2
ACM-2
AUSTIN BLVD. STATION HOUSE
NTS
NORTH

Location	Material Description	Estimated Quantity	Unit of Measure
Platform - Electrical Room	Brown Sealant Caulk	10	LF
Austin Boulevard Station House - CA Booth	Black Window Caulk	80	LF
Austin Boulevard Station House - Exterior Storefront Entrance	Black Door Caulk	175	LF
Mason Avenue Station House - Janitors Closet	Water Pipe Insulation	10	LF
Mason Avenue Station House - Janitors Closet	Vent Pipe Insulation	10	LF

SHEET NOTES

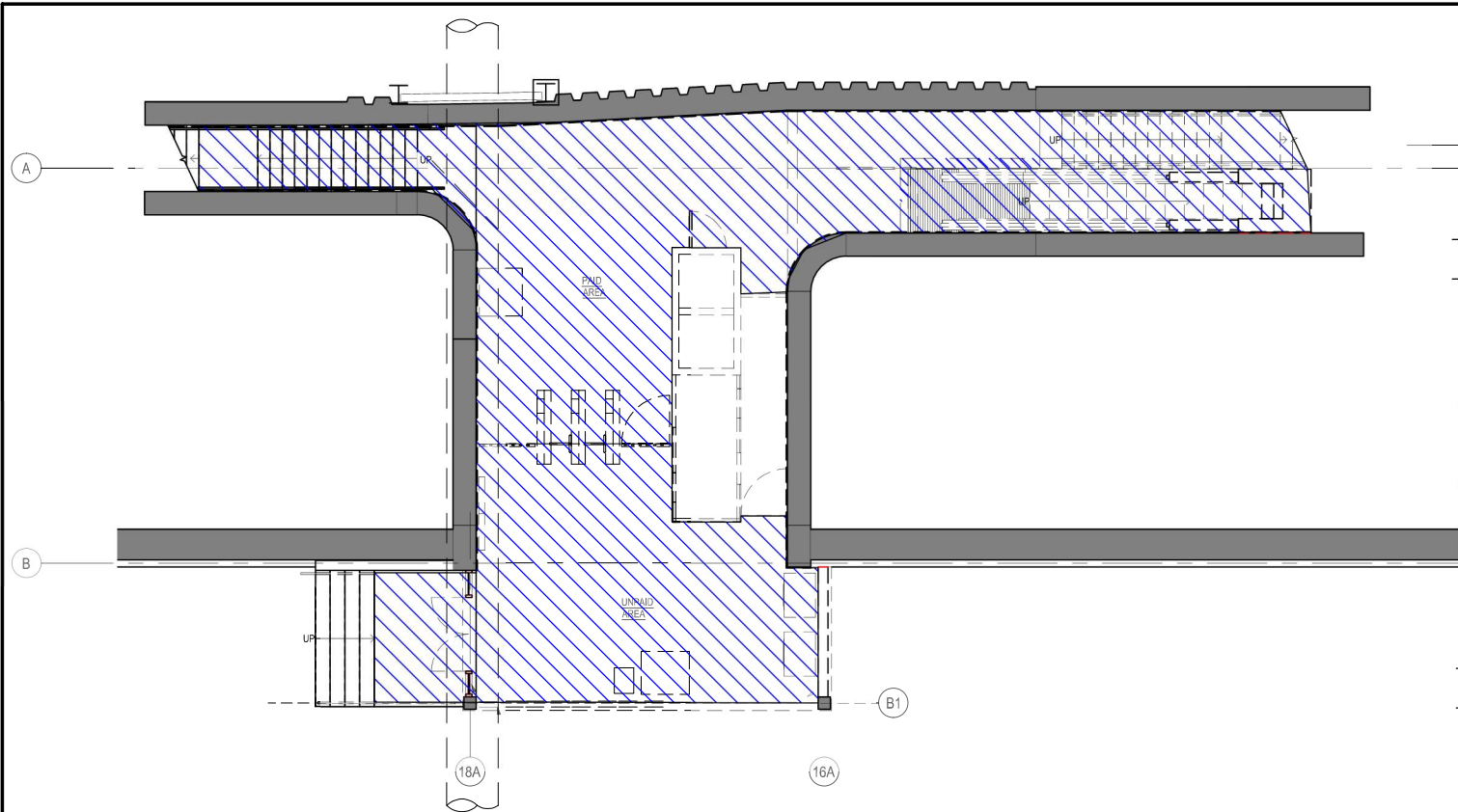
1. CONTRACTOR SHALL REFER TO CONTRACT DOCUMENTS TO DETERMINE THE EXTENT OF ASBESTOS ABATEMENT SCOPE OF WORK.
2. LOCATIONS SHOWN ON THIS DRAWINGS ARE APPROXIMATE. CONTRACTOR SHALL VERIFY ALL DIMENSIONS, QUANTITIES, AND FIELD CONDITION PRIOR TO BIDDING.
3. ASBESTOS ABATEMENT WORK SHALL BE CONDUCTED IN ACCORDANCE WITH THE REQUIREMENTS PROVIDED IN THE CONTRACT DOCUMENTS AND IN COMPLIANCE WITH ALL APPLICABLE FEDERAL, STATE, AND CITY REGULATIONS AND IN ACCORDANCE WITH SPECIFICATIONS 02 71 00 AND 02 71 10.
4. ANY AND ALL CHANGES TO THE PROJECT DESIGN SHALL REQUIRE PRIOR WRITTEN APPROVAL OF THE ASBESTOS PROJECT DESIGNER.
5. ABATEMENT SHALL BE CONDUCTED UTILIZING WET METHOD. NO DRY REMOVAL IS PERMITTED. NO VISIBLE EMISSION OF DUST/DEBRIS FROM CONTAINMENT IS ALLOWED.

