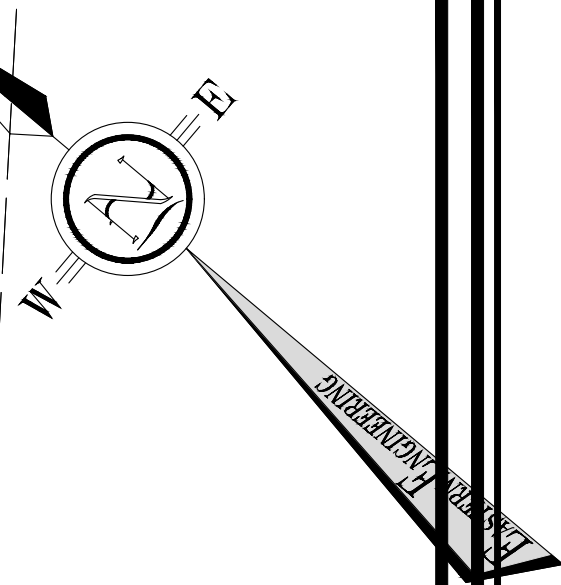


BENCHMARK
ELEVATIONS ARE DERIVED FROM GPS
OBSERVATIONS.
(UTM NORTH-ZONE 18, NAD 83)

NOTE:
CONTRACTOR TO CONTACT UTILITY
COMPANIES TO DETERMINE TYPE,
LOCATION, AND CONFIGURATION OF
EXISTING PLANT.



BENCHMARK

NOTE:
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COMPANIES TO DETERMINE TYPE,
LOCATION, AND CONFIGURATION OF
EXISTING PLANT.

No.	By	Date	Revisions
3	CAJ	2026-04-02	SWM UPDATE
2	CAJ	2026-03-17	TENDER
1	AJP	2025-12-19	99 PERCENT
0	CAJ	2025-12-12	FOR INTERNAL REVIEW

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EASTERN
ENGINEERING GROUP INC.
CONSULTING ENGINEERS
Apex Building
207-100 Strowger Blvd.
Brockville, Ont. K6V 5J9
Telephone: (613) 345-0400
Facsimile: (613) 345-0008
www.EastEng.com

Project Title:
HFI PYROTECHNICS INC.
3322 HAND RD
RR#4

Drawing Title:
EXISTING CONDITIONS
PLAN

Design:	BAC	Checked:		Approved:		Project No.:	11824
Drawn:	BAC	Checked:		Date:	2025-02-11	Contract No.:	

