FORT DUPONT
SHAPED BY HISTORY & ANCHORED IN NATURE

Fort DuPont Redevelopment and Preservation Corporation
Board of Directors Meeting

November 9, 2022
8:30 a.m.
Delaware City Fire Hall
815 5th Street
Delaware City DE 19706

AGENDA

1. Call to Order
2. Roll Call
3. Introduction of New Board Appointee
4. Approval of Minutes
    a. October 12, 2022
5. Treasurer's Report
    a. Financial Report
6. Committee Reports
        i. Executive Committee
        ii. Design and Historic Preservation Committee
7. Executive Director's Report
8. New Business
    a. Freedom of Information Act (FOIA) draft Policy
    b. Entranceway to Fort DuPont
    c. FY 24 Request for funding
9. Delaware City updates
10. Public comment

11. Executive Session (if needed)
12. Actions to be voted upon from Executive Session (if applicable)
    a. Potential action on Independent Accountants' Report on Applying Agreed-Upon Procedures
13. Next meeting date: December 14, 2022 8:30 a.m.
14. Adjourn

Please note: Pursuant to 29 Del. C 10004(e)(2), this Agenda may be changed to include additional items including executive sessions or to delete items that arise at the time of the meeting.

Potential executive session pursuant to 29 Del. C. 10004(b)(9) ("Personnel matters in which the names, competency and abilities of individuals employees…are discussed.")

Potential executive session pursuant to 29 Del. C. 10004(b)(2) ("discussions regarding sales or leases of real property) and 29 Del C. 10004 (b)(6) (discussion of the content of documents, excluded from the definition of "public record," where such discussion may disclose the contents of such documents).

Potential executive session pursuant to 29 Del. C. 1004 (b)(4) ("Strategy sessions, including those involving legal advice or opinion from an attorney-at-law…") and 29 Del. C. 10004(b)(6) (discussion of the contents of documents, excluded from the definition of "public record," where such discussion may disclose the contents of such documents.

FORT DUPONT REDEVELOPMENT AND PRESERVATION CORPORATION

BOARD OF DIRECTORS MEETING

The Fort Dupont Redevelopment and Preservation Corporation Board of Directors meeting was held at the Delaware City Community Center, 250 5th Street, on October 12, 2022 with Chair John McMahon presiding. Board members present were Secretary Shawn Garvin (Department of Natural Resources and Environmental Control (DNREC), Ms. Ruth Ann Jones (Controller General of the State of Delaware), Dr. Courtney Stewart (Office of Management and Budget), Mr. David Edgell (Office of State Planning Coordination), Mr. Rony Baltazar-Lopez (Department of State), Mr. David Baylor (Delaware City Manager), Mr. Kevin Whitaker (Resident of Delaware City), Mr. Michael Graci (Resident of Fort DuPont), Mr. Douglas Eriksen (Resident of Delaware City), and Ms. Wendy Rogers (Resident of Fort DuPont). Mr. Kurt Forman (Delaware Prosperity Partnership) was absent.

Staff members present were Mr. Tim Slavin – Executive Director, Mr. Shane Martin – Project Manager, Mr. Bert Scogletti – Treasurer, and Mr. Richard Forsten and Ms. Pam Scott of Saul Ewing Arnstein and Lehr LLP.

Members of the public present to speak were Roberta DeLeo, Beth Konkus, Billie Travalini, Tim Dilliplane, and Jack Guerin.

CALL TO ORDER

Chair McMahon called the Fort DuPont Redevelopment and Preservation Corporation (FDRPC) Board of Directors meeting to order at 8:32 a.m.

INTRODUCTION OF NEW BOARD APPOINTEES

Mr. Graci, Mr. Erikson, and Ms. Rogers introduced themselves and briefly provided their background information.

APPROVAL OF MINUTES – SEPTEMBER 14, 2022

Mr. Erikson advised that he was not in attendance at the September 14, 2022 board meeting, as indicated in the minutes.

Mr. Whitaker moved for approval of the minutes, as corrected. The motion was seconded by Dr. Stewart and unanimously carried.

TREASURER'S REPORT

Financial Report

Mr. Bert Scogletti stated that, due to a QuickBooks conversion and a conversion from a modified cash to a modified accrual system, the Financial Report would be presented at the November meeting.

Adoption of FY 23 Operating and Capital Budget

Referring to page 8, line 238 of the Draft Fiscal Year 2023 Operating and Capital Budget (Exhibit 1), Mr. Scogletti advised that the loan with Applied Bank had been paid off and the budgeted $50,000 was no longer necessary.

Mr. Scogletti advised that any budget amendments would be proposed in January or February of 2023.

Mr. Whitaker moved for acceptance of the Report, as presented. The motion was seconded by Mr. Edgell and unanimously carried.

COMMITTEE REPORTS

Executive Committee

Chair McMahon advised that the Executive Committee met on October 4, 2022 with no action taken. The minutes of that meeting will be disseminated at the next Board meeting.

Design and Historic Preservation Committee

Chair McMahon advised that the Design and Historic Preservation Committee was scheduled to meet at 4:00 p.m. that afternoon in the Surf Room of the Delaware City Public Library.

EXECUTIVE DIRECTOR'S REPORT

Mr. Tim Slavin, Executive Director, reviewed the Executive Director Monthly Report for the period September 1, 2022 to September 30, 2022 (Exhibit 2), noting the following project updates:

Marina Village

The Fort Dupont Redevelopment and Preservation Corporation (FDRPC) Board of Directors will be hosting a public information session on the Marina Village project on October 24, 2022 at 6:30 p.m. at the fire house. They will answer questions and present updates on this and other Fort Dupont projects. The Marina Village project was tabled by the Planning Commission and the FDRPC has requested that the item be included for discussion and possible action by the Planning Commission at their meeting of November 7, 2022.

Entranceway

Verdantas has been requested to prepare a report on the feasibility of the "right-in, right-out" option for the entranceway and the two significant issues related to it:

1) The amount of fill that would have to take place under the Reedy Point bridge and what effect that may or may not have on the piers of the bridge. That will inform the Army Corp of Engineers whether or not they will allow that option.

2) What amendments to Polk Town Road and some of the private properties along Polk Town Road would be needed.

The report was due at the end of September; however, Verdantas notified them that they were running a couple of weeks behind due to staffing issues. Early indications are that the right-in, right-out option is a very involved design that would be very disruptive to the Polk Town Road area. A recommendation will be presented to the Board in November or December. The drivers behind the project are the cap on permits and the closing of the St. George's bridge for 18 months, which will greatly restrict construction on Route 9.

Deputy Director Posting
The Deputy Director position, which is required by HB 355, was posted October 10, 2022. It is primarily a lead financial officer for the Corporation. The position requires approval by the Board and a successful candidate will be presented in December or January.

NAI Emory Hill Property Management Contract
The NAI Emory Hill Property Management contract is underway and they are now the property manager. They have been onsite and collected all the information they need, they have reached out to all of the residential leaseholders, they are inspecting properties and transitioning the leaseholders to their payment system. NAI Emory Hill is also in the process of gathering the comparables necessary for the listing of 1303 Officers Row.

Canal Bank Revetment
The Canal Bank Revetment has been with the Army Corp of Engineers (ACOE) for many months and a meeting has been scheduled for October 20, 2022 to discuss where they are in the process.

Events
The Corporation helped support the Delaware Autism Walk and Delaware City Day.

Training Facilities
Fort Dupont continues to be the place of choice for various public safety departments to train in the vacant hospital buildings.

Operational Efficiencies
Operational efficiencies are underway related to accounting and converting the system to Information Technology Solutions and contractual services are being tightened up to provide a transparent process.

PROPOSED SALE OF CORPORATION PROPERTY (TRUCK)(Action Item: 2022-10.12.01)
Mr. Tim Slavin, Executive Director, advised that the pickup truck is a RAM 2500, not a Ford F250 pickup truck, as stated on the action form. He noted that the truck is owned by FDRPC and is no longer needed. The balance due on the WSFS note for this and another pickup truck (which will remain in use) is $48,646.

Staff recommends the sale of the RAM 2500 to the highest bidder.

Mr. Baylor moved to authorize the Executive Director to liquidate the truck. The motion was seconded by Dr. Stewart and unanimously carried.

DELAWARE CITY UPDATES
Mr. David Baylor, City Manager – Delaware City, recognized Mr. Tim Slavin, Executive Director of FDRPC, for his assistance with Delaware City Day. He noted that they were able to hold two events on the same day without issue.

He also noted that the MOU to enhance police services was still outstanding and work continues on the streets MOU.

Mr. Baylor advised that the Branch Canal issue still needs to be resolved, noting that neither party really wants the canal. The Army Corp of Engineers is an integral part of the issue, as are DelDOT and the current business owners along the canal.

PUBLIC COMMENT

Ms. Roberta DeLeo asked if the Blue Water trailers were considered with the right-in, right-out entrance solution. Responding, Mr. Slavin advised that the solution that will be designed has to incorporate those needs.

Ms. Beth Konkus asked if the sale of the truck would be through public auction. Responding, Mr. Slavin advised that he would contact her with the information.

Ms. Billie Travalini advised that she had been attending the FDRPC meetings for over seven years to speak on behalf of the children of Governor Bacon Health Center, who are also an important story to the site. She stated that she had been promised that something meaningful would be done to remember the children of Governor Bacon who were neglected and sometimes abused at the site. Ms. Travalini thought that something should be done in a positive way to serve the children of the future in memory of those children, of which she was one. With regard to rebranding the site, she stated that if they are going to remember and restore the historic meaning of the site, 1948 to 1984 is a period of history that cannot be forgotten.

Responding to Mr. Tim Dilliplane, Mr. Slavin reiterated that the Fort Dupont Redevelopment and Preservation Corporation (FDRPC) Board of Directors will be hosting a public information session on the Marina Village project on October 24, 2022 at 6:30 p.m. at the fire house.

Mr. Jack Guerin of FightDECorruption.com asked if future meetings would be held at the Community Center. Responding, Mr. Slavin advised that the fire house was unavailable for this meeting and the November meeting. He noted that they would be looking at the best solution for a meeting location.

RECESS INTO EXECUTIVE SESSION

Secretary Garvin moved to recess into executive session, seconded by Mr. Whitaker and unanimously carried. Meeting recessed at 8:55 a.m.

RECONVENE

Secretary Garvin moved to reconvene the FDRPC Board meeting, seconded by Mr. Whitaker and unanimously carried. Meeting reconvened at 10:22 a.m.

POTENTIAL ACTION ON INDEPENDENT ACCOUNTANTS' REPORT ON APPLYING AGREED-UPON PROCEDURES

Mr. Richard Forsten, legal counsel for FDRPC, stated that the Independent Accountants' Report on Applying Agreed-Upon Procedures is still in progress and there is no action to be taken at this time.

NEXT MEETING DATE

The next meeting is scheduled for November 9, 2022 at 8:30 a.m.

ADJOURNMENT

Mr. Baylor moved for adjournment, seconded by Mr. Edgell and unanimously carried.

Meeting Adjourned at 10:24 a.m.

Exhibits

Exhibit 1 - Draft Fiscal Year 2023 Budget

Exhibit 2 - Executive Director Monthly Report for the period September 1, 2022 to September 30, 2022

FORT DUPONT

SHAPED BY HISTORY & ANCHORED IN NATURE

Fort DuPont Redevelopment and Preservation Corporation
Executive Committee
October 4, 2022 11:00 a.m.

MINUTES

Chairman McMahon called the meeting to order at 11:09 a.m. Present were Courtney Stewart, David Baylor, Ruth Ann Jones, and Bert Scogletti. This constitutes a quorum of the Executive Committee. Also present was Tim Slavin. The meeting was held via zoom and the anchor location was the FDRPC offices at 260 Old Elm Ave. in Delaware City. No members of the public attended.

Mr. Scogletti gave a brief overview of the proposed FY 2023 budget, which will be presented and voted on at the October 12, 2022 meeting of the full board. There were no questions.

Mr. Slavin mentioned that a potential source of grant support is funding being provided through a competitive grant program from FEMA (through DEMA). FDRPC may look at apply for funding for the canal revetment project. Deadline is December 1, 2022.

FY 24 budget request. Mr. Slavin inquired as to the manner of submission for the FY 24 budget request for consideration in the Governor's Recommended Budget for FY 24. A request will be made in letter form from the FDRPC upon approval by the Board of Directors at its November 9, 2022 meeting.

Mr. Slavin gave a status report on the following projects:

Entranceway. Mr. Slavin reported that FDRPC is awaiting the study from Verdantas on the "right in/right out" option for the entranceway. Initial indications are that this design is complicated and time consuming, and the overall project costs would be more

expensive. Mr. Slavin stated that he is looking to bring the issue forward for a decision in December 2022.

Marina Village. Mr. Slavin stated that the review of the Special Use Permit was tabled by the Delaware City Planning Commission at its September 2022 meeting. FDRPC is holding an informational session about the project (and other updates) for the community on October 24, 2022.

Canal Revetment. Mr. Slavin reported that the US Army Corps of Engineers (USACE) has agreed to meet via teleconference on the issue of pending cultural resources review. This meeting will also include representatives of the Delaware State Historic Preservation Office.

Mr. Slavin reported that Crystal Pini-McDaniel has been retained as a part-time employee. Mr. Slavin also reported that the Deputy Director position is now considered open.

There were no items for discussion which warranted an executive session and none was held.

There being no further discussion, the meeting adjourned at 11:43 a.m.

FORT DUPONT

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Executive Director Monthly Report
For the period September 1, 2022 to September 30, 2022
October 4, 2022

Our board meeting will be held on November 9, 2022 at 8:30 a.m. at the ***Delaware City Fire Hall.*** Board packets will be distributed via email (as a pdf attachment) on November 4, 2022.

- **Entranceway.**
    - The report from Verdantas covering the geotechnical evaluation of the proposed "right in/right out" option has been received. Verdantas analyzed three alternatives: Alternative 1 would add 8-9 feet of additional fill and result in a finished grade of 11 feet above existing conditions; Alternative 1A would add 5-6 feet of additional fill and result in a finished grade of 8 feet above existing conditions; and the Base Design would add 2-3 feet of additional fill and result in a proposed finished grade of 5 feet above existing conditions.
        - Alternative 1 and 1A are not recommended by Verdantas because of the impact each would have on the existing piers for the Reedy Point Bridge.
        - The roundabout entranceway is now the only viable option for the necessary improvements.
        - An action item will be presented to the Board for information purposes at the November 9, 2022 meeting.
    - September 2022 report: FDRPC is awaiting the findings of the study by Verdantas on the "Right In, Right Out" option. The key finding is what impact this option may have on the piers supporting the Reedy Point Bridge. Note: Without resolution on the entranceway issue, FDRPC will effectively be capped on the number of new permits. Additionally, in response to requests from residents of Fort DuPont, two open issues related to the Roundabout option have been explored: access/egress to the campus during construction, and access/egress by emergency vehicles along the Promenade. A resolution for both of these issues have been identified and will be discussed at the October 24, 2022 meeting on Marina Village (see earlier item).

- **Branch Canal issues.**

    - **Bank revetment project.** A meeting was held (via Webex) with Nicole Minnibach of the U.S. Army Corps of Engineers, and Gwen Davis and Sarah Carr of the State Historic Preservation Office. Concerns were raised by the SHPO about possible effects of the staging areas proposed for the project. In order to address these issues, a map was prepared combining three layers: proposed revetment plan, existing conditions, and areas of concern identified in the cultural resources study conducted previously. A follow-up on site meeting is planned for later in November 2022.
        - This project is eligible for a grant of up to 90% reimbursable costs from the Federal Emergency Management Agency. Verdantas is preparing the application on behalf of Fort DuPont.

    - **Proposed transfer of owners from U.S. Army Corps of Engineers (USACE).** DelDOT has sent a draft Environmental Assessment for the proposed transfer of ownership of two parcels currently owned by USACE: the Fifth Street Bridge to DelDOT, and the Branch Canal to FDRPC. The authority was granted to the USACE by Congress in the Water Resources Development Act of 2018. (Note: Language included in the law provides for the transfer of ownership of the canal to be approved by the Governor of Delaware.)
        - The Environmental Assessment was non-controversial as the action being proposed (transfer of ownership) did not disrupt any existing land conditions. The document will continue to USACE and for public comment.
        - Tim Slavin stated to DelDOT that while the Environmental Assessment may continue as one document, it will be necessary to de-couple the two actions and deal with them separately. He stated that the FDRPC Board of Directors has not been briefed on the issue, nor has any position been taken about receiving the ownership of the Branch Canal.

- **Marina Village.**
    - September 2022 report: A public meeting sponsored by FDRPC was held on October 24, 2022 with 48 people in attendance. FDRPC has requested that the item be included for discussion and possible action by the Planning Commission at their meeting of November 7, 2022.

- **Property Management contract underway on November 1, 2022.** NAI Emory Hill formally began their contract as property management contractor for the residential leases maintained by FDRPC. New leases were offered to 9 of the 10 current lessees with new market rates for rent established. Current lessees were offered a one-time step-up to market rate, which resulted in a 50% step-up from January 1 to June 30 2023, and then the full market rate effective July 1, 2023.

- **DNREC Archive building and DNREC Maintenance Shop.**
    - FDRPC is working with DNREC to complete the necessary permitting. An Environmental Covenant was signed by Tim Slavin on October 26, 2022 and transmitted to DNREC. Mobilization can not occur until these plans are approved by DNREC.
    - September 2022 report: The brownfield investigation for exterior work to the DNREC Archive building has been approved and now proceeds to a study. Water, sewer, handicap ramp, and parking lot are on hold until approvals are issued by DNREC. The Stormwater and Sediment (S&S) plan has been approved and signed off by DNREC for the DNREC Maintenance building. FDRPC has sent plans to prospective contractors for bids. Construction is expected to mobilize in late October/early November.

- **Executive Committee meeting.** The Executive Committee met on November 1, 2022.

- **Design and Historic Preservation Committee.** The next meeting of the Design and Historic Preservation Committee is scheduled for Wednesday November 16th at 4:00 p.m.

Community Interaction

- **Delaware City Council meetings.** Tim Slavin attended the October 16, 2022 meeting of the Delaware City Council and gave a brief update on projects at Fort DuPont.

On the Horizon

- **Potential action items at November 9, 2022 Board of Directors meeting.** There are potential action items for consideration at the November 9, 2022 Board of Directors meeting. There will be an executive session at the November 9, 2022 meeting.

Other

- **Cyber attack on Fort DuPont information assets.** On October 12-13 the Fort DuPont website was the target of a cyber attack which denied our use of the site. A police report was issued by the Delaware City Police Department. The damage was contained and repaired and no personal data was exploited. FDRPC has now contracted with Tech Impact for a wholesale conversion of information technology assets to a new system.

Fort DuPont Redevelopment And Preservation Corporation
Freedom of information Act ("FOIA") Policy

Part 1 - Purpose

The purpose of this policy is to set forth the procedures for responding to requests from the public for "public records". The Corporation is a "public body" as that term is defined in 29 *Del. C.* §10002(k), and, as such, is subject to the provisions of the Delaware Freedom of Information Act ("FOIA"). All "public records", as that term is defined in 29 *Del. C.* §10002(o), shall be open and subject to disclosure to the Requesting Party, except if the information is specifically exempt from disclosure as set forth in 29 *Del. C.* §10002(o).

Part 2 – Definitions

The following words and terms, when used in this policy, shall have the following meaning unless the context clearly indicates otherwise:

(1) "Corporation" means the Fort DuPont Redevelopment and Preservation Corporation.

(2) "FOIA" means the Delaware Freedom of Information Act as established pursuant to Tile 29, Chapter 100 of the Delaware Code.

(3) "FOIA Coordinator" shall mean _____, or their designee.

(4) "FOIA Request" or "Request" means a request to inspect or copy a Public Record pursuant to the provisions of 29 *Del. C.* §10003 and in accordance with

this policy.

(5) "FOIA Request Form" means the form approved by the Corporation upon which requests for Public Records can be made, attached hereto as Exhibit "A".

(6) "Public Record" shall have the meaning set forth in 29 *Del. C.* §10002(o).

(7) "Requesting Party" means the party filing a FOIA Request.

Part 3 – Records Request, Response Procedures and Access

A. FOIA Coordinator

The Corporation shall designate a FOIA Coordinator who shall serve as the point of contact for FOIA Requests and coordinate the Corporation's responses thereto. The FOIA Coordinator shall be identified on the Corporation's website and the Corporation shall provide the name and contact information for the FOIA Coordinator to the Attorney General's Office. The Corporation shall update this information on its website and with the Attorney General's Office within twenty (20) business days of any change in the FOIA Coordinator or their contact information. The FOIA Coordinator may designate other employees to perform specific duties and functions hereunder.

The FOIA Coordinator shall maintain a document which tracks all FOIA Requests. For each FOIA Request, the document shall include, at a minimum, the Requesting Party's contact information, the date the Corporation received the FOIA Request, the Corporation's response deadline, the date of the Corporation's response

(including reasons for any extension), the names, contact information and dates of correspondence with individuals contacted in connection with the FOIA Request, the dates of review by the Corporation, the names of the individuals who conducted such reviews, whether documents were made available, the amount of copying and/or administrative fees assessed, and the date of final disposition. Attached hereto as Exhibit "B" is the form to be used for tracking FOIA Requests.

B. Form of Request

All FOIA Requests shall be made in writing and submitted to the Corporation in person, by email or by facsimile to the FOIA Coordinator. FOIA Requests should be submitted using the FOIA Request Form attached as Exhibit "A" to this policy; however, any FOIA Request that contains the required information and otherwise conforms to this policy shall not be denied solely because the request is not made using the approved form.

All FOIA Requests shall adequately describe the records being requested in sufficient detail to enable the Corporation to locate such records with reasonable effort. The Requesting Party shall be as specific as possible when requesting records. To assist the Corporation in locating the requested records, the Corporation may request that the Requesting Party provide additional information known to the Requesting Party, such as the types of records being sought, dates, parties to correspondence, and the subject matter of the requested records.

Note that any records over _____ years old may be located in off-site storage

and will be subject to a retrieval fee. The Requesting Party shall be provided with a written cost estimate of such retrieval fees prior to retrieving such records. Records retrieved from storage will be kept on site for review for ten (10) business days before being returned to storage.

C. Method of Filing FOIA Request

FOIA Requests may be made to the Corporation by mail, in person, by email or by facsimile. Copies of the FOIA Request Form may be obtained from the Corporation either via the Corporation's website (www.ftdupont.org) or by contacting the Corporation at 302-838-7374.

D. Corporation Response to FOIA Requests

The Corporation will respond to a FOIA Request within fifteen (15) business days after receipt thereof, either by providing access to the requested records, denying access to the records or parts thereof, or by advising that additional time is needed because the Request is for voluminous records, records that will require extended research to locate or legal advice is required. If access cannot be provided within fifteen (15) business days, the Corporation shall cite one of the reasons hereunder why more time is needed and provide to the Requesting Party a good faith estimate of how much additional time is required to respond to the request.

If a Request is denied, in whole or in part, the response shall indicate the reasons for the denial.

Prior to disclosure, records may be reviewed by the Corporation to ensure that

those records or portions of records deemed nonpublic may be removed pursuant to 29 *Del. C.* §10002(o) or any other applicable provision of FOIA.

Copies of records requested can be picked up at the Corporation's offices, emailed (if available electronically) or sent via facsimile with no charge. If the Requesting Party requests that the records be mailed via Postal Service, the Requesting Party shall be responsible for the cost of mailing.

E. Request for Email Records

Requests for email records shall be fulfilled by the Corporation from its own records if doing so can be accomplished by the Corporation with reasonable effort. If the Corporation determines that it cannot fulfill all or any portion of such request, and such request pertains to the Corporation, the Corporation will reach out to the appropriate state or local agency to obtain and provide such email records.

F. Hours of Review

The Corporation shall provide reasonable access for reviewing Public Records during regular business hours (9:00 a.m. to 5:00 p.m.). Appointments will be scheduled at a mutually convenient time for the Requesting Party and the Corporation. If photocopies are desired, the specific records must be identified by tabbing the pages. If less than twenty (20) pages are to be copied and personnel are available to do so, copies will be made while the Requesting Party waits for them.

G. Fees.

(a) If paper records are provided to the Requesting Party, photocopying fees

shall be as follows:

(i) Standard Sized, Black and White Copies/Printouts: The first twenty (20) pages will be provided free of charge. The charge for copying standard sized, black and white Public Records for copies over and above 20 shall be $0.10 per single sided sheet ($0.20 for a double-sided sheet). This charge applies to copies of the following standard size: 8.5" x 11", 8.5" x 14" and 11" x 17".

(ii) Standard Sized, Color Copies/Printouts: An additional charge of $1.00 per sheet will be assessed for all color copies or printouts for standard sized copies and $1.50 per sheet for larger copies.

(iii) Oversized Black and White Copies/Printouts: The charge for copying oversized Public Records shall be $2.00 per 18" x 22" sheet and $3.00 per 24" x 36" sheet. The charge for copying documents larger than 24" x 36" shall be $ 1.00 per square foot. Over-sized documents that the Corporation is not capable of reproducing will be sent off-site and the Requesting Party will be charged the costs incurred.

(iv) Oversized Color Copies/Printouts: An Additional charge of $1.50_ per sheet will be assessed for all color copies or printouts for oversized copies.

(v) Electronically Generated Records: Charges for copying records maintained in an electronic format will be calculated by the material costs involved in generating the copies (including but not limited to DVD, CD, or

other electronic storage costs) and administrative costs.

(b) Administrative Fees shall be as follows:

(i) Administrative fees shall be assessed for requests requiring more than one hour of staff time to process. Charges for administrative fees may include staff time associated with processing FOIA Requests, including but not limited to, identifying records, monitoring file reviews and generating computer records. Administrative fees shall not include any cost associated with the Corporation's counsel's review of whether any portion of the requested records is exempt from FOIA.

(ii) For requests that require more than one hour of staff time, the Corporation shall provide a written cost estimate of such fees to the Requesting Party, listing all charges expected to be incurred in retrieving such records, prior to responding to any request that would require Requesting Party to incur administrative fees. Upon receipt of the estimate, the Requesting Party may decide whether or not to proceed with the Request.

(iii) Administrative fees will be billed to the Requesting Party per quarter hour. These charges will be billed at the current hourly pay rate (pro-rated for quarter hour increments) of the lowest paid employee capable of performing the service. Administrative fees will be in addition to any other charges incurred under this Section F, including, but not limited to, copying fees.

(c) Payment of all fees shall be due no later than the time the records are released to the Requesting Party. The Corporation may require pre-payment of all fees prior

to performing any services. The Corporation accepts cash or check payable to "Ft. DuPont Redevelopment and Preservation Corporation". There is a return check fee of thirty-five dollars ($35.00).

(d) Requesting Parties who do not reschedule or cancel appointments to view files at least one full business day in advance of the appointment may be subject to the charges incurred by the Corporation in preparing the requested records.

This FOIA policy is hereby adopted by the Board of Directors of the Ft. DuPont Redevelopment and Preservation Corporation on this ____ day of _____ 2022.

_____
John McMahon
Chair

Exhibit A

Request for Public Records Form

NAME OF REQUESTOR: _____

DATE OF REQUEST: _____

MAILING ADDRESS OF REQUESTOR: _____

PHONE: _____ EMAIL: _____

RECORDS REQUESTED: (Be as specific as possible, providing a description of the types of records, dates, parties to correspondence, subject matter, etc. The public body will do its best to assist you in identifying the records sought).

There may be costs involved in responding to your request. Refer to the Corporation's policy for information about costs and access to records.

PLEASE CONTACT ME IF COSTS WILL BE GREATER THAN: $_____

Within 15 business days from receipt of your request the Corporation must either provide you with access to records, deny your request or state that additional time is needed.

EXHIBIT "B"

FOIA TRACKING FORM (For internal use only)

FOIA REQUEST NUMBER: _____

CONTACT INFORMATION (where a response may be sent):

Name of Requesting Party: _____

Address: _____

City, State, Zip: _____

Phone: (h) _____ (w) _____ (cell) _____

Fax No. _____ Email: _____

Date Corporation received FOIA Request: _____

Date response due to Requesting Party: _____

Date Corporation reviewed FOIA Request: _____

Names of individuals, if any, with whom Corporation corresponded to respond to FOIA Request:

_____

Names of those who reviewed FOIA Request on behalf of Corporation: _____

_____

Were documents made available for review? _____ If so, when? _____

Fees assessed for copying/administrative services: _____

Date Corporation provided a response to Requesting Party: _____

Date of final disposition of FOIA Request: _____

ACTION FORM

November 9, 2022	**Action Item: 2022-11-09-001**
Subject:	Entranceway re-affirmation
Related project:	None
Prepared by:	Tim Slavin
Expenditure Reqd:	None
Amount Budgeted:	N/A
Funding Source/Code	N/A
Recommended Action:	This item is presented for informational purposes only at this meeting. Pending further dialogue with the community, a recommendation from staff will be presented at the December 2022 board meeting.
Background and Analysis:	The FDRPC is required to make improvements to the entranceway at Fort DuPont (Route 9 and Old Elm Ave.). These improvements will allow additional building permits to be issued. FDRPC is currently nearing the cap of the building permits it is permitted to have without any further improvements. Four options were considered for the entranceway solution: 1. Do Nothing option. This was eliminated because of the need for additional building permits. 2. Signal at Route 9 and Old Elm Ave. This was eliminated because of concerns raised by the U.S. Army Corps of Engineers (USACE) over the specter of traffic backing up on the Reedy Point Bridge. 3. Roundabout. This was accepted by FDRPC and DelDOT as the preferred alternative in 2019. The project was successfully bid and awarded to A-Del construction. Communication by FDRPC to the local community was deficient and resulted in the project being paused in December 2021.

	4. Right In Right Out alternative. This alternative was studied by Verdantas at the request of FDRPC. The alternative included the raising of Old Battery Lane under the Reedy Point Bridge to raise the road out of the flood zone. This would result in a finished grade of 11 feet. The geotechnical study completed by Verdantas and issued on October 1, 2022 concluded that raising the roadbed to a level out of the flood zone would have a negative effect on the existing piers of the Reedy Point Bridge. As such, this would not be supported by the USACE. (Note: FDRPC will raise the roadbed to a proposed finish grade of five feet, which will eliminate the risk of the roadbed being flooded during minor flooding events.) FDRPC staff met with Delaware City Fire Chief Allan Mackenzie and President Wally Poppe. Both Chief Mackenzie and President Poppe stated that they have maintained concerns about the roundabout as a solution to the entranceway. The concerns of the DCFC were noted as follows: • DCFC maintains the position that a roundabout will present safety issues to the community. • DCFC asked FDRPC for the following: o Confirmation that the width of the circle accommodates fire trucks, ambulances, and tractor trailers. o Description of the signal and lighting at the roundabout. o Description of the signage and lighting coming northbound from the Reedy Point Bridge. o Description of the signage and lighting coming southbound into the roundabout from the city. o Assurances that the state is addressing the safety requirements in the design. o Confirmation that egress during construction is available for the largest of fire trucks of DCFC. o Confirmation that DCFC will still have access to canal bank and Polktown Road during construction.

