Erosion Control/Storm Water Management Maintenance/Operation Plan

For:

Kaukauna Area School District
Victor Haen Elementary
Building Addition & Site Improvements

PREPARED BY:

Point of Beginning

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Located in:

City of Kaukauna,
Outagamie County, Wisconsin

Dated:
May 1, 2025

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Kaukauna Area School District
Kaukauna, Wisconsin

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for
Kaukauna Area School District
Kaukauna, WI

1.0 BACKGROUND & GENERAL INFORMATION

1.1 Introduction and Project Location

Point of Beginning, Inc. has been retained to perform storm water management calculations and prepare a storm water management plan per NR216.47 and NR151, for the proposed site improvements at Victor Haen Elementary School in Kaukauna, WI. The project is located in a Part of Lot 3 of Block 51 of the Assessor's Plat of the City of Kaukauna, located in Part of Private Claim 1, Section 14, Township 21 North, Range 18 East, City of Kaukauna, Outagamie County, Wisconsin.

1.2 Project Description

The proposed project consists of constructing a building addition, a new poured-in-place playground, and various site improvements. Storm sewer will be installed for storm water capture and rate control. (see Layout Plan in **Appendix A**).

1.3 Project Requirements

The project area includes approximately 3.77 acres. Since the project exceeds one acre, a Wisconsin Department of Natural Resources Notice of Intent application/permit (NOI-WPDES per WDNR) will be applied for.

The storm water management plan for this project is developed in accordance with municipal standards and the NOI-WPDES requirements and NR216.47/NR151.121 for redevelopment sites.

1.4 General Project Data

Soils

Based on the geo-technical data collected in 2021, the site is situated primarily on fill material. The geotechnical data containing soil hydrologic classes are attached in **Appendix B**.

Groundwater

Per the geotechnical report, ground water was encountered from 7.5' – 19'. It is not expected to impact construction.

Wetlands

The DNR's Surface Water Viewer online tool shows no possible wetland areas across the residential lots to the north. All site improvements have been kept a minimum of 75' from the potential wetland area, per the Surface Water Viewer.

Precipitation

The following precipitation rates from the NOAA Atlas 14 Point Precipitation Frequency Estimates: WI, have been utilized for storm water calculations:

$P_{2,24}$ = 2.45”
$P_{10,24}$ = 3.51”
$P_{100,24}$ = 5.50”

2.0 EXISTING DRAINAGE CONDITIONS

2.1 Existing Drainage Area

The existing drainage area includes sub-basin E1-E2, which includes the greater project area at large as well as a slim area along the south property line where a sidewalk is proposed. Runoff from E1 & E2 drains over the surface to on-site storm inlets connected to the City’s storm sewer system. An existing drainage map can be found in **Appendix C.**

2.2 Existing Drainage Calculation Summary

Existing drainage calculations utilize TR-55 methodology and results for a 2, 10, and 100-year design storm are included. Where composite Times of Concentration are less than 0.1 hours (6.0 minutes), the TR-55 recommended minimum Time of Concentration of 0.1 hours (6.0 minutes) was used. Existing drainage calculations are provided in **Appendix C.**

2.3 Existing Off-Site Drainage

Existing surrounding storm water runoff draining directly onto the project area is negligible.

3.0 PROPOSED DRAINAGE CONDITIONS

3.1 Proposed Drainage Areas

The proposed drainage areas within the project limits are represented by sub-basin D1-D3. Sub-basin D1 consists of the areas of the site which lie north and south of the proposed building addition. Sub-basin D2 consists of the slim area along the south property line, as in sub-basin E2. Runoff from D1 & D2 drains over the surface to on-site storm inlets connected to the City’s storm sewer system. Sub-basin D3 consists of the building addition and the area on the northeast side of the addition. Runoff from D3 is comprised largely of the drainage from the building addition’s interior storm sewer system. Runoff from D3 drains to the depressed area adjacent to the northeast side of the building (Pond 1P). This is a dry depression area intended for rate control during larger storm events. Pond 1P drains via storm sewer to the City’s storm sewer system. A proposed drainage area map is provided in **Appendix D.**

3.2 Post-Development Runoff Summary

Proposed drainage calculations utilize TR-55 methodology and results for a 2, 10, and 100-year design storm have been attached. Where composite Times of Concentration are less than 0.1 hours (6.0 minutes), the TR-55 recommended minimum Time of Concentration of 0.1 hours (6.0 minutes) was used. A proposed drainage area map and calculations are provided in **Appendix D.**

3.3 Proposed Detention Areas

The depression area created on the northeast side of the building addition provides rate control and is modeled as Pond 1P. 1P is a dry basin with a 6” outlet pipe at an elevation of 710.50’. The top of the depression area is at an elevation of 713.00’. During the 100-year rainfall event, HydroCAD calculations indicate that the high water level reaches an elevation of 712.21’, therefore no emergency overflow occurs.

See Section **4.3 Peak Discharge** for runoff rates. See **Appendix D** for runoff calculations.

4.0 POST-DEVELOPMENT PERFORMANCE STANDARDS

4.1 Total Suspended Solids

With no parking or roadway areas included in the project, TSS removal is not required.

4.2 Infiltration

According to NR151.124(3)(b)(3), redevelopment post-construction sites are exempt from the infiltration requirements of NR151.

4.3 Peak Discharge

BMPs shall be employed to maintain or reduce the peak runoff discharge rates, to the maximum extent practicable, as compared to pre-development conditions.

The pre-development and post-development peak rates of discharge and volumes of discharge leaving the site runoff rates are summarized below. See **Appendix D** for HydroCAD modeling routing diagrams, summaries, and node listings.

	Pre-Development Site Drainage (1L)	Post-Development Site Drainage (1L)
2-year 24-hour Peak Flow	4.81 cfs	3.79 cfs
10-year 24-hour Peak Flow	8.64 cfs	6.31 cfs
100-year 24-hour Peak Flow	16.51 cfs	11.36 cfs

Summary

The modeling of the site drainage demonstrates that discharge rates are reduced. As such, the requirements set by the Department of Natural Resources for total peak discharge, and infiltration are met by the proposed design.

The Storm Water Erosion Control Plan and the Storm Water Management Plan show that BMP engineering practices in hydrology planning and design have been considered and the resulting development will function as a positive addition to the community while sustaining environmental benefits in storm water management and quality.

5.0 CONSTRUCTION SITE PERFORMANCE STANDARDS

5.1 Erosion Control

The purpose of this control plan is to provide guidelines that comply with the state and local requirements, as well as to make recommendations regarding erosion control and storm water management. The construction of this development is a critical phase in terms of storm water management and runoff control. Construction site erosion control will help minimize the impact of development, enhance and protect local environment, and protect the surrounding project area by applying best management practices for erosion control at construction sites. This work shall be planned and executed in accordance with the Wisconsin Department of Natural Resources Storm Water Management Technical Standards and/or accepted local engineering practice. The owner/developer will be responsible for erosion control during the process of construction. Silt fence, site vegetation, and erosion mat will be utilized to keep sediment from leaving the construction site. **See Appendix E.**

5.2 Construction Site Erosion Control Measures

The following erosion control devices may be used on the project site at any time during the construction phases to ensure compliance with NR 216 and local erosion control requirements, as applicable.

a) Inlet Protection (WDNR 1060)

Inlet protection is a temporary barrier applied around storm drains. It is designed to prevent sediment from entering the storm sewer system. All fabrics used for inlet protection devices must be selected from the list of approved fabrics certified for inlet protection, Geotextile Fabric, Type FF in the current edition of the Wisconsin Department of Transportation Product Acceptability List (PAL).

b) Non-channel Erosion Mat (WDNR 1052)

The purpose of this practice is to protect the soil surface from the erosive effect of rainfall and prevent sheet erosion during the establishment of grass or other vegetation, and to reduce soil moisture loss due to evaporation. This practice applies to both Erosion Control Re-vegetative Mats (ECRM) and Turf-Reinforcement Mats (TRM).

1. CLASS I: A short-term duration (minimum of 6 months), light duty, organic mat with photodegradable plastic or biodegradable netting.

a. Type A – Use on erodible slopes 2.5:1 or flatter.

b. Type B – Double netted product for use on erodible slopes 2:1 or flatter.

c) Interim Manufactured Perimeter Control and Slope Interruption Products (WDNR 1071)

The purpose of the installation of these products is to reduce uninterrupted slope length to slow the velocity of runoff so as to retain transported sediment from disturbed areas. This practice applies to Log-Type products.

d) Site Vegetation

Existing site vegetation outside of project limits shall be protected and maintained to the maximum extent practicable. Existing site vegetation within the project limits shall remain undisturbed until construction schedule warrants disturbance. For disturbed areas vegetation that resists erosion, maintains slow storm water velocities, and retains sediment from runoff shall be provided by the contractor. Temporary seeding may be required for disturbed areas that are subject to long periods of construction inactivity. Temporary vegetation is used when areas are disturbed and may remain unfinished long enough to allow vegetation to grow and assist with erosion control. Permanent vegetation is encouraged as soon as possible in the construction process.

e) Trackout Protection (WDNR 1057)

Stone tracking pads will be constructed at all entrances to the construction site to minimize sediment tracking onto existing streets. A minimum of one construction entrance is required for the project site. Tracking pads are temporary and will be removed or much of the aggregate will be removed before the site is completed.

f) Waste and Material Disposal

All waste and unused building materials (including garbage, debris, cleaning wastes, or other construction materials) shall be properly disposed of and not allowed to be carried by runoff into a receiving channel or inlet.

5.3 Operation and Maintenance, Short-term

The Owner of this project in Kaukauna, Outagamie County, Wisconsin, is directly responsible for implementation and maintenance of the construction site erosion control measures.

The Contractor shall conduct the following inspections:

- Weekly inspections of implemented erosion and sediment controls.
- Inspections of erosion and sediment controls within 24 hours after precipitation event 0.5 inches or greater which results in runoff during active construction periods.

The Contractor shall maintain weekly written reports of all inspections that include:

- The date, time, and exact place of the inspection.
- The name of the individual who performed the inspection.
- An assessment of the condition of erosion and sediment controls.
- A description of any erosion and sediment control implementation and maintenance performed.
- A description of the present phase of construction at the site.

Repairs shall be made immediately, as required, to maintain effectiveness, until permanent vegetation is established. All repairs to erosion control devices shall be documented. The attached Wisconsin Department of Natural Resources Construction Site Inspection Report (Form 3400-187) may be used for recording purposes. A copy of Form 3400-187 can be found in **Appendix F**.

5.4 Operation and Maintenance, Long-term

The Owner of this project in Kaukauna, Outagamie County, Wisconsin, is directly responsible for the operation, inspection, and maintenance of all storm water facilities located within the site, as described below.

- Area Storm Sewer:
  Inspection: Accumulation of sediment and/or debris within storm sewer pipe, and/or outfall. Look for damage to pipe and outfall.
  Maintenance: Remove accumulated sediment and/or debris within the pipe and/or within or near inlets. Repair damaged to pipe and/or inlets. If the damage is un-repairable then the pipe and/or inlet shall be replaced.

The aforementioned inspection and maintenance schedule shall be performed after any rainfall event exceeding one inch of rainfall, and at a minimum semi-annually in early spring and fall. All inspections and maintenance shall be documented, and the OWNER shall keep all inspection and maintenance reporting/records onsite and available upon request of the City and/or Wisconsin Department of Natural Resources.

6.0 SUMMARY

6.1 General

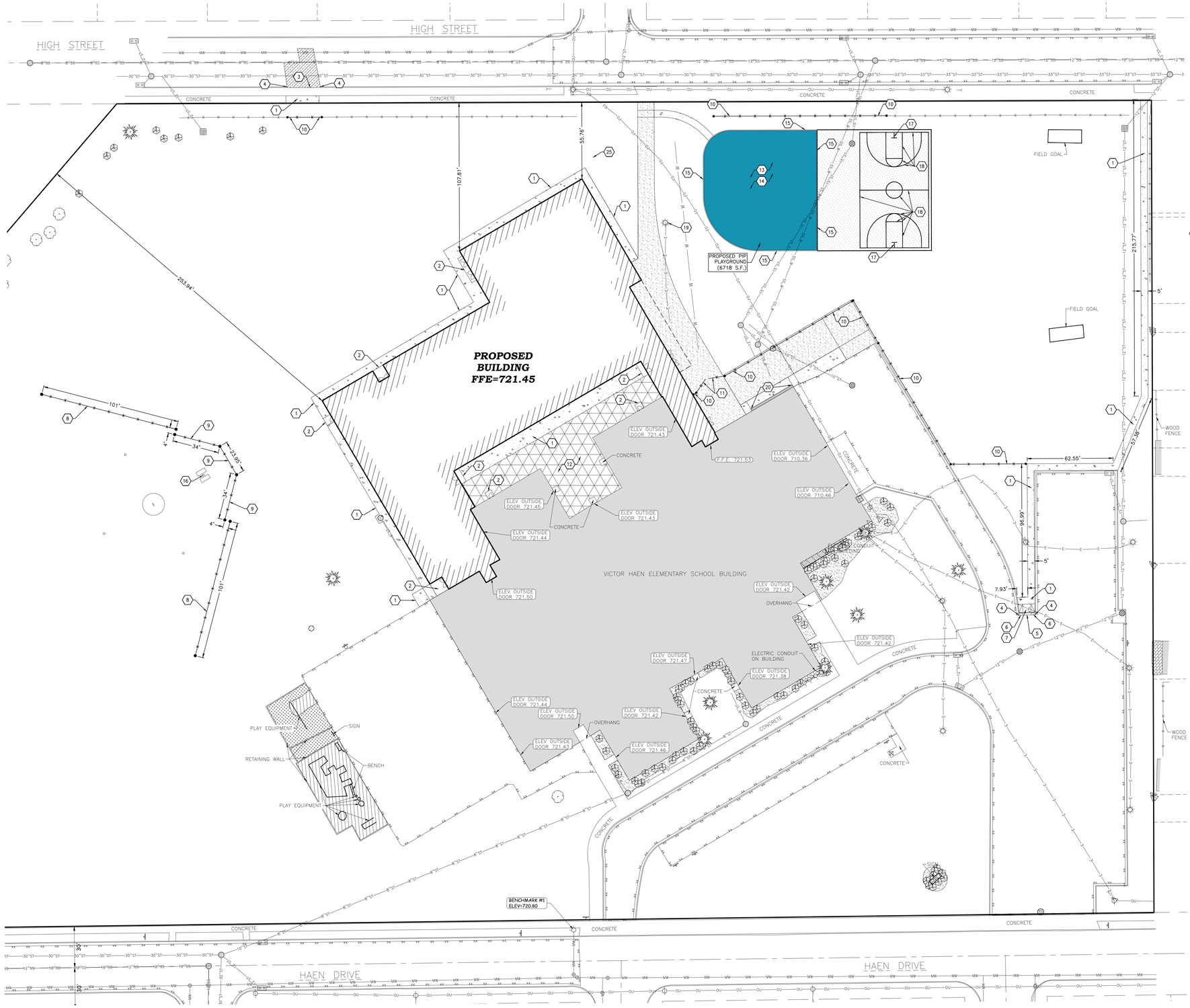
The proposed development as outlined above meets all Wisconsin Department of Natural Resources storm water regulations pertaining to redevelopment.

For the temporary construction site scenario, sediment transport from this site to adjacent properties will be reduced by the erosion control devices and conservation practice standards.

This plan meets state storm water BMPs and provides an environmentally sound and practical solution for the future storm water runoff generated from the development of this site.

APPENDIX A

Proposed Layout Plan



GENERAL NOTES:

1. CONTRACTOR SHALL LOCATE ALL PUBLIC AND PRIVATE UTILITIES PRIOR TO COMMENCEMENT OF WORK.
2. GRADE, LINE, AND LEVEL TO BE REVIEWED IN THE FIELD BY THE CONSTRUCTION MANAGER.
3. ALL REQUIRED EROSION CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH LOCAL MUNICIPAL AND DEPARTMENT OF NATURAL RESOURCES REGULATIONS.
4. SEE SHEET C400 FOR ALL REQUIRED EROSION CONTROL ELEMENTS.
5. ANY EXISTING UTILITIES NOT SHOWN ON THIS DOCUMENT WHICH NEED TO BE REMOVED, RELOCATED AND OR ADJUSTED SHALL BE THE RESPONSIBILITY OF THE SITE GRADING CONTRACTOR.
6. VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO THE START OF DEMOLITION/CONSTRUCTION.
7. BIDDERS SHALL VISIT THE SITE AND REVIEW EXISTING CONDITIONS PRIOR TO THE BID DATE.
8. PRIOR TO STARTING WORK, VERIFY WITH THE LOCAL AUTHORITIES THAT ALL REQUIRED PERMITS HAVE BEEN ACQUIRED.
9. COORDINATE CONSTRUCTION IN THE RIGHT OF WAY WITH THE LOCAL AUTHORITIES.
10. PROVIDE PROPER BARRICADES, SIGNS, AND TRAFFIC CONTROL TO MAINTAIN THRU TRAFFIC ALONG ADJACENT STREETS IN ACCORDANCE WITH LOCAL MUNICIPAL REQUIREMENTS.
11. SIDEWALK JOINTS SHALL BE INSTALLED AS INDICATED OR AS APPROVED BY THE CONSTRUCTION MANAGER.
12. ALL NEW CONCRETE PAVEMENT AND CURB ON ADJACENT STREET SHALL BE TIED IN WITH #5 DOWEL BAR, MIN. 24" LONG, AT 18" O/C.
13. ALL GENERAL LANDSCAPE AREAS SHALL BE SEEDED, FERTILIZED, AND CRIMP HAY MULCHED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.

KEYNOTES:

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1. CONCRETE SIDEWALK — 2 / C600
2. CONCRETE STOOP (SEE ARCHITECTURAL PLANS)
3. 30" CONCRETE CURB & GUTTER — 4 / C600
4. DOWEL CURBING TO EXISTING WITH 2–#5 AT 18" O/C. EMBEDDED 6" TYP.
5. 24" DEPRESSED CURB — 4 / C600
6. CURB TAPER/TRANSITION AREA — 5 / C600
7. HANDICAP RAMP — 6 / C600
8. 4' CHAIN LINK FENCE (INCL. FENCEGUARD MOW STRIP IN GRASS AREAS) — 7 / C600
9. 20' CHAIN LINK BACKSTOP — 8 / C600
10. 6' CHAIN LINK FENCE (INCL. FENCEGUARD MOWSTRIP IN GRASS AREAS) — 7 / C600
11. 6'x24' CHAIN LINK DOUBLE GATE — 9 / C600
12. SYNTHETIC TURF IN COURTYARD AREA — 10 / C600
13. 4" OF PLAYGROUND FILL MATERIAL W/ POURED–IN–PLACE PLAYGROUND SURFACE BY PLAYGROUND VENDOR. SEPARATION FABRIC & UNDERDRAIN BY GENERAL CONTRACTOR. (GC TO EXCAVATE TO PROPOSED SUBGRADE DEPTHS) — 1 / C601
14. PLAYGROUND EQUIPMENT BY PLAYGROUND VENDOR (AS APPROVED BY OWNER)
15. 6"x12" CONCRETE CURB AROUND PLAYGROUND — 1 / C601
16. HOME PLATE (BASE PADS & PITCHING RUBBER BY OWNER) — 2 / C601
17. BASKETBALL GOAL (KEEPER GOALS MODEL: CONTENDERINAC OR APPROVED EQUAL)
18. 2" BASKETBALL LAYOUT STRIPING
19. RAISE OR REPLACE EXISTING LIGHT POLE BASE
20. ACO K200 SERIES TRENCH DRAIN — 3 / C601

PAVEMENT HATCH PATTERNS:

- PROPOSED STANDARD ASPHALT PAVEMENT — 1 / C600
- REPAIR & REPLACE PAVEMENT/CURB (IN KIND) FOLLOWING UTILITY INSTALLATION (SEE UTILITY PLAN)
- PROPOSED STANDARD CONCRETE PAVEMENT — 2 / C600
- PROPOSED REINFORCED CONCRETE PAVEMENT — 3 / C600
- SYNTHETIC TURF IN COURTYARD AREA — 10 / C600
- POURED–IN–PLACE PLAYGROUND SURFACE — 1 / C601

0' 30' 60'
1" = 30'

REVISIONS

CHECKED:	JL
DRAWN:	GC
DATE	05/01/2025
PROJECT NO.	24.0140

NOT FOR CONSTRUCTION

LAYOUT PLAN
KEYNOTES

KASD - VICTOR HAEN ELEMENTARY
SCHOOL ADDITION & RENOVATION
CITY OF KAUKAUNA
OUTAGAMIE CO, WISCONSIN

Civil Engineering
Land Surveying
Landscape Architecture
4941 Kitschling Court
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Point of Beginning

SHEET C200

APPENDIX B

Geotechnical Data

2135 South 116th Street
West Allis, WI 53227

April 11, 2025

Neil Henriksen
Point of Beginning, Inc.
4941 Kirschling Court
Stevens Point, WI 54481

Subject: Geotechnical Consulting Services - *revised*
Victor Haen Elementary School Addition
1130 Haen Drive, Kaukauna, Wisconsin

Dear Mr. Henriksen:

GeoTest, Inc. (GeoTest) has prepared this geotechnical engineering report related to the above-referenced project. This report describes the subsurface exploration and laboratory testing programs and presents recommendations regarding civil and structural engineering design aspects of the project, as well as other construction considerations.