KEY PLAN

LOCATION OF ASBESTOS-CONTAINING MATERIALS

-  BROWN SEALANT CAULK
-  PIPE INSULATION (WATER PIPE, VENT PIPE)
-  BLACK CAULK (WINDOW, DOOR)

										SUB CONSULTANT  GSG CONSULTANTS, INC. 735 Remington Road, Schaumburg, IL 60193 Tel: 630.994.2600, www.gsg-consultants.com										PRIMARY CONSULTANT 										DESIGNED: EP DRAWN: EP CHECKED: GK DATE: 04/18/2022										 CHICAGO TRANSIT AUTHORITY ENGINEERING										LOCATION NAME: 351 N. AUSTIN BOULEVARD TITLE: CTA AUSTIN STATION ASBESTOS-CONTAINING MATERIALS										SCALE: NTS PROJECT NO. 20-1052										SHEET NO. ACM-2									
1	04/19/22	EP	GK	60% SUBMITTAL						REV	DATE	BY	APP	DESCRIPTION																																																																	



SHEET NOTES

1. CONTRACTOR SHALL REFER TO CONTRACT DOCUMENTS TO DETERMINE THE EXTENT OF HAZARDOUS AND UNIVERSAL WASTES REMOVAL AND/OR MANAGEMENT.
2. LOCATIONS SHOWN ON THIS DRAWINGS ARE APPROXIMATE. CONTRACTOR SHALL VERIFY ALL DIMENSIONS, QUANTITIES, AND FIELD CONDITION PRIOR TO BIDDING.
3. HAZARDOUS AND UNIVERSAL WASTES IN THE PROJECT AREAS INCLUDED IN THE SCOPE OF WORK SHALL BE MANAGED IN ACCORDANCE WITH SPECIFICATION 02 86 13.