DUFFIELD ASSOCIATES
Soil, Water & the Environment

October 31, 2022

Fort DuPont Redevelopment and Preservation Corporation
c/o Mr. Timothy Slavin
P.O. Box 521
Delaware City, Delaware

RE: Geotechnical Evaluation
Route 9 Overpass & Proposed Grading for
Underpass Commercial Entrance
Fort DuPont Development
Delaware City, Delaware

Dear Mr. Slavin:

Verdantas, LLC has completed our geotechnical evaluation for the Route 9 overpass and proposed grading for the underpass commercial entrance at the Fort DuPont development located in Delaware City, Delaware. This evaluation is summarized in the appended report, which includes the data obtained in our field and laboratory programs, a summary of the subsurface conditions encountered, and comments related to the design of the proposed improvements. These services were performed in general accordance with our Amendment #7, dated July 15, 2022, and the professional services agreement Project No. 10801CX, dated April 27, 2017.

We appreciate this opportunity to be of service to you and will remain available to assist you and your team. Should you have any questions concerning this evaluation, we encourage you to contact us

Sincerely,

VERDANTAS, LLC

Brian Lowe, P.E.
Geotechnical Engineer

James F. Cloonan, P.E., LEED AP
Senior Consultant

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DUFFIELD ASSOCIATES
Soil, Water & the Environment

Geotechnical Evaluation

Old Battery Lane Improvements- Grading Alternatives Review Fort DuPont Development, Delaware City, Delaware
Project number: 10801.CX

October 31, 2022

Prepared for:
Fort DuPont Redevelopment and Preservation Corporation
P.O. Box 521
Delaware City, Delaware

Prepared by:
Duffield Associates, LLC
5400 Limestone Road
Wilmington, Delaware 19707

Contents

Appendices

Executive Summary

The following report summarizes Duffield Associates LLC's Geotechnical Evaluation for the proposed improvements to Old Battery Lane as part of the Fort DuPont development in Delaware City. Delaware. The purpose of this evaluation was to observe and document the subsurface conditions and perform analysis

of influence of the proposed improvements on the existing Route 9 bridge pier (piers designated N30 and N3) foundations bordering. Three grading alternatives are considered. A field and lab program was performed to inform our analysis. The following comments and conclusions are provided:

- The subsurface beneath 4 to 10 inches of topsoil can be generalized as a layer of sand or gravel fill to a depth of 2 feet. Beneath the fill, the native subsurface conditions in the test borings performed at the site can generally be described as sand with varying amounts of silt to depths between 7 and 8 feet overlying a layer of compressible high plasticity silt and sand with organics, observed to a depth of 13 feet. Below the silt stratum, sand with varying amounts of silt was encountered transitioning at 28 to 38 feet to sand with varying amounts of clay to the extent of the borings. Bedrock was not encountered. Groundwater was observed in each boring at a depth of 3 feet (corresponding to an approximate elevation of -1 feet, project datum)
- Analysis of the three grading concepts indicates that the placement of between 2 and 9 feet of fill as part of the Old Battery Lane improvements could results in an estimated surface settlements between 1 ½ to 5 inches of beneath the road and between ¼ and 3 ½ inches in the vicinity of the existing piers. The magnitude of this settlement varies for each of the 3 grading alternatives,
- Settlement of the piles at both piers N30 and N31 is estimated to be ¼ inch or less in each alternative,
- In the Base Case, the estimated displacements, moments, and shear loading imposed by the fill on each of the abutments represent a nominal increase in loading on both plumb and battered piles.
- For the Alternative 1 and 1A cases, the estimated displacements, moments, and shear loading imposed by the fill on each of the abutments represent a significant addition to the demand on both plumb and battered piles. Additional displacements of up to 1/8 of an inch are estimated to occur.
- The proposed regrading embankment slopes exceed the minimum typical factor of safety for global stability,
- Based on the analysis performed, it is our opinion that the Base Case improvements will not adversely impact the existing bridge piers N30 and N31. The Alternate 1 and 1A regrading options are anticipated to have adverse impacts on the bridge per foundations and are not recommended.
- Based on our analysis it is our opinion that the proposed improvements represented by the Base Case will not adversely impact the existing bridge piers N30 and N31.

More detailed conclusions and recommendations for design and construction of the foundations and building slab are provided in the following report.

1.0 Project Summary

1.1 Proposed Improvements

As part of the overall the Fort DuPont development plan, the grade of Old Battery Lane (currently designated Wilmington Avenue) will be raised as part of the flood hazard mitigation measures. The paved two-lane road will be supported on the proposed embankment fill. Old Battery Lane will serve as an entrance to the development from Polktown Road, passing beneath the existing Route 9 Bridge structure between piers designated N30 and N31 (per United States Army Corps of Engineer [USACE] 1965 bridge drawings, referenced below). Currently the site arrangement has not been finalized however, several options (alternatives) are being considered that raise the grade between three and nine feet. Apart from the embankment fill and various access ramps, the grade beyond the Old Battery Road improvements is generally proposed to be altered less than 1-foot from present grade.

1.2 References Utilized

To assist in the preparation of this evaluation, the following references were utilized:

- A letter prepared by Duffield Associates, Inc. titled, “Project No. 10801.CX Route 9 Overpass & Proposed Grading for Underpass Commercial Entrance Fort DuPont Development Delaware City, Delaware,” dated May 6, 2019;
- A letter prepared by the USACE responding to the May 6, 2019, Duffield Associates, Inc. letter requesting further information to address concerns related to the grading in the vicinity of the bridge structure dated August 8, 2022;
- Sheets 2, 6, 10 and 12 of a set of drawings prepared by Modjeski & Masters, Inc. for the USACE titled, “Inland Waterway Delaware River to Chesapeake Bay, Del. & MD. Reedy Point Bridge General Plan & Elevation Substructure Contract,” marked “Sheet 2” dated September 21, 1965;
- A log for an exploration performed by an unknown party designed “Boring No. 33” performed February 7 and 8, 1964 at “:STA 139+20 on E”.

1.3 Existing Site Conditions

Based on an existing conditions drawing prepared by Duffield Associates, LLC (Duffield), the grades along Wilmington Avenue in the vicinity of the existing bridge overpass ranged between 1 and 3 feet (project datum). Wilmington Avenue is a paved road and represents the approximate alignment of proposed Old Battery Lane. The area surrounding Old Wilmington Avenue is generally grass, with significant vegetation present to the south of the road and west of the bridge.

Based on the referenced documents, the Route 9 bridge is pile supported in the vicinity of the improvements. Pier numbers N30 and N31 are located immediately south and north, respectively, of the proposed Old Battery Lane area. The foundation system of the proximate bridge piers is reported to consist of thirteen, 12-inch nominal diameter, concrete filled, precast concrete tapertube (or step taper) -style piles driven to a tip elevation of -33.2 feet (pier N30, as built) and -37.4 feet (pier N31, as built). Details regarding the thickness or composition of the shell or installed length of reinforcement are not available for individual piles. The referenced drawings show the piers to be supported by three vertical and ten battered piles. The top of the reinforced concrete pile cap elevation is reported as elevation 4.5 feet. Design loading for the piles is not noted on the referenced documents.

Several existing utilities were identified in the vicinity of the proposed structure including buried communications and two unknown lines.

2.0 Field and Laboratory Testing

2.1 Previous Subsurface Evaluations

Duffield Associates, LLC (Duffield) has been involved in many aspects of the Fort DuPont redevelopment since the project's inception. Geotechnical explorations including drilling, test pits, infiltration testing and hand augers have been performed at the site. The subsurface conditions observed in these previous evaluations were considered in this evaluation where appropriate.

2.2 Test Borings

On August 2, 2022, two soil borings designated TB-01 and TB-02 were performed at the site, each to a depth of 50 feet beneath existing grade. Prior to performance of the borings, a Miss Utility of Delaware request was submitted by the drilling contractor to delineate utilities within the public right of way. Additionally, a private surface utility scan was performed by Trinity Subsurface Engineering, LLC as a subcontractor to Duffield.

The borings were performed by CGC Geoservices, LLC as a subcontractor to Duffield with a track mounted CME 55 drill rig utilizing 4 ¼ inner diameter hollow stem augers (in accordance with ASTM D1452) or 3 ⅞ inch drag bit and mud rotary drilling (in accordance with ASTM D5783) as applicable. Bentonite drilling fluid was utilized during rotary drilling. Sampling was performed at 2 ½ -foot intervals in the top 10 feet and at 5-foot intervals thereafter. Disturbed sampling was performed with a 2-inch outer diameter split spoon in general accordance with ASTM D1586. Split barrel samplers were advanced utilizing a 140-pound automatic trip hammer falling 30 inches. The energy transfer ratio of the hammer was not measured during the field program. These sampling events were observed and recorded by our field staff. Undisturbed sampling was performed with 3-inch diameter thin-wall Shelby Tubes in general accordance with ASTM D1587. Soil samples were packaged in sealed containers and transported in general accordance with ASTM D4220 to the Duffield geotechnical laboratory in Wilmington, Delaware for subsequent review and testing. A representative of Duffield observed the boring being performed, visually classified the samples in general accordance with ASTM D2488 and prepared the graphical boring logs shown in Appendix B. Following completion, the borings were backfilled with auger cuttings. Additional settlement and softening of the backfill may occur, resulting in a depression or hole in the ground surface. Consequently, future maintenance and restoration of the site may be required.

The approximate test boring locations are shown in Appendix B. Test boring logs, which describe the conditions observed during the field exploration program, are enclosed as Appendix C

2.3 Laboratory Testing

Laboratory testing was performed on disturbed and undisturbed samples collected during the field program. The laboratory program was designed to evaluate the engineering characteristics of the earth material encountered. The results of the laboratory testing are summarized in Table 1 and select results have been included on the attached logs. No environmental testing or characterization was performed.

Table 1 – Laboratory Test Results

Boring	Sample No.	Depth (feet)	Moisture Content (%) (ASTM D2216)	Dry Unit Weight (pcf) (ASTM D2937)	Percent Passing No. 200 Sieve (%) (ASTM D1140)	Atterberg Limits (ASTM D4318)	
						Liquid Limit (%)	Plasticity Index (%)
TB-1	S-3	4.0 – 6.0	62.4	--	89.1	--	--
	S-5	8.0 – 10.0	44.9	--	54.2	34	8
	S-7	18.0 – 20.0	15.3	--	7.0	--	--
	S-9	28.0 – 30.0	11.7	--	5.6	--	--
TB-2	S-2	2.0 – 4.0	18.2	--	3.7	--	--
	ST-1	4.0 – 6.0	22.1	--	15.7	--	--
	ST-2	8.0 – 10.0	69.6	60.3	60.1	104	59
	S-7	18.0 – 20.0	18.3	--	11.0	--	--
	S-9	28.0 – 30.0	25.2	--	40.5	--	--
	S-10	33.0 – 35.0	24.4	--	36.9	28	10

3.0 Subsurface Conditions

3.1 Generalized Site Geology

Regional mapping by the Delaware Geologic Survey (DGS) indicates the project site to be located within the Atlantic Coastal Plain geological province. The Coastal Plain can be described as a wedge-shaped accumulation of unconsolidated sediments deposited on a sloping shelf or basement of Piedmont-type (crystalline metamorphic and igneous) bedrock.

Based on available 1:100:000 scale mapping on the DGS Delaware Geologic Information Resource (DGIR) online application, the surficial geology of the site is mapped as the Scotts Corners Formation (map unit Qsc). This Scotts Corners unit is described as, “Heterogeneous unit of light gray to brown to light-yellowish-brown, coarse to fine sand, gravelly sand and pebble gravel with rare discontinuous beds of organic-rich clayey silt, clayey silt, and pebble gravel. Sands are quartzose with some feldspar and muscovite. Commonly capped by one to two feet of silt to fine sandy silt. Laminae of opaque heavy minerals are common. Unit underlies a terrace parallel to the present Delaware River that has elevations less than 25 feet. Interpreted to be a transgressive unit consisting of swamp, marsh, estuarine channel, beach, and bay deposits. Climate during the time of deposition was temperate to warm temperate as interpreted from fossil pollen assemblages (Ramsey, 1997). Overall thickness of the unit rarely exceeds 20 feet.” Marsh deposits are also mapped along portions of the river and canal banks in the area.

3.2 Stratigraphic Soil Conditions

Generalized descriptions of the subsurface materials that were encountered during the explorations are provided in the following sections. Referenced depths are relative the existing grade at the time of the explorations unless otherwise noted.

3.2.1 Undocumented Fill

Beneath the surficial 4 to 10 inches of topsoil (**Stratum A**) a layer of undocumented fill (**Stratum B**) was encountered to a depth of 2 feet. The fill was sampled as moist, loose to medium dense sand or gravel with varying amounts of silt.

3.2.2 Native Soil

Beneath the undocumented fill (**Stratum B**), the native subsurface conditions in the test borings performed at the site can generally be described as moist to wet, very loose to medium dense sand with varying amounts of silt (**Stratum C**) to depths between 7 and 8 feet. Beneath the surficial sand layer, a layer of wet, very soft to medium stiff low to high plasticity silt and sand layer with organics (presumably a marsh deposit) was observed to a depth of 13 feet (thickness ranging between 5 and 6 feet (**Stratum D**). Below the silt stratum, wet, loose to medium dense sand with trace to little silt (**Stratum E1**) graded at 28 to 38 feet to wet, medium dense to dense sand with little- to and clay (**Stratum E2**) to the extent of the borings. Bedrock was not encountered.

3.3 Groundwater Conditions

Groundwater was observed in each boring at a depth of 3 feet (corresponding to an approximate elevation of -1 feet, project datum) prior to mud rotary drilling.

Groundwater mapping by DGS and the State of Delaware, Department of Natural Resources and Environmental Control (DNREC) well permit database indicates annual average groundwater levels in “dry” to “wet” conditions range from approximately 5 to 6 feet below the existing ground surface.

Groundwater levels at the site will be affected by seasonal and annual variations in precipitation and may be impacted by local and regional development. It is estimated that variations in groundwater levels several feet higher or lower than those observed during this evaluation could be experienced during extreme variations in precipitation.

3.4 Compressibility

One-dimensional laboratory consolidation testing was performed on one sample within the silt stratum to estimate their stress history and performance under loading. To determine the preconsolidation pressure (i.e., the maximum past pressure), the graphical method proposed by Casagrande was utilized. Using this method, the sample was estimated to be normally consolidated. The consolidation results are present in Appendix C.

4.0 Discussion of Analysis

Currently, three options for the grading of Old Battery Lane are under consideration. The general geometry of each option is presented in Table 2. Concept level drawings are included in Appendix A.

Table 2 – Design Alternative Summary

Design Option	Proposed Finished Grade of Old Battery Lane in Beneath Bridge (feet, project datum)	Approximate Additional Fill Beneath Bridge (feet)	Additional Fill Around Pier N30 (feet)	[Additional Fill Around Pier N31 (feet)
Base Design	5	2 - 3	0	0
Alternative 1	11	8 – 9	0 - 2	2 – 5
Alternative 1A	8	5 – 6	0 – 1	0 - 2

An analysis was performed to evaluate the impacts of the proposed regrading fill depth on the existing bridge pier foundations. Models for settlement, stress influence, and global stability were developed based on the explorations performed as part of this evaluation, laboratory data, and the generally accepted standard of practice. The parameters utilized in the various analysis for each geotechnical unit at the site are presented in tabular form in Appendix D.

4.1 Settlement

Both elastic settlement from the granular soils and consolidation settlement from the compressible fine-grained soils were considered for each arrangement. The arrangement for each design option were modeled in RocScience Settle3. The Boussinesq stress computation method was utilized to model the stress distribution beneath the embankment. An assumed compacted in place total unit weight of 135 pcf was assumed for the embankment soil. The maximum settlements were observed near the center of the embankments. Surface settlement ranges in the vicinity of the bridge abutments were estimated. Both the Alternative 1 and 1A arrangements induced significant surface settlement in the vicinity of each of the bridge piers. The base design with smaller fill height and extent, cause negligible settlement in the vicinity of the bridge piers. In each case, the vertical settlement beneath the piles was estimated to be less than ¼ inch. Most of the settlement is estimated to take place during placement and over the initial one to three months following application of the load. The results are summarized in Table 3 and have been presented graphically in Appendix D.

Table 3 – Estimated Settlement Summary at Selected Points

Design Option	Maximum Estimated Surface Settlement Near Center of Fill Beneath Bridge (inches)	Estimated Surface Settlement Near Pier N30 Piles (inches)	Estimated Settlement Beneath Pier N30 Pile Tip (inches)	Estimated Surface Settlement Near Pier N31 Piles (inches)	Estimated Settlement Beneath Pier N31 Pile Tip (inches)
Base Design	1 ½ – 2	< ¼	< ¼	< ¼	< ¼
Alternative 1	5	1 ½ – 2 ½	< ¼	2 ¼ – 3 ¼	< ¼
Alternative 1A	3 ¾	½ – 1 ¼	< ¼	1 – 2	< ¼

4.2 Additional Lateral Loading on Piles

When an embankment is constructed, the fill load imposes additional vertical and horizontal stresses on the subsurface. The magnitude of the loading is dependent of the amount of fill, and composition of the subsurface soils. In Loading stresses due to the additional fill were estimated in each design case for the "worst case" pile within the pile cap. The resultant pressure distributions for each design option were calculated for both Pier N30 and N31 utilizing the stress distributions evaluated in Settle3. The resultant pressure distributions for each case are summarized in Table 4 presented in Appendix D.

Table 4 – Estimated Settlement Summary at Selected Points

Design Option	Range of Additional Stress (psf)	
	Pier N30	Pier N31
Base Design	33 – 328	26 – 90
Alternative 1	685 – 890	307 - 413
Alternative 1A	395 - 529	104 - 313

The pressure distributions were incorporated into a lateral pile analysis modeling using LPile by Ensoft. Based on the available drawings, a 12-inch diameter round concrete pile with 6 No. 6 reinforcing bars and 2 inches of clear spacing was analyzed. A modulus of elasticity of 29 million psi and yield strength of 50 thousand psi was assumed for the reinforcing steel. A 28-day concrete strength of 4,000 psi was utilized for the concrete. Casing was neglected since there was no casing information on the drawings. Not considering the casing is a conservative assumption since the steel contribution would further increase the section modulus to resist bending. The tapered tip was not included in the analysis as details of the geometry are unknown. Both plumb and battered (3 horizontal to 12 vertical or 14 degrees from vertical, away from direction of loading) were evaluated in the free head condition. The maximum effects of the loading on the pile are presented in Table 5 and tabular and graphical outputs have been included in Appendix D. These should be considered additional to the existing loading on the piles, which is not known. It is our opinion that the results for the Base Design represent a nominal increased in demand on the piles at each abutment with negligible deformation, and that the results for the Alternatives 1 and 1A designs, coupled with the estimated settlements of the soil around the piers could result in significant stress on the pier foundations considered.

Table 5 – Summary of Lateral Pile Analysis

Abutment	Design Case	Pile Arrangement	Estimated Maximum Additional Deflection (inches)	Estimated Maximum Increase Bending Moment (lb-ft)	Estimated Maximum Increase in Shear Force (lbs)
N30	Base Case	Plumb	Less than 0.01	583	213
		3/12 Battered	Less than 0.01	584	208
	Alternative1	Plumb	0.12	2695	635
		3/12 Battered	0.13	2727	641
	Alternative 1A	Plumb	0.07	2167	373
		3/12 Battered	0.07	2137	373
N31	Base Case	Plumb	Less than 0.01	355	100

		3/12 Battered	Less than 0.01	351	97
	Alternative1	Plumb	0.06	2430	490
		3/12 Battered	0.07	2389	480
	Alternative 1A	Plumb	0.03	1079	272
		3/12 Battered	0.03	1066	268

4.3 Global Stability

Global stability of the embankment arrangements for the three options was evaluated using the computer program SLIDE2 by RocScience. Slopes were modeled using the Spencer method with circular failure surfaces in the software program. The geometry was based on a cross section taken perpendicular to the slope face, in the vicinity of the bridge piers. Representative strength parameters were based on field and laboratory data and correlations. Shallow, raveling failures of the face were screened out of the analysis. The cross section for the analysis was based on the provided project drawings for the area beneath the bridge. A 250 pound per square foot surcharge was modeled within the travel lanes of Old Battery Lane. Typically, the minimum acceptable static factor of safety for earthen embankments is 1.3. The estimated factors of safety exceeded the minimum in each analysis case. The results of stability analyses are shown in Table 6 and included in Appendix D.

Table 6 – Global Stability Analysis

Design Option	Static Factor of Safety	
	Left to Right	Right to Left
Base Design	2.7	2.5
Alternative 1	2.3	2.3
Alternative 1A	2.3	2.5

5.0 Conclusions

Duffield performed a field and lab program to characterize the subsurface in the vicinity of the proposed improvements. Various analyses were performed to estimate the impact of the proposed improvements to the existing bridge facility. Based on our analysis, we offer the following conclusions:

- The additional of between 2 and 9 feet of fill to improve Old Battery Lane is estimated to cause surface settlements between 1 ½ to 5 inches of beneath the road, between ¼ and 2 ½ inches in the vicinity of Pier N30 and between ¼ and 3 ¼ inches in the vicinity of Pier N31. The majority of the settlement is anticipated to occur during and within three months following construction of the improvements. The magnitude of this settlement varies for each of the 3 grading alternatives,
- Settlement of the piles is estimated to be ¼ inch or less in each case, due to the dense bearing stratum.
- In the Base Case, the estimated displacements, moments, and shear loading imposed by the fill on each of the abutments represent a nominal increase in demand on both plumb and battered piles.
- In the Alternative 1 and 1A cases, the estimated displacements, moments, and shear loading imposed by the fill on each of the abutments represent a significant addition to the demand on both plumb and battered piles. Additional displacements of up to 1/8 of an inch are estimated to occur.
- In each case, the embankment slopes exceeded the minimum typical factor of safety for global stability in the static case.
- Based on the estimated additional stress on the piles, and settlement at the abutments, design Alternatives 1 and 1A are therefore not recommended.

Based on our analysis it is our opinion that the proposed improvements represented by the Base Case will not adversely impact the existing bridge piers N30 and N31.

6.0 Qualifications

The recommendations of this report have been prepared according to generally accepted soil and foundation engineering practice and are based on the conditions encountered by the test borings performed at the site. Although soil quality has been inferred from the interpolation of the sampling data, you should explicitly note that subsurface conditions beyond the test borings are, in fact, unknown. This report applies solely to the size, type, and location of the structures described herein. In the event that changes are proposed, this report will not be considered valid unless the changes have been reviewed and the recommendations of this report modified and re-approved in writing by Duffield Associates, LLC.

Appendix A

Figures

NOTE:

THIS SKETCH IS ADAPTED FROM A 7.5 MINUTE SERIES U.S.G.S TOPOGRAPHIC MAP TITLED "DELAWARE CITY, DE-NJ" DATED 2019.

DATE: 2 AUGUST 2022	**SITE LOCATION SKETCH**	**DESIGNED BY:** RRM	DUFFIELD ASSOCIATES Soil, Water & the Environment
SCALE: 1" = 2000'	**FORT DUPONT**	**DRAWN BY:** RRM	5400 LIMESTONE ROAD WILMINGTON, DE 19808-1232 TEL. 302.239.6634 FAX 302.239.8485
PROJECT. NO. 10801.CX	**OLD BATTERY LANE IMPROVEMENTS**	**CHECKED BY:** BTL	OFFICES IN DELAWARE, MARYLAND PENNSYLVANIA AND NEW JERSEY
SHEET: FIGURE 1	**DELAWARE CITY ~ NEW CASTLE COUNTY ~ DELAWARE**	**FILE:** LOC-10801.CX	E-MAIL: DUFFIELD@DUFFNET.COM

KEY:

TB-01 - APPROXIMATE TEST BORING LOCATION

NOTE:

THIS AERIAL PHOTO WAS ACQUIRED THROUGH GOOGLE EARTH.
AERIAL PHOTOGRAPHY DATED SEPTEMBER, 2020.

80' 0 80' 160'

DRAWING SCALE 1" = 80'

TEST BORING LOCATION SKETCH

FORT DUPONT
OLD BATTERY LANE IMPROVEMENTS

WILMINGTON ~ NEW CASTLE COUNTY ~ DELAWARE

DESIGNED BY:	RRM
DRAWN BY:	RRM
CHECKED BY:	BTL
FILE:	GEO-10801.CX

DUFFIELD ASSOCIATES
Soil, Water & the Environment
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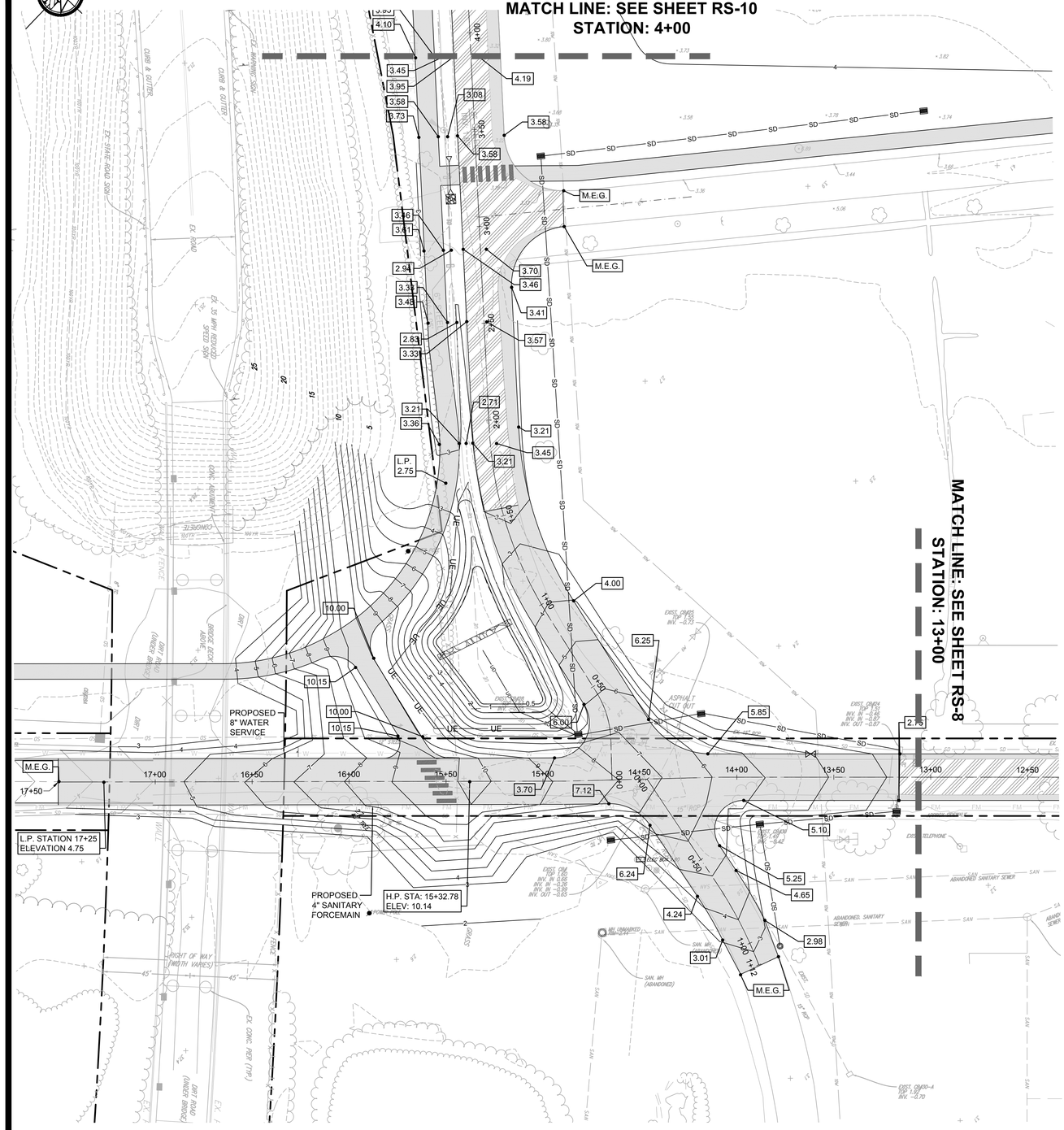
FAX. 302.239.8485
OFFICES IN DELAWARE, MARYLAND
PENNSYLVANIA AND NEW JERSEY
E-MAIL: DUFFIELD@DUFFNET.COM

DATE: 16 SEPTEMBER 2022

SCALE: 1"=80'

PROJECT NO. 10801.CX

SHEET: FIGURE 2



OLD BATTERY LANE IMPROVEMENTS
BASE DESIGN GRADING
DUFFIELD ASSOCIATES, LLC
10801.CX
OCTOBER 21, 2022

DUFFIELD ASSOCIATES
Soil, Water & the Environment
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DESIGNED BY: BRK
DRAWN BY: brk
CHECKED BY: SJG
FILE NAME: RS_11975CK
STEPHEN J. GORSKI, P.E.
STATE: DELAWARE P.E. #12625

No.	REVISION	CHK'D BY	DATE
-	-	-	-

PRELIMINARY NOT FOR CONSTRUCTION

OWNER: FORT DUPONT REDEVELOPMENT AND PRESERVATION CORPORATION
260 OLD ELM AVENUE
DELAWARE CITY, DELAWARE 19706

ROAD AND STORM DRAIN PLANS - GRADING
OLD BATTERY LANE STATION 13+00 TO 17+03.25
FORT DUPONT
OLD BATTERY LANE IMPROVEMENTS

DELWARE CITY ~ NEW CASTLE COUNTY ~ DELAWARE

DATE: 22 JUNE 2022
SCALE: 1" = 30'
PROJECT NO. 11975.CK
SHEET: RS 9A

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OLD BATTERY LANE IMPROVEMENTS
ALTERNATIVE 1 GRADING
DUFFIELD ASSOCIATES, LLC
10801.CX
OCTOBER 21, 2022