Project Description

Point of Beginning is assisting with the design of an addition to the existing school building located at 1130 Haen Drive in Kaukauna, Wisconsin. The location of the property is illustrated on Figure 1 in Appendix A.

The existing building is a single-story structure with a finished floor elevation of about 722 feet. A portion of the building has a lower-level floor elevation of about 716 feet due to a topographic change. The addition will consist of a single-story, slab-on-grade structure, that will have an assumed finished floor elevation of 722 feet. The development plan is illustrated on Figure 2 in Appendix A.

Structural loads are not expected to exceed 400 kips for columns and 6 kips per linear foot (klf) for walls. The floor slab will be subjected to a maximum load of 100 pounds per square foot (psf). To achieve the finished floor elevations for the addition, maximum fills of about 5 feet are anticipated.

The area of the proposed addition is currently grass and pavements. The ground surface slopes downward from the south to the north with an elevation of about 5 feet.

Scope of Work

Geotechnical Subsurface Exploration

The geotechnical exploration program consisted of twelve borings (B-1 through B-12) drilled to depths of 25 feet below the existing ground surface. The boring locations are identified on Figure 2 in Appendix A. The ground surface elevations at the boring locations were provided by Point of Beginning.

The borings were drilled using conventional hollow-stem augers. Soil samples were obtained at 2.5-foot intervals to a depth of 10 feet and 5-foot intervals thereafter. The soil samples were obtained by split-barrel sampling procedures, in general accordance with ASTM D1586. Representative portions of the samples were sealed in glass jars and returned to Point of Beginning for laboratory testing and classification.

Descriptive logs for each boring, which describe the methods of advancement, sample types, sample depths, and observations regarding soil and groundwater conditions, were prepared at the time of the field work. These logs were utilized by Point of Beginning as an aid to prepare the final logs included in Appendix B.

Water level information, if encountered, was noted during drilling. All drilling and sampling procedures are described in Appendix C.

Laboratory Testing

Point of Beginning examined and visually classified each sample, based on texture and plasticity, in accordance with the Unified Soil Classification System (USCS). Like soils were grouped into strata that are described on the soil logs. The notes included on the logs and chart describing this system of classification is included in Appendix B.

The laboratory testing program consisted of the following:

- Water content testing on all samples.
- Calibrated hand penetrometer (Q_p) testing on all fine grained (clay and silt).
- Atterberg Limits testing on two samples.

The laboratory test results are presented on the final logs or reports included in Appendix B. All laboratory procedures are described in Appendix C.

Soil and Groundwater Conditions

The following narrative is a generalization of the subsurface conditions encountered at the borings. Soil conditions can vary in areas between the sampling locations. For a more-detailed description of the subsurface conditions encountered at each boring location, please refer to the attached logs in Appendix B.

General Soil Conditions - The general soil profile at the boring locations, below asphalt pavement, concrete, or topsoil, consisted of clay and sand fill materials to depths of about 1.5 to 7 feet at six borings and stratified layers of native clay, silt, and sand. Organic peat was encountered at one boring (B-2) to a depth of about 3.5 feet.

The fills were likely related to past grading activities at the site when the school was constructed. The native soil layers varied in their coarse sand, silt and gravel content.

Fill Materials – One clay fill sample exhibited stiff consistency, with a Q_p value of 3,500 pounds per square foot (psf). Three additional clay fill samples were disturbed and could not be tested.

The relative density of three sand fill samples was loose to medium dense, with N-values of 3, 9, and 10. These values equate to strengths that range from about 1,000 psf to 2,500 psf.

Typically, moisture contents are considered high if they are above 20% in fine-grained soils and 15% in coarse-grained (sand and gravel) soils. The moisture content in the four clay fill samples ranged from 18.5% to 21.4%. Three samples (75%) exceeded 20%. The moisture content in the three sand fill samples ranged from 12.9% to 17.1%. Two samples (67%) exceeded 15%.

Native Fine-Grained Soils – Forty-two native clay and silt samples exhibited stiff to hard consistencies, with Q_p values ranging from 2,000 psf to greater than 9,000 psf. Using 9,000 psf as the maximum value, the average was 4,321 psf. Twenty-two samples (52%) were less than 4,000 psf (stiff) and four samples (10%) exceeded 8,000 psf (hard). Sixteen additional samples were disturbed and could not be tested.

The moisture content in fifty-eight native clay samples ranged from 12.2% to 35.2%. Twenty-eight samples (48%) exceeded 20%.

Native Coarse-Grained Soils – The relative density of sixteen native sand samples was medium dense, with N-values that ranged from 13 to 27. The average was 17. These values equate to strengths that range from about 3,000 psf to 6,000 psf.

The moisture content in the native sand samples ranged from 13.7% to 25.8%. Fourteen samples (88%) exceeded 15%.

Groundwater Conditions

Free groundwater and perched water (wet and saturated soils) was encountered at all borings during drilling. Based on the moisture contents and visual classifications of the samples, water existed at depths that ranges from 1 to 8 feet (elevations of 710 to 718 feet).

Fluctuations in the groundwater table elevation should be expected with variations in precipitation, evapotranspiration, surface runoff, etc. Also, shallow perched groundwater conditions should be expected where relatively permeable granular soils are underlain by relatively impermeable cohesive soils, especially following precipitation events.

Analysis and Recommendations

There are eight primary issues that should be considered when planning this project.

- Undocumented (absence of quality control testing) fill soils exist on the property. Typically, fills are a concern for structural support because they could have been placed inconsistently and not sufficiently compacted, potentially causing excessive total and/or differential settlements for foundations. The field data indicates the fills are variable in their strength characteristics, and therefore, not considered suitable for support of structural elements.
- The bearing soils at the assumed footing elevations will be variable, including native clay and sand that exhibited variable strengths, undocumented fills, and engineered fills. Variable-strength bearing soils can cause differential settlements.
- Clean sandy (small quantities of fines) soils were encountered that will pose excavating challenges, especially related to trench stability.
- Clay soils were present on the property, which are sensitive to construction activity, and actions to stabilize the subgrade during construction should be planned.
- Organic peat was encountered at one boring location (B-2). These soils, which could also exist in other areas, are not suitable for the support of structures or engineered fill. They should be removed where needed.
- Shallow soils (less than 5 feet) with high moisture content were present at all boring locations, which will cause significant grading and excavating challenges, and actions to stabilize the soils during construction should be planned.
- Shallow perched water and groundwater exists that should require dewatering planning.
- Care must be taken to ensure the integrity of the existing foundations are maintained.

Foundation Support

Foundation design includes evaluating for both bearing capacity and settlement; one or the other controls the design. Conventional foundation systems are typically designed using an allowable bearing capacity based on maximum total and differential settlements of 1 inch and ¾ inch, respectively. The addition can be supported by conventional spread footings. However, due to the presence of undocumented fills and organic soils, some soil improvement is expected.

The estimated footing pad elevations are 718 for exterior footings and 720 for interior footings. The following table identifies the depths/elevations where suitable soils are anticipated.

Boring No.	Surface Elevation (ft)	*Suitable Soil Depth (ft)	*Suitable Soil Elevation (ft)
B-1	720.77	0.5	720
B-2	714.33	3.5	711
B-3	715.68	3.5	712
B-4	717.41	0.5	717
B-5	716.05	3.5	712.5
B-6	717.05	1.0	716

Boring No.	Surface Elevation (ft)	*Suitable Soil Depth (ft)	*Suitable Soil Elevation (ft)
B-7	718.26	1.0	717
B-8	721.37	1.5	720
B-9	720.17	7.0	713
B-10	720.16	3.5	716.5
B-11	717.84	0.5	717.5
B-12	717.99	4.0	714

*Rounded to the nearest ½-foot.

Given the shallow depths of the unsuitable materials, over-excavation is considered the most-viable method. The bearing soils will consist of variable strength soils (1,000 psf to greater than 9,000 psf) or engineered fills placed to raise the existing grades or replace unsuitable soils. Because the bearing soils will vary, it is recommended that a conservative allowable bearing capacity be used by the structural engineer to design the footings to minimize differential settlements.

The foundation should be designed using an allowable bearing capacity value of 3,000 psf, with the understanding that some soil improvement will still be required. If a higher bearing capacity value is desired, additional soil improvement (e.g., over-excavation) under portions of the building would be required.

Traditionally, perimeter footings and interior footings in unheated areas should bear at a depth of at least 48 inches below the final exterior grade to provide adequate frost protection. If desired, exterior footings can bear at shallower depths by following ASCE 32-01 (American Society of Civil Engineers, Design and Construction of Frost-Protected Shallow Foundations, 2001). Interior footings not subject to frost can bear directly beneath the floor slab.

Seismic Design

The soil conditions present at a site are utilized in determining the Seismic Design Category (SDC) for structures. Part of selecting the SDC is determining the Site Class for the soils, which categorizes common soil conditions into broad classes, where typical ground motion attenuation and amplification effects are assigned. Site Class is determined based on the average properties of the soil within 100 feet of the ground surface. Geotechnical engineers use a variety of parameters to characterize the engineering properties of these soils, including general soil classifications (e.g., hard rock, soft clay, etc.), N-values, and laboratory testing.

Site Class A includes hard rock that is typically found only in the eastern United States. The types of rock typically found in the western states include various volcanic deposits, sandstones, shales, and granites that commonly have the characteristic appropriate to either Site Class B or C. Sites with very dense sands and gravels or very stiff to hard clay deposits also may qualify as Site Class C. Sites with relatively stiff cohesive or medium

dense non-cohesive soils, including mixtures of clays, silts, and sands, are categorized as Site Class D. Site Class D is the most common site class throughout the United States. Sites along rivers or other waterways underlain by deep soft clay deposits are categorized as Site Class E. Sites where soils are subject to liquefaction or other ground instabilities are categorized as Site Class F and site-specific analyses are required.

Based on the types of soils present at the boring locations at this property, and their apparent engineering properties, Site Class D is assigned to the site, as defined in the International Building Code (2015) Section 1613.

Floor Slab Support

Most of the existing soils (except for the organic soils) are suitable for support of concrete floor slabs. However, due to the presence of variable soils, floor slab area should be proof-rolled and soft areas removed or improved prior to the placement of base course materials. An average subgrade modulus value of 125 pounds per cubic inch (pci) is appropriate.

Engineered Fill, Wall, and Utility Trench Backfill

All engineered fill, wall, and utility trench backfill should consist of inorganic materials, free of debris, not exceed 3 inches in size, and should be placed in 8 to 10-inch loose lifts compacted to a minimum of 95 percent of the maximum dry density (Modified Proctor). The fill should be moisture conditioned to be within 3± percent of the optimum moisture content.

The on-site soils can be reused as engineered fill, assuming they do not include deleterious materials (organic soils, wet soils, etc.). However, due to the moisture sensitive nature of clay and silt soils, their use could pose construction challenges regarding achieving the required compaction requirements. The grading contractor may choose to use coarse-grained soil that can be more easily compacted and would be less sensitive to moisture levels.

Construction Considerations

All loose, wet, organic, disturbed, or otherwise unsuitable surface soils should be stripped from structural and engineered fill areas prior to any construction activities. The exposed subgrade soils and all engineered fills should be observed, tested, and documented by a representative of the geotechnical engineer. Large structural areas, such as the building footprint, pavement, and engineered fill zones, should be proof-rolled to identify low-strength or disturbed areas that need to be removed or improved.

Footing excavations and all structural subgrade soils should be evaluated to confirm the bearing materials are consistent with those identified in this report and anticipated by the structural engineer. If unanticipated conditions are encountered, the geotechnical and structural engineers should be notified immediately. All footing pads must bear upon suitable native soils or engineered fill soils that have been confirmed in the field by a

representative of the geotechnical engineer. Where unsuitable bearing soils, such as fill, organic, disturbed, wet, frozen, or low-strength (less than the design bearing capacity) soils are encountered, the excavation should be extended to competent bearing soil. If extended, the footing pads can be constructed at the base of the excavations, or the excavations can be backfilled with clean, crushed stone or lean concrete.

Most soils on-site will be sensitive to disturbances from construction activity due to their clay and silt content and high moisture content. Construction activities can cause significant reductions in soil strength and support capabilities. In addition, moisture sensitive soils that are or become wet will likely impact grading and compaction schedules. Care should be taken during construction to protect these soils from moisture or disturbance from equipment. Placing a working subbase layer of 3-inch crushed stone or utilizing a cement stabilization program in areas subjected to construction traffic could be beneficial and reduce the need to strip disturbed soils.

The structural design should also consider the proximity of new footings in relation to existing footing. Imparting new loads to existing footings could induce additional settlement and new footing excavations could affect the structural integrity of existing footings.

It is likely that excavations will encounter shallow groundwater or perched water. Filtered sump pumps and drawing water from sump pits should be adequate to remove water that collects in excavations. Sump pits should be lined with a geotextile and filled with open-graded, free- draining aggregate.

Surface water should not be allowed to collect in excavations or on prepared subgrades during or after construction. Areas should be sloped to facilitate removal of collected surface runoff. Positive site drainage should be provided to reduce infiltration of surface water around the perimeter of structures and within pavement areas.

Excavation walls may need to be sloped or braced for stability and safety reasons. The Owner and Contractor should be aware of, and become familiar with, applicable local, state, and federal safety regulations, including current OSHA Excavation and Trench Safety Standards. Construction-site safety generally is the responsibility of the Contractor, who should also be responsible for the means, methods, and sequencing of construction operations.

The Contractor should be aware that slope height, slope inclination, or excavation depths should in no case exceed those specified in local, state, or federal safety regulations, (e.g., OSHA Health and Safety Standards for Excavations, 29 CFR Part 1926), or successor regulations. The shallow soils encountered in the borings are Type A, B, and C when applying the OSHA regulations. Such regulations are strictly enforced, and if they are not followed, the Owner, Contractor, and/or earthwork Subcontractor(s) could be liable for substantial penalties.

2135 South 116th Street
West Allis, WI 53227

General Qualifications

The services provided by GeoTest were performed with the degree of skill and care typically performed by other members of the geotechnical engineering profession, practicing in this locale, at this time. No other warranty, expressed or implied, is given.

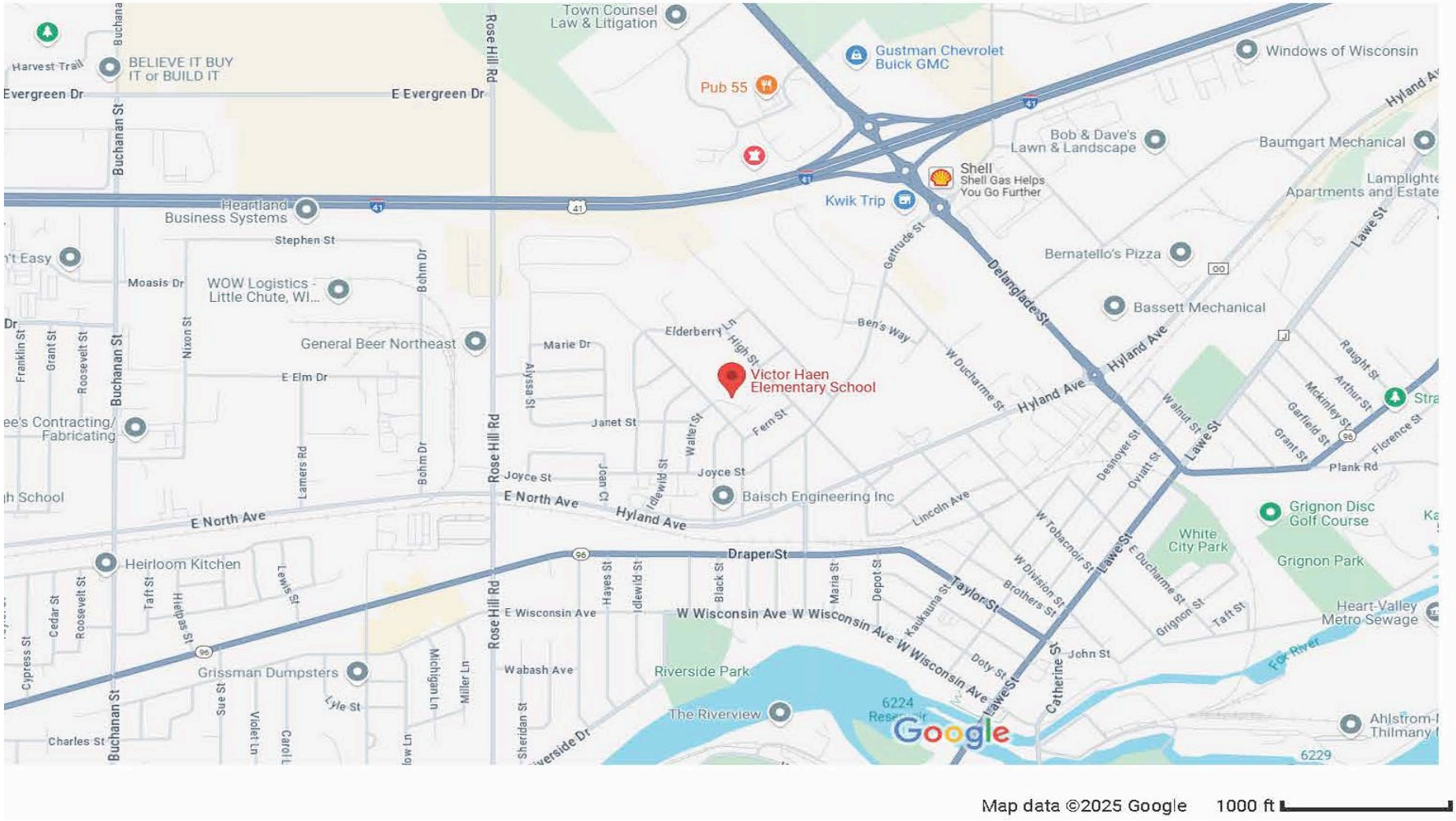
We appreciate the opportunity to provide geotechnical engineering services. If you have any questions, or require any further assistance, please feel free to contact us.