KEY PLAN

LOCATIONS OF HAZARDOUS AND UNIVERSAL WASTE

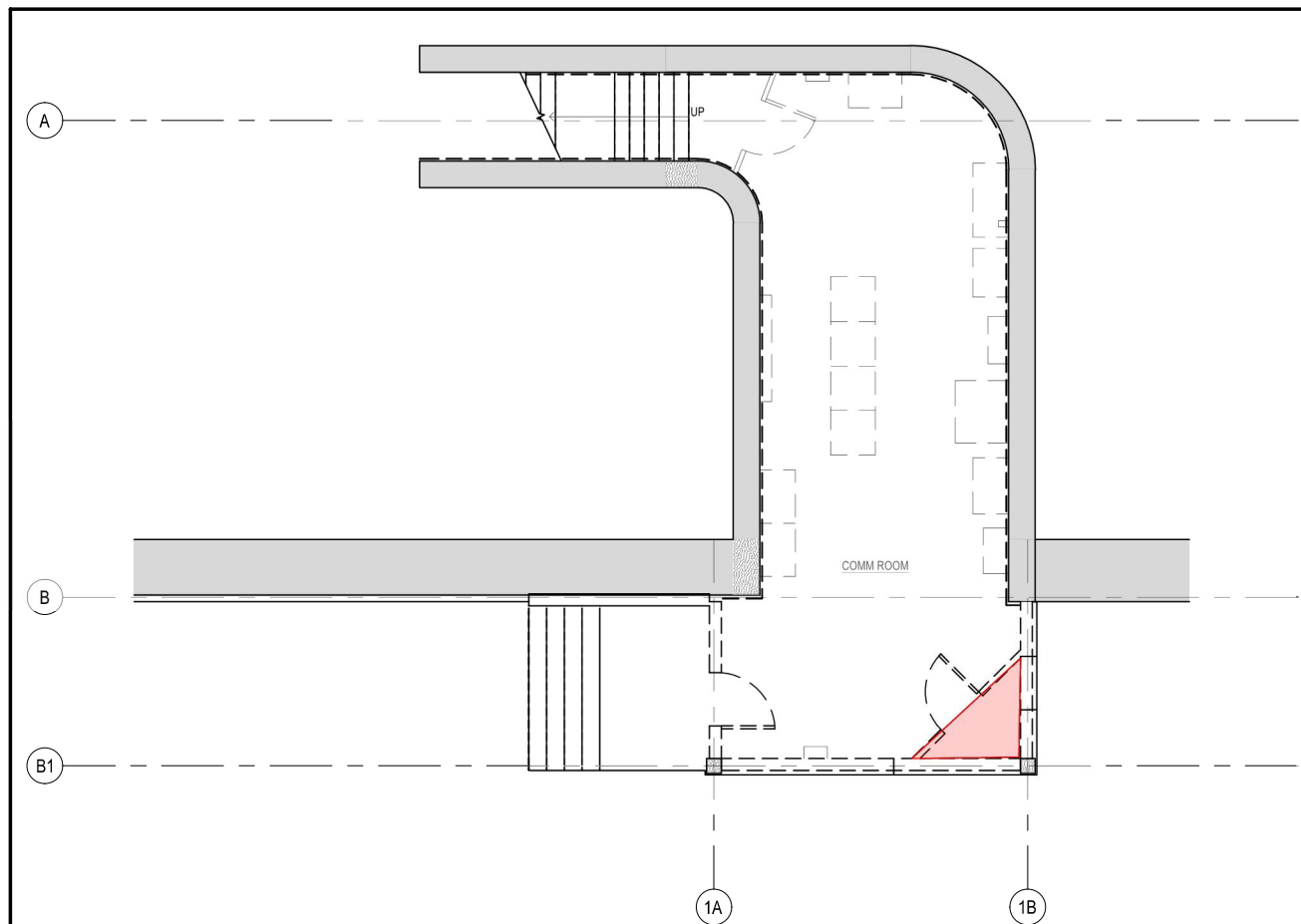


POTENTIAL PCB FLUORESCENT LIGHT BALLASTS (EXCEPT LED LIGHTS) AND FLUORESCENT LIGHT TUBES (ASSUMED MERCURY CONTAINING) - (TYPICAL THROUGHOUT STATION).

2
UW-2
AUSTIN BLVD. STATION HOUSE
NTS



				SUB CONSULTANT				PRIMARY CONSULTANT				DESIGNED: EP				LOCATION NAME: 351 N. AUSTIN BOULEVARD				SCALE: NTS				SHEET NO. UW-2			
				GSG CONSULTANTS, INC. 735 Remington Road, Schaumburg, IL 60193 Tel: 630.994.2600, www.gsg-consultants.com				SEPSTEIN				DRAWN: EP				TITLE: CTA AUSTIN STATION HAZARDOUS AND UNIVERSAL WASTE				PROJECT NO. 20-1052							
REV. DATE BY APP DESCRIPTION				REV. DATE BY APP DESCRIPTION				CHECKED: GK				DATE: 04/18/2022															
1 04/19/22 EP GK 60% SUBMITTAL																											



3
ACM-3

MASON AVE. STATION HOUSE

NTS



NORTH

SHEET NOTES

1. CONTRACTOR SHALL REFER TO CONTRACT DOCUMENTS TO DETERMINE THE EXTENT OF ASBESTOS ABATEMENT SCOPE OF WORK.
2. LOCATIONS SHOWN ON THIS DRAWINGS ARE APPROXIMATE. CONTRACTOR SHALL VERIFY ALL DIMENSIONS, QUANTITIES, AND FIELD CONDITION PRIOR TO BIDDING.
3. ASBESTOS ABATEMENT WORK SHALL BE CONDUCTED IN ACCORDANCE WITH THE REQUIREMENTS PROVIDED IN THE CONTRACT DOCUMENTS AND IN COMPLIANCE WITH ALL APPLICABLE FEDERAL, STATE, AND CITY REGULATIONS AND IN ACCORDANCE WITH SPECIFICATIONS 02 71 00 AND 02 71 10.
4. ANY AND ALL CHANGES TO THE PROJECT DESIGN SHALL REQUIRE PRIOR WRITTEN APPROVAL OF THE ASBESTOS PROJECT DESIGNER.
5. ABATEMENT SHALL BE CONDUCTED UTILIZING WET METHOD. NO DRY REMOVAL IS PERMITTED. NO VISIBLE EMISSION OF DUST/DEBRIS FROM CONTAINMENT IS ALLOWED.