OLD BATTERY LANE IMPROVEMENTS
ALTERNATIVE 1A GRADING
DUFFIELD ASSOCIATES, LLC
10801.CX
OCTOBER 21, 2022
OLD ELM AVENUE
SD FORCE MAIN
22' x 8' PARALLEL PARKING SPACES
EX. 60' R/W
OPEN SPACE
PROP. 10" WATER
PROP. 18" HDPE
PROPOSED 20' SANITARY SEWER EASEMENT
PROP. WET POND
BIO #5
PROP. 36" RCP
PROP. 67 LF 24" HDPE @ 4.25%
20' BSL
BENCHMARK
FOUND NGS DISK (855 1910 TIDAL 3)
ELEV.: 15.01' (NAVD88)
N: 571884.5' (NAD83 2011 DSP)
E: 607228.9' (NAD83 2011 DSP)
PROP. 12' WIDE PROMENADE
EX. 8' CONC. WALK
EX. 30' BRIDGE DECK
EX. BRIDGE
PROP. 15" RCCP CL. IV
PROP. 18" RCP
PROP. 18" RCCP CL.IV
MAG SPIKE 4.70
COLTER AVENUE
BENCHMARK #13
SET IRON ROD WITH CAP
ELEV.: 4.01' (NAVD88)
N: 571640.69' (NAD83 2011 DSP)
E: 607766.51' (NAD83 2011 DSP)
EDGE OF PAVEMENT
OAK LANE (PRIVATE)
6" STEEL INV: 1.83'
POWER POLE (TYP.)
6' TALL CHAIN LINK FENCE
DELAWARE ROUTE 9
(ROAD 2, RIGHT-OF-WAY WIDTH VARIES)
SURVEY DISC 20.54
SURVEY DISC 19.83
EX. 35 MPH REDUCED SPEED SIGN
OLD BATTERY LANE
OAK LANE
ELEC BOX 1.80
TB-1
POWER POLE
REEDY POINT BRIDGE
EX. CONC. PIER (TYP.)
EX. PARAPET WALL
BRIDGE BEAM
POLKTOWN RD. (ROAD 2A)
POLKTOWN PLACE (ROAD 2B) R.O.W. WIDTH VARIES
EX. ASPHALT ROAD
OWNER UNKNOWN
PARCEL NO. 12-023.00-001 JOYLETTE CARRINGTON 201 POLKTOWN PLACE DELAWARE CITY, DE 19706 ZONE: NC5
PARCEL NO. 12-023.00-002 KHAYREEE E. & ALLYSON T. BEY 203 POLKTOWN PLACE DELAWARE CITY, DE 19706 ZONE: NC5
PARCEL NO. 12-023.00-024 CLARA LEWIS 101 OLD DUTCH NECK RD DELAWARE CITY, DE 19706 ZONE: NC5
PARCEL NO. 12-023.00-003 GEORGE CLARK 100 OLD DUTCH NECK RD DELAWARE CITY, DE 19706 ZONE: NC5
PARCEL NO. 12-023.00-005 CHARLES AND ROBERT EMORY 205 POLKTOWN PLACE DELAWARE CITY, DE 19706 ZONE: NC5
PARCEL NO. 12-023.00-007 ALMA MILLER 205 POLKTOWN PLACE DELAWARE CITY, DE 19706 ZONE: NC5
PARCEL NO. 12-023.00-009 JOSEPH BAYARD 209 POLKTOWN PLACE DELAWARE CITY, DE 19706 ZONE: NC5
PARCEL NO. 12-023.00-004 THOMAS WATSON 211 POLKTOWN PLACE DELAWARE CITY, DE 19706 ZONE: NC5
PARCEL NO. 12-023.00-012 ANNETTE PURNELL 219 POLKTOWN PLACE DELAWARE CITY, DE 19706 ZONE: NC5
PARCEL NO. 12-023.00-014 ANNETTE PURNELL 221 POLKTOWN PLACE DELAWARE CITY, DE 19706 ZONE: NC5
PARCEL NO. 12-023.00-016 WILLIAM BISHOP 225 POLKTOWN PLACE DELAWARE CITY, DE 19706 ZONE: NC5
PARCEL NO. 12-023.00-025 JOSEPH BOWYER 227 POLKTOWN PLACE DELAWARE CITY, DE 19706 ZONE: NC5
PARCEL NO. 12-023.00-026 ANNE PORTER AND EMMA BOYER 229 POLKTOWN PLACE DELAWARE CITY, DE 19706 ZONE: NC5
PARCEL NO. 12-023.00-019 OVERBOARD CORP 120 OLD DUTCH NECK ROAD DELAWARE CITY, DE 19706 ZONE: NC5
PARCEL NO. 22-013.00-001 FORT DUPONT REDEVELOPMENT & PRESERVATION CORP 100 NORTH REEDY POINT ROAD DELAWARE CITY, DE 19706 ZONE: 22HPR
LIMIT OF TIDAL WETLANDS
EX. EDGE OF PAVING
DENSE VEGETATION
POLKTOWN PLACE

Appendix B

Boring Logs and General Notes

DUFFIELD ASSOCIATES
Soil, Water & the Environment

TEST BORING TB-01

Geotechnical Evaluation
Fort DuPont
Old Batttery Lane Improvements
Delaware City, Delaware
Project No. 10801.CX

Date Started	: August 2, 2022	Drilling Equipment	: Track-Mounted CME 55
Date Completed	: August 2, 2022	Drilling Methods	: HSA (SPT, Mud Rotary)
Logged by	: RRM	Surface Elevation	: 2 feet
Weather	: Clear, 80°F		
Driller/Agency	: J. Blemings/CGC Geoservices		

Sample Condition: ⊠ Remolded
Water Levels: ▼ During Drilling; ▽ At Completion

Depth in feet	Surf. Elev. 2 ft	USCS	DESCRIPTION	Sample Number	Blows per 6 inches	Recovery (ft)	Moisture Content (%)	Percent Passing 200 Sieve
0	2		TOPSOIL (± 10 inches)					
			FILL: Brown fine to medium SAND and SILT, trace gravel (moist)	S-1	1-2-5-4	1.8		
2	0	SP	Gray fine to medium SAND, little silt, trace coarse sand (moist to wet)	S-2	3-3-3-3	2.0		
4	-2			S-3	1/12"-1/12"	2.0	62.4	89.1
		ML	Gray SILT, little fine sand (wet)					
6	-4	SM	Gray fine SAND, little silt, trace medium to coarse sand (wet)	S-4	1-1-1-1	2.0		
8	-6	ML	Gray, brown SILT, little to some organics, trace fine sand (wet)					
			Gray SILT, and fine sand (wet) (Liquid Limit = 34; Plasticity Index = 8)	S-5	1-2-2-2	2.0	44.9	54.2
10	-8							
12	-10							
14	-12	SP-SM	Brown fine SAND, trace silt, trace medium to coarse sand (wet)	S-6	1-3-5-4	2.0		
16	-14							
18	-16		Brown fine SAND, trace silt, trace medium to coarse sand (wet)	S-7	6-4-5-6	2.0	15.3	7.0
20	-18							

NOTES:
1. Test boring terminated at ± 50.0 feet below existing ground surface (b.e.g.s.).
2. Drilling performed with 4.25 inch diameter hollow stem augers.
3. Surface elevation estimated based on existing conditions drawings prepared by Duffield Associates, LLC., dated September 8, 2022.
4. Wet-on-spoon conditions observed at ± 3.0 feet b.e.g.s.
5. Water level upon completion observed at ± 3.4 feet with augers at ± 20.0 feet.
6. Switched to mud rotary (3.875 inch Tricone) at ± 20.0 feet b.e.g.s.
7. Soil descriptions performed in general accordance with ASTM D 2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).
8. Borehole backfilled with auger cuttings upon completion.

DUFFIELD ASSOCIATES
Soil, Water & the Environment

TEST BORING TB-01

Geotechnical Evaluation
Fort DuPont
Old Batttery Lane Improvements
Delaware City, Delaware
Project No. 10801.CX

Date Started	: August 2, 2022	Drilling Equipment	: Track-Mounted CME 55
Date Completed	: August 2, 2022	Drilling Methods	: HSA (SPT, Mud Rotary)
Logged by	: RRM	Surface Elevation	: 2 feet
Weather	: Clear, 80°F		
Driller/Agency	: J. Blemings/CGC Geoservices		

Sample Condition: ⊠ Remolded
Water Levels: ▼ During Drilling; ▽ At Completion

Depth in feet	Surf. Elev. 2 ft	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	Recovery (ft)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
22	-20	SP-SM	Brown fine SAND, trace silt, trace medium to coarse sand (wet)	⊠	S-8	4-6-6-3	2.0			
24	-22									
26	-24									
28	-26		Brown fine SAND, trace silt, trace medium to coarse sand (wet)	⊠	S-9	3-3-2-3	2.0	11.7	5.6	
30	-28									
32	-30									
34	-32	ML	Gray SILT, some to little fine sand (wet)	⊠	S-10	3-4-7-8	2.0			
36	-34									
38	-36	SM	Gray fine SAND, some silt, trace medium to coarse sand (wet)	⊠	S-11	10-13-17-17	2.0			
40	-38									
42	-40									

NOTES:
1. Test boring terminated at ± 50.0 feet below existing ground surface (b.e.g.s.).
2. Drilling performed with 4.25 inch diameter hollow stem augers.
3. Surface elevation estimated based on existing conditions drawings prepared by Duffield Associates, LLC., dated September 8, 2022.
4. Wet-on-spoon conditions observed at ± 3.0 feet b.e.g.s.
5. Water level upon completion observed at ± 3.4 feet with augers at ± 20.0 feet.
6. Switched to mud rotary (3.875 inch Tricone) at ± 20.0 feet b.e.g.s.
7. Soil descriptions performed in general accordance with ASTM D 2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).
8. Borehole backfilled with auger cuttings upon completion.

DUFFIELD ASSOCIATES
Soil, Water & the Environment

TEST BORING TB-01

Geotechnical Evaluation
Fort DuPont
Old Batttery Lane Improvements
Delaware City, Delaware
Project No. 10801.CX

Date Started	: August 2, 2022	Drilling Equipment	: Track-Mounted CME 55
Date Completed	: August 2, 2022	Drilling Methods	: HSA (SPT, Mud Rotary)
Logged by	: RRM	Surface Elevation	: 2 feet
Weather	: Clear, 80°F		
Driller/Agency	: J. Blemings/CGC Geoservices		

Sample Condition: ⊠ Remolded
Water Levels: ▼ During Drilling; ▽ At Completion

Depth in feet	Surf. Elev. 2 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	Recovery (ft)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
42	-40										
44	-42		SM	Gray fine SAND, some silt, trace medium to coarse sand (wet)	⊠	S-12	8-12-20-15	2.0			
46	-44										
48	-46			Gray fine SAND, some silt, trace medium to coarse sand (wet)	⊠	S-13	12-14-14-16	2.0			
50	-48										
52	-50										
54	-52										
56	-54										
58	-56										
60	-58										
62	-60										

NOTES:
1. Test boring terminated at ± 50.0 feet below existing ground surface (b.e.g.s.).
2. Drilling performed with 4.25 inch diameter hollow stem augers.
3. Surface elevation estimated based on existing conditions drawings prepared by Duffield Associates, LLC., dated September 8, 2022.
4. Wet-on-spoon conditions observed at ± 3.0 feet b.e.g.s.
5. Water level upon completion observed at ± 3.4 feet with augers at ± 20.0 feet.
6. Switched to mud rotary (3.875 inch Tricone) at ± 20.0 feet b.e.g.s.
7. Soil descriptions performed in general accordance with ASTM D 2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).
8. Borehole backfilled with auger cuttings upon completion.

DUFFIELD ASSOCIATES
Soil, Water & the Environment

TEST BORING TB-02

Geotechnical Evaluation
Fort DuPont
Old Batttery Lane Improvements
Delaware City, Delaware
Project No. 10801.CX

Date Started	: August 2, 2022	Drilling Equipment	: Track-Mounted CME 55
Date Completed	: August 2, 2022	Drilling Methods	: HSA (SPT, Mud Rotary)
Logged by	: RRM	Surface Elevation	: 2 feet
Weather	: Clear, 80°F		
Driller/Agency	: J. Blemings/CGC Geoservices		

Sample Condition: Remolded; Undisturbed
Water Levels: During Drilling; At Completion

Depth in feet	Surf. Elev. 2 ft	USCS	DESCRIPTION	Sample Number	Blows per 6 inches	Recovery (ft)	Moisture Content (%)	Percent Passing 200 Sieve
0	2		TOPSOIL (± 4 inches)					
			FILL: Gray GRAVEL, little to some fine to medium sand, trace silt	S-1	2-4-6-5	0.8		
2	0	SP	Gray fine to medium SAND, trace coarse sand, trace silt (moist-wet)	S-2	5-5-6-5	1.8	18.2	3.7
4	-2		SHELBY TUBE ST-1: 4.0' - 6.0' - Gray fine to medium SAND, little silt (wet)	ST-1	P-U-S-H	2.0	22.1	15.7
6	-4	SM	Gray and brown fine to medium SAND, little silt, trace gravel, trace coarse sand, trace organics (wet)	S-4	1-1-1-1	1.8		
8	-6		SHELBY TUBE ST-2: 8.0' - 10.0' - Gray SILT and fine sand, trace organics (wet) (Liquid Limit = 104; Plasticity Index = 57)	ST-2	P-U-S-H	2.0	69.9	60.1
10	-8	MH						
12	-10							
14	-12		Brown fine SAND, trace medium to coarse sand, trace silt (wet)	S-6	4-4-7-7	2.0		
16	-14	SP-SM						
18	-16		Brown fine SAND, little silt, trace medium to coarse sand (wet)	S-7	5-5-5-7	2.0	18.3	11.0
20	-18							

NOTES:
1. Test boring terminated at ± 50.0 feet below existing ground surface (b.e.g.s.).
2. Drilling performed with 4.25 inch diameter hollow stem augers.
3. Surface elevation estimated based on existing conditions drawings prepared by Duffield Associates, LLC., dated September 8, 2022.
4. Wet-on-spoon conditions observed at ± 3.0 feet b.e.g.s.
5. Water level upon completion observed at ± 2.8 feet with augers at ± 15.0 feet.
6. Switched to mud rotary (3.875 inch Tricone) at ± 15.0 feet b.e.g.s.
7. Soil descriptions performed in general accordance with ASTM D 2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).
8. Borehole backfilled with auger cuttings upon completion.

DUFFIELD ASSOCIATES
Soil, Water & the Environment

TEST BORING TB-02

Geotechnical Evaluation
Fort DuPont
Old Batttery Lane Improvements
Delaware City, Delaware
Project No. 10801.CX

Date Started : August 2, 2022
Date Completed : August 2, 2022
Logged by : RRM
Weather : Clear, 80°F
Driller/Agency : J. Blemings/CGC Geoservices

Drilling Equipment : Track-Mounted CME 55
Drilling Methods : HSA (SPT, Mud Rotary)
Surface Elevation : 2 feet

Sample Condition: Remolded; Undisturbed
Water Levels: During Drilling; At Completion

Depth in feet	Surf. Elev. 2 ft	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	Recovery (ft)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
22	-20	SP-SM	Brown and gray fine SAND, trace silt, trace medium to coarse sand (wet)		S-8	3-3-3-4	2.0			
24	-22									
26	-24									
28	-26	SC	Gray fine SAND and CLAY, trace medium to coarse sand (wet)		S-9	3-2-4-4	2.0	25.2	40.5	
30	-28									
32	-30									
34	-32		Gray fine to medium SAND and CLAY, trace coarse sand (wet) (Liquid Limit = 28; Plasticity Index = 10)		S-10	8-8-8-8	1.8	24.4	36.9	
36	-34									
38	-36		Gray fine SAND, little clay, trace medium to coarse sand (wet)		S-11	8-10-13-15	2.0			
40	-38									
42	-40									

NOTES:
1. Test boring terminated at ± 50.0 feet below existing ground surface (b.e.g.s.).
2. Drilling performed with 4.25 inch diameter hollow stem augers.
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7. Soil descriptions performed in general accordance with ASTM D 2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).
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DUFFIELD ASSOCIATES
Soil, Water & the Environment

TEST BORING TB-02

Geotechnical Evaluation
Fort DuPont
Old Batttery Lane Improvements
Delaware City, Delaware
Project No. 10801.CX

Date Started	: August 2, 2022	Drilling Equipment	: Track-Mounted CME 55
Date Completed	: August 2, 2022	Drilling Methods	: HSA (SPT, Mud Rotary)
Logged by	: RRM	Surface Elevation	: 2 feet
Weather	: Clear, 80°F		
Driller/Agency	: J. Blemings/CGC Geoservices		

Sample Condition: Remolded; Undisturbed
Water Levels: During Drilling; At Completion

Depth in feet	Surf. Elev. 2 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	Recovery (ft)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
42	-40										
44	-42		SC	Gray fine SAND, some clay, trace medium to coarse sand (wet)		S-12	11-10-12-12	2.0			
46	-44										
48	-46			Gray fine SAND, little clay, trace medium to coarse sand, trace gravel (wet)		S-13	9-10-16-13	2.0			
50	-48										
52	-50										
54	-52										
56	-54										
58	-56										
60	-58										
62	-60										

NOTES:
1. Test boring terminated at ± 50.0 feet below existing ground surface (b.e.g.s.).
2. Drilling performed with 4.25 inch diameter hollow stem augers.
3. Surface elevation estimated based on existing conditions drawings prepared by Duffield Associates, LLC., dated September 8, 2022.
4. Wet-on-spoon conditions observed at ± 3.0 feet b.e.g.s.
5. Water level upon completion observed at ± 2.8 feet with augers at ± 15.0 feet.
6. Switched to mud rotary (3.875 inch Tricone) at ± 15.0 feet b.e.g.s.
7. Soil descriptions performed in general accordance with ASTM D 2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).
8. Borehole backfilled with auger cuttings upon completion.

DUFFIELD ASSOCIATES
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GENERAL NOTES

DUFFIELD ASSOCIATES uses the following definitions and terminology to classify and correlate the field and laboratory samples.

VISUAL UNIFIED CLASSIFICATIONS: The soil samples are described by color, major constituent, modifiers (by percentage), and density (or consistency). Coarse Grained or Granular Soils have more than 50% of their dry weight retained on a No. 200 sieve; they are described as: boulders, cobbles, gravel or sand. Fine Grained Soils have less than 50% of their dry weight retained on a No. 200 sieve; they are described as: clays or clayey silts if they are cohesive and silts if they are noncohesive. In addition to gradation, granular soils are defined on the basis of their relative in-place density and fine grained soils on the basis of their strength or consistency and their plasticity.

The Unified Soil Classification symbols are:

COARSE GRAINED SOILS

GW - Well graded gravels
GP - Poorly graded gravels
GM - Silty gravels
GC - Clayey gravels
SW - Well graded sands
SP - Poorly graded sands
SM - Silty sands
SC - Clayey sands

FINE GRAINED SOILS

ML - Silts of low plasticity
CL - Clays of low to medium plasticity
OL - Organic silt clays of low plasticity
MH - Silts of high plasticity
CH - Clays of high plasticity
OH - Organic silt clays of high plasticity
PT - Peat and highly organic soils

SIZE DESCRIPTION

F - Fine
M - Medium
C - Coarse
G - Gravel

MODIFIERS (PERCENTAGE)

Tr -	Trace	1 - 10%
Ltl -	Little	11 - 20%
Some		21 - 35%
& -	And	36 - 50%

COLOR

Or - Orange
Yel - Yellow
Br - Brown
Blk - Black
Gr - Gray
R - Red
Vc - Varicolored
Dk - Dark
Lt - Light

DENSITY: COARSE GRAINED SOILS

Very loose	4 blows/ft or less
Loose	5 to 10 blows/ft
Medium	11 to 30 blows/ft
Dense	31 to 50 blows/ft
Very Dense	51 blows/ft or more

CONSISTENCY: FINE GRAINED SOILS

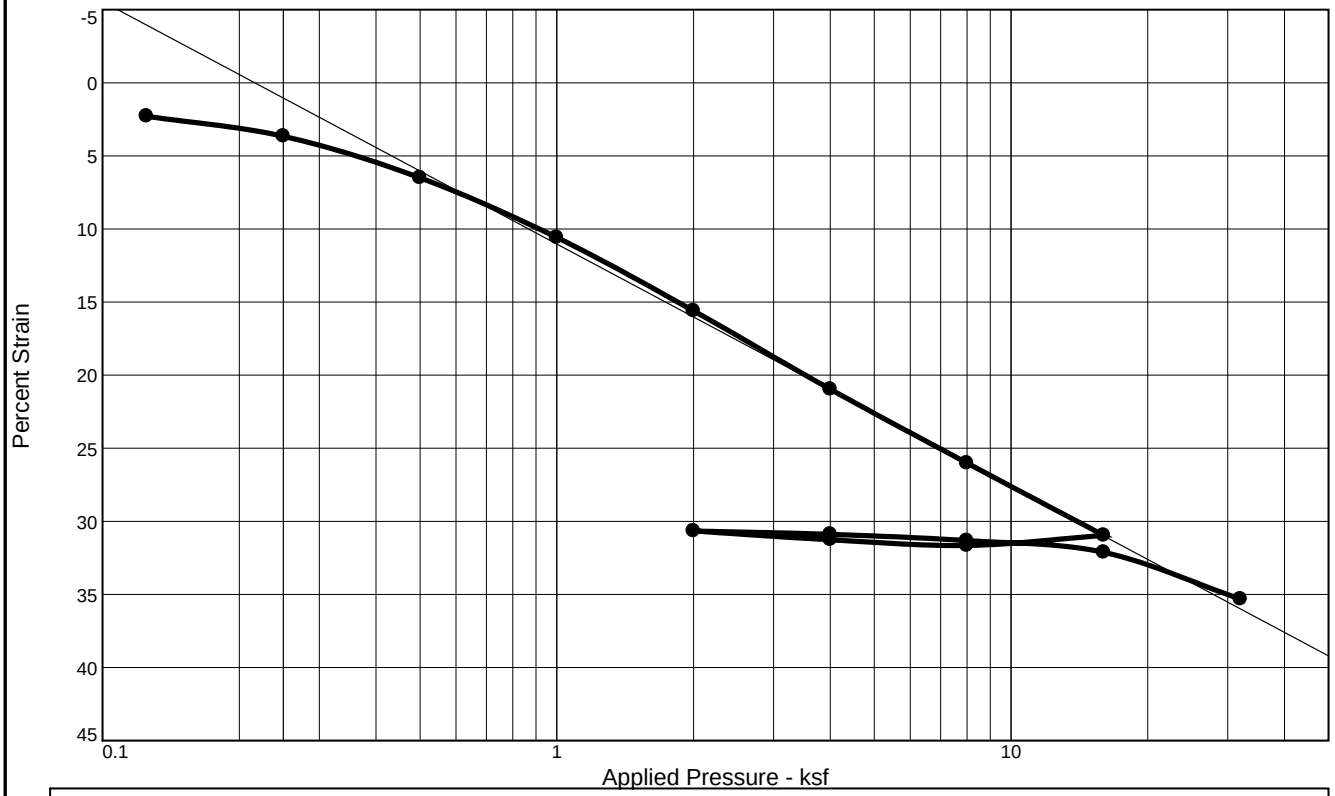
Very soft	2 blows/ft or less
Soft	3 to 4 blows/ft
Medium	5 to 8 blows/ft
Stiff	9 to 15 blows/ft
Very stiff	16 to 30 blows/ft
Hard	31 blows/ft or more

NOTE: The Standard Penetration Test "N" value is the number of blows per foot of a 140 pound hammer falling 30 inches on a 2 inch O.D. split spoon sampler, except where otherwise noted.

Appendix C

Lab Results

CONSOLIDATION TEST REPORT



Coefficients of Consolidation and Secondary Consolidation

No.	Load (ksf)	C_v (ft.^{2}/day)	C_α	No.	Load (ksf)	C_v (ft.^{2}/day)	C_α	No.	Load (ksf)	C_v (ft.^{2}/day)	C_α
2	0.25	0.089									
3	0.50	0.164									
4	1.00	0.100									
5	2.00	0.095									
6	4.00	0.084									
7	8.00	0.097									
15	32.00	0.098									

Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	Overburden (ksf)	P_c (ksf)	C'_c	C'_r	Initial Void Ratio
Saturation	Moisture									
	69.6 %	60.3	104	57	--	--	0.55	0.166	0.013	--

MATERIAL DESCRIPTION	USCS	AASHTO
Gray, high plasticity SILT, some fine sand, trace organics	MH	

Project No. 10801CX **Client:** Fort DuPont Redevelopment and Preservation Corporation

Project: Ft DuPont Old Battery Lane Improvements

Source of Sample: TB-2 **Depth:** 8.0 - 10.0 **Sample Number:** ST-2

Remarks:

DUFFIELD ASSOCIATES
Soil, Water & the Environment
5400 Limestone Road
Wilmington, DE 19808
P: 302.239.6634
F: 302.239.8485
E: duffield@duffnet.com

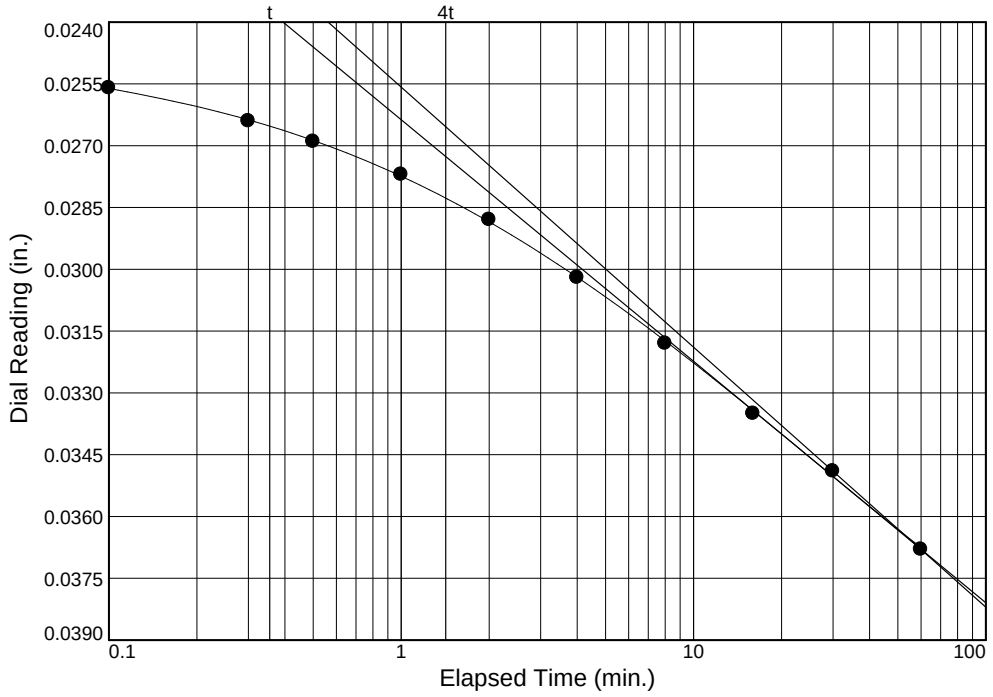
Figure

Tested By: RRM

Dial Reading vs. Time

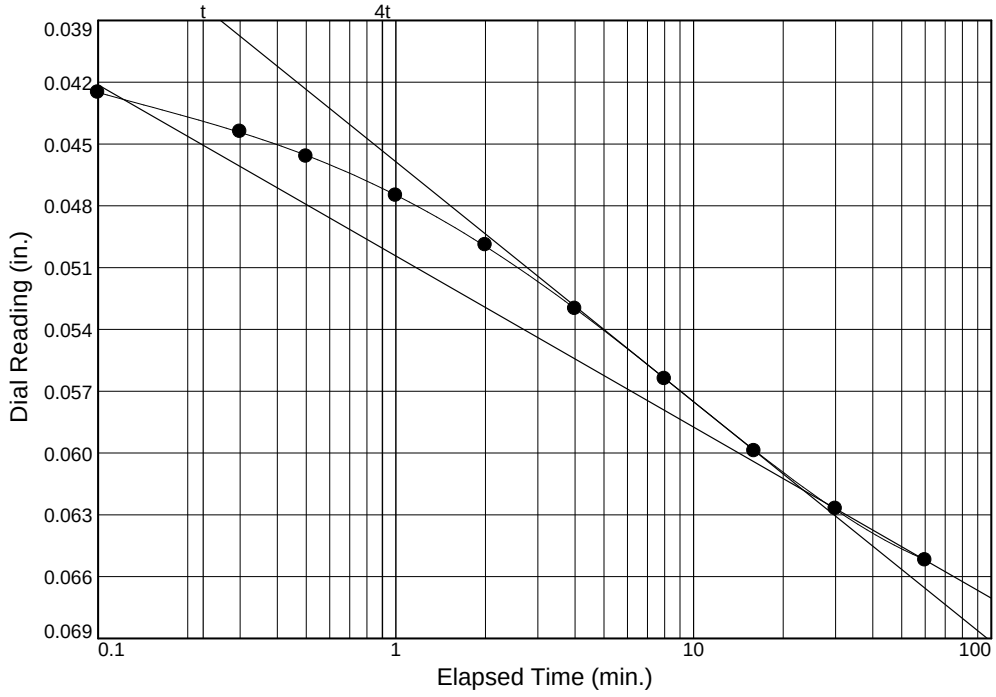
Project No.: 10801CX
Project: Ft DuPont Old Battery Lane Improvements

Source of Sample: TB-2 Depth: 8.0 - 10.0 Sample Number: ST-2



Load No.= 2
Load= 0.25 ksf
D_0 = 0.0248
D_{50} = 0.0308
D_{100} = 0.0367
T_{50} = 5.19 min.

C_v @ T_{50}
0.089 ft.^{2}/day



Load No.= 3
Load= 0.50 ksf
D_0 = 0.0406
D_{50} = 0.0512
D_{100} = 0.0618
T_{50} = 2.70 min.