Sincerely,

Michael D. Frede, P.E.
Technical Director/Senior Engineer

Appendix A

- Figure 1 – Project Location Diagram
- Figure 2 – Boring Location Diagram



GeoTest	**Project Name:**	Victor Haen Elementary School	**Project No.:**	8556	**FIGURE 1** **Project Location Diagram**
	Project Location:	1130 Haen Drive Kaukauna, Wisconsin Outagamie County	**Date:** **Drawn By:** **Scale:**	4/3/25 MDF NTS	

GeoTest	**Project Name:** Victor Haen Elementary School **Project Location:** 1130 Haen Drive Kaukauna, Wisconsin Outagamie County	**Project No.:** 8556 **Date:** 4/3/25 **Drawn By:** MDF **Scale:** NTS	**FIGURE 2** **Boring Location Diagram**

Appendix B

- General Notes
- Boring Logs
  - B-1 through B-12
- Unified Soil Classification System (USCS)
- Atterberg Limits Test Reports
  - B-3:23.5-25’
  - B-12:3.5-5’

General Notes

Drilling and Sampling Abbreviations:

AD	Solid-Stem Auger	**OS**	Osterberg Sampler, 3-inch-O.D. Shelby Tube
AS	Auger Sample	**PMT**	Pressuremeter Test (In Situ)
BS	Bulk Sample	**RD**	Rotary Drilling
DD	Diamond Core Drilling	**SS**	Split-Spoon Sampler, 1.375-inch-I.D., 2-inch-O.D. (Unless otherwise noted)
FT	Fish Tail		
GP	Geoprobe	**ST**	Shelby Tube Sampler, 2-inch-O.D. (Unless otherwise noted)
GS	Giddings Sampler	**VS**	Vane Shear
HA	Hand-Auger Drilling	**WOH**	Weight of Hammer
HS	Hollow-Stem Auger	**WS**	Wash Sample

Standard Penetration ("N"): Blows per foot of a 140-pound hammer falling 30 inches on a 2-inch-O.D. split-spoon sampler, except where otherwise noted.

Water Level Measurement Abbreviations:

AAR	After Auger Removal	**BCR**	Before Casing Removal	**WS**	While Sampling
AB	After Boring	**DCI**	Dry Cave In		
ACR	After Casing Removal	**WCI**	Wet Cave In		
BAR	Before Auger Removal	**WD**	While Drilling		
BCI	Before Casing Installation	**WL**	Water Level		

Water levels indicated on the boring logs are the levels measured in the boring at the times indicated. In relatively pervious soils, the observed water levels are considered a reliable indicator of groundwater positions. In relatively impervious soils, the accurate determination of groundwater elevations may not be possible, even after several days of observations. In this case, other indicators of groundwater position, such as sealed observation wells or piezometers, may be required.

Gradation Description and Terminology:

Coarse-grained granular soils have more than 50% of their dry weight retained on a #200 sieve (0.074 mm); they include boulders, cobbles, gravel, sand, and combinations thereof. Fine-grained soils have less than 50% of their dry weight retained on a #200 sieve. Fine-grained granular soils are non-cohesive, and include silt; fine-grained cohesive soils include silty clay, and clay.

Major Component of Sample	Size Range	Description of Components Present in Sample	Percent of Dry Weight
Boulders	Over 8" (200 mm)	Trace	<5
Cobbles	8" to 3" (200 to 75 mm)	Few	5 - 10
Gravel	3" to #4 sieve (75 to 4.76 mm)	Little	15 - 25
Sand	#4 to #200 sieve (4.76 to 0.074 mm)	Some	30 - 45
Silt	Passing #200 sieve (0.074 to 0.005 mm)		
Clay	Smaller than 0.005 mm		

Consistency of Cohesive Soils

Unconfined Compressive Strength, Qu, tsf	Consistency
<0.25	Very Soft
0.25 - 0.49	Soft
0.50 - 0.99	Medium Stiff
1.00 - 1.99	Stiff
2.00 - 3.99	Very Stiff
>4.00	Hard

Relative Density of Granular Soils

N, Blows per 12 inches	Relative Density
0 - 3	Very Loose
4 - 9	Loose
10 - 29	Medium Dense
30 - 49	Dense
50 - 80	Very Dense
>80	Extremely Dense

SOIL BORING LOG

Boring By: Point of Beginning Inc.

Project: Victor Haen Elementary School Addition
Location: See Map
Rig: Mobile B57 ATV

Boring: 1
Auger: 3.25"HSA
Page: 1 of 1
Drillers: DC/TH
Date: 3/26/25
Elevation: 720.77

Depth (ft.)		Classification/Description	#	Sample Depth (ft.)	N	Rec (in.)	M	Qp (tsf)	Notes
	-	Concrete							
1	-	-----5"-----	1	1 - 2.5	10	17"	M	4.5	MC 17.4%
	-	Brown F-M Sand w/ Little Silt and Little Gravel							
2	-	USCS - SP							
	-	-----1.0'----							
3	-	Brown Silty Sandy Clay w/ Little Gravel							
	-	USCS - CL	2	3.5 - 5	10	0"			
4	-								
	-								
5	-								
	-								
6	-	-----6.0'-----	3	6 - 7.5	16	12"	W	1.75	MC 19.3%
	-	Brown Sandy Silt w/ Trace Gravel							
7	-	USCS - ML							
	-								
8	-								
	-		4	8.5 - 10	9	13"	S	1.5	MC 19.9%
9	-	-----9.0-----							
	-	Brown Silty Sandy Clay w/ Trace Gravel							
10	-								
	-								
11	-								
	-								
12	-								
	-								
13	-								
	-	-----13.5'-----	5	13.5 - 15	6	11"	S	1.0	MC 20.5%
14	-	Brown Silty Sandy Clay w/ Little Gravel							
	-	USCS - CL							
15	-								
	-								
16	-								
	-								
17	-								
	-								
18	-								
	-	-----18.5'-----	6	18.5 - 20	21	10"	S		MC 20.9%
19	-	Gray Sandy Silt w/ Trace Gravel							
	-	USCS - ML							
20	-	-----Water @ 19.0'-----							
	-								
21	-								
	-								
22	-	-----23.5'-----							
	-	Brown Silty Clay w/ Trace Gravel							
23	-	USCS - CL							
	-	-----E.O.B. 25'-----	7	23.5 - 25	4	18"	S	1.0	MC 21.5%
24	-	-----Water at 19.0' at Completion-----							
	-	-----Backfilled with Bentonite Chips-----							
25	-								

SOIL BORING LOG

Boring By: Point of Beginning Inc.

Project: Victor Haen Elementary School Addition
Location: See Map
Rig: Mobile B57 ATV

Boring: 2
Auger: 3.25"HSA
Page: 1 of 1
Drillers: DC/TH
Date: 3/25/25
Elevation: 714.33

Depth (ft.)		Classification/Description	#	Sample Depth (ft.)	N	Rec (in.)	M	Qp (tsf)	Notes
	-	Dark Brown Silty Sandy Clay Topsoil	1	0 - 2	2	18"	S		MC 34.3%
1	-	-----14"-----							
	-	Dark Brown Silty Clayey Peat							
2	-	USCS - PT							
	-								
3	-								
	-	-----3.5'-----	2	3.5 - 5	10	16"	S	2.75	MC 20.7%
4	-	Brown Silty Sandy Clay w/ Trace Gravel							
	-	USCS - CL							
5	-								
	-								
6	-		3	6 - 7.5	11	15"	S	2.75	MC 22.1%
	-								
7	-								
	-								
8	-								
	-	-----8.5'-----	4	8.5 - 10	6	16"	S	2.25	MC 21.0%
9	-	Brown/Red Sily Clay w/ Little Sand and Trace Gravel							
	-	USCS - CL							
10	-	-----Water @ 9.0'-----							
	-								
11	-								
	-								
12	-								
	-								
13	-								
	-		5	13.5 - 15	4	18"	S	1.5	MC 21.2%
14	-								
	-								
15	-								
	-								
16	-								
	-								
17	-								
	-								
18	-								
	-		6	18.5 - 20	4	18"	S	1.5	MC 24.1%
19	-								
	-								
20	-								
	-								
21	-								
	-								
22	-								
	-								
23	-								
	-	-----E.O.B. 25'-----	7	23.5 - 25	2	18"	S	1.0	MC 21.8%
24	-	-----Water at 9.0' at Completion-----							
	-	-----Backfilled with Bentonite Chips-----							
25	-								

SOIL BORING LOG

Boring By: Point of Beginning Inc.

Project: Victor Haen Elementary School Addition
Location: See Map
Rig: Mobile B57 ATV

Boring: 3
Auger: 3.25"HSA
Page: 1 of 1
Drillers: DC/TH
Date: 3/25/25
Elevation: 715.68

Depth (ft.)		Classification/Description	#	Sample Depth (ft.)	N	Rec (in.)	M	Qp (tsf)	Notes
	-	Dark Brown Silty Sandy Clay Topsoil	1	0 - 2	4	18"	S		MC 21.4%
1	-	-----11.5"-----							
	-	Dark Brown Silty Sandy Clay							
2	-	(Fill)							
	-	USCS - CL							
3	-								
	-	-----3.5'-----	2	3.5 - 5	16	16"	M		MC 16.5%
4	-	Brown Silty Sandy Clay w/ Trace Gravel							
	-	USCS - CL							
5	-								
	-								
6	-		3	6 - 7.5	25	16'	W		MC 17.9%
	-								
7	-	-----Water @ 7.5'-----							
	-								
8	-								
	-		4	8.5 - 10	24	15"	M	4.5	MC 12.2%
9	-	-----9.0-----							
	-	Brown/Red Silty Clay w/ Little Sand and Trace Gravel							
10	-	USCS - CL							
	-								
11	-								
	-								
12	-								
	-								
13	-								
	-		5	13.5 - 15	8	15"	S	1.75	MC 19.1%
14	-								
	-								
15	-								
	-								
16	-								
	-								
17	-								
	-								
18	-								
	-		6	18.5 - 20	9	18"	S	1.75	MC 21.9%
19	-								
	-								
20	-								
	-								
21	-								
	-								
22	-								
	-								
23	-								
	-	-----E.O.B. 25'-----	7	23.5 - 25	4	18"	S	1.25	MC 23.1%
24	-	-----Water at 7.5' at Completion-----							
	-	-----Backfilled with Bentonite Chips-----							
25	-								

SOIL BORING LOG

Boring By: Point of Beginning Inc.

Project: Victor Haen Elementary School Addition
Location: See Map
Rig: Mobile B57 ATV

Boring: 4
Auger: 3.25"HSA
Page: 1 of 1
Drillers: DC/TH
Date: 3/26/25
Elevation: 717.41

Depth (ft.)		Classification/Description	#	Sample Depth (ft.)	N	Rec (in.)	M	Qp (tsf)	Notes
	-	Dark Brown Silty Sandy Clay Topsoil	1	0 - 2	6	18"	S	2.5	MC 20.4%
1	-	-----8"-----							
	-	Brown Silty Sandy Clay w/ Trace Gravel							
2	-	USCS - CL							
	-								
3	-								
	-		2	3.5 - 5	19	12"	M		MC 16.2%
4	-								
	-	-----4.5'-----							
5	-	Brown Mostly Fine Silty Sand w/ Trace Gravel							
	-	USCS - SP-SM							
6	-		3	6 - 7.5	16	10"	S		MC 18.2%
	-	-----6.5'------							
7	-	Brown F-M Sand w/ Little Silt and Trace Gravel							
	-	USCS - SP							
8	-								
	-	-----8.5'-----	4	8.5 - 10	16	12"	M	3.75	MC 14.9%
9	-	Brown Silty Sandy Clay w/ Trace Gravel							
	-	USCS - CL							
10	-								
	-								
11	-								
	-								
12	-	-----Water @ 12.0'----							
	-								
13	-								
	-		5	13.5 - 15	14	15"	S	2.75	MC 23.2%
14	-								
	-								
15	-								
	-								
16	-								
	-								
17	-								
	-								
18	-								
	-		6	18.5 - 20	8	13"	S	2.0	MC 21.7%
19	-								
	-								
20	-								
	-								
21	-								
	-								
22	-								
	-								
23	-								
	-	-----E.O.B. 25'-----	7	23.5 - 25	8	16"	W	1.5	MC 18.3%
24	-	-----Water at 12.0' at Completion-----							
	-	-----Backfilled with Bentonite Chips-----							
25	-								

SOIL BORING LOG

Boring By: Point of Beginning Inc.

Project: Victor Haen Elementary School Addition
Location: See Map
Rig: Mobile B57 ATV

Boring: 5
Auger: 3.25"HSA
Page: 1 of 1
Drillers: DC/TH
Date: 3/26/25
Elevation: 716.05

Depth (ft.)		Classification/Description	#	Sample Depth (ft.)	N	Rec (in.)	M	Qp (tsf)	Notes
	-	Asphalt							
1	-	-----7.5"-----	1	1 - 2.5	8	16"	S		MC 20.5%
	-	Brown F-M Sand and Gravel w/ Little Silt							
2	-	(CABC)							
	-	-----1.0'----							
3	-	Dark Brown Silty Sandy Clay w/ Little Gravel							
	-	(Fill)	2	3.5 - 5	13	15"	M		MC 16.8%
4	-	USCS - CL							
	-	-----3.5'-----							
5	-	Brown Silty Sandy Clay w/ Trace Gravel							
	-	USCS - CL							
6	-	-----4.5'-----	3	6 - 7.5	17	13"	S		MC 21.0%
	-	Brown Sandy Silt w/ Trace Gravel							
7	-	USCS - ML							
	-								
8	-								
	-		4	8.5 - 10	18	14"	W		MC 16.3%
9	-								
	-								
10	-								
	-								
11	-								
	-								
12	-								
	-								
13	-								
	-	-----13.5'-----	5	13.5 - 15	6	16"	S	1.25	MC 20.6%
14	-	Brown Silty Clay w/ Little Sand and Trace Gravel							
	-	USCS - CL							
15	-	-----Water @ 14.0'-----							
	-								
16	-								
	-								
17	-								
	-								
18	-								
	-		6	18.5 - 20	6	14"	S	1.25	MC 28.9%
19	-								
	-								
20	-								
	-								
21	-								
	-								
22	-								
	-								
23	-								
	-	-----E.O.B. 25'-----	7	23.5 - 25	4	16"	S	1.5	MC 20.3%
24	-	-----Water at 14.0' at Completion-----							
	-	-----Backfilled with Bentonite Chips-----							
25	-								

SOIL BORING LOG

Boring By: Point of Beginning Inc.

Project: Victor Haen Elementary School Addition
Location: See Map
Rig: Mobile B57 ATV

Boring: 6
Auger: 3.25"HSA
Page: 1 of 1
Drillers: DC/TH
Date: 3/26/25
Elevation: 717.05

Depth (ft.)		Classification/Description	#	Sample Depth (ft.)	N	Rec (in.)	M	Qp (tsf)	Notes
	-	Dark Brown Silty Sandy Clay Topsoil	1	0-2	8	18"	M		MC 15.8%
1	-	-----11"-----							
	-	Brown/Red Silty Sandy Clay w/ Trace Gravel							
2	-	USCS - CL							
	-								
3	-								
	-	Brown Sandy Silt w/ Trace Gravel	2	3.5 - 5	15	14"	M		MC 17.7%
4	-	USCS - ML							
	-								
5	-								
	-								
6	-		3	6 - 7.5	19	14"	S		MC 17.5%
	-	----6.5'-----							
7	-	Brown Mostly Fine Sand w/ Some Silt							
	-	and Trace Gravel							
8	-	USCS - SP-SM							
	-	------8.5'-----	4	8.5 - 10	12	16"	M	4.5	MC 16.2%
9	-	Brown/Red Silty Sandy Clay w/ Trace Gravel							
	-	USCS - CL							
10	-								
	-								
11	-								
	-								
12	-								
	-								
13	-								
	-	-----13.5'-----	5	13.5 - 15	17	11"	S		MC 18.1%
14	-	Gray Mostly Fine Silty Sand w/ Trace Gravel							
	-	USCS - SP-SM							
15	-	-----Water @ 14.0'-----							
	-								
16	-								
	-								
17	-								
	-								
18	-	"-----18.5'-----							
	-	Brown Silty Clay w/ Some Sand and Trace Gravel	6	18.5 - 20	6	18"	W	1.5	MC 18.2%
19	-	USCS - CL							
	-								
20	-								
	-								
21	-								
	-								
22	-	-----23.5'-----							
	-	Red/Brown Clay w/ Little Silt and Trace Gravel							
23	-	USCS - CH							
	-	-----E.O.B. 25'-----	7	23.5 - 25	8	16"	S	3.0	MC 35.2%
24	-	-----Water at 14.0' at Completion-----							
	-	-----Backfilled with Bentonite Chips-----							
25	-								

SOIL BORING LOG

Boring By: Point of Beginning Inc.

Project: Victor Haen Elementary School Addition
Location: See Map
Rig: Mobile B57 ATV

Boring: 7
Auger: 3.25"HSA
Page: 1 of 1
Drillers: DC/TH
Date: 3/27/25
Elevation: 718.26

Depth (ft.)	Classification/Description	#	Sample Depth (ft.)	N	Rec (in.)	M	Qp (tsf)	Notes
0	Dark Brown Silty Sandy Clay Topsoil	1	0-2	7	16"	W		MC 19.7%
1	-----12"-----							
	Brown/Red Silty Sandy Clay w/ Trace Gravel							
2	USCS - CL							
3								
	-----3.5'-----	2	3.5 - 5	11	15"	M	1.75	MC 14.5%
4	Brown Silty Clay w/ Some Sand and Trace Gravel							
	USCS - CL							
5								
6		3	6 - 7.5	12	12"	M		MC 17.0%
7								
8								
	------8.5'-----	4	8.5 - 10	22	15"	S		MC 25.2%
9	Brown F-M Sand w/ Some Silt and Trace Gravel							
	USCS - SP-SM							
10	-----Water @ 10.0'------							
11								
12								
13								
		5	13.5 - 15	14	18"	S		MC 23.1%
14								
15								
16								
17								
18								
	-----18.5'-----	6	18.5 - 20	4	18"	S	1.25	MC 24.1%
19	Brown Silty Clay w/ Little Sand and Trace Gravel							
	USCS - CL							
20								
21								
22								
23								
	-----E.O.B. 25'-----	7	23.5 - 25	5	18"	S	1.5	MC 20.6%
24	-----Water at 10.0' at Completion-----							
	-----Backfilled with Bentonite Chips-----							
25								

SOIL BORING LOG

Boring By: Point of Beginning Inc.

Project: Victor Haen Elementary School Addition
Location: See Map
Rig: Mobile B57 ATV

Boring: 8
Auger: 3.25"HSA
Page: 1 of 1
Drillers: DC/TH
Date: 3/26/25
Elevation: 721.37

Depth (ft.)		Classification/Description	#	Sample Depth (ft.)	N	Rec (in.)	M	Qp (tsf)	Notes
	-	Concrete							
1	-	-----5"-----	1	1 - 2.5	3	16"	W		MC 17.1%
	-	Brown F-M Sand w/ Little Silt and Trace Gravel							
2	-	(Fill)							
	-	-----1.5'-----							
3	-	Brown Silty Sandy Clay w/ Trace Gravel							
	-	USCS - CL	2	3.5 - 5	6	10"	M		MC 16.5%
4	-								
	-								
5	-								
	-								
6	-	-----6.0'-----	3	6 - 7.5	6	12"	S	1.75	MC 20.6%
	-	Brown/Red Silty Sandy Clay w/ Trace Gravel							
7	-	USCS - CL							
	-								
8	-								
	-		4	8.5 - 10	16	11"	S		MC 18.4%
9	-	-----9.0'-----							
	-	Brown F-M Silty Sand w/ Trace Gravel							
10	-	USCS - SP-SM							
	-	----Water @ 10.0'-----							
11	-								
	-								
12	-								
	-								
13	-								
	-	-----13.5'-----	5	13.5 - 15	15	14"	S		MC 15.7%
14	-	Brown Sandy Silt w/ Trace Gravel							
	-	USCS - ML							
15	-								
	-								
16	-								
	-								
17	-								
	-								
18	-								
	-	-----18.5'-----	6	18.5 - 20	17	16"	M	2.5	MC 15.6%
19	-	Brown Silty Clay w/ Little Sand and Trace Gravel							
	-	USCS - CL							
20	-								
	-								
21	-								
	-								
22	-								
	-								
23	-								
	-	-----E.O.B. 25'-----	7	23.5 - 25	3	18"	S	1.25	MC 21.7%
24	-	-----Water at 10.0' at Completion-----							
	-	-----Backfilled with Bentonite Chips-----							
25	-								

SOIL BORING LOG

Boring By: Point of Beginning Inc.