KEY PLAN

LOCATION OF ASBESTOS-CONTAINING MATERIALS



BROWN SEALANT CAULK



PIPE INSULATION (WATER PIPE, VENT PIPE)



BLACK CAULK (WINDOW, DOOR)

Location	Material Description	Estimated Quantity	Unit of Measure
Platform - Electrical Room	Brown Sealant Caulk	10	LF
Austin Boulevard Station House - CA Booth	Black Window Caulk	80	LF
Austin Boulevard Station House - Exterior Storefront Entrance	Black Door Caulk	175	LF
Mason Avenue Station House - Janitors Closet	Water Pipe Insulation	10	LF
Mason Avenue Station House - Janitors Closet	Vent Pipe Insulation	10	LF

REV	DATE	BY	APP	DESCRIPTION
1	04/19/22	EP	GK	60% SUBMITTAL

SUB CONSULTANT
GSG GSG CONSULTANTS, INC.
735 Remington Road, Schaumburg, IL 60193
Tel: 630.794.2000, www.gsg-consultants.com

PRIMARY CONSULTANT
SEAL/ SIGNATURE

PRIMARY CONSULTANT
SEPSTEIN

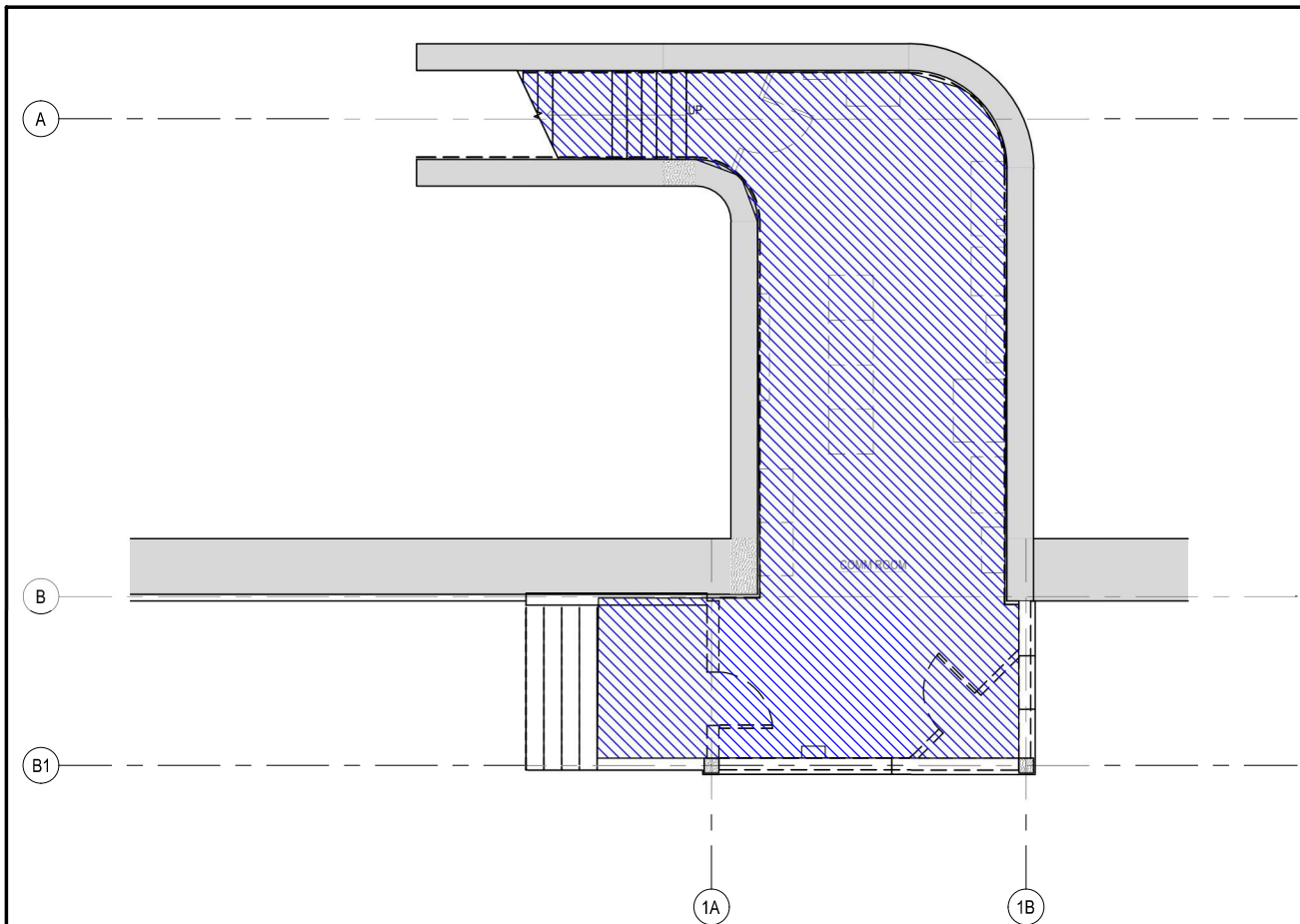
DESIGNED: EP
DRAWN: EP
CHECKED: GK
DATE: 04/18/2022



