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JANET T. MILLS
GOVERNOR

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION



MELANIE LOYZIM
COMMISSIONER

Via email

October 20, 2025

Mallinckrodt US LLC/Medtronic
Ashley Foster Pinnock, Sr. Legal Director and Managing EHS Counsel
710 Medtronic Parkway LC 300
Minneapolis, MN 55432

RE: Notice of Violation, Mallinckrodt US LLC, Bureau of Remediation and Waste Management

Dear Ashley Pinnock,

Enclosed is a Notice of Violation ("NOV") alleging the failure of Mallinckrodt US LLC/Medtronic (Mallinckrodt) to comply with the Maine Department of Environmental Protection (Department or DEP) Designation of Uncontrolled Hazardous Substances Site and Order (the Department Order) and the Board of Environmental Protection's Order on Appeal (the BEP Order) (collectively "Orders") regarding activities at the chloralkali manufacturing facility located adjacent to the Penobscot River in Orrington, Maine (Site). The violations are more fully described in the attached NOV.

Mallinckrodt began remedial activities in 2014, in accordance with the Orders after years of litigation that resulted in decisions by Maine Business and Consumer Court and the Maine Supreme Judicial Court upholding the requirements of the Orders. The Orders established no limitation on the costs or extent of sampling, soil removal, and water treatment that may be required of Mallinckrodt to satisfy the requirements of the Orders. The Department has repeatedly identified the provisions of the Orders that require removal of all soils at the Site, with very specific exceptions, that contain more than the media protection standards in the Orders. The Department has provided and continued to offer on-site guidance for soil removal activities that cannot be conducted in compliance with standards of Occupational Safety and Health Administration.

The Department disagrees with Mallinckrodt's assertion that contamination remaining at the Site no longer poses a danger to public health and that further remediation in accordance with the Department Orders is unnecessary. The Department offers technical assistance which may assist you in returning to compliance and avoiding further enforcement action. If you require technical assistance concerning this NOV please contact the case manager identified below.

A NOV is an administrative notice that is required by Maine law to be sent to parties the Department believes are responsible for violations of the state's laws, Department's rules, and/or orders, prior to initiating civil enforcement actions. A failure to take the actions described in this NOV, including your contacting me within the expected time deadline, may result in a decision to pursue additional enforcement actions.

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826

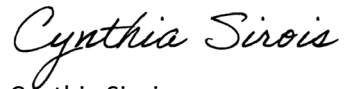
BANGOR
106 HOGAN ROAD, SUITE 6
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207) 941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04769
(207) 764-0477 FAX: (207) 760-3143

Thank you for your immediate attention to this matter.

Sincerely,

A handwritten signature in black ink that reads "Cynthia Sirois". The script is fluid and cursive, with the first letters of each word being capitalized and prominent.

Cynthia Sirois,
Environmental Protection Regulatory Specialist
Office of the Commissioner
17 State House Station
Augusta, ME 04333-0017



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Remediation and Waste Management
State House Station #17
Augusta, Maine 04333-0017
Telephone: (207) 287-7826

AMENDED NOTICE OF VIOLATION

PART I: GENERAL INFORMATION

ALLEGED VIOLATOR'S NAME:

Mallinckrodt US LLC/Medtronic

DOCKET NUMBER:

ALLEGED VIOLATOR'S MAILING ADDRESS:

710 Medtronic Parkway LC 300

Minneapolis, MN 55432

DATE ISSUED:

October 20, 2025

PHYSICAL LOCATION OF VIOLATIONS:

99 Industrial Way

Orrington, ME 04474

CERTIFIED MAIL NUMBER:

via email

POINT OF CONTACT AND TITLE:

**Ashley Foster Pinnock, Sr. Legal Director and
Managing EHS Counsel**

TELEPHONE NUMBER:

(763) 526-0924

PART II: INFORMATION CONCERNING THE ALLEGED VIOLATION

This Notice of Violation (NOV) is in reference to Mallinckrodt US LLC's (Mallinckrodt) ongoing failure to meet remediation requirements at its contaminated property that is subject to orders issued by the Department of Environmental Protection and the Board of Environmental Protection.

SUMMARY OF FACTS ALLEGED AS BASIS FOR VIOLATION(S):

1. Mallinckrodt owned and operated a chloralkali manufacturing facility located adjacent to the Penobscot River in Orrington, Maine (Site), and identified on the town of Orrington tax map at 005, lot 068.
2. On November 24, 2008, pursuant to 38 M.R.S. § 1365, the Commissioner of the Maine Department of Environmental Protection (Department or DEP) issued a Designation of Uncontrolled Hazardous Substances Site and Order (the Commissioner's Order) to Mallinckrodt,¹ which required Mallinckrodt to remediate the Site, including specified hazardous wastes such as mercury and chloropicrin.
3. On December 19, 2008, Mallinckrodt filed an administrative appeal of the Commissioner's Order with the Board of Environmental Protection (BEP).

¹ Mallinckrodt US LLC is a wholly owned subsidiary of United States Surgical Corporation. *Mallinckrodt US LLC v. Dep't of Env't Prot.*, 2014 ME 52, ¶ 1 n.1, 90 A.3d 428.

DISTRIBUTION:	Case File	X	Enforcement Director	X	AG's Office	X	EPA	Other:	
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4. On August 19, 2010, the BEP issued its Order on Appeal (the BEP Order), which made additional findings, denied Mallinckrodt's appeal, and affirmed and incorporated the Commissioner's Order in its entirety with certain modifications set forth in the BEP Order. Among other things, the BEP Order recognized the necessity of the Commissioner's requirement of Media Protection Standards (MPSs) to achieve a standard of remediation that is "protective of public health, safety and the environment,"² affirmed the applicable MPS for mercury of 2.2 ppm for the remediation of the Site, and, except for a limited exception not applicable here, mandated the removal by Mallinckrodt of all on-site soils and other media that do not meet that standard.³ Collectively, the Commissioner's Order, as affirmed with modifications by the BEP Order, are the legally binding Orders governing remediation work at the Site (henceforth, the DEP Orders).
5. On September 17, 2010, Mallinckrodt filed a judicial appeal of the DEP Orders, along with raising an independent claim pursuant to 42 U.S.C. § 1983, in Penobscot County Superior Court, which action was subsequently transferred to the Maine Business and Consumer Docket (the BCD).
6. On October 31, 2012, the BCD affirmed the DEP Orders and dismissed Mallinckrodt's section 1983 claim.
7. On February 15, 2013, Mallinckrodt filed a further notice of appeal of the DEP Orders to the Maine Supreme Judicial Court sitting as the Law Court (the Law Court).
8. On April 3, 2014, the Law Court issued a decision, *Mallinckrodt US LLC v. DEP*, 2014 ME 52, 90 A.3d 428, affirming the DEP Orders, which have remained final and not subject to further appeal and have governed all of Mallinckrodt's remediation work at the Site since that time.
9. The DEP Orders require Mallinckrodt to submit Corrective Measures Implementation Plans (CMIPs), or work plans, in prioritized phases⁴ and delegates to the DEP the authority to determine the priority of tasks for Mallinckrodt's removal of all soil and other media over the mercury MPS from the Site. The Commissioner's Order, §§ 3(a), (c), and (r) (at pp. 32-33), required Mallinckrodt to submit a CMIP to the DEP for its review and approval for the excavation, removal, and off-site disposal of all solid media exceeding the applicable MPS, including soils in the Plant Area,⁵ by January 31, 2009. The BEP Order, issued in mid-2010 after Mallinckrodt appealed the Commissioner's Order, cited to its requirements regarding the removal of **all solid media including soils** that exceed the MPS, explained that this "includes the plant area soils . . . as well as any other area on-site of soils in excess of the media protection standards," and found that "this requirement is necessary to address a danger or likelihood of danger to public health and safety and the environment."⁶ The BEP Order further noted the importance of Mallinckrodt implementing such excavation and removal work as expeditiously as possible to reduce the risks to human health and the environment posed by the Site.⁷
10. Remediation work began at the site in 2014. Removal of soil above the applicable MPS followed a process by which the area to be excavated would be identified and sub-divided into cells based on the results of prior soil investigation that determined the depth of

² BEP Order § 6(D)(1) (at p. 15).

³ BEP Order §§ 6(D)(4) (at pp. 15-16) and 12(E) (at p. 47). A limited exception to the removal requirement for soils that do not attain the MPS in Landfill areas only is included in the BEP Order at §§ 10(C)-10(D) (at pp. 30-39).

⁴ Commissioner's Order at pp. 32-33; BEP Order §§ 12(B) (at p. 46) and 13 (at p. 49).

⁵ The "Plant Area" is the contiguous 12-acre section within the 235-acre site upon which the former Cell Building was built. BEP Order § 8(b)(1) (at p. 18) and Aerial Plant Area Boundary (Ex. X).

⁶ BEP Order § 12(E) (at p. 47).

⁷ BEP Order § 13 (at p. 49).

excavation and then confirmation sampling would be used to document that soil above the applicable MPS had been removed.⁸

11. After completion of work on the Landfill 1 area of the Site, Mallinckrodt petitioned the DEP Commissioner on June 19, 2018, seeking relief from the requirements of the DEP Orders. That petition was denied by the Commissioner on August 7, 2018.
12. Mallinckrodt subsequently submitted a CMIP to remediate the Cell Building area, within the larger Plant Area, following the existing process approved by the Department and used by Mallinckrodt during the previous phased remediation work. This CMIP was approved and remediation of the Cell Building area began in August 2019.
13. On March 13, 2023, DEP informed Mallinckrodt in a progress meeting that the DEP's highest priority at the Site was the unremediated portion of the Plant Area and requested a work plan from Mallinckrodt to complete Plant Area remediation as the next prioritized remediation phase for the Site. DEP approved a CMIP for the paved sump/catch basin #6 as an interim operation.⁹
14. On June 2, 2023, the DEP notified Mallinckrodt by letter that Mallinckrodt's existing work plans did not yet cover the DEP's identified highest priority for the Site, i.e., remediating the remainder of the Plant Area. The DEP requested that a work plan meeting be held and that Mallinckrodt submit to the DEP, within 45 days of the June 2 letter,¹⁰ a work plan to remediate the remainder of the Plant Area (except for the Maintenance Building) consistent with the applicable MPS.
15. The requested Plant Area work plan is required to delineate the process of locating and removing all soil and other material with mercury concentrations above the MPS of 2.2 ppm in the entirety of the Plant Area, which removal has been determined to be necessary for the protection of public health, safety and the environment and is required by the DEP Orders.
16. In a letter dated July 20, 2023, Mallinckrodt acknowledged receipt of the DEP's June 2, 2023, letter, raised concerns with locating and removing all soils above the required mercury MPS of 2.2 ppm at the Site, and requested a meeting with the DEP to discuss "flexibility" in meeting that requirement of the DEP Orders.
17. In a letter dated July 31, 2023, the DEP responded to Mallinckrodt's July 20, 2023, letter. The DEP emphasized that although meeting the 2.2 ppm mercury MPS for soil remediation at the Site may present technical challenges for Mallinckrodt, the MPS of 2.2 ppm for mercury in soils is a requirement of the DEP Orders and is therefore non-negotiable.
18. After several additional meetings and calls with the DEP, Mallinckrodt eventually submitted a Plant Area remediation CMIP (Plant Area CMI Plan, Concrete and Utility Removal, Addendum 4) to the DEP by letter dated November 2, 2023, 108 days after the 45-day deadline of July 17, 2023, set forth in the DEP's June 2, 2023, letter requesting such a CMIP.
19. Mallinckrodt's CMIP submission included 38 soil and boring samples over the MPS spread over 11 yet to be remediated cells within the Plant Area.¹¹ Analysis of excavation soil samples by TechLaw, the DEP remediation contractor overseeing the remediation work, identified 12

⁸ This process was followed for the Nitromethane building (2014), Landfills 3-5 (2015-6), Scrap metal yard (2016), Northern Drainage Ditch (2016-17), Southerly Stream (2017), Landfill 2 (2017), Southern Cove (2017-18), and Landfill 1 (2018).

⁹ The remediation of the paved sump/catch basin #6 was completed in November 2023.

¹⁰ Although 30 days is the standard response time under multiple provisions of the DEP Order, the DEP in its discretion provided additional time for Mallinckrodt to respond to its June 2, 2023, letter considering the complexity of the requested work plan for the remediation of the remainder of the Plant Area.

¹¹ See Table "Mallinckrodt's Plant Area Soils with Hg>MPS and Planned for Remedial Excavation" citing Drawing #6 of Mallinckrodt's Plant Area CMI Plan, Concrete and Utility Removal, Addendum 4.

additional areas of media above the MPS for mercury requiring further remediation within the Plant Area.¹²

20. The DEP determined that Mallinckrodt's November 2, 2023, Plant Area CMIP was non-compliant with the DEP Orders and the DEP's June 2, 2023, letter because the Plant Area CMIP did not address remediation of all soils exceeding the mercury MPS at the Site, as required by the DEP Orders.¹³
21. Mallinckrodt's proposed November 2, 2023, Plant Area CMIP is inconsistent with the DEP Orders and departs from the DEP's approved remediation practices at the Site in several ways. Specifically, Mallinckrodt's proposed Plant Area CMIP artificially limits the locations where excavations would be performed by proposing to excavate small areas (20 ft X 20 ft) rather than entire cells as had been done with all previous excavations at the Site. The proposed Plant Area CMIP also limits the depth of excavation to no more than two feet below the depths of soil exceedances in boring samples, rather than continuing excavation until all sample results are less than the MPS of 2.2 ppm, as required by the DEP Orders and as has been done at all previous excavations at the Site other than Landfills 1 & 2. Mallinckrodt also proposes limiting excavations to a depth of 15 feet below ground surface, even though previous investigations and excavations have determined that soils exceeding the Site's MPS of 2.2 ppm for mercury have been found at greater depths in the Plant Area.
22. By letter dated January 4, 2024, the DEP notified Mallinckrodt that its November 2, 2023, Plant Area CMIP was unacceptable as proposed because it did not meet the conditions of the DEP Orders, which require the removal of all soil and other materials from the Site that exceed the mercury MPS of 2.2 ppm and which provided the DEP with authority to set the priority of tasks under CMIPs. Mindful of the ongoing delays at the Site, and rather than outright rejecting the November 2, 2023, Plant Area CMIP as non-compliant with the DEP Orders, the DEP approved Mallinckrodt's Plant Area CMIP but with modifications necessary to meet the requirements of the DEP Orders. Pursuant to paragraph 14¹⁴ of the Commissioner's Order, Mallinckrodt was then required to incorporate the DEP's modifications of the non-compliant November 2, 2023, Plant Area CMIP into a new work plan within 30 days.
23. By letter dated February 5, 2024, Mallinckrodt requested a meeting with the DEP to present a new work plan. On March 6, 2024, during this requested meeting, Mallinckrodt presented a work plan for the Plant Area that did not incorporate the DEP's modifications to the Plant Area CMIP and that still limited the depths and locations of excavations in the Plant Area.
24. On numerous occasions, DEP has informed Mallinckrodt that, to be approved, any CMIP or work plan for the Plant Area at the Site must comply with the requirements of the DEP Orders, including the removal of all soils that the exceed the MPS of 2.2 ppm for mercury to protect public health, safety and the environment.¹⁵
25. Despite the requirement of the DEP Orders and repeated reminders by the DEP that Mallinckrodt remove all soils at the Site that the exceed the MPS of 2.2 ppm for mercury to protect public health, safety and the environment, Mallinckrodt has repeatedly attempted to

¹² See Table "Locations where bottom of excavation soil sample results are > MPS for mercury and the cells are not completed as of March 2025".

¹³ See Plant Area Site Plan of Approximate Locations of Visible Hg and Soil with HG > MPS compiled by TechLaw, March 7, 2025.

¹⁴ Commissioner's Order § 14 (at p. 36): "For every approval with modification, DEP will specify the nature of the required modification. DEP's modification shall be deemed incorporated into and enforceable under this Order, and Mallinckrodt shall incorporate such modification into the relevant work plan, proposal or report within thirty (30) days of receipt of such approval with modification unless DEP agrees in writing to an extended period."

¹⁵ The DEP informed Mallinckrodt of this in writing on June 29, 2019; July 23, 2023; October 2, 2023; and January 4, 2024, and verbally at meetings with Mallinckrodt, including meetings held on September 26, 2023, and March 6, 2024.

evade this clear requirement. Indeed, on December 20, 2024, after failing to comply with the DEP Orders since at least February 5, 2024, when it was required to submit a compliant Plant Area CMIP, Mallinckrodt sent a petition to the BEP requesting that it be relieved of its responsibilities under the DEP Orders, including its responsibility to meet the MPS set by the DEP Orders. Contrary to Mallinckrodt's contentions, the Site is still a threat to human health, safety and the environment. Soil in the unremediated portion of the Plant Area presently contains visible elemental mercury and is above the required MPS.¹⁶

26. On March 19, 2025, DEP issued a NOV alleging violations of Sections 3(a), 3(c), and 3(r) of the Commissioner's Order (at pp. 32-33) and Sections 6(D)(4), 12(E), and 14 of the BEP Order (at pp. 15-16, 36, 47). These alleged violations are incorporated below.
27. On April 8, 2025, Mallinckrodt requested to meet with DEP staff to discuss the March 2025 NOV. The meeting was held via Teams on July 14, 2025. During this meeting, DEP staff extended the compliance schedule deadline for Mallinckrodt to submit for the DEP's review and approval a detailed work plan to remove all solid material above the Site MPS from all unremediated areas within the Plant Area. The deadline was reset to August 18, 2025. During the meeting, Ashley Pinnock, Sr. Legal Director and EHS Managing Counsel for Mallinckrodt, stated the workplan Mallinckrodt would submit on or before August 18, 2025 would be the final extent of Mallinckrodt's excavation plans.
28. On August 18, 2025, Mallinckrodt submitted its response to the March 19, 2025, NOV, including its workplan in the form of an addendum (Addendum 5) to the Plant Area Corrective Measures Implementation Plan.
29. Mallinckrodt's Addendum 5 for the Plant Area did not incorporate DEP's modifications to the Plant Area CMIP. Instead, Addendum 5 proposes that Mallinckrodt would only excavate to 4 feet in depth in six specific areas on the site: PA3-1, PA3-2, PA3-7, PA7-6, PA8, and CB6-16. Notably, Mallinckrodt continues to evade the clear requirement that it remove all soils at the Site that exceed the MPS of 2.2 ppm for mercury to protect public health, safety, and the environment.
30. As of the date of this Amended NOV, Mallinckrodt has not submitted a CMIP to the DEP that incorporates the DEP's January 4, 2024, modifications or otherwise addresses the excavation and removal from the Plant Area of all soil and other media with mercury levels above the 2.2 ppm MPS, as required by the DEP Orders.
31. As of the date of this Amended NOV, Mallinckrodt has failed to excavate and remove all solid media and soils exceeding applicable MPS in the Plant Area, including all soil and other media with mercury levels above the 2.2 ppm MPS, as required by the Commissioner's Order, §§ 3(a), (r) (at pp. 32-33) and as upheld and required by the final BEP Order, §§ 6(D)(4) (at pp. 15-16) and 12(E) (at p. 47).
32. In addition to the violations identified above, Mallinckrodt's failure to submit a plan to excavate and remove all solid media and soils exceeding applicable MPS in the Plant Area, including all soil and other media with mercury levels above the 2.2 ppm MPS, as required by the DEP Orders, and its failure to remove all such soils as required by the DEP Orders, has resulted in ongoing, daily violations since at least February 5, 2024, or the deadline for Mallinckrodt to have submitted a compliant Plant Area CMIP.
33. As of the date of this Amended NOV, Mallinckrodt has not submitted a CMIP to the DEP that satisfies the compliance requirement detailed in the DEP's March 19, 2025, NOV.
34. In its Addendum 5, Mallinckrodt stated its intention to abandon-in-place any portion of the industrial sewer located at depths greater than 4 feet within site areas PA3-1, PA3-2, PA3-7, PA7-6, PA8, and CB6-16. Mallinckrodt stated it intends to abandon-in-place the "accessible

¹⁶ Furthermore, entire areas of the Site have not even been characterized or fully assessed for contamination, such as the TSSA-1 area.

(e.g. through manholes or vaults)” remaining portions of the industrial sewer in the Plant Area. DEP has interpreted this as Mallinckrodt intending to retain all industrial sewer lines not under the six specific areas that it deems inaccessible and abandon-in-place any lines within these areas or “accessible” on the remaining portion of the Site that are located at depths greater than 4 feet. This would fail to comply with the DEP Orders which require removal of the industrial sewer.¹⁷ Through this Amended NOV, DEP requests Mallinckrodt either clarify or confirm its proposed approach to removal of industrial sewer at the Site.

35. In its Addendum 5, Mallinckrodt commented on its future plans for Temporary Soil Stockpile Area (TSSA) No. 1. DEPs interprets Mallinckrodt’s statements in Addendum 5 as intending to develop and submit a plan to retain the pavement over TSSA No. 1 but not perform excavation work on or under TSSA No. 1. Through this Amended NOV, DEP requests Mallinckrodt either clarify or confirm its proposed approach to excavation and remediation under TSSA No. 1.
36. Mallinckrodt’s Addendum 5 is silent as to excavations in the Chloropicrin area. Instead, it states the “SVE system in the Chloropicrin Area, the groundwater extraction systems at Landfill 1 and at Landfills 3, 4, and 5, and the groundwater treatment plant (GWTP) will continue to operate until performance goals are achieved.” Through this Amended NOV, DEP requests Mallinckrodt to confirm or clarify how it will meet the MPS of 0.125mg/kg for Chloropicrin to comply with the DEP Orders and protect public health, safety, and the environment.
37. The DEP Orders require Mallinckrodt to establish a trust fund to provide financial assurance for the activities required by the Commissioner’s Order, including operation of the wastewater treatment plant, groundwater collection system, and groundwater monitoring, and maintenance of the Ferry Road filtration system.¹⁸ The Board upheld this financial assurance requirement in its 2010 Order.¹⁹ After 15 years, Mallinckrodt still has not established financial assurance for this Site.

AUTHORITY

38 M.R.S. § 347-A(1) authorizes the Commissioner to initiate an enforcement action through one or more steps “whenever it appears to the commissioner, after investigation, that there is or has been a violation of this Title, . . . or of the terms or conditions of a license, permit or order issued by the board or the commissioner .” All orders of the department may be enforced by the Attorney General or the department. 38 M.R.S. § 347-A(5).

“In the event of a violation of any provision of the laws administered by the department or of any order, regulation, license, permit, approval, administrative consent agreement or decision of the board or commissioner . . . the Attorney General or the department may institute injunction proceedings to enjoin any further violation thereof, a civil or criminal action or any appropriate combination thereof without recourse to any other provision of law administered by the department.” 38 M.R.S. § 348(1). Courts may order restoration of any affected areas in such actions. 38 M.R.S. § 348(2).

¹⁷ Commissioner’s Order §3(d) (at p. 32).

¹⁸ Commissioner’s Order §9 (at p. 35): “Mallinckrodt shall... establish a trust fund to provide financial assurance for the activities included in the Commissioner’s Order, the operation of the wastewater treatment plant, groundwater collection system, groundwater monitoring and maintenance of the Ferry Road filtration system.”

¹⁹ BEP Order §14A (at p. 49-50).

38 M.R.S. § 349(2) further provides, in pertinent part, that “[e]xcept as otherwise specifically provided, a person who violates a law administered by the department, *including, without limitation, a violation of the terms or conditions of an order, rule, license, permit, approval or decision of the board or commissioner* . . . is subject to a civil penalty, payable to the State, of not less than \$100 and not more than \$10,000 for each day of that violation or, if the violation relates to hazardous waste, of not more than \$25,000 for each day of the violation. This penalty is recoverable in a civil action.” (*Emphasis added.*)

SPECIFIC VIOLATIONS

The Department has identified the following violations of the DEP Orders by Mallinckrodt:

Violations of Sections 3(a), 3(c), and 3(r) of the Commissioner’s Order (at pp. 32-33) and Sections 6(D)(4) and 12(E) of the BEP Order (at pp. 15-16, 47): Failure to Excavate, Remove and Dispose of All Mercury Contaminated Soils in the Plant Area Consistent with the Mercury MPS.

By failing to excavate, remove, and dispose of all mercury-contaminated soils in the Plant Area consistent with the mercury MPS, Mallinckrodt has violated the DEP Orders on an ongoing, daily basis since, at the latest, February 5, 2024.