C_v @ T_{50}
0.164 ft.^{2}/day

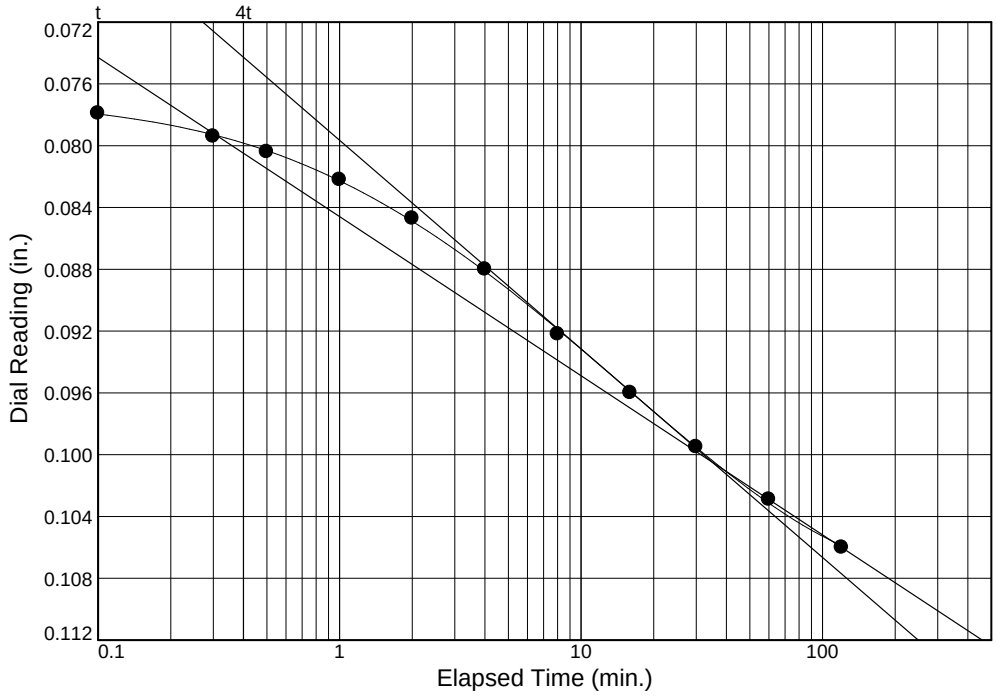
Figure

DUFFIELD ASSOCIATES

Dial Reading vs. Time

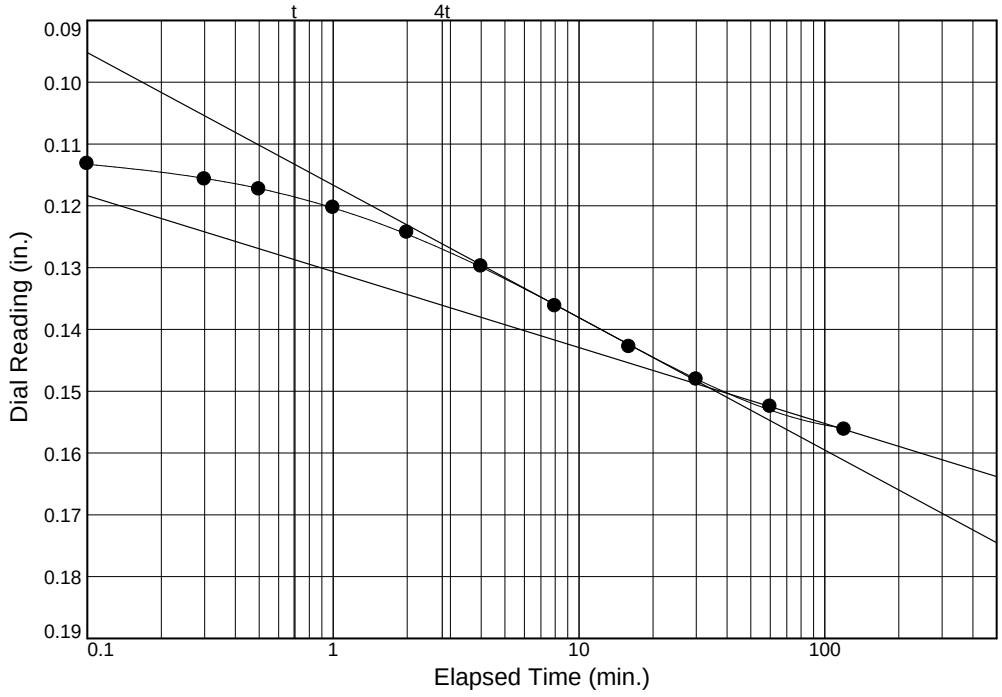
Project No.: 10801CX
Project: Ft DuPont Old Battery Lane Improvements

Source of Sample: TB-2 Depth: 8.0 - 10.0 Sample Number: ST-2



Load No.= 4
Load= 1.00 ksf
D_0 = 0.0761
D_{50} = 0.0883
D_{100} = 0.1005
T_{50} = 4.11 min.

C_v @ T_{50}
0.100 ft.^{2}/day



Load No.= 5
Load= 2.00 ksf
D_0 = 0.1101
D_{50} = 0.1298
D_{100} = 0.1494
T_{50} = 3.93 min.

C_v @ T_{50}
0.095 ft.^{2}/day

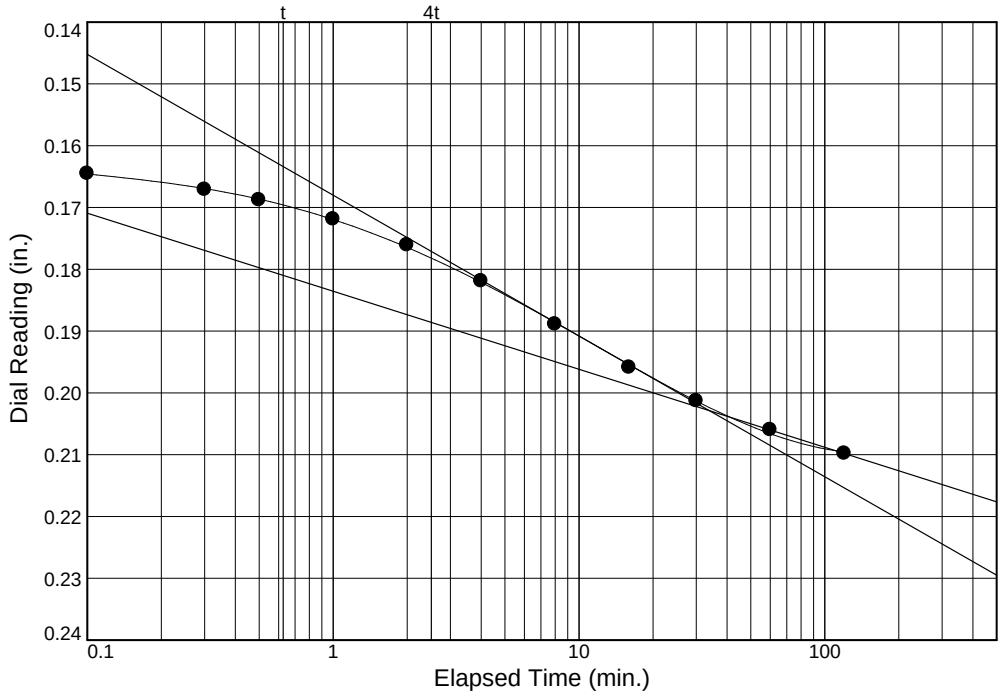
Figure

DUFFIELD ASSOCIATES

Dial Reading vs. Time

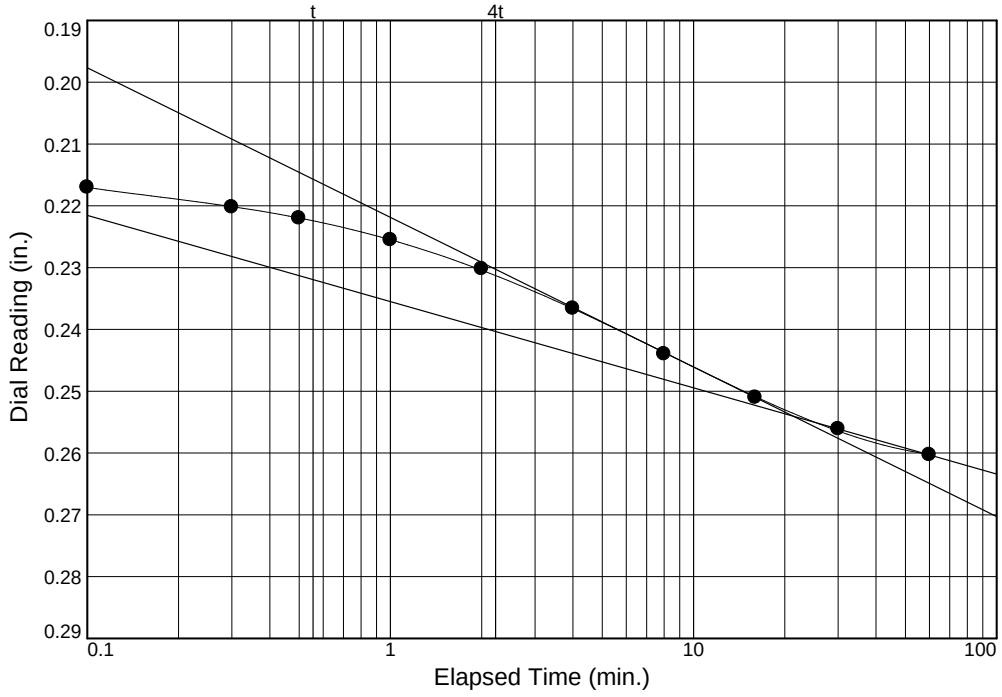
Project No.: 10801CX
Project: Ft DuPont Old Battery Lane Improvements

Source of Sample: TB-2 Depth: 8.0 - 10.0 Sample Number: ST-2



Load No.= 6
Load= 4.00 ksf
D_0 = 0.1610
D_{50} = 0.1819
D_{100} = 0.2029
T_{50} = 3.92 min.

C_v @ T_{50}
0.084 ft.^{2}/day



Load No.= 7
Load= 8.00 ksf
D_0 = 0.2136
D_{50} = 0.2338
D_{100} = 0.2540
T_{50} = 2.96 min.

C_v @ T_{50}
0.097 ft.^{2}/day

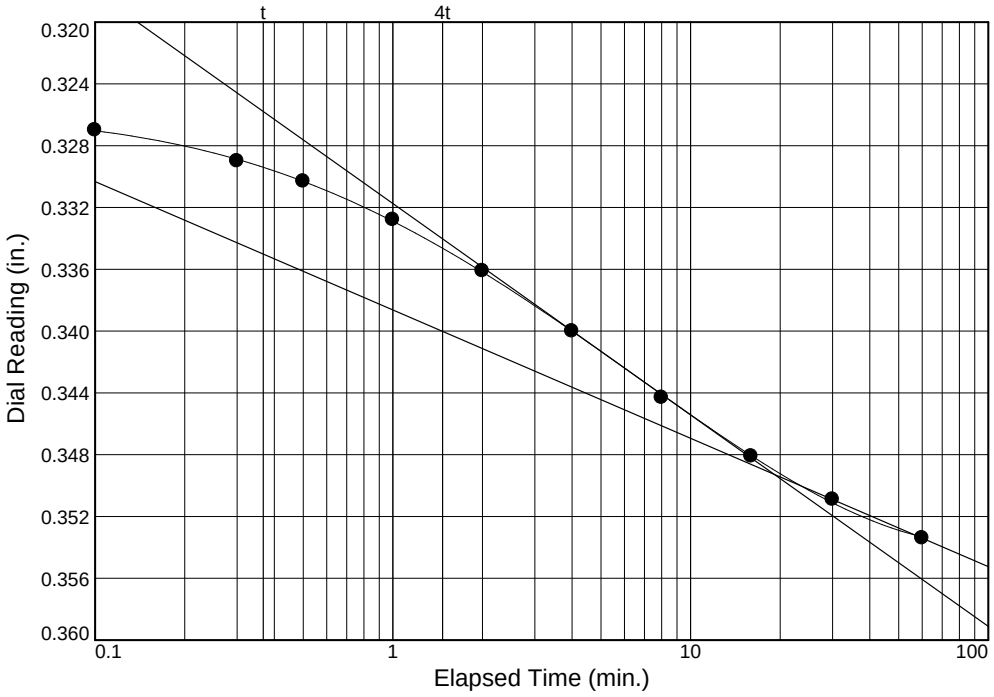
Figure

DUFFIELD ASSOCIATES

Dial Reading vs. Time

Project No.: 10801CX
Project: Ft DuPont Old Battery Lane Improvements

Source of Sample: TB-2 Depth: 8.0 - 10.0 Sample Number: ST-2



Load No.= 15
Load= 32.00 ksf
D_0 = 0.3242
D_{50} = 0.3367
D_{100} = 0.3493
T_{50} = 2.22 min.

C_v @ T_{50}
0.098 ft.^{2}/day

Figure

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Appendix D

Analysis

Subsurface Stratigraphy and Parameters

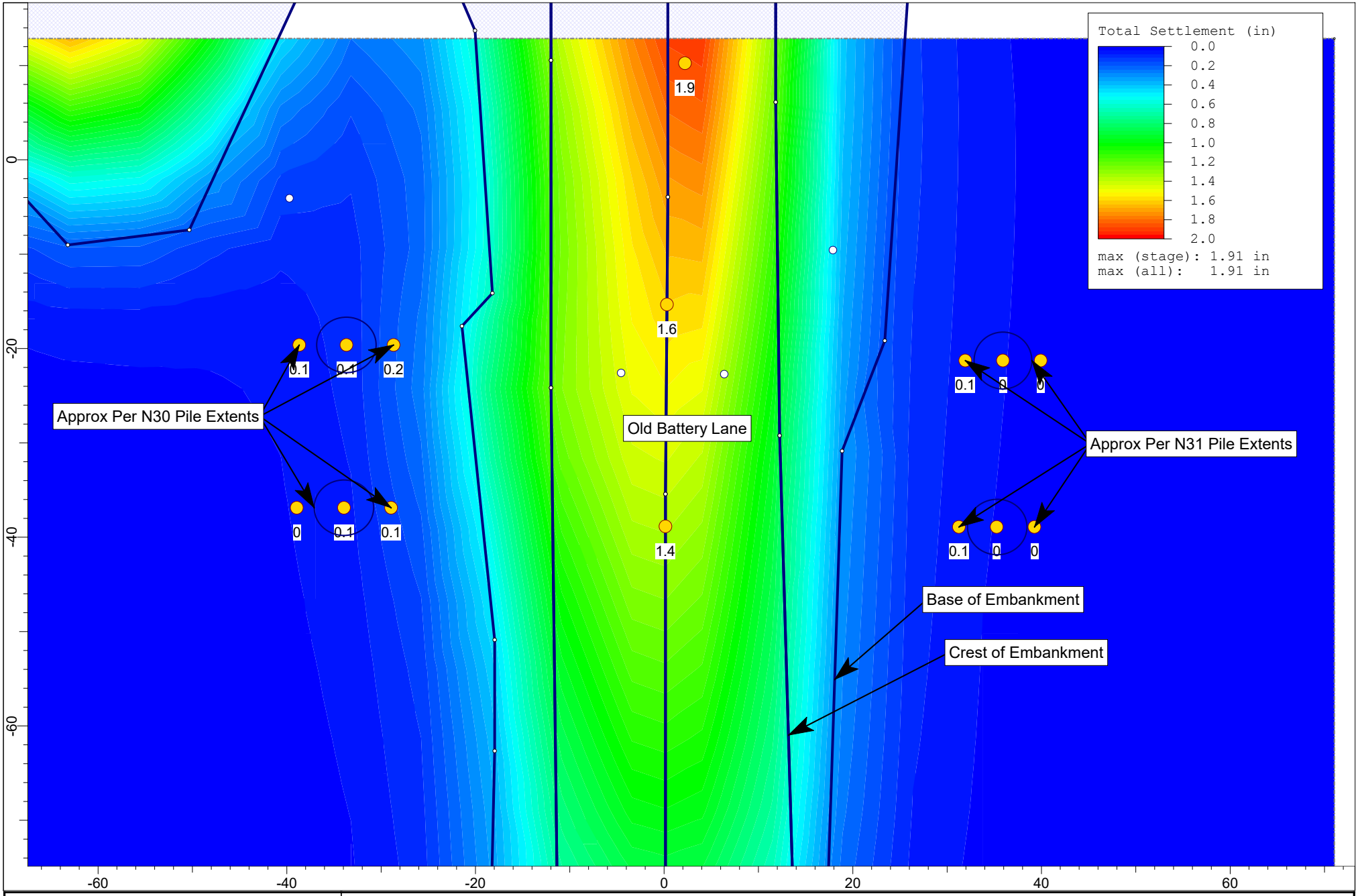
Subsurface Stratigraphy and Parameters

Stratum Description [Stratum Designation]	Depth to Top of Layer (feet)	Total [Submerged] Unit Weight, γ [γ'] (pcf)	Strength parameters		Settlement Parameters					Lateral Pile Analysis Parameters		
			Effective Friction, Angle, Φ' (degrees)	Effective Cohesion [Undrained Shear Strength], c [su] (psf)	Elastic Modulus, E (ksf)	Over consolidation Ratio	Strain Based Compression Ratio, CR	Strain Based Compression Ratio, RR	Coefficient of Consolidation, c_v (ft^2/day)	p-y Model	Lateral Subgrade Modulus, k_h (pci)	Soil Strain at 50 percent Strength, ε_{50}
Topsoil [A]	Not Utilized											
Granular Undocumented Fill [B]	0	115	30	0	300	--	--	--	--	Sand (Reese)	25	--
Shallow Sand [C]	2	115	30	0	300	--	--	--	--	Sand (Reese)	25	--
	3	115 [52.6]								Sand (Reese)	20	
Silt [D]	8	105 [42.6]	0	[500]	--	1.0	0.166	0.013	0.1	Soft Clay (Matlock)	--	0.02
Deep Sand 1 [E1]	13	115 [52.6]	36	0	600	--	--	--	--	Sand (Reese)	60	--
Deep Sand 2 [E2]	36.5	115 [52.6]	36	0	1200	--	--	--	--	Sand (Reese)	125	--
Road Fill	-- [1]	135	36	0	-- [1]	-- [1]	-- [1]	-- [1]	-- [1]	-- [2]	-- [2]	-- [2]

Notes:

1) Not present in settlement analysis
2) Not present in lateral pile analysis

Settlement Analysis



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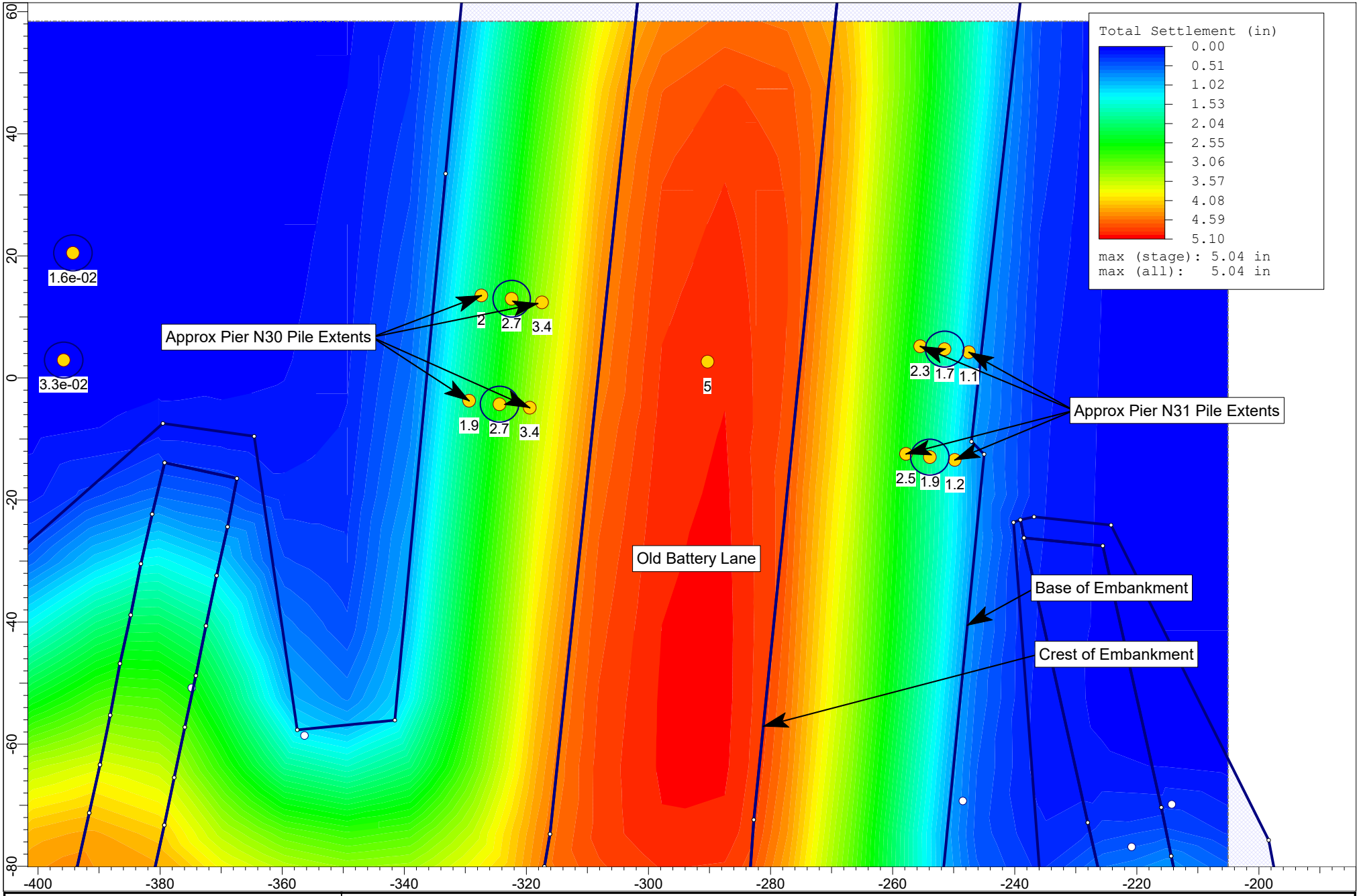
Soil, Water & the Environment

SETTLE3 5.008

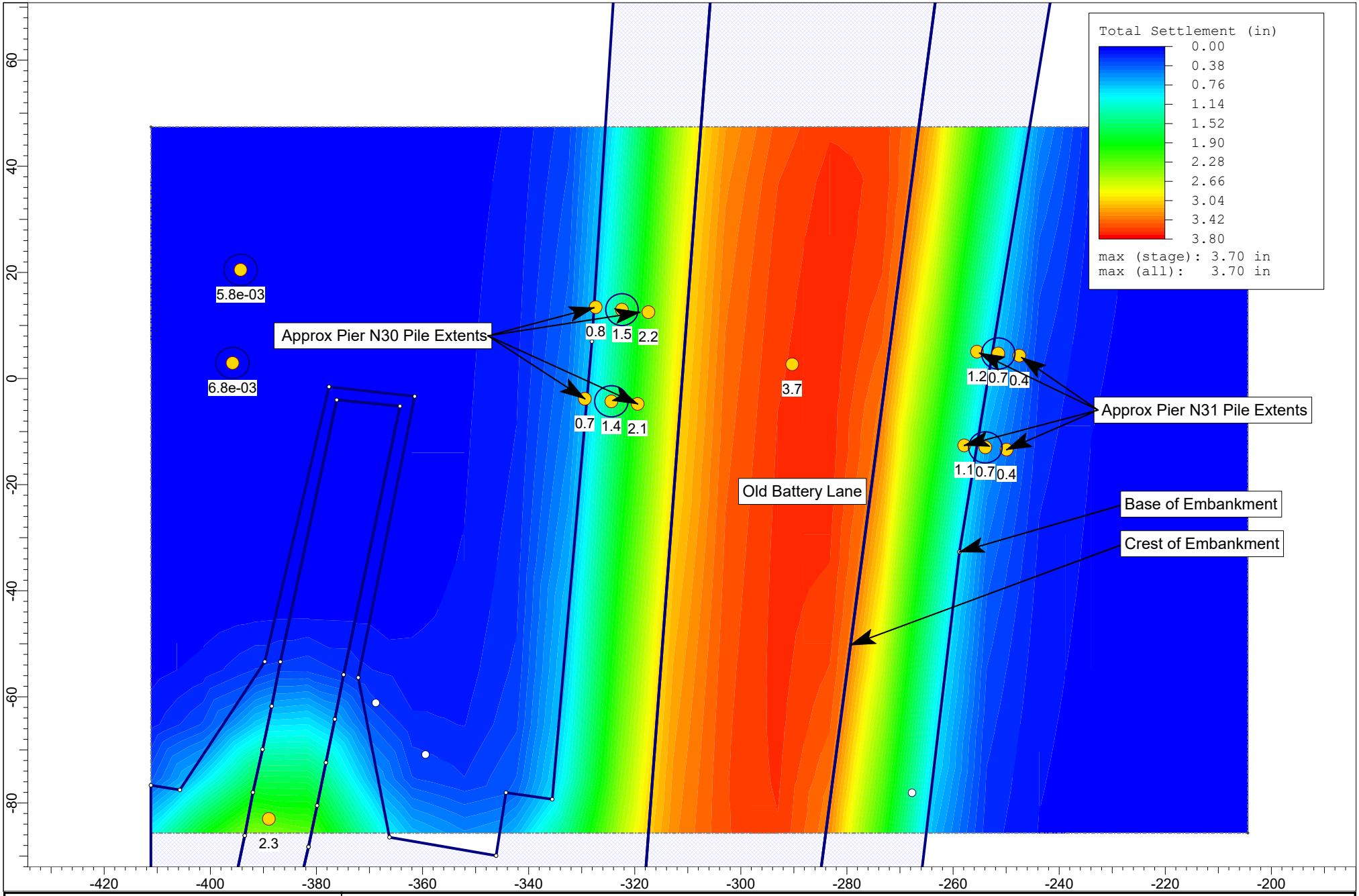
Project	Fort Dupont		
Analysis Description	Old Battery Road Improvements - Base Design		
Analysis By	BTL	*Company*	Duffield Associates, LLC
Print Date	10/26/2022	*Project No.*	10801.CX



DUFFIELD ASSOCIATES
Soil, Water & the Environment

Project	Fort Dupont		
Analysis Description	Old Battery Road Improvements - Alt 1		
Analysis By	BTL	*Company*	Duffield Associates, LLC
Print Date	10/26/2022	*Project No.*	10801.CX

SETTLE3 5.008



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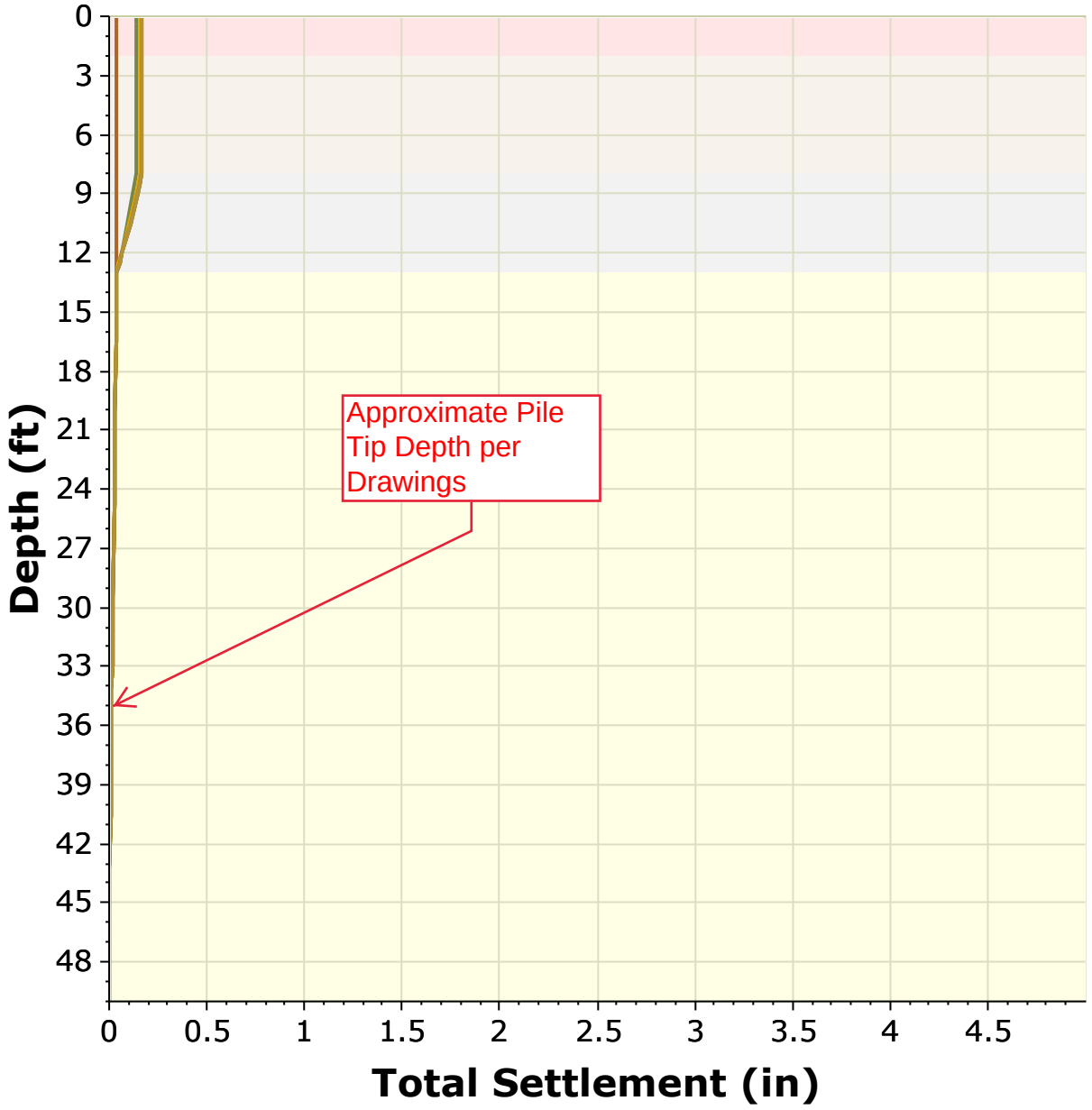
Project	Fort Dupont		
Analysis Description	Old Battery Lane Improvements - Alt 1A		
Analysis By	BTL	*Company*	Duffield Associates, LLC
Print Date	10/26/2022	*Project No.*	10801.CX

SETTLE3 5.008

Total Settlement at Pier N30 vs. Depth



- Query Point 12 (Full Embankment = 1 d)
- Query Point 12 (1 month = 30 d)
- Query Point 12 (2 months = 60 d)
- Query Point 12 (3 months = 90 d)
- Query Point 12 (4 months = 120 d)
- Query Point 12 (5 months = 150 d)
- Query Point 12 (6 months = 180 d)