LOCATION NAME: 351 N. AUSTIN BOULEVARD
TITLE: CTA AUSTIN STATION
ASBESTOS-CONTAINING MATERIALS

SCALE: NTS
PROJECT NO. 20-1052

SHEET NO.
ACM-3



SHEET NOTES

1. CONTRACTOR SHALL REFER TO CONTRACT DOCUMENTS TO DETERMINE THE EXTENT OF HAZARDOUS AND UNIVERSAL WASTES REMOVAL AND/OR MANAGEMENT.
2. LOCATIONS SHOWN ON THIS DRAWINGS ARE APPROXIMATE. CONTRACTOR SHALL VERIFY ALL DIMENSIONS, QUANTITIES, AND FIELD CONDITION PRIOR TO BIDDING.
3. HAZARDOUS AND UNIVERSAL WASTES IN THE PROJECT AREAS INCLUDED IN THE SCOPE OF WORK SHALL BE MANAGED IN ACCORDANCE WITH SPECIFICATION 02 86 13.

KEY PLAN

LOCATIONS OF HAZARDOUS AND UNIVERSAL WASTE



POTENTIAL PCB FLUORESCENT LIGHT BALLASTS (EXCEPT LED LIGHTS) AND FLUORESCENT LIGHT TUBES (ASSUMED MERCURY CONTAINING) - (TYPICAL THROUGHOUT STATION).