Violations of Sections 3(a) and of the Commissioner’s Order (at pp. 32-33) and Sections 6(D)(4) and 12(E) of the BEP Order: Failure to Timely Provide a CMIP for the Excavation, Removal, and Off-Site Disposal of All Mercury Contaminated Soils in the Plant Area Consistent with the Mercury MPS.

By failing to provide a timely CMIP for the excavation, removal, and disposal of all mercury-contaminated soils in the Plant Area consistent with the mercury MPS, Mallinckrodt has violated the DEP Orders on an ongoing, daily basis since, at the latest, February 5, 2024.

Violation of Section 14 of the Commissioner’s Order (at p. 36): Failure to Incorporate DEP Modifications Into Relevant Work Plan for the Plant Area.

Section 14 of the BEP Order (at p. 36) states and requires: “For every approval with modification, DEP will specify the nature of the modification. DEP’s modification shall be deemed incorporated into and enforceable under this Order, and Mallinckrodt shall incorporate such modification into the relevant work plan, proposal or report within thirty (30) days of receipt of such approval with modifications unless DEP agrees in writing to an extended period.”

By failing to incorporate the modifications to the Plant Area CMIP approved by the DEP on January 4, 2024, Mallinckrodt violated Section 14 of the Commissioner’s Order (at p. 36) on an ongoing, daily basis since, at the latest, February 5, 2024.

Violations of Section 9 and of the Commissioner’s Order (at pp. 35) and Section 14(A) of the BEP Order (at pp. 49-50): Failure to establish a trust fund to provide financial assurance.

By failing to establish a trust fund to provide financial assurance, Mallinckrodt has violated the DEP Orders on an ongoing, daily basis.

POTENTIAL VIOLATIONS – CLARIFICATION RESPONSE BY MALLINCKRODT

REQUESTED. IF THE DEPARTMENT DOES NOT RECEIVE CLARIFICATION FROM MALLINCKRODT THAT INDICATES MALLINCKRODT'S COMPLIANCE WITH THE DEP ORDERS, THE POTENTIAL VIOLATIONS WILL BE TREATED AS SPECIFIC VIOLATIONS.

Violations of Sections 3(d) and of the Commissioner's Order (at pp. 32) and Section 12(F) of the BEP Order (at pp. 47-48): Failure to remove the industrial sewer.

Violations of Sections 3(a), 3(c), and 3(r) of the Commissioner's Order (at pp. 32-33) and Sections 6(D)(4) and 12(E) of the BEP Order (at pp. 15-16, 47): Failure to Excavate, Remove and Dispose of All Chloropicrin Contaminated Soils in the Plant Area Consistent with the Chloropicrin MPS.

Violations of Sections 3(a), 3(c), and 3(r) of the Commissioner's Order (at pp. 32-33) and Sections 6(D)(4) and 12(E) of the BEP Order (at pp. 15-16, 47): Failure to Excavate, Remove, and Dispose of All Solid Material Exceeding MPS. Specifically, Failure to Excavate, Remove, and Dispose of Soils on the Plant Area on, under, and surrounding TSSA No. 1.

CONCLUSION

In summary, remediation work at the Mallinckrodt site began in 2014 utilizing the standards and practices required by DEP Orders as affirmed by the Maine Law Court. The DEP Orders require removal of all soils present at the site that exceed the MPS of 2.2 ppm for mercury as necessary for the protection of human health and the environment. The DEP Orders also require that Mallinckrodt submit CMIPs to ensure, to the satisfaction of DEP, that the remedial operations will effectively achieve the standards required by order.

Beginning in March of 2023, Mallinckrodt was informed by the DEP that the remainder of the Plant Area was the highest remaining remediation priority and that the submission of a CMIP to address the removal of all soils exceeding the mercury MPS within the Plant Area was required. The CMIP submitted by Mallinckrodt on November 2, 2023 was both 108 days in excess of the deadline required by order and technically insufficient to achieve the requisite soil remediation standard. Mallinckrodt has refused to incorporate the DEP's modified approvals necessary to sufficiently address this priority. The CMIP submitted by Mallinckrodt on August 18, 2025, was technically insufficient to achieve the requisite soil remediation standard and does not comply with the legal requirements of the DEP Orders. To date, Mallinckrodt has not submitted a CMIP that complies with the DEP Orders. As a result, no significant remediation work has been performed in the prioritized section of the Mallinckrodt site.

The DEP Orders require removal of the industrial sewer on Site. To date, Mallinckrodt has not submitted a CMIP that meets this requirement. The DEP Orders requires that Mallinckrodt establish a trust fund provide financial assurance for the activities included in the Commissioner's Order, the operation of the wastewater treatment plant, groundwater collection system, groundwater monitoring and maintenance of the Ferry Road filtration system. To date, Mallinckrodt has not established this trust fund.

1. Within 30 days of receipt of this NOV, submit for the DEP's review and approval a detailed work plan to remove all solid material above the Site MPS from all unremediated areas within the Plant Area.
2. Within 30 days of the receipt of this NOV, submit for the DEP's review and approval a detailed work plan to remove all industrial sewer on the Site.
3. Within 30 days of the receipt of this NOV, establish a trust fund for providing financial assurance in accordance with the DEP Orders. Provide documentation of this trust fund to the DEP.
4. Within 30 days of the receipt of this NOV, confirm and clarify that Mallinckrodt's performance goals for the SVE in the Chloropicrin area do not exceed the 0.125mg/kg MPS for Chloropicrin.
5. Within 30 days of the receipt of this NOV, confirm and clarify that Mallinckrodt plans to remediate the soils under TSSA No. 1 to meet MPS levels for all contaminants.
6. Within 15 days of receiving DEP approval or approval with modification, implement the approved plan.

Timely cooperation on implementing the corrective actions requested in this NOV and contacting the case manager in writing within thirty (30) days of receiving this NOV are two significant factors that may affect whether, or the extent to which, the Department pursues further enforcement action. Your reply should document all corrective actions taken to address each of the violations cited in this NOV and to ensure that compliance is achieved and maintained. Any relevant documentation of compliance (e.g. analytical results, work orders, manifest copies or other documents) should be included in your response. The Department offers technical assistance which may help you in correcting violations and preventing future violations. If you need technical assistance concerning this NOV or have questions regarding the Hazardous Waste Management Rules, please contact the Enforcement Case Manager identified below.

PART III: DEPARTMENT ENFORCEMENT CONTACT

ENFORCEMENT CASE MANAGER:

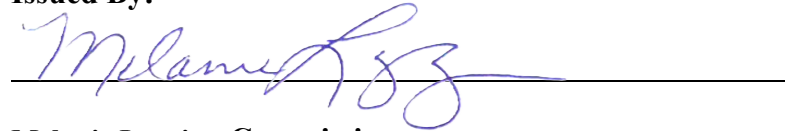
Cynthia Sirois
Department of Environmental Protection
17 State House Station
Augusta, ME, 04333-0017

TELEPHONE NUMBER:

207.557.2641

State of Maine, Department of Environmental Protection

Issued By:



Melanie Loyzim, Commissioner

Enclosure(s) (4):

ENCLOSURES

Plant Area CMI Plan, Concrete and Utility Removal, Addendums 4 and 5
Plant Area Site Plan of Approximate Locations of Visible Hg and Soil with HG MPS
Table of Plant Area Soil with Hg above MPS and Mallinckrodt Plans for Remediation
Table of Plant Area Soils with Hg above the MPS and Planned for Excavation

August 18, 2025

VIA E-MAIL

Maine Department of Environmental Protection
Attn: Melanie Loyzim, Commissioner
17 State House Station
28 Tyson Dr.
Augusta, ME 04333-0017
melanie.loyzim@maine.gov

Re: Orrington, Maine, Chlor-Alkali Manufacturing Facility Notice of Violation

Dear Commissioner Loyzim:

Mallinckrodt US LLC (“Mallinckrodt”) respectfully submits the attached workplan in response to the Notice of Violation (“NOV”) issued by the Maine Department of Environmental Protection (“DEP”) on March 19, 2025 related to the former HoltraChem Site in Orrington, Maine (the “Site”). The workplan is in the form of an addendum (“Addendum 5”) to the Plant Area Corrective Measures Implementation Plan – Concrete and Utility Removal scope of work, approved by the DEP on July 24, 2020. Mallinckrodt is prepared to implement the work upon approval of Addendum 5 as drafted and confirmation that it adequately addresses the NOV and that the work described therein will satisfy the DEP and Maine Board of Environmental Protection’s (“BEP’s”) orders (the “Orders”).

Addendum 5 follows seventeen years of Mallinckrodt’s good-faith compliance with the Order. Mallinckrodt has spent hundreds of millions of dollars. It has removed significantly more material from the Site than the DEP or BEP ever contemplated, including 27,500 pounds of mercury. It has taken 10,000 soil samples; installed three landfill caps; removed industrial sewer; extracted and treated millions of gallons of water; and has closed or submitted closure reports for eight of nine portions of the Site, certifying its compliance with the letter of the Orders. Over these years, Mallinckrodt has been cooperative with and responsive to the DEP at every turn in remediating the Site for the benefit of the people of the State of Maine.

Addendum 5 describes the work remaining at the Site and is consistent with the plan Mallinckrodt proposed in its July 14, 2025, meeting with DEP.¹ At that meeting,

¹ For months before the DEP issued the NOV, Mallinckrodt had requested a meeting to discuss the challenges of remediation in the Plant Area and a plan for addressing same. DEP indicated, however, that it wished to wait until issuing an NOV before holding a meeting. Both before and after the NOV was issued, Mallinckrodt petitioned BEP for relief from the Orders, which BEP then referred to DEP. DEP denied that petition on April 16, 2025. On April 8, shortly after the NOV was issued, Mallinckrodt requested an extension of the

Maine Department of Environmental Protection
August 18, 2025
Page 2

Mallinckrodt explained in detail that the work proposed in Addendum 5 is tailored to Site realities brought to DEP's attention years ago: removal of all Plant Area soils with mercury above media protection standard of 2.2 ppm is infeasible, dangerous to attempt, and not necessary for addressing Site risk.

To address these realities, Mallinckrodt has long suggested discussions to come up with a reasonable resolution of the impracticability DEP has put before it, one that avoids litigation that would unnecessarily draw on the State's limited resources and compromise Maine taxpayers' interests, and one that finally allows beneficial use of the property rather than continued stagnation of the Site. DEP has long been aware of these issues but has declined to act on any of them. The DEP has refused to engage with Mallinckrodt in any meaningful discussion regarding the status of the Site, the impossibility of performance, the source of remaining risk at the Site, or the path to obtaining closure of the Site.

During the July 14 meeting, Mallinckrodt explained that its prior work and proposed next steps eliminate risk at the Site. Mallinckrodt has replaced several feet of contaminated soil with clean soil across the Site and has installed extraction wells to make sure no mercury in groundwater leaves the Site.² As result, the Site no longer presents any of the danger to human health or the environment that the Site was first identified to remedy. This is supported by expert opinion provided to the DEP and is consistent with an independent study by mercury scientists, who also concluded that the Site is not a significant source of mercury to the Penobscot River. In addition, Mallinckrodt reiterated legitimate concerns regarding worker safety in further attempting to remediate the Site at depth. At the conclusion of the meeting, DEP asked Mallinckrodt to respond to the NOV by submitting a workplan consistent with Mallinckrodt's proposal by August 18.

Addendum 5 includes significant additional work to eliminate risk. It involves removal of remaining soils zero to four feet below ground surface in the Plant Area with mercury concentrations greater than the media protection standard and backfilling excavation areas with a minimum of four feet of clean material. Addendum 5 further identifies final restoration activities that will be performed throughout the Plant Area and the CB6 Paved Sump Area after completion of Addendum 5. This work will cost millions of dollars and take approximately a year to complete.

Given the scope of this commitment, Mallinckrodt requires assurance that the work it proposes will bring finality to the Site. Mallinckrodt will commence work on Addendum

response deadline to allow time for a meeting with DEP. On May 27, DEP granted Mallinckrodt's request for a meeting, which was then scheduled for July 14.

² Although it declined to meaningfully engage with Mallinckrodt's concerns during the July 14 meeting, DEP stated that it does not believe the groundwater extraction system is adequately capturing groundwater. That statement was surprising to Mallinckrodt because it is inconsistent with DEP's longstanding involvement in and approval of that system and years of data demonstrating its efficacy.

Maine Department of Environmental Protection
August 18, 2025
Page 3

5 upon approval by DEP and confirmation from DEP that Addendum 5 satisfies the NOV and the work described therein will satisfy the Orders.

Mallinckrodt wants to resolve this dispute, to cooperate and comply, to see the Site property put to beneficial use, and to achieve these goals without compromising its own or the State's limited resources. But it cannot achieve any of these goals alone. Mallinckrodt looks forward to DEP's approval of Addendum 5 as drafted.

Thank you for your attention to this matter.

Very truly yours,



Jeff Talbert

Attachments

cc: Susanne Miller (susanne.miller@maine.gov)
Nick Hodgkins (nick.hodgkins@maine.gov)
Chris Evans (chris.evans@maine.gov)
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August 18, 2025

Maine Department of Environmental Protection
Attn: Melanie Loyzim, Commissioner
17 State House Station
28 Tyson Dr.
Augusta, ME 04333-0017

**Subject: Plant Area CMI Plan, Concrete and Utility Removal, Addendum 5
Orrington Remediation Site
Orrington, Maine**

Dear Commissioner Loyzim:

This letter presents an addendum (Addendum 5) to the Plant Area Corrective Measures Implementation (CMI) Plan – Concrete and Utility Removal (CUR) scope of work (Plant Area CUR CMI Plan), approved by the Maine Department of Environmental Protection (DEP) on July 24, 2020, that is being completed at the Orrington Remediation Site (Site). The work presented in this Addendum 5 is located mainly in the Plant Area and one area is in the Catch Basin 6 (CB6) and Paved Sump area. Previous work in the CB6 and Paved Sump area was presented in the CB6 and Paved Sump CMI Plan, approved by the Maine DEP on August 24, 2022. This scope of work is being completed as part of the State of Maine Board of Environmental Protection (BEP) Order (Order) effective April 13, 2014.

The Addendum 5 scope of work was presented to the Maine DEP during a July 14, 2025 teleconference. The July 14, 2025 teleconference was held at the request of Mallinckrodt, in response to the Notice of Violation (NOV) that was issued by Maine DEP on March 19, 2025. The meeting resulted in the Maine DEP requesting that a formal CMI Plan be submitted by Mallinckrodt. The Addendum 5 scope was prepared to address the NOV and satisfy the terms of the Order related to soil excavations of mercury soils above the MPS and the Industrial Sewer.

The objective of Addendum 5 is to remove surface soils (0 to 4 feet below ground surface [bgs]) in localized areas that pose a potential human health or ecological risk to future recreational or industrial receptors at the Site. Specifically, remaining surface soils with mercury concentrations that are greater than the media protection standard (MPS) and that present a potential human or ecological risk will be excavated as shown on **Drawing 6**. Following the removal of these surface soils, excavation areas will be backfilled with a minimum of 4 feet of clean material. Soils excavated with mercury concentrations exceeding the MPS will be transported offsite for disposal. In addition, the remaining portions of the Industrial Sewer in the Plant Area that are greater than 4 feet bgs that are accessible (e.g., through manholes or vaults) or identified in test pits will be abandoned in place.

The depth of soil excavations and approach for the Industrial Sewer takes into account the health and safety of the construction workers that will be implementing the work. During the July 14,

2025 teleconference, Maine DEP acknowledged worker health and safety was a consideration they have used at the Site when determining the depth of soil excavations. Excavating at depths greater than 4 feet provides limited to no environmental benefit, while increasing risks to worker health and safety due to concerns related to excavation stability, trench stability, and dewatering. These conditions have been encountered during other excavation activities at the Site.

These activities eliminate potential remaining exposure pathways in Site surface soils, further reducing the potential risk to human health and the environment at the Site pursuant to the Uncontrolled Hazardous Substances Site Law (38 MRSA 1365). The majority of the Plant Area and CB6 and Paved Sump area will have a minimum of 4 feet of clean fill, pavement (TSSA 1 and portions of railroad area), or concrete foundations (Maintenance Building), thereby eliminating the risk of ingestion, direct contact, or inhalation of surface soils for both human and ecological receptors. In the limited areas where soils with mercury concentrations above the MPS remain at depths greater than 4 feet, any associated risks will be mitigated through the implementation of institutional controls (i.e., a deed notice). Similar to soils left in place at Landfill 1, Mallinckrodt has performed mercury sequential extraction testing on soil samples from the Plant Area. The results of these tests indicate that the majority of mercury fractions are in low soluble forms and not susceptible to leaching. This is supported by multiple years of groundwater monitoring which indicate mercury concentrations in the groundwater are below the MPS and other actionable levels.

Following completion of Addendum 5, final restoration activities will be performed throughout the Plant Area and the CB6 and Paved Sump Area. These restoration activities will be presented in a separate plan to the Maine DEP and are anticipated to include the following:

- Develop a plan for Temporary Soil Stockpile Areas (TSSAs) No. 1 and 3 considering potential future use by the Town. The TSSAs are currently paved and will be used to temporarily stockpile soils and load rail cars during Addendum 5.
- Restoration of the former Cell Building area, including removing or cutting sheet piles and establishing final grades
- Final grading of the Plant Area and CB6 and Paved Sump area and the installation of permanent stormwater management features. These designs will also consider potential future use by the Town.
- Stabilization and revegetation of remaining disturbed areas of the Site.
- Develop a long term operation and maintenance plan associated with the Landfill 3, 4, and 5 caps.

In addition, the SVE system in the Chloropicrin Area, the groundwater extraction systems at Landfill 1 and at Landfills 3, 4, and 5, and the groundwater water treatment plant (GWTP) will continue to operate until performance goals are achieved. Erosion and sediment controls, along with stormwater best management practices (BMPs) will be maintained throughout the duration of Addendum 5 and until the Site is fully stabilized.

Scope of Work

The scope of work to be performed as part of this Addendum 5 will utilize existing protocols that were developed, approved by Maine DEP, and implemented during prior stages of work. These protocols and plans are described in the following:

- *Catch Basin #6 and Paved Sump CMI Plan*, prepared by Geosyntec and CDM Smith, dated July 2022. The CMI Plan was approved by the Maine DEP in an email correspondence from Max Luick dated August 24, 2022.
- *Plant Area CMIP – Phase 1 Scope of Work*, prepared by Geosyntec and CDM Smith, dated January 2, 2018. The CMI Plan was approved by the Maine DEP in a letter from Kyle Jellison dated January 9, 2018.
- *Plant Area CMI Plan – Concrete and Utility Removal*, prepared by Geosyntec and CDM Smith, dated July 2, 2020. Revision 1 of the Drawings was dated July 20, 2020, and addressed Maine DEP comments received during a July 15, 2020, teleconference. The CMI Plan was approved by Maine DEP in a letter from Chris Swain dated July 24, 2020.

Details on the Addendum 5 scope of work are provided below and in the attached drawings (**Attachment 1**).

Pre-Excavation Activities

Pre-excavation activities will be completed by the Remediation Contractor (CDM Smith, Inc.) prior to initiating excavation in the Addendum 5 areas. The Remediation Contractor will perform a pre-excavation survey, install a temporary air monitoring station downgradient of PA8, construct temporary decontamination pad(s) (as needed), locate active utilities in PA8 using test pits and/or ground penetrating radar (GPR), install temporary stormwater controls (berms and swales) in CB6-16, and establish pertinent erosion and sediment controls (see **Drawing 4**). The Remediation Contractor will take measures to protect active structures, including monitoring wells, active utilities, and the railroad tracks. Construction equipment and materials will be stockpiled in the existing on-site staging areas located throughout the Plant Area. Waste and material to be shipped offsite for disposal will be stockpiled in TSSAs 1 or 3.

Excavation

The lateral limits of excavations areas PA3-1, PA3-2, PA3-7, PA7-6, and PA8 were defined using data from pre-design investigations, subsequent sampling activities during previous excavations, and as-built excavation information from the Plant Area Phase 1 CMI Plan and the Plant Area CUR CMI Plan excavation and backfilling activities. Pre-design investigation results for borings in these areas were presented in the Northern Drainage Ditch CMIP Revision 1 (dated August 23, 2016) and the Plant Area CMI Plan (dated February 13, 2017). These excavations will target areas that were not previously excavated in the Plant Area due to the need to maintain the Site access Troad during other CMI Plans and continued operation of the interceptor trench adjacent to the Southerly Stream.

The lateral limits of CB6-16 were defined using data collected from pre-design investigations and as-built excavation information. CB6-16 also includes the southeastern portion of CB6-14 where excavation was not previously performed during implementation of the CB6 and Paved Sump – Addendum 1 CMI Plan (dated March 10, 2023) due to stability concerns. The lateral extents of the excavation areas are shown on **Drawing 6** and tabulated on **Drawing 7**.

Additional excavation beyond the lateral limits of the excavation areas are not anticipated, as these lateral limits were established based on existing sample locations that were below the MPS, adjacent boundaries of previously excavated areas, or the presence of physical constraints. These physical constraints include the sheet pile alignment adjacent to PA7-6 and PA3-7, the rail tracks located north of PA8, and the Southerly Stream located south of PA8.

The vertical extent of each of the Addendum 5 excavation areas will be 4 feet targeting the removal of surface soils with mercury concentrations exceeding the MPS. This depth is designed to eliminate risks associated with direct contact, ingestion, or inhalation of surface soils to future recreational or commercial users of the Site. Upon reaching the bottom of the excavation, a visual inspection will be conducted to look for the presence of visible mercury. Visual mercury is not anticipated to be encountered within the limits of the Addendum 5 excavation limits based on the observations from the pre-design investigation borings. Nonetheless, if visible mercury is observed during excavation, the location will be reviewed with the Maine DEP to determine whether additional excavation can be safely conducted within the constraints of the excavation limits. This evaluation will consider factors such as excavation stability, worker health and safety, and the potential risk associated with remaining visible mercury. Once excavation is complete, areas will be backfilled with clean material, which will act as a protective cover to limit the exposure to subsurface soils.

An additional consideration when determining the excavation depth was worker health and safety. In accordance with the Occupational Safety and Health Administration (OSHA) excavation standards (29 CFR 1926 Subpart P), excavation stability measures are not required for excavations that do not exceed 4 feet in depth. Excavations greater than 4 feet need additional excavation stability measures, such as temporary shoring (i.e., sheet piles or trench boxes), benching or sloping. Additionally, in many cases dewatering is also required as the depth increases below 4 feet bgs. Since the planned excavation will have sidewalls no greater than 4 feet in height, no additional stability measures or water management controls will be required. The Remediation Contractor will monitor excavation conditions throughout the work and perform localized maintenance as needed.

Record Sampling

Record samples will be collected at the bottom of excavation areas to document soils remaining at the Site as shown on **Drawing 8**. This information will be incorporated into the deed notices to inform potential future construction activities. The record samples collected at the bottom of the excavation areas will supplement previous samples collected from within the excavation areas. Over 390 soil samples have been collected from within the footprint of the Addendum 5 excavation areas and tested for mercury during the pre-design investigation. These samples will be referred to

as pre-excavation record samples. To supplement this dataset, additional record samples will be collected from the bottom of the excavation at a depth of 4 feet bgs. The objective of these samples is to achieve a post-excavation sampling frequency of approximately one sample per 1,000 square feet specifically for samples collected at a depth of 4 feet. This frequency is similar to the post-excavation record sampling frequency utilized in the Landfill 1 CMI Plan for areas where material above the MPS was left in place.

To support implementation of other CMI Plans clean material has been placed and also removed to construct roads, staging areas, and facilitate the installation of deadman anchors along the sheet pile alignment used to excavate the former Cell Building area. As a result, the elevation at a depth of 4 feet bgs during the pre-design investigation may differ from the elevation at the same depth during implementation of Addendum 5. To assess the consistency of the pre-excavation record samples collected at a depth of 4 feet, the elevation at which each sample was originally obtained was compared to the excavation surface. This comparison was used to determine the number of pre-excavation record samples that correspond to a 4-foot depth relative to the excavation bottom.

Following excavation, a survey will be conducted in excavation areas to confirm that the vertical and lateral extents of the excavation (**Drawings 6 and 7**) have been achieved. The pre-design borings and post-excavation record samples, as well as a comparison of the as-built survey to the excavation surface, will serve as final documentation of any remaining mercury concentrations greater than the medium project standards and bottom of excavation elevation.