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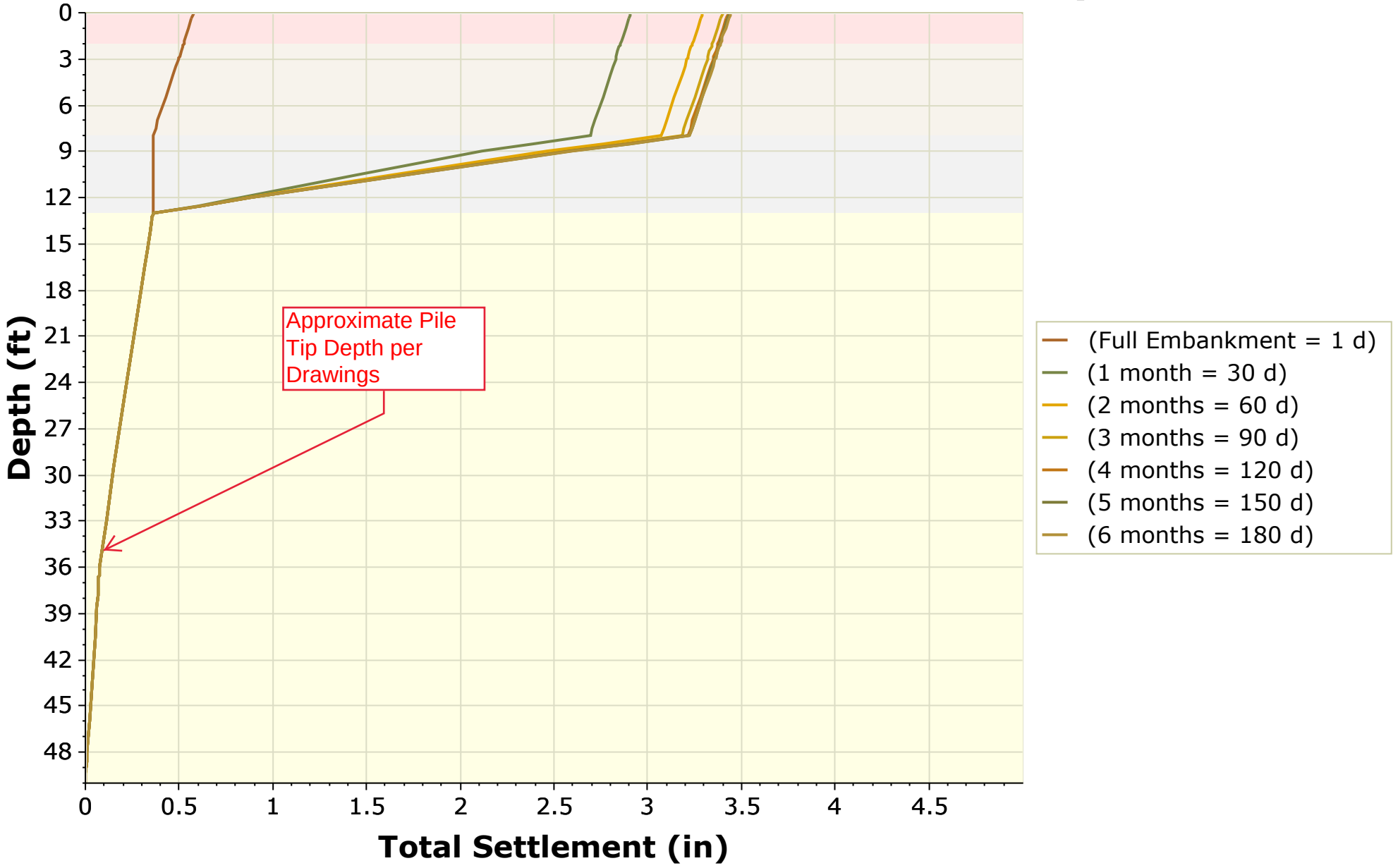
Project	Fort Dupont		
Analysis Description	Old Battery Road Improvements - Base Design		
Analysis By	BTL	*Company*	Duffield Associates, LLC
Print Date	10/26/2022	*Project No.*	10801.CX

SETTLE3 5.008

Total Settlement at Pier N30 vs. Depth



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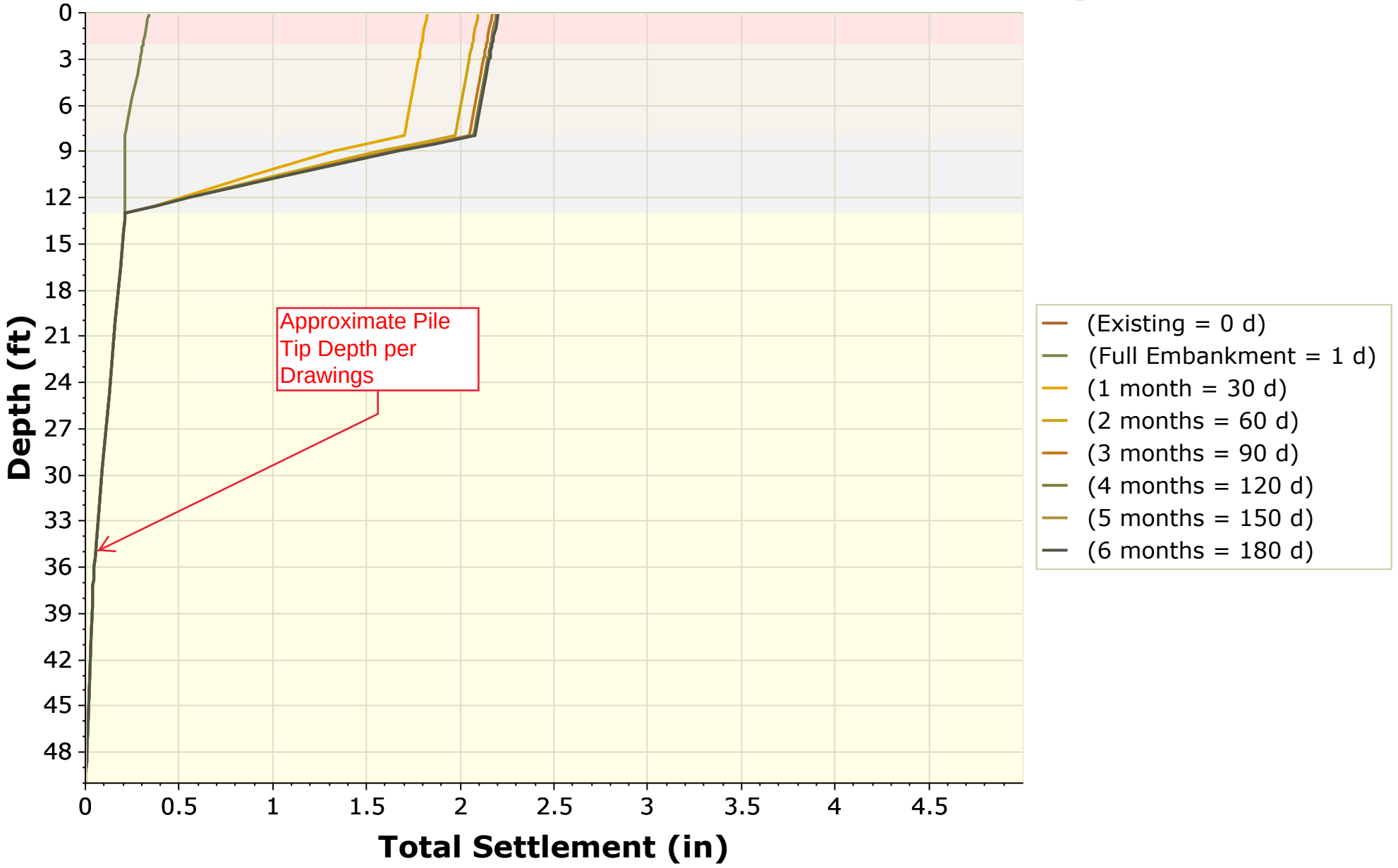
Soil, Water & the Environment

Project	Fort Dupont		
Analysis Description	Old Battery Road Improvements - Alt 1		
Analysis By	BTL	*Company*	Duffield Associates, LLC
Print Date	10/26/2022	*Project No.*	10801.CX

SETTLE3 5.008

Total Settlement at Pier N30 vs. Depth



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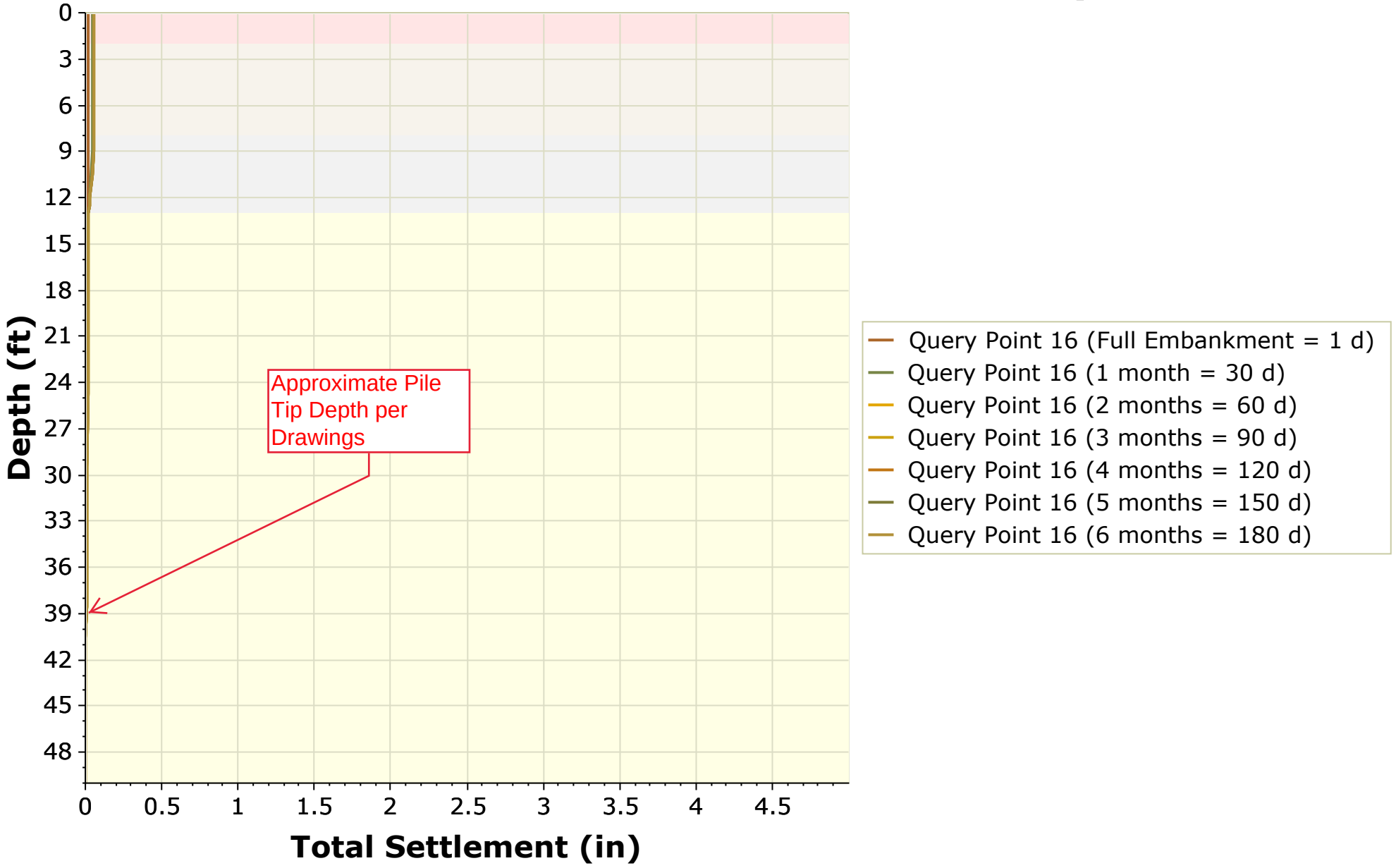
Project	Fort Dupont		
Analysis Description	Old Battery Lane Improvements - Alt 1A		
Analysis By	BTL	*Company*	Duffield Associates, LLC
Print Date	10/26/2022	*Project No.*	10801.CX

SETTLE3 5.008

Total Settlement at Pier N31 vs. Depth



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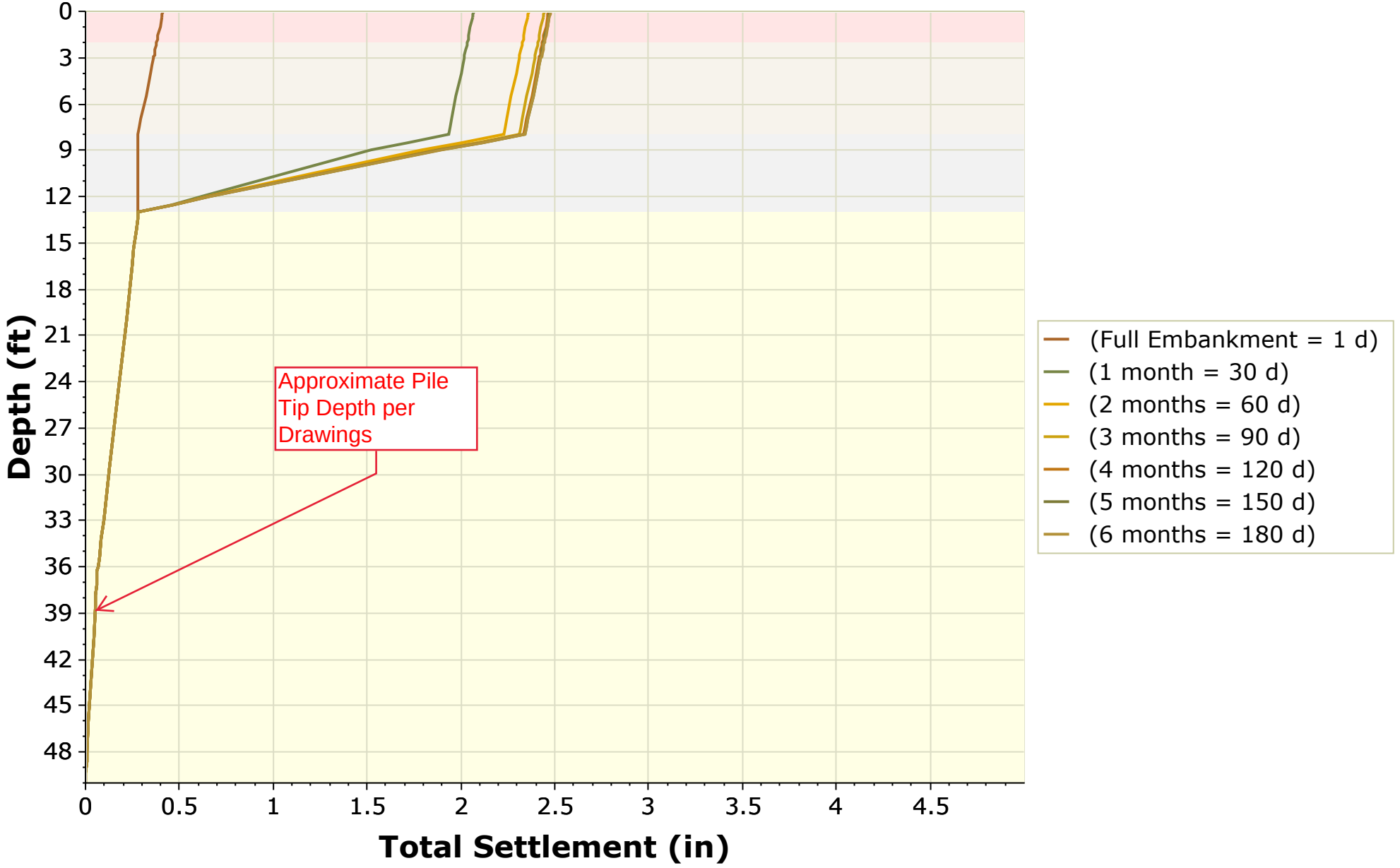
Project	Fort Dupont		
Analysis Description	Old Battery Road Improvements - Base Design		
Analysis By	BTL	*Company*	Duffield Associates, LLC
Print Date	10/26/2022	*Project No.*	10801.CX

SETTLE3 5.008

Total Settlement at Pier N31 vs. Depth



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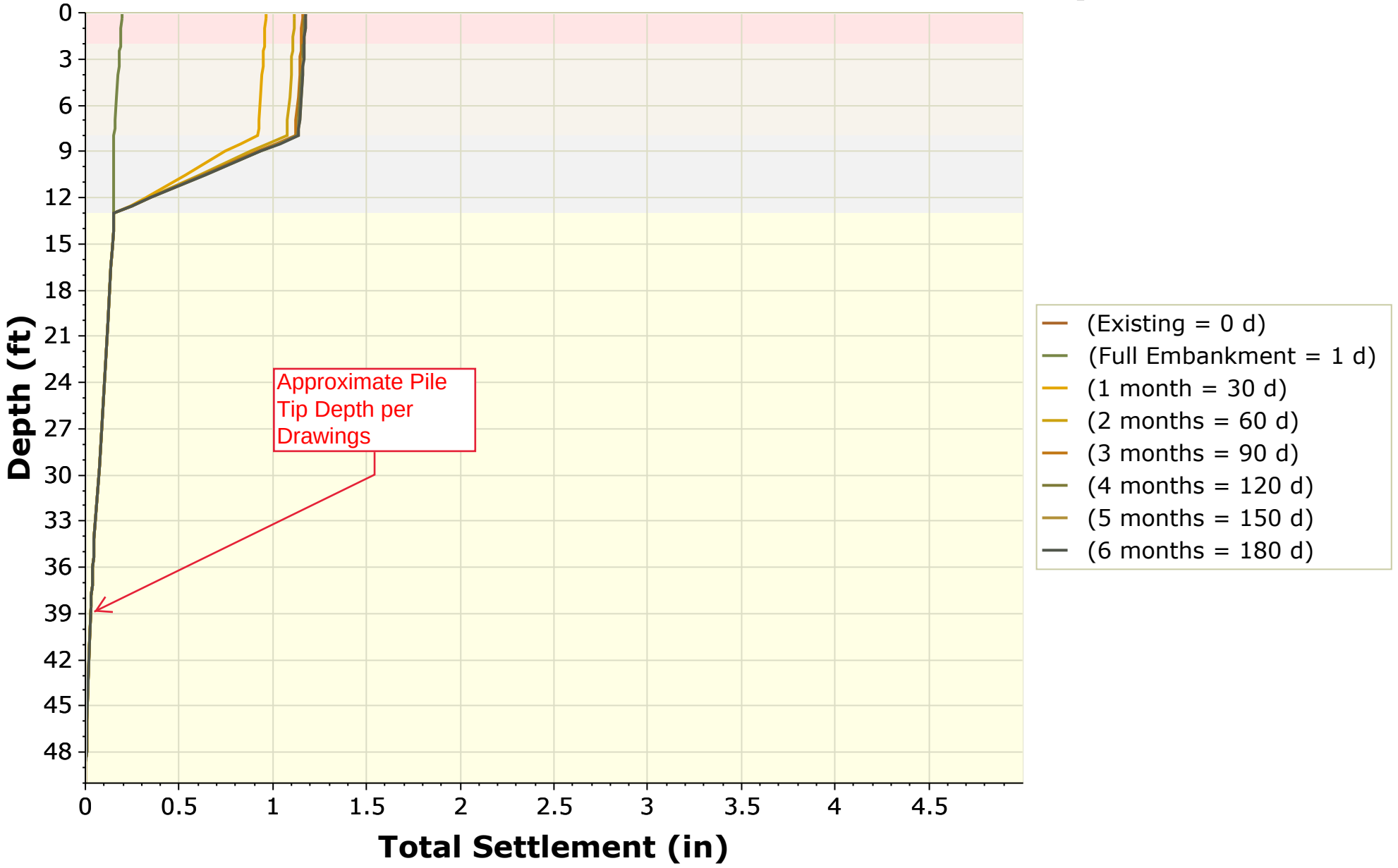
Soil, Water & the Environment

Project	Fort Dupont		
Analysis Description	Old Battery Road Improvements - Alt 1		
Analysis By	BTL	*Company*	Duffield Associates, LLC
Print Date	10/26/2022	*Project No.*	10801.CX

SETTLE3 5.008

Total Settlement at Pier N31 vs. Depth



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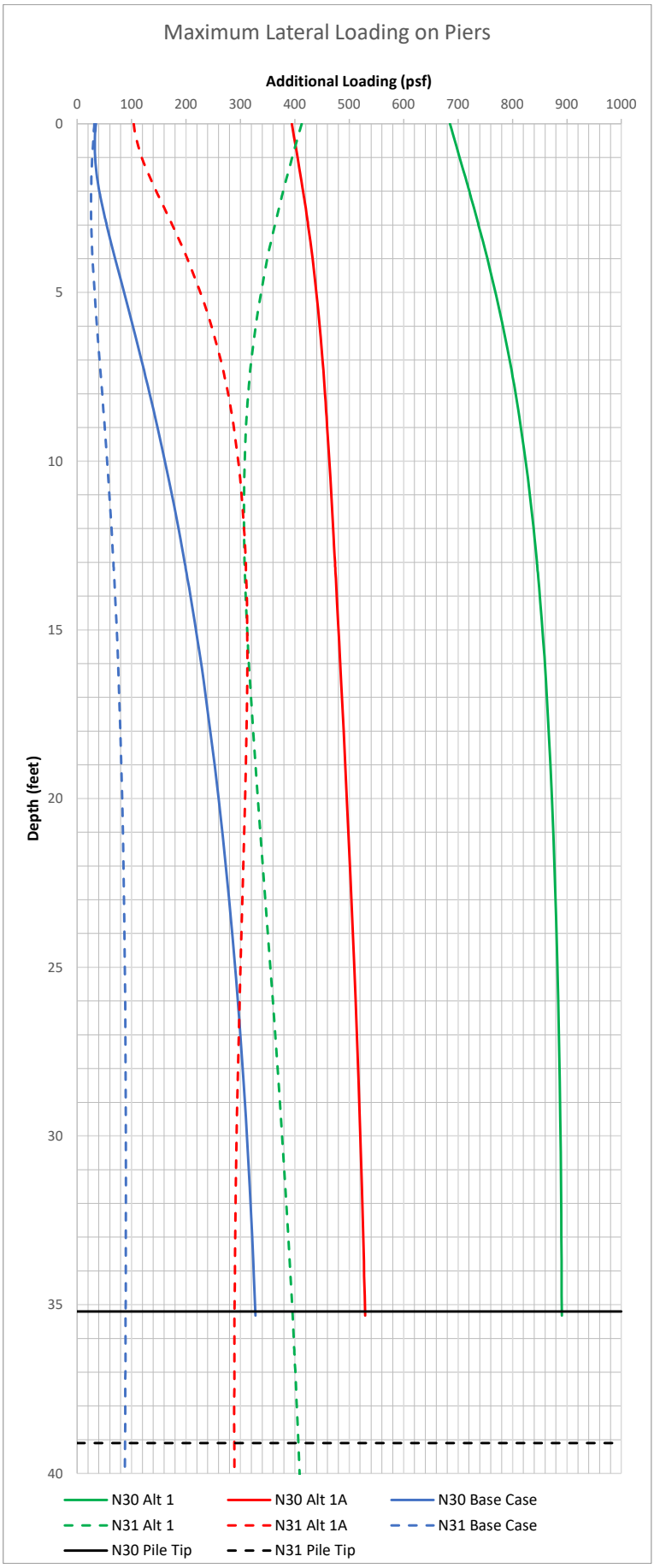
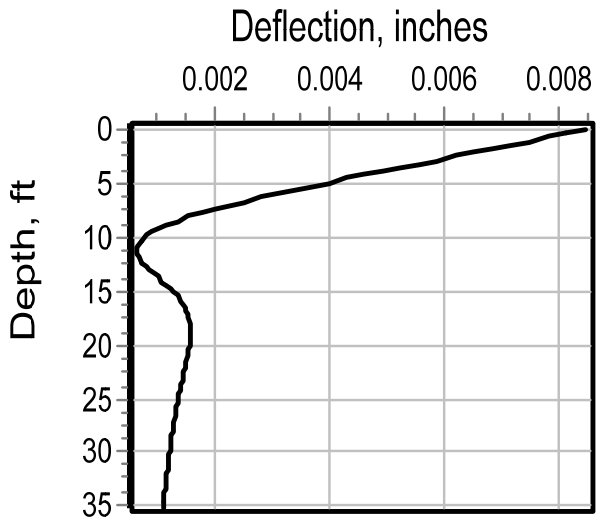
Project	Fort Dupont		
Analysis Description	Old Battery Lane Improvements - Alt 1A		
Analysis By	BTL	*Company*	Duffield Associates, LLC
Print Date	10/26/2022	*Project No.*	10801.CX

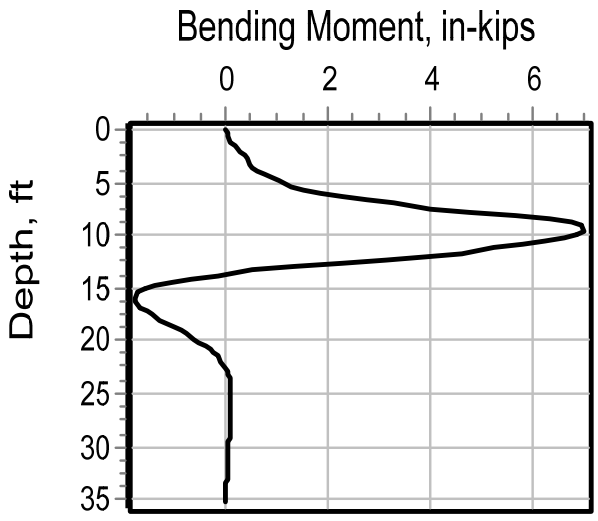
SETTLE3 5.008

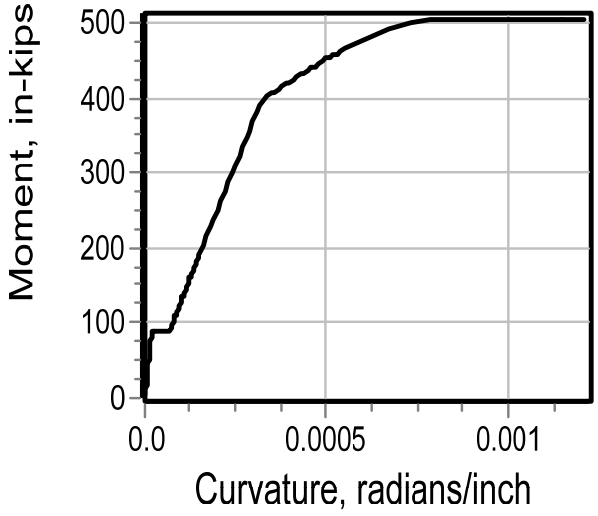
Pile Lateral Loading

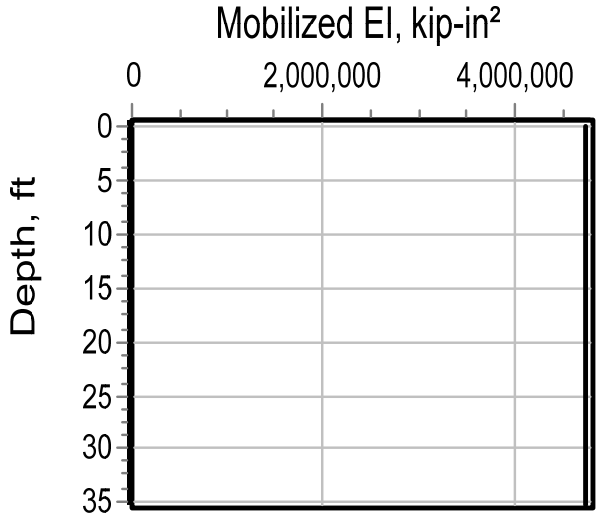

Maximum Lateral Loading on Piers
Additional Loading (psf)
0
100
200
300
400
500
600
700
800
900
1000
Depth (feet)
0
5
10
15
20
25
30
35
40
N30 Alt 1
N30 Alt 1A
N30 Base Case
N31 Alt 1
N31 Alt 1A
N31 Base Case
N30 Pile Tip
N31 Pile Tip

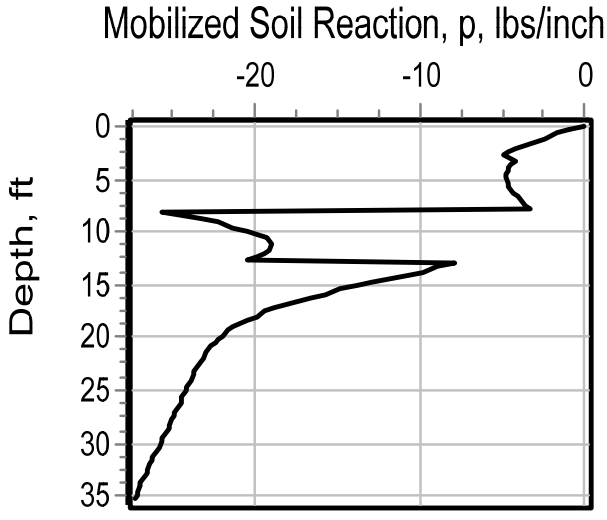
10801.CX
Pier N30 Results
Base Design
Plum Pile