Drawing No.:
Horizontal: 250

C0

UNITS EQUAL METRES UNLESS OTHERWISE NOTED
File No.: 12108 Civil HFI r4.dwg

LEGEND

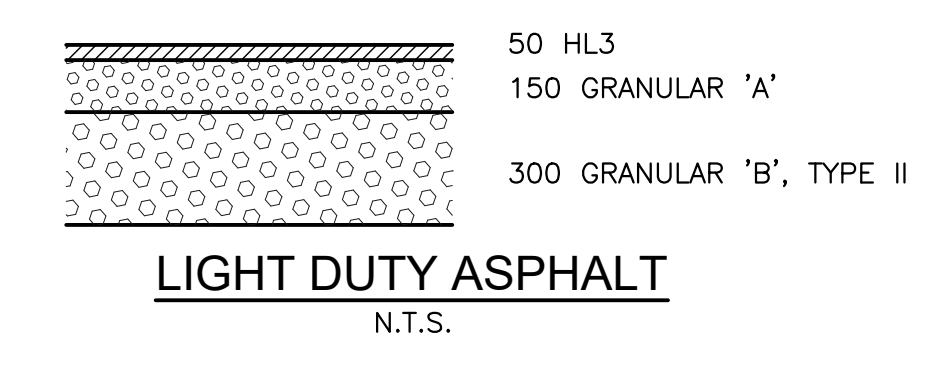
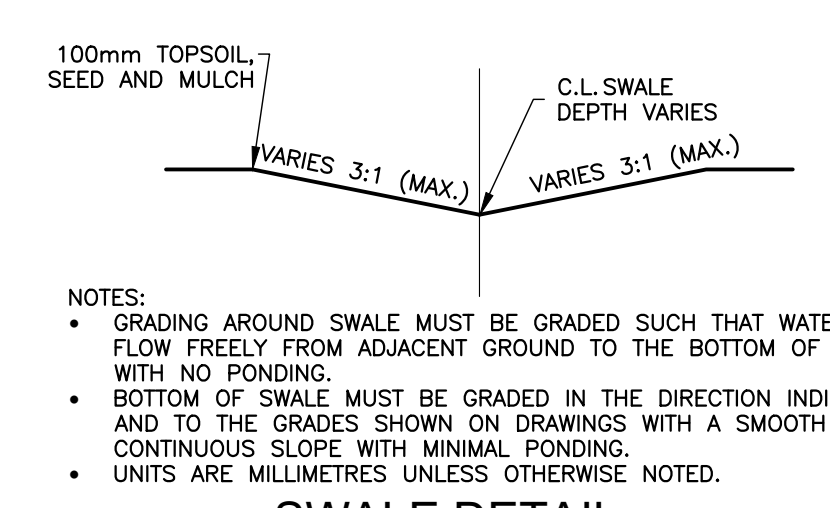
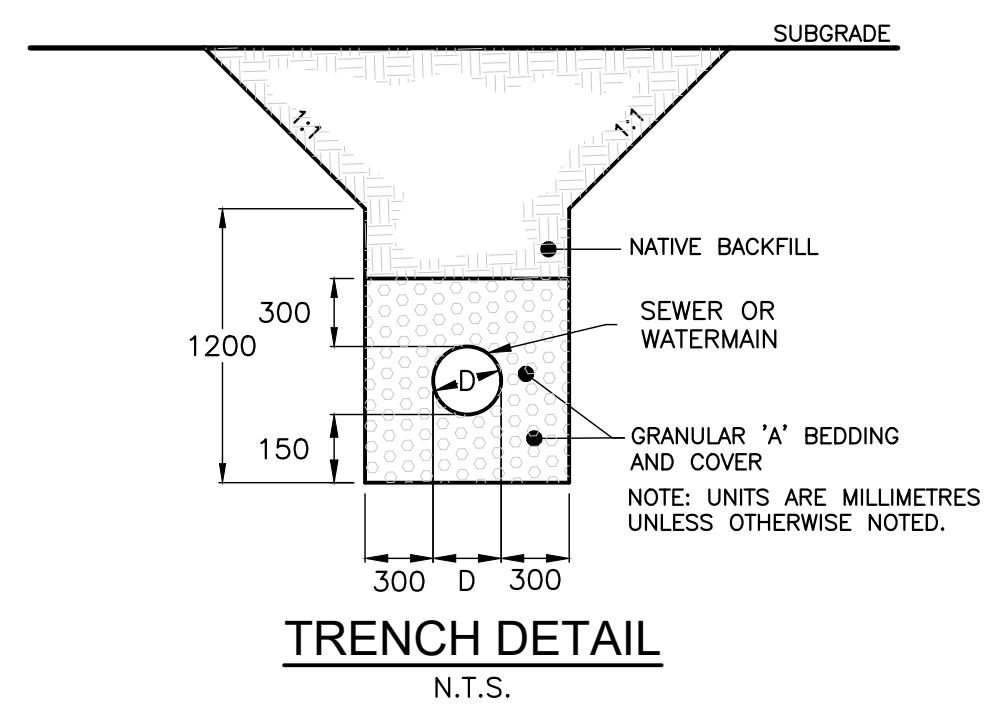