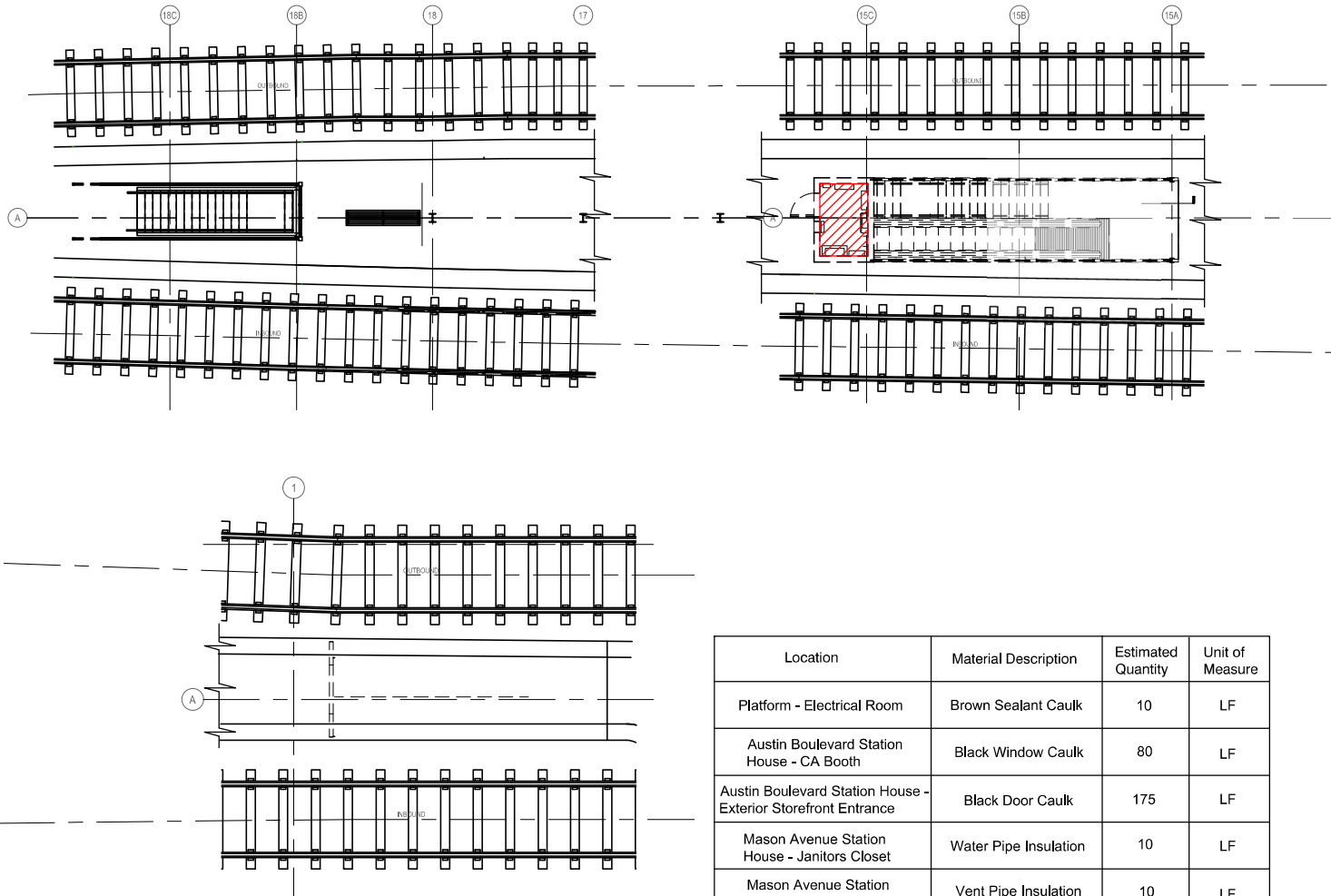
3
UW-3

MASON AVE. STATION HOUSE
NTS



NORTH

				SUB CONSULTANT				PRIMARY CONSULTANT				DESIGNED: EP				LOCATION NAME: 351 N. AUSTIN BOULEVARD				SCALE: NTS				SHEET NO. UW-3			
				GSG				SEPSTEIN				DRAWN: EP				TITLE: CTA AUSTIN STATION				PROJECT NO. 20-1052							
				735 Remington Road, Schaumburg, IL 60193 Tel: 630.794.2000, www.gsg-consultants.com				CHICAGO TRANSIT AUTHORITY ENGINEERING				CHECKED: GK				HAZARDOUS AND UNIVERSAL WASTE											
												DATE: 04/18/2022															
REV				DATE				BY				APP				DESCRIPTION											
1				04/19/22				EP				GK				60% SUBMITTAL											



SHEET NOTES

1. CONTRACTOR SHALL REFER TO CONTRACT DOCUMENTS TO DETERMINE THE EXTENT OF ASBESTOS ABATEMENT SCOPE OF WORK.
2. LOCATIONS SHOWN ON THIS DRAWINGS ARE APPROXIMATE. CONTRACTOR SHALL VERIFY ALL DIMENSIONS, QUANTITIES, AND FIELD CONDITION PRIOR TO BIDDING.
3. ASBESTOS ABATEMENT WORK SHALL BE CONDUCTED IN ACCORDANCE WITH THE REQUIREMENTS PROVIDED IN THE CONTRACT DOCUMENTS AND IN COMPLIANCE WITH ALL APPLICABLE FEDERAL, STATE, AND CITY REGULATIONS AND IN ACCORDANCE WITH SPECIFICATIONS 02 71 00 AND 02 71 10.
4. ANY AND ALL CHANGES TO THE PROJECT DESIGN SHALL REQUIRE PRIOR WRITTEN APPROVAL OF THE ASBESTOS PROJECT DESIGNER.
5. ABATEMENT SHALL BE CONDUCTED UTILIZING WET METHOD. NO DRY REMOVAL IS PERMITTED. NO VISIBLE EMISSION OF DUST/DEBRIS FROM CONTAINMENT IS ALLOWED.

KEY PLAN

LOCATION OF ASBESTOS-CONTAINING MATERIALS

-  BROWN SEALANT CAULK
-  PIPE INSULATION (WATER PIPE, VENT PIPE)
-  BLACK CAULK (WINDOW, DOOR)

Location	Material Description	Estimated Quantity	Unit of Measure
Platform - Electrical Room	Brown Sealant Caulk	10	LF
Austin Boulevard Station House - CA Booth	Black Window Caulk	80	LF
Austin Boulevard Station House - Exterior Storefront Entrance	Black Door Caulk	175	LF
Mason Avenue Station House - Janitors Closet	Water Pipe Insulation	10	LF
Mason Avenue Station House - Janitors Closet	Vent Pipe Insulation	10	LF