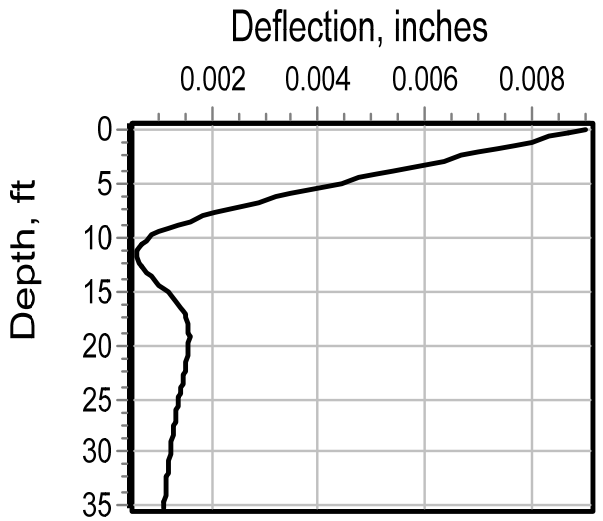


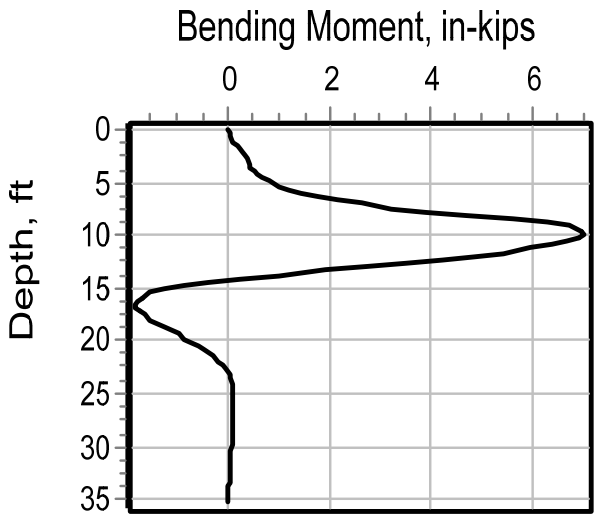


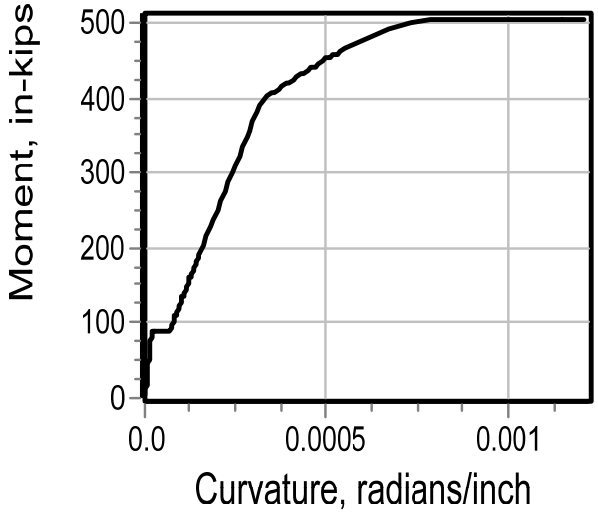


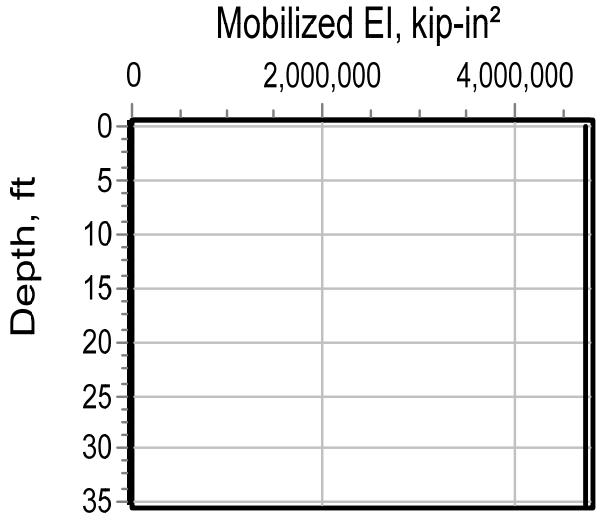


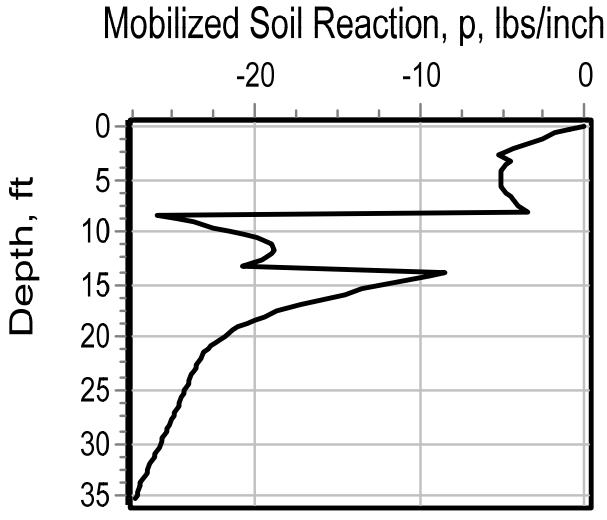
10801.CX
Pier N30 Results
Base Design
Battered Pile



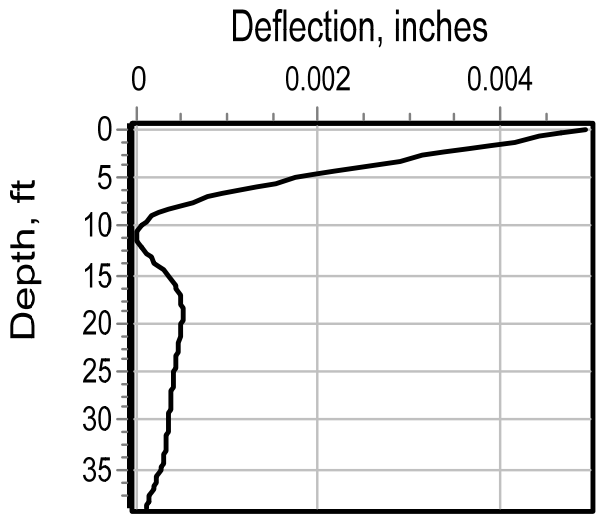


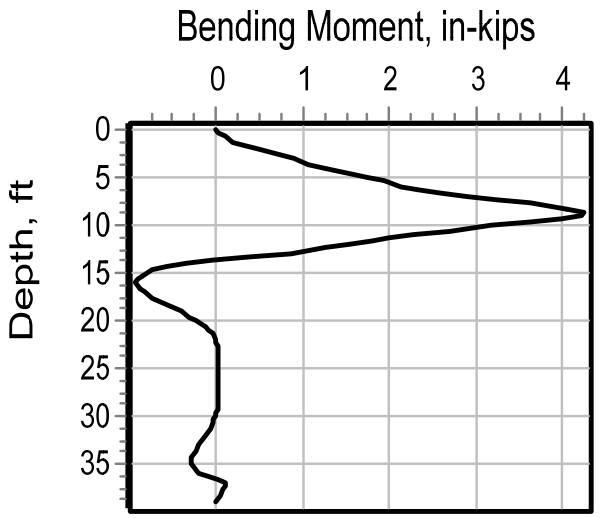


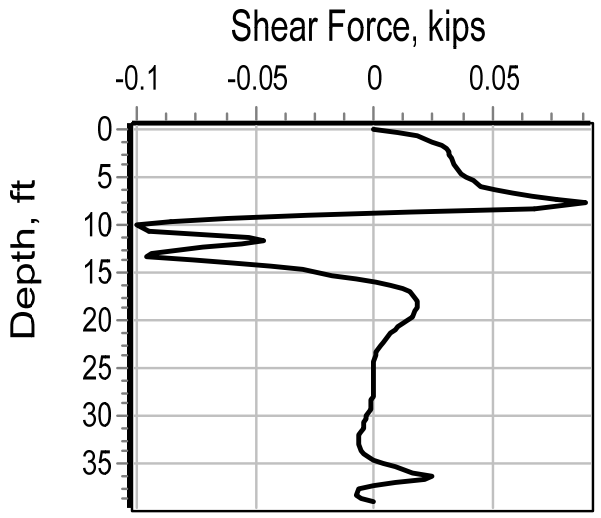


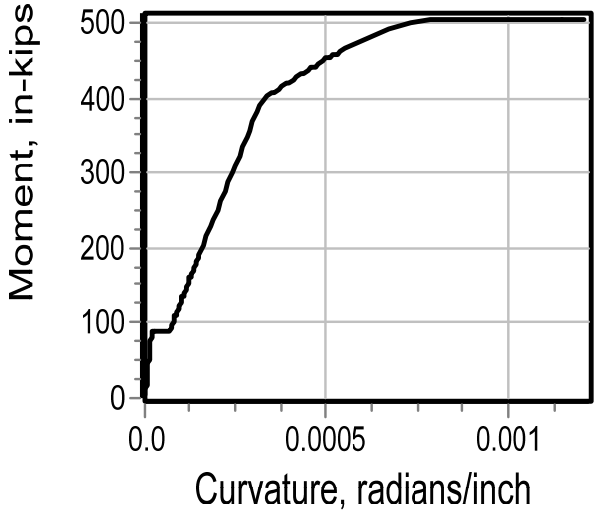


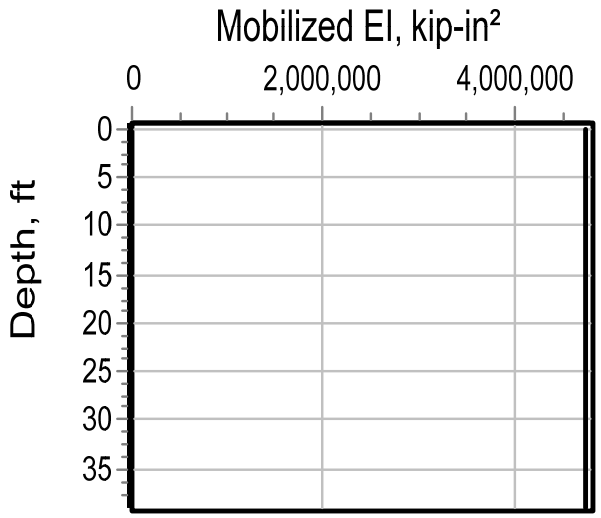
10801.CX
Pier N31 Results
Plumb Pile

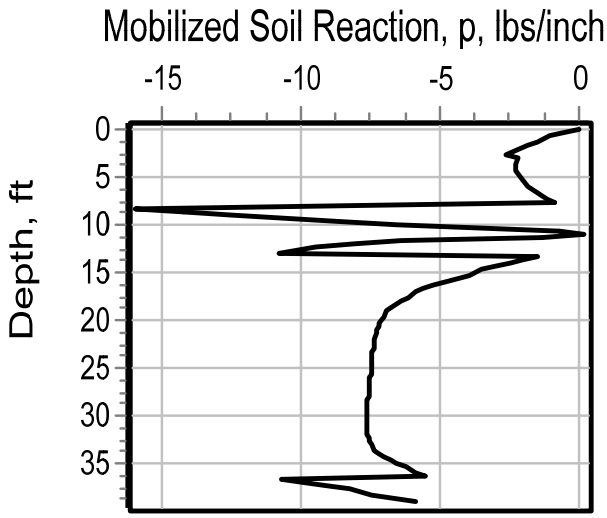




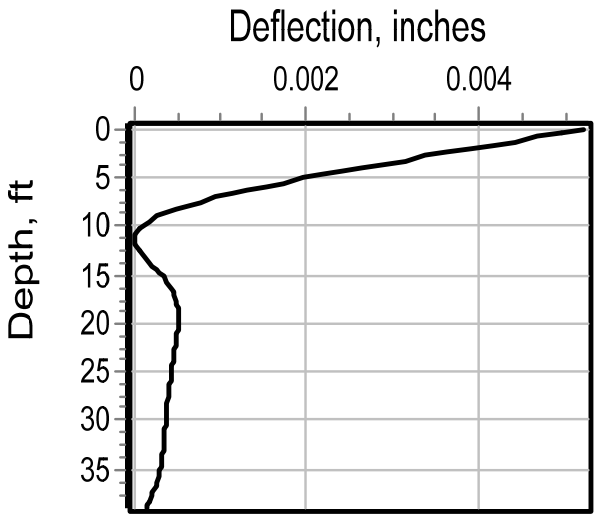


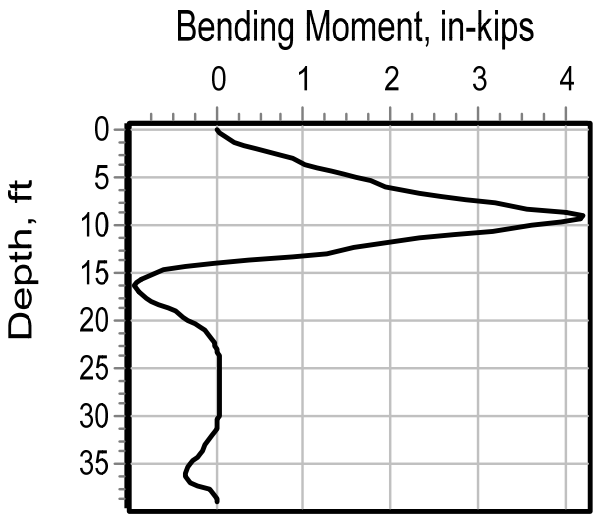


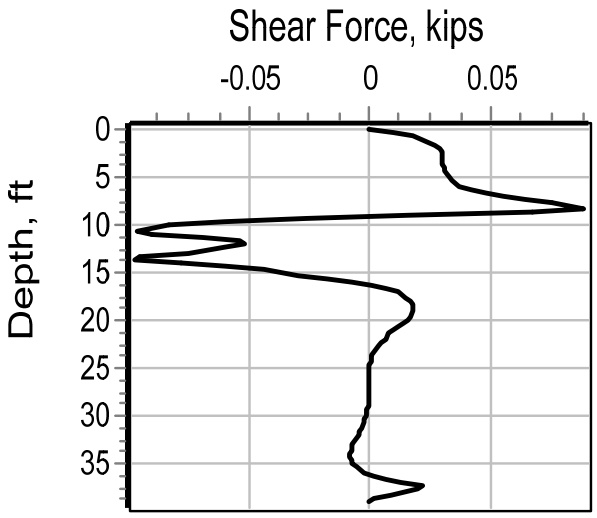


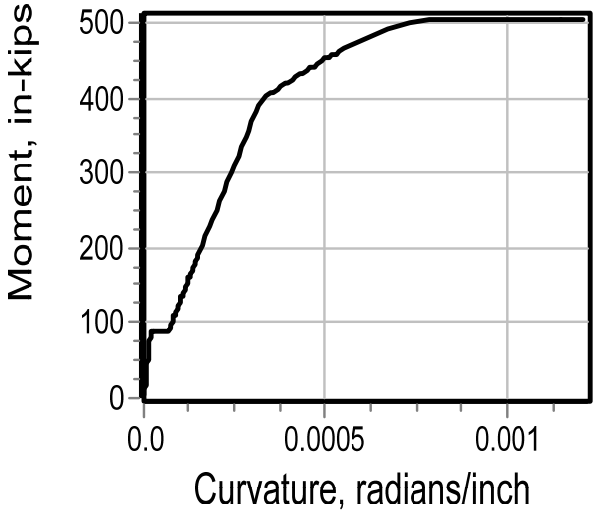


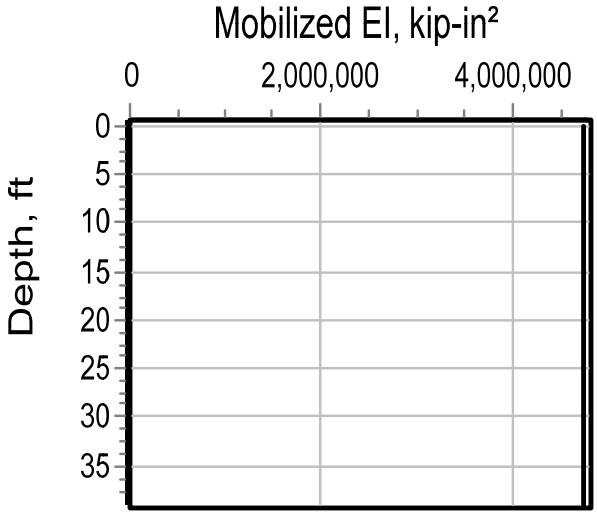
10801.CX
Pier N31 Results
Battered Pile

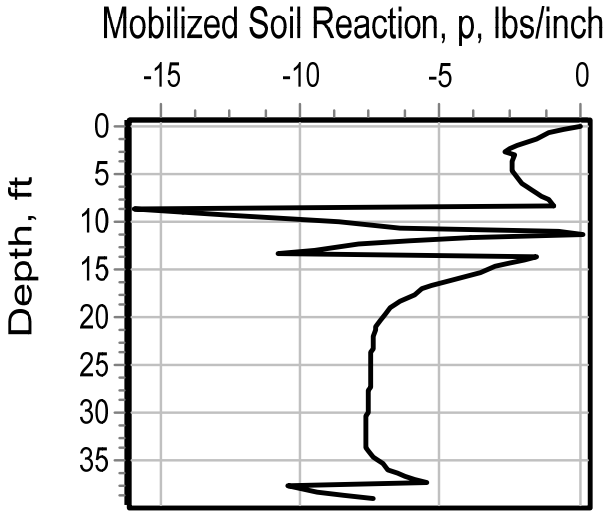




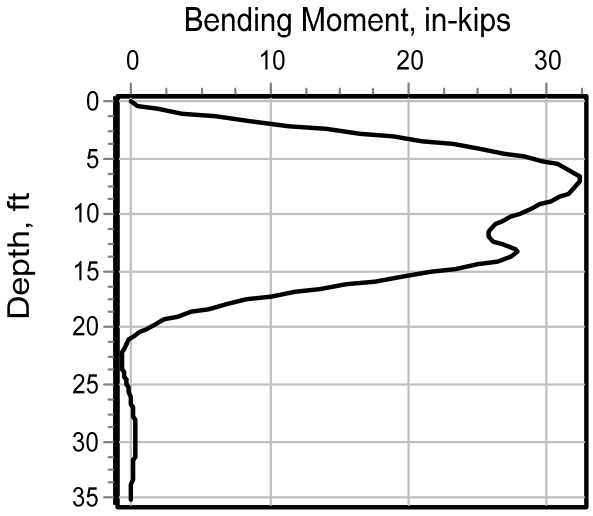


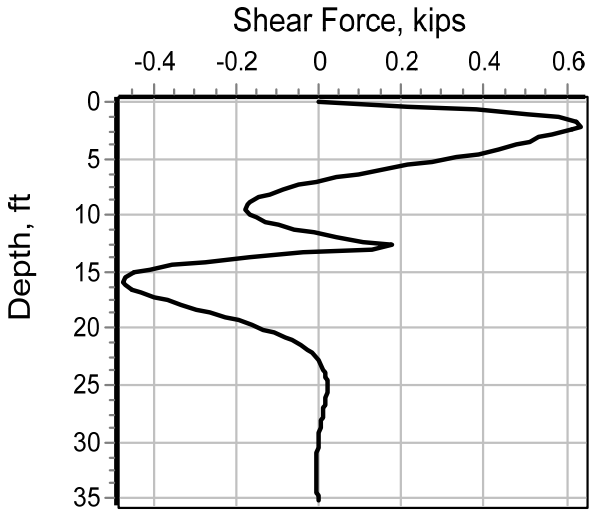


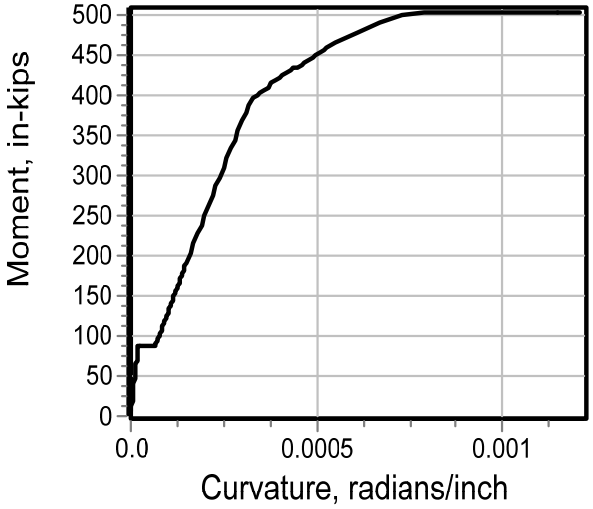


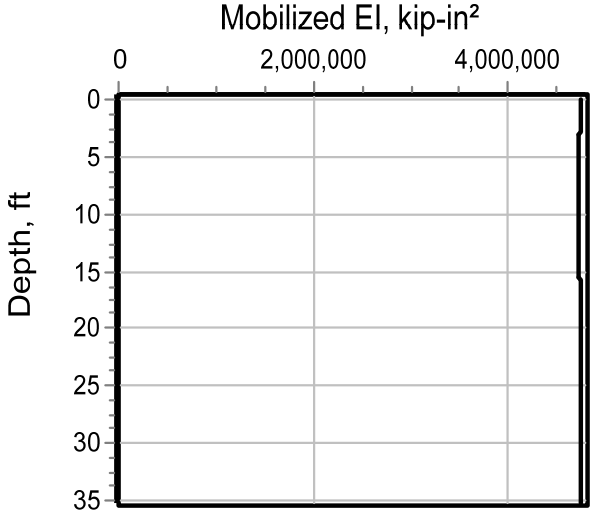


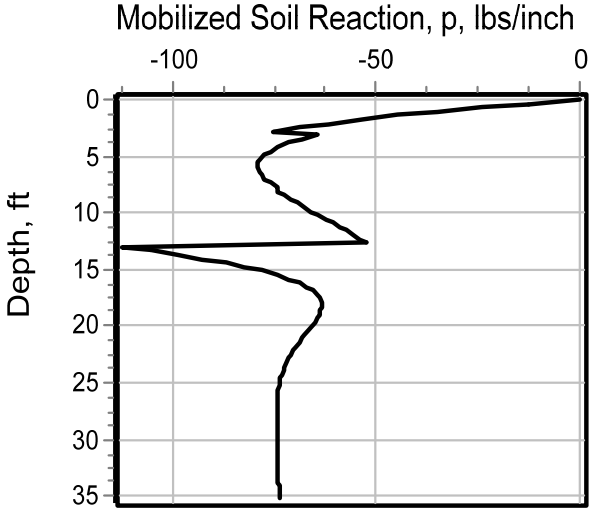
10801.CX
Pier N30 Results
Alternative 1
Plumb Pile



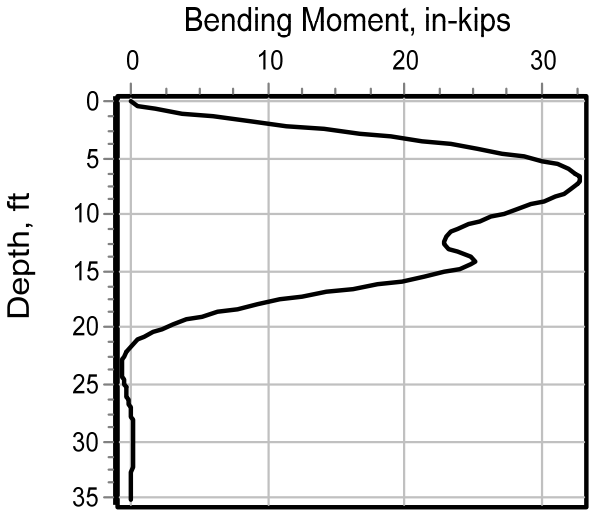


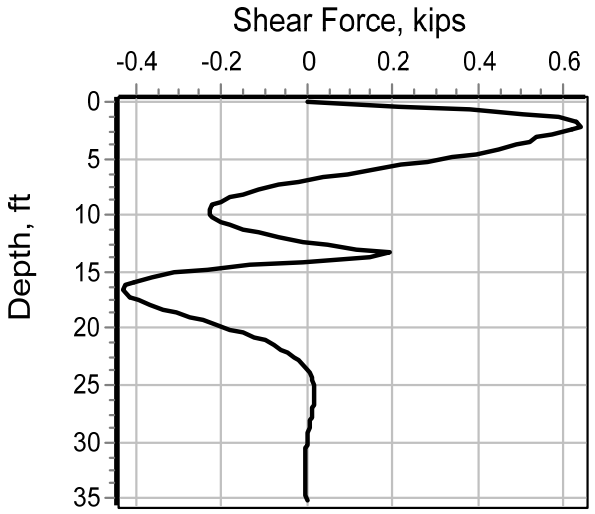


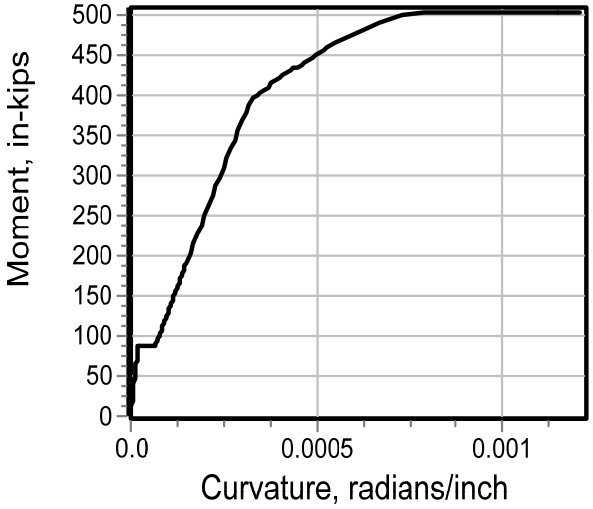


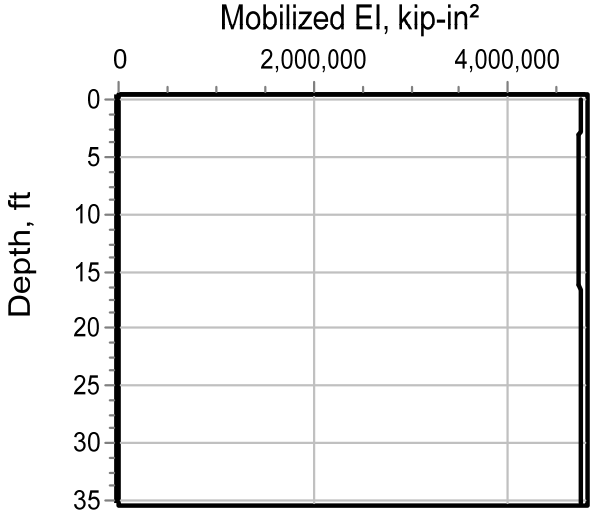


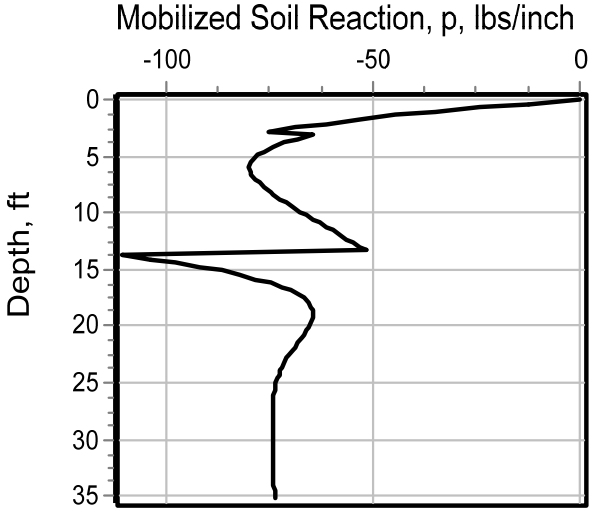
10801.CX
Pier N30 Results
Alternative 1
Batter Pile



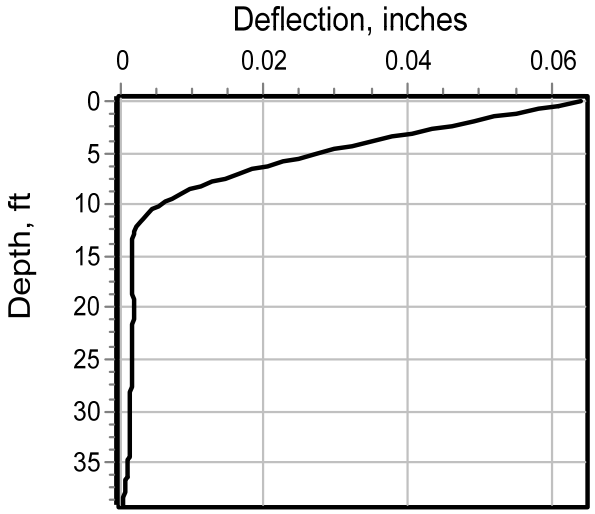


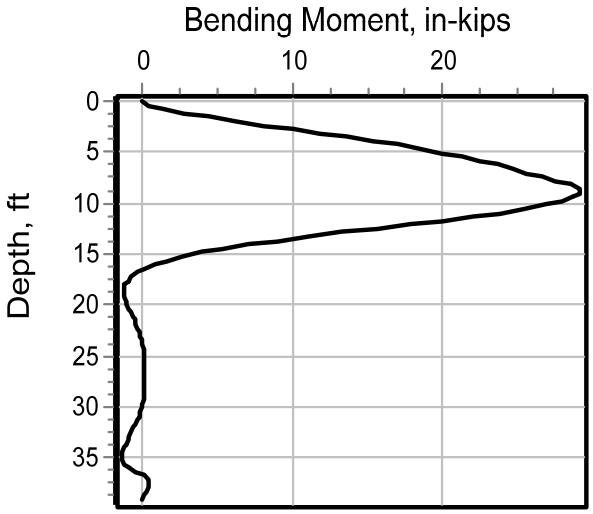


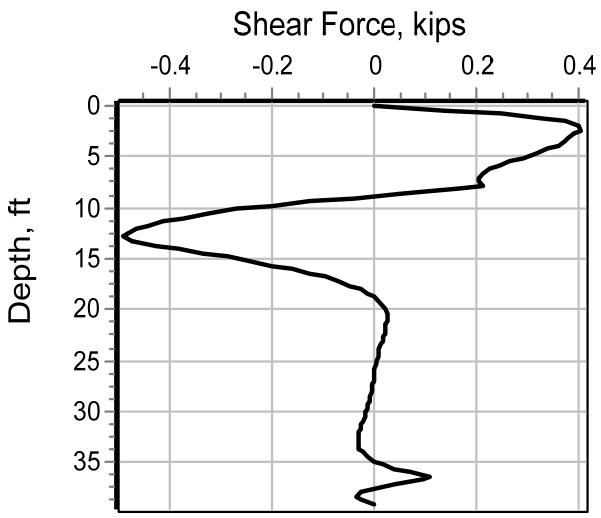


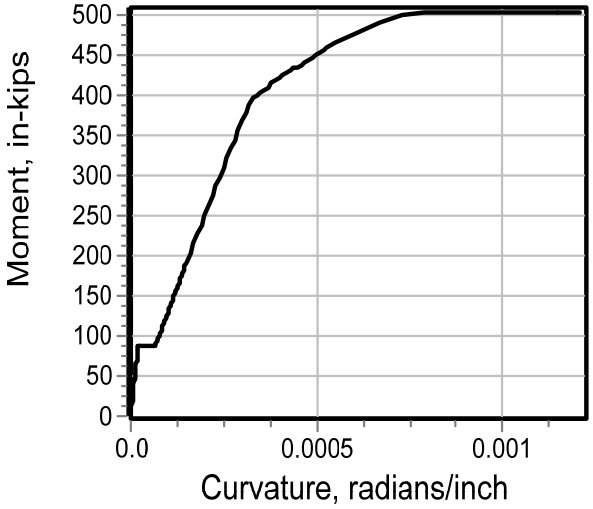


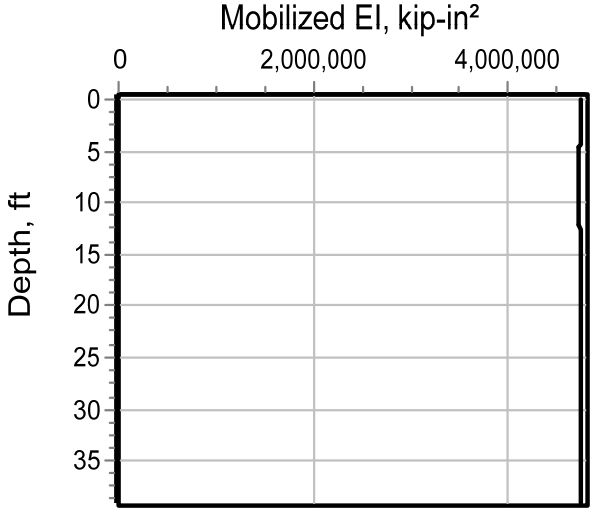
10801.CX
Pier N31 Results
Alternative 1
Plumb Pile