Table 1: Summary of Record Samples

Excavation Area	PA3-1	PA3-2	PA3-7	PA7-6	PA8	CB6-16
Total Number of Pre-Excavation Record Samples	8	25	24	20	50	270
Number of Pre-Excavation Record Samples Collected at 4 feet bgs	0	2	1	2	7	14
Number of Post-Excavation Record Samples	1	1	1	1	12	3
Area (sf)	869	2,100	2,253	3,155	19,315	17,096
Total Record Samples at 4 feet bgs	1	3	2	3	19	16
Sample Frequency	1 per 869 sf	1 per 700 sf	1 per 1,127 sf	1 per 1,052 sf	1 per 1,017 sf	1 per 1,006 sf

Notes:

1. A minimum of one sample will be collected from each excavation area, regardless of whether a sample is required to meet the target frequency of one sample per 1,000 square feet.
sf: square feet

Table 2: Pre-Excavation Record Samples Collected at a 4-Foot Depth

Location ID	Northing (USSurveyFoot)	Easting (USSurveyFoot)	Elevation Interval (USSurveyFoot)
SB-PA-181	899834.6	391545.4	65.6 – 64.6
SB-PA-130	899802.2	391550.9	65.7 – 64.7
SB-PA-35	899788.4	391599.7	64.8 – 62.8
SB-PA-33	899631.5	391598.8	64.9 – 62.9
SB-PA-234	899665.1	391572.8	65.6 – 64.6
SB-ND-06	899098.5	391400.7	32.4 – 31.4
SB-ND-07	899040.5	391365.7	25.1 – 24.1
SB-ND-08	899072.8	391347.0	25.5 – 24.5
SB-ND-13	899117.6	391348.1	29.9 – 28.9
SB-ND-14	899072.0	391296.4	21.9 – 20.9
SB-ND-16	899109.5	391308.6	27.8 – 26.8
SB-ND-18	899176.4	391427.9	44.3 – 43.3
SB-ND-20	899128.4	391380.5	34 – 33
SB-ND-21	899126.8	391334.2	30.1 – 29.1
SB-PA-156	899175.8	391360.1	43.2 – 42.2
TS-ND-C2	899008.1	391283.1	20.3 – 19.3
TS-ND-C3	899031.5	391267.4	20.1 – 19.1
SB-ND-19	899151.8	391406.6	38.9 – 37.9
SB-ND-15	899143.4	391306.2	29.3 – 28.3
TS-ND-B1	899094.7	391370.7	24.4 – 23.4
SB-ND-15	899143.4	391306.2	29.3 – 28.3
SB-PA-13	899526.0	391296.2	57.3 – 56.3
SB-PA-63	899575.9	391282.8	55.5 – 53.5
SB-PA-140	899612.4	391279.7	57.1 - 56.1
SB-PA-64	899529.2	391244.3	50.6 – 48.6
SB-PA-86	899377.9	391299.5	62.3 – 61.3
TS-SS-R2A	899501.0	391235.6	49 – 48
TS-SS-S4	899402.2	391190.1	46.4 – 45.4

Table 3: Excavation Record Samples to be Completed after Excavation

Excavation Area	Location ID	Northing (USSurveyFoot)	Easting (USSurveyFoot)	Depth (feet bgs)
PA3-1	RS-PA-04	391636.88	899802.20	4.0
PA7-6	RS-PA-05	391579.90	899691.98	4.0
PA3-7	RS-PA-06	391582.41	899775.48	4.0
PA3-2	RS-PA-07	391563.06	899814.21	4.0
PA8	RS-PA-08	391311.21	899414.98	4.0
PA8	RS-PA-09	391321.18	899445.39	4.0
PA8	RS-PA-10	391308.60	899493.37	4.0
PA8	RS-PA-11	391297.43	899546.61	4.0
PA8	RS-PA-12	391285.09	899581.30	4.0
PA8	RS-PA-13	391278.72	899450.48	4.0
PA8	RS-PA-14	391285.16	899517.25	4.0
PA8	RS-PA-15	391262.50	899411.80	4.0
PA8	RS-PA-16	391265.14	899553.97	4.0
PA8	RS-PA-17	391241.86	899442.92	4.0
PA8	RS-PA-18	391253.76	899500.17	4.0
PA8	RS-PA-19	391221.69	899410.71	4.0
CB6-16	RS-CB6-01	391387.15	899129.56	4.0
CB6-16	RS-CB6-02	391342.65	899091.21	4.0
CB6-16	RS-CB6-03	391298.24	899060.11	4.0

Concrete and Utility Removal

Concrete structures are not anticipated within the excavation limits of PA3-1, PA3-2, PA3-7, PA7-6, and CB6-16. Within the excavation limits of PA8, concrete anticipated to be encountered includes three manholes associated with subsurface utilities and a vault associated with the Southerly Stream interceptor trench. One of the three manholes is part of the Industrial Sewer system and extends to a depth of approximately 8 feet bgs. Concrete associated with the Industrial Sewer manhole will be removed to a depth of 4 feet bgs. The remaining portion of the manhole and associated piping will be abandoned in place with grout or flowable fill, and the pipe ends will be securely plugged. Concrete structures related to active utilities, including the Southerly Stream Interceptor Trench vault, will be maintained during excavation. Manholes not connected to active utilities will be removed down to 4 feet bgs and the remaining portion of the manhole abandoned in place with grout or flowable fill. Concrete encountered within the excavation limits will be inspected in accordance with the Plant Area CUR CMI Plan Visible Mercury Protocol.

Abandoned utilities encountered within the excavation limits will be removed or abandoned in place, documented, and inspected in accordance with the procedures discussed in the Plant Area CUR CMI Plan Pipe in Excavation Protocol and Visible Mercury Protocol. Abandoned utilities within the excavation limits are shown on **Drawing 3** and include:

- Former water lines

- Storm drains
- Force Main lines in CB6-16 and PA8
- GWTP discharge pipe in PA8 (Please note there is one abandoned pipe and two active pipes)

Active utilities are not expected to be encountered within PA3-1, PA3-2, PA3-7, PA7-6, and CB6-16. Active utilities are present within PA8 and support infrastructure related to the Southerly Stream interceptor trench and the GWTP. These include two active GWTP discharge pipes, underground electrical lines, and the Southerly Stream interceptor trench. The exact depths of these utilities are currently unknown. GPR and/or test pits excavated to a maximum depth of 6 feet bgs will be performed prior to excavation activities in PA8 to identify the location of utilities. These test pits will help guide further excavation in PA8 to avoid disturbing active utilities. If a utility is not encountered within this depth, the test pit will be backfilled, and the area will be surveyed to document the absence of the utility within the upper 6 feet of soil. If encountered, active utilities will be protected or relocated during excavation. The approximate location of active utilities are shown on **Drawing 3**.

Industrial Sewer

Based on historical records and observations made during the pre-design investigation, the elevation of the Industrial Sewer is expected to be below the Addendum 5 excavation area design depths. Where accessible the Industrial Sewer located at depths greater than 4 feet will be abandoned in place using flowable fill or grout. If portions of the Industrial Sewer are encountered during excavation, the pipes will be disconnected and removed in accordance with the Pipe in Excavation Protocol. Prior to backfilling, the ends of any remaining pipe will be securely plugged.

The invert elevations of the Industrial Sewer in the Plant Area are anticipated to range from 57 feet to 65 feet (approximately 5 feet to 12 feet bgs). Portions of the Industrial Sewer in the Plant Area were deeper than previous excavations performed under the Plant Area CUR CMI Plan and were therefore not removed. Test pits performed during the CUR CMI Plan confirmed the presence or absence of the Industrial Sewer in portions of the Plant Area. Remaining sections where the presence or absence of the Industrial Sewer was not confirmed will be identified by locating manholes connected to the Industrial Sewer system or by conducting test pits to a depth of approximately 6 feet in approximate locations (**Drawing 5**). If the Industrial Sewer is encountered, it will be abandoned in place by filling the pipes with grout or flowable fill and securely plugging the pipe ends. If the Industrial Sewer is not encountered, the test pit will be backfilled, and the area will be surveyed to document the absence of the Industrial Sewer. Material removed from the top 4 feet of the test pit consists of clean fill placed during the Plant Area CUR activities and will be reused as backfill within the test pit. Material removed from depths greater than 4 feet bgs will be inspected and stockpiled in the TSSAs for off-site disposal.

Other Construction Activities

Waste characterization sampling, erosion and sediment control, water management, and backfilling will be conducted in accordance with the procedures discussed in the Plant Area CUR CMI Plan. Additional details regarding these other construction activities are presented in the subsections below.

Protection of Select Monitoring Wells and Utilities

Monitoring wells and piezometers that are used for sampling will be protected during excavation. These locations include B-327-O1 and MW-509-B1 in PA8, and B-316-O1, B-316-B1, PZ-PA-229-S, PZ-PA-229-D, PZ-PA-230, and PZ-PA-217 in CB6-16. Monitoring wells and piezometers which are not required for future sampling will be abandoned prior to excavation activities in accordance with Maine DEP Guidance for Well and Boring Abandonment or removed during excavation activities. Wells identified for abandonment include the MW-702 cluster located in PA8. The location of monitoring wells and piezometers are shown on **Drawing 3**.

Waste Characterization

Waste characterization samples will be collected at a frequency determined by the disposal facility to develop a waste profile for appropriate disposal. Based on previous waste characterization results from the Plant Area and CB6 and Paved Sump area, it is anticipated that soil will be sent to a non-hazardous waste disposal facility, unless visible mercury is observed or waste profile sampling indicates the material exceeds a hazardous waste criterion. Samples for waste characterization will be collected prior to excavation using waste characterization borings or after soil has been excavated and stockpiled in the TSSAs. Samples will be sent to Pace Analytical for analysis of waste characterization parameters required by the disposal facility.

Erosion and Sediment Controls

Temporary erosion and sediment controls including silt fence, diversion berms, and stabilization measures will be implemented prior to any earth disturbing activities to be performed under this scope of work. The locations of erosion and sediment controls are shown on **Drawing 4**. Erosion and sediment control measures will be installed in accordance with the Maine DEP Erosion and Sediment Control Best Management Practices. Inspections of erosion and sediment control measures will be performed throughout construction activities and as defined in the Plant Area CUR CMI Plan. Maintenance on erosion and sediment control measures will be performed as needed. Additional erosion and sediment controls may be installed throughout the excavation and restoration area depending on Site conditions.

The CB6-16 area receives overland flow from upland areas. During excavation activities, temporary features within the area, such as the bypass pipe, stormwater retention area, and access road, will be removed. To manage stormwater during excavation activities, diversion berms will be constructed to redirect upland flow around the active excavation area (**Drawing 4**). If needed, sumps will be used to control and manage water accumulation within the excavation area. Following excavation, the access road will be reinstalled, and a temporary swale will be

constructed to convey stormwater from upland areas in the CB6 and Paved Sump area to the existing Landfill 1 swale. Permanent stormwater management features and final grading within the CB6 and Paved Sump area will be presented in a separate plan.

Water Management

It is not anticipated that groundwater will be encountered during the activities performed under this scope of work. Typical groundwater elevations in the Plant Area and the CB6 and Paved Sump area range from 7 to 9 feet bgs, which is below the planned excavation depth of 4 feet bgs.

If water is encountered, localized sumps will be installed and pumped to maintain the water level at least 1 foot below the bottom of excavation. Groundwater and surface water that accumulate in the excavation areas will be directed to a sump and pumped as needed to fractionation tanks or a TSSA for temporary storage, or directly to the onsite GWTP to keep the bottom of the excavation dry.

Backfilling and Grading

Once excavation and sampling activities are completed, common fill will be used as backfill. The backfill will be placed and compacted in 1-foot lifts and tested for density and moisture. Testing requirements are provided in the Construction Quality Assurance Plan included as an attachment to the Plant Area CUR CMI Plan. In general, the top of backfill will match the existing grade and promote positive drainage, as shown on **Drawing 9**. Completed areas will be covered with topsoil and seeded. Other surface covering (e.g., asphalt or gravel) may be used depending on the anticipated use of the area. Final restoration activities will be presented in a separate plan.

Areas in PA8 that are adjacent to the Southerly Stream will be restored in accordance with the Southerly Stream CMI Plan, approved by Maine DEP on November 7, 2016. Restoration activities adjacent to the Southerly Stream will include final grading to ensure a smooth transition with the existing stream bank. After grading, the area will be seeded with a seed mix that is compatible with the surrounding area.

Schedule

The anticipated schedule for the excavation areas included in this Addendum is included in **Table 4** below.

Table 4: Schedule for Addendum 5 Activities

Task	Anticipated Start Date	Anticipated End Date
Submit Plant Area CUR CMI Plan Addendum 5 Scope of Work to Maine DEP	August 18, 2025	August 18, 2025
Review and Approval of Plant Area CUR CMI Plan Addendum 5 Documents as drafted and resolution of NOV by Maine DEP	August 19, 2025	September 19, 2025
Mobilize for Construction Activities in Plant Area for Addendum 5 Scope of Work	September 22, 2025	September 22, 2025

If you have any questions during your review, please feel free to contact me at 212-836-7088.

Sincerely,



Jeff Talbert

Attachment:

Attachment 1: Plant Area CUR CMI Plan Addendum 5 Drawings

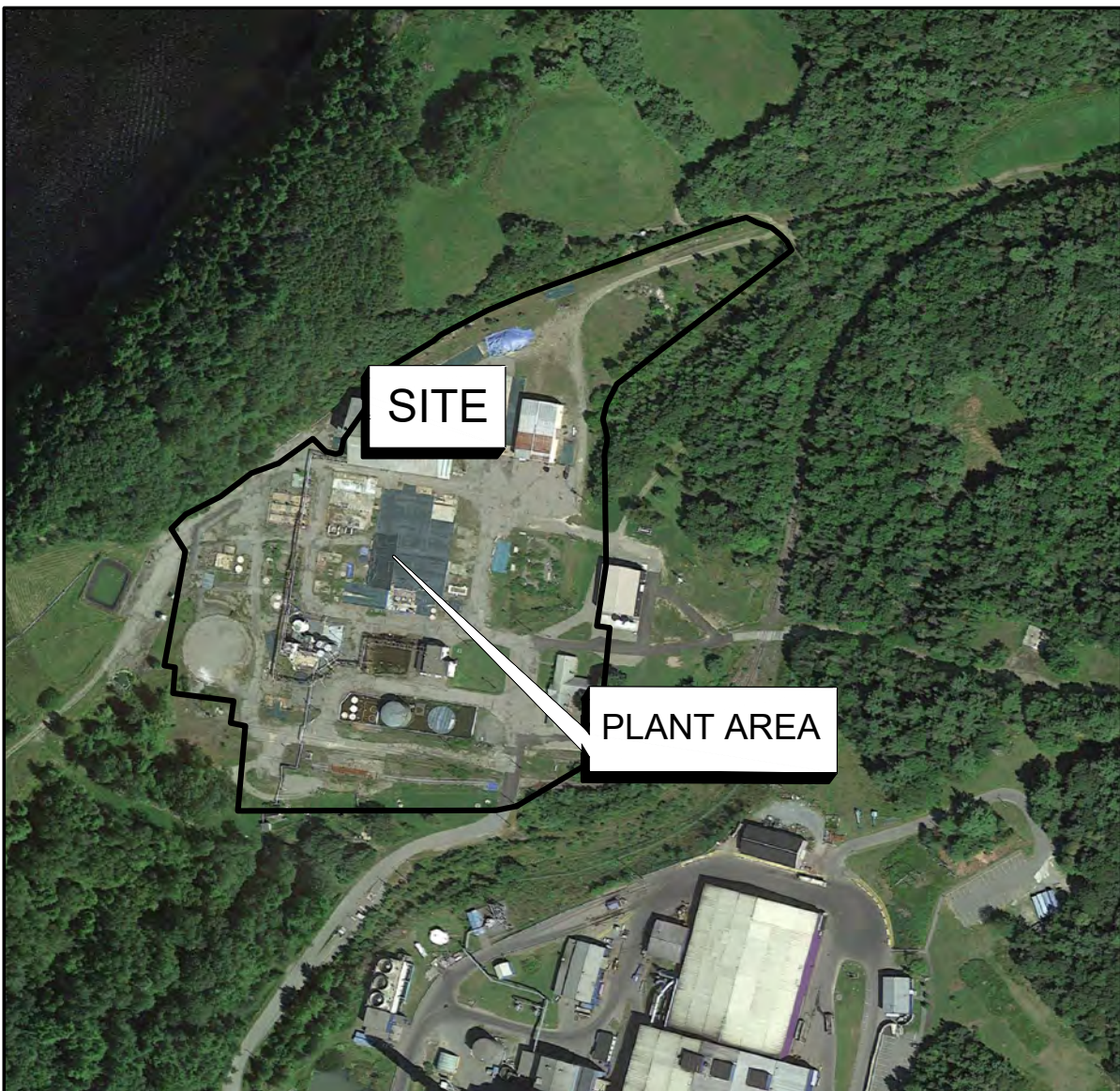
PLANT AREA CORRECTIVE MEASURES IMPLEMENTATION PLAN
CONCRETE AND UTILITY REMOVAL ADDENDUM 5
ORRINGTON REMEDIATION SITE
ORRINGTON, MAINE
AUGUST 2025



SOURCE: BY BING MAPS.
VICINITY MAP
NOT TO SCALE



LIST OF DRAWINGS	
DRAWING NUMBER	DRAWING TITLE
1	COVER SHEET
2	GENERAL NOTES AND LEGEND
3	EXISTING CONDITIONS
4	EROSION AND SEDIMENT CONTROL AND SITE LAYOUT PLAN
5	UTILITY ASSESSMENT AND ABANDONMENT
6	EXCAVATION PLAN
7	EXCAVATION AND SAMPLE SUMMARY TABLES
8	RECORD SAMPLING PLAN
9	INTERIM GRADING AND RESTORATION PLAN
10	EROSION AND SEDIMENT CONTROL DETAILS I
11	EROSION AND SEDIMENT CONTROL DETAILS II



SOURCE: Aerial photo provided by CDMSmith in image file named "aerial poster"
LOCATION MAP
NOT TO SCALE

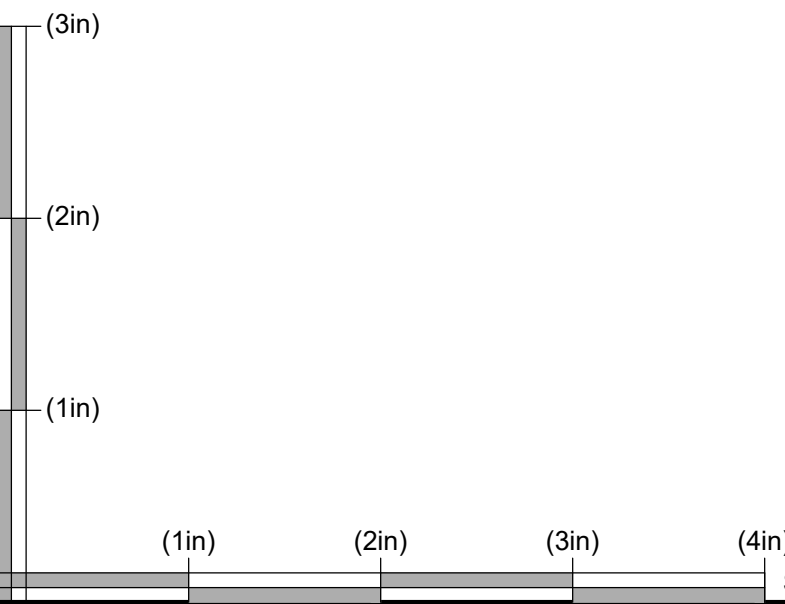


PREPARED FOR:

MALLINCKRODT US LLC

REV	DATE	DESCRIPTION			DRN APP
CDM Smith		Geosyntec consultants			
TITLE: COVER SHEET					
PROJECT: PLANT AREA CORRECTIVE MEASURES IMPLEMENTATION PLAN CONCRETE AND UTILITY REMOVAL - ORRINGTON REMEDIATION SITE					
SITE: ORRINGTON, MAINE					
THIS DRAWING MAY NOT BE ISSUED FOR PROJECT TENDER OR CONSTRUCTION, UNLESS SEALED. SIGNATURE DATE		DESIGN BY:	EG	DATE:	AUGUST 2025
		DRAWN BY:	JHT	PROJECT NO.:	BR0292C-01
		CHECKED BY:	EG	FILE:	BR0292C-01-CUR-04 D005
		REVIEWED BY:	CMG	DRAWING NO.:	
		APPROVED BY:	CMG		1 OF 11

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SCALE IS BASED ON 22" X 34" NON-REDUCED SHEET SIZE (BORDER = 21" X 32")

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GENERAL NOTES

- THE SITE IS LOCATED AT 99 INDUSTRIAL WAY, ORRINGTON MAINE 04474.
- EXISTING TOPOGRAPHY AND SITE FEATURES ARE BASED ON AS-BUILT SURVEYS CONDUCTED BY CES, INC OF BANGOR MAINE BETWEEN MARCH 2021 AND SEPTEMBER 2024.
- THE HORIZONTAL DATUM IS NAD83 (NORTH AMERICAN DATUM 1983) MAINE STATE PLANE (EAST ZONE) AND THE VERTICAL DATUM IS NAVD 88 (NORTH AMERICAN VERTICAL DATUM 1988).
- PRE-DESIGN INVESTIGATION LOCATIONS AND PRE-EXCAVATION SAMPLE LOCATIONS WERE SURVEYED BY CES, INC OF BREWER, MAINE BETWEEN JULY 2015 AND MAY 2017.
- WETLAND DELINEATION AND CLASSIFICATION WERE OBTAINED FROM CDM SMITH DRAWING "38410_WETLAND_CLASSIFICATIONS.DWG" PROVIDED ON 2015.03.17. FLAGGED WETLAND LOCATIONS OBTAINED BY CES, INC OF BANGOR MAINE BETWEEN THE DATES OF NOVEMBER 12, 2014 AND JANUARY 21, 2015.
- NORMAL SITE HOURS ARE FROM 07:00 AM TO 05:00 PM MONDAY THROUGH FRIDAY. APPROVAL FROM THE REMEDIATION PROJECT MANAGER IS REQUIRED FOR CONSTRUCTION OUTSIDE THE NORMAL OPERATING HOURS.
- EXISTING UTILITIES SHOWN ON THE DRAWINGS ARE APPROXIMATE.
- THE REMEDIATION CONTRACTOR SHALL PERFORM WORK WITHIN THE DESIGNATED LIMITS OF WORK SHOWN ON THE DRAWINGS, UNLESS OTHERWISE APPROVED.
- REFER TO INDIVIDUAL SHEETS FOR DRAWING-SPECIFIC NOTES.
- THE STAGING AREAS AND ACCESS ROADS SHALL BE FREQUENTLY INSPECTED BY THE REMEDIATION CONTRACTOR FOR MATERIAL THAT MAY HAVE SPILLED DURING TRANSPORT. SPILLED MATERIAL SHALL BE TRANSPORTED TO THE TEMPORARY SOIL STOCKPILE AREA BY THE REMEDIATION CONTRACTOR FOR DISPOSAL OFF-SITE.
- WELLS INDICATED ON THE DRAWINGS SHALL BE PROTECTED BY THE REMEDIATION CONTRACTOR USING HIGH VISIBILITY FLAGGING AND PHYSICAL BARRIERS. IF DAMAGED OR DESTROYED, MONITORING WELLS SHALL BE REPLACED BY REMEDIATION CONTRACTOR.
- STORMWATER AND/OR GROUNDWATER WITHIN THE EXCAVATION AREAS (CONTACT WATER) SHALL BE COLLECTED, STORED TEMPORARILY, AND TREATED TO MEET THE INFLUENT REQUIREMENTS SET BY THE ON-SITE GROUNDWATER TREATMENT PLANT (GWTP). CONTACT WATER SHALL BE TRANSFERRED TO THE ON-SITE GWTP. THE REMEDIATION CONTRACTOR SHALL CONFIRM SUFFICIENT STORAGE CAPACITY IS AVAILABLE BASED ON DESIGN STORM INFORMATION AND GWTP CAPACITY.
- THE REMEDIATION CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT CONTACT WATER IS CONTAINED AND DOES NOT FLOW OUTSIDE OF THE EXCAVATION. ADDITIONAL CONTROLS, BEYOND THOSE SHOWN IN THIS DRAWING SET, MAY BE NECESSARY TO CONTROL AND MINIMIZE CONTACT WATER.
- MATERIALS REMOVED FROM WITHIN THE LIMIT OF WORK WILL BE TRANSPORTED TO AND STOCKPILED AT THE DESIGNATED TEMPORARY SOIL STOCKPILE AREA BY THE REMEDIATION CONTRACTOR. MATERIALS SHALL BE SEGREGATED INTO SEPARATE STOCKPILES (I.E., CLEARING AND GRUBBING MATERIALS SHALL NOT BE MIXED WITH EXCAVATED SOILS). THE REMEDIATION PROJECT MANAGER WILL LOAD THE MATERIALS INTO RAIL CARS FOR TRANSPORTATION AND DISPOSAL AT AN OFF-SITE DISPOSAL FACILITY.
- RECORD SAMPLING WILL BE PERFORMED BY THE CQA ENGINEER AFTER EXCAVATION.
- SITE COCS AND REPRESENTATIVE MEDIA PROTECTION STANDARDS (MPS) ARE PRESENTED IN TABLE 1:

Table 1: Soil Media Protection Standards – Numeric

COC	Soil (mg/kg)
Mercury	2.2
Chloropicrin	0.125
PCBs	1.0
Cadmium	8
Ethylbenzene	13
Xylene	190

THIS SEQUENCE OF WORK IS INTENDED TO DESCRIBE THE OVERALL CONSTRUCTION PROJECT AND A GENERAL SEQUENCE OF ACTIVITIES. UNLESS OTHERWISE NOTED, IT IS NOT INTENDED TO ESTABLISH A RIGID OR REQUIRED CONSTRUCTION SEQUENCE. ACTIVITIES LISTED BELOW ARE TO BE PERFORMED BY THE REMEDIATION CONTRACTOR UNLESS OTHERWISE NOTED.