1
ACM-1

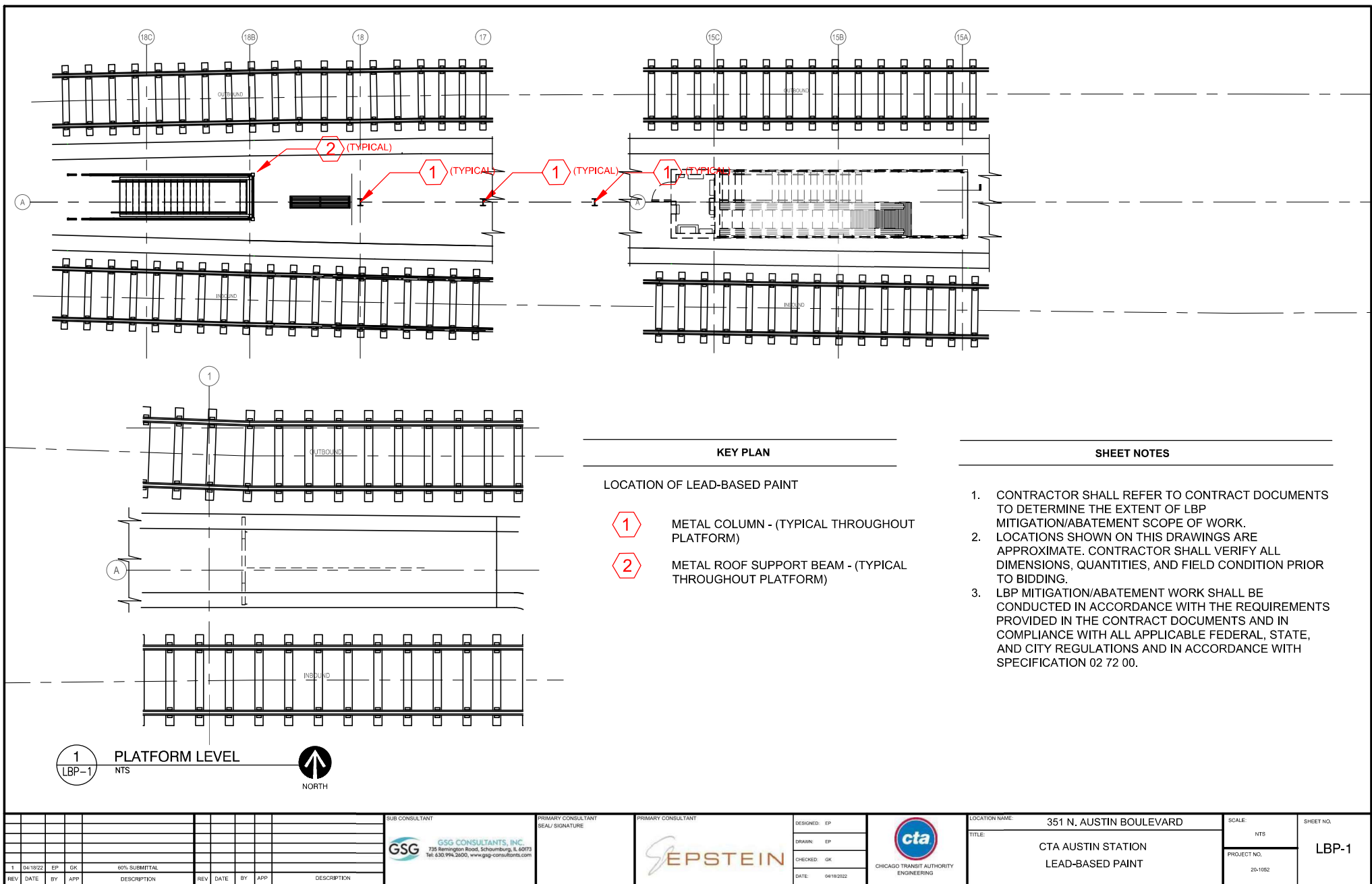
PLATFORM LEVEL

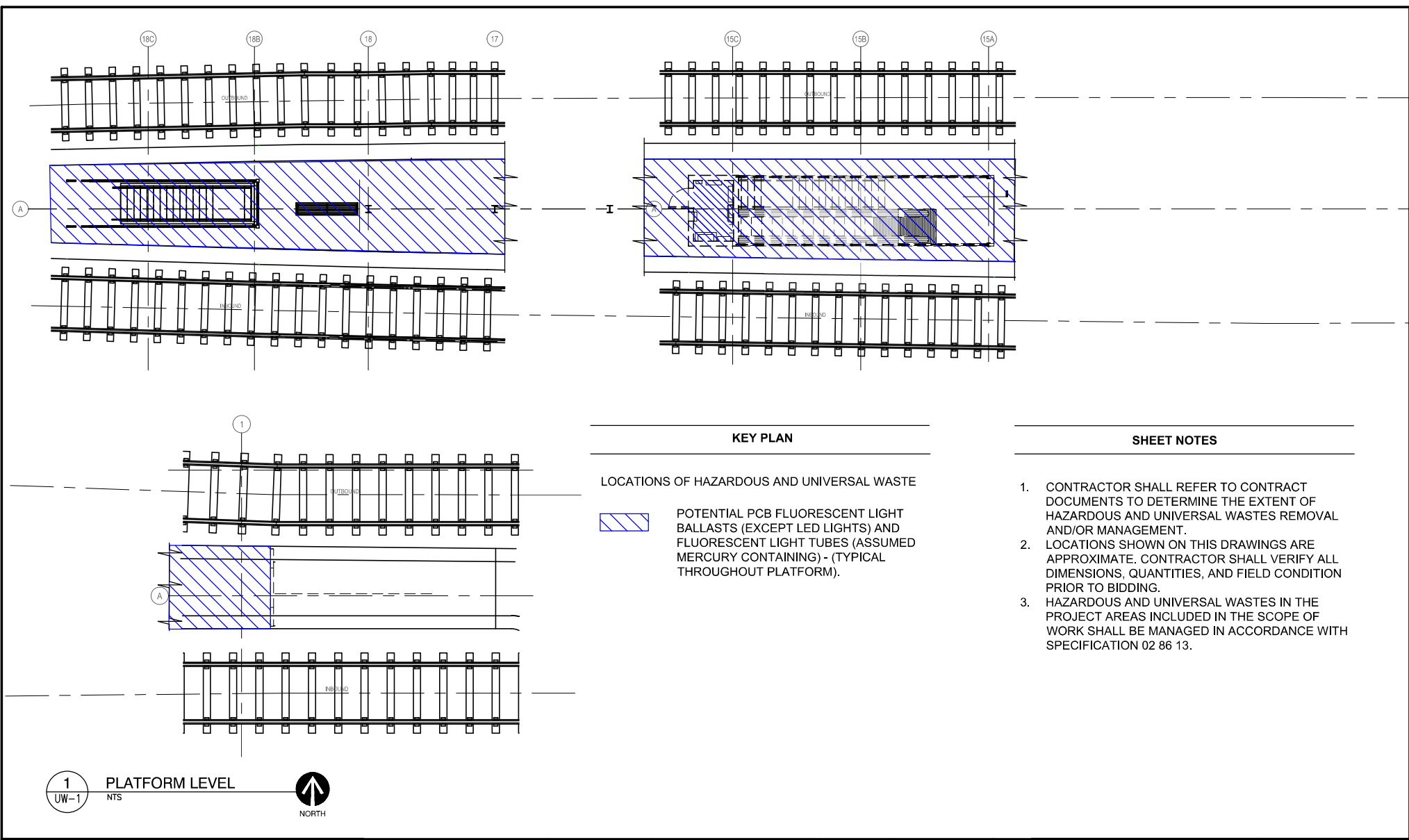
NTS



NORTH

										SUB CONSULTANT  GSG CONSULTANTS, INC. 735 Remington Road, Schaumburg, IL 60193 Tel: 630.994.2000, www.gsg-consultants.com										PRIMARY CONSULTANT BEAU/ SIGNATURE										PRIMARY CONSULTANT 										DESIGNED: EP DRAWN: EP CHECKED: GK DATE: 04/18/2022										 CHICAGO TRANSIT AUTHORITY ENGINEERING										LOCATION NAME: 351 N. AUSTIN BOULEVARD TITLE: CTA AUSTIN STATION ASBESTOS-CONTAINING MATERIALS										SCALE: NTS PROJECT NO. 20-1052										SHEET NO. ACM-1									
1	04/19/22	EP	GK	60% SUBMITTAL						REV	DATE	BY	APP	DESCRIPTION																																																																											





KEY PLAN

LOCATIONS OF HAZARDOUS AND UNIVERSAL WASTE



POTENTIAL PCB FLUORESCENT LIGHT BALLASTS (EXCEPT LED LIGHTS) AND FLUORESCENT LIGHT TUBES (ASSUMED MERCURY CONTAINING) - (TYPICAL THROUGHOUT PLATFORM).

SHEET NOTES

