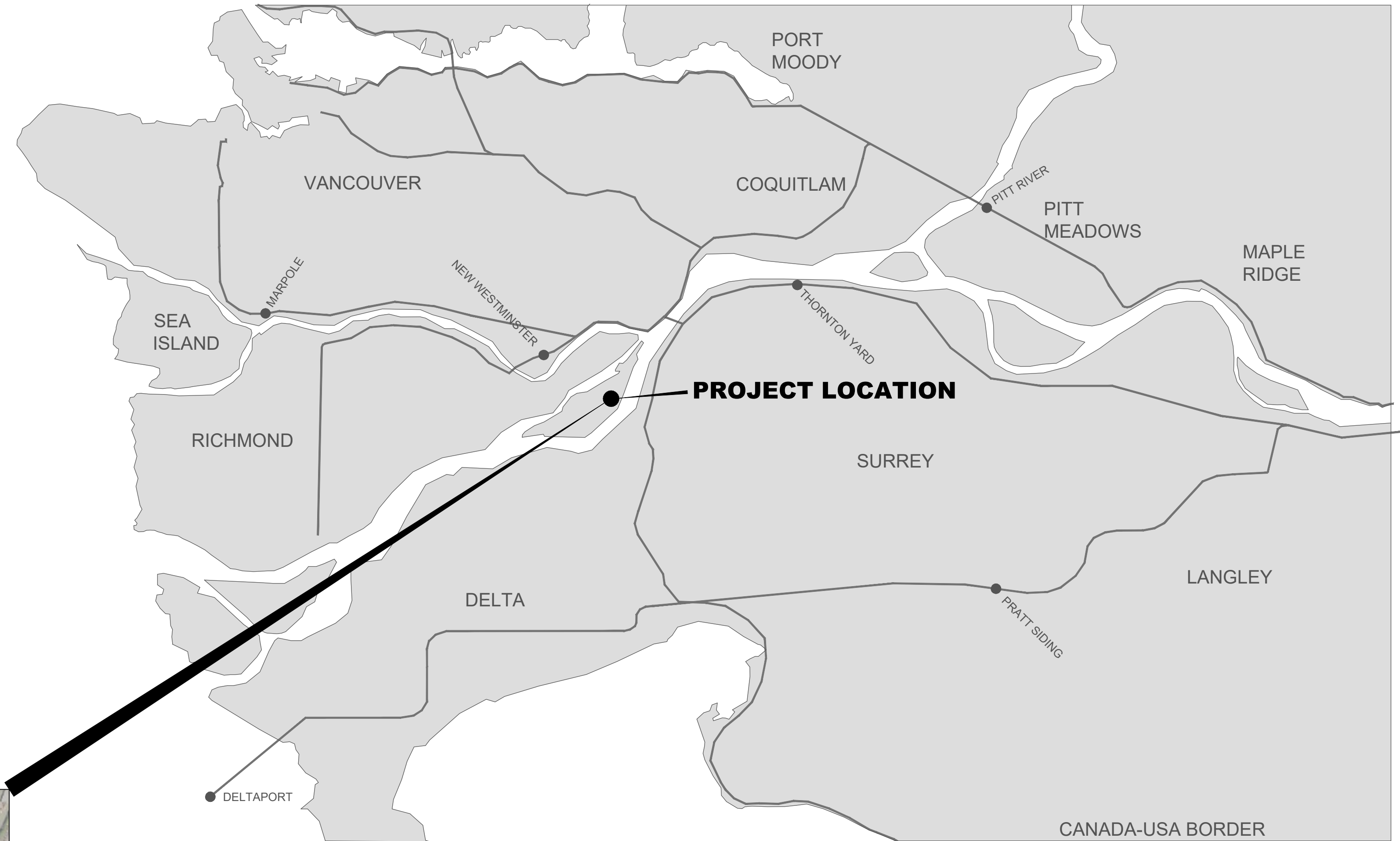


# M M

## MOTT MACDONALD

MOTT MACDONALD  
Suite 1888, Bentall 5  
550 Burrard Street  
Vancouver, BC, V6C 2B5

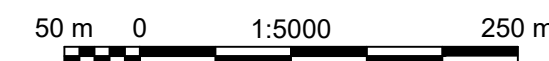
VFPA PROJECT NO. 21-098  
MMD PROJECT NO. 514100592  
ISSUED FOR PERMIT  
DATE: 2023-JUNE-30



SITE LOCATION PLAN  
NOT TO SCALE

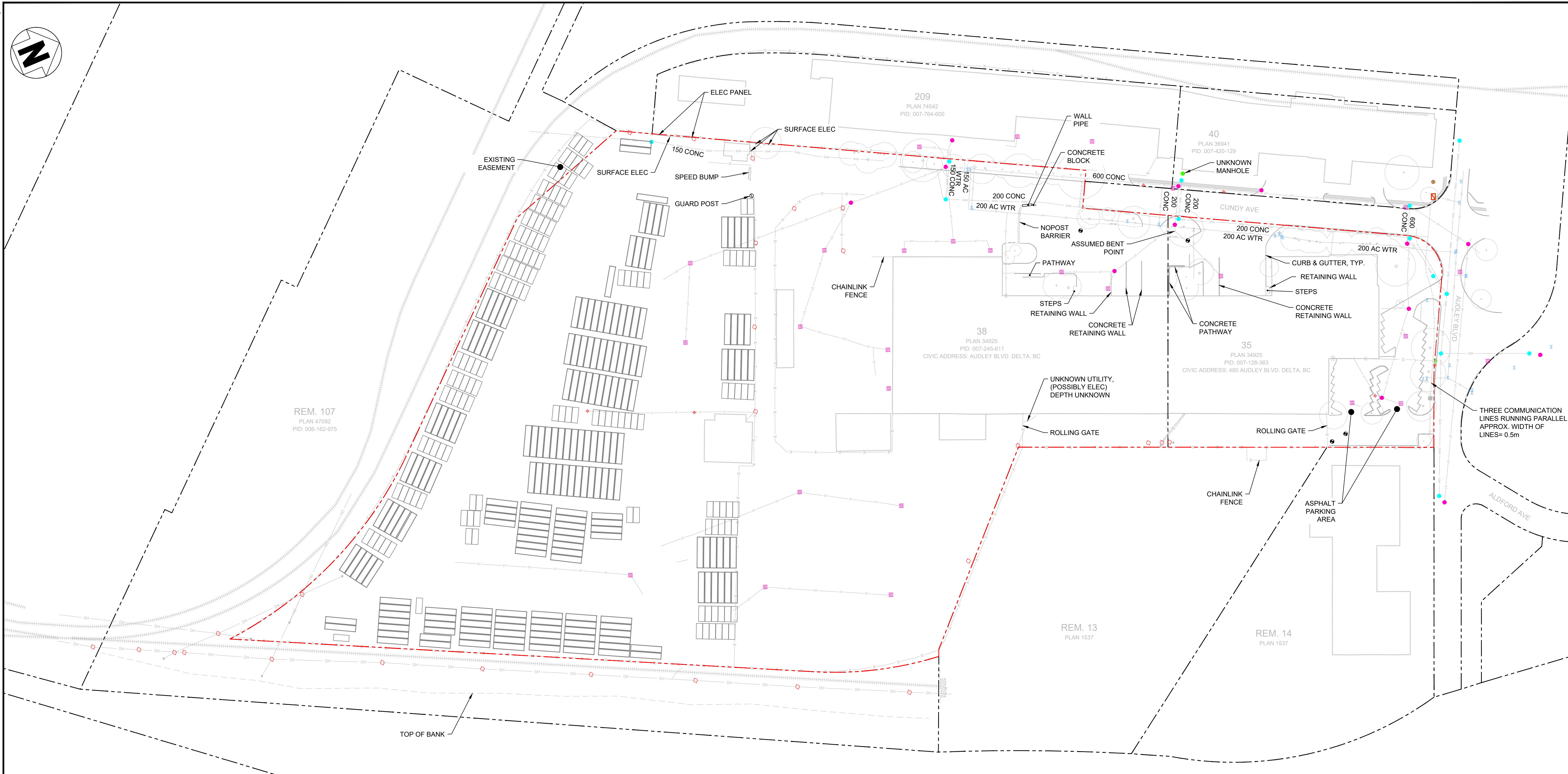
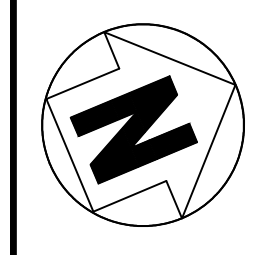


SATELLITE VIEW  
SCALE 1:5000



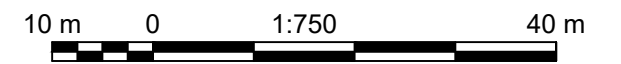
VANCOUVER FRASER PORT AUTHORITY  
300 LOW LEVEL ROAD,  
NORTH VANCOUVER

TITLE BLOCK CLTB.rwg



**FOR PERMITTING**  
**NOT FOR CONSTRUCTION**

- LEGEND:**
- VFPA LEGAL PROPERTY LIMIT
  - PROPERTY LIMIT
  - EX. STORM PIPE
  - EX. ELECTRICAL LINE
  - EX. GAS LINE
  - EX. SANITARY
  - EX. WATER LINE
  - OH
  - EX. FENCE
  - EX. RAILWAY CENTRE LINE
  - EX. COMM LINE
  - EX. OVERHEAD UTILITY
  - EX. GUY WIRE LINE
  - EX. SURFACE ELEC
  - UNKNOWN UTILITY
  - EX. FENCE
  - EX. RAILWAY CENTRE LINE
  - EX. STORM MANHOLE
  - EX. SANITARY MANHOLE
  - EX. TELECOM MANHOLE
  - EX. POWER POLE
  - EX. LAMP STANDARD
  - EX. FIRE HYDRANT
  - EX. CATCH BASIN
  - EX. MONITORING WELL
  - EX. WATER VALVE
  - EX. GAS VALVE
  - EX. GUARD POST
  - EX. GUY WIRE
  - EX. BUILDING
  - EX. SHIPPING CONTAINERS
  - EX. TREE



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Ref. No.	REFERENCE

**MOTT MACDONALD**  
ENGINEERS AND GEOSCIENTISTS BRITISH COLUMBIA  
PERMIT TO PRACTICE NUMBER: 1001591

Suite 1888, Bentall 5  
550 Burrard Street  
Vancouver, BC, V6C 2B5  
Canada  
T 604.681.4400  
W www.mottmac.com

A	2023/01/31	ISSUED FOR PERMIT	KW	AL
No.	Date	REVISION	Dr'n	Ch'd

**PORT of vancouver**  
Vancouver Fraser Port Authority  
ENGINEERING DEPARTMENT

DESIGN BY: A. L.  
DRAWN BY: K. W.  
APPROVED: A. K.  
DATE: 2023-JAN-31  
SCALE: AS SHOWN  
VFP SITE: CNVXXX

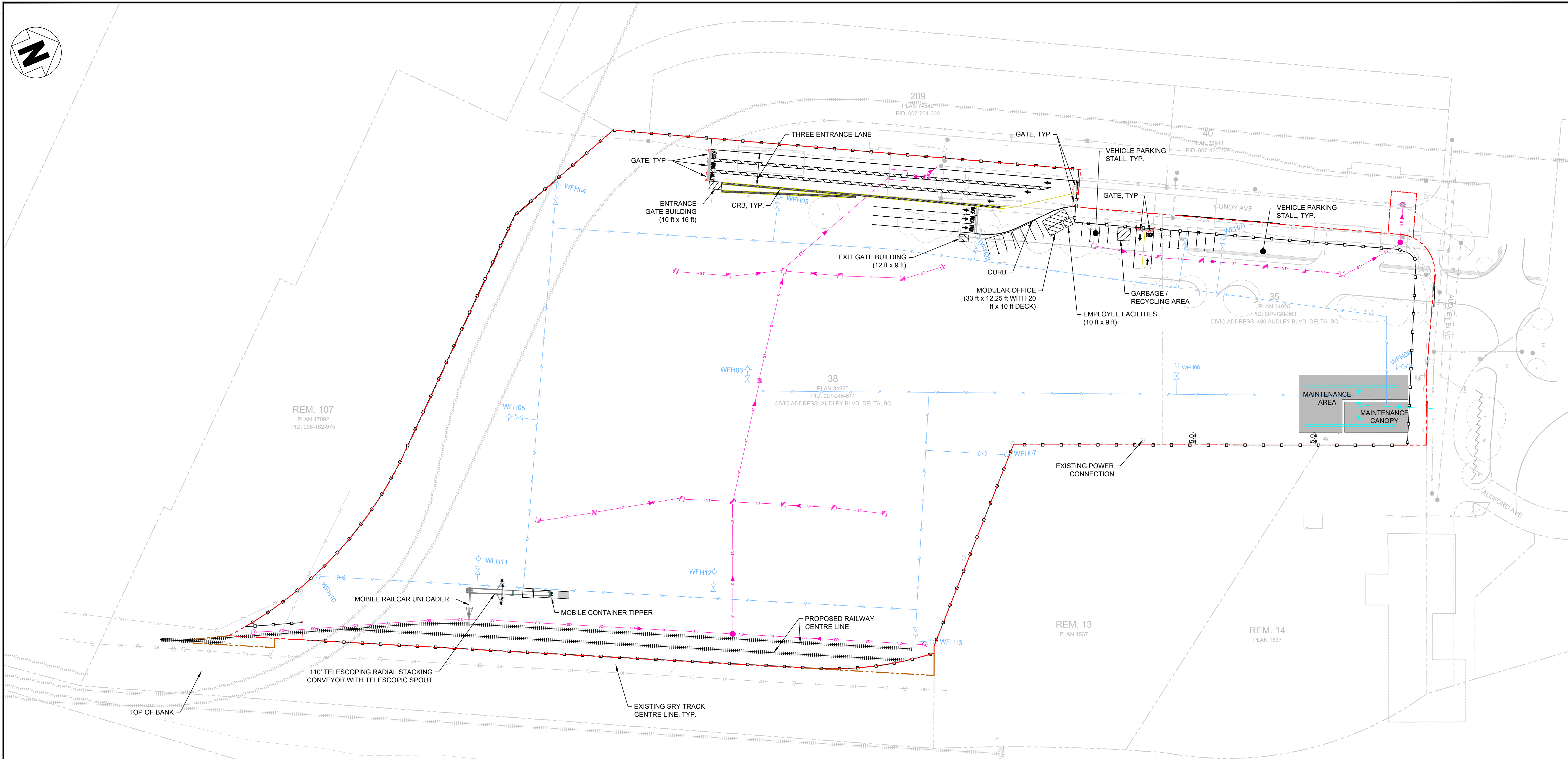
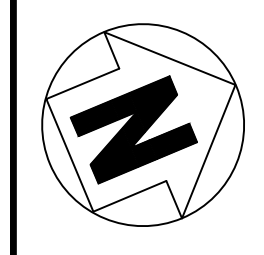
**VANCOUVER FRASER PORT AUTHORITY**  
**TDK METRO TERMINALS EXPANSION**

**SITE PLAN - EXISTING CONDITION**

21-098-GA-001

SIZE	DWG	SHEET	REV
D		1 of 1	A

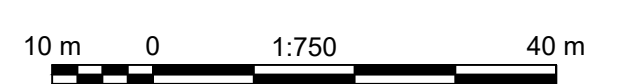
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FOR PERMITTING  
NOT FOR CONSTRUCTION

**LEGEND:**

- PROPOSED WORK LIMIT/ LIMIT OF VFPA JURISDICTION
- .-.- PROPOSED WORK LIMIT/ LIMIT OF DELTA JURISDICTION
- - - - PROPOSED WORK LIMIT/ LIMIT OF SRY LAND JURISDICTION
- o-o- PROPOSED FENCE
- ||||| PROPOSED RAILWAY CENTRE LINE
- PROPOSED STORM PIPE
- PROPOSED SANITARY
- PROPERTY LINE
- PROPOSED WATER LINE
- EX. FENCE
- EX. RAILWAY CENTRE LINE
- PROPOSED STORM MANHOLE
- PROPOSED CATCH BASIN
- ⊕ PROPOSED WATER VALVE
- EX. MONITORING WELL
- PROPOSED SEWER OIL WATER SEPARATOR
- PROPOSED STORM OIL WATER SEPARATOR
- ⬠ PROPOSED FIRE HYDRANT
- PROPOSED CONTAINER AREA
- PROPOSED PAVING AREA
- EX. BUILDING
- EX. TREE



DATE: 2023/06/30 - 2:15pm  
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Ref. No.	REFERENCE


**M MOTT MACDONALD**  
 Suite 1888, Bentall 5  
 550 Burrard Street  
 Vancouver, BC, V6C 2B5  
 Canada  
 T 604.681.4400  
 W www.mottmac.com  
 ENGINEERS AND GEOSCIENTISTS BRITISH COLUMBIA  
 PERMIT TO PRACTICE NUMBER: 1001591  
 514100592-MMD-00-PO-DR-GA-0002

No.	Date	REVISION	Dr'n	Ch'd
C	2023/06/30	ISSUED FOR PERMIT	CA	AL
B	2023/03/10	ISSUED FOR PERMIT	KW	AL
A	2023/01/31	ISSUED FOR PERMIT	KW	AL

**PORT of vancouver**  
**Vancouver Fraser Port Authority**  
 ENGINEERING DEPARTMENT

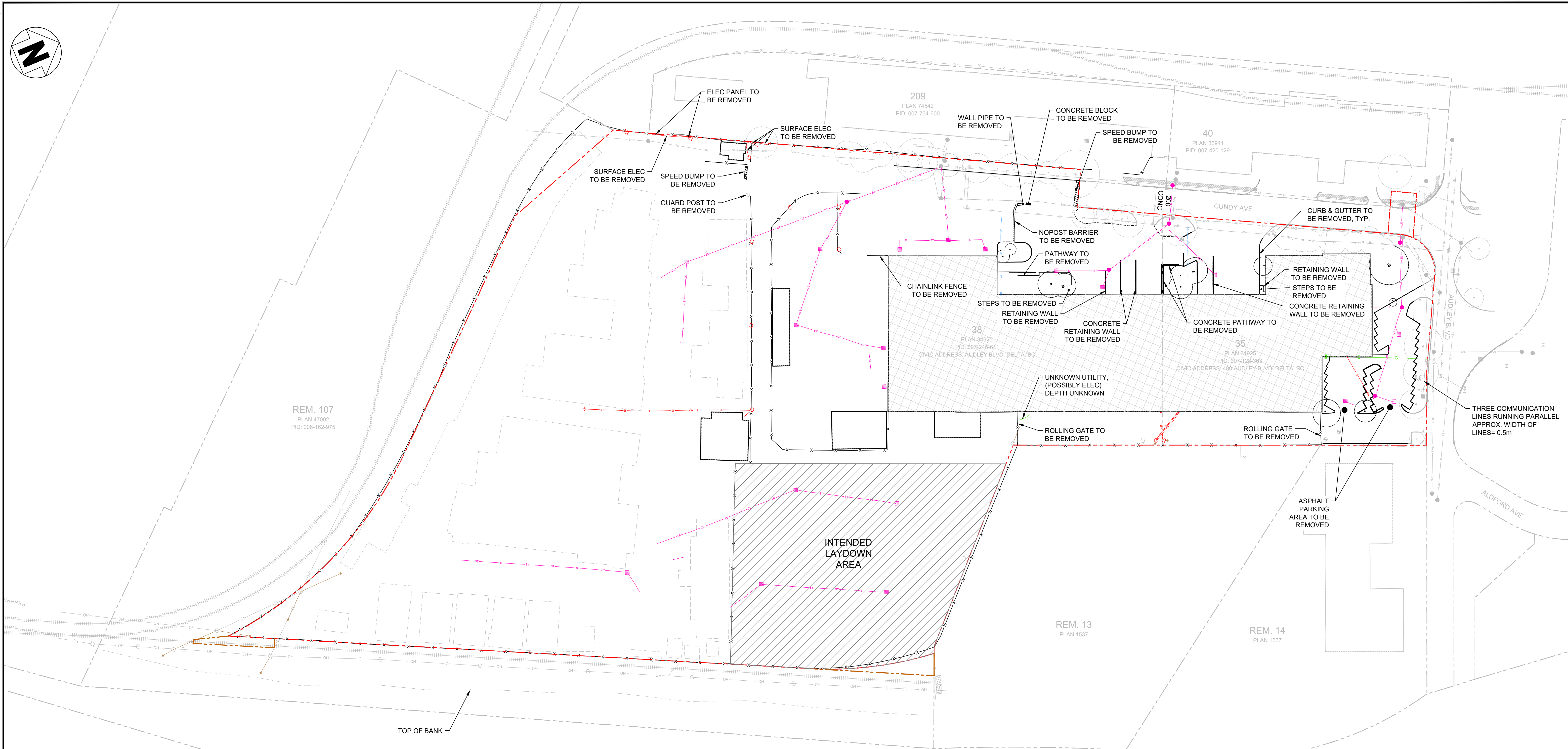
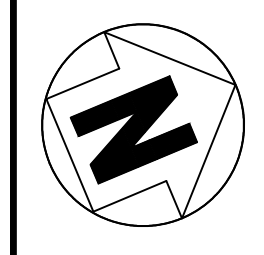
DESIGN BY	A. L.
DRAWN BY	K. W.
APPROVED	A. K.
DATE	2023-JAN-31
SCALE	AS SHOWN
VFPA SITE	CNVXXX

**VANCOUVER FRASER PORT AUTHORITY**  
**TDK METRO TERMINALS EXPANSION**

**PROPOSED SITE PLAN**

SIZE	DWG	21-098-GA-002	SHEET	REV
D			1 of 1	C

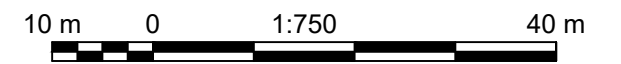
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**FOR PERMITTING**  
**NOT FOR CONSTRUCTION**

LEGEND:

- PROPOSED WORK LIMIT/ LIMIT OF VFPA JURISDICTION
- PROPOSED WORK LIMIT/ LIMIT OF DELTA JURISDICTION
- PROPOSED WORK LIMIT/ LIMIT OF SRY LAND JURISDICTION
- EX. STORM PIPE TO BE REMOVED
- EX. GAS LINE TO BE REMOVED
- EX. WATER LINE TO BE REMOVED
- UNKNOWN UTILITY TO BE REMOVED
- EX. FENCE TO BE REMOVED
- EX. RAILWAY CENTRE LINE
- EX. ELECTRICAL LINE TO BE REMOVED
- EX. STORM MANHOLE TO BE REMOVED
- ⊗ EX. WATER VALVE TO BE REMOVED
- ⊗ EX. GAS VALVE TO BE REMOVED
- EX. MONITORING WELL
- EX. CATCH BASIN TO BE REMOVED
- EX. GUARD POST TO BE REMOVED
- EX. GUY WIRE TO BE REMOVED
- EX. POWER POLE TO BE REMOVED
- ⊗ EX. LAMP STANDARD TO BE REMOVED
- EX. BUILDING TO BE REMOVED
- INTENDED LAYDOWN AREA
- EX. SHIPPING CONTAINERS TO BE REMOVED
- ⊗ EX. TREE TO BE REMOVED



DATE: 2023/01/27 - 9:20am  
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Ref. No.	REFERENCE

**M MOTT MACDONALD**  
 Suite 1888, Bentall 5  
 550 Burrard Street  
 Vancouver, BC, V6C 2B5  
 Canada  
 T 604.681.4400  
 W www.mottmac.com

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No.	Date	REVISION	Dr'n	Ch'd

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**Vancouver Fraser Port Authority**  
 ENGINEERING DEPARTMENT

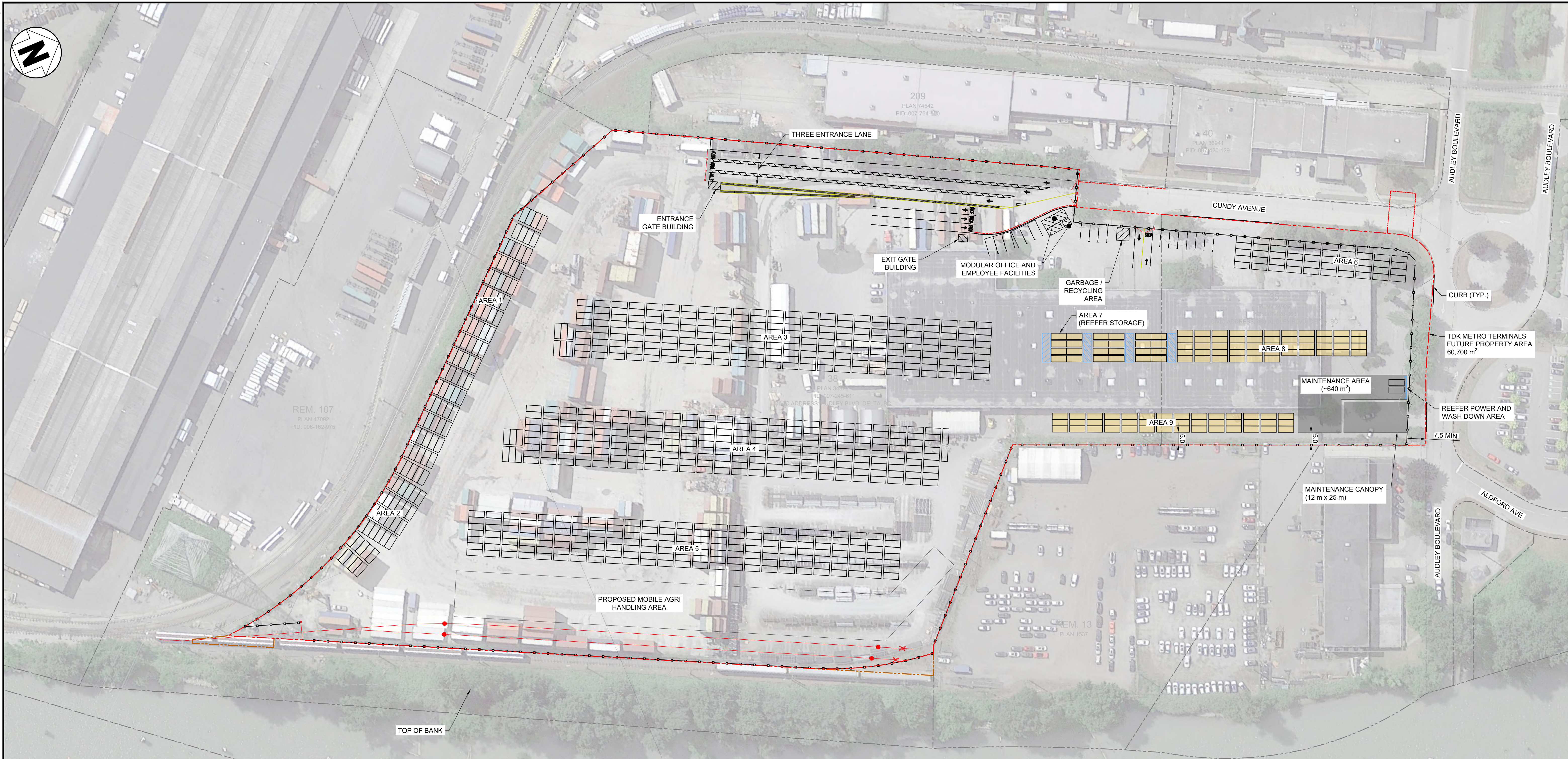
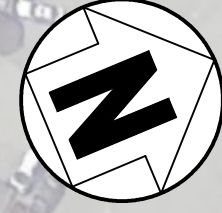
DESIGN BY	A. L.
DRAWN BY	K. W.
APPROVED	A. K.
DATE	2023-JAN-31
SCALE	AS SHOWN
VFPA SITE	CNVXXX

**VANCOUVER FRASER PORT AUTHORITY**  
**TDK METRO TERMINALS EXPANSION**

**DEMOLITION PLAN**

21-098-GA-003

SIZE	DWG	SHEET	REV
D		1 of 1	A



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NOT FOR CONSTRUCTION

**LEGEND:**

- PROPOSED WORK LIMIT/ LIMIT OF VFPA JURISDICTION
- PROPOSED WORK LIMIT/ LIMIT OF DELTA JURISDICTION
- PROPOSED WORK LIMIT/ LIMIT OF SRY LAND JURISDICTION
- PROPERTY LINE
- PROPOSED RAILWAY CENTRE LINE
- EX. FENCE
- EX. RAILWAY CENTRE LINE
- 4 STACK HIGH TEU CONTAINER
- 6 STACK HIGH TEU CONTAINER
- DIRECTION OF TRUCK TRAFFIC
- EX. TREE

10 m 0 1:750 40 m

Ref. No.	REFERENCE
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**M**  
**MOTT**  
**MACDONALD**

ENGINEERS AND GEOSCIENTISTS BRITISH COLUMBIA  
PERMIT TO PRACTICE NUMBER: 1001591

514100592-MMD-00-P0-DR-GA-0004

Suite 1888, Bentall 5  
550 Burrard Street  
Vancouver, BC, V6C 2B5  
Canada  
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B	2023/06/30	ISSUED FOR PERMIT	CA	AL
A	2023/01/31	ISSUED FOR PERMIT	CA	AL
No.	Date	REVISION	Dr'n	Ch'd

**PORT of vancouver**

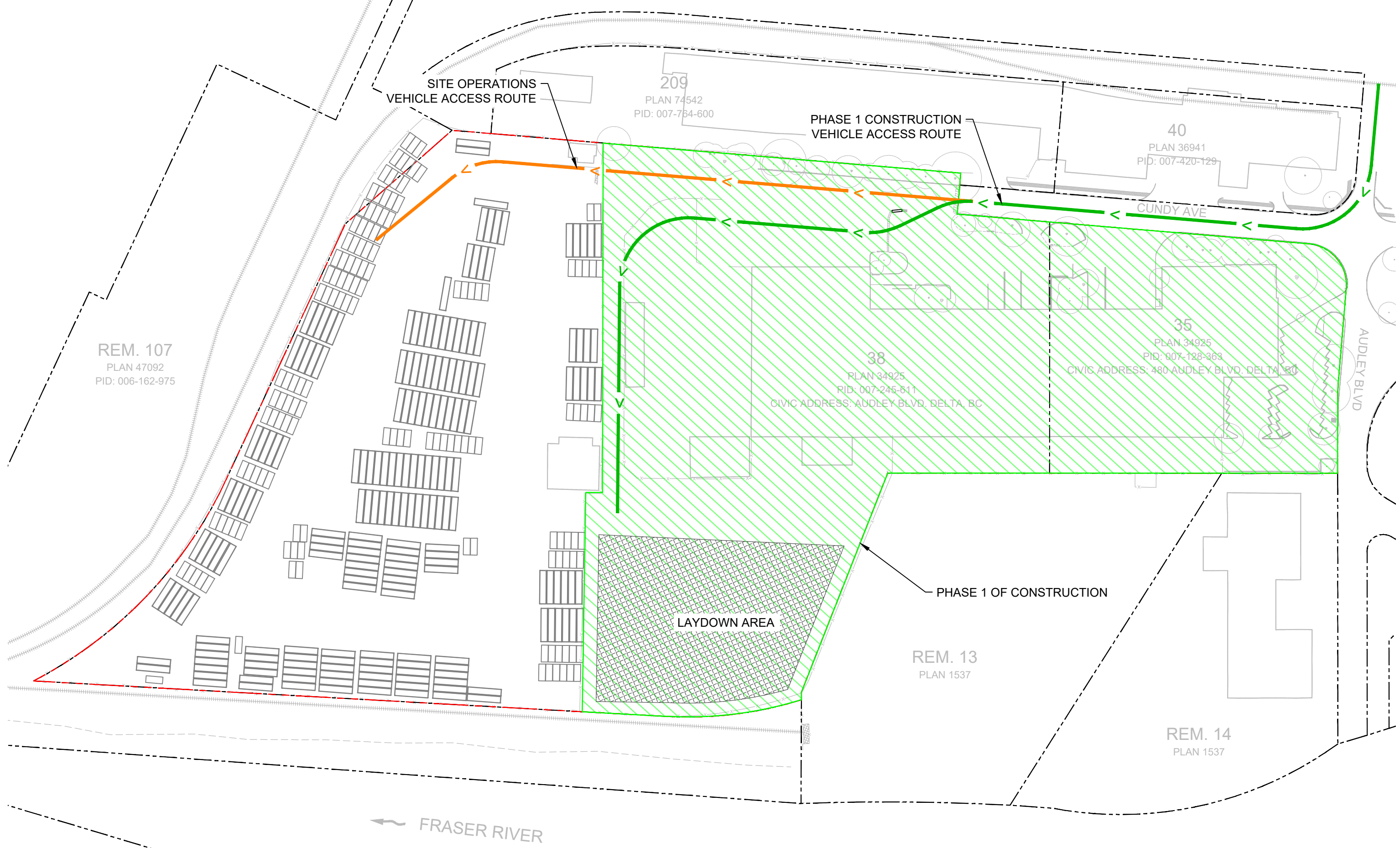
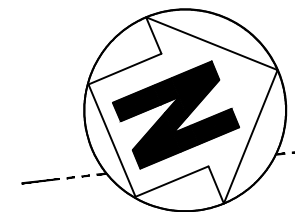
Vancouver Fraser Port Authority

ENGINEERING DEPARTMENT

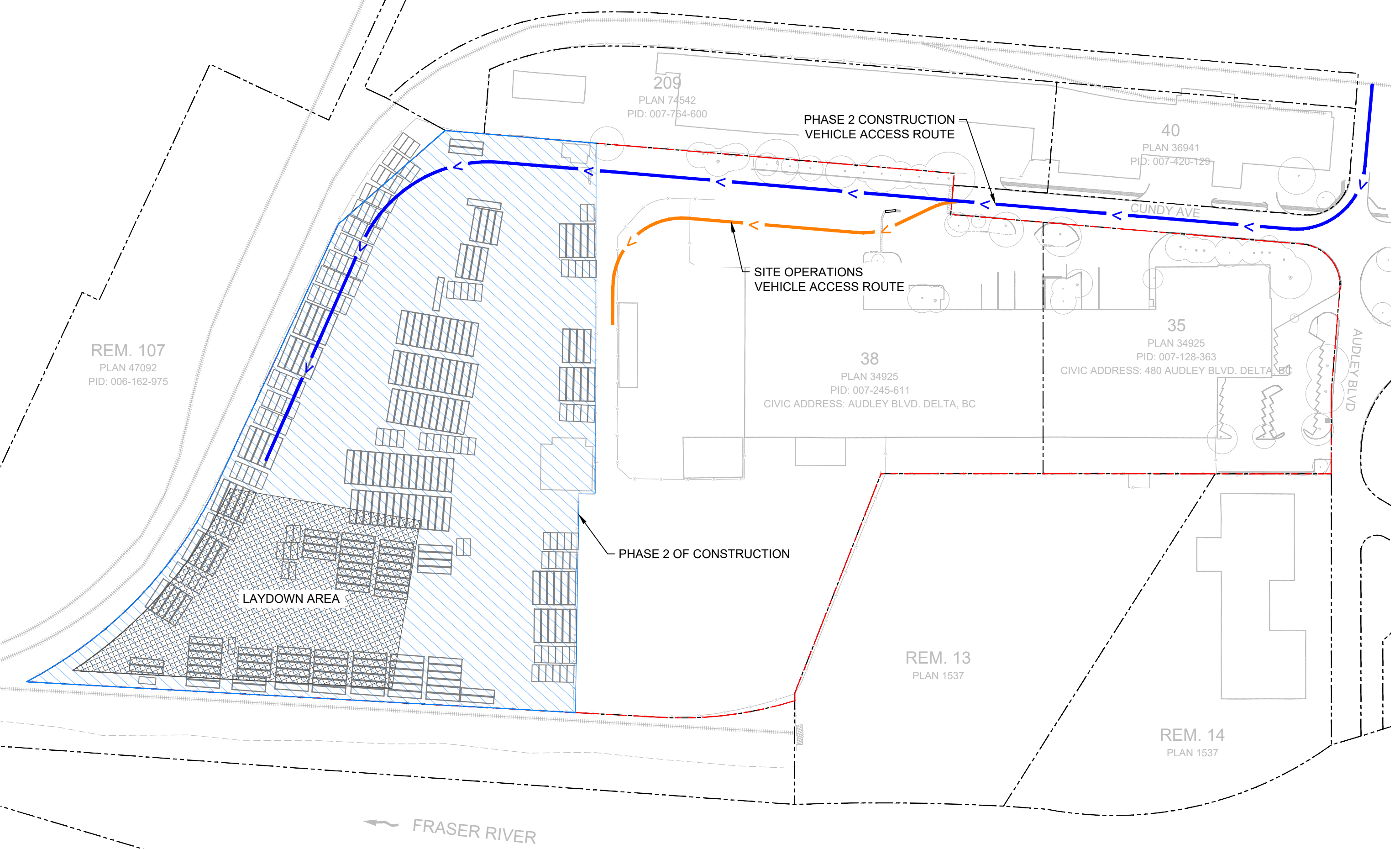
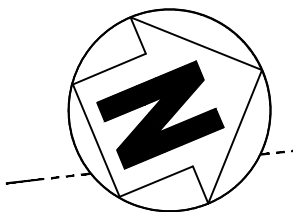
DESIGN BY	C. A.
DRAWN BY	C. A.
APPROVED	A. K.
DATE	2023-JAN-31
SCALE	AS SHOWN
VFPA SITE	CVVXXX

<b>VANCOUVER FRASER PORT AUTHORITY</b>				
<b>TDK METRO TERMINALS EXPANSION</b>				
<b>PROPOSED CONTAINER ARRANGEMENT</b>				
SIZE	DWG	<b>21-098-GA-004</b>	SHEET	REV
D			1 of 1	B

TITLE BLOCK CLTB.rwg



PHASE 1 OF CONSTRUCTION

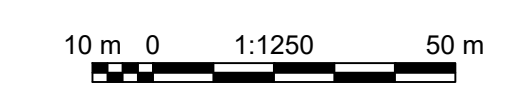


PHASE 2 OF CONSTRUCTION

FOR PERMITTING

NOT FOR CONSTRUCTION

- LEGEND:
- VFPA LEGAL PROPERTY LIMIT
  - - - PROPERTY LIMIT
  - - - - - EX. RAILWAY CENTRE LINE
  - EX. SHIPPING CONTAINERS
  - < PHASE 1 CONSTRUCTION VEHICLE ACCESS ROUTE
  - < PHASE 2 CONSTRUCTION VEHICLE ACCESS ROUTE
  - < SITE OPERATIONS VEHICLE ACCESS ROUTE



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Ref. No.	REFERENCE


**M MOTT MACDONALD**  
 Suite 1888, Bentall 5  
 550 Burrard Street  
 Vancouver, BC, V6C 2B5  
 Canada  
 T 604.681.4400  
 W www.mottmac.com

ENGINEERS AND GEOSCIENTISTS BRITISH COLUMBIA  
 PERMIT TO PRACTICE NUMBER: 1001591

514100592-MMD-00-PO-DR-GA-0005

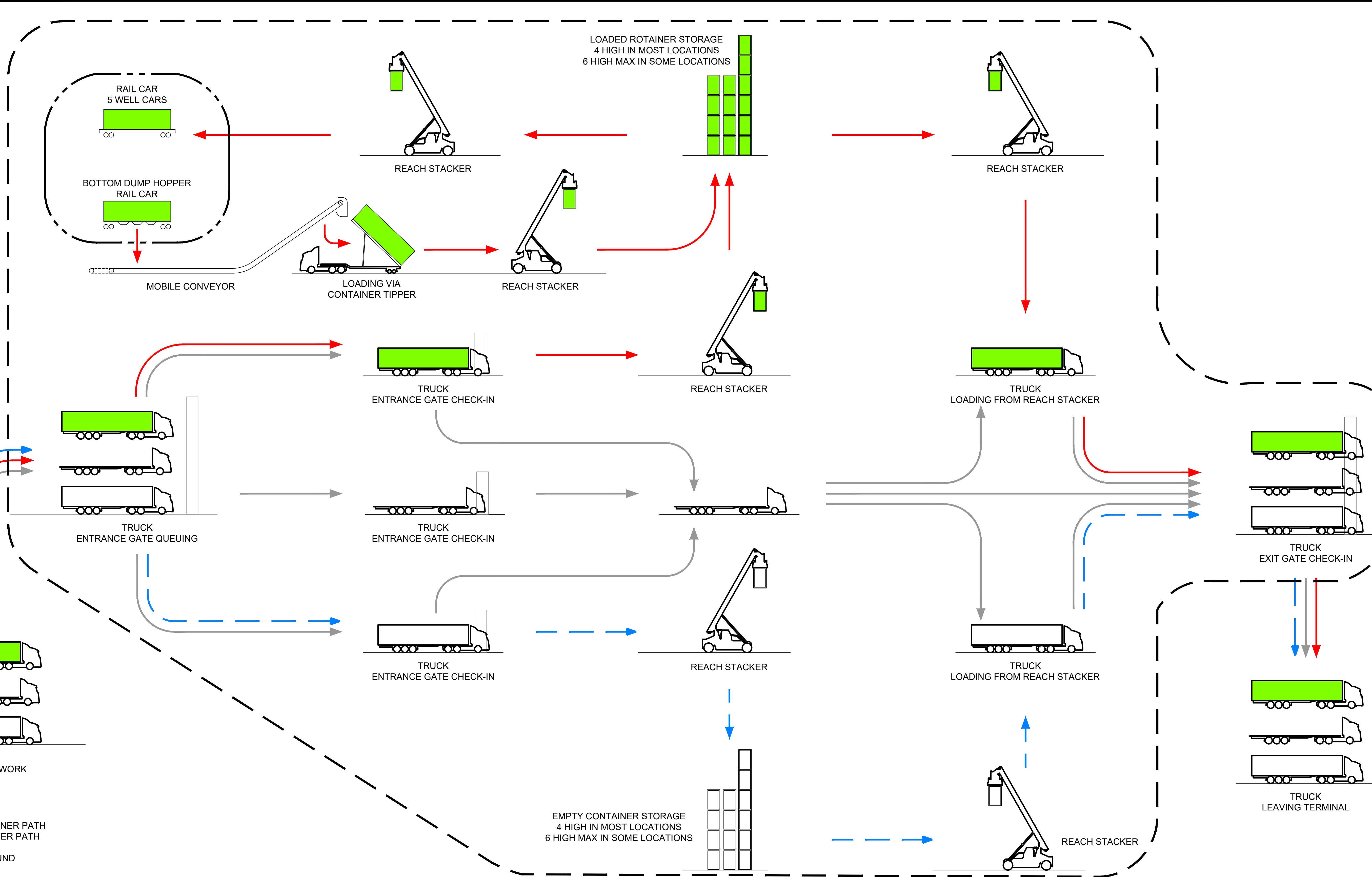
No.	Date	REVISION	Dr'n	Ch'd
A	2023/03/10	ISSUED FOR PERMIT	CA	AW

**PORT of vancouver**  
 Vancouver Fraser Port Authority  
 ENGINEERING DEPARTMENT

DESIGN BY	A. L.
DRAWN BY	C. A.
APPROVED	A. W.
DATE	2023-MAR-10
SCALE	AS SHOWN
VFPA SITE	CNVXXX

**VANCOUVER FRASER PORT AUTHORITY**  
**TDK METRO TERMINALS EXPANSION**  
**TDK CONSTRUCTION PHASING**  
**VEHICLE ACCESS & LAYDOWN AREAS**

SIZE	DWG	21-098-GA-005	SHEET	REV
D			1 of 1	A



- LOADED CONTAINER PATH
- EMPTY CONTAINER PATH
- TRUCK PATH
- TERMINAL GROUND
- RAIL YARD

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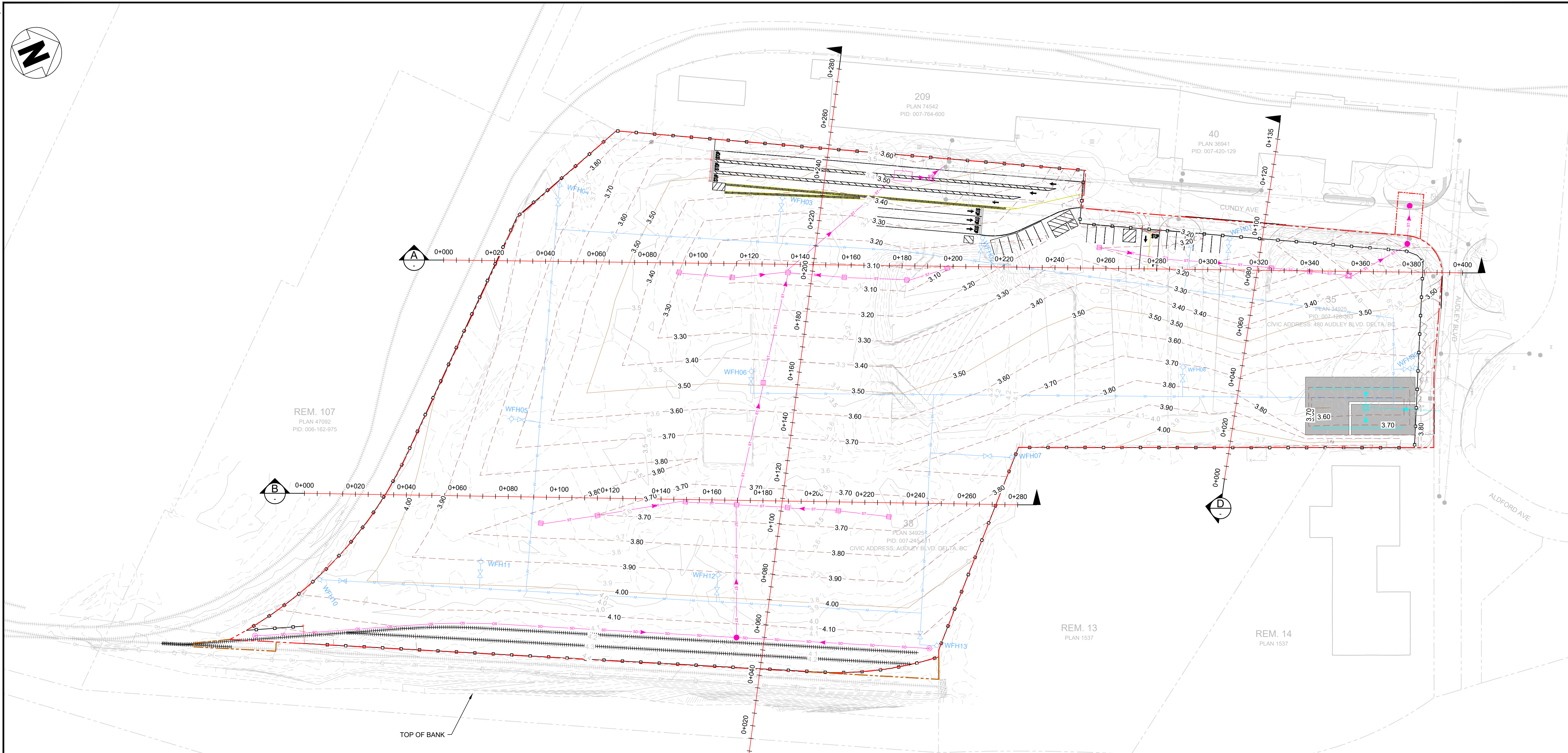
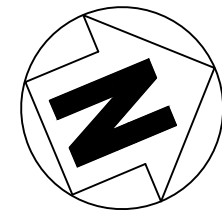
**MOTT MACDONALD**  
ENGINEERS AND GEOSCIENTISTS BRITISH COLUMBIA  
PERMIT TO PRACTICE NUMBER: 1001591  
514100592-MMD-00-PO-DR-RW-0001

Suite 1888, Bentall 5 550 Burrard Street Vancouver, BC, V6C 2B5 Canada T 604.681.4400 W www.mottmac.com				
B	2023/03/14	ISSUED FOR DISCUSSION	HK	SR
A	2022/10/11	ISSUED FOR DISCUSSION	HK	SR
No.	Date	REVISION	Dr'n	Ch'd

**PORT of vancouver**  
Vancouver Fraser Port Authority  
ENGINEERING DEPARTMENT

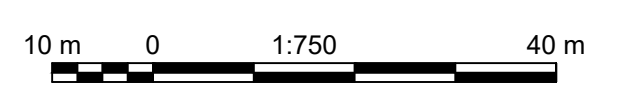
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DRAWN BY	C. A.
APPROVED	A. W.
DATE	2023-JAN-31
SCALE	AS SHOWN
VFPA SITE	CNVXXX

<b>VANCOUVER FRASER PORT AUTHORITY</b>	
<b>TDK METRO TERMINALS EXPANSION</b>	
<b>FLOW DIAGRAM</b>	
SIZE	DWG.
<b>D</b>	<b>21-098-GA-006</b>
SHEET	REV
<b>1 of 1</b>	<b>B</b>



FOR PERMITTING  
NOT FOR CONSTRUCTION

- LEGEND:**
- PROPOSED WORK LIMIT/ LIMIT OF VFPA JURISDICTION
  - PROPOSED WORK LIMIT/ LIMIT OF DELTA JURISDICTION
  - PROPOSED WORK LIMIT/ LIMIT OF SRY LAND JURISDICTION
  - PROPOSED STORM PIPE
  - PROPOSED SANITARY
  - PROPOSED WATER LINE
  - PROPOSED FENCE
  - PROPOSED RAILWAY CENTRE LINE
  - EX. COMM LINE
  - EX. OVERHEAD UTILITY
  - EX. FENCE
  - EX. RAILWAY CENTRE LINE
  - PROPOSED MAJOR CONTOUR (0.5m INTERVAL)
  - PROPOSED MINOR CONTOUR (0.1m INTERVAL)
  - EX. MAJOR CONTOUR (0.5m INTERVAL)
  - EX. MINOR MAJOR (0.1m INTERVAL)
  - PROPOSED STORM MANHOLE
  - PROPOSED CATCH BASIN
  - ⊗ PROPOSED WATER VALVE
  - EX. MONITORING WELL
  - PROPOSED SEWER OIL WATER SEPARATOR
  - PROPOSED STORM OIL WATER SEPARATOR
  - PROPOSED CONTAINER AREA
  - PROPOSED PAVING AREA



Ref. No.	REFERENCE

M M

MOTT  
MACDONALD

ENGINEERS AND GEOSCIENTISTS BRITISH COLUMBIA  
PERMIT TO PRACTICE NUMBER: 1001591

Suite 1888, Bentall 5  
550 Burrard Street  
Vancouver, BC, V6C 2B5  
Canada  
T 604.681.4400  
W www.mottmac.com

B	2023/06/30	ISSUED FOR PERMIT	CA	AL
A	2023/01/31	ISSUED FOR PERMIT	KW	AL
No.	Date	REVISION	Dr'n	Ch'd

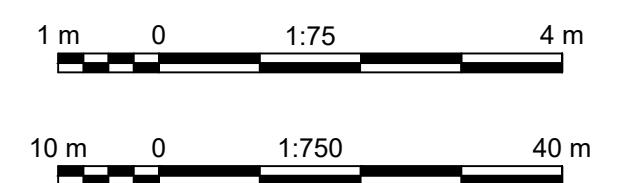
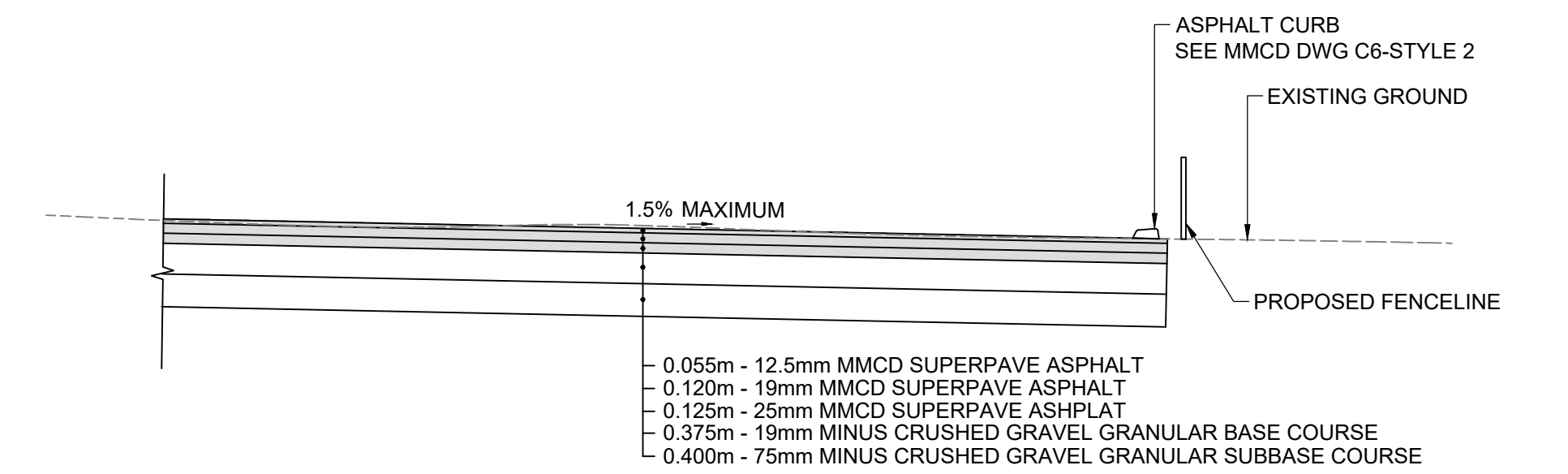
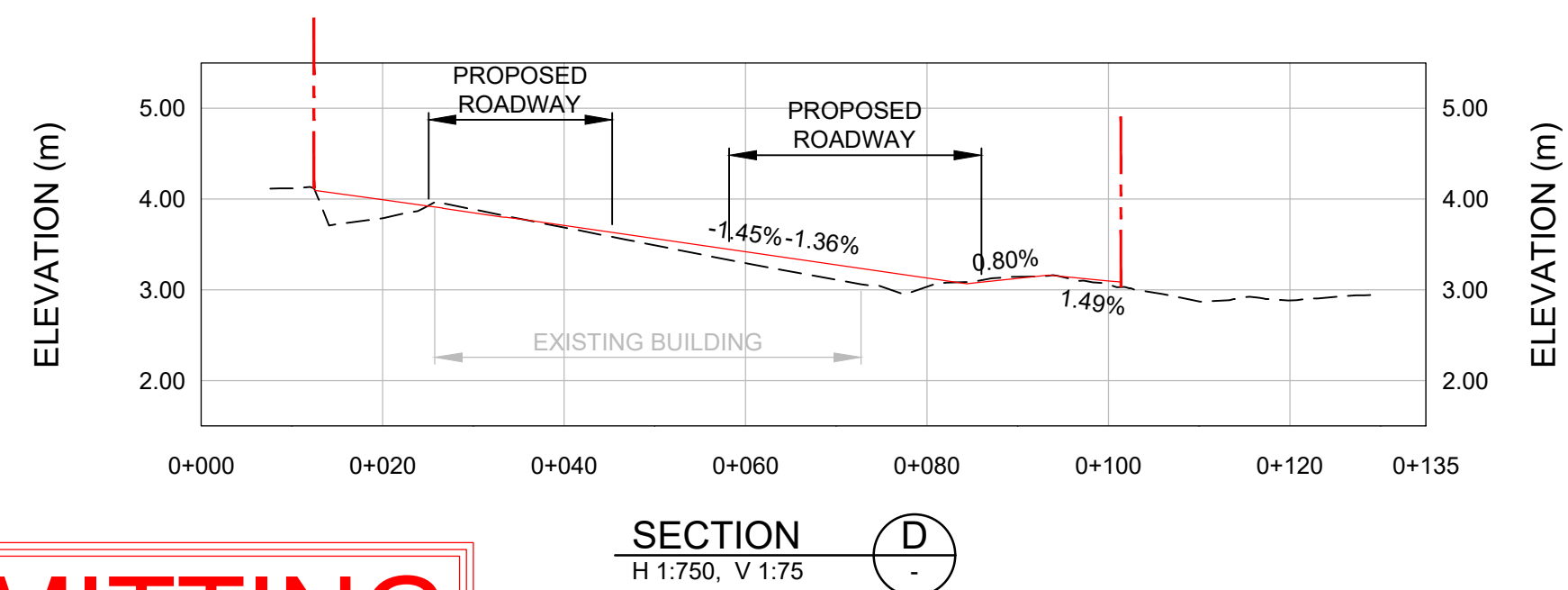
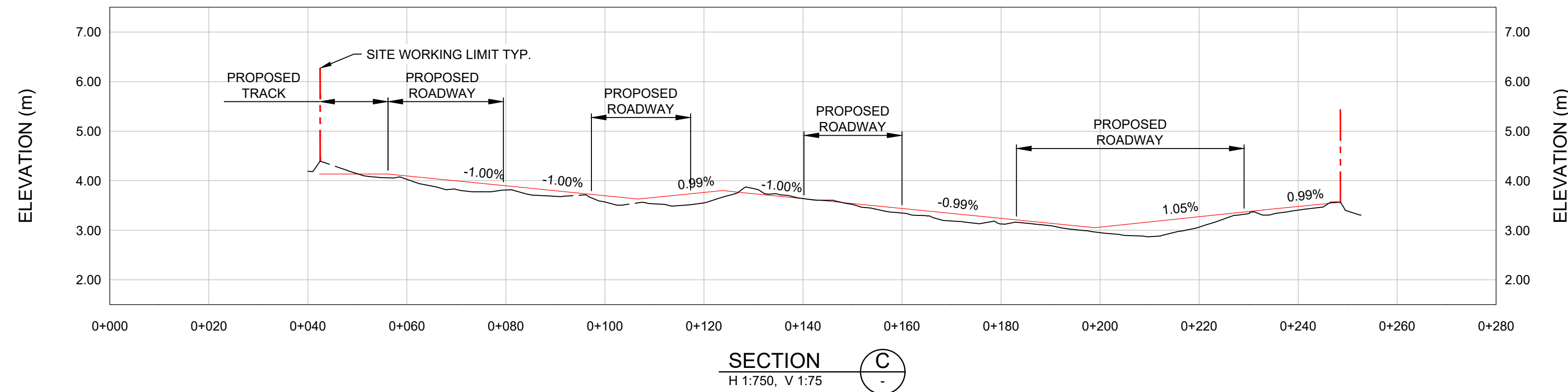
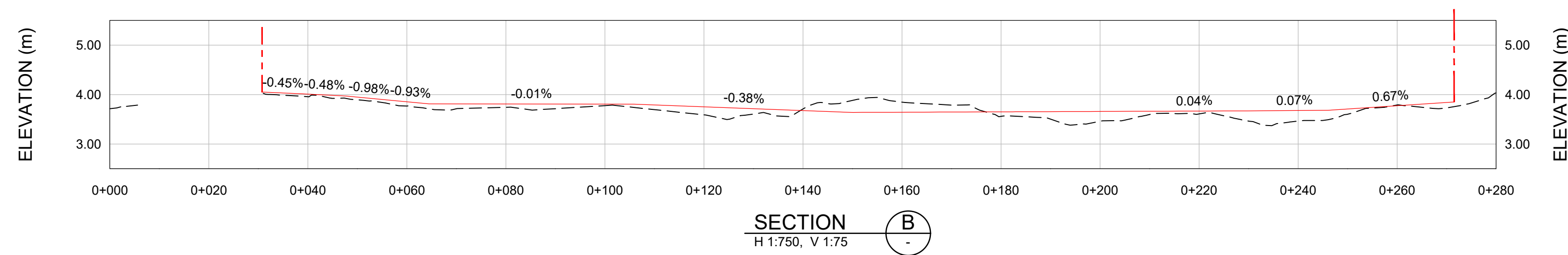