Project: Victor Haen Elementary School Addition
Location: See Map
Rig: Mobile B57 ATV

Boring: 9
Auger: 3.25"HSA
Page: 1 of 1
Drillers: DC/TH
Date: 3/27/25
Elevation: 720.17

Depth (ft.)		Classification/Description	#	Sample Depth (ft.)	N	Rec (in.)	M	Qp (tsf)	Notes
	-	Dark Brown Silty Sandy Clay Topsoil	1	0 - 2	10	18"	M		MC 16.1%
1	-	-----6"-----							
	-	Brown/Red Silty Sandy Clay w/ Trace Gravel							
2	-	(Possible Fill)							
	-	USCS - CL							
3	-	----1.5'-----							
	-	Brown F-M Silty Sand w/ Trace Gravel	2	3.5 - 5	8	12"	W	1.75	MC 18.5%
4	-	(Possible Fill)							
	-	USCS - SP-SM							
5	-	-----3.5'-----							
	-	Brown/Red Silty Sandy Clay w/ Trace Gravel							
6	-	(Possible Fill)	3	6 - 7.5	16	14"	S		MC 17.9%
	-	USCS - CL							
7	-	-----7.0'-----							
	-	Brown F-M Silty Sand w/ Trace Gravel							
8	-	USCS - SP-SM							
	-		4	8.5 - 10	27	11"	S		MC 16.8%
9	-								
	-								
10	-								
	-								
11	-								
	-								
12	-								
	-								
13	-								
	-		5	13.5 - 15	14	10"	S		MC 20.5%
14	-	-----Water @ 14.0'-----							
	-								
15	-								
	-								
16	-								
	-								
17	-								
	-								
18	-								
	-	-----18.5'-----	6	18.5 - 20	10	16"	S	2.25	MC 25.2%
19	-	Brown Silty Clay w/ Little Sand and Trace Gravel							
	-	USCS - CL							
20	-								
	-								
21	-								
	-								
22	-								
	-								
23	-								
	-	-----E.O.B. 25'-----	7	23.5 - 25	6	15"	S	1.5	MC 26.7%
24	-	-----Water at 14.0' at Completion-----							
	-	-----Backfilled with Bentonite Chips-----							
25	-								

SOIL BORING LOG

Boring By: Point of Beginning Inc.

Project: Victor Haen Elementary School Addition
Location: See Map
Rig: Mobile B57 ATV

Boring: 10
Auger: 3.25"HSA
Page: 1 of 1
Drillers: DC/TH
Date: 3/26/25
Elevation: 720.16

Depth (ft.)		Classification/Description	#	Sample Depth (ft.)	N	Rec (in.)	M	Qp (tsf)	Notes
	-	Dark Brown Silty Sandy Clay Topsoil	1	0 - 2	9	18"	M		MC 12.9%
1	-	-----7"-----							
	-	Brown/Red Silty Sandy Clay w/ Trace Gravel							
2	-	(Possible Fill)							
	-	USCS - CL							
3	-	----1.5'-----							
	-	Dark Brown Silty Sandy Clay w/ Trace Gravel	2	3.5 - 5	13	13"	W	2.5	MC 17.0%
4	-	(Possible Fill)							
	-	USCS - SP-SM							
5	-	-----3.5'-----							
	-	Brown/Red Silty Sandy Clay w/ Trace Gravel							
6	-	USCS - CL	3	6 - 7.5	30	11"	S		MC 27.2%
	-	-----6.0'-----							
7	-	Brown Sandy Silt w/ Trace Gravel							
	-	USCS - ML							
8	-								
	-	-----8.5'-----	4	8.5 - 10	11	8"	S		MC 25.8%
9	-	Brown F-M Sand w/ Little Silt and Trace Gravel							
	-	USCS - SP							
10	-	-----Water @ 9.0'-----							
	-								
11	-								
	-								
12	-								
	-								
13	-								
	-		5	13.5 - 15	15	10"	S		MC 22.0%
14	-								
	-								
15	-								
	-								
16	-								
	-								
17	-								
	-								
18	-								
	-		6	18.5 - 20	13	13"	S		MC 23.1%
19	-								
	-								
20	-								
	-								
21	-								
	-								
22	-	-----23.5'-----							
	-	Brown Silty Sandy Clay w/ Trace Gravel							
23	-	USCS - CL							
	-	-----E.O.B. 25'-----	7	23.5 - 25	8	18"	S	2.25	MC 19.4%
24	-	-----Water at 9.0' at Completion-----							
	-	-----Backfilled with Bentonite Chips-----							
25	-								

SOIL BORING LOG

Boring By: Point of Beginning Inc.

Project: Victor Haen Elementary School Addition
Location: See Map
Rig: Mobile B57 ATV

Boring: 11
Auger: 3.25"HSA
Page: 1 of 1
Drillers: DC/TH
Date: 3/27/25
Elevation: 717.84

Depth (ft.)		Classification/Description	#	Sample Depth (ft.)	N	Rec (in.)	M	Qp (tsf)	Notes
	-	Dark Brown Silty Sandy Clay Topsoil	1	0 - 2	7	12"	S		MC 23.1%
1	-	-----7"-----							
	-	Brown/Gray Silty Sandy Clay w/ Trace Gravel							
2	-	USCS - CL							
	-								
3	-								
	-	-----3.5'-----	2	3.5 - 5	26	10"	W		MC 10.1%
4	-	Brown F-M Silty Sand w/ Trace Gravel							
	-	USCS - SP-SM							
5	-								
	-								
6	-		3	6 - 7.5	20	13"	S		MC 20.8%
	-								
7	-								
	-								
8	-								
	-		4	8.5 - 10	14	14"	S		MC 23.3%
9	-								
	-								
10	-								
	-								
11	-								
	-								
12	-								
	-								
13	-								
	-	-----13.5'-----	5	13.5 - 15	13	13"	M	3.5	MC 14.3%
14	-	Brown Sandy Clay w/ Little Silt and Trace Gravel							
	-	USCS - CL							
15	-	-----Water @ 14.0'----							
	-								
16	-								
	-								
17	-								
	-								
18	-								
	-	-----18.5'-----	6	18.5 - 20	26	18"	W	2.25	MC 16.3%
19	-	Brown F-M Silty Sand w/ Trace Gravel							
	-	USCS - SP-SM							
20	-	-----19.5'-----							
	-	Brown Silty Sandy Clay w/ Trace Gravel							
21	-	USCS - CL							
	-								
22	-								
	-								
23	-								
	-	-----E.O.B. 25'-----	7	23.5 - 25	9	14"	S	2.25	MC 20.2%
24	-	-----Water at 14.0' at Completion-----							
	-	-----Backfilled with Bentonite Chips-----							
25	-								

SOIL BORING LOG

Boring By: Point of Beginning Inc.

Project: Victor Haen Elementary School Addition
Location: See Map
Rig: Mobile B57 ATV

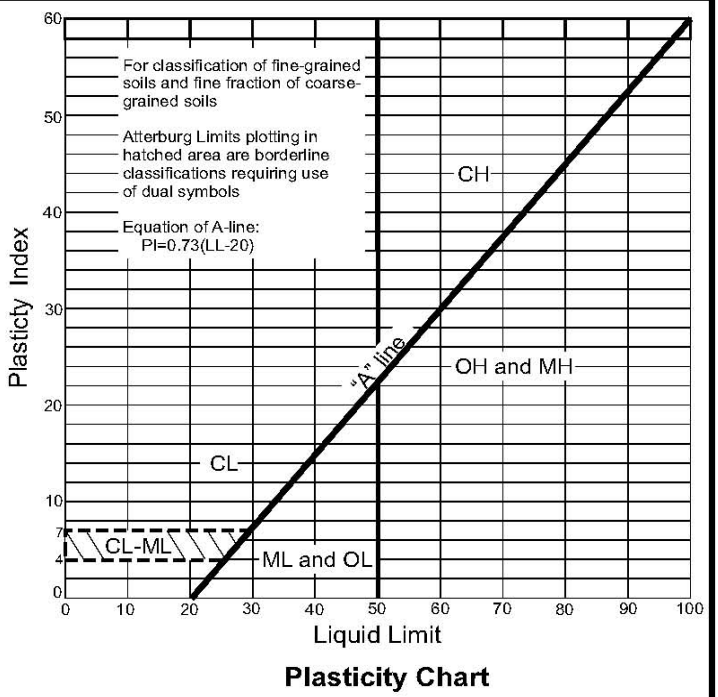
Boring: 12
Auger: 3.25"HSA
Page: 1 of 1
Drillers: DC/TH
Date: 3/27/25
Elevation: 717.99

Depth (ft.)		Classification/Description	#	Sample Depth (ft.)	N	Rec (in.)	M	Qp (tsf)	Notes
	-	Dark Brown Silty Sandy Clay Topsoil	1	0 - 2	7	18"	S		MC 21.2%
1	-	(Fill)							
	-								
2	-								
	-								
3	-								
	-		2	3.5 - 5	12	16"	M	4.5	MC 13.6%
4	-	-----4.0'-----							
	-	Brown Silty Sandy Clay w/Little Gravel							
5	-	USCS - CL							
	-								
6	-	-----6.0'-----	3	6 - 7.5	21	14"	W		MC 12.6%
	-	Brown F-M Silty Clayey Sand w/ Trace Gravel							
7	-	USCS - CL							
	-								
8	-								
	-		4	8.5 - 10	23	15"	W		MC 15.5%
9	-								
	-								
10	-								
	-								
11	-								
	-								
12	-								
	-								
13	-								
	-	-----13.5'-----	5	13.5 - 15	6	15"	W	2.0	MC 19.6%
14	-	Brown/Red Silty Clay w/ Some Sand and Trace Gravel							
	-	USCS - CL							
15	-	-----Water @ 14.0'-----							
	-								
16	-								
	-								
17	-								
	-								
18	-								
	-		6	18.5 - 20	13	14"	S		MC 13.7%
19	-	-----19.0'-----							
	-	Brown F-M Silty Sand w/ Trace Gravel							
20	-	USCS - SP-SM							
	-								
21	-								
	-								
22	-	-----23.5'-----							
	-	Brown/Red Silty Clay w/ Some Sand and Trace Gravel							
23	-	USCS - CL							
	-	-----E.O.B. 25'-----	7	23.5 - 25	7	16"	S	1.5	MC 24.0%
24	-	-----Water at 14.0' at Completion-----							
	-	-----Backfilled with Bentonite Chips-----							
25	-								

Unified Soil Classification System (USCS)

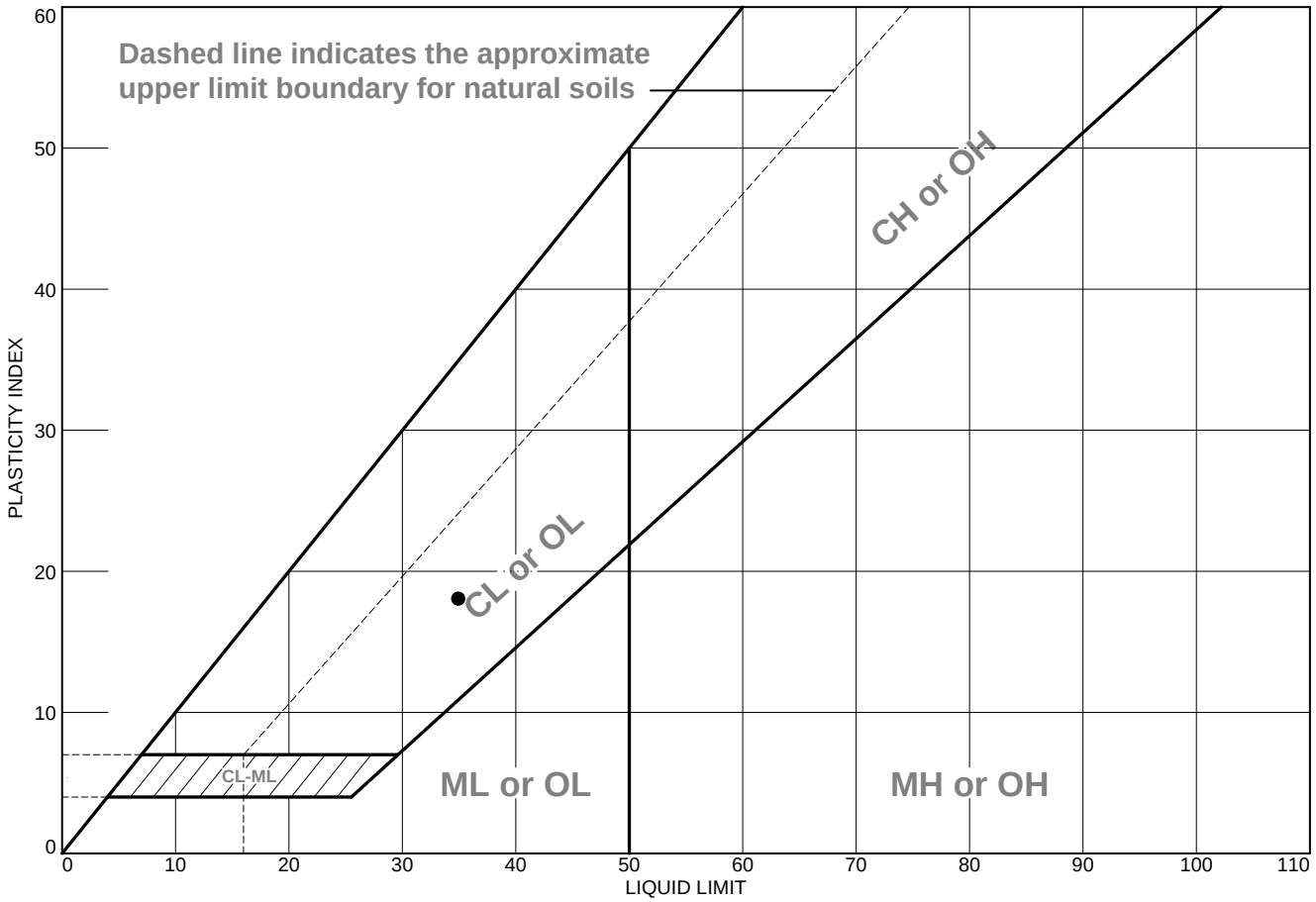
Major Divisions			Group symbols	Typical Names	Laboratory classification criteria	
Coarse-grained soils (More than half of material is larger than No. 200 sieve size)	Gravels (More than half of coarse fraction is larger than No. 4 sieve size)	Clean gravels (Little or no fines)	GW	Well-graded gravels, gravel-sand mixtures, little or no fines	$C_u = \frac{D_{60}}{D_{10}}$ greater than 4; $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ between 1 and 3	
			GP	Poorly graded gravels, gravel-sand mixtures, little or no fines	Not meeting all gradation requirements for GW	
		Gravels with fines (Appreciable amount of fines)	GM d u	Silty gravels, gravel-sand-silt mixtures	Atterberg limits below "A" line or P.I. less than 4	Above "A" line with P.I. Between 4 and 7 are borderline cases requiring use of dual symbols
			GC	Clayey gravels, gravel-sand-clay mixtures	Atterberg limits above "A" line or P.I. greater than 7	
	Sands (More than half of coarse fraction is smaller than No. 4 sieve size)	Clean sands (Little or no fines)	SW	Well-graded sands, gravelly sands, little or no fines	$C_u = \frac{D_{60}}{D_{10}}$ greater than 6; $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ between 1 and 3	
			SP	Poorly graded sands, gravelly sands, little or no fines	Note meeting all gradation requirements for SW	
		Sands with fines (Appreciable amount of fines)	SM d u	Silty sand, sand-silt mixtures	Atterberg limits below "A" line or P.I. less than 4	Limits plotting in hatched zone with P.I. between 4 and 7 are borderline cases requiring use of dual symbols
			SC	Clayey sands, sand-clay mixtures	Atterberg limits above "A" line or P.I. greater than 7	
Fine-grained soils (More than half of material is smaller than No. 200 sieve size)	Silts and clays (Liquid limit less than 50)		ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity		
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silt clays, lean clays		
			OL	Organic silts and organic silty clays of low plasticity		
	Silts and clays (Liquid limit greater than 50)		MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soil, elastic silts		
			CH	Inorganic clays of high plasticity, fat clays		
			OH	Organic clays of medium to high plasticity, organic silts		
	Highly organic soils		Pt	Peat and other highly organic soils		

Determine percentages of sand and gravel from grain-size curve.
Depending on percentage of fines (fraction smaller than No. 200 sieve size), coarse-grained soils are classified as follows:
Less than 5 percent . . . . . GW, GP, SW, SP
More than 12 percent . . . . . GM, GC, SM, SC
5 to 12 percent . . . . . Borderline cases requiring dual symbols



Plasticity Chart

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●	Brown Clay with little silt and trace gravel	35	17	18			

Project No. 25.2022 **Client:** Kaukauna School District

Project: Victor Haen Elementary School

●**Source of Sample:** B3-S7 **Sample Number:** B3-S7

Remarks:

●Sample B3-S7

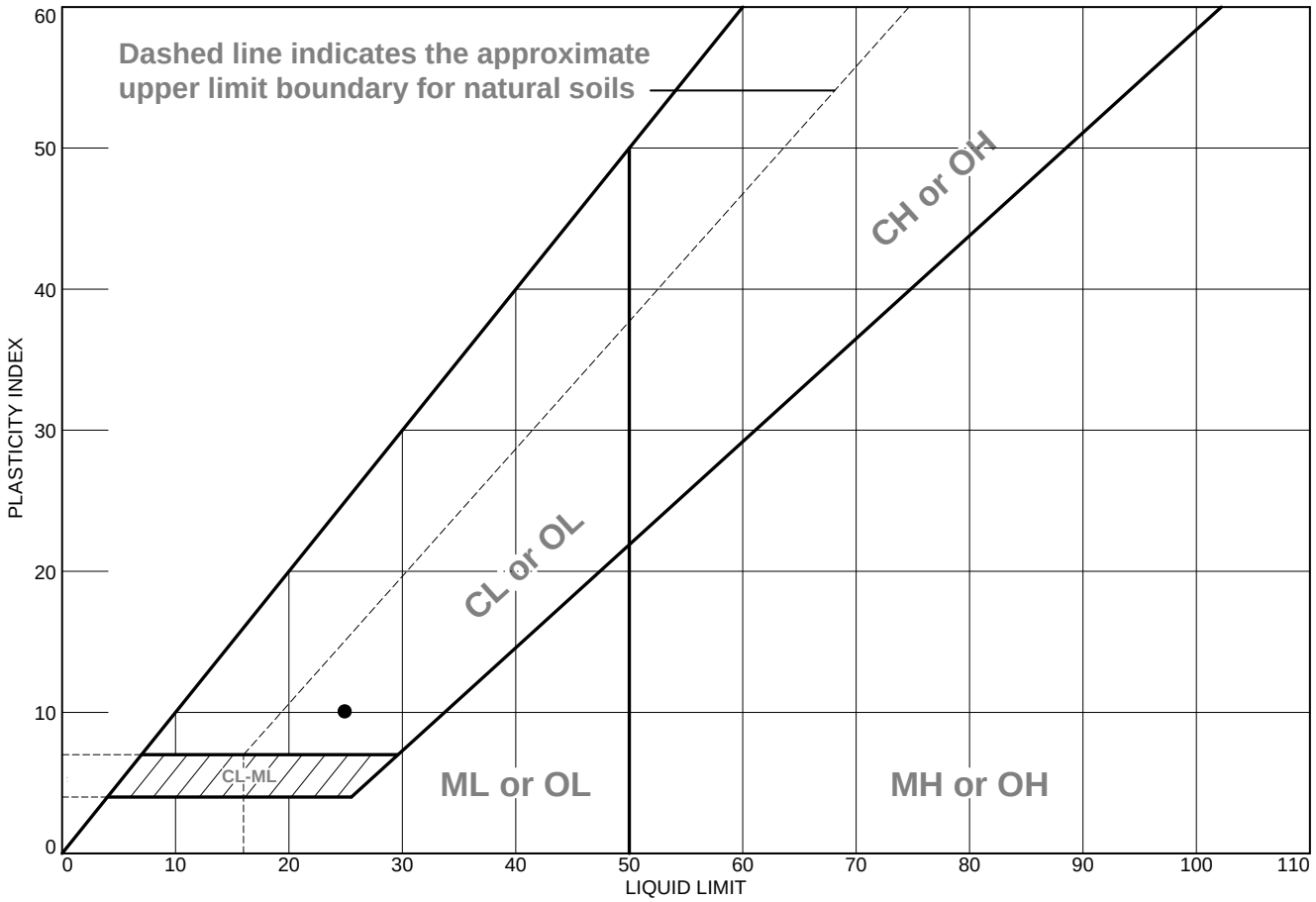
Point of Beginning, Inc.