1. CONTRACTOR SHALL REFER TO CONTRACT DOCUMENTS TO DETERMINE THE EXTENT OF HAZARDOUS AND UNIVERSAL WASTES REMOVAL AND/OR MANAGEMENT.
2. LOCATIONS SHOWN ON THIS DRAWINGS ARE APPROXIMATE. CONTRACTOR SHALL VERIFY ALL DIMENSIONS, QUANTITIES, AND FIELD CONDITION PRIOR TO BIDDING.
3. HAZARDOUS AND UNIVERSAL WASTES IN THE PROJECT AREAS INCLUDED IN THE SCOPE OF WORK SHALL BE MANAGED IN ACCORDANCE WITH SPECIFICATION 02 86 13.

1
UW-1
NTS
PLATFORM LEVEL
NORTH

				SUB CONSULTANT				PRIMARY CONSULTANT				DESIGNED: EP				LOCATION NAME: 351 N. AUSTIN BOULEVARD				SCALE: NTS				SHEET NO. UW-1			
				GSG				EPSTEIN				DRAWN: EP				TITLE: CTA AUSTIN STATION HAZARDOUS AND UNIVERSAL WASTE				PROJECT NO. 20-1052							
				735 Remington Road, Schaumburg, IL 60193 Tel. 630.394.3000, www.gsg-consultants.com				CHICAGO TRANSIT AUTHORITY ENGINEERING				CHECKED: GK															
												DATE: 04/18/2022															
REV				DATE				BY				APP				DESCRIPTION											
1				04/19/22				EP				GK				60% SUBMITTAL											