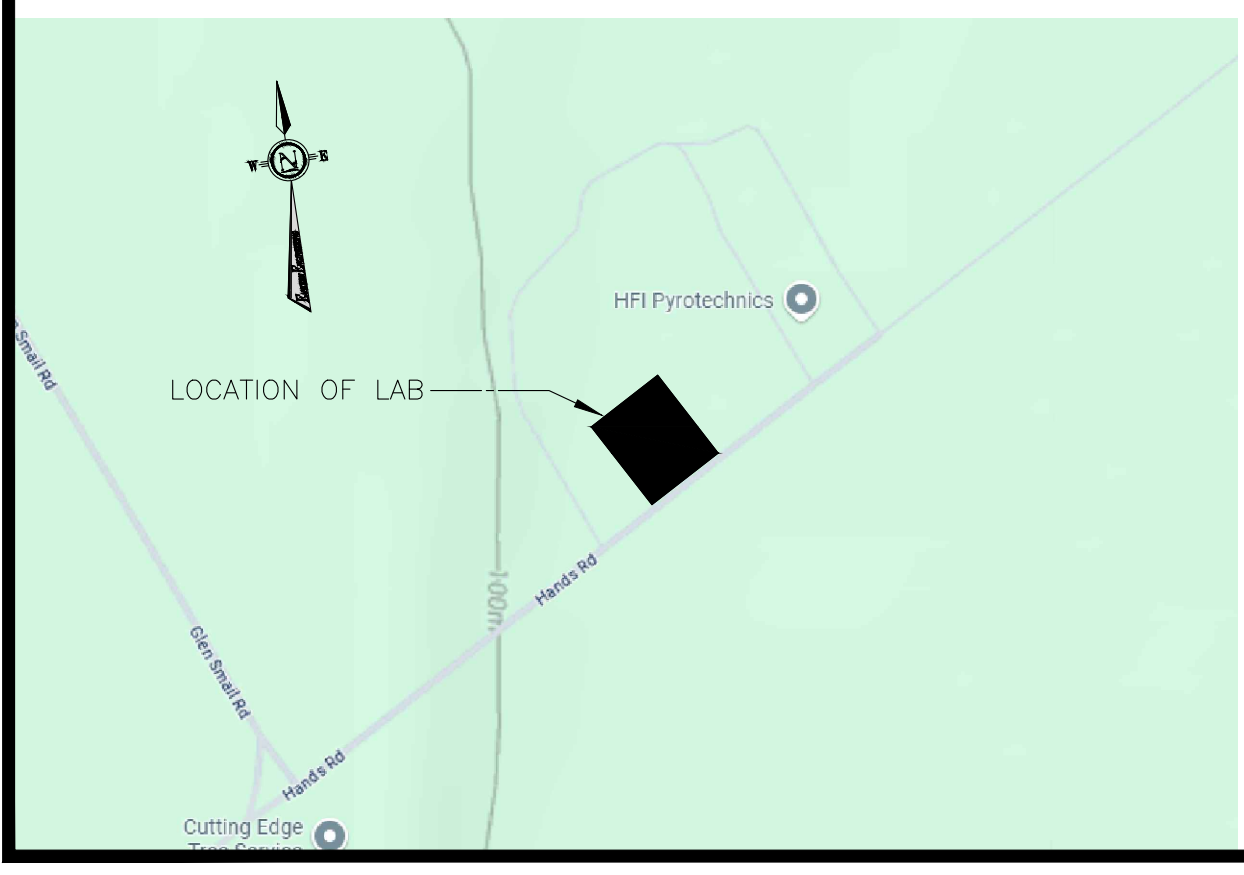
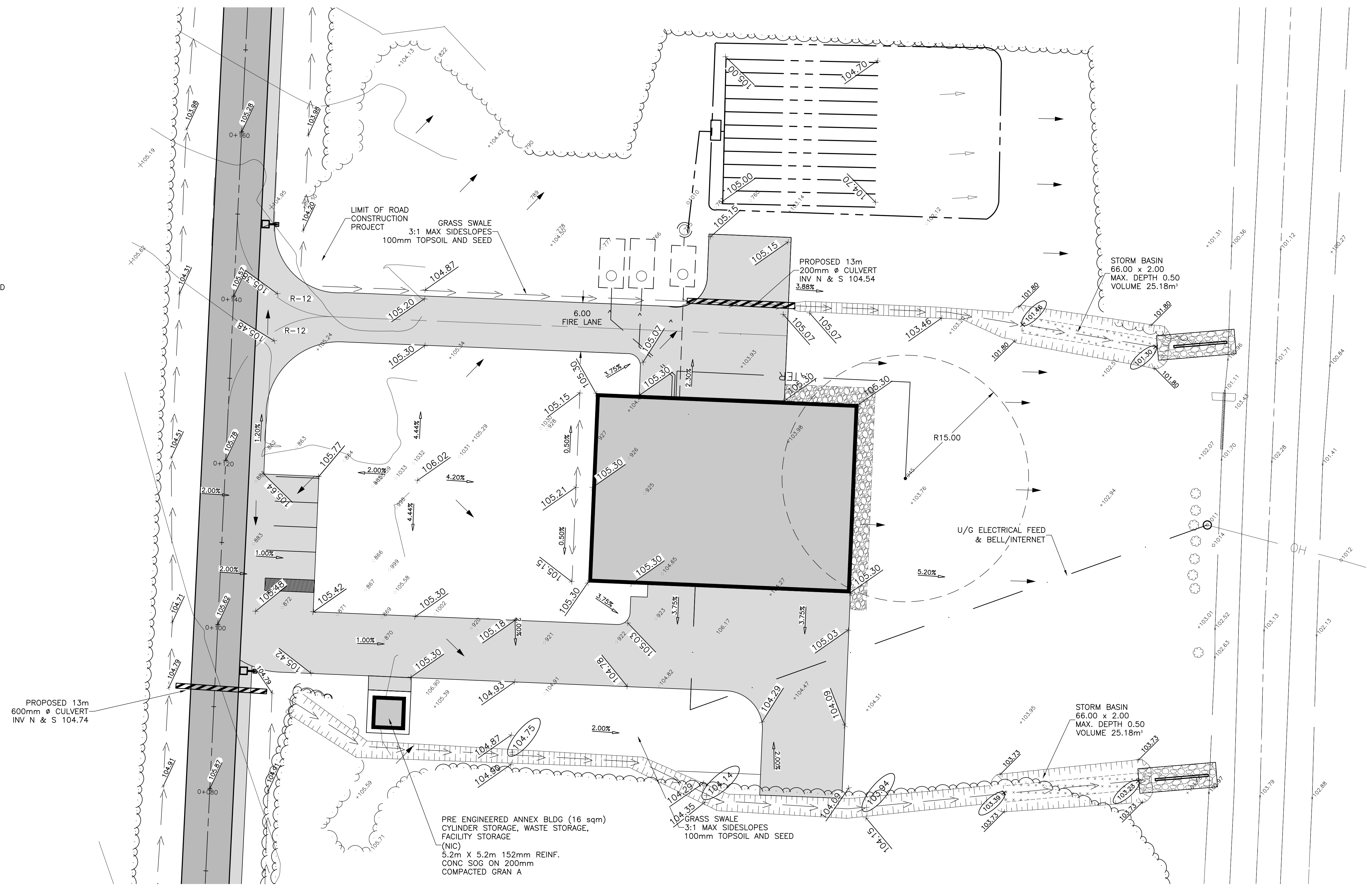
- × 92.30 EXISTING TOPO GRADE
- × 92.90 PROPOSED GRADE
- EXISTING GRADE
- STORM SEWER
- SANITARY SEWER
- WATERMAIN
- BELL UNDERGROUND
- GAS UNDERGROUND
- CABLE UNDERGROUND
- ELECTRICAL UNDERGROUND
- OVERHEAD UTILITIES
- BH ○ B ○ LS ○ H UTILITY POLE
- AN UTILITY ANCHOR
- UTILITY PEDISTAL
- PROPERTY BAR FOUND
- ▴ RS ROAD SIGN
- FENCE
- TREELINE
- TREE
- 11.58 PROPERTY BOUNDARY
- N49°15'50"E
- EXISTING BUILDING
- PROPOSED BUILDING