SITE PREPARATION

- INSTALL EROSION AND SEDIMENT CONTROLS AT LOCATIONS PERTINENT TO THE EXCAVATION AREAS AND MAINTAIN EXISTING EROSION AND SEDIMENT CONTROLS PER THE EROSION CONTROL AND SITE LAYOUT PLAN DRAWING. INSTALL ADDITIONAL TEMPORARY EROSION AND SEDIMENT CONTROLS THAT MAY BE NEEDED.
- INSTALL TEMPORARY AIR MONITORING SYSTEMS AS NEEDED. TEMPORARY AIR MONITORING SYSTEMS WILL BE OPERATED DURING WORKING HOURS.
- MAINTAIN AND REPAIR ACCESS ROADS IN THE PLANT AREA AND CATCH BASIN 6 AND PAVED SUMP AREA THROUGHOUT CONSTRUCTION.
- ESTABLISH AND MAINTAIN APPROPRIATE SUPPORT, CONTAMINATION REDUCTION, AND EXCLUSION ZONES IN ACCORDANCE WITH THE HASP.
- CONSTRUCT DECONTAMINATION PADS FOR EQUIPMENT AND PERSONNEL AS NEEDED.
- INSTALL WATER MANAGEMENT EQUIPMENT AND CONTROLS.
- EXCAVATION AREAS WILL BE CLEARED AND GRUBBED AS NEEDED.
- PRECONSTRUCTION SURVEYS WILL BE CONDUCTED PRIOR TO THE START OF EXCAVATION ACTIVITIES.

CONCRETE AND UTILITY REMOVAL

- VERIFY THE TYPE AND LOCATION OF UTILITIES WITHIN THE LIMITS OF WORK PRIOR TO THE START OF WORK, ESTABLISH SURVEY CONTROL, AND VERIFY EXISTING CONDITIONS SHOWN ON THE PLANS ARE ACCURATE. CONTACT DIGSAFE (811 OR 1-888-340-7233).
- IDENTIFY AND CLEARLY MARK ALL ACTIVE UTILITIES AND WELLS THAT WILL BE PROTECTED DURING EXCAVATION.
- TEST PITS SHALL BE EXCAVATED, AS NEEDED, IN AREAS WHERE ACTIVE UTILITIES ARE PRESENT BUT THEIR EXACT DEPTH AND LOCATION ARE UNKNOWN. TEST PITS WILL BE USED TO GUIDE EXCAVATION TO AVOID DISTURBING OR DAMAGING ACTIVE UTILITIES.
- ABANDONED UTILITIES AND CONCRETE ENCOUNTERED WITHIN EXCAVATION LIMITS WILL BE INSPECTED, REMOVED, AND DISPOSED OF OFF-SITE AT AN APPROPRIATE DISPOSAL FACILITY.

INDUSTRIAL SEWER

- VERIFY THE LOCATION OF INDUSTRIAL SEWER REMAINING IN THE PLANT AREA USING GROUND PENETRATING RADAR (GPR), LOCATING JUNCTION STRUCTURES OR MANHOLES, OR PERFORMING TEST PITS.
- IF ENCOUNTERED WITHIN EXCAVATION LIMITS, MANHOLES, JUNCTION STRUCTURES, OR PIPES ASSOCIATED WITH THE INDUSTRIAL SEWER SYSTEM WILL BE INSPECTED, REMOVED, AND DISPOSED OF OFF-SITE AT AN APPROPRIATE DISPOSAL FACILITY.
- INDUSTRIAL SEWER OUTSIDE OF EXCAVATION LIMITS WILL BE ABANDONED BY COMPLETELY FILLING THE SEWER LINE WITH FLOWABLE FILL.
- FLOWABLE FILL:
 - FLOWABLE FILL SHALL BE NON-SHRINK, NON-METALLIC, AND NON-CORROSIVE
 - FLOWABLE FILL SHALL CONFORM TO ASTM C1107/C1107M AND CRD-C621
 - COMPRESSIVE STRENGTH, MINIMUM AS SPECIFIED IN ASTM C1107/C1107M, TABLE 1:
 - AT ONE DAY: 1,000 PSI
 - AT THREE DAYS: 2,500 PSI
 - AT SEVEN DAYS: 3,500 PSI
 - AT 28 DAYS: 5,000 PSI

EXCAVATION

- CONDUCT ALL EXCAVATIONS IN ACCORDANCE WITH OSHA STANDARDS. THE REMEDIATION CONTRACTOR SHALL MONITOR EXCAVATION CONDITIONS THROUGHOUT WORK AND PERFORM LOCALIZED MAINTENANCE AS NEEDED.
- EXCAVATE MATERIALS WITHIN LIMITS OF EXCAVATION AS SHOWN ON THE DRAWINGS
- REMOVE UTILITIES ENCOUNTERED IN EXCAVATION AREAS.
- PERFORM DEWATERING AS NECESSARY DURING EXCAVATION. COLLECT, TREAT, STORE AND CONVEY CONTACT WATER. DISPOSE OF CONTACT WATER AS NECESSARY BY TRANSFERRING TO THE ONSITE GROUNDWATER TREATMENT PLANT (GWTP).
- DECONTAMINATE VEHICLES EXITING THE ACTIVE EXCAVATION AREA ON THE DECONTAMINATION PAD(S). TREAT WATER COLLECTED IN THE DECONTAMINATION PAD(S) AS CONTACT WATER AND PUMP TO THE ONSITE GWTP. WATER IN THE DECONTAMINATION PAD(S) MUST BE REMOVED PRIOR TO OVERTOPPING THE DECONTAMINATION PAD CONTAINMENT BERMS.
- INSPECT FOR VISIBLE MERCURY DURING EXCAVATION ACTIVITIES. IF OBSERVED, THE REMEDIATION PROJECT MANAGER SHALL BE NOTIFIED IMMEDIATELY AND THE MATERIAL SHALL BE SEGREGATED SEPERATELY FOR DISPOSAL AT AN APPROVED FACILITY.
- INSTALL ORANGE PLASTIC SAFETY FENCE OR APPROVED ALTERNATIVE AROUND OPEN EXCAVATIONS AT THE END OF EACH WORK DAY.
- PERFORM POST-EXCAVATION RECORD SAMPLING FOR MERCURY ON THE BOTTOM OF THE EXCAVATION AT THE LOCATIONS INDICATED ON THE DRAWINGS. THE REMEDIATION CONTRACTOR SHALL COOPERATE WITH AND SUPPORT THE SAMPLING ACTIVITIES.
- REMEDICATION CONTRACTOR SHALL CONDUCT AS-BUILT SURVEY OF THE VERTICAL AND LATERAL LIMITS OF THE EXCAVATION, CONFIRM THE EXCAVATION ELEVATIONS PER THE EXCAVATION PLAN, AND SHALL SURVEY THE RECORD SAMPLE LOCATIONS.

SITE RESTORATION

- BACKFILL, GRADE, AND SHAPE THE EXCAVATION AREAS IN ACCORDANCE WITH THE PROJECT DRAWINGS AND SPECIFICATIONS AFTER OBTAINING APPROVAL FROM THE REMEDIATION PROJECT MANAGER.
- REMOVE DECONTAMINATION PAD AREA(S) AT THE COMPLETION OF EXCAVATION ACTIVITIES. DECONTAMINATION PAD MATERIALS SHALL BE STOCKPILED IN THE DESIGNATED TEMPORARY SOIL STOCKPILE AREA AS DIRECTED BY THE REMEDIATION PROJECT MANAGER AND DISPOSED OF OFF-SITE.
- PLACE TOPSOIL AND SEED IN DISTURBED AREAS.
- MAINTAIN AND LEAVE EROSION CONTROL MEASURES IN PLACE UNTIL VEGETATION HAS BEEN RESTORED AND AS DIRECTED BY THE REMEDIATION PROJECT MANAGER.

SOIL EROSION AND SEDIMENT CONTROL

- WORK SHALL BE DONE IN ACCORDANCE WITH THE MAINE EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES.
- SOIL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCES, OR IN THEIR PROPER SEQUENCE AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
- DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN 7 DAYS AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, SHALL IMMEDIATELY RECEIVE A TEMPORARY SEEDING AND MULCH. IF THE SEASON PREVENTS THE ESTABLISHMENT OF A TEMPORARY COVER, THE DISTURBED AREAS SHALL BE MULCHED WITH STRAW, OR EQUIVALENT MATERIAL, AT A RATE OF TWO (2) TONS PER ACRE.
- PERMANENT VEGETATION SHALL BE SEEDON ON EXPOSED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADING. MULCH AND TACKIFIER OR EROSION CONTROL BLANKET SHALL BE USED FOR PROTECTION UNTIL SEEDING IS ESTABLISHED.
- A SUB-BASE COURSE (E.G., ¼-INCH STONE, OR EQUIVALENT AS APPROVED BY THE REMEDIATION PROJECT MANAGER) SHALL BE APPLIED IMMEDIATELY FOLLOWING ROUGH GRADING OF TRAVEL AREAS AND INSTALLATION OF IMPROVEMENTS TO STABILIZE ACCESS ROADWAYS.
- IMMEDIATELY FOLLOWING INITIAL DISTURBANCE OR ROUGH GRADING OF CRITICAL AREAS SUBJECT TO EROSION (I.E.; STEEP SLOPES) THESE AREAS SHALL RECEIVE A TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH, EROSION CONTROL BLANKET, OR A SUITABLE EQUIVALENT, AT A RATE OF TWO (2) TONS PER ACRE.
- AT THE TIME WHEN THE SITE PREPARATION FOR PERMANENT VEGETATIVE STABILIZATION WILL BE ACCOMPLISHED, ANY SOIL THAT WILL NOT PROVIDE A SUITABLE ENVIRONMENT TO SUPPORT ADEQUATE VEGETATIVE GROUND COVER, SHALL BE REMOVED OR TREATED IN SUCH A WAY THAT WILL PERMANENTLY ADJUST THE SOIL CONDITIONS AND RENDER IT SUITABLE FOR VEGETATIVE GROUND COVER. IF THE REMOVAL OR TREATMENT OF THE SOIL WILL NOT PROVIDE SUITABLE CONDITIONS, NON-VEGETATIVE MEANS OF PERMANENT GROUND STABILIZATION WILL BE REQUIRED.
- ANY CHANGES TO THE EROSION AND SEDIMENT CONTROL PLAN WILL REQUIRE THE SUBMISSION OF REVISED EROSION AND SEDIMENT CONTROL PLANS TO THE REMEDIATION PROJECT MANAGER.
- THE REMEDIATION CONTRACTOR IS RESPONSIBLE FOR KEEPING ADJACENT ROADS CLEAN FROM SEDIMENT TRACK-OUT DURING THE LIFE OF THE CONSTRUCTION PROJECT.
- THE REMEDIATION CONTRACTOR SHALL BE RESPONSIBLE FOR REMEDIATING ANY EROSION OR SEDIMENT PROBLEMS THAT ARISE AS A RESULT OF ONGOING CONSTRUCTION AT THE REQUEST OF THE REMEDIATION PROJECT MANAGER.

SEQUENCE OF WORK

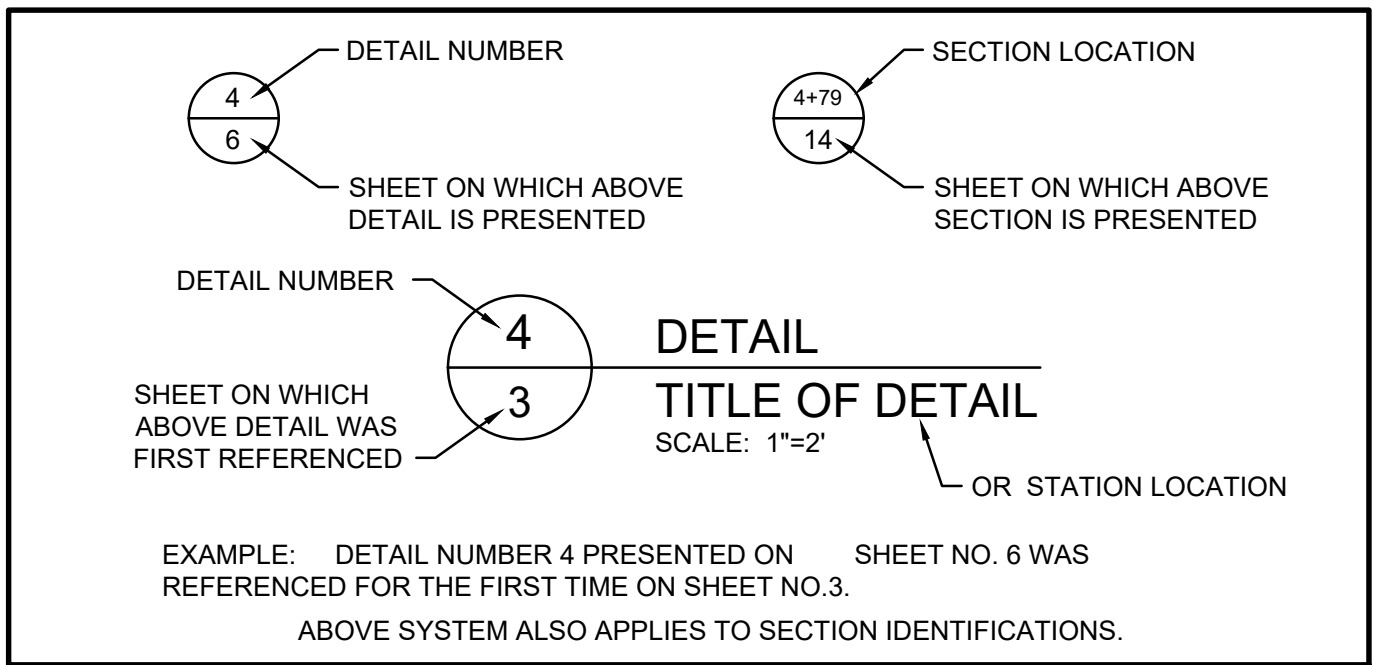
LEGEND

	FENCE LINE		INLET TO GROUNDWATER TREATMENT PLANT
	RAILROAD		STREAM TRANSECT SAMPLE LOCATION
	EXISTING GROUND ELEVATION (FEET NAVD 88)		WETLAND DELINEATION
	APPROXIMATE LIMIT OF LANDFILL		RIP RAP PROTECTION
	UTILITY POLE LOCATION		CELL BUILDING TEMPORARY SHEET PILE ALIGNMENT
	INDUSTRIAL SEWER MANHOLE		ABANDONED WELL LOCATION
	INDUSTRIAL SEWER PIPE		WASTE CHARACTERIZATION BORING
	STORM DRAIN PIPE		CONTROL POINT
	LEACH FIELD PIPE		
	WATER PIPE		
	FUEL OIL PIPE		
	SANITARY SEWER PIPE		
	CHLORATE BUILDING UNDERDRAIN PIPE		
	GROUNDWATER TREATMENT PLANT PIPE		
	CONTACT WATER PIPE		
	APPROXIMATE PIPE LOCATION		
	CATCH BASIN		
	HISTORIC MONITORING WELL/SOIL BORING (THERE MAY BE A CLUSTER OF WELLS IN SOME LOCATIONS)		
	PRE-DESIGN TEST PIT		
	PRE-DESIGN GEOTECHNICAL BORING		
	HISTORIC MONITORING WELL/PIEZOMETER TO BE MAINTAINED (THERE MAY BE A CLUSTER OF WELLS IN SOME LOCATIONS)		
	SURFACE WATER FLOW		
	TRAILER		
	TEST PIT LOCATION AND IDENTIFICATION		

	WETLAND DELINEATION
	RIP RAP PROTECTION
	CELL BUILDING TEMPORARY SHEET PILE ALIGNMENT
	ABANDONED WELL LOCATION
	WASTE CHARACTERIZATION BORING
	CONTROL POINT

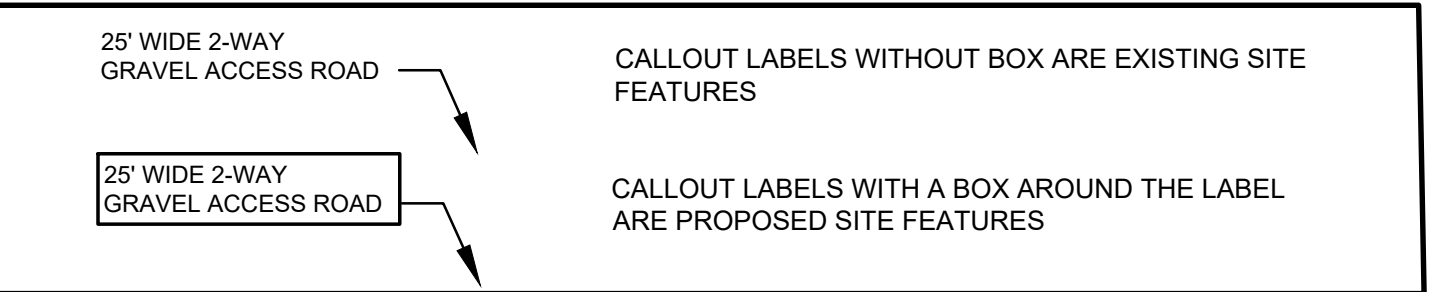
	INLET TO GROUNDWATER TREATMENT PLANT
	STREAM TRANSECT SAMPLE LOCATION
	WETLAND DELINEATION
	RIP RAP PROTECTION
	CELL BUILDING TEMPORARY SHEET PILE ALIGNMENT
	ABANDONED WELL LOCATION
	WASTE CHARACTERIZATION BORING
	CONTROL POINT

	ADDENDUM 5 EXCAVATION AREAS
	PRE-EXCAVATION BOTTOM SAMPLE
	PRE-EXCAVATION SIDE WALL SAMPLE
	POST-EXCAVATION BOTTOM SAMPLE
	RECORD SAMPLE
	2016 SURVEYED AREA BOUNDARY LIMITS
	FORCE MAIN
	UNDERGROUND ELECTRICAL UTILITY
	APPROXIMATE PIPE LOCATION
	SOUTHERLY STREAM CULVERT
	INDUSTRIAL SEWER NOT ENCOUNTERED DURING EXCAVATION
	SOUTHERLY STREAM INTERCEPTOR TRENCH
	LIMIT OF COMPLETED PLANT AREA/CB6 AND PAVED SUMP SOIL EXCAVATION AREAS



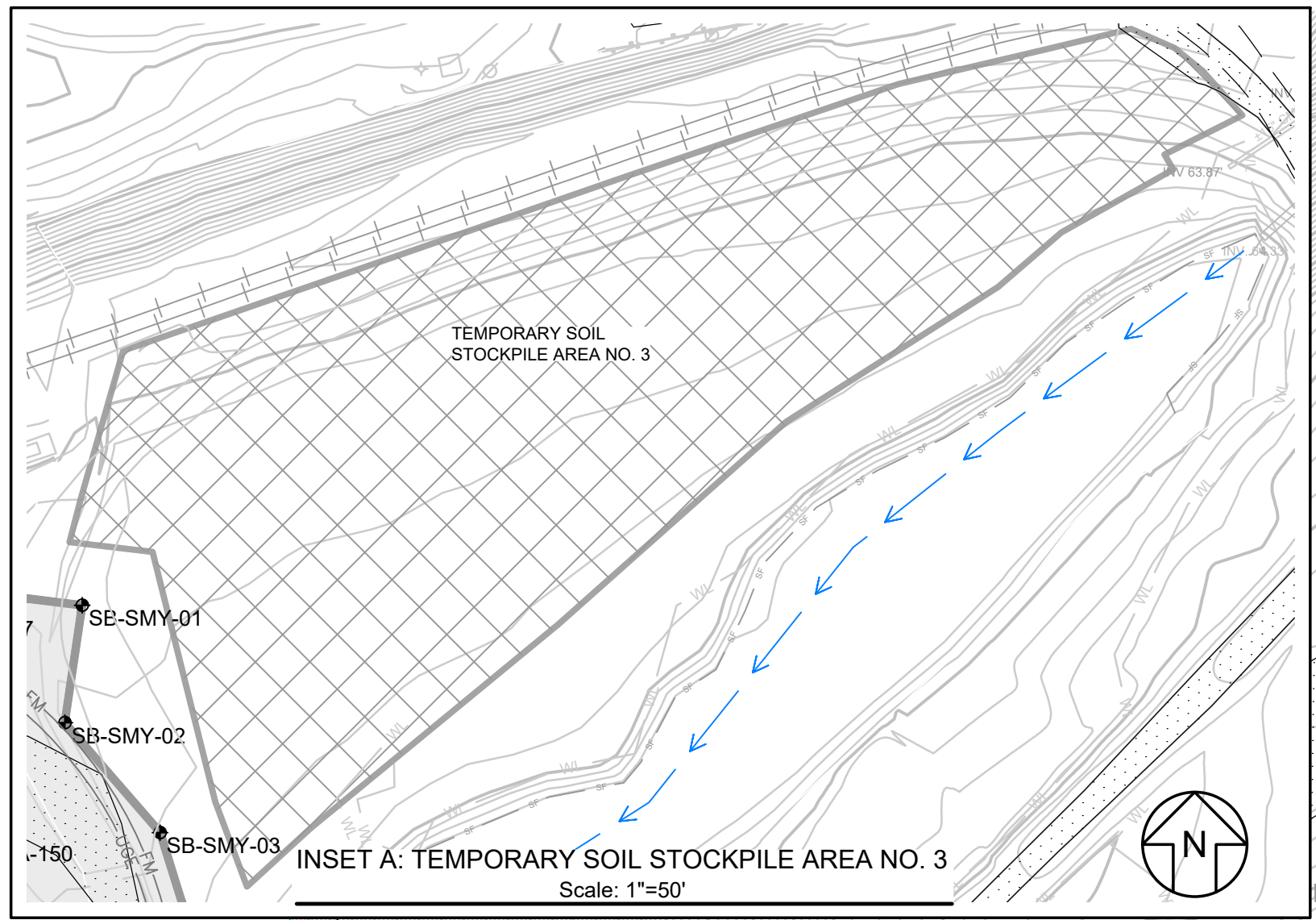
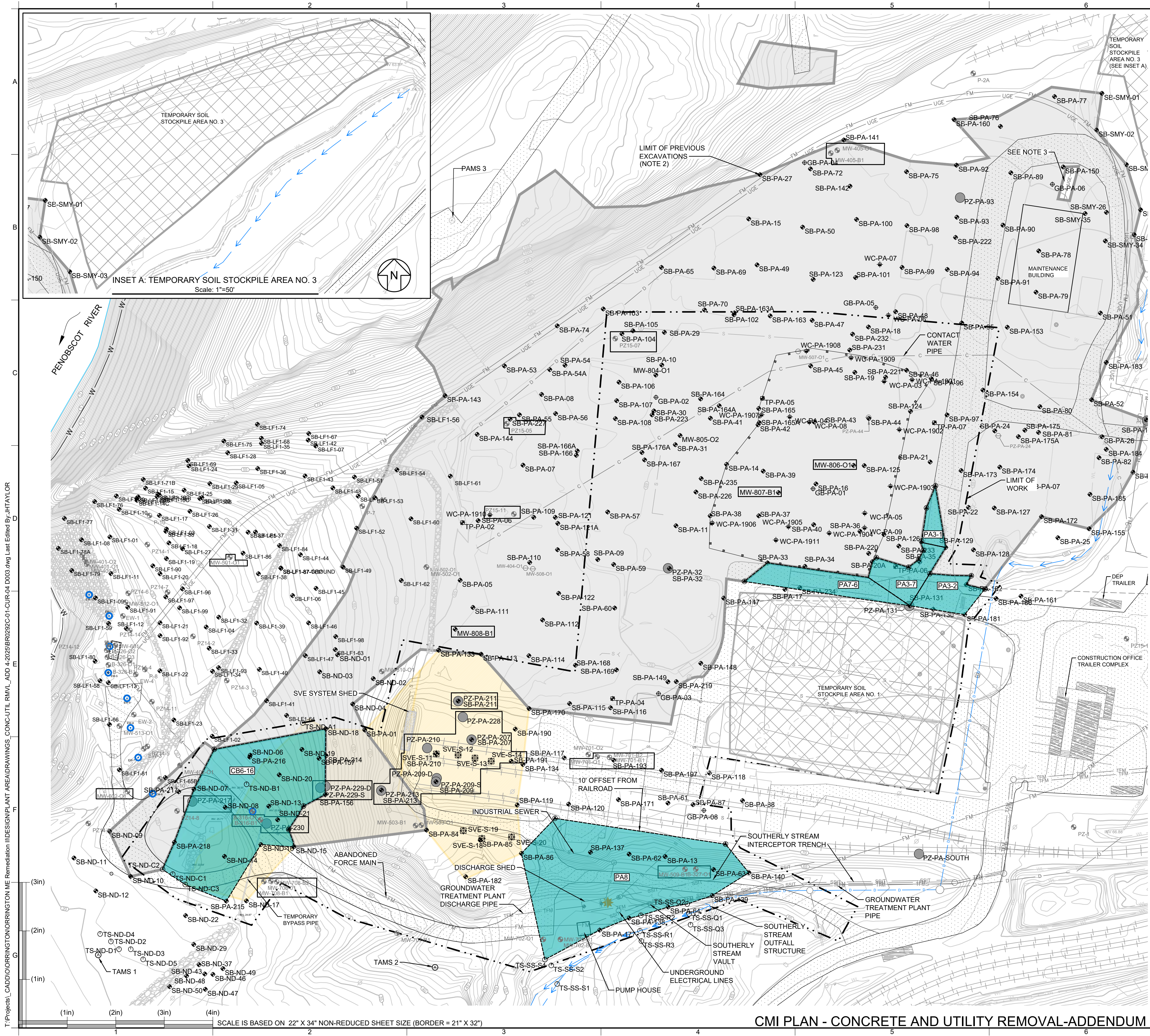
SECTION / DETAIL IDENTIFICATION LEGEND