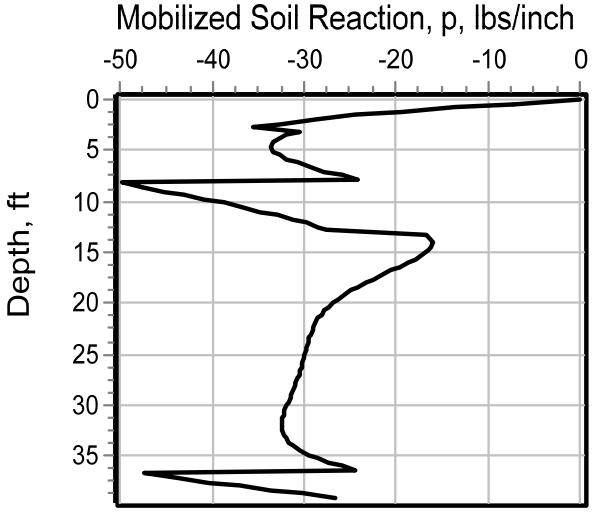




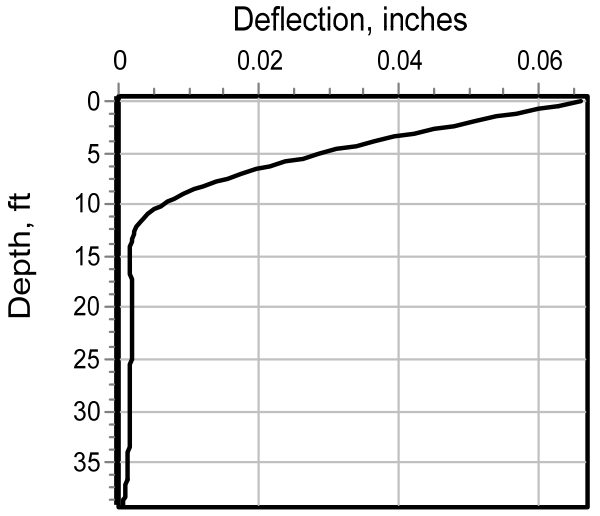


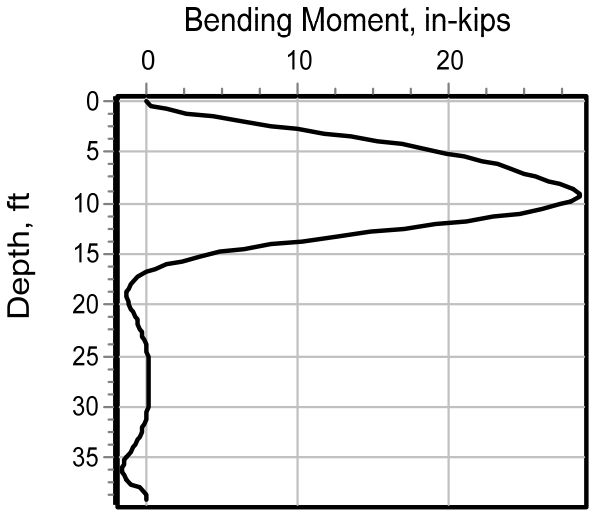


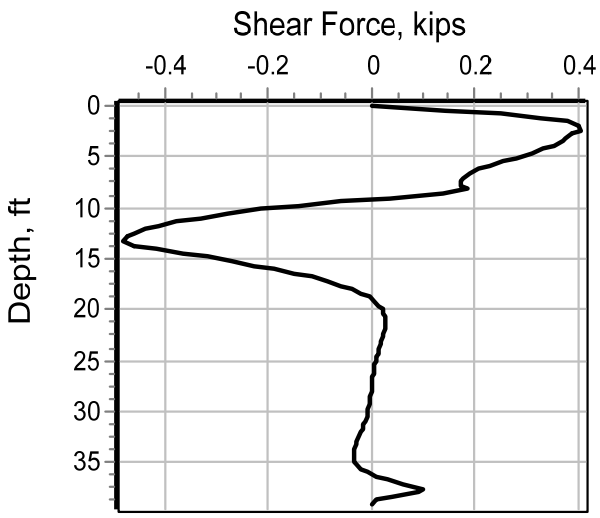


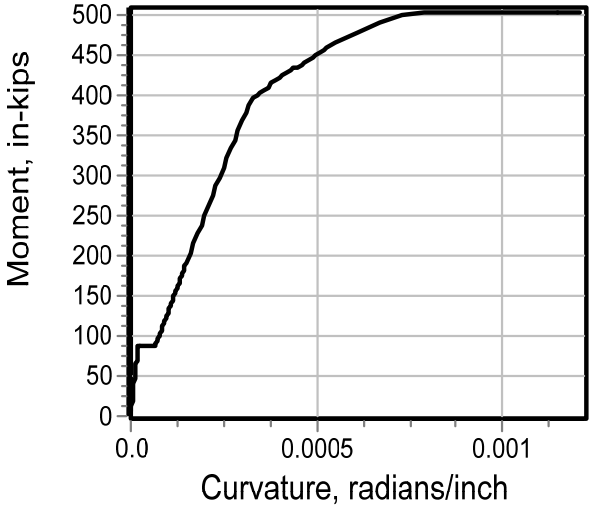


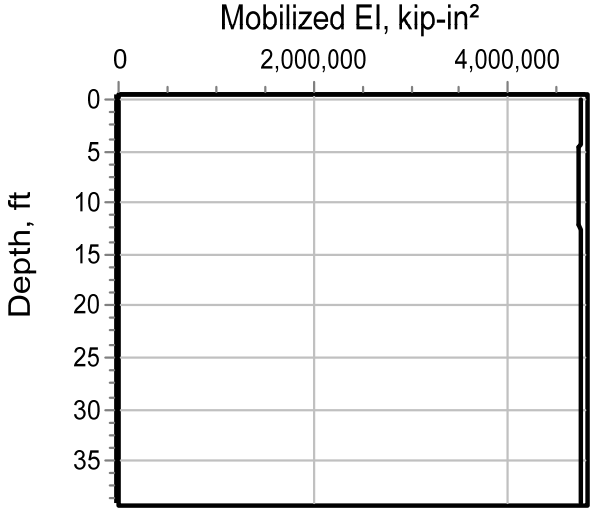
10801.CX
Pier N31 Results
Alternative 1
Batter Pile

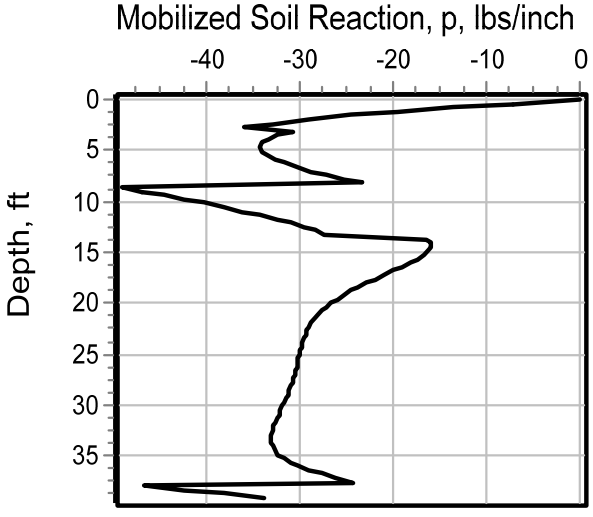




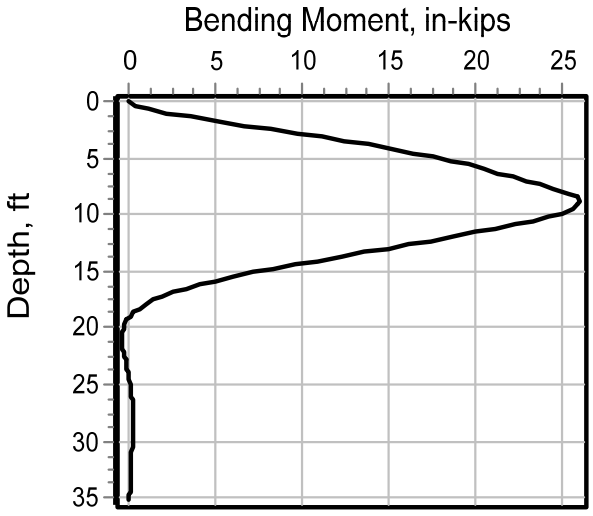


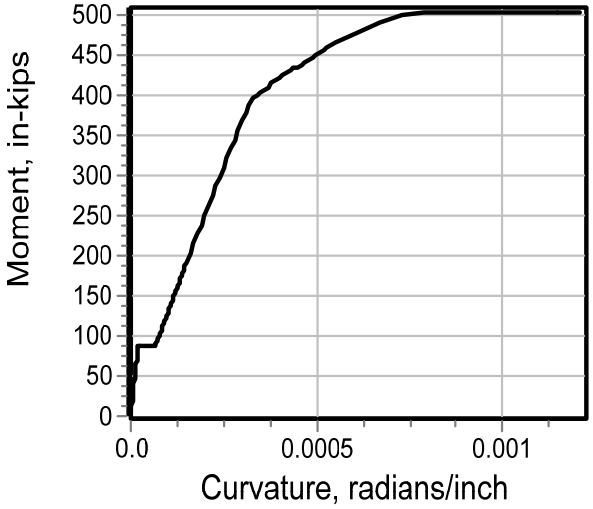


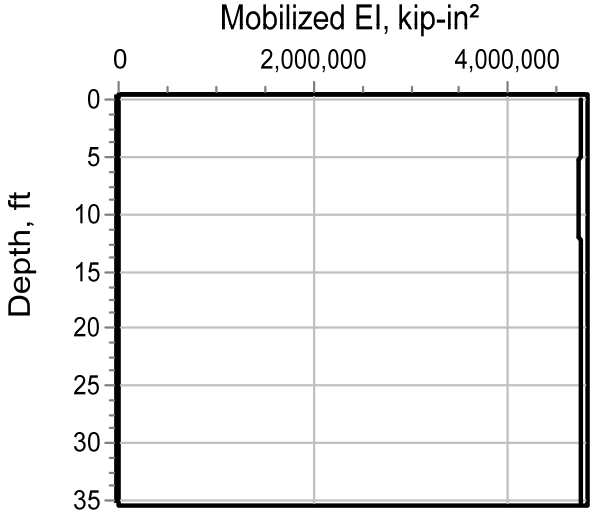


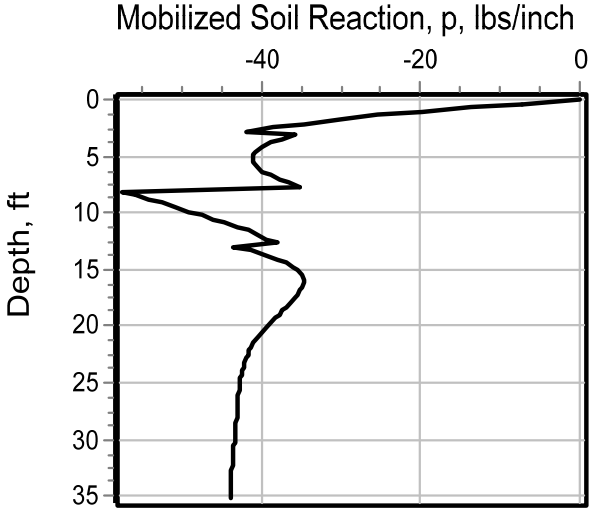


10801.CX
Pier N30 Results
Alternative 1A
Plumb Pile

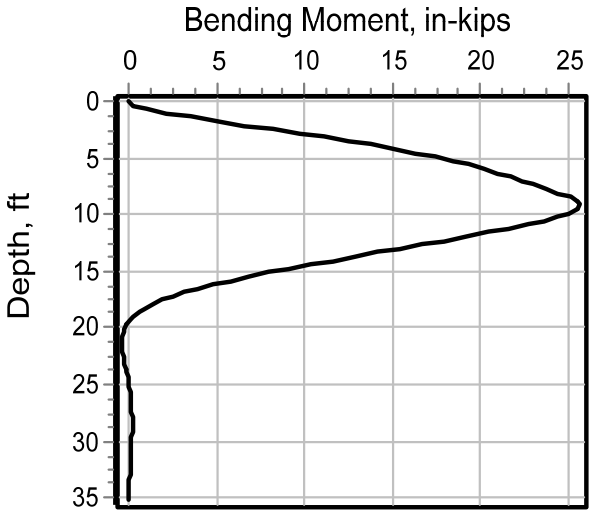


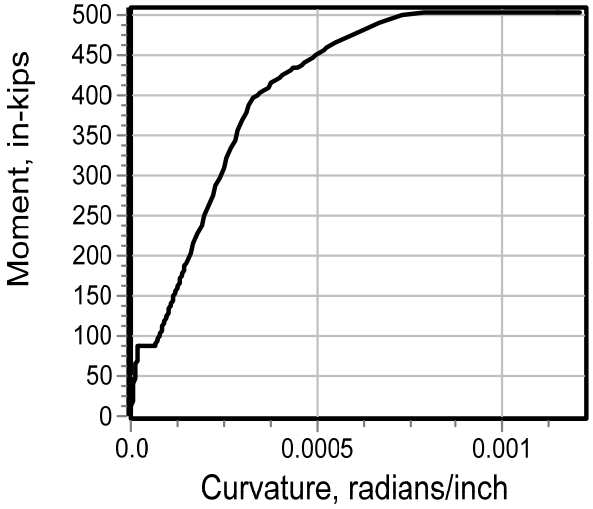


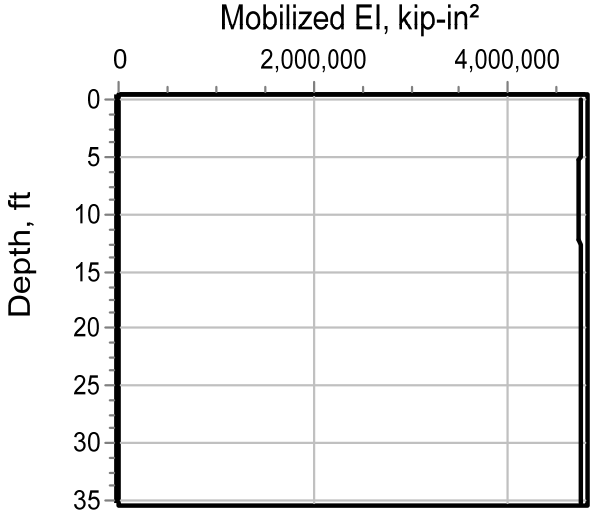


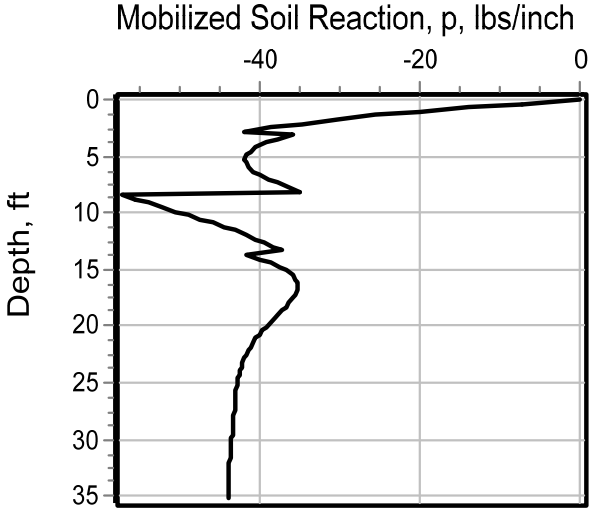


10801.CX
Pier N30 Results
Alternative 1A
Batter Pile

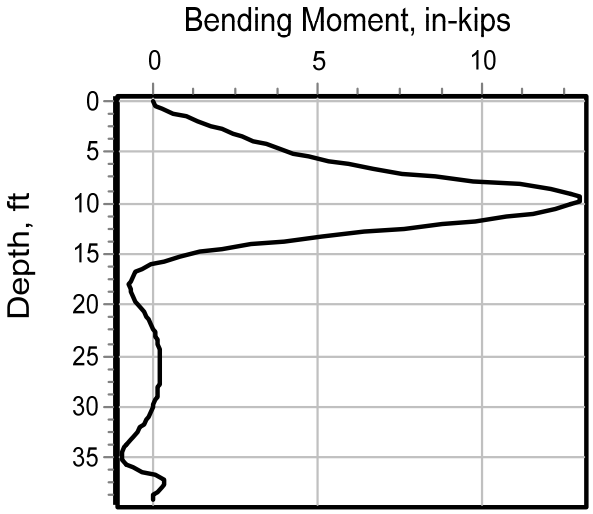


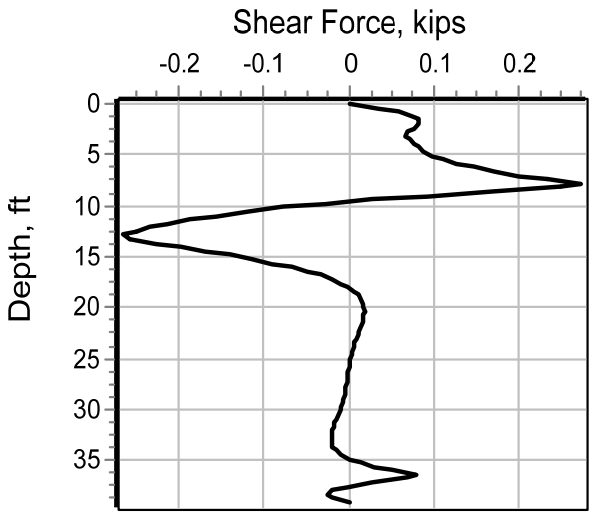


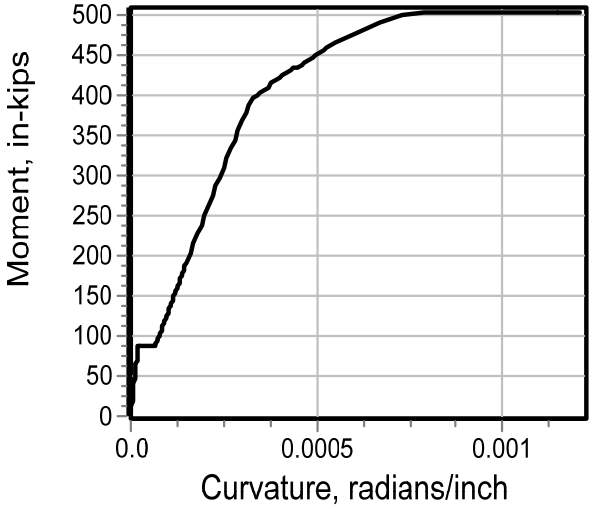


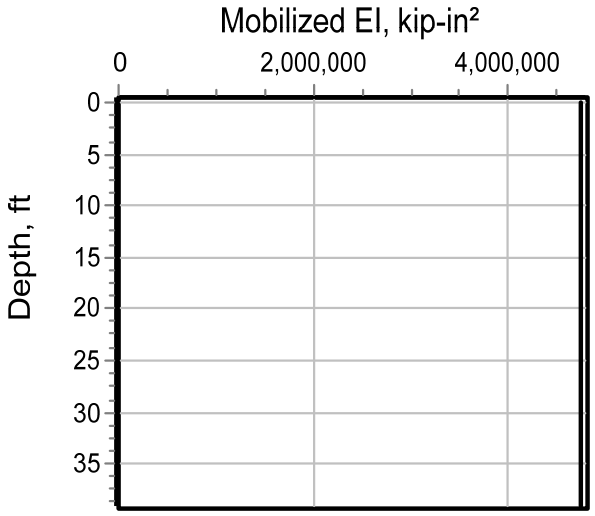


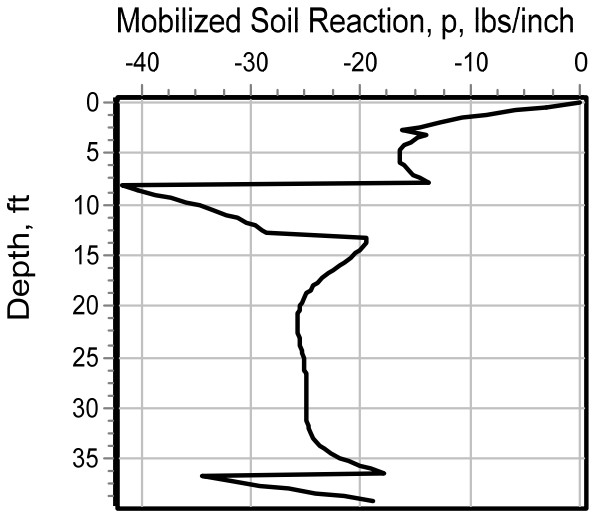
10801.CX
Pier N31 Results
Alternative 1A
Plumb Pile



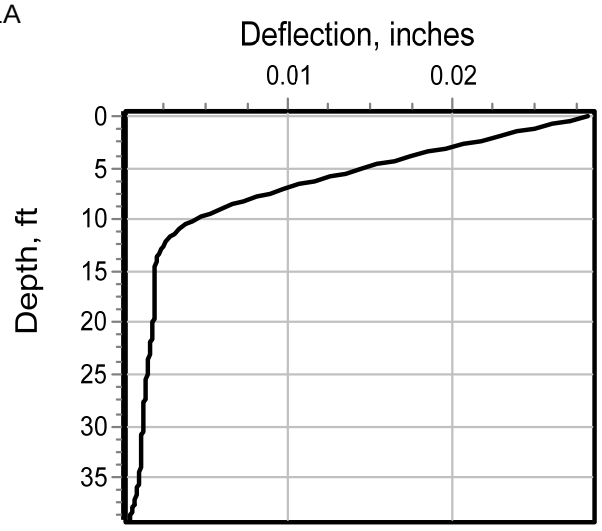


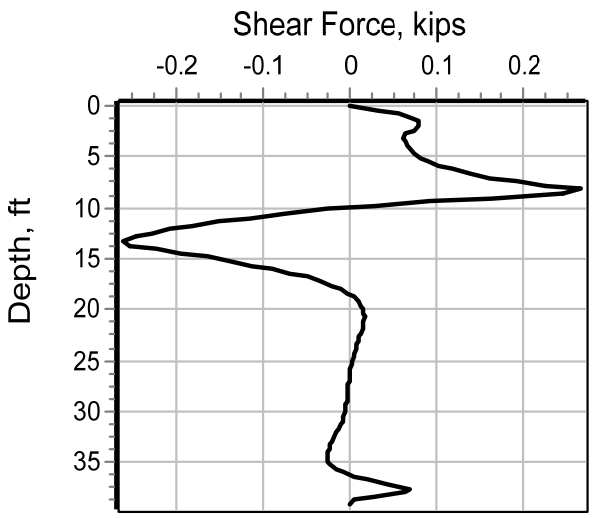


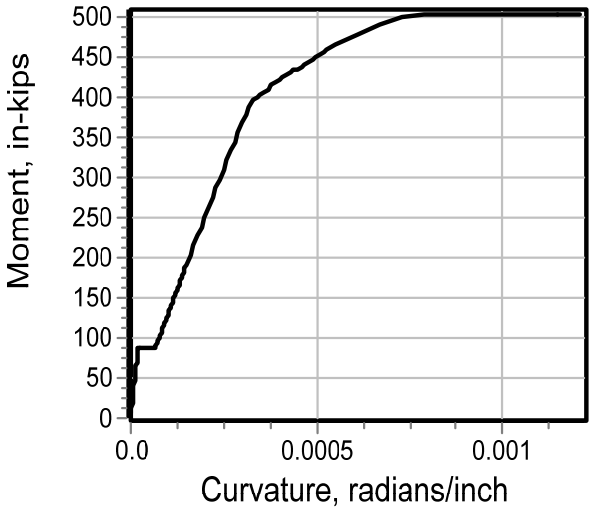


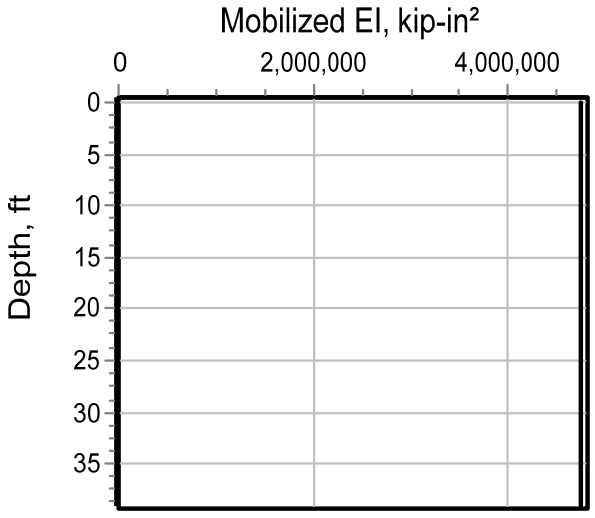


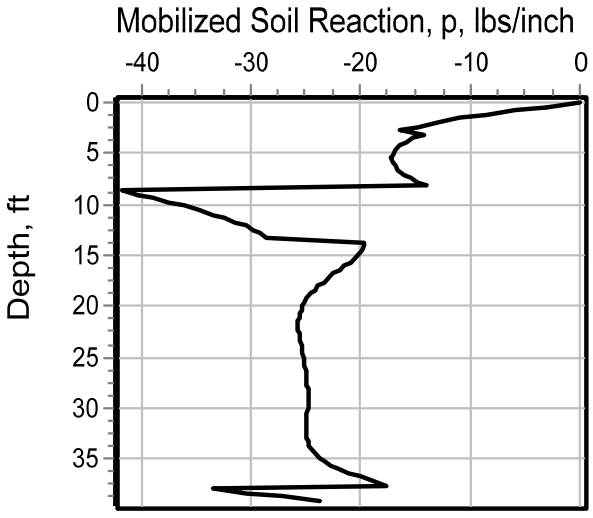
10801.CX
Pier N31 Results
Alternative 1A
Batter Pile





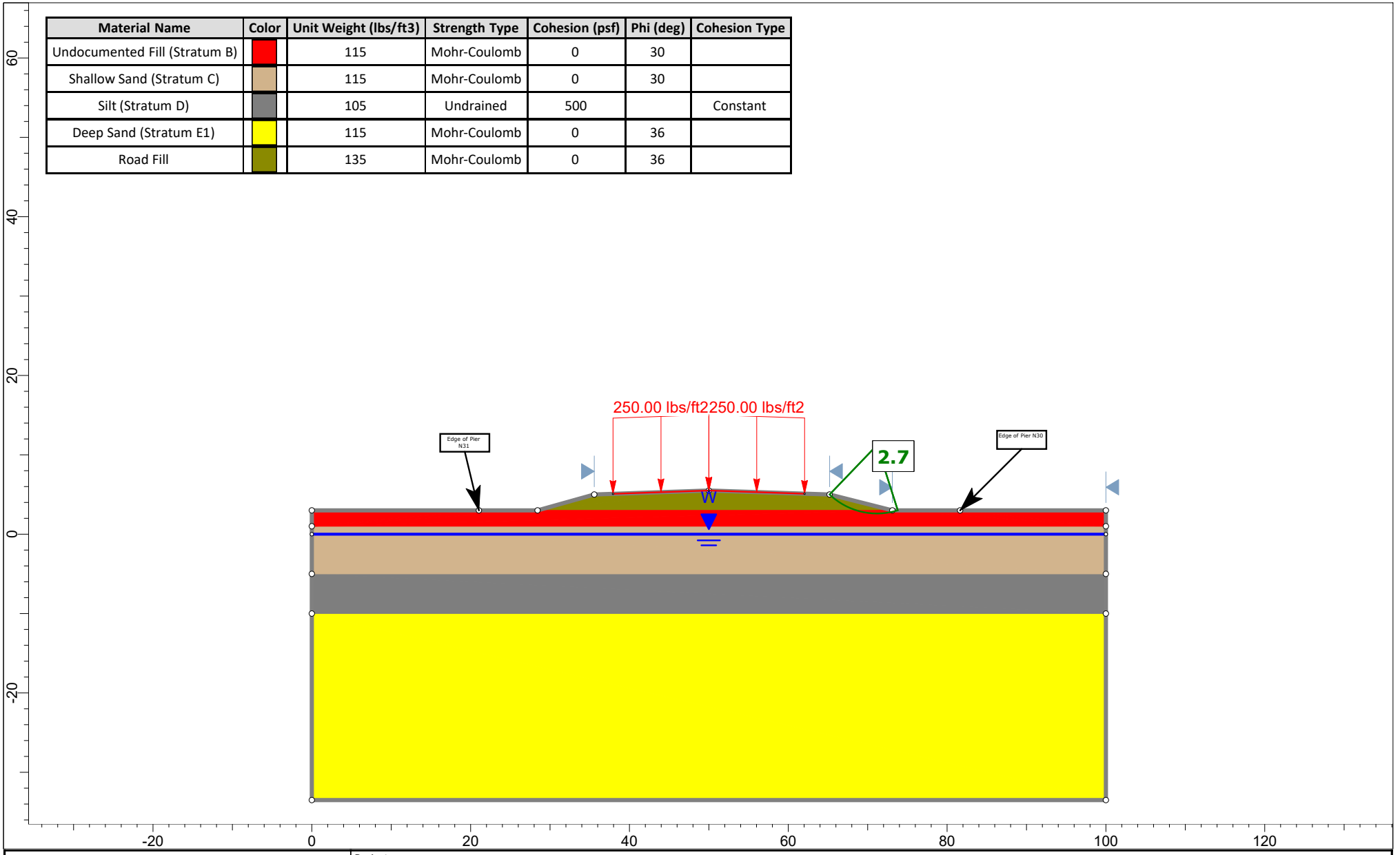






Global Stability Analysis

Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)	Cohesion Type
Undocumented Fill (Stratum B)		115	Mohr-Coulomb	0	30	
Shallow Sand (Stratum C)		115	Mohr-Coulomb	0	30	
Silt (Stratum D)		105	Undrained	500		Constant
Deep Sand (Stratum E1)		115	Mohr-Coulomb	0	36	
Road Fill		135	Mohr-Coulomb	0	36	