BENCHMARK
ELEVATIONS ARE DERIVED FROM GPS
OBSERVATIONS.
(UTM NORTH-ZONE 18, NAD 83)

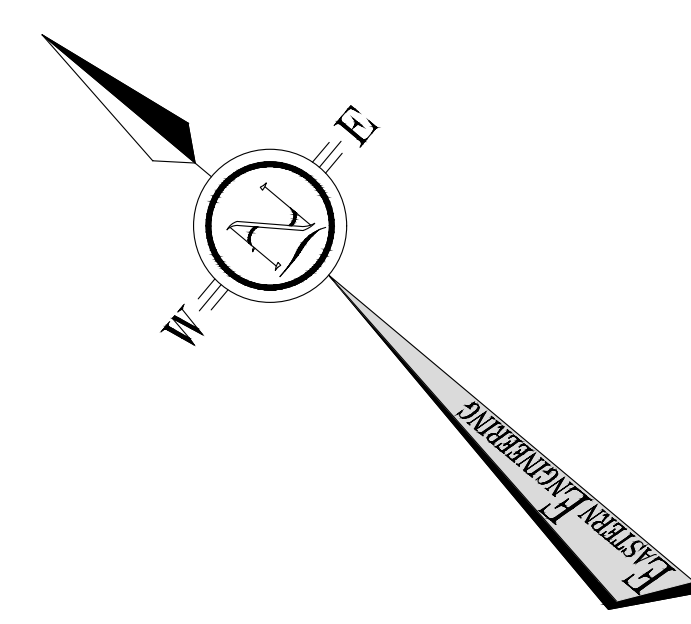
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COMPANIES TO DETERMINE TYPE,
LOCATION, AND CONFIGURATION OF
EXISTING PLANT.

LEGEND

- × 92.30 EXISTING TOPO GRADE
— 92.90 PROPOSED GRADE
— 92.90 EXISTING GRADE
○ □ STORM SEWER
○ □ SANITARY SEWER
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▶ RS ROAD SIGN
— FENCE
— TREELINE
— TREE
11.58 PROPERTY BOUNDARY
N49°15'50"E
EXISTING BUILDING
PROPOSED BUILDING



NOTES:
• GRADING AROUND SWALE MUST BE GRADED SUCH THAT WATER WILL FLOW FREELY FROM ADJACENT GROUND TO THE BOTTOM OF SWALE WITH NO PONDING.
• BOTTOM OF SWALE MUST BE GRADED IN THE DIRECTION INDICATED AND TO THE GRADES SHOWN ON DRAWINGS WITH A SMOOTH CONTINUOUS SLOPE WITH MINIMAL PONDING.
• UNITS ARE MILLIMETRES UNLESS OTHERWISE NOTED.



No.	By	Date	Revisions
3	CAJ	2026-04-02	SWM UPDATE
2	CAJ	2026-03-17	TENDER
1	AJP	2025-12-19	99 PERCENT
0	CAJ	2025-12-12	FOR INTERNAL REVIEW

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Apex Building
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Telephone: (613) 345-0400
Facsimile: (613) 345-0008
www.EastEng.com

Project Title: **HFI PYROTECHNICS INC. 3322 HAND RD RR#4**

Drawing Title: **SITE PLAN LAB**

Design: BAC	Checked: .	Approved: .	Project No.: 11824
Drawn: BAC	Checked: .	Date: 2025-02-11	Contract No.: .

Scale: 0 5 10
Horizontal: 250

C1

UNITS EQUAL METRES UNLESS OTHERWISE NOTED
File No.: 12108_Civil_HFI_r4.dwg

GENERAL NOTES

- ALL WORK ON CITY PROPERTY TO BE PERFORMED BY A CONTRACTOR APPROVED BY THE CITY.
- CONTRACTOR TO VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.
- CONTRACTOR TO OBTAIN ALL NECESSARY PERMITS PRIOR TO START OF CONSTRUCTION.

SEPTIC DESIGN NOTES:

- ALL WORK SHALL CONFORM TO THE ONTARIO BUILDING CODE, LATEST EDITION.
- CONTRACTOR TO SUPPLY ALL MATERIAL, EQUIPMENT AND LABOUR TO INSTALL.
- CONSTRUCT SWALES AROUND BED TO DIRECT RUNOFF FLOW AROUND BED.
- CONTRACTOR TO ARRANGE FOR UTILITY LOCATES PRIOR TO EXCAVATION.
- CONTRACTOR TO REINSTATE AND GRADE GRASS AREAS WITH 75mm TOPSOIL, FERTILIZER AND SEED.
- GRADE SIDE SLOPES TO MAXIMUM SLOPE OF 4:1.
- ALL TANK OPENINGS TO HAVE PRE-MANUFACTURED RISERS TO GRADE. PROVIDE 300mm COVER OVER TANKS AND CHAMBERS.