CMI PLAN - CONCRETE AND UTILITY REMOVAL-ADDENDUM 5



DRAWING LABEL/CALLOUT LEGEND

REV	DATE	DESCRIPTION	DRN	APP
TITLE: GENERAL NOTES AND LEGEND				
PROJECT: PLANT AREA CORRECTIVE MEASURES IMPLEMENTATION PLAN CONCRETE AND UTILITY REMOVAL - ORRINGTON REMEDIATION SITE				
SITE: ORRINGTON, MAINE				
THIS DRAWING MAY NOT BE ISSUED FOR PROJECT TENDER OR CONSTRUCTION, UNLESS SEALED.		DESIGN BY: EG	DATE: AUGUST 2025	G
SIGNATURE		DRAWN BY: JHT	PROJECT NO.: BR0292C-01	
DATE		CHECKED BY: EG	FILE: BR0292C-01-CUR-04 D002	
		REVIEWED BY: CMG	DRAWING NO.: 2 OF 11	
		APPROVED BY: CMG		



LEGEND

INLET TO GROUNDWATER TREATMENT PLANT

FIRE HYDRANT LOCATION

UTILITY POLE LOCATION

WETLAND DELINEATION

PRE-DESIGN SOIL BORING

PRE-DESIGN SURFACE SOIL SAMPLE

PRE-DESIGN TEST PIT

STREAM TRANSECT BORING LOCATION

PRE-DESIGN GEOTECHNICAL BORING

PRE-DESIGN PIEZOMETER

WASTE CHARACTERIZATION BORING

MONITORING WELL/PIEZOMETER ABANDONED

PERFORMANCE MONITORING GROUNDWATER SAMPLE

SOIL VAPOR EXTRACTOIN (SVE) WELL

MEAN HIGH WATER (EL 6.62)

HISTORICAL MONITORING WELL/PIEZOMETER TO BE MAINTAINED (THERE MAY BE A CLUSTER OF WELLS IN SOME LOCATIONS)

CHLOROPICRIN TREATMENT AREA

LIMIT OF WORK

TEMPORARY BYPASS PIPE

TEMPORARY SOIL STOCKPILE AREA (TSSA)

ACCESS ROAD

INDUSTRIAL SEWER

GROUNDWATER TREATMENT PLANT PIPE

CONTACT WATER PIPE

FORCE MAIN

UNDERGROUND ELECTRICAL UTILITY

STORM DRAIN PIPE

SOUTHERLY STREAM INTERCEPTOR TRENCH

SOUTHERLY STREAM CULVERT

SURFACE WATER FLOW

FORMER CELL BUILDING TEMPORARY SHEET PILE ALIGNMENT

ADDENDUM 5 EXCAVATION AREAS

EXCAVATION AREA ID

PERMANENT AIR MONITORING STATION

TEMPORARY AIR MONITORING STATION

LIMIT OF COMPLETED PLANT AREA/CB6 AND PAVED SUMP SOIL EXCAVATION AREAS

NOTES:

1. SEE DRAWING NO. 2 FOR GENERAL NOTES AND ADDITIONAL LEGEND INFORMATION.

2. THE LIMITS OF PREVIOUS EXCAVATIONS WERE OBTAINED FROM AS-BUILT SURVEY DATA COLLECTED DURING THE PLANT AREA PHASE 1 CMIP, PLANT AREA CUR CMIP, AND THE CATCH BASIN 6 AND PAVED SUMP ADDENDUM 1 CMIP.

3. MATERIAL WAS LEFT IN PLACE TO PROTECT AN ACTIVE UNDERGROUND ELECTRICAL LINE IN PAS 4. THERE ARE NO SAMPLE LOCATIONS WITHIN THE FOOTPRINT OF THE MATERIAL LEFT IN PLACE THAT INDICATE SOIL CONCENTRATIONS EXCEED THE MPS.

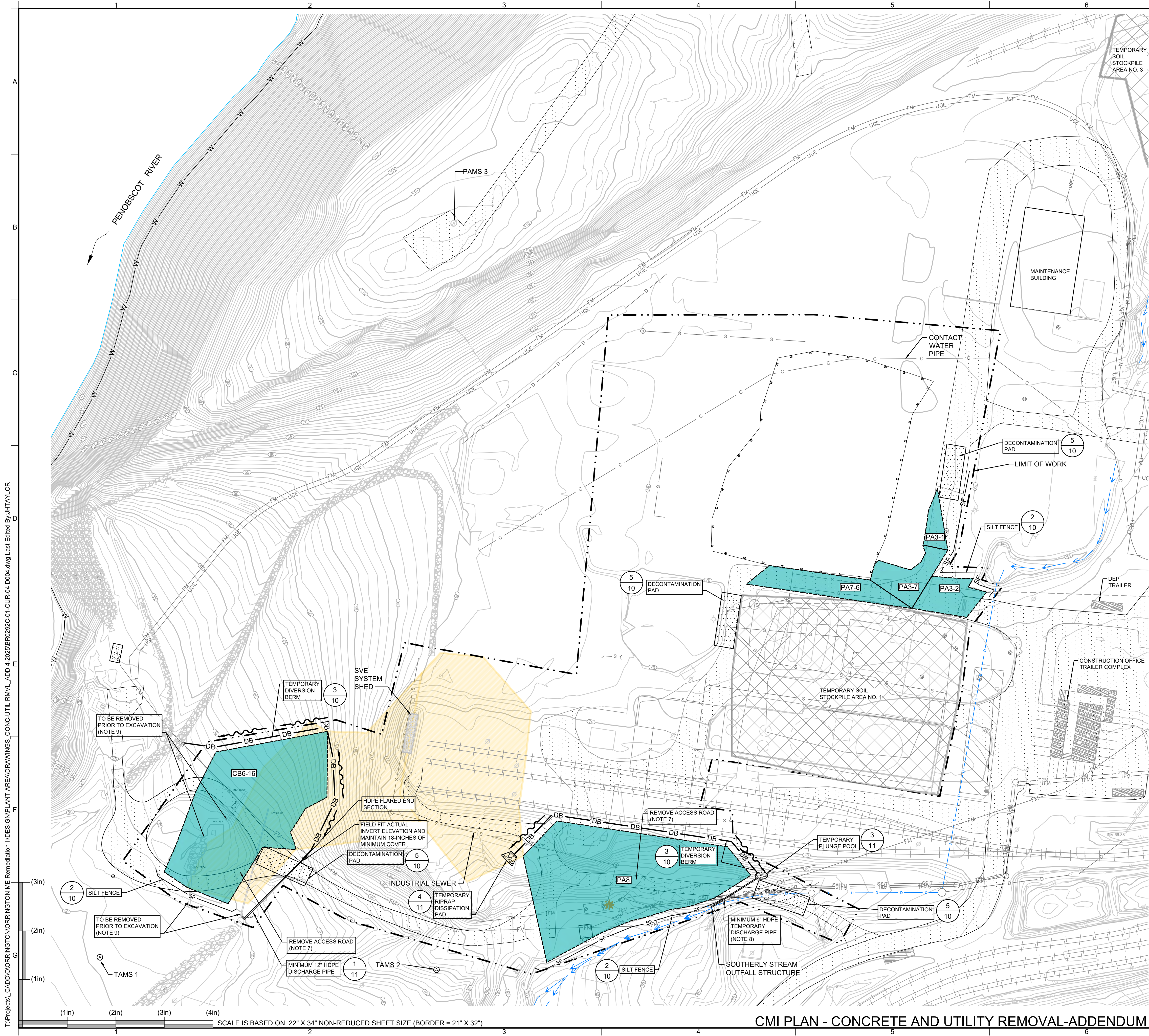
SCALE IN FEET

REV	DATE	DESCRIPTION	DRN	APP	
CDM Smith Geosyntec consultants					
TITLE: EXISTING CONDITIONS					
PROJECT: PLANT AREA CORRECTIVE MEASURES IMPLEMENTATION PLAN CONCRETE AND UTILITY REMOVAL - ORRINGTON REMEDIATION SITE					
SITE: ORRINGTON, MAINE					
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		REVIEWED BY:	CMG	DRAWING NO.:	3 OF 11
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DATE					

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CMI PLAN - CONCRETE AND UTILITY REMOVAL-ADDENDUM 5

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LEGEND

- SF — SILT FENCE
- DB — DIVERSION BERM
- STORMWATER FLOW

- NOTES:**
- SEE DRAWING NO. 2 FOR GENERAL NOTES AND ADDITIONAL LEGEND INFORMATION.
 - INSTALL TEMPORARY EROSION AND SEDIMENT CONTROLS PRIOR TO EARTH DISTURBING ACTIVITIES. TEMPORARY CONTROLS NOT SHOWN ON THE DRAWINGS USED TO CONTROL INTERIM CONSTRUCTION CONDITIONS SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE CURRENT VERSION OF THE MAINE EROSION AND SEDIMENT CONTROL PRACTICES FIELD GUIDE FOR CONTRACTORS. STORMWATER RUNOFF FROM DISTURBED AREAS MUST PASS THROUGH A BEST MANAGEMENT PRACTICE (BMP) BEFORE BEING DISCHARGED TO THE NORTHERN DRAINAGE DITCH OR SOUTHERLY STREAM. MAINTAIN TEMPORARY EROSION AND SEDIMENT CONTROLS UNTIL UPGRADIENT DRAINAGE AREAS ARE STABILIZED WITH A NON-ERODIBLE MATERIAL, EROSION CONTROL BLANKET, OR AT LEAST 70% COVERAGE OF VEGETATION.
 - TEMPORARY SOIL STOCKPILE AREAS NO. 1 AND NO. 3 WILL BE USED TO STORE EXCAVATED MATERIAL PRIOR TO OFFSITE DISPOSAL.
 - DECONTAMINATION PADS WILL BE ESTABLISHED PRIOR TO EXCAVATION.
 - AREAS BETWEEN DECONTAMINATION PADS AND TSSAS WHICH EQUIPMENT TRAVERSES WILL BE INSPECTED DAILY. ANY MATERIAL THAT IS INADVERTENTLY DROPPED WILL BE PICKED UP AND TRANSPORTED TO TSSA.
 - THE LOCATION OF WATER MANAGEMENT STRUCTURES IN PA8, SUCH AS THE PLUNGE POOL, IS APPROXIMATE AND WILL BE DETERMINED BASED ON THE LOCATION OF ACTIVE UTILITIES AND FIELD CONDITIONS.
 - FILL MATERIALS USED TO RAISE THE ELEVATION DURING CONSTRUCTION OF ACCESS ROADS IN PA8 AND CB6-16 WILL BE REMOVED PRIOR TO EXCAVATION ACTIVITIES. EXCAVATION ACTIVITIES IN THESE AREAS WILL BEGIN AT THE SOIL ELEVATION BELOW THE GEOTEXTILE. MATERIALS REMOVED FROM THE ACCESS ROAD WILL BE STOCKPILED IN A TSSA AND REUSED ONSITE.
 - WATER MANAGEMENT CONTROLS IN PA8 WILL DIRECT OVERLAND RUNOFF AROUND ACTIVE EXCAVATION AREAS TO DISCHARGE INTO THE SOUTHERLY STREAM AT THE EXISTING SOUTHERLY STREAM OUTFALL STRUCTURE.
 - EXISTING WATER MANAGEMENT CONTROLS IN CB6-16 INCLUDE A RIPRAP RETENTION AREA, DISCHARGE PIPES, AND A BYPASS PIPE. THESE CONTROLS WILL BE REMOVED PRIOR TO EXCAVATION ACTIVITIES.



TITLE: EROSION AND SEDIMENT CONTROL AND SITE LAYOUT PLAN

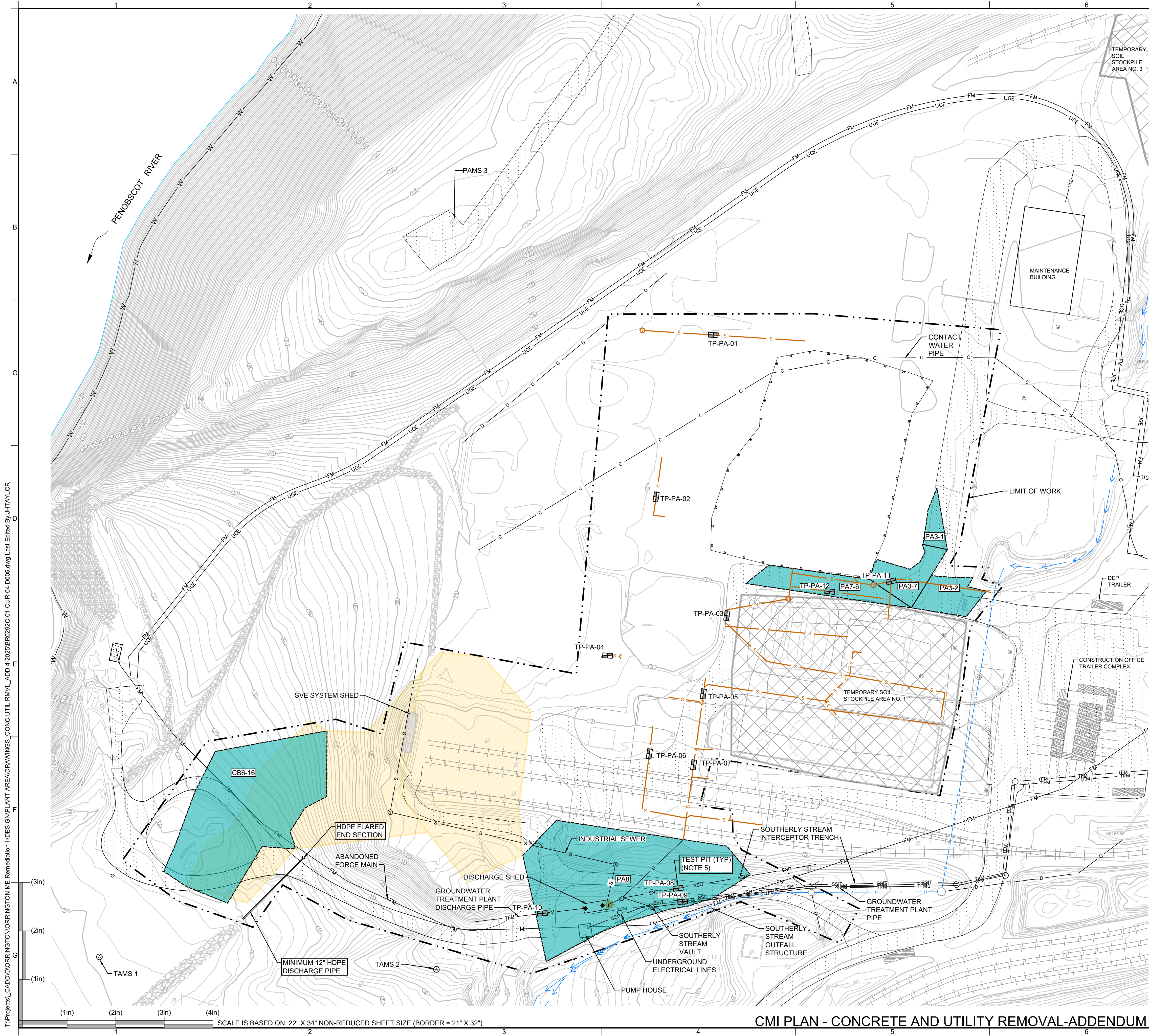
PROJECT: PLANT AREA CORRECTIVE MEASURES IMPLEMENTATION PLAN
CONCRETE AND UTILITY REMOVAL - ORRINGTON REMEDIATION SITE

SITE: ORRINGTON, MAINE

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CMI PLAN - CONCRETE AND UTILITY REMOVAL-ADDENDUM 5

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LEGEND

S

INDUSTRIAL SEWER PIPE TO BE ABANDONED

S

INDUSTRIAL SEWER PIPE LOCATION TO BE VERIFIED FOR POTENTIAL ABANDONMENT

SSIT

SOUTHERLY STREAM INTERCEPTOR TRENCH

TFM

GROUNDWATER TREATMENT PLANT PIPE

C

CONTACT WATER PIPE

FM

FORCE MAIN

UGE

UNDERGROUND ELECTRICAL UTILITY

D

STORM DRAIN PIPE

D

SOUTHERLY STREAM CULVERT

TP-PA-01

TEST PIT LOCATION AND IDENTIFICATION

- NOTES:
1.

TESTS PITS USED TO IDENTIFY THE LOCATION OF INDUSTRIAL SEWER WILL BE EXCAVATED TO A DEPTH OF 6 FEET BGS. IF INDUSTRIAL SEWER IS ENCOUNTERED IT WILL BE ABANDONED IN PLACE BY FILLING WITH GROUT OR FLOWABLE FILL AND SECURELY PLUGGING THE PIPE ENDS. IF NOT ENCOUNTERED, THE TEST PIT WILL BE BACKFILLED AND THE AREA WILL BE SURVEYED TO DOCUMENT THE ABSENCE OF THE INDUSTRIAL SEWER.
2.

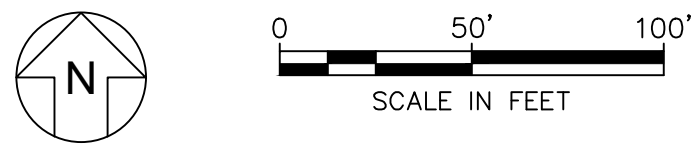
CLEAN FILL MATERIAL REMOVED FROM WITHIN THE TOP 4 FEET BGS OF THE TEST PITS USED TO IDENTIFY THE LOCATION OF INDUSTRIAL SEWER WILL BE REUSED IN THE TEST PIT AS BACKFILL. MATERIAL REMOVED FROM DEPTHS GREATER THAN 4 FEET BGS WILL BE STOCKPILED IN TSSAS FOR OFFSITE DISPOSAL.
3.

INDUSTRIAL SEWER WILL BE ABANDONED IN PLACE WITH A PLUG AND FLOWABLE FILL OR GROUT.
4.

TEST PITS WILL BE PERFORMED IN PA8 PRIOR TO EXCAVATION TO IDENTIFY THE LOCATION OF ACTIVE UTILITIES. ACTIVE UTILITIES INCLUDE THE SOUTHERLY STREAM INTERCEPTOR TRENCH, GWTP PIPE AND DISCHARGE PIPE, AND UNDERGROUND ELECTRICAL LINES. MATERIAL REMOVED FROM THE TEST PIT WILL BE STOCKPILED IN TSSAS FOR OFFSITE DISPOSAL.
5.

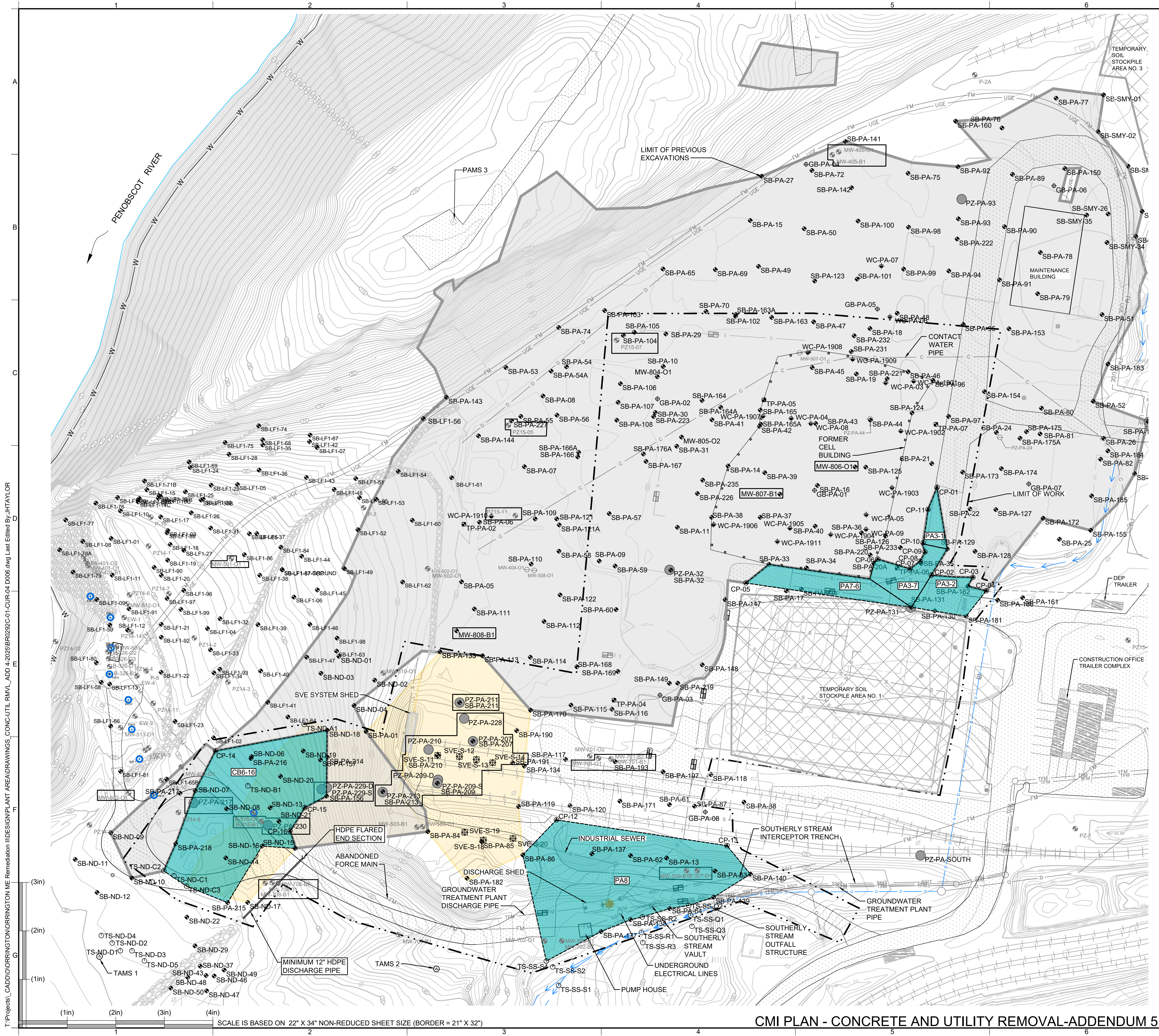
ABANDONED UTILITIES ENCOUNTERED WITHIN TEST PITS WILL BE REMOVED.
6.