Stevens Point, Wisconsin

Figure

Tested By: NH

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●	Brown Silty Clay with Trace gravel	25	15	10			

Project No. 25.2022 **Client:** Kaukauna School District

Project: Victor Haen Elementary School

●**Source of Sample:** B12-S2 **Sample Number:** B12-S2

Remarks:

●Sample B12-S2

Point of Beginning, Inc.

Stevens Point, Wisconsin

Figure

Tested By: NH

Appendix C

- Drilling Procedures
- Sampling Procedures
- Laboratory Procedures

Hand-Auger Drilling (HA)

A sampling device is driven into the soil to the desired sample depth by a sledge hammer. After extracting the sample, the hole is advanced by a hand auger until the next sampling depth is reached. The manual driving of the sampler, especially into cohesive soils, may result in some sample disturbance. However, there are some situations where this method is the only viable option.

Solid-Stem Auger Drilling (AD)

Continuous flight augers are turned and hydraulically advanced by a truck- or track-mounted unit to create a borehole. In solid-stem auger drilling, casing and drilling mud are not typically used to maintain an open borehole.

Hollow-Stem Auger Drilling (HS)

Continuous flight augers having open stems are used to advance the borehole. The open stem allows the sampling tool to be used without removing the augers from the borehole. Hollow-stem augers maintain an open borehole during the sampling operations. This sampling method is not appropriate for geotechnical investigation beneath the water table, especially in granular soils.

Rotary Drilling (RD)

Various cutting bits, in conjunction with circulating drilling fluid, are used to advance the borehole. Surface casing is used to maintain sidewall stability in the top several meters of the borehole, and to facilitate the circulation of the drilling fluid into the mud tank.

Diamond Core Drilling (DD)

A double-tube or triple-tube core barrel with a diamond bit cuts an annular space around a cylinder of rock or cemented material. When the coring has proceeded to the desired core run length, the core is broken off and the sample is retained by a core catcher just above the diamond bit. Samples recovered by this procedure are placed in sturdy core boxes in sequential order.

Auger Sampling (AS)

Soil samples are obtained as cuttings from the auger flights as they are lifted from the borehole. Auger samples provide a general indication of subsurface conditions; however, they do not provide undisturbed samples, nor do they provide samples from specific depths. Due to the possible loss of soil components, or the mixing of soil components from various elevations, auger samples may not be representative of in-situ soil conditions.

Split-Barrel Sampling (SS) - ASTM Standard D-1586-84

A 2-inch-O.D. split-barrel sampler is driven into the soil a distance of 18 inches by a 140-pound hammer free-falling 30 inches. The first 6 inches of penetration is usually considered a seating drive. The Standard Penetration Resistance value is the number of blows of the hammer over the final 12 inches of driving. This value provides an indication of the in-place relative density of granular soils. The indication should be considered qualitative, since many variables such as drill crews, drill rigs, drilling procedures, and hammer-rod-sampler assemblies can significantly affect the Standard Penetration Resistance value. A representative portion of the soil sample is recovered from the split-barrel sampler, placed in a sample jar, and delivered to our laboratory for further examination and possible testing.

Shelby Tube Sampling Procedure (ST) - ASTM Standard D-1587-83

A 2- or 3-inch-diameter thin-walled seamless steel tube having a sharp cutting edge is hydraulically pushed into the soil to obtain a relatively undisturbed sample. This procedure is generally used for cohesive soils. The Shelby tubes are carefully handled to minimize sample disturbance, and delivered to a laboratory where the soil is extruded from the tube, examined, and tested.

American Society for Testing and Materials

ASTM 1586
Standard Method for Penetration Test and Split-Barrel Sampling of Soils[1]

This standard is issued under the fixed designation D 1586; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of the last revision. A number in parentheses indicates the year of the last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

This method has been approved for use by agencies of the Department of Defense and for listing in the DOD Index of Specifications and Standards.

1. Scope

1.1 This method describes the procedure, generally known as the Standard Penetration (SPT), for driving a split-barrel sampler to obtain a representative soil sample and a measure of the resistance of the soil to penetration of the sampler.

1.2 This standard may involve hazardous materials, operations, and equipment. This standard does not purport to address all of the safety problems associated with its use. It is the responsibility of whoever uses this standard to consult and establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use. For a specific precautionary statement, see 5.4.1.

1.3 The values stated in inch-pound units are to be regarded as the standard.

2. Applicable Documents

2.1 ASTM Standards:

D2487 Test Method for Classification of Soils for Engineering Purposes[2]

D2488 Practice for Description and Identification of Soils (Visual-Manual Procedure)[2]

D4220 Practice for Preserving and Transporting Soil Samples[2]

3. Descriptions of Terms Specific to This Standard

3.1 anvil--that portion of the drive-weight assembly while the hammer strikes and through which the hammer energy passes into the drill rods.

3.2 cathead--the rotating drum or windlass in the rope-cathead lift system around which the operator wraps a rope to lift and drop the hammer by successively tightening and loosening the rope turns around the drum

3.3 drill rods--rods used to transmit downward force and torque to the drill bit while drilling a borehole.

3.4 drive-weight assembly--a device consisting of the hammer, hammer fall guide, the anvil, any hammer drop system.

3.5 hammer--that portion of the drive-weight assembly consisting of the 140 ± 2 lb (63.5 ± 1 kg) impact weight which is successfully lifted and dropped to provide the energy that accomplishes the sampling and penetration.

3.6 hammer drop system--that portion of the drive-weight assembly by which the operator accomplishes the lifting and dropping of the hammer to produce the blow.

3.7 hammer fall guide--that part of the drive-weight assembly used to guide the fall of the hammer.

3.8 N-value--the blowcount representation of the penetration resistance of the soil. The N-value, reported in blows per foot, equals the sum of the number of blows required to drive the sampler over the depth interval of 6 to 18 in. (150 to 450 mm) (see 7.3).

3.9 ΔN--the number of blows obtained from each of the 6-in. (150-mm) intervals os sampler penetration (see 7.3).

3.10 number of rope turns--the total contact angle between the rope and the cathead at the beginning of the operator's rope slackening to drop the hammer; divided by 360° (see Fig. 1).

3.11 sampling rods--rods that connect the drive-weight assembly to the sampler. Drill rods are often used for this purpose.

3.12 SPT--abbreviation for Standard Penetration Test, a term by which engineers commonly refer to this method.

4. Significance and Use

4.1 This method provides a soil sample for identification purposes and for laboratory tests appropriate for soil obtained from a sampler that may produce large shear strain disturbance in the sample.

4.2 This method is used extensively in a great variety of geotechnical exploration projects. Many local correlations and widely published correlations which relate SPT blowcount, or N-value, and the engineering behavior of earthworks and foundation are available.

5. Apparatus

5.1 Drilling Equipment--Any drilling equipment that provides at the time of sampling a suitably clean open hole before insertion of the sampler and ensures that the penetration test is performed on undistributed soil shall be acceptable. The following pieces of equipment have proven to be suitable for advancing a borehole in some subsurface conditions.

---

[1] This method is under the jurisdiction of ASTM Committee D-18 on Soil and Rock and is the direct responsibility of subcommittee D18.02 on Sampling and Related Field Testing for Soil Investigations.

Current edition approved Sept. 11, 1984. Published November 1984. Originally published as D1586-58T. Last previous edition D1586-67 (1974).

[2] Annual Book of ASTM Standards, Vol 04.08.

5.1.1 Drag, Chopping and Fishtail Bits, less than 6.5 in. (162 mm) and greater than 2.2 in. (56 mm) in diameter may be used in conjunction with open-hole rotary drilling or casing-advancement drilling methods. To avoid disturbance of the underlying soil, bottom discharge bits are not permitted; only side discharging bits are permitted.

5.1.2 Roller-Cone Bits, less than 6.5 in. (162 mm) and greater than 2.2 in. (56 mm) in diameter may be used in conjunction with open-hole rotary drilling or casing-advancement drilling methods if the drilling fluid discharge is deflected.

5.1.3 Hollow-Stem Continuous Flight Augers, with or without a center bit assembly, may be used to drill the boring. The inside diameter of the hollow-stem augers shall be less than 6.5 in. (162 mm) and greater that 2.2 in. (56 mm).

5.1.4 Solid, Continuous Flight, Bucket and Hand Augers, less than 6.5 in. (162 mm) and greater than 2.2 in. (56 mm) in diameter may be used if the soil on the side of the boring does not cave into the sampler or sampling rods during the sampling.

5.2 Sampling Rods--Flush-joint steel drill rods shall be used to connect the split-barrel sampler to the drive-weight assembly. The sampling rod shall have a stiffness (moment of inertia) equal to or greater than that of a parallel wall "A" rod (a steel rod which has an outside diameter of 1 5/8 in. (41.2 mm) and an inside diameter of 1 1/8 in. (28.5 mm).

NOTE 1--Recent research and comparative testing indicates the type rod used, with stiffness ranging from "A" size rod to "N" size rod, will usually have a negligible effect on the N-values to depths of at least 100 ft. (30 m).

5.3 Split-Barrel Sampler--The sampler shall be constructed with the dimensions indicated in Fig. 2. The driving shoe shall be hardened steel and shall be replaced or repaired when it becomes dented or distorted. The use of liners to produce a constant inside diameter of 1 3/8 in. (35 mm) is permitted, but shall be noted on the penetration record if used. The use of a sampler retainer basket is permitted, and should also be noted on the penetration record if used.

NOTE 2--Both theory and available test datas suggest that N-values may increase 10 to 30% when liners are used.

5.4 Drive-Weight Assembly:

5.4.1 Hammer and Anvil--The hammer shall weigh 140 ± 2 lb (63.5 ± 1 kg) and shall be a solid rigid metallic mass. The hammer shall strike the anvil and make steel on steel contact when it is dropped. A hammer fall guide permitting a free fall shall be used. Hammers used with the cathead and rope method shall have an unimpeded overlift capacity of at least 4 in. (100 mm). For safety reasons, the use of hammer assembly with an internal anvil is encouraged.

NOTE 3--It is suggested that the hammer fall guide be permanently marked to enable the operator or inspector to judge the hammer drop height.

5.4.2 Hammer Drop System--Rope-cathead, trip, semi-automatic, or automatic hammer drop systems may be used, providing the lifting apparatus will not cause penetration of the sampler while re-engaging and lifting the hammer.

5.5 Accessory Equipment--Accessories such as labeled, sample containers, data sheets, and groundwater level measuring devices shall be provided in accordance with the requirements of the project and other ASTM standards.

6. Drilling Procedure

6.1 The boring shall be advanced incrementally to permit intermittent or continuous sampling. Test intervals and locations are normally stipulated by the project engineer or geologist. Typically, the intervals selected are 5 ft. (1.5 m) or less in homogeneous strata with test and sampling locations at every change of strata.

6.2 Any drilling procedure that provides a suitably clean and stable hole before insertion of the sampler and assures that the penetration test is performed on essentially undisturbed soil shall be acceptable. Each of the following procedures have proven to be acceptable for some subsurface conditions. The subsurface conditions anticipated should be considered when selecting the drilling method to be used.

6.2.1 Open-hole rotary drilling method.

6.2.2 Continuous flight hollow-stem auger method.

6.2.3 Wash boring method.

6.2.4 Continuous flight solid auger method.

6.3 Several drilling methods produce unacceptable borings. The process of jetting through an open tube sampler and then sampling when the desired depth is reached shall not be permitted. The continuous flight solid auger method shall not be used for advancing the boring below a water table or below the upper confining bed of a confined non-cohesive stratum that is under artesian pressure. Casing may not be advanced below the sampling elevation prior to sampling. Advancing a boring with bottom discharge bits is not permissible. It is not permissible to advance the boring for subsequent insertion of the sampler solely by means of previous sampling with the SPT sampler.

6.4 The drilling fluid within the boring or hollow-stem augers shall be maintained at or above the in situ groundwater level at all times during drilling, removal of drill rods, and sampling.

7. Sampling and Testing Procedure

7.1 After the boring has been advanced to the desired sampling elevation and excessive cuttings have been removed, prepare for the test with the following sequence of operations.

7.1.1 Attach the split-barrel sampler to the sampling rods and lower into borehole. Do not allow the sampler to drop onto the soil to be sampled.

7.1.2 Position the hammer above and attach the anvil to the top of the sampling rods. This may be done before the sampling rods and sampler are lowered into the borehole.

7.1.3 Rest the dead weight of the sampler, rods, anvil, and drive weight on the bottom of the boring and apply a seating blow. If excessive cuttings are encountered at the bottom of the boring, remove the sampler and sampling rods from the boring and remove the cuttings.

7.1.4 Mark the drill rods in three successive 6-in. (0.15-m) increments so that the advance of the sampler under the impact of the hammer can be easily observed for each 6-in. (0.15-m) increment.

7.2 Drive the sampler with blows from the 140-lb (63.5-kg) hammer and count the number of blows applied in

each 6-in. (0.15-m) increment until one of the following occurs:

7.2.1 A total of 50 blows have been applied during any one of the three 6-in. (0.15-m) increments described in 7.1.4.

7.2.2 A total of 100 blows have been applied.

7.2.3 There is no observed advance of the sampler during the application of 10 successive blows of the hammer.

7.2.4 The sampler is advanced the complete 18 in. (0.45 m) without the limiting blow counts occurring as described in 7.2.1, 7.2.2, or 7.2.3.

7.3 Record the number of blows required to effect each 6 in. (0.15 m) of penetration or fraction thereof. The first 6 in. is considered to be a seating drive. The sum of the number of blows required for the second and third 6 in. of penetration is termed the "standard penetration resistance", or the "N-value". If the sampler is driven less than 18 in. (0.45 m), as permitted in 7.2.1, 7.2.2, or 7.2.3, the number of blows per each complete 6 in. (0.15-m) increment and per each partial increment shall be recorded on the boring log. For partial increments, the depth of penetration shall be reported to the nearest 1 in. (25 mm), in addition to the number of blows. If the sampler advances below the bottom of the boring under the static weight of the hammer, this information should be noted on the boring log.

7.4 The raising and dropping of the 140-lb (63.5-kg) hammer shall be accomplished using either the following two methods:

7.4.1 By using a trip, automatic, or semi-automatic hammer drop system which lifts the 140-lb (63.5 kg) hammer and allows it to drop 30 ± 1.0 in. (0.76 m ± 25 mm) unimpeded.

7.4.2 By using a cathead to pull a rope attached to the hammer. When the cathead and rope method is used the system and operation shall conform to the following:

7.4.2.1 The cathead shall be essentially free of rust, oil, or grease and have a diameter in the range of 6 to 10 in. (150 to 250 mm).

7.4.2.2 The cathead should be operated at a minimum speed of rotation of 100 RPM, or the approximate speed of rotation shall be reported on the boring log.

7.4.2.3 No more than 2 1/4 rope turns on the cathead may be used during the performance of the penetration test, as shown in Fig. 1.

NOTE 4--The operator should generally use either 1 3/4 of 2 1/4 rope turns, depending upon whether or not the rope comes off the top (1 3/4 turns) or the bottom (2 1/4 turns) of the cathead. It is generally known and accepted that 2 3/4 or more rope turns considerably impedes the fall of the hammer and should not be used to perform the test. The cathead rope should be maintained in a relatively dry, clean, and unfrayed condition.

7.4.2.4 For each hammer blow, a 30-in. (0.76 m) lift and drop shall be employed by the operator. The operation of pulling and throwing the rope shall be performed rhythmically without holding the rope at the top of the stroke.

7.5 Bring the sampler to the surface and open. Record the percent recovery or length of sample recovered. Describe the soil samples recovered as to composition, color, stratification, and condition, then place one or more representative portions of the sample into sealable moisture-proof containers (jars) without ramming or distorting any apparent stratification. Seal each container to prevent evaporation of soil moisture. Affix labels to the containers bearing job designation, boring number, sample depth, and the blow count per 6-in. (0.15 m) increment. Protect the samples against extreme temperature changes. If there is a soil change within the jar for each stratum and note its location in the sampler barrel.

8. Report

8.1 Drilling information shall be recorded in the filed and shall include the following:

8.1.1 Name and location of job,

8.1.2 Names of crew,

8.1.3 Type and make of drilling machine,

8.1.4 Weather conditions,

8.1.5 Date and time of start and finish of boring,

8.1.6 Boring number and location (station and coordinates, if available and applicable),

8.1.7 Surface evaluation, if applicable

8.1.8 Method of advancing and cleaning the boring,

8.1.9 Method of keeping boring open,

8.1.10 Depth of water surface and drilling depth at time of a noted loss of drilling fluid, and time and date when reading or notation was made,

8.1.11 Location of strata changes,

8.1.12 Size of casing, depth of cased portion of boring,

8.1.13 Equipment and method of driving sampler,

8.1.14 Type of sampler and length and inside diameter of barrel (note use of liners),

8.1.15 Size, type and section length of the sampling rods, and

8.1.16 Remarks.

8.2 Data obtained for each sample shall be recorded in the field and shall include the following:

8.2.1 Sample depth and, if utilized, the sample number,

8.2.2 Description of soil,

8.2.3 Strata changes within sample,

8.2.4 Sampler penetration and recovery lengths, and

8.2.5 Number of blows per 6-in. (0.15 m) or partial increment.

9. Precision and Bias

9.1 Variations in N-values of 100% or more have been observed when using different standard penetration test apparatus and drillers for adjacent borings in the same soil formation. Current opinion, based on field experience, indicates that when using the same apparatus and driller N-values in the same soil can be reproduced with coefficient or variation of about 10%.

9.2 The use of faulty equipment, such as extremely massive or damaged anvil, a rusty cathead, a low speed cathead, an old, oily rope, or massive or poorly lubricated rope sheaves can significantly contribute to differences in N-values obtained between operator-drill rig systems.

9.3 The variability in N-values produced by different drill rigs and operators may be reduced by measuring the part of the hammer energy delivered into the drilling rods from the sampler and adjusting N on the basis of comparative energies. A method for energy measurement and N-value adjustment is currently under development.

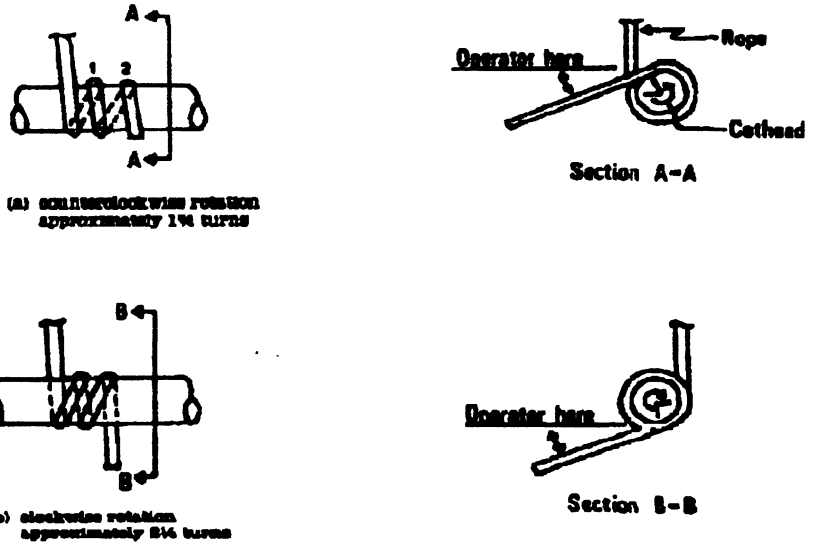
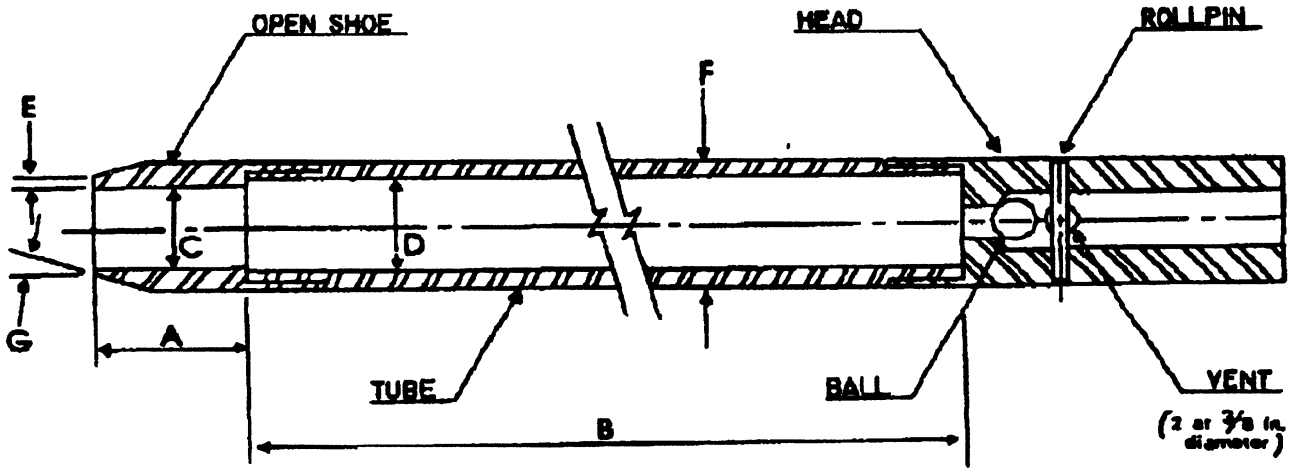


FIG. 1 Definitions of the number of rope turns and the angle for (a) counterclockwise rotation and (b) clockwise rotation of the cathead



A = 1.0 to 2.0 in. (25 to 50 mm)
B = 18.0 to 30.0 in. (0.457 to 0.762 m)
C = 1.375 ± 0.005 in. (34.93 ± 0.13 mm)
D = 1.50 ± 0.05 - 0.00 in. (38.1 ± 1.3 - 0.0 mm)
E = 0.10 ± 0.02 in. (2.54 ± 0.25 mm)
F = 2.00 ± 0.05 - 0.00 in. (50.8 ± 1.3 - 0.0 mm)
G = 16.0° to 23.0°

The 1 1/2 in. (38 mm) inside diamter split barrel may be used with a 16-gage wall thickness split liner. The penetrating end of the drive shoe may be slightly rounded. Metal or plastic retainers may be used to retain soil samples.

FIG. 2 Split-Barrel Sampler

Water Content (W_c)

The water content of a soil is determined by weighing a moist soil sample, drying it in an oven for approximately 24 hours, and reweighing the sample to determine the moisture loss. The water content is the ratio of the weight of water in the soil to the weight of the dry soil. Water content is typically expressed as a percentage.

Calibrated Hand Penetrometer (Q_p)

In the calibrated hand penetrometer test, the unconfined compressive strength of a soil is estimated to a maximum value of 4.5 tons per square foot (tsf) by measuring the resistance of the soil sample to penetration by a spring-calibrated plunger. The hand penetrometer test device has been carefully calibrated by its manufacturer with the results of numerous unconfined compressive strength tests. This test provides a quick, simple, and low-cost testing procedure from which soil strength can be estimated.

Unconfined Compression Test (Q_u)

In the unconfined compression strength test, an undisturbed cylinder of soil is loaded axially until the soil fails to carry additional load, or until 20% strain has been reached, whichever occurs first. The undrained shear strength of a cohesive soil is usually considered to equal half of the unconfined compressive strength.

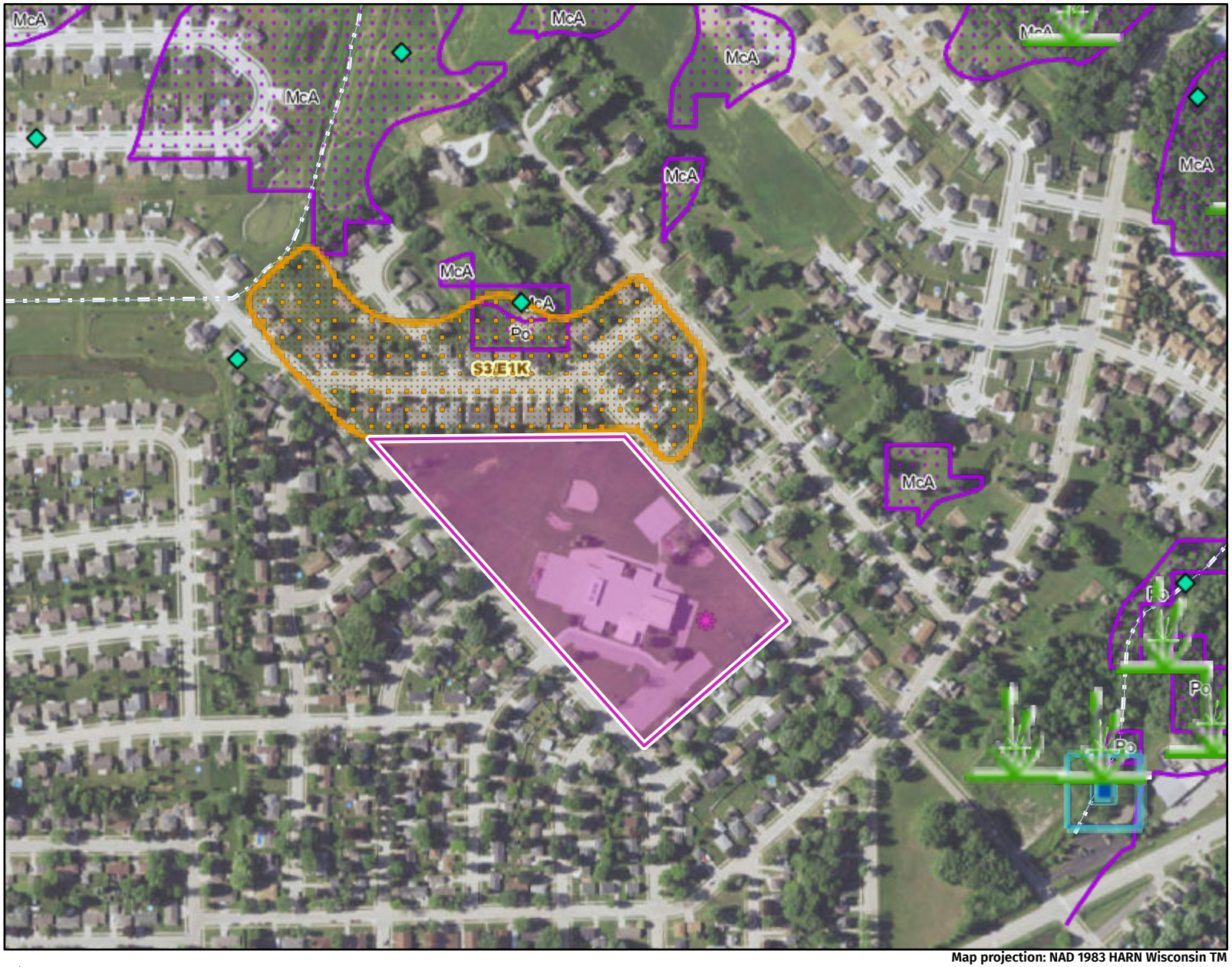
Dry Density (γ_d)

The dry density of a soil is the weight of dry soil in a unit volume. The soil's total unit weight is typically calculated by weighing a cylinder of soil, and dividing the weight by the cylinder's volume as calculated by measuring the cylinder's height and diameter at several locations. The soil's dry density is then determined by correcting the cylinder's weight to account for its water content measured as described above. Use of this value is often made when estimating the degree of compaction of a soil.

Classification of Samples

Soil samples are classified on the basis of their texture and plasticity in accordance with the Unified Soil Classification System (USCS). The two-letter designator in parentheses following each soil description on the boring logs represents the applicable unified classification. If the designator is capitalized, the classification has been confirmed by the appropriate index testing. If the designator is lower-case, the classification has been visually estimated.

WISCONSIN DEPARTMENT OF NATURAL RESOURCES



Legend: (some map layers may not be displayed)

- Wetland Identifications and Confirmations

Wetland Class Points

- Excavated pond
- Wetland too small to delineate
- Wetland Class Areas
- USDA Wetspots
- Wetland Indicators
- 24K Streams and Rivers
- 24K Intermittent Streams
- Latest Leaf On Imagery
- City or Village
- County Boundaries

County and Local Roads

- County HWY
- Local Road

Notes:

Map projection: NAD 1983 HARN Wisconsin TM

N

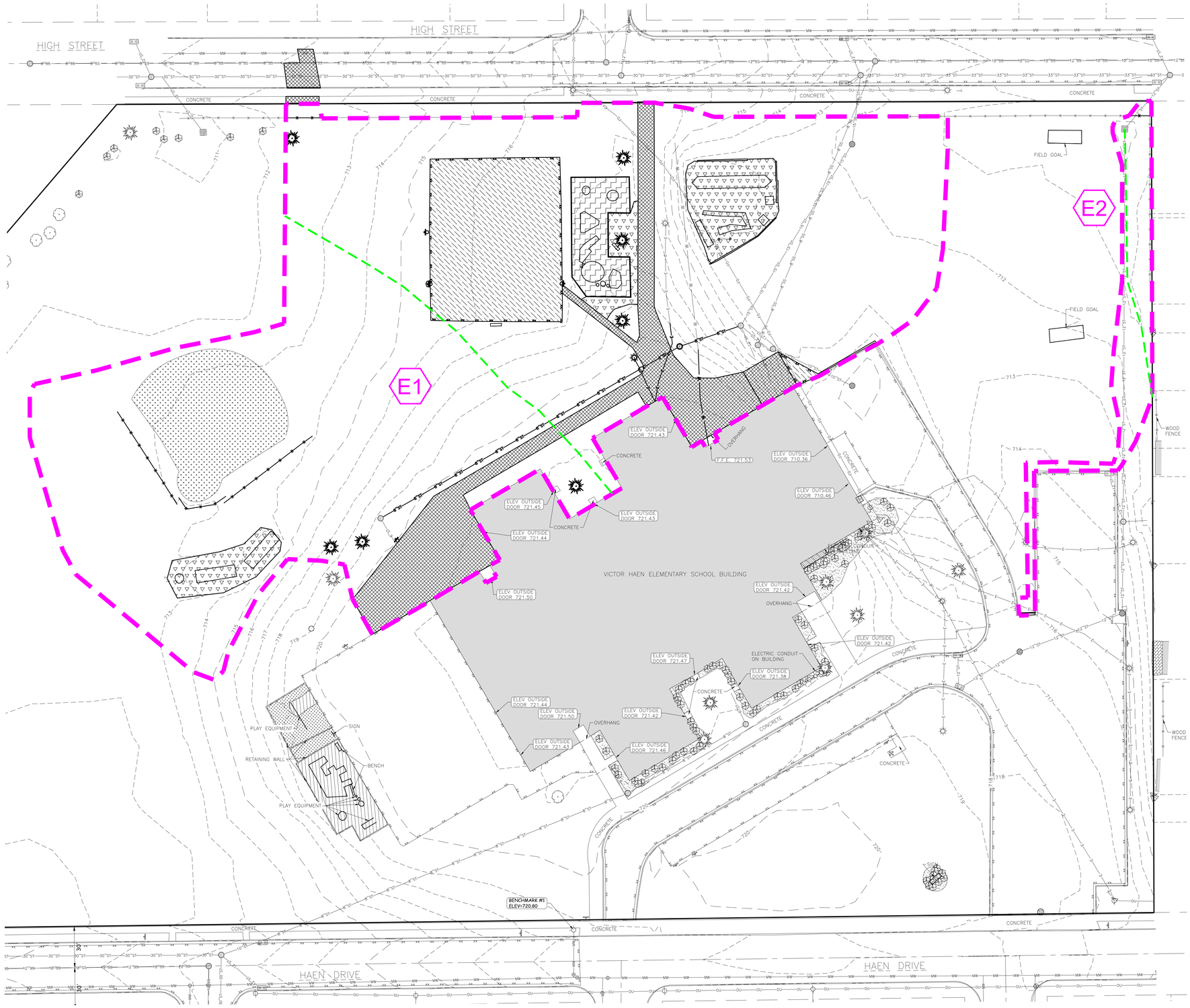
Map: 0 425 850 Feet
0 125 250 Meters

Service Layer Credits:
Wisconsin Wetland Inventory NWI (cached): , Wetland Indicators & Soils: Surface Water Data Viewer Team, EN Basic Basemap WTM Ext: , 2022 Leaf On: , Wisconsin Wetland Inventory NWI (Dynamic): Calvin Lawrence, Dennis Weise, Nina Rihn

Date Printed: 2/10/2025 10:24 AM

APPENDIX C

Existing Drainage Map and Calculations



LEGEND:

EXISTING DRAINAGE AREA LIMITS

EXISTING Tc FLOW PATH

EXISTING DRAINAGE AREA LABEL — E1

REVISIONS

CHECKED:	JL
DRAWN:	GC
DATE	05/01/2025
PROJECT NO.	24.0140

EXISTING DRAINAGE

KASD - VICTOR HAEN ELEMENTARY
SCHOOL ADDITION & RENOVATION
CITY OF KAUKAUNA
OUTAGAMIE CO, WISCONSIN

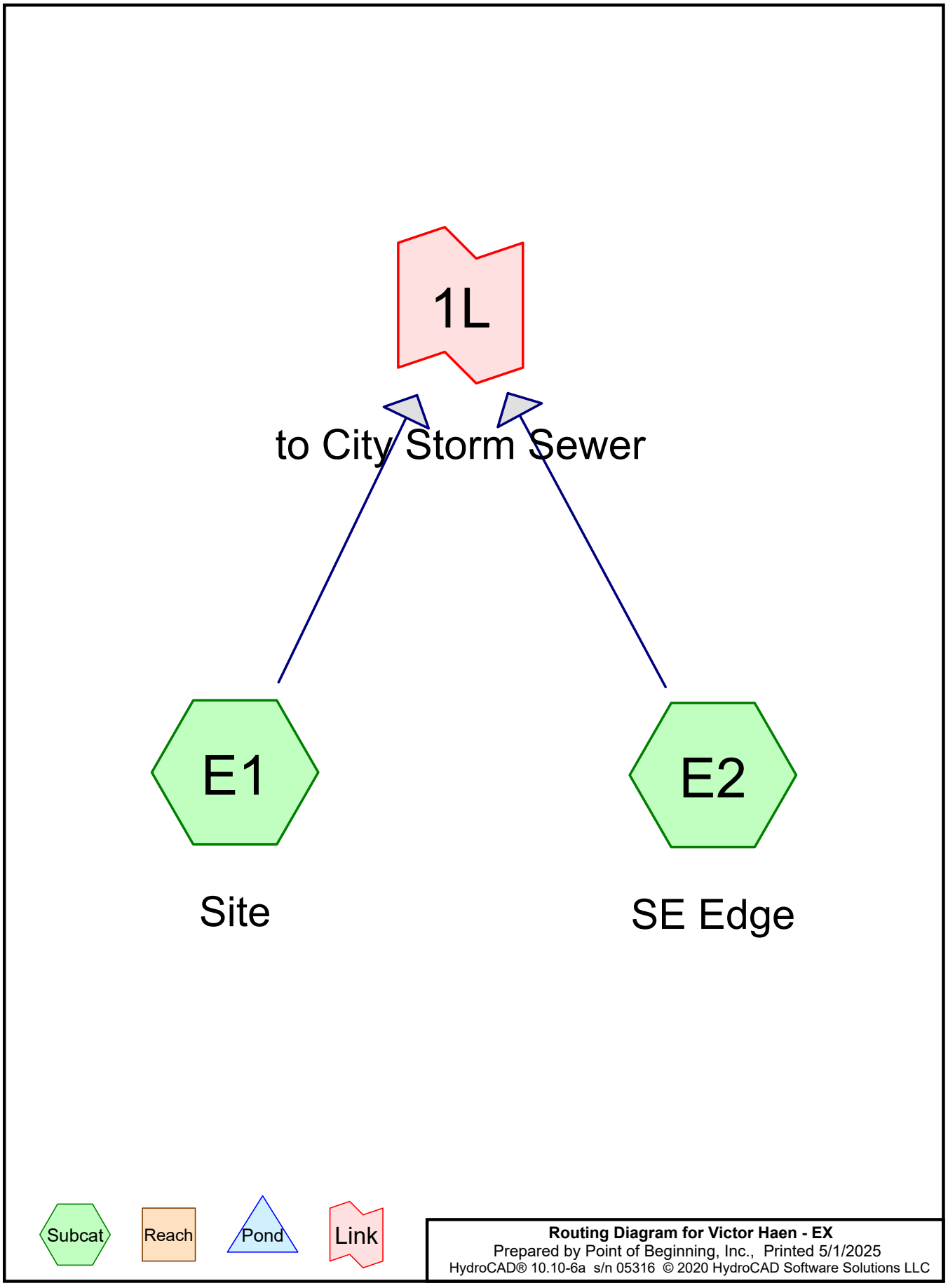
Civil Engineering
Land Surveying
Landscape Architecture

4941 Kirschling Court
Stevens Point, WI 54481
715.344.9999 (PH) 715.344.9922 (FX)

Point of Beginning

0' 30' 60'
1" = 30'

SHEET EX



Routing Diagram for Victor Haen - EX
Prepared by Point of Beginning, Inc., Printed 5/1/2025

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
2.773	78	Grass (E1, E2)
0.182	98	Gravel (E1)
0.070	98	PIP Playground (E1)
0.580	98	Paved (E1)
0.167	78	Wood Chip Playgrounds (E1)
3.772	**82**	**TOTAL AREA**

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentE1: Site Runoff Area=157,398 sf 23.04% Impervious Runoff Depth=1.09"
Flow Length=315' Tc=11.4 min CN=WQ Runoff=4.68 cfs 0.329 af

SubcatchmentE2: SE Edge Runoff Area=6,928 sf 0.00% Impervious Runoff Depth=0.76"
Flow Length=197' Slope=0.0076 '/' Tc=6.0 min CN=78 Runoff=0.18 cfs 0.010 af

Link 1L: to City Storm Sewer Inflow=4.81 cfs 0.339 af
Primary=4.81 cfs 0.339 af

Total Runoff Area = 3.772 ac Runoff Volume = 0.339 af Average Runoff Depth = 1.08"
77.94% Pervious = 2.940 ac 22.06% Impervious = 0.832 ac

Summary for Subcatchment E1: Site

Runoff = 4.68 cfs @ 12.20 hrs, Volume= 0.329 af, Depth= 1.09"
Routed to Link 1L : to City Storm Sewer

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-Year Rainfall=2.45"

	Area (sf)	CN	Description
*	25,267	98	Paved
*	7,939	98	Gravel
*	7,265	78	Wood Chip Playgrounds
*	3,051	98	PIP Playground
*	113,876	78	Grass
	157,398		Weighted Average
	121,141		76.96% Pervious Area
	36,257		23.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.8	55	0.0084	0.09		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.45"
1.6	260	0.0315	2.66		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
11.4	315	Total			

Summary for Subcatchment E2: SE Edge

Runoff = 0.18 cfs @ 12.14 hrs, Volume= 0.010 af, Depth= 0.76"
Routed to Link 1L : to City Storm Sewer

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-Year Rainfall=2.45"

	Area (sf)	CN	Description
*	6,928	78	Grass
	6,928		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.5	197	0.0076	1.31		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
2.5	197	Total, Increased to minimum Tc = 6.0 min			

Summary for Link 1L: to City Storm Sewer

Inflow Area = 3.772 ac, 22.06% Impervious, Inflow Depth = 1.08" for 2-Year event
Inflow = 4.81 cfs @ 12.19 hrs, Volume= 0.339 af
Primary = 4.81 cfs @ 12.19 hrs, Volume= 0.339 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentE1: Site Runoff Area=157,398 sf 23.04% Impervious Runoff Depth=1.91"
Flow Length=315' Tc=11.4 min CN=WQ Runoff=8.38 cfs 0.576 af

SubcatchmentE2: SE Edge Runoff Area=6,928 sf 0.00% Impervious Runoff Depth=1.50"
Flow Length=197' Slope=0.0076 '/' Tc=6.0 min CN=78 Runoff=0.38 cfs 0.020 af

Link 1L: to City Storm Sewer Inflow=8.64 cfs 0.596 af
Primary=8.64 cfs 0.596 af

Total Runoff Area = 3.772 ac Runoff Volume = 0.596 af Average Runoff Depth = 1.90"
77.94% Pervious = 2.940 ac 22.06% Impervious = 0.832 ac

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentE1: Site Runoff Area=157,398 sf 23.04% Impervious Runoff Depth=3.63"
Flow Length=315' Tc=11.4 min CN=WQ Runoff=15.96 cfs 1.093 af

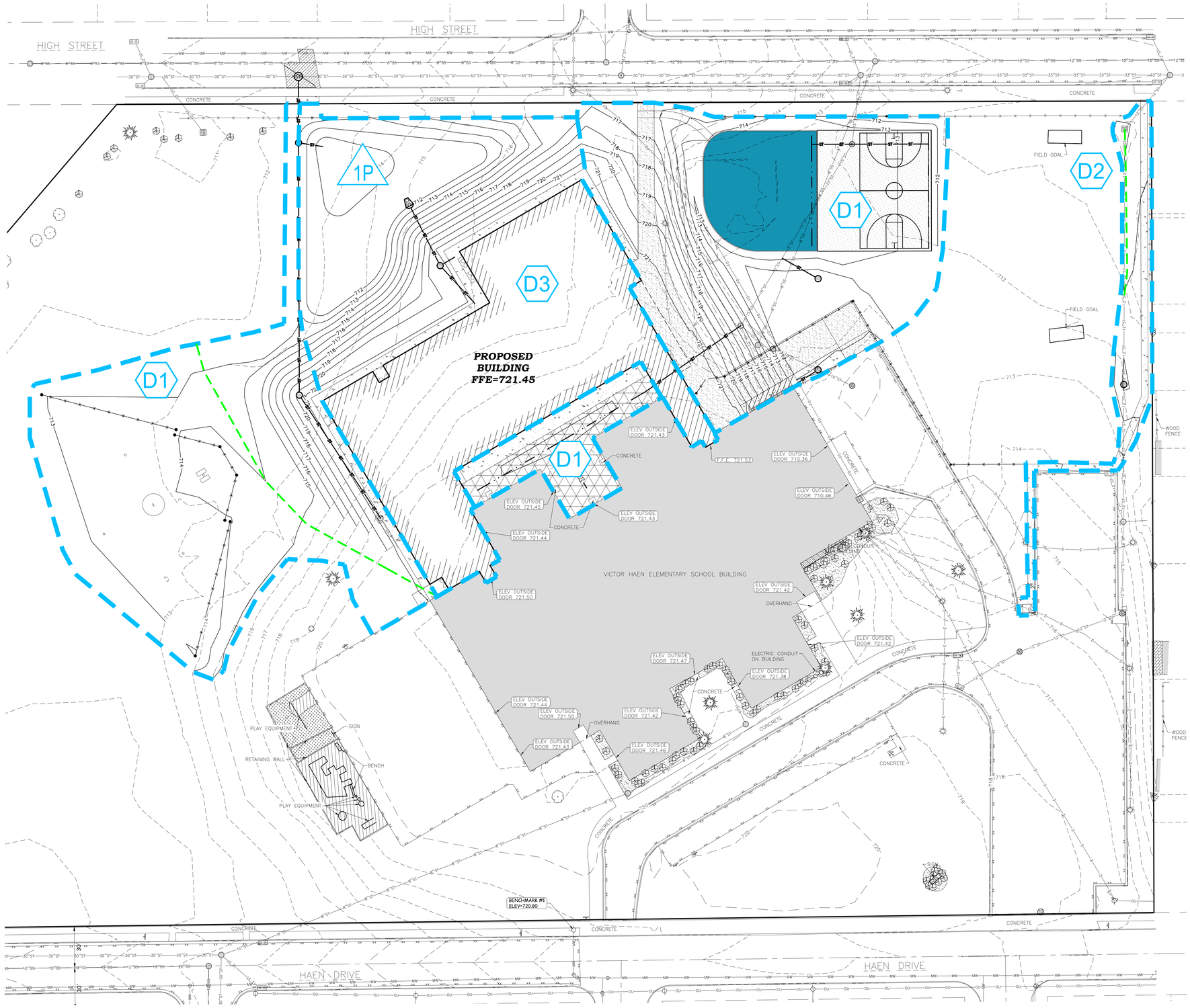
SubcatchmentE2: SE Edge Runoff Area=6,928 sf 0.00% Impervious Runoff Depth=3.14"
Flow Length=197' Slope=0.0076 '/' Tc=6.0 min CN=78 Runoff=0.78 cfs 0.042 af

Link 1L: to City Storm Sewer Inflow=16.51 cfs 1.135 af
Primary=16.51 cfs 1.135 af

Total Runoff Area = 3.772 ac Runoff Volume = 1.135 af Average Runoff Depth = 3.61"
77.94% Pervious = 2.940 ac 22.06% Impervious = 0.832 ac

APPENDIX D

Proposed Drainage Map and Calculations



LEGEND:

PROPOSED DRAINAGE AREA LIMITS

PROPOSED Tc FLOW PATH

PROPOSED DRAINAGE AREA LABEL — D1

PROPOSED PONDING AREA LABEL — 1P

REVISIONS

CHECKED:	JL
DRAWN:	GC
DATE	05/01/2025
PROJECT NO.	24.0140

PROPOSED DRAINAGE

KASD - VICTOR HAEN ELEMENTARY SCHOOL ADDITION & RENOVATION
CITY OF KAUKAUNA
OUTAGAMIE CO, WISCONSIN

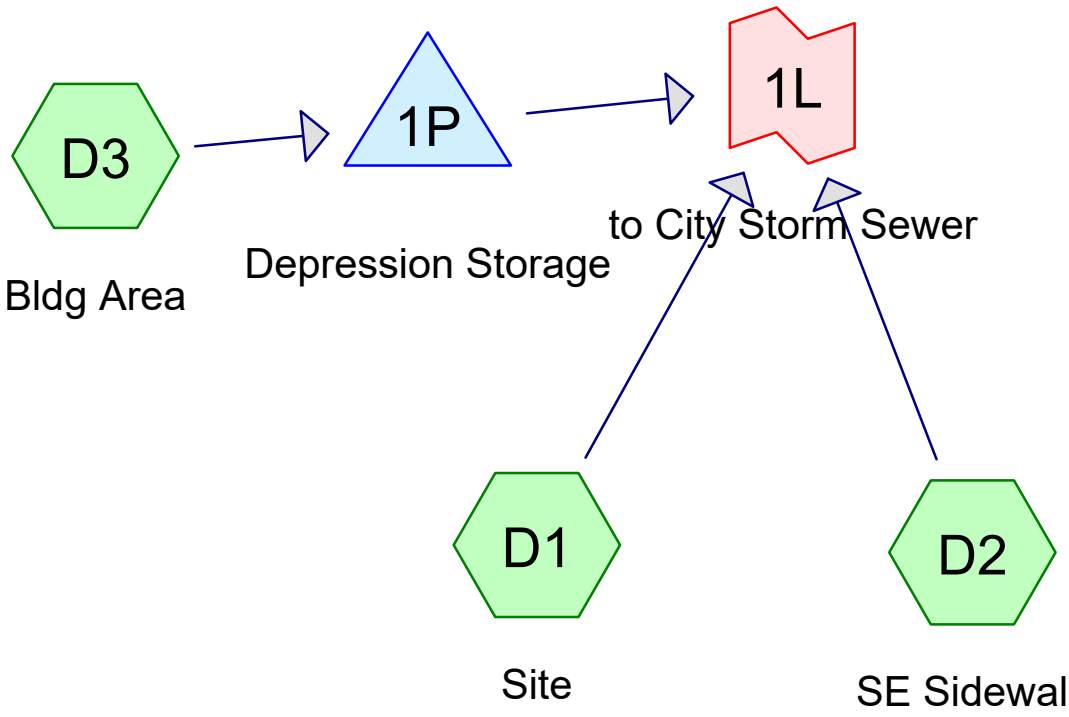
Civil Engineering
Land Surveying
Landscape Architecture

4941 Kirschling Court
Stevens Point, WI 54481
715.344.9999 (PH) 715.344.9922 (FX)

Point of Beginning

0' 30' 60'
1" = 30'

SHEET PR



Subcat Reach Pond Link

Routing Diagram for Victor Haen - PR
Prepared by Point of Beginning, Inc., Printed 5/1/2025

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2-Year	MSE 24-hr	4	Default	24.00	1	2.45	2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.734	98	Building (D3)
1.552	78	Grass (D1)
0.701	74	Grass (D2, D3)
0.154	98	PIP Playground (D1)
0.426	98	Paved (D1)
0.094	98	Sidewalk (D2, D3)
0.110	39	Synth Turf Courtyard w/ underdrain (D1)
3.772	**84**	**TOTAL AREA**

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentD1: Site Runoff Area=97,684 sf 25.89% Impervious Runoff Depth=1.10"
Flow Length=264' Tc=10.7 min CN=WQ Runoff=2.97 cfs 0.205 af

SubcatchmentD2: SE Sidewalk Runoff Area=6,928 sf 32.79% Impervious Runoff Depth=1.12"
Flow Length=197' Slope=0.0760 '/' Tc=6.0 min CN=WQ Runoff=0.25 cfs 0.015 af

SubcatchmentD3: Bldg Area Runoff Area=59,714 sf 56.63% Impervious Runoff Depth=1.51"
Tc=6.0 min CN=WQ Runoff=2.85 cfs 0.172 af

Pond 1P: Depression Storage Peak Elev=711.49' Storage=2,092 cf Inflow=2.85 cfs 0.172 af
6.0" Round Culvert n=0.013 L=18.0' S=0.0050 '/' Outflow=0.68 cfs 0.172 af

Link 1L: to City Storm Sewer Inflow=3.79 cfs 0.392 af
Primary=3.79 cfs 0.392 af

Total Runoff Area = 3.772 ac Runoff Volume = 0.392 af Average Runoff Depth = 1.25"
62.65% Pervious = 2.363 ac 37.35% Impervious = 1.409 ac

Summary for Subcatchment D1: Site

Runoff = 2.97 cfs @ 12.19 hrs, Volume= 0.205 af, Depth= 1.10"
Routed to Link 1L : to City Storm Sewer

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-Year Rainfall=2.45"

	Area (sf)	CN	Description
*	18,571	98	Paved
*	6,718	98	PIP Playground
*	4,790	39	Synth Turf Courtyard w/ underdrain
*	67,605	78	Grass
	97,684		Weighted Average
	72,395		74.11% Pervious Area
	25,289		25.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.3	40	0.0130	0.07		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.45"
1.4	224	0.0310	2.64		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
10.7	264	Total			

Summary for Subcatchment D2: SE Sidewalk

Runoff = 0.25 cfs @ 12.13 hrs, Volume= 0.015 af, Depth= 1.12"
Routed to Link 1L : to City Storm Sewer

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-Year Rainfall=2.45"

	Area (sf)	CN	Description
*	2,272	98	Sidewalk
*	4,656	74	Grass
	6,928		Weighted Average
	4,656		67.21% Pervious Area
	2,272		32.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	197	0.0760	4.14		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
0.8	197	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment D3: Bldg Area

Runoff = 2.85 cfs @ 12.13 hrs, Volume= 0.172 af, Depth= 1.51"
Routed to Pond 1P : Depression Storage

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-Year Rainfall=2.45"

	Area (sf)	CN	Description
*	31,979	98	Building
*	1,835	98	Sidewalk
*	25,900	74	Grass
	59,714		Weighted Average
	25,900		43.37% Pervious Area
	33,814		56.63% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Pond 1P: Depression Storage

Inflow Area = 1.371 ac, 56.63% Impervious, Inflow Depth = 1.51" for 2-Year event
Inflow = 2.85 cfs @ 12.13 hrs, Volume= 0.172 af
Outflow = 0.68 cfs @ 12.40 hrs, Volume= 0.172 af, Atten= 76%, Lag= 16.0 min
Primary = 0.68 cfs @ 12.40 hrs, Volume= 0.172 af
Routed to Link 1L : to City Storm Sewer

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 711.49' @ 12.40 hrs Surf.Area= 5,161 sf Storage= 2,092 cf

Plug-Flow detention time= 24.6 min calculated for 0.172 af (100% of inflow)
Center-of-Mass det. time= 24.5 min (800.4 - 775.9)

Volume	Invert	Avail.Storage	Storage Description
#1	710.50'	17,258 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
710.50	1	1.0	0	0	1
711.00	2,147	181.0	366	366	2,608
712.00	9,747	452.0	5,490	5,855	16,263
713.00	13,142	525.0	11,402	17,258	21,960

Device	Routing	Invert	Outlet Devices
#1	Primary	710.50'	**6.0" Round Culvert** L= 18.0' CPP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 710.50' / 710.41' S= 0.0050 '/' Cc= 0.900 n= 0.013, Flow Area= 0.20 sf

Primary OutFlow Max=0.68 cfs @ 12.40 hrs HW=711.49' (Free Discharge)
└**1=Culvert** (Barrel Controls 0.68 cfs @ 3.45 fps)

Summary for Link 1L: to City Storm Sewer

Inflow Area = 3.772 ac, 37.35% Impervious, Inflow Depth = 1.25" for 2-Year event
Inflow = 3.79 cfs @ 12.19 hrs, Volume= 0.392 af
Primary = 3.79 cfs @ 12.19 hrs, Volume= 0.392 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentD1: Site Runoff Area=97,684 sf 25.89% Impervious Runoff Depth=1.89"
Flow Length=264' Tc=10.7 min CN=WQ Runoff=5.22 cfs 0.353 af

SubcatchmentD2: SE Sidewalk Runoff Area=6,928 sf 32.79% Impervious Runoff Depth=1.91"
Flow Length=197' Slope=0.0760 '/' Tc=6.0 min CN=WQ Runoff=0.44 cfs 0.025 af

SubcatchmentD3: Bldg Area Runoff Area=59,714 sf 56.63% Impervious Runoff Depth=2.40"
Tc=6.0 min CN=WQ Runoff=4.56 cfs 0.274 af

Pond 1P: Depression Storage Peak Elev=711.77' Storage=3,869 cf Inflow=4.56 cfs 0.274 af
6.0" Round Culvert n=0.013 L=18.0' S=0.0050 '/' Outflow=0.83 cfs 0.274 af

Link 1L: to City Storm Sewer Inflow=6.31 cfs 0.652 af
Primary=6.31 cfs 0.652 af

Total Runoff Area = 3.772 ac Runoff Volume = 0.652 af Average Runoff Depth = 2.08"
62.65% Pervious = 2.363 ac 37.35% Impervious = 1.409 ac

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentD1: Site Runoff Area=97,684 sf 25.89% Impervious Runoff Depth=3.55"
Flow Length=264' Tc=10.7 min CN=WQ Runoff=9.80 cfs 0.664 af

SubcatchmentD2: SE Sidewalk Runoff Area=6,928 sf 32.79% Impervious Runoff Depth=3.59"
Flow Length=197' Slope=0.0760 '/' Tc=6.0 min CN=WQ Runoff=0.82 cfs 0.048 af

SubcatchmentD3: Bldg Area Runoff Area=59,714 sf 56.63% Impervious Runoff Depth=4.18"
Tc=6.0 min CN=WQ Runoff=7.95 cfs 0.478 af

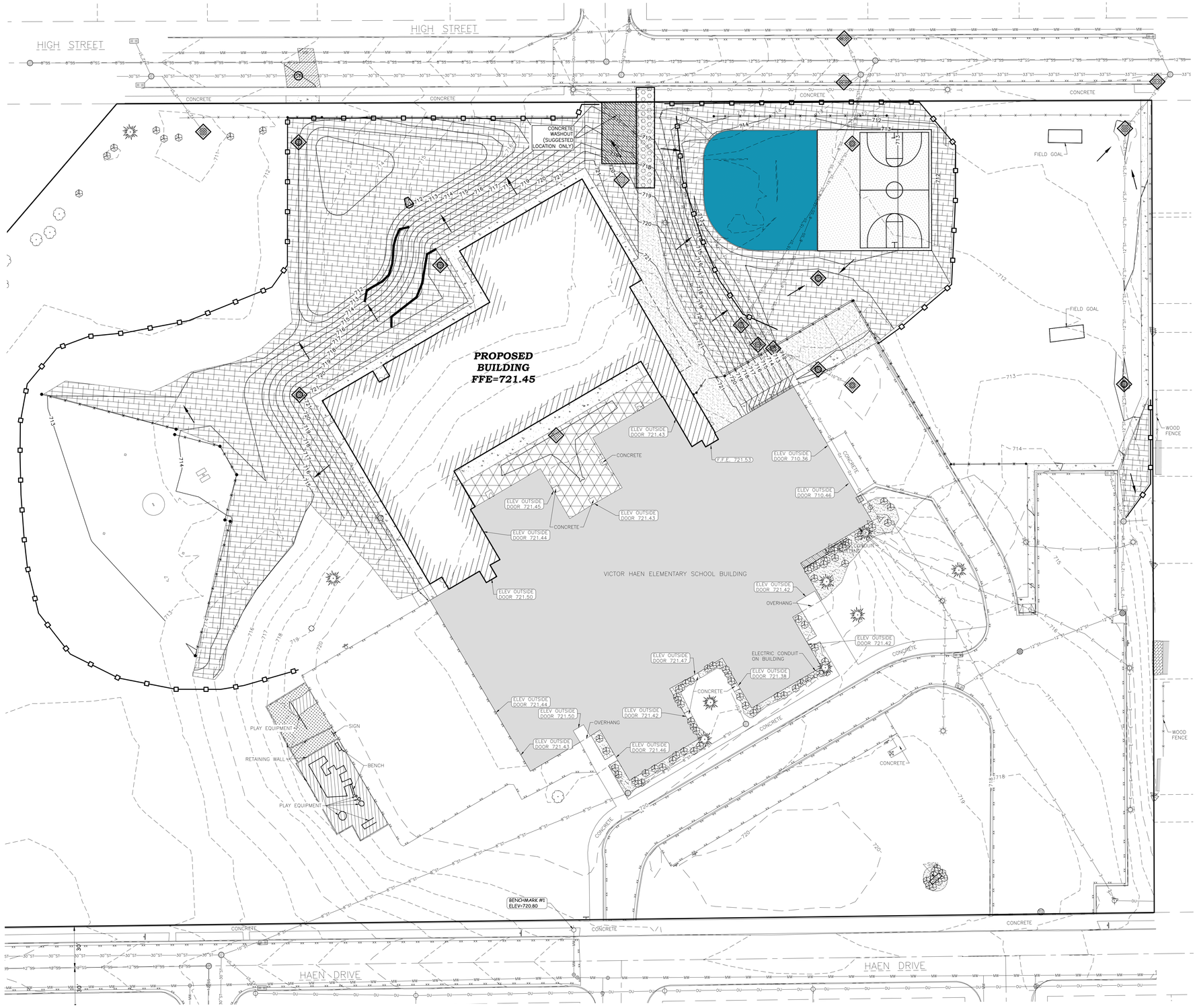
Pond 1P: Depression Storage Peak Elev=712.21' Storage=7,978 cf Inflow=7.95 cfs 0.478 af
6.0" Round Culvert n=0.013 L=18.0' S=0.0050 '/' Outflow=1.01 cfs 0.478 af

Link 1L: to City Storm Sewer Inflow=11.36 cfs 1.189 af
Primary=11.36 cfs 1.189 af

Total Runoff Area = 3.772 ac Runoff Volume = 1.189 af Average Runoff Depth = 3.78"
62.65% Pervious = 2.363 ac 37.35% Impervious = 1.409 ac

APPENDIX E

Proposed Erosion Control Plan



GENERAL NOTES:

1. CONTRACTOR SHALL LOCATE ALL PUBLIC AND PRIVATE UTILITIES PRIOR TO COMMENCEMENT OF WORK.
2. NOTIFY THE LOCAL MUNICIPALITY AT LEAST 2 WORKING DAYS PRIOR TO THE START OF SOIL DISTURBING ACTIVITIES.
3. INSTALL ALL TEMPORARY EROSION CONTROL ELEMENTS PRIOR TO THE START OF DEMOLITION/CONSTRUCTION.
4. ALL ACTIVITIES SHALL BE CONDUCTED IN A LOGICAL SEQUENCE TO MINIMIZE THE AMOUNT OF BARE SOIL EXPOSED AT ANY ONE TIME. MAINTAIN EXISTING VEGETATION AS LONG AS POSSIBLE.
5. CRUSHED ROCK DRIVES FOR SEDIMENT TRACKING UTILIZING 3" CRUSHED ROCK SHALL BE MAINTAINED AT ALL CONSTRUCTION ENTRANCES TO THE SITE. THE ROCK DRIVE SHALL BE A MINIMUM OF 12" THICK AND BE A MINIMUM OF 50 FEET IN LENGTH BY THE WIDTH OF THE DRIVEWAY.
6. OFFSITE SEDIMENT DEPOSITS RESULTING FROM STORMWATER RUNOFF SHALL BE CLEANED BY THE END OF THE NEXT WORKDAY. OFFSITE SEDIMENT DEPOSITS RESULTING FROM CONTRACTOR ACTIVITIES, INCLUDING SOIL TRACKING, SHALL BE CLEANED EACH WORKDAY. EXCESSIVE AMOUNTS OF SEDIMENT OR DEBRIS TRACKED ONTO ADJACENT STREETS SHALL BE CLEANED IMMEDIATELY. FINE SEDIMENT ACCUMULATIONS ON ADJACENT STREETS SHALL SWEPT MECHANICALLY OR MANUALLY AT LEAST WEEKLY AND BEFORE IMMINENT RAINFALL.
7. DISTURBED GROUND OUTSIDE OF THE EVERYDAY CONSTRUCTION AREAS, INCLUDING SOIL STOCKPILES, THAT ARE LEFT INACTIVE FOR MORE THAN 7 DAYS SHALL BE TEMPORARILY STABILIZED BY SEEDING/MULCHING OR OTHER APPROVED METHODS.
8. WASTE MATERIAL THAT IS GENERATED ON THE CONSTRUCTION SITE SHALL BE PROPERLY DISPOSED OF AND NOT ALLOWED TO RUN INTO RECEIVING WATERS.
9. EROSION CONTROL DEVICES DESTROYED AS A RESULT OF CONSTRUCTION ACTIVITIES SHALL BE REPAIRED BY THE END OF EACH WORK DAY.
10. INSPECT ALL EROSION CONTROL MEASURES AT LEAST ONCE A WEEK AND AFTER ANY RAINFALL OF 0.5" OR MORE. MAKE NEEDED REPAIRS AND DOCUMENT ALL ACTIVITIES AS PER THE REQUIREMENTS OF THE NOTICE OF INTENT SUBMITTED BY THE PROJECT CIVIL ENGINEER.
11. ALL TEMPORARY EROSION CONTROL ELEMENTS SHALL REMAIN IN PLACE UNTIL A SUFFICIENT GROWTH OF VEGETATION IS ESTABLISHED AND THEN BE REMOVED AS PART OF THE BASE BID.
12. IF SEDIMENT LADEN WATER NEEDS TO BE REMOVED FROM THE SITE, FILTER BAGS OR SCREENING SHALL BE USED IN ACCORDANCE WITH WI DNR TECHNICAL STANDARD 1061 TO PREVENT SEDIMENT DISCHARGE TO THE MAXIMUM EXTENT PRACTICABLE.
13. COORDINATE ALL EARTHWORK ACTIVITIES WITH THE RESPECTIVE TRADES RESPONSIBLE FOR THE INSTALLATION OF GAS, CABLE, TELEPHONE AND ELECTRICAL (INCLUDING MAIN SERVICE, SITE LIGHTING, CONDUITS AND SIGNAGE).
14. IF BARE SOIL IS EXPOSED DURING THE WINTER MONTHS, STABILIZATION BY MULCHING OR ANIONIC POLYACRYLAMIDE SHALL OCCUR PRIOR TO SNOWFALL OR GROUND FREEZE.
15. SILT FENCE SHALL BE INSTALLED AROUND THE TOPSOIL STOCKPILE.
16. THE CONTRACTOR SHALL PERFORM INSPECTIONS AND MONITORING OF EROSION CONTROL PRACTICES IN ACCORDANCE WITH THE WI DNR "CONSTRUCTION SITE INSPECTION REPORT" FORM 3400–187. THIS FORM CAN BE FOUND IN THE CONSTRUCTION SPECIFICATIONS.

EROSION CONTROL LEGEND:

EXISTING CONTOUR	888
PROPOSED CONTOUR	888
PROPOSED SILT FENCE	1 C602
PROPOSED INLET PROTECTION	2, 3 C602
EROSION CONTROL BLANKET	4 C602
ROCK CONSTRUCTION ENTRANCE	5 C602
TEMPORARY SLOPE INTERRUPTION	6 C602
CONCRETE WASHOUT AREA (INSTALL PER EPA STANDARDS)	7 C602
STORM WATER OVERLAND FLOW DIRECTION	

EROSION CONTROL SEQUENCING:

1. INSTALL PERIMETER EROSION CONTROL
2. BEGIN DEMOLITION
3. BEGIN ROUGH GRADING AND UTILITY INSTALLATION
4. DURING GRADING ACTIVITIES EXISTING GRASS AND VEGETATION, TO BE REMOVED, SHALL REMAIN IN PLACE FOR AS LONG AS POSSIBLE, TO AVOID SEDIMENT TRANSPORT.
5. TEMPORARY STABILIZATION ACTIVITY SHALL COMMENCE WHEN LAND DISTURBING CONSTRUCTION ACTIVITIES HAVE TEMPORARILY CEASED AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS.
6. FINAL STABILIZATION ACTIVITY SHALL COMMENCE WHEN LAND DISTURBING ACTIVITIES CEASE AND FINAL GRADE HAS BEEN REACHED ON ANY PORTION OF THE SITE.
7. IF DISTURBED AREAS MUST BE LEFT OVER WINTER, AN ANIONIC POLYACRYLAMIDE SHALL BE APPLIED TO ALL DISTURBED AREAS PRIOR TO GROUND FREEZE. SEE SPECIFICATIONS FOR DETAILS.

REVISIONS

CHECKED:	JL
DRAWN:	GC
DATE	05/01/2025
PROJECT NO.	24.0140

NOT FOR CONSTRUCTION

EROSION CONTROL PLAN

KASD - VICTOR HAEN ELEMENTARY
SCHOOL ADDITION & RENOVATION
CITY OF KAUKAUNA
OUTAGAMIE CO, WISCONSIN

Civil Engineering
Land Surveying
Landscape Architecture
4941 Kirschling Court
Stevens Point, WI 54481
715.344.9999 (PH) 715.344.9922 (FX)

Point of Beginning

0' 30' 60'
1" = 30'

SHEET C400

APPENDIX F

State of Wisconsin Construction Site Inspection Report,
Post Construction Long-Term Storm Water Management Checklist,
And Notice of DNR Notice of Termination

State of Wisconsin
Department of Natural Resources (DNR)
PO Box 7921, Madison WI 53707-7921
dnr.wi.gov

CONSTRUCTION SITE INSPECTION REPORT

Form 3400-187 (R 02/2025)

Notice: This form was developed in accordance with s. NR 216.48 Wis. Adm. Code for WPDES permittees' convenience; however, use of this specific form is voluntary. Multiple copies of this form may be made to compile the inspection report. Inspections of the construction site and implemented erosion and sediment control best management practices (BMPs) must be performed weekly and within 24 hours after a rainfall event 0.5 inches or greater.

Construction Site Name and Location (Project, Municipality, and County):	**Site/Facility ID No. (FIN):**
Onsite Contact/Contractor:	**Onsite Phone/Cell:**

Note: In accordance with s. NR 216.48 (4), Wis. Adm. Code, inspection reports, along with erosion control and storm water management plans, are required to be maintained on site and made available upon request. Repair or replace erosion and sediment control best management practices within 24 hours of an inspection or department notification that repair or replacement is needed. PLEASE PRINT LEGIBLY.

Date of inspection:	**Time of inspection:** **Start:** _____ ◯ **am** ◯ **pm** **End:** _____ ◯ **am** ◯ **pm**	**Type of inspection:** ◯ **Weekly** ◯ **Precipitation Event** ◯ **Other (specify)**
Weather/Site Conditions: **Temp.** _____ **°F** **Antecedent Soil Moisture** **Last Rainfall Depth:** _____ **inches** **Last Rainfall Date:** _____	◯ **Dry** ◯ **Frozen or snow covered** ◯ **Variable** ◯ **Frozen (Thaw predicted in next week)** ◯ **Wet** ◯ **Melting Snow/slush**	**Describe current phase of construction:** Scheduled Final Stabilization Date for Universal Soil Loss Equation (USLE) [1] : **Project on Schedule[2]?** ◯ **Yes** ◯ **No**
Name(s) of individual(s) performing inspection:		**Inspector Phone/Cell:**

I certify that the information contained on this form is an accurate assessment of site conditions at the time of inspection:

Inspector Signature _____ **Date:** _____

Inspection Questions:	**Yes**	**No (Identify Actions Required):**	**Location/Comments:**	**Actions Completed by Date & Initials**
1. Is the erosion control plan accessible to operators?	☐	☐ Provide onsite copy		
2. Is the permit certificate posted where visible?	☐	☐ Post certificate		
3. Is the current phase of construction on sequence with the site-specific erosion and sediment control plan, including installation/stabilization of ponds and ditches?	☐	☐ Add sediment control ☐ Install missing ditch/pipe/pond ☐ Stabilize bare soil		
4. Are all erosion and sediment control BMPs shown on plan properly installed and in functional condition?	☐	☐ Repair ☐ Modify ☐ Install/Replace		
5. Is inlet protection properly installed and functioning in all inlets likely to receive runoff from the site?	☐	☐ Clean ☐ Replace ☐ Install		
6. Is the air free of fugitive dust resulting from construction activity and bare soil exposure?	☐	☐ Apply water ☐ Apply dust control product		

[1] The Universal Soil Loss Equation (USLE) model and the Construction Site Soil Loss and Sediment Discharge Guidance are available at: http://dnr.wi.gov/topic/stormwater/standards/const_standards.html

[2] If the project is not on schedule then the soil loss summary for the project should be reviewed, and schedule, plan or practices modified accordingly.

CONSTRUCTION SITE INSPECTION REPORT

Inspection Questions:	Yes	No (Identify Actions Required):	Location/Comments:	Actions Completed by Date & Initials
7. Is the public right of way curb line free of tracked soil and accumulation?	☐	☐ Install tracking pad ☐ Widen/lengthen pad ☐ Amend stone/Add geotextile ☐ Install wheel washing station ☐ Close entrance/exit ☐ Limit traffic across disturbed areas ☐ Sweep road and curb line		
8. Are wetlands, lakes, streams, ditches, or storm sewers downstream of the site free of sedimentation and turbid water leaving the site?[3]	☐	☐ Repair/Replace erosion control ☐ Add sediment controls ☐ Modify operations ☐ Contact DNR to verify extent of cleanup required		
9. Is dewatering and/or vehicle and equipment washing being done in a manner that prevents erosion and sediment discharge?	☐	☐ Install treatment train ☐ Install energy dissipation ☐ Modify discharge location ☐ Modify intake to reduce sediment		
10. Are soil stockpiles existing for more than 7 days covered and stabilized?	☐	☐ Seed ☐ Install mat/mulch/polymer ☐ Cover with tarp/plastic sheeting		
11. Are downstream channels and other downhill areas protected from scour and erosion?	☐	☐ Install energy dissipation at outfall ☐ Install ditch checks ☐ Install slope interruption ☐ Install onsite detention		
12. Are good housekeeping practices or treatment controls in place to prevent the discharge of chemicals, cement, trash, and other materials into wetlands, waterways, storm sewers, ditches, or drainage-ways?[4]	☐	☐ Properly dispose of trash ☐ Provide concrete washout station ☐ Contact DNR to verify extent of cleanup required		
13. Is the plan reflective of current site operations and does it address all erosion and sediment control issues identified during the inspection?	☐	☐ Revise sequence ☐ Revise sediment control BMP ☐ Revise erosion control BMP ☐ Revise post-construction storm water BMP		
14. Are all areas where construction has temporarily ceased (and will not resume for more than 2 weeks) temporarily stabilized?	☐	☐ Topsoil & seed ☐ Install mat/mulch/polymer ☐ Cover with tarp/plastic sheeting		
15. Are all areas at final grade permanently vegetated or stabilized with other treatments?	☐	☐ Topsoil & seed ☐ Install mat/mulch/polymer ☐ Sod ☐ Install stone base		
16. Have temporary sediment controls been removed in areas of the site that meet the permit definition of 'final stabilization'?	☐	☐ Water to establish vegetation ☐ Repair or reseed areas ☐ Remove temporary practices		

3 If sediment discharge enters a wetland or waterbody, the permittee should consult with DNR staff to determine if sediment cleanup and/or additional control measures are required.

4 The permittee shall notify the DNR immediately via the spills hotline at (800)943-0003 of any release or spill of a hazardous substance to the environment in accordance with s. 292.11, Wis. Stats., and ch. NR 706, Wis. Adm. Code.

State of Wisconsin
Department of Natural Resources
dnr.wi.gov

Notice of Termination – Storm Water Discharges Associated With Land Disturbing Construction Activities General Permit

Form 3400-162 (R 12/14)

This Notice of Termination (NOT) form is authorized by s. 283.37, Wis. Stats. Submittal of a completed NOT to the Department is mandatory for any landowner of a construction site regulated under 40 CFR Part 122, Chapter 283, Wis. Stats., and Chapter NR 216, Wis. Adm. Code. Failure to submit a completed NOT to the Department after the construction site undergoes final stabilization may result in forfeitures up to $10,000 per day, pursuant to s. 283.92 (2), Wis. Stats. Personally identifiable information on this NOT may be used for other water quality program purposes.

Submission of this NOT constitutes notice that the landowner identified in Section I, no longer intends to be authorized by a general WPDES permit to discharge storm water associated with land disturbing construction activities from the construction site identified in Section III of this NOT.

All necessary information must be provided on this NOT. Failure to complete this NOT correctly may result in rejection of this NOT by the Department. Please read all instructions before completing. Please type or clearly print your answer to all questions

Section I: Landowner Information

Business Name	Authorized Representative		
Mailing Address	City	State: WI	ZIP Code
E-mail	Phone Number (area code)	Alternate Phone Number	

Section II: Contractor Information

Business Name	Contact Person		
Mailing Address	City	State: WI	ZIP Code
E-mail	Phone Number (area code)	Alternate Phone Number	

Section III: Facility/Site Location Information

Site Name

Location Address/Description				WDNR Site Number	
◯ City ◯ Township ◯ Village of				County	
PLSS Information	Township N	Range ☐ East ☐ West	Section	Quarter	Quarter-Quarter

☐ Attach photos of the current site conditions

Date photos were taken

Section IV: Certification

I certify under penalty of law that disturbed soils at the identified site have undergone final stabilization and temporary erosion and sediment control measures have been removed or that all storm water discharges associated with construction activity that are authorized by a general WPDES storm water discharge permit have otherwise been eliminated. I understand that by submitting this Notice of Termination, I am no longer authorized to discharge storm water associated with construction activity by the general WPDES permit, and that discharging pollutants in storm water associated with construction activity to waters of Wisconsin is unlawful where the discharge is not authorized by a WPDES permit.

NOTE: The person signing below must be a representative of the landowner as defined in s. NR 216.55 (4) Wis. Adm. Code. "Landowner" for purposes of this NOT is defined in s. NR 216.002 (13), Wis. Adm. Code. Failure to have this NOT properly signed will result in its rejection.

Signature of Landowner/Authorized Representative	Date Signed
Printed Name of Landowner/Authorized Representative	Title

Mail this completed NOT form to the appropriate Wisconsin Department of Natural Resources office in the region where the facility is located. See the instructions on page 2 of this form for regional office addresses.

Instructions

Section I: Landowner Information

Provide the legal name of the person, firm, public organization, or any other entity that owns the construction site described in Section III of this application and holds or qualifies for an applicable general or individual constructions site storm water discharge permit. The mailing address and phone number given should be for the authorized representative.

Section II: Contractor Information

Provide the legal name of the person, firm, or any other entity that acted as the major contractor in charge or operating the construction site described in Section III of this application. The mailing address and phone number given should be for the contact person.

Section III: Construction Site Information

Enter the construction site's official or legal name and complete address, including county, city, state and zip code. Be sure to include the quarter-quarter, quarter, section, township and range (the nearest quarter section) of the site. If the site is on more than one quarter, enter the quarter that best describes the location of the site. Use additional space if needed to describe the site location. The WDNR Site Number can be found in the upper right corner of the original letter conferring coverage under the general permit from the WDNR.

Required: Attach photos of the current site conditions and provide the date the photos were taken.

Section IV: Certification

State Statutes provide for severe penalties for submitting false information on this NOT form. State regulations require this NOT to be signed as follows:

1. For a corporation, by a responsible corporate officer including president, secretary, treasurer, vice president, manager, or a duly authorized representative having overall responsibility for the operation covered by this permit.
2. For a unit of government, by a ranking elected official or other duly authorized representative.
3. For a partnership, by a general partner; and for a sole proprietorship, by the proprietor.
4. For a limited liability company, by a manager.

Sign the form and print the name of the individual signing the NOT and date of signature. If the form was prepared by a consultant or someone other than an employee of the site landowner, provide the name and address of the preparer.

If you need additional information about the NOT for construction activities, please contact the Department at (608) 267-7694.

Mailing Address

Unless otherwise directed, mail this completed NOT Form to the WDNR office associated with the county of the site location:

NORTHERN REGION (NOR)				
Ashland Barron Bayfield Burnett	Douglas Florence Forest Iron	Langlade Lincoln Oneida Polk Price	Rusk Sawyer Taylor Vilas Washburn	WDNR Baldwin Service Center 890 Spruce Street Baldwin, WI 54002 715-684-2914 ext. 109
NORTHEAST REGION (NER)				
Brown Calumet Door Fond du Lac	Green Lake Kewaunee Manitowoc Marinette	Marquette Menominee Oconto Oneida Reservation	Outagamie Shawano Waupaca Waushara Winnebago	WDNR Northeast Regional Headquarters 2984 Shawano Avenue Green Bay, WI 54313-6727 920-662-5100
WEST CENTRAL REGION (WCR)				
Adams Buffalo Chippewa Clark	Crawford Dunn Eau Claire Jackson Juneau	La Crosse Marathon Monroe Pepin Pierce	Portage St. Croix Trempealeau Vernon Wood	WDNR Baldwin Service Center 890 Spruce Street Baldwin, WI 54002 715-684-2914 ext. 109
SOUTH CENTRAL REGION (SCR)				
Columbia Dane Dodge	Grant Green Iowa	Jefferson LaFayette Richland	Rock Sauk	WDNR South Central Regional Headquarters 3911 Fish Hatchery Road Fitchburg, WI 53711 608-275-3266
SOUTHEAST REGION (SER)				
Kenosha Milwaukee	Ozaukee Racine	Sheboygan Walworth	Washington Waukesha	WDNR Waukesha Service Center 141 N.W. Barstow Street, Room 180 Waukesha, WI 53188 262-574-2100

Storm Water Management Practices
Post Construction Long-Term Storm Water Management Checklist

Site Name: Victor Haen Elementary – Building Addition & Site Improvements

Location: Kaukauna, Outagamie County, Wisconsin

Responsible Party: The Owner is of the property responsible for the post construction long-term storm water management upkeep. This checklist may be utilized when performing inspections after any rainfall event exceeding one inch of rainfall, and at a minimum semi-annually in early spring and fall.

Date of Inspection: (mm/dd/yy)

Time of Inspection: (start/end)

Type of Inspection: (annual/quarterly/precipitation event)

Weather:

Inspector's Name:

Component Inspected:	**Repairs Required:**	**Comments:**
General Site Area		
-Sediment Deposits		
-Trash Accumulation		
-Plant Life		
-Surface Erosion		
-Mulch		
Site Vegetation		
Area Storm Sewer Pipe		
Grass and Plants throughout Site		
-Bare Spots		
-Dead Plant Material		
-Washouts		