SEPTIC SYSTEM DESIGN (AS PER OBC)

OFFICE BUILDING (75 4/9.3 sqm)
26m*34.80m=904.80 sqm
904.80 sqm*(75 4/9.3 sqm)
=7296.77 L/DAY

DESIGN FLOW 7297 L/DAY

BED

$L = \frac{QT}{200}$ WHERE $T=6$
 $= \frac{(7297*6)}{200} = 218.9m$
USE 12 RUNS @ 18.25m = 219 m

SEPTIC TANK

VOLUME = $7297 \times 3 = 21,891 \text{ L}$
(USE 22,897 L TANK)
WITH EFFLUENT FILTER

LOADING RATE

LOADING RATE 8 L/m²
 $\frac{Q}{L/R} = \frac{7297}{8} = 912.13 \text{ m}^2$
IMPORTED SAND AREA 923 m²

PUMP CHAMBER

VOLUME = 1200L

DOSING RATE

DISTRIBUTION PIPE VOLUME = 967 L
75% = 726 L
DOSING RATE = $726 \text{ L} / 15m = 0.81 \text{ L/SEC}$

PUMP SPECIFICATIONS

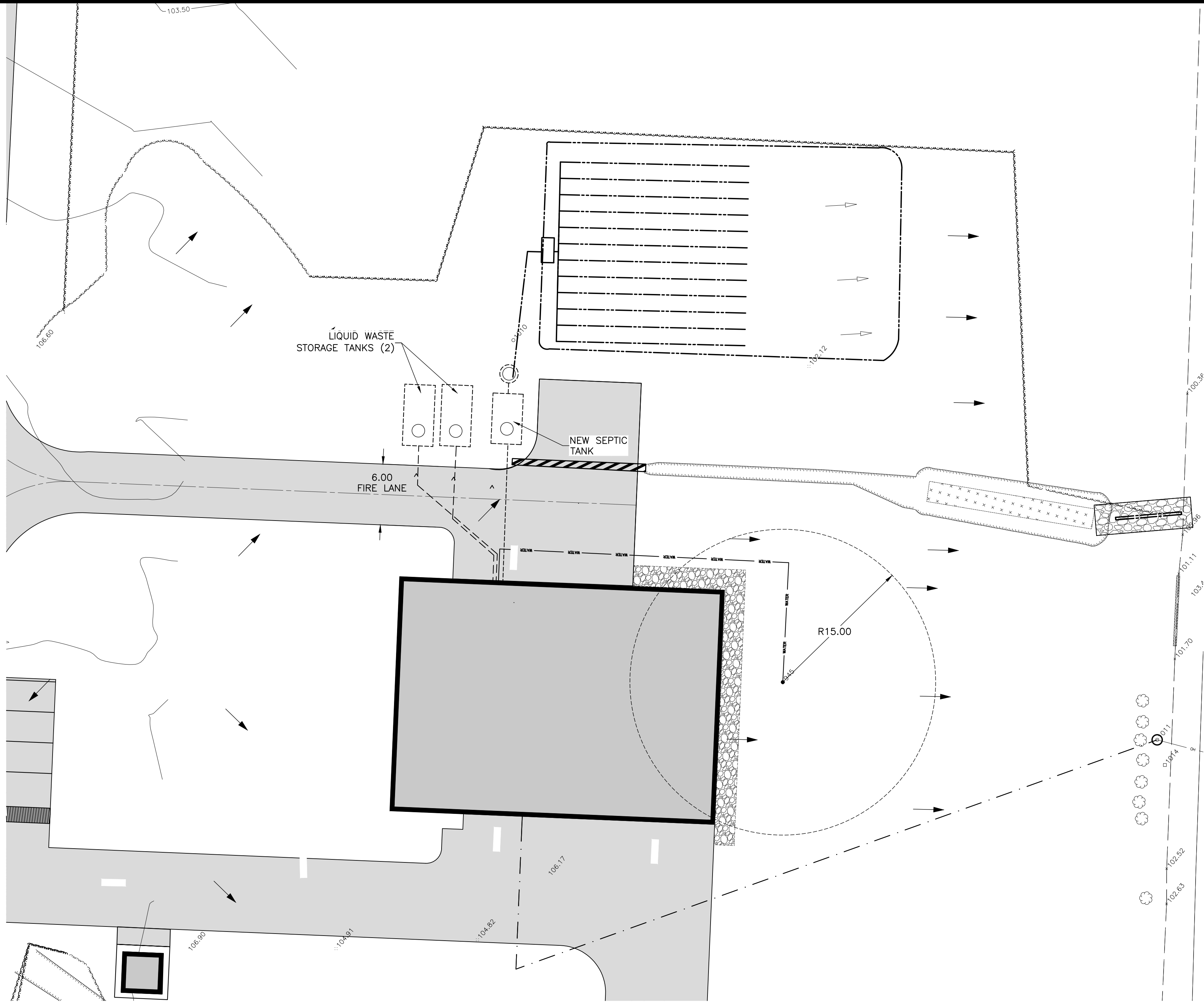
- DUPLEX MYERS ME 45 MC-21, 1/2 HP EFFLUENT PUMP
- 1 1/2" PVC COMPRESSION CHECK VALVE
- GALVANIZED STEEL GUIDE RAIL AND CHAIN LIFT
- QUICK CONNECT DISCHARGE FITTING
- HIGH-LOW FLOAT CONTROL
- HIGH LEVEL FLOAT WITH ALARM
- WEATHER PROOF CONTROL PANEL WITH HAND/OFF/AUTO SWITCH, ALARM LIGHT, TEST, BUZZER, PUMP RUN LIGHT