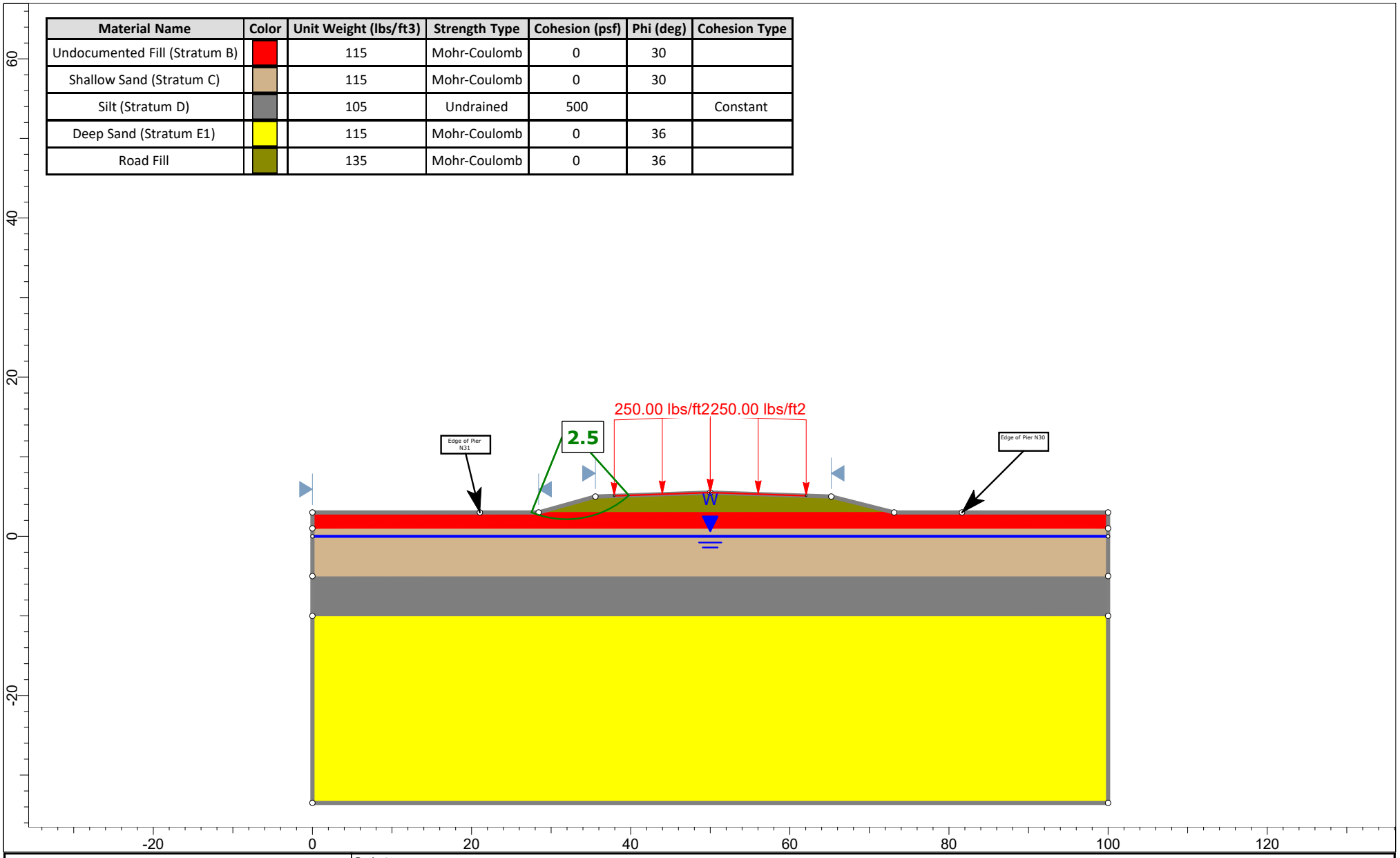


DUFFIELD ASSOCIATES
Soil, Water & the Environment

SLIDEINTERPRET 9.012

Project	Fort DuPont		
Group	Old Battery Lane Improvements - Base Design		
Drawn By	BTL	Company	Duffield Associates, LLC
Date	10/26/2022	File Name	10801.CX

Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)	Cohesion Type
Undocumented Fill (Stratum B)		115	Mohr-Coulomb	0	30	
Shallow Sand (Stratum C)		115	Mohr-Coulomb	0	30	
Silt (Stratum D)		105	Undrained	500		Constant
Deep Sand (Stratum E1)		115	Mohr-Coulomb	0	36	
Road Fill		135	Mohr-Coulomb	0	36	



DUFFIELD ASSOCIATES
Soil, Water & the Environment

SLIDEINTERPRET 9.012

Project	Fort DuPont		
Group	Old Battery Lane Improvements - Base Design		
Drawn By	BTL	Company	Duffield Associates, LLC
Date	10/26/2022	File Name	10801.CX

Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)	Cohesion Type
Undocumented Fill (Stratum B)		115	Mohr-Coulomb	0	30	
Shallow Sand (Stratum C)		115	Mohr-Coulomb	0	30	
Silt (Stratum D)		105	Undrained	500		Constant
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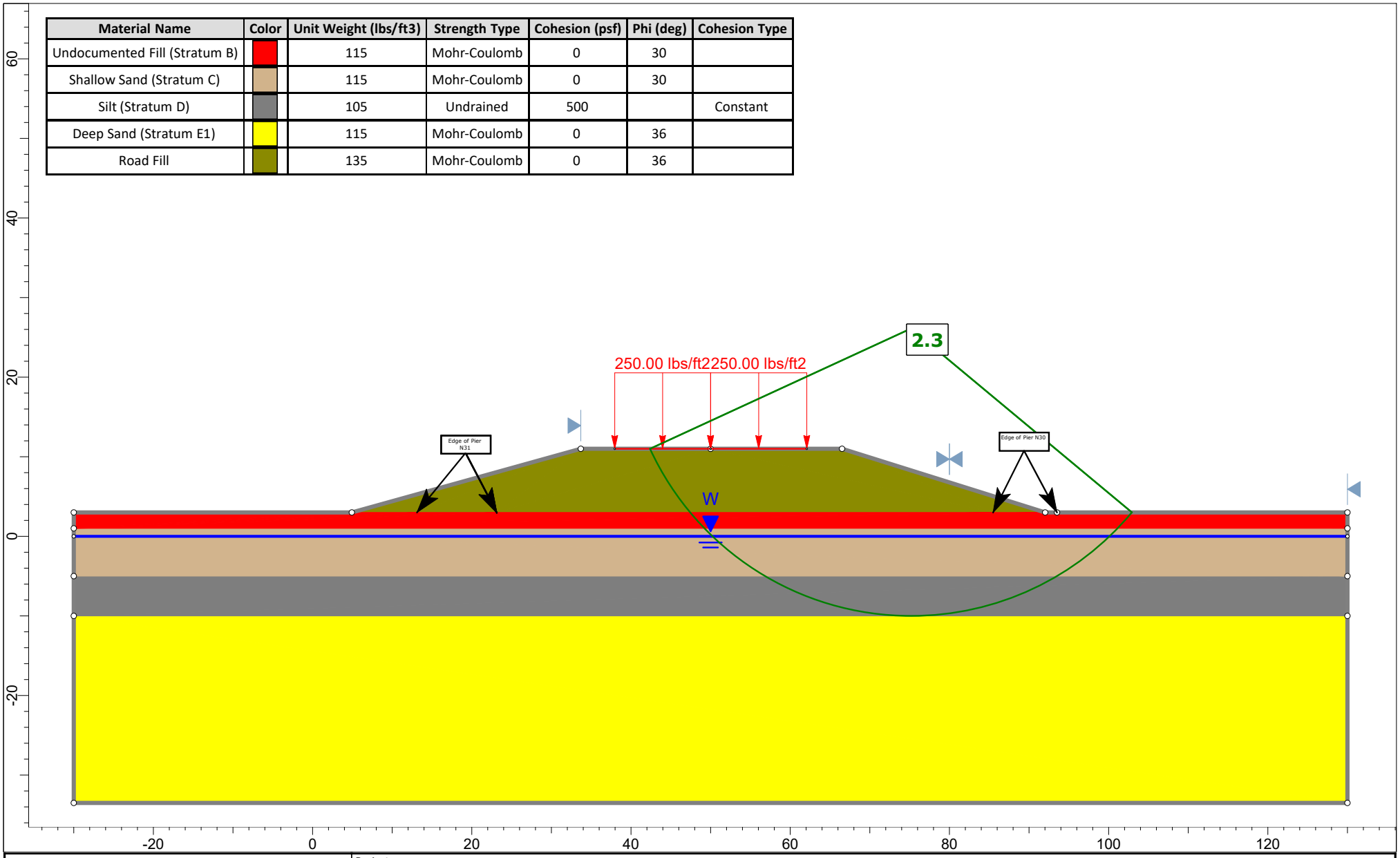
Road Fill		135	Mohr-Coulomb	0	36	

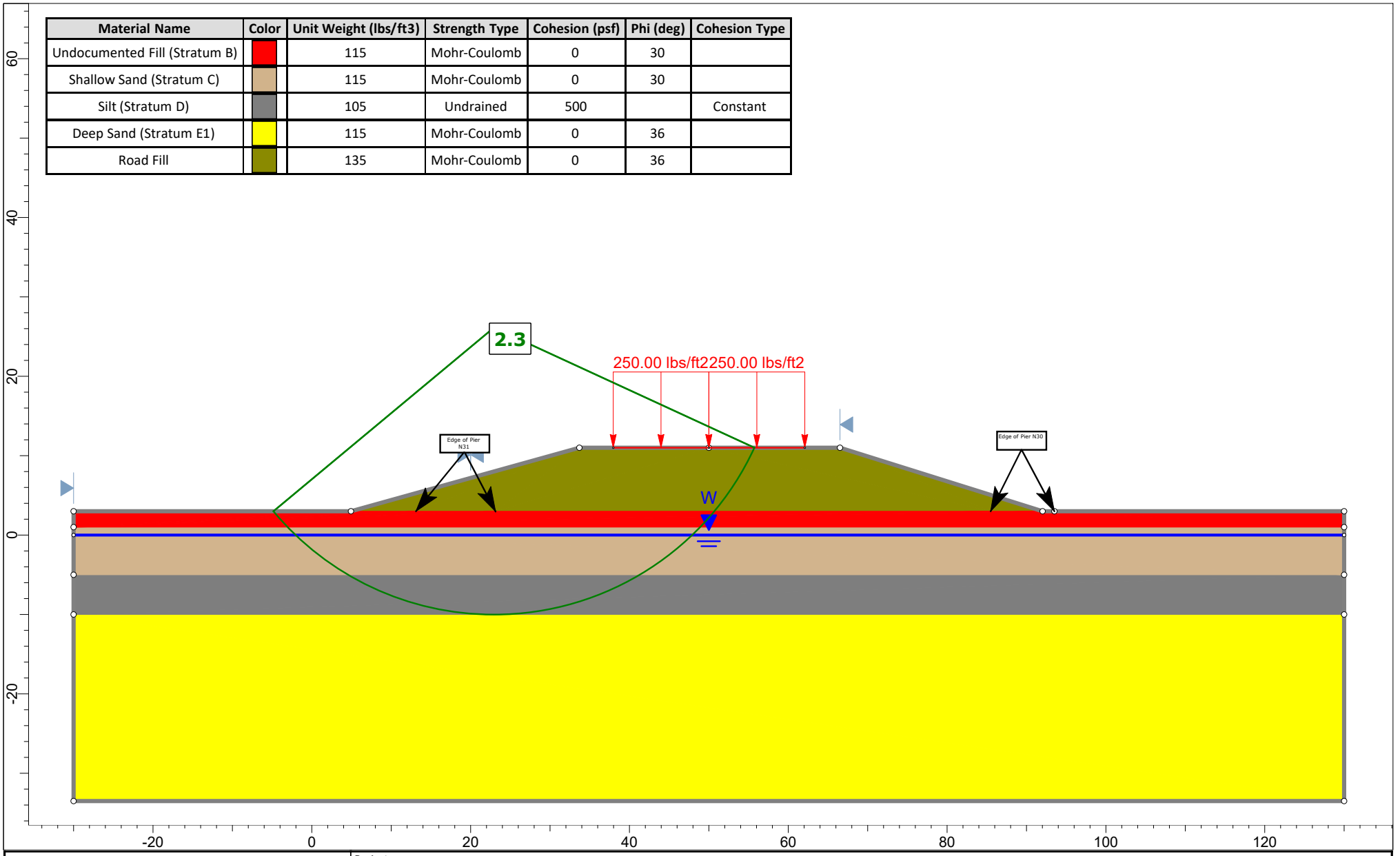


DUFFIELD ASSOCIATES
Soil, Water & the Environment

SLIDEINTERPRET 9.012

Project	Fort DuPont		
Group	Old Battery Lane Improvements - Alt 1		
Drawn By	BTL	Company	Duffield Associates, LLC
Date	10/26/2022	File Name	10801.CX

Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)	Cohesion Type
Undocumented Fill (Stratum B)		115	Mohr-Coulomb	0	30	
Shallow Sand (Stratum C)		115	Mohr-Coulomb	0	30	
Silt (Stratum D)		105	Undrained	500		Constant
Deep Sand (Stratum E1)		115	Mohr-Coulomb	0	36	
Road Fill		135	Mohr-Coulomb	0	36	



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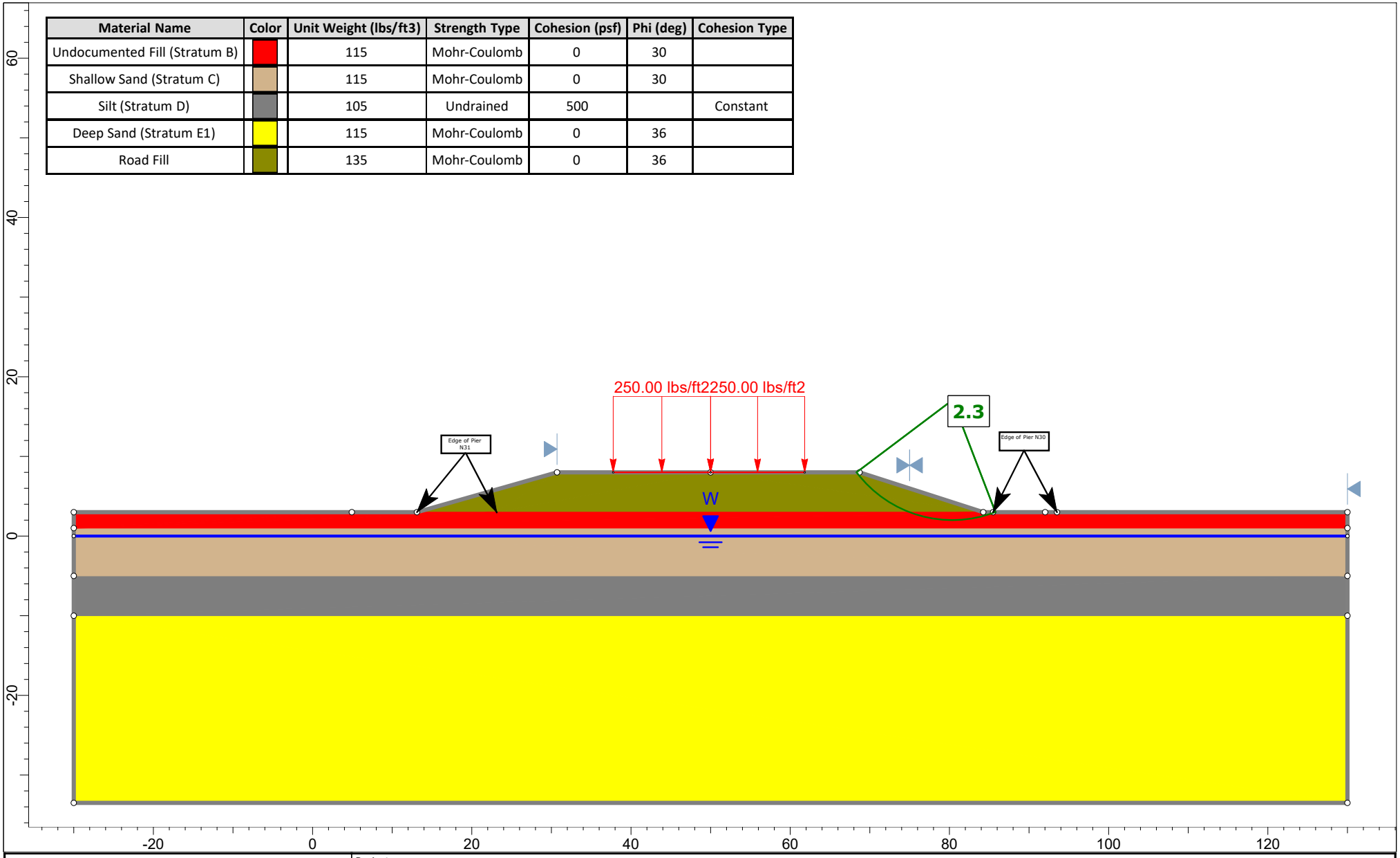
SLIDEINTERPRET 9.012

Project	Fort DuPont		
Group	Old Battery Lane Improvements - Alt 1		
Drawn By	BTL	Company	Duffield Associates, LLC
Date	10/26/2022	File Name	10801.CX

Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)	Cohesion Type
Undocumented Fill (Stratum B)		115	Mohr-Coulomb	0	30	
Shallow Sand (Stratum C)		115	Mohr-Coulomb	0	30	
Silt (Stratum D)		105	Undrained	500		Constant
Deep Sand (Stratum E1)		115	Mohr-Coulomb	0	36	
Road Fill		135	Mohr-Coulomb	0	36	



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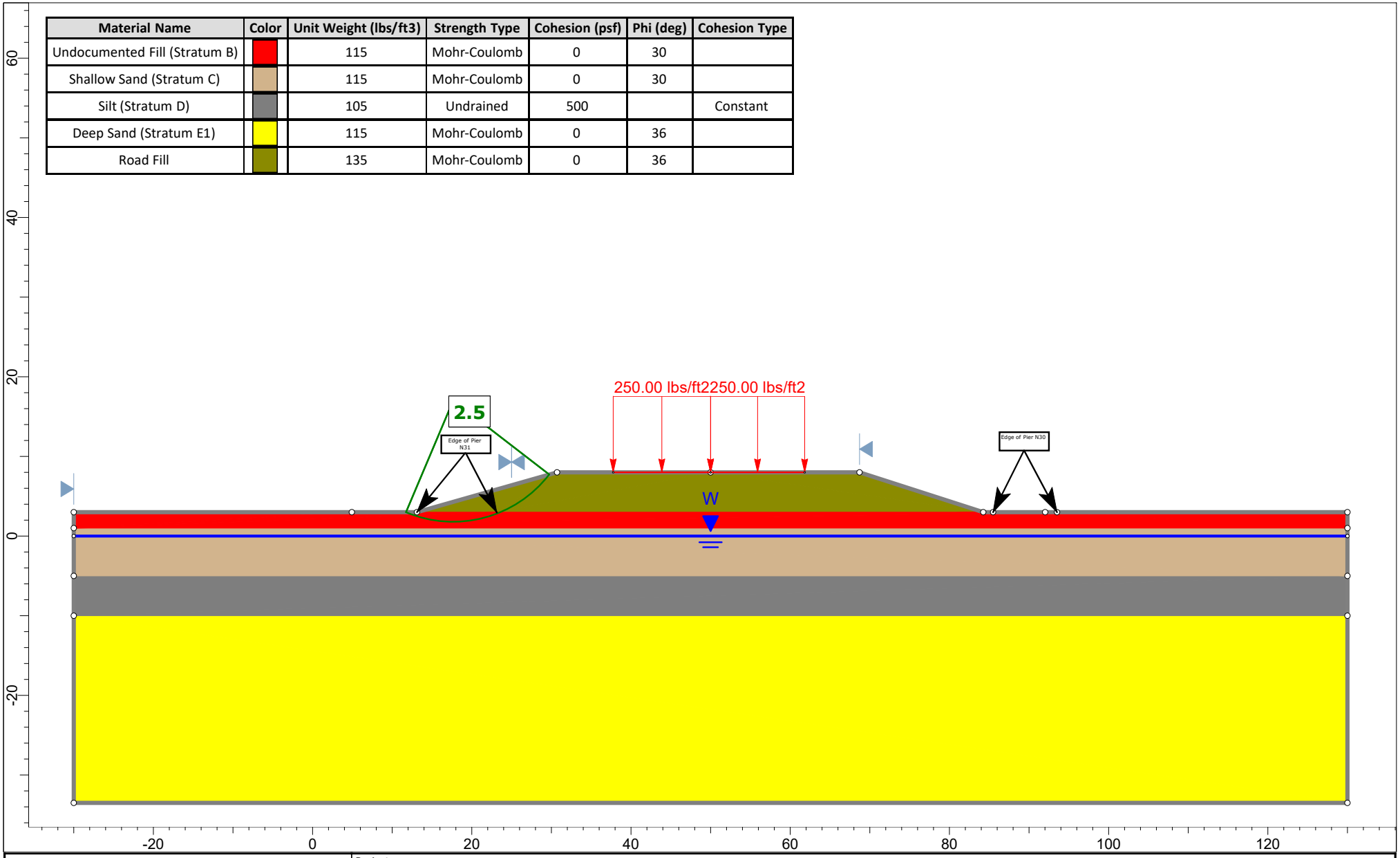
Soil, Water & the Environment

SLIDEINTERPRET 9.012

Project	Fort DuPont		
Group	Old Battery Lane Improvements - Alt 1A		
Drawn By	BTL	Company	Duffield Associates, LLC
Date	10/26/2022	File Name	10801.CX

Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)	Cohesion Type
Undocumented Fill (Stratum B)		115	Mohr-Coulomb	0	30	
Shallow Sand (Stratum C)		115	Mohr-Coulomb	0	30	
Silt (Stratum D)		105	Undrained	500		Constant
Deep Sand (Stratum E1)		115	Mohr-Coulomb	0	36	
Road Fill		135	Mohr-Coulomb	0	36	



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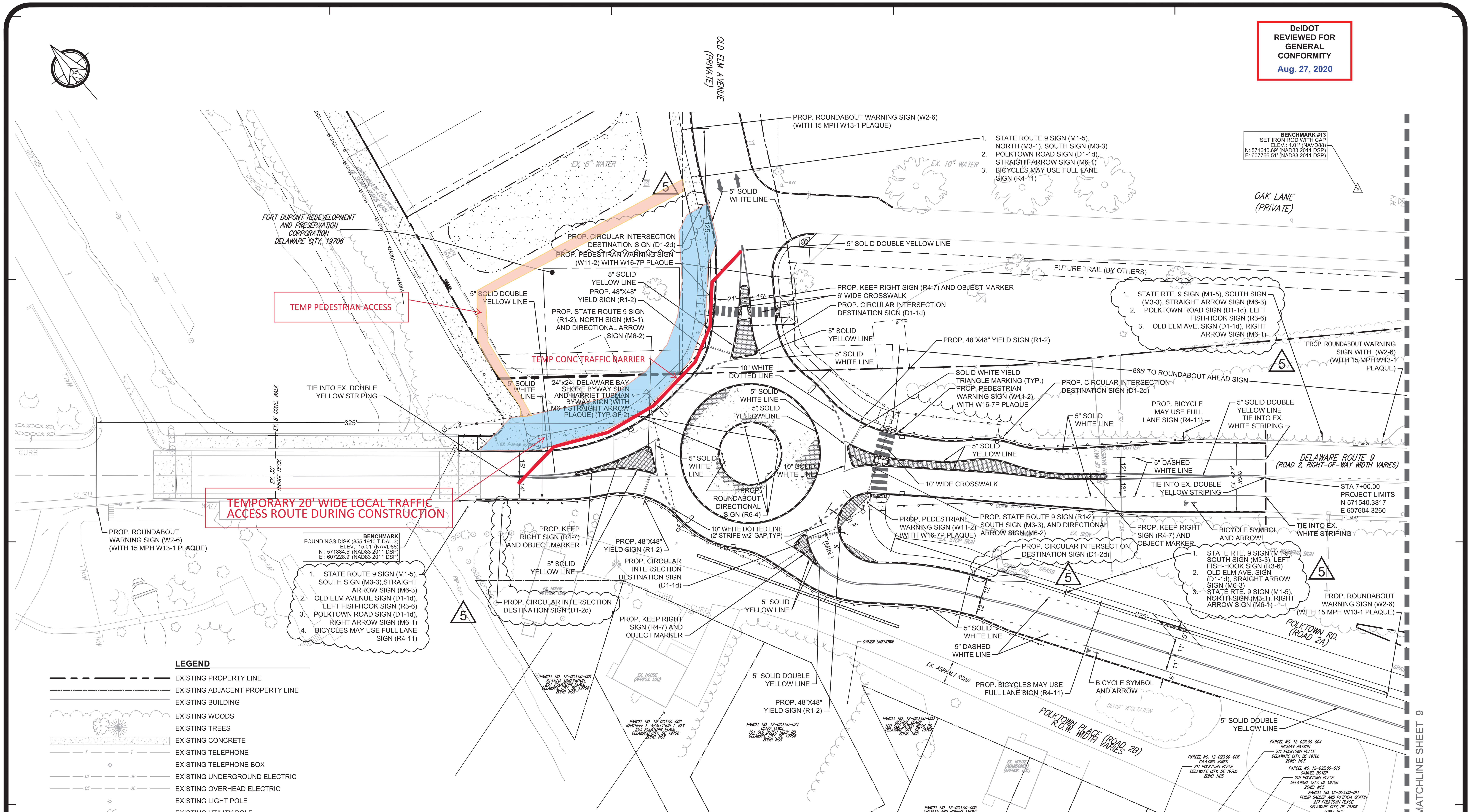
Soil, Water & the Environment

SLIDEINTERPRET 9.012

Project	Fort DuPont		
Group	Old Battery Lane Improvements - Alt 1A		
Drawn By	BTL	Company	Duffield Associates, LLC
Date	10/26/2022	File Name	10801.CX

DelDOT
REVIEWED FOR
GENERAL
CONFORMITY
Aug. 27, 2020



LEGEND

EXISTING PROPERTY LINE
EXISTING ADJACENT PROPERTY LINE
EXISTING BUILDING
EXISTING WOODS
EXISTING TREES
EXISTING CONCRETE
EXISTING TELEPHONE
EXISTING TELEPHONE BOX
EXISTING UNDERGROUND ELECTRIC
EXISTING OVERHEAD ELECTRIC
EXISTING LIGHT POLE
EXISTING UTILITY POLE
EXISTING MANHOLE
EXISTING SEWER
EXISTING STORM DRAIN
EXISTING FORCEMAIN
EXISTING WATER
EXISTING WATER VALVE
EXISTING FIRE HYDRANT
PROPOSED PROPERTY LINE
PROPOSED LOT LINE
PROPOSED CURB
PROPOSED SIDEWALK/CONCRETE PAVEMENT
PROPOSED FULL DEPTH ASPHALT
PROPOSED STORM DRAIN
PROPOSED SANITARY SEWER
PROPOSED FORCE MAIN
PROPOSED WATER MAIN
LIMIT OF DISTURBANCE
PROPOSED HYDRANT
PROPOSED WATER VALVE
PROPOSED TEE

MARKING LEGEND

SOLID WHITE OR YELLOW (SW/5" **, SW/10" ** OR SY/5") — 5" or 10" **
SOLID DOUBLE YELLOW (DSY/5") — 5", 5", 6"
BROKEN WHITE (BW/5") — 30' (9m), 10' (3m), 5"
DOTTED WHITE (DW/5" ** OR DW10" **) — 5" or 10" **, 6' (1.8m), 2' (0.6m)
STOP BAR (WHITE) — 16", OVERALL LENGTH AS SHOWN ON THE PLAN
CROSS WALK (WHITE) — 24", 24", WIDTH AS SHOWN ON THE PLAN 72" 96" OR 120"
YIELD ARROW (WHITE) — 12", 6", 18"

30' 0 30' 60'
DRAWING SCALE 1" = 30'

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E-MAIL: DUFFIELD@DUFFNET.COM

CHECKED BY: SJG
DESIGNED BY: JTO
FILE NAME: ENT10801CM
DRAWN BY: JTO
STEPHEN J. GORSKI, P.E.
STATE: DELAWARE P.E. #12625

No.	REVISION	CHK'D BY	DATE
1	COMMENTS PER DELDOT	SJG	8/26/2019
3	REVISED POLKTOWN RD. GRADES	SJG	2/11/2020
5	REVISED PER DELDOT COMMENTS	SJG	8/21/2020

OWNER: FORT DUPONT REDEVELOPMENT AND PRESERVATION CORPORATION 260 OLD ELM AVENUE DELAWARE CITY, DE 19706

SIGNAGE AND STRIPPING PLAN
COMMERCIAL ENTRANCE PLAN
FORT DUPONT
CANAL DISTRICT
DELAWARE CITY~NEW CASTLE COUNTY~DELAWARE

DATE: 16 MAY 2019
SCALE: 1" = 30'
PROJECT NO. 10801.CM
SHEET: 8 OF 24

ACTION FORM

November 9, 2022	**Action Item: 2022-11-09-002**
Subject:	FY 24 Request for Funding letter
Related project:	None
Prepared by:	Bert Scogletti and Tim Slavin
Expenditure Reqd:	None
Amount Budgeted:	N/A
Funding Source/Code	N/A
Recommended Action:	Approval of the requested funding of $4.25M.
Background and Analysis:	This funding request to the State of Delaware includes the following items: • **$2.5 million in ongoing funding** to be dedicated to infrastructure upgrades, the continued preservation of historic structures, maintenance, and upkeep of campus buildings, and funding for administration. • **$750,000 toward restoration at the historic Fort DuPont Theater**. The Theater is one of the most unique structures at Fort DuPont having served members of the military as a venue for entertainment. Consistent with its original use, we envision the theater to serve as a resource for local community and arts groups to provide programming and arts events for the Delaware City community. The Corporation has provided resources to stabilize the exterior of this facility over the past year. The requested funding would be applied to interior renovations. The Corporation will also work to secure private funding for this effort.

	• **$1.0 million to complete the restoration of the historic Chapel**. When complete, the Chapel will serve as a community center for meetings, events, and social gatherings. The Corporation has invested in restoring the exterior of the facility and completing necessary site work around the base of the structure. The requested funds will complete renovations to the exterior and interior as well as for constructing a small addition.