THE LOCATIONS OF UTILITIES ARE APPROXIMATE AND WILL BE VERIFIED IN THE FIELD.



REV	DATE	DESCRIPTION	DRN	APP	
CDM Smith Geosyntec consultants					
TITLE: UTILITY ASSESSMENT AND ABANDONMENT					
PROJECT: PLANT AREA CORRECTIVE MEASURES IMPLEMENTATION PLAN CONCRETE AND UTILITY REMOVAL - ORRINGTON REMEDIATION SITE					
SITE: ORRINGTON, MAINE					
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		CHECKED BY:	EG	FILE:	BR0292C-01-CUR-04 D005
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DATE					

CMI PLAN - CONCRETE AND UTILITY REMOVAL-ADDENDUM 5



LEGEND

ADDENDUM 5 EXCAVATION AREAS

PA3-1

EXCAVATION AREA ID

FORMER CELL BUILDING TEMPORARY SHEET PILE ALIGNMENT

LIMIT OF COMPLETED PLANT AREA/CB6 AND PAVED SUMP SOIL EXCAVATION AREAS

CP-01

CONTROL POINT

- NOTES:
1. THE LATERAL EXTENT OF THE EXCAVATIONS WERE DEFINED USING DATA FROM PRE-DESIGN INVESTIGATIONS AND AS-BUILT EXCAVATION INFORMATION FROM THE PLANT AREA PHASE 1 CMI PLAN, PLANT AREA CUR CMI PLAN, AND CB6 AND PAVED SUMP CMI PLAN AND THE PLANT AREA CUR CMI PLAN. THE LATERAL EXTENTS OF THE EXCAVATION AREAS ARE TABULATED ON DRAWING NO. 7.
 2. THE VERTICAL EXTENT OF THE EXCAVATION IS DEFINED AT 4 FEET BGS, TARGETING THE REMOVAL OF SURFACE SOILS WITH MERCURY CONCENTRATIONS ABOVE THE MPS. THE VERTICAL EXTENTS OF THE EXCAVATION AREAS ARE TABULATED ON DRAWING NO. 7.
 3. THE BOTTOM OF THE EXCAVATION WILL BE INSPECTED FOR VISIBLE MERCURY IN ACCORDANCE WITH THE VISIBLE MERCURY PROTOCOL. SOIL CONTAINING VISIBLE MERCURY WILL BE STOCKPILED SEPARATELY FOR OFF-SITE DISPOSAL.
 4. THE REMEDIATION CONTRACTOR SHALL PERFORM THE EXCAVATIONS IN A DEWATERED CONDITION.



TITLE:		EXCAVATION PLAN	
PROJECT:		PLANT AREA CORRECTIVE MEASURES IMPLEMENTATION PLAN CONCRETE AND UTILITY REMOVAL - ORRINGTON REMEDIATION SITE	
SITE:		ORRINGTON, MAINE	
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EXCAVATION SUMMARY TABLE			
EXCAVATION AREA NAME	AREA	AVERAGE ELEV OF GS	EXCAVATION DEPTH
(-)	(SF)	(FT)	(FT)
PA3-1	869	68.9	4.0
PA3-2	2,100	68.7	4.0
PA3-7	2,253	69.0	4.0
PA7-6	3,155	69.1	4.0
PA8	19,315	58.4	4.0
CB6-16	17,096	34.1	4.0

NOTES:

- GROUND SURFACE ELEVATIONS VARY THROUGHOUT PA8 AND CB6-16 DUE TO THE PRESENCE OF STEEP SLOPES.
- EXCAVATIONS ARE DEFINED BY THE DEPTH BELOW GROUND SURFACE (BGS).

BORING SUMMARY TABLE			
LOCATION	NORTHING	EASTING	GROUND SURFACE ELEVATION (FT)
SB-ND-06	391400.73	899098.49	36.54
SB-ND-07	391365.70	899040.53	29.90
SB-ND-08	391346.98	899072.77	29.84
SB-ND-13	391348.08	899117.64	33.65
SB-ND-14	391296.41	899071.98	25.78
SB-ND-15	391306.24	899143.42	33.86
SB-ND-16	391308.64	899109.48	31.70
SB-ND-18	391427.93	899176.38	48.29
SB-ND-19	391406.57	899151.79	42.23
SB-ND-20	391380.46	899128.43	37.81
SB-ND-21	391334.20	899126.76	33.96
SB-PA-117	391397.89	899422.02	71.01
SB-PA-118	391382.28	899571.72	71.00
SB-PA-119	391349.37	899373.59	70.37
SB-PA-120	391350.27	899426.56	71.00
SB-PA-129	391614.62	899815.16	68.90
SB-PA-13	391296.22	899526.05	62.38
SB-PA-130	391550.94	899802.23	69.00
SB-PA-131	391554.63	899778.23	69.00
SB-PA-134	391391.09	899379.52	71.02
SB-PA-137	391300.67	899449.04	70.74
SB-PA-138	391232.85	899488.92	52.23
SB-PA-139	391255.99	899574.49	57.99
SB-PA-140	391279.74	899612.36	61.44
SB-PA-156	391360.11	899175.80	46.54
SB-PA-157	391397.47	899169.45	45.40
SB-PA-162	391576.42	899836.21	67.99
SB-PA-171	391354.90	899477.88	70.85
SB-PA-177	391220.51	899458.57	51.06
SB-PA-181	391545.45	899834.65	69.02
SB-PA-190	391427.51	899371.58	71.00
SB-PA-191	391394.50	899367.41	71.02
SB-PA-193	391395.56	899472.99	71.00
SB-PA-197	391385.12	899522.29	71.00
SB-PA-20A	391599.95	899739.41	69.01
SB-PA-214	391400.12	899176.77	47.23
SB-PA-215	391250.37	899073.89	24.58
SB-PA-216	391398.81	899098.00	36.40
SB-PA-218	391311.07	899020.39	24.23
SB-PA-234	391573.30	899664.81	69.03
SB-PA-33	391598.77	899631.49	69.07
SB-PA-35	391599.72	899788.39	69.00
SB-PA-61	391351.32	899528.91	71.00
SB-PA-62	391298.75	899488.92	62.40
SB-PA-63	391282.84	899575.90	59.69
SB-PA-64	391244.28	899529.16	54.97
SB-PA-86	391299.53	899377.91	66.30
SB-PA-87	391349.78	899554.78	71.00
SB-PA-88	391353.87	899605.77	70.99
TS-ND-B1	391370.71	899094.75	33.73
TS-ND-C1	391278.10	899018.64	24.42
TS-ND-C2	391283.09	899008.14	24.21
TS-ND-C3	391267.42	899031.53	24.90
TS-SS-Q2	391247.48	899548.75	56.96
TS-SS-R2	391235.62	899500.96	52.67
TS-SS-S4	391190.11	899402.17	50.42

NOTE:

- GROUND SURFACE ELEVATIONS ARE BASED ON AS-BUILT SURVEY DATA.

CONTROL POINT TABLE		
LOCATION	NORTHING	EASTING
CP-01	391678.01	899804.50
CP-02	391587.67	899798.74
CP-03	391585.52	899841.46
CP-04	391571.64	899855.21
CP-05	391579.66	899607.70
CP-06	391604.18	899743.58
CP-07	391594.28	899776.80
CP-08	391602.12	899787.27
CP-09	391611.56	899792.19
CP-10	391621.09	899790.15
CP-11	391655.34	899795.26
CP-12	391335.67	899412.55
CP-13	391309.08	899588.23
CP-14	391406.73	899061.39
CP-15	391348.28	899153.41
CP-16	391324.16	899138.11

REV	DATE	DESCRIPTION	DRN	APP
CDM Smith Geosyntec consultants				
TITLE: EXCAVATION AND SAMPLE SUMMARY TABLES				
PROJECT: PLANT AREA CORRECTIVE MEASURES IMPLEMENTATION PLAN CONCRETE AND UTILITY REMOVAL - ORRINGTON REMEDIATION SITE				
SITE: ORRINGTON, MAINE				
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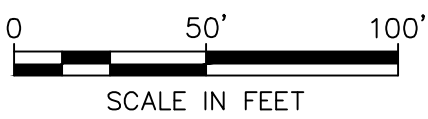
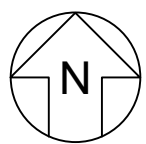
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LEGEND

RECORD SAMPLE POINT

RECORD SAMPLE SUMMARY TABLE			
LOCATION ID	NORTHING (USSurveyFoot)	EASTING (USSurveyFoot)	DEPTH (FT BGS)
RS-PA-04	391636.88	899802.20	4.0
RS-PA-05	391579.90	899691.98	4.0
RS-PA-06	391582.41	899775.48	4.0
RS-PA-07	391563.06	899814.21	4.0
RS-PA-08	391311.21	899414.98	4.0
RS-PA-09	391321.18	899445.39	4.0
RS-PA-10	391308.60	899493.37	4.0
RS-PA-11	391297.43	899546.61	4.0
RS-PA-12	391285.09	899581.30	4.0
RS-PA-13	391278.72	899450.48	4.0
RS-PA-14	391285.16	899517.25	4.0
RS-PA-15	391262.50	899411.80	4.0
RS-PA-16	391265.14	899553.97	4.0
RS-PA-17	391241.86	899442.92	4.0
RS-PA-18	391253.76	899500.17	4.0
RS-PA-19	391221.69	899410.71	4.0
RS-CB6-01	391387.15	899129.56	4.0
RS-CB6-02	391342.65	899091.21	4.0
RS-CB6-03	391298.24	899060.11	4.0



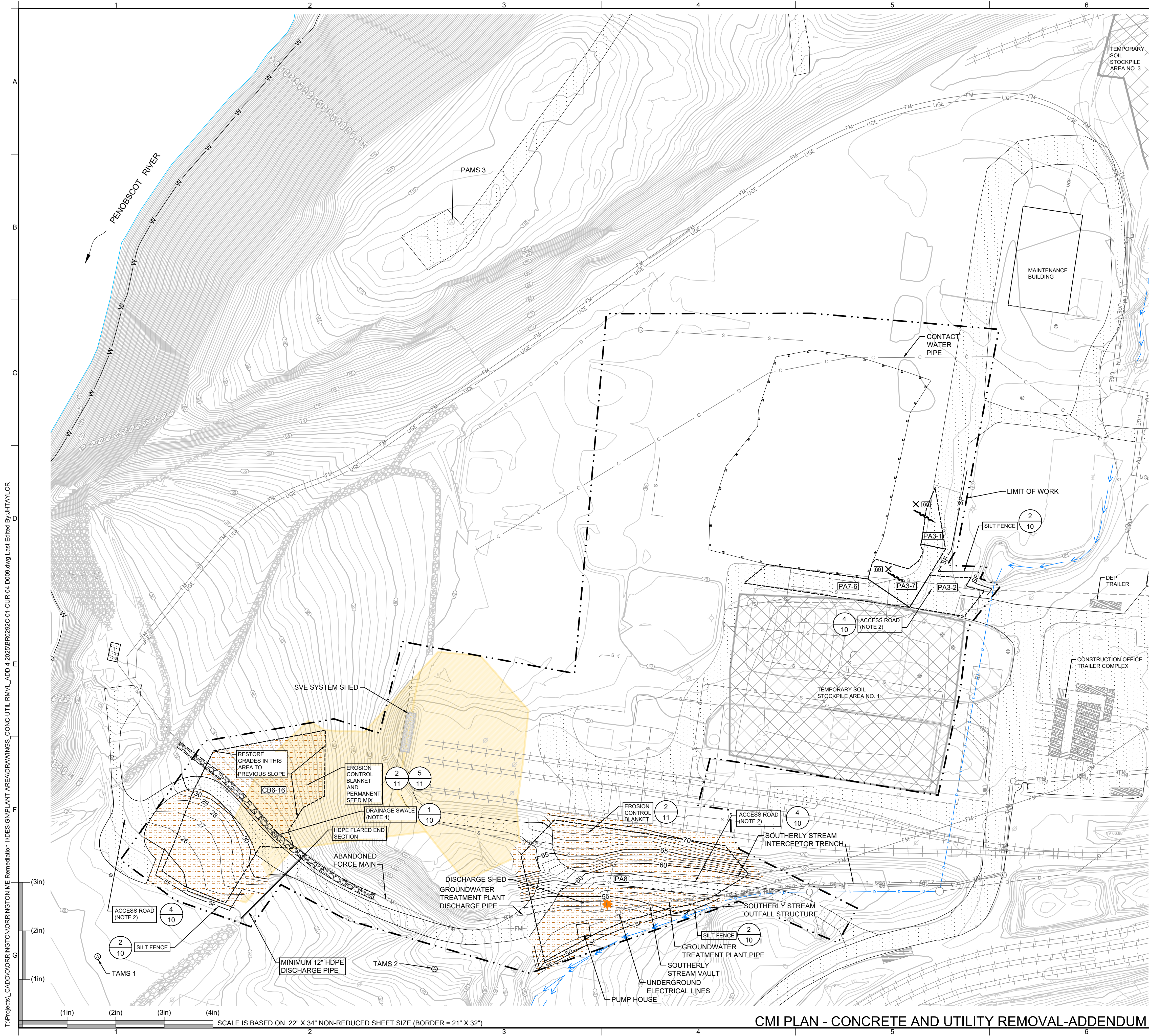
RECORD SAMPLING PLAN

PROJECT: PLANT AREA CORRECTIVE MEASURES IMPLEMENTATION PLAN
CONCRETE AND UTILITY REMOVAL - ORRINGTON REMEDIATION SITE

SITE: ORRINGTON, MAINE

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LEGEND

70

69

PROPOSED GRADING MAJOR CONTOURS (5')

APPROXIMATE RESTORATION GRADES (NOTE 2)

DRAINAGE DIRECTION (APPROXIMATE)

DRAINAGE SWALE

EROSION CONTROL BLANKET AND PERMANENT SEED MIX

NOTES

1.

SEE DRAWING NO. 2 FOR GENERAL NOTES AND ADDITIONAL LEGEND INFORMATION.

2.

ACCESS ROADS WILL BE RESTORED AS SHOWN FOLLOWING EXCAVATION AND BACKFILL ACTIVITIES AT THE DISCRETION OF THE REMEDIATION CONTRACTOR.

3.

AREAS IN PA8 THAT ARE ADJACENT TO THE SOUTHERLY STREAM WILL BE RESTORED IN ACCORDANCE WITH THE SOUTHERLY STREAM CMI PLAN, APPROVED BY MAINE DEP ON NOVEMBER 7, 2016.

4.

FINAL GRADING AND PERMANENT STORMWATER MANAGEMENT FEATURES WILL BE INCLUDED UNDER A SEPARATE COVER.

5.

SILT FENCE WILL BE MAINTAINED UNTIL VEGETATION IS ESTABLISHED.

N

0

50'

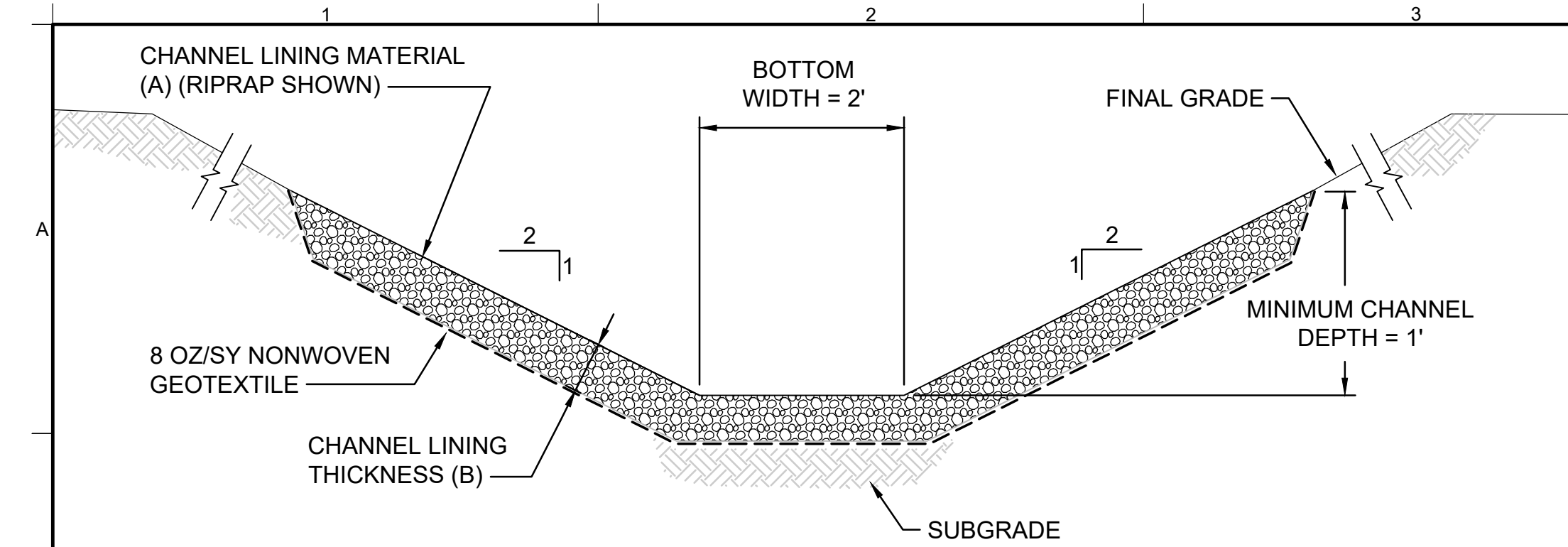
100'

SCALE IN FEET

REV	DATE	DESCRIPTION	DRN	APP	
CDM Smith Geosyntec consultants					
TITLE: INTERIM GRADING AND RESTORATION PLAN					
PROJECT: PLANT AREA CORRECTIVE MEASURES IMPLEMENTATION PLAN CONCRETE AND UTILITY REMOVAL - ORRINGTON REMEDIATION SITE					
SITE: ORRINGTON, MAINE					
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DATE					

CMI PLAN - CONCRETE AND UTILITY REMOVAL-ADDENDUM 5

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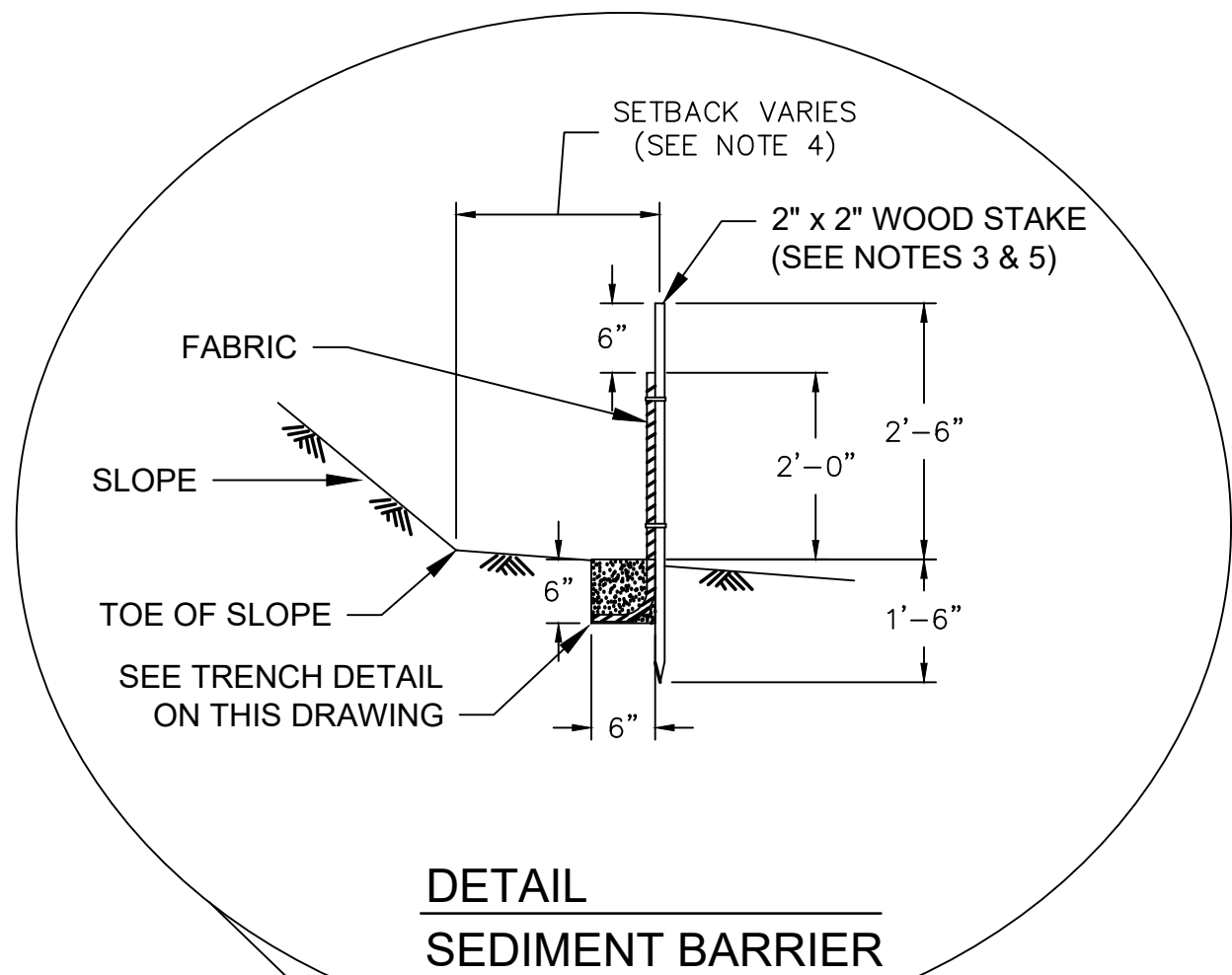


DESIGNATION			(A)	(B)
CHANNEL ID	UPGRADIENT INVERT (NOTE 1) (FT)	DOWNGRADIENT INVERT (NOTE 2) (FT)	CHANNEL LINING MATERIAL	CHANNEL LINING THICKNESS (FT)
TEMPORARY SWALE	40.0	30.0	RIPRAP (D50 = 6 IN.)	1