- NOTES:
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 - BOTTOM OF SWALE MUST BE GRADED IN THE DIRECTION INDICATED AND TO THE GRADES SHOWN ON DRAWINGS WITH A SMOOTH CONTINUOUS SLOPE WITH MINIMAL PONDING.
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SWALE DETAIL

N.T.S.



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NOTE:
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LEGEND

- EXISTING TOPO GRADE
- PROPOSED GRADE
- EXISTING GRADE
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No.	By	Date	Revisions

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Project Title:
HFI PYROTECHNICS INC.
3322 HAND RD
RR#4

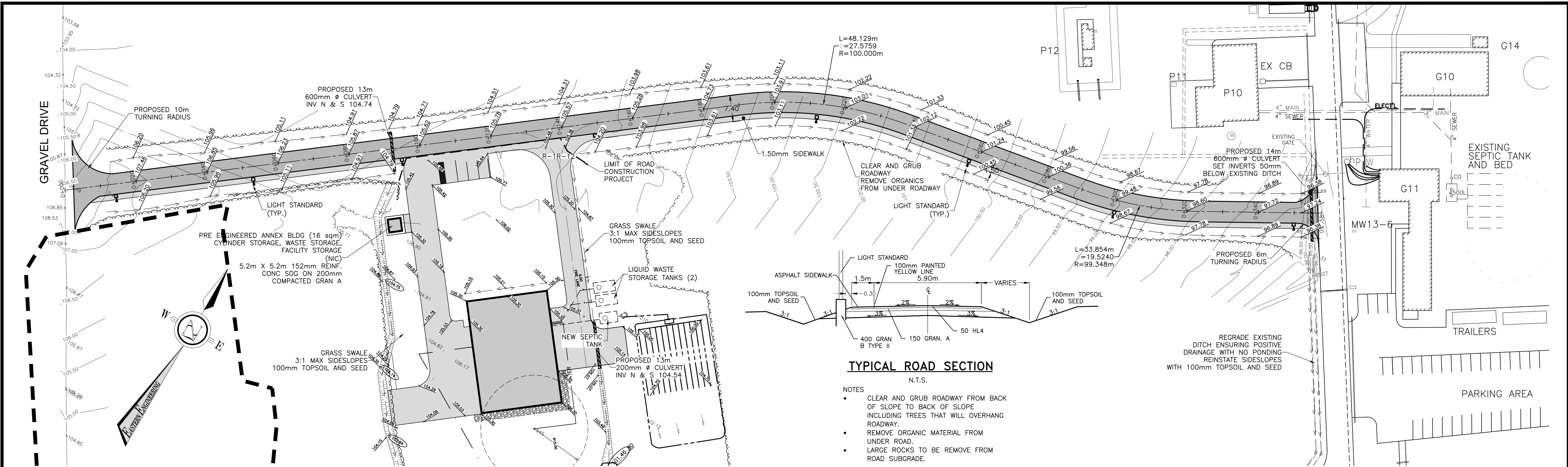
Drawing Title:
SEPTIC PLAN

Design:	Checked:	Approved:	Project No.:
BAC	.	.	11824
Drawn:	Checked:	Date:	Contract No.:
BAC	.	2025-02-11	.