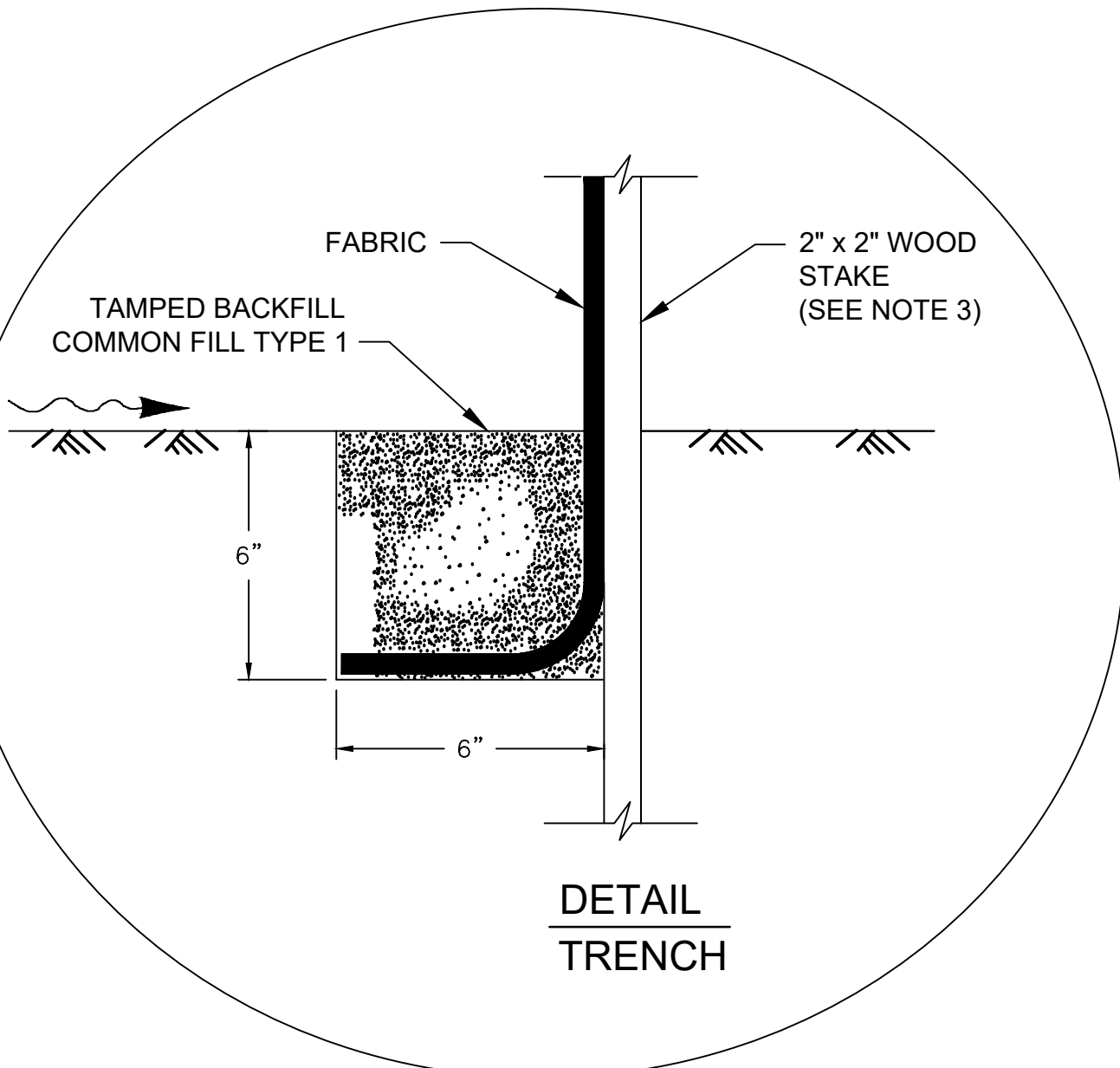
NOTE:

- THE UPGRADIENT INVERT ELEVATION OF THE SWALE WILL BE DETERMINED IN THE FIELD BASED ON EXISTING CONDITIONS.
- THE DOWNGRADIENT INVERT OF THE SWALE WILL TIE INTO THE EXISTING LANDFILL 1 SWALE

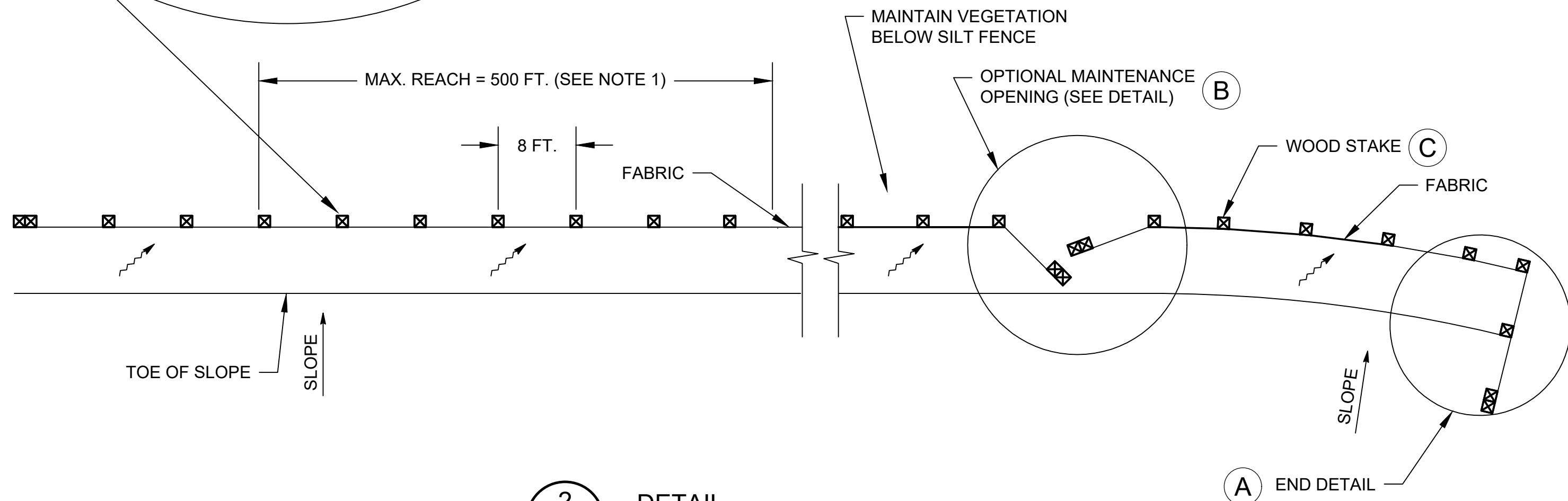
1
9 **DETAIL**
DRAINAGE SWALE
SCALE: N.T.S.
XREF: X083



DETAIL
SEDIMENT BARRIER

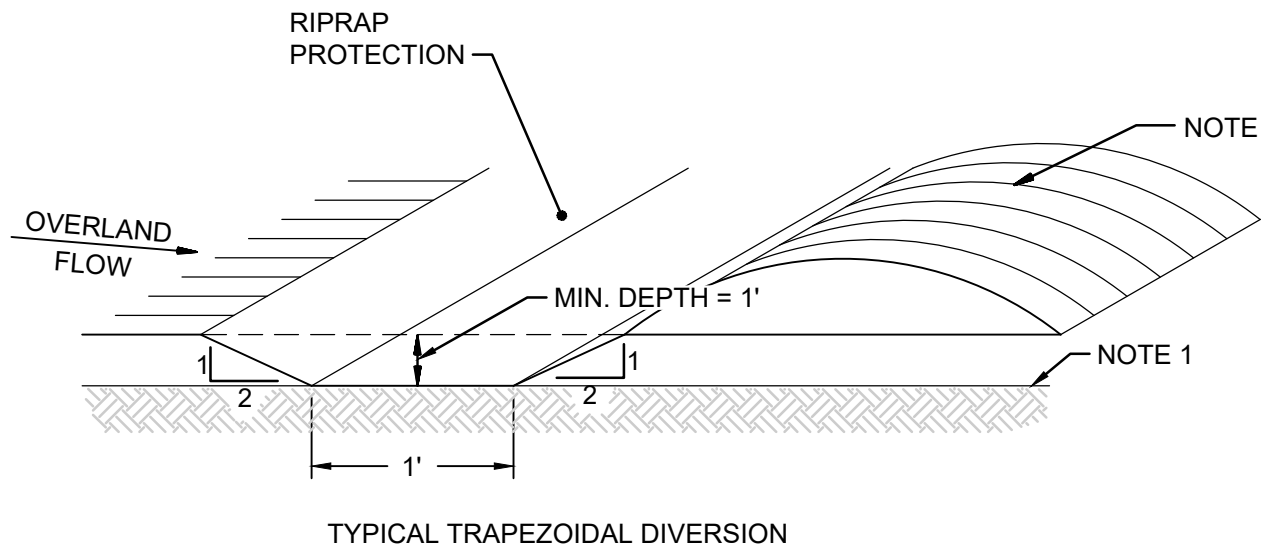


DETAIL
TRENCH



2
4 **DETAIL**
SILT FENCE
SCALE: N.T.S.
XREF: X059

SCALE IS BASED ON 22" X 34" NON-REDUCED SHEET SIZE (BORDER = 21" X 32")

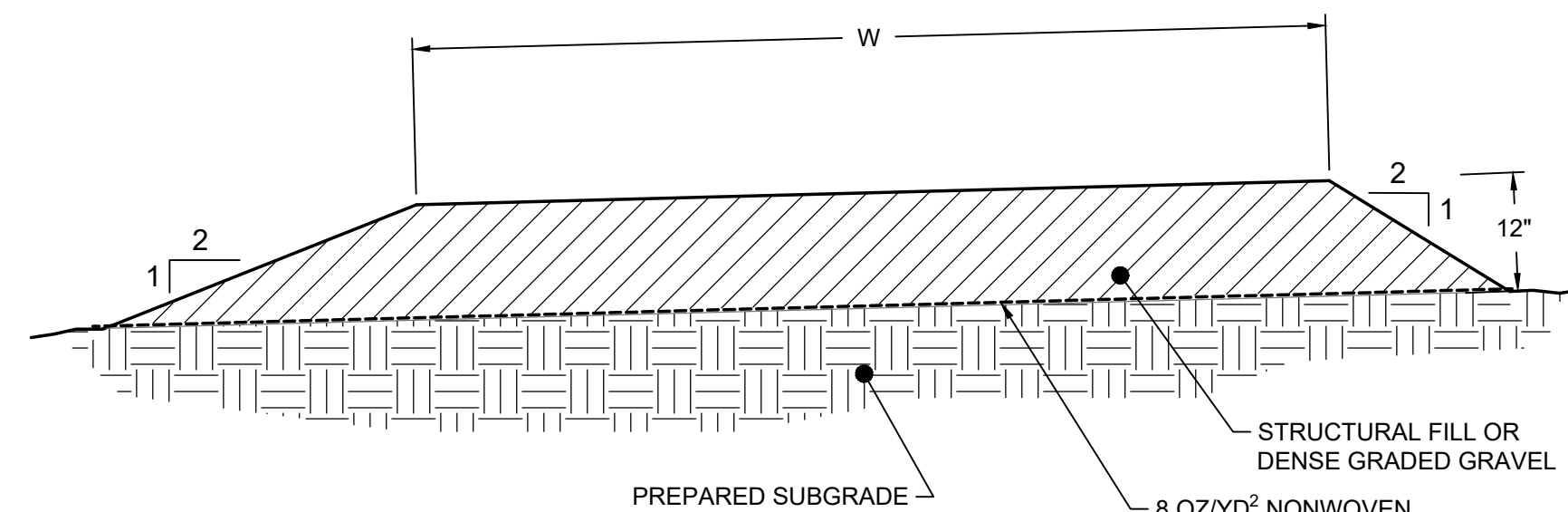


TYPICAL TRAPEZOIDAL DIVERSION

NOTES:

- DIVERSION BERM SHALL BE CONSTRUCTED ON EXISTING GRADE. EXCAVATION TO CONSTRUCT BERM NOT PERMITTED.
- BERM MATERIALS MUST BE ADEQUATELY COMPACTED IN ACCORDANCE WITH THE EARTHWORKS SPECIFICATION (02200) AND STABILIZED. THE REMEDIATION CONTRACTOR SHALL ADD BERM MATERIAL AS NECESSARY TO ACHIEVE MINIMUM CHANNEL DIMENSIONS.
- BERM SHALL BE CONSTRUCTED OF ON-SITE RE-USED MATERIAL OR COMMON FILL (AS NEEDED). BERM SHALL NOT BE CONSTRUCTED OF TOPSOIL.
- MINIMUM SLOPE OF BERM IS 0.01 FT / FT.
- RIPRAP PROTECTION (D50=6 IN) SHALL BE INSTALLED ALONG THE DIVERSION BERM AT A THICKNESS OF 2X THE D50.
- ALTERNATE CHANNEL CONFIGURATIONS MUST HAVE AN EFFECTIVE CROSS SECTIONAL FLOW AREA OF 12 SF.

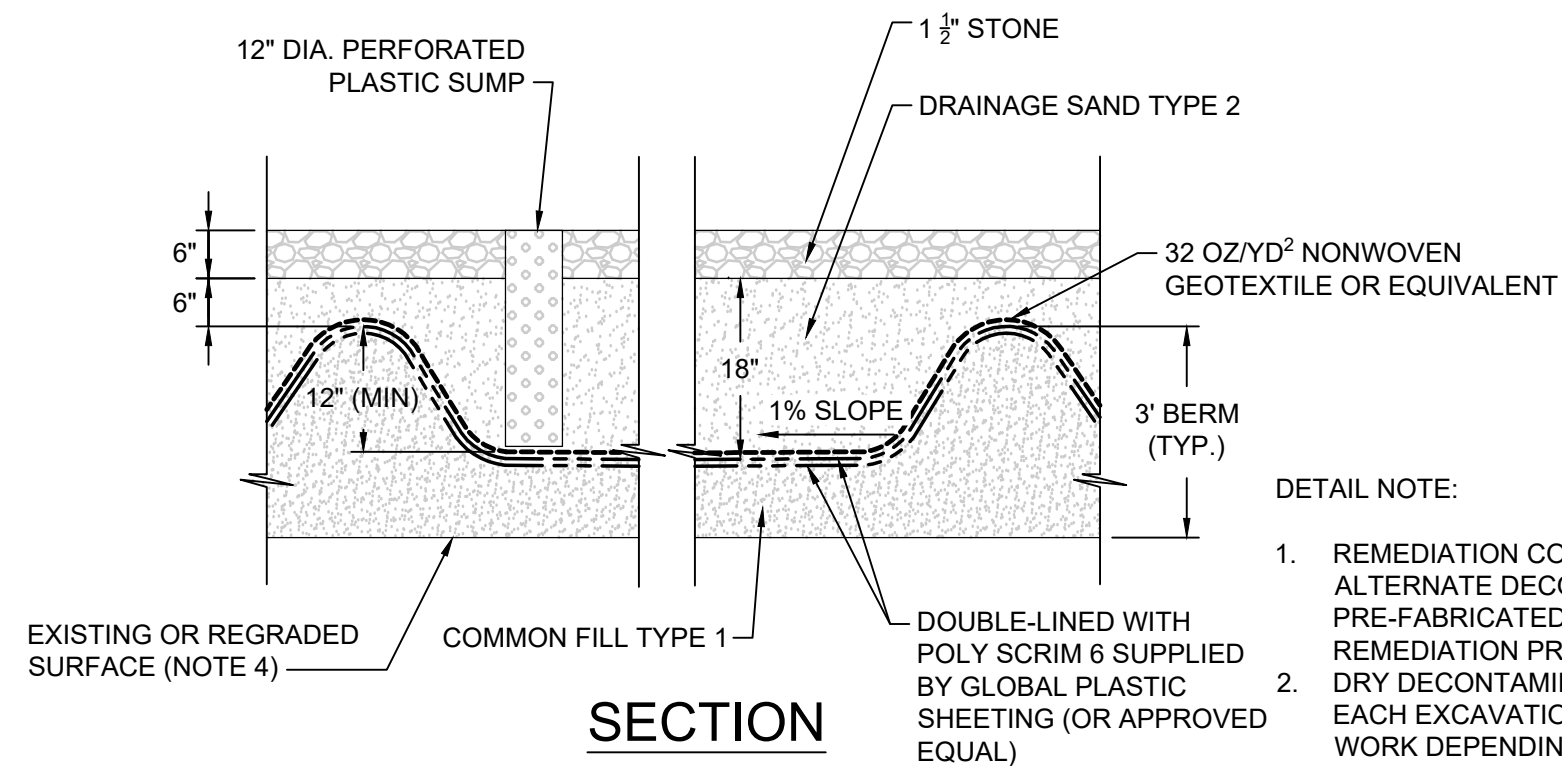
3
4 **DETAIL**
TEMPORARY DIVERSION BERM
SCALE: N.T.S.
XREF: X084



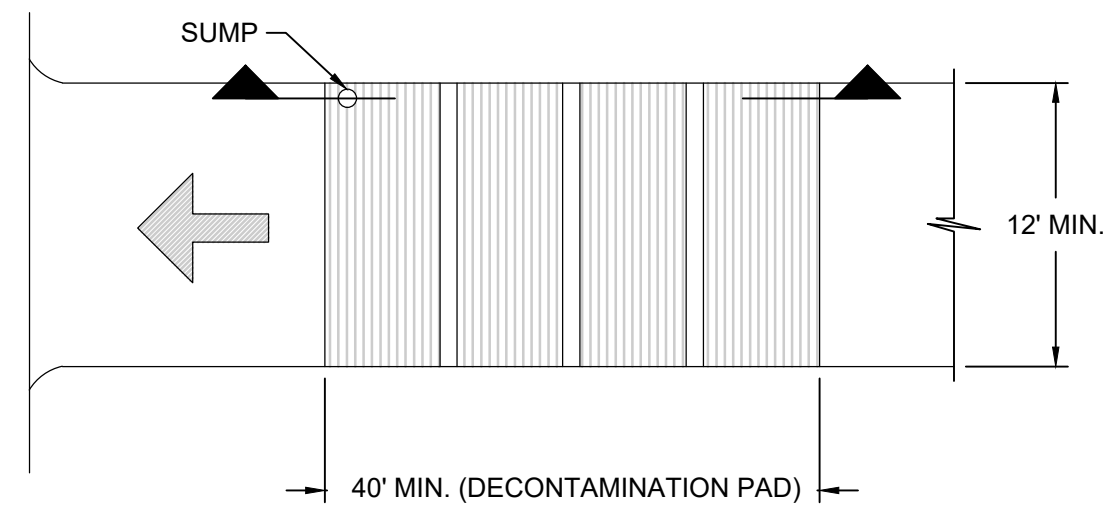
DETAIL NOTES:

- W = 15' FOR ONE-WAY ROAD AND 25' FOR TWO-WAY ROAD.
- SLOPE SURFACE 1% TO DRAIN.

4
9 **DETAIL**
ACCESS ROAD
SCALE: N.T.S.
XREF: X079



SECTION



PLAN

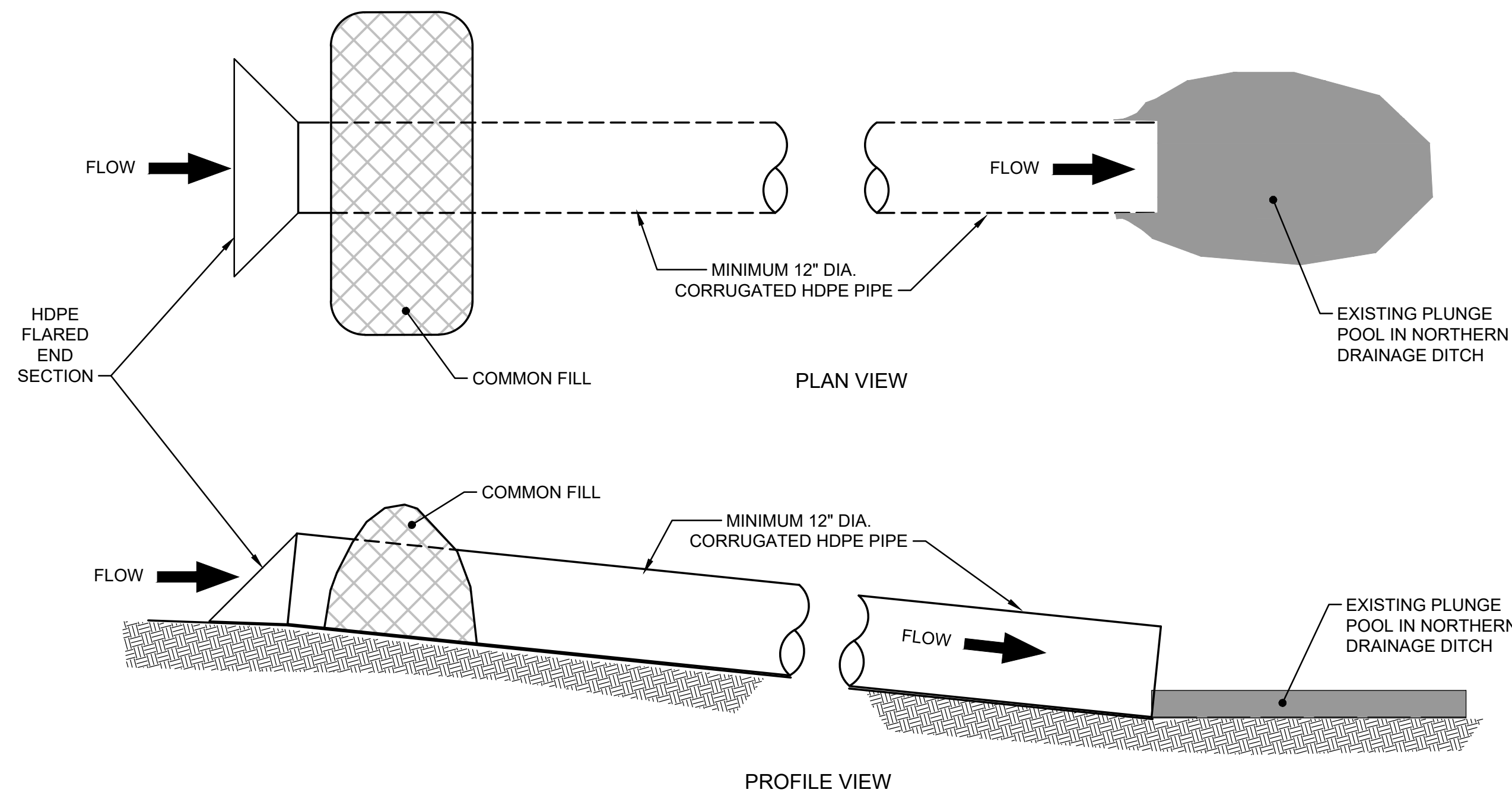
5
4 **DETAIL**
DECON PAD
SCALE: N.T.S.
XREF: X089

NOTES AND LEGEND:

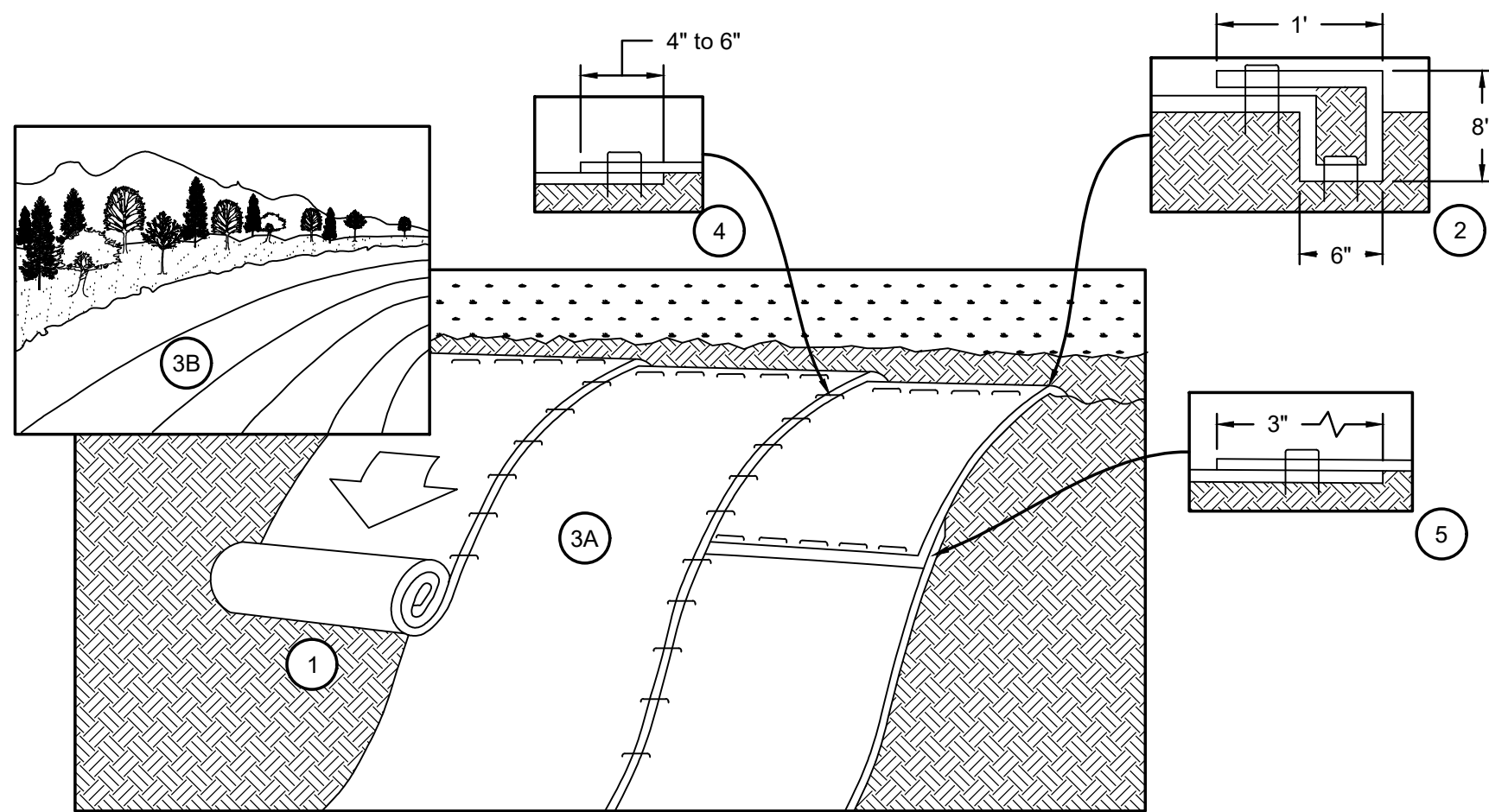
- CONSTRUCT THE LENGTH OF EACH REACH SO THAT THE CHANGE IN BASE ELEVATION ALONG THE REACH DOES NOT EXCEED 1/3 THE HEIGHT OF THE LINEAR BARRIER, IN NO CASE SHALL THE REACH LENGTH EXCEED 500 FT.
- THE LAST 10 FT. OF FENCE SHALL BE TURNED UP SLOPE.
- STAKE DIMENSIONS ARE NOMINAL AND DIMENSIONS SHOWN ARE TYPICAL.
- DIMENSION MAY VARY TO FIT FIELD CONDITION.
- STAKES SHALL BE SPACED AT 8 FT. MAXIMUM (10 FT. SPACING FOR END STAKES) AND SHALL BE POSITIONED ON DOWNSTREAM SIDE OF FENCE.
- STAKES TO OVERLAP AND FENCE FABRIC TO FOLD AROUND EACH STAKE ONE FULL TURN. SECURE FABRIC TO STAKE WITH AT LEAST 4 STAPLES.
- STAKES SHALL BE DRIVEN TIGHTLY TOGETHER TO PREVENT POTENTIAL FLOW-THROUGH OF SEDIMENT AT JOINT. THE TOPS OF THE STAKES SHALL BE SECURE WITH WIRE.
- FOR END STAKE, FENCE FABRIC SHALL BE FOLDED AROUND TWO STAKES ONE FULL TURN AND SECURE WITH 4 STAPLES.
- MAINTENANCE OPENINGS SHALL BE CONSTRUCTED IN A MANNER TO ENSURE SEDIMENT REMAINS BEHIND SILT FENCE.
- DETAILS ARE DRAWN TO SCALE AS NOTED EXCEPT FOR THE GEOSYNTHETICS WHICH ARE SHOWN AT AN EXAGGERATED SCALE FOR CLARITY.

REV	DATE	DESCRIPTION	DRN	APP
CDM Smith Geosyntec consultants				
TITLE: EROSION AND SEDIMENT CONTROL DETAILS I				
PROJECT: PLANT AREA CORRECTIVE MEASURES IMPLEMENTATION PLAN CONCRETE AND UTILITY REMOVAL - ORRINGTON REMEDIATION SITE				
SITE: ORRINGTON, MAINE				
THIS DRAWING MAY NOT BE ISSUED FOR PROJECT TENDER OR CONSTRUCTION, UNLESS SEALED.		DESIGN BY: EG	DATE: AUGUST 2025	G
SIGNATURE		DRAWN BY: JHT	PROJECT NO.: BR0292C-01	
DATE		CHECKED BY: EG	FILE: BR0292C-01-CUR-04 D010	
		REVIEWED BY: CMG	DRAWING NO.: 10 OF 11	
		APPROVED BY: CMG		

T:\Projects\ CADD\ORRINGTON ME Remediation\DESIGN\PLAN AREA DRAWINGS\ CONC-UTIL RMV_ADD 4-2025\BR0292C-01-CUR-04 D011.dwg Last Edited By: JHTAYLOR



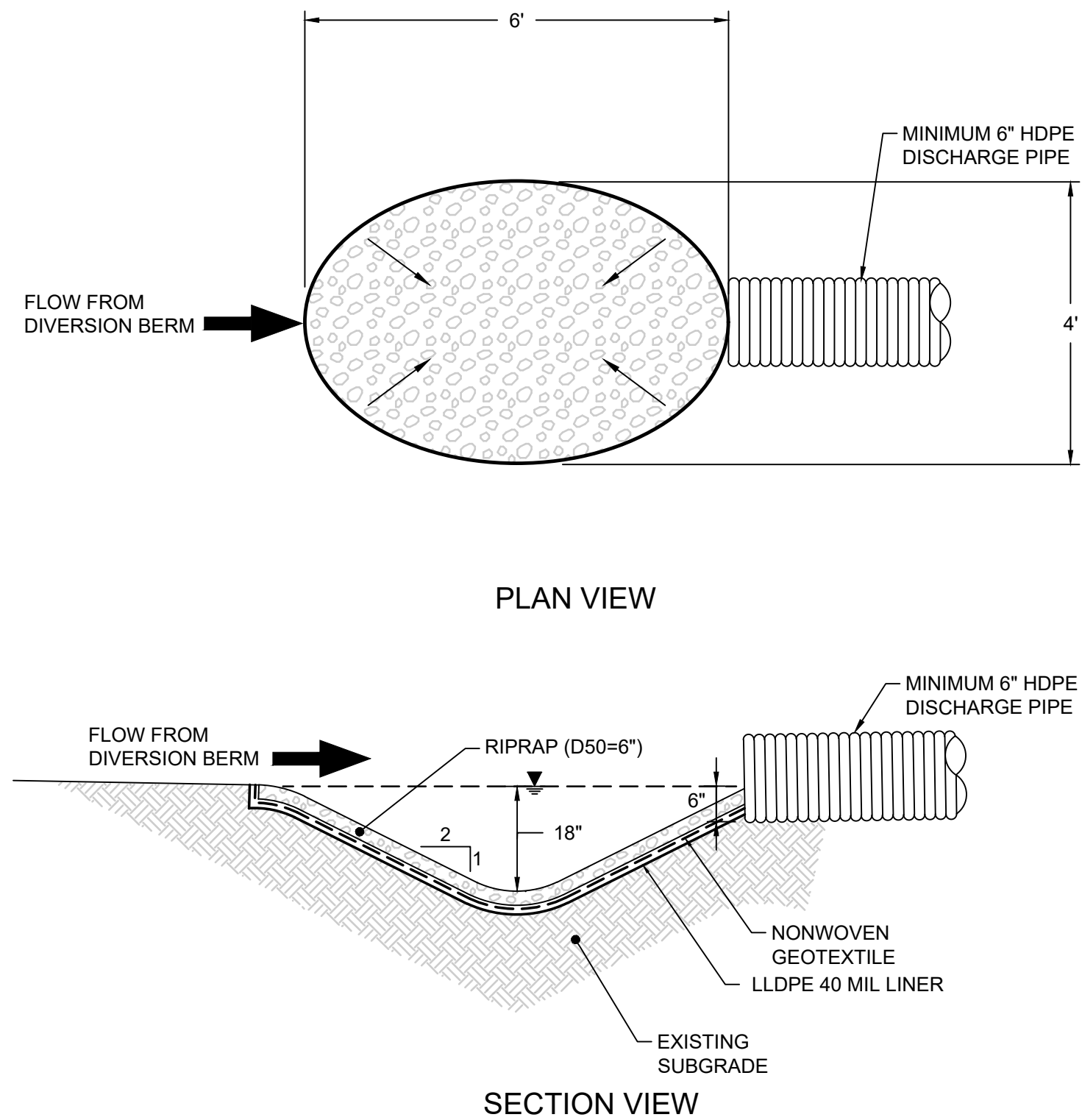
1
4
DETAIL
DISCHARGE PIPE
SCALE: N.T.S.
XREF: X097



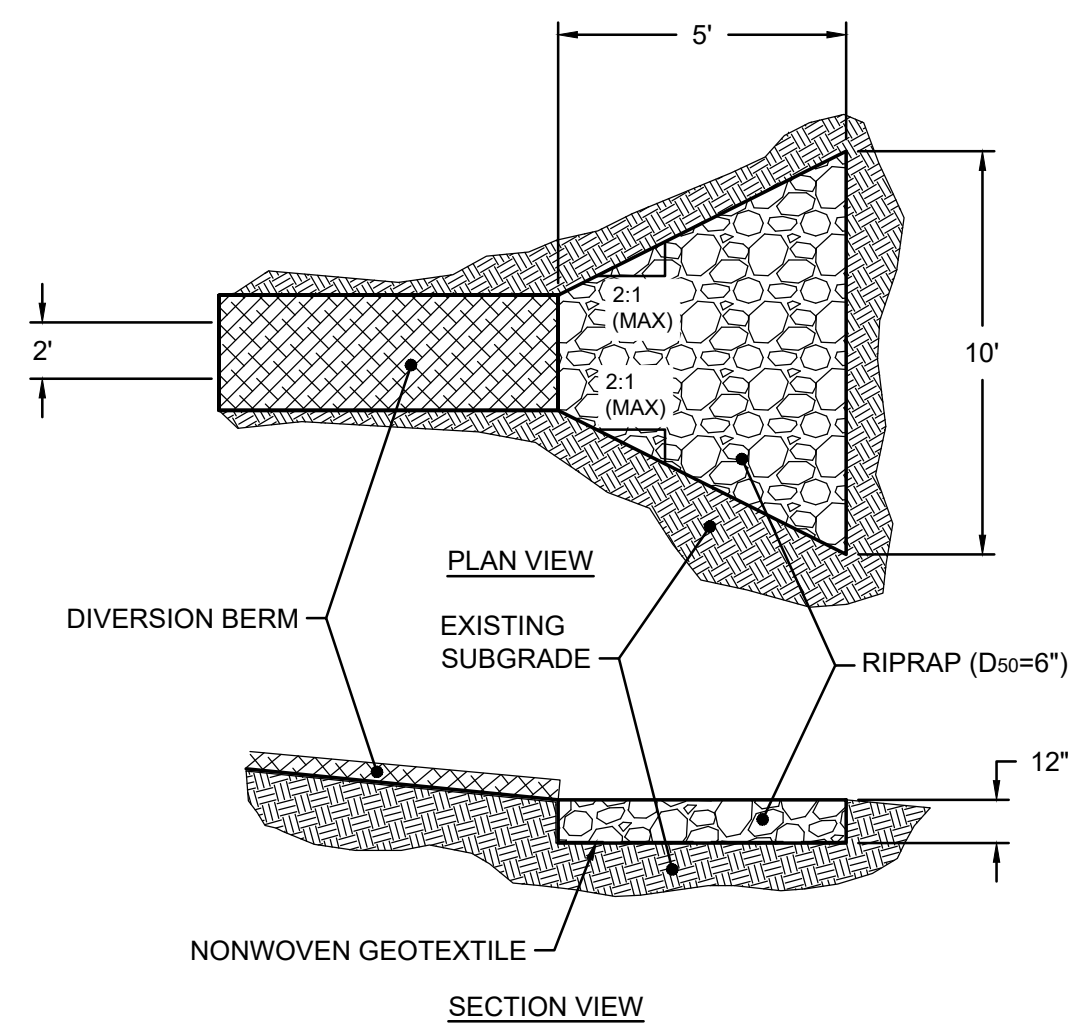
- NOTES:
1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
 2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 8" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.
 3. ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS PER MANUFACTURER'S RECOMMENDATION.
 4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 4"- 6" OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
 5. CONSECUTIVE BLANKETS SPICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE BLANKET WIDTH.
 6. PLACE STAPLES/STAKES PER MANUFACTURER'S RECOMMENDATION FOR THE APPROPRIATE SLOPE BEING APPLIED.
 7. IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.
 8. EROSION CONTROL BLANKET SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS AND THIS DETAIL.

2
9
DETAIL
EROSION CONTROL BLANKET
SCALE: N.T.S.
XREF: X090

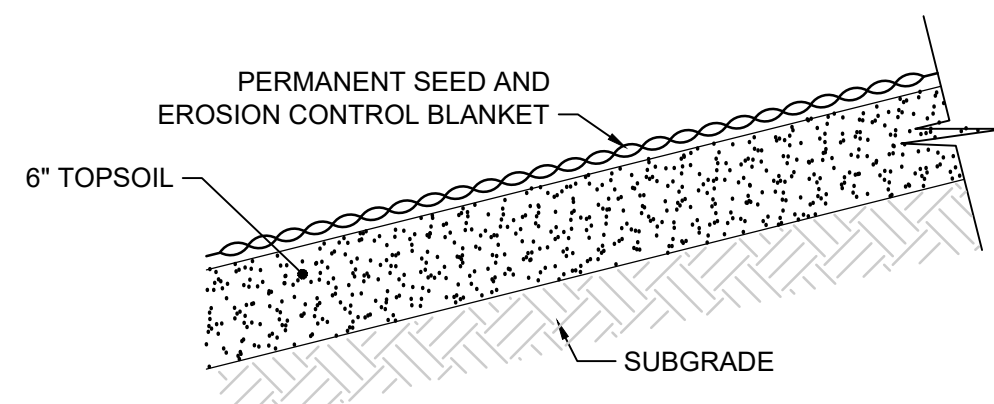
SCALE IS BASED ON 22" X 34" NON-REDUCED SHEET SIZE (BORDER = 21" X 32")



3
4
DETAIL
TEMPORARY PLUNGE POOL
SCALE: N.T.S.
XREF: X051



4
4
DETAIL
TEMPORARY RIPRAP DISSIPATION PAD
SCALE: N.T.S.
XREF: X058



5
9
DETAIL
TOPSOIL
SCALE: N.T.S.
XREF: X096

CMI PLAN - CONCRETE AND UTILITY REMOVAL-ADDENDUM 5

REV	DATE	DESCRIPTION	DRN	APP
CDM Smith Geosyntec consultants				
TITLE: EROSION AND SEDIMENT CONTROL DETAILS II				
PROJECT: PLANT AREA CORRECTIVE MEASURES IMPLEMENTATION PLAN CONCRETE AND UTILITY REMOVAL - ORRINGTON REMEDIATION SITE				
SITE: ORRINGTON, MAINE				
THIS DRAWING MAY NOT BE ISSUED FOR PROJECT TENDER OR CONSTRUCTION, UNLESS SEALED. SIGNATURE DATE		DESIGN BY:	EG	DATE: AUGUST 2025
		DRAWN BY:	JHT	PROJECT NO.: BR0292C-01
		CHECKED BY:	EG	FILE: BR0292C-01-CUR-04 D011
		REVIEWED BY:	CMG	DRAWING NO.: 11 OF 11
		APPROVED BY:	CMG	

Plant Area Site Plan of Approximate Locations of Visible Hg and Soil with Hg > MPS, Except the Former Cell Bldg Area, March 7, 2025

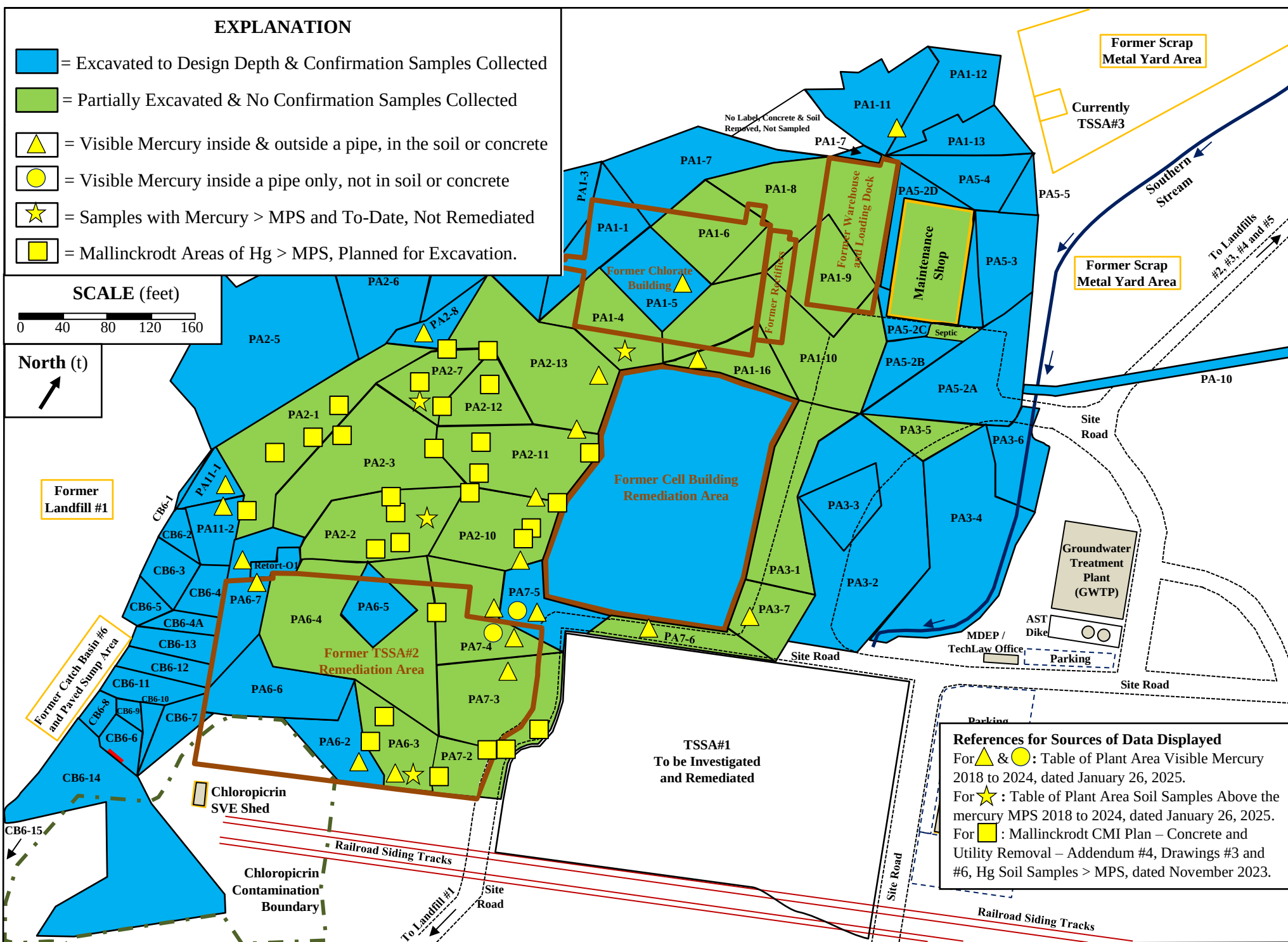
EXPLANATION

- = Excavated to Design Depth & Confirmation Samples Collected
- = Partially Excavated & No Confirmation Samples Collected
- = Visible Mercury inside & outside a pipe, in the soil or concrete
- = Visible Mercury inside a pipe only, not in soil or concrete
- = Samples with Mercury > MPS and To-Date, Not Remediated
- = Mallinckrodt Areas of Hg > MPS, Planned for Excavation.

SCALE (feet)

0 40 80 120 160

North (t)



References for Sources of Data Displayed

- For ▲ & ● : Table of Plant Area Visible Mercury 2018 to 2024, dated January 26, 2025.
- For ★ : Table of Plant Area Soil Samples Above the mercury MPS 2018 to 2024, dated January 26, 2025.
- For ■ : Mallinckrodt CMI Plan – Concrete and Utility Removal – Addendum #4, Drawings #3 and #6, Hg Soil Samples > MPS, dated November 2023.

Locations where bottom of excavation soil sample results are > MPS for mercury and the cells are not completed as of March 2025.

Sample Date	Remedial Cell	Sample Identification and Mercury-in-Soil Analytical Result
		BS-PA-93A (Geosyntec) 3.08 mg/Kg
		BS-PA-93B (MDEP) 100.0 mg/Kg
December 22, 2020	PA2-2	BS-PA-102 3.63 mg/Kg
		BS-PA-104A (Geosyntec) 5.02 mg/Kg
	Remediation	BS-PA-104B (MDEP) 3.40 mg/Kg
	not complete	BS-PA-106 12.80 mg/Kg
		RS-PA-01A (Geosyntec) 2.51 mg/Kg
January 6, 2021	PA2-7	RS-PA-01B (MDEP) 2.80 mg/Kg
	Remediation	
	not complete	
		BS-PA-142A (Geosyntec) 2.75 mg/Kg
August 26, 2021	PA1-4	BS-PA-142B (MDEP) 2.90 mg/Kg
	Remediation	
	not complete	
		BS-PA-147A (Geosyntec) 9.40 mg/Kg
September 30, 2021	PA6-3	BS-PA-147B (MDEP) 6.50 mg/Kg
	Remediation	
	not complete	

Mallinckrodt's Plant Area Soils with Hg > MPS and Planned for Remedial Excavation

Remedial Cell Id.	Soil Boring Id.	Soil Sample Id.	Depth of Clean Soil to Access > MPS	Thickness of Soil > MPS to Excavate
PA2-1	SB-LF1-61		10.0'	2.0'
	SB-PA-08		8.0' to layer #1 3.0' deeper to layer #2	1.0' 2.0'
	SB-PA-55		6.5'	2.0'
	SB-PA-56		7.0'	2.0'
	SB-PA-144		6.0'	6.0'
PA2-2		BS-PA-93A-DEP	5.5'	1.0' min. then re-sample
		BS-PA-102	4.0'	1.0' min. then re-sample
		BS-PA-104A	3.5'	1.0' min. then re-sample
		BS-PA-106	4.0'	1.0' min. then re-sample
	SB-PA-167		5.5'	14.0'
PA2-3	SB-PA-55		6.5'	2.0'
	SB-PA-56		7.0'	2.0'
	SB-PA-108		4.5' to layer #1 4.0' deeper to layer #2	1.0' 1.0'
PA2-7		RS-PA-01A-DEP	5.6'	1.0' min. then re-sample
	SB-PA-106		4.5'	1.0'
PA2-10	SB-PA-14		4.5'	9.0'
	SB-PA-31		6.0'	2.0'
	SB-PA-167		5.5'	14.0'
	SB-PA-226		5.0'	10.0'
	SB-PA-235		5.0'	3.5'
PA2-11	SB-PA-14		4.5'	9.0'
	SB-PA-30		6.0'	6.0'
	SB-PA-31		6.0'	2.0'
	SB-PA-42		4.0'	2.0'
	SB-PA-223		5.0' to layer #1 2.5' deeper to layer #2 1.0' deeper to layer #3	8.5' 1.0' 1.0'
	MW-805-02		9.0'	2.0'
PA2-12	SB-PA-10		8.0' to layer #1 1.0' deeper to layer #2	1.0' 1.0'
	SB-PA-29		6.25'	2.0'
	SB-PA-105		4.0'	3.0'
PA6-3	SB-PA-116		6.25' to layer #1 2.0' deeper to layer #2	10.0' 1.0'
	SB-PA-168		5.5'	2.0'
		BS-PA-147A-DEP	8.0'	1.0' min. then re-sample
PA7-2	SB-PA-116		6.25' to layer #1 2.0' deeper to layer #2	10.0' 1.0'
	SB-PA-149		6.0' to layer #1 2.0' deeper to layer #2	4.0' 8.0'
PA7-3	SB-PA-148		12.0'	2.0'
	SB-PA-149		6.0' to layer #1 2.0' deeper to layer #2	4.0' 8.0'
	SB-PA-219		5.25' to layer #1 2.0' deeper to layer #2	5.0' 2.0'
PA7-4	SB-PA-59		4.75' to layer #1	2.0'
			6.0' deeper to layer #2	2.0'

Source:

CMI Plan-Concrete and Utility Removal-Addendum #4, drawing #6, dated November 2023