Scale: Drawing No.:

C2

UNITS EQUAL METRES UNLESS OTHERWISE NOTED
File No.: 12108 Civil HFI r4.dwg



TYPICAL ROAD SECTION

- NOTES
- CLEAR AND GRUB ROADWAY FROM BACK OF SLOPE TO BACK OF SLOPE INCLUDING TREES THAT WILL OVERHANG ROADWAY.
 - REMOVE ORGANIC MATERIAL FROM UNDER ROAD.
 - LARGE ROCKS TO BE REMOVE FROM ROAD SUBGRADE.

GENERAL NOTES

- ALL WORK ON TOWNSHIP PROPERTY TO BE PERFORMED BY A CONTRACTOR APPROVED BY THE TOWNSHIP.
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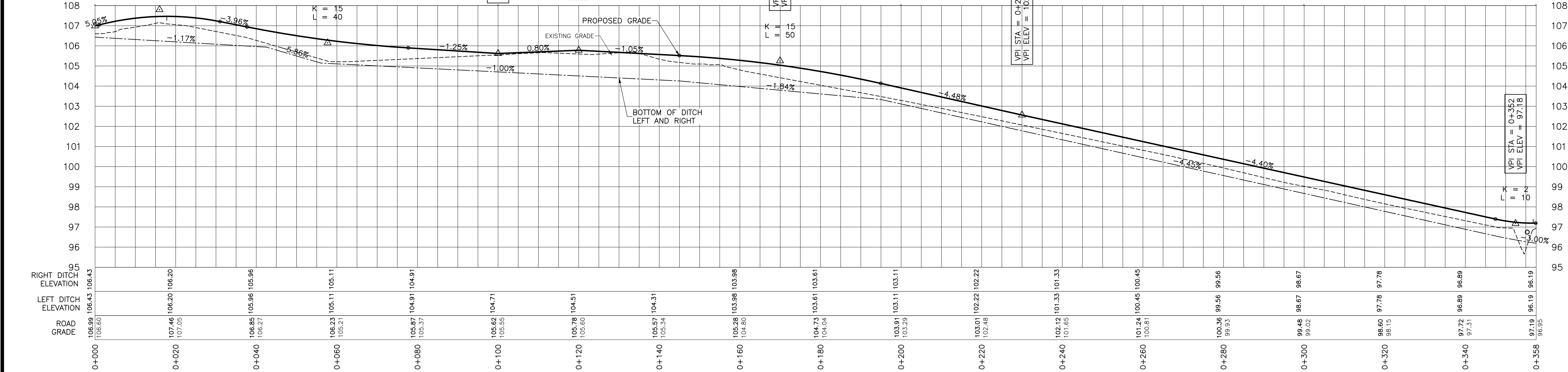
- PAVEMENT MARKING NOTES
- ALL LINES SHALL BE PAINTED YELLOW.
 - ALL LINES SHALL BE 100mm WIDE.
 - PAINT MUST MEET "OPSS 1716 WATER-BORNE TRAFFIC PAINT" SPECIFICATIONS.

LEGEND

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	0	CAJ	2025-12-12	FOR INTERNAL REVIEW
No.	By	Date	Revisions	

Scale	Horizontal: 500	Vertical: 100
Design: BAC	Checked: BAC	Approved: 12108
Date: 2025-06-23	Contract No.	

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Project Title: **HFI PYROTECHNICS INC.**
3322 HANDS RD
RR#3

Drawing Title: **NEW SERVICE ROAD**

Drawing No.: **C3**
Drawing No.: 12108, Civil HFI v4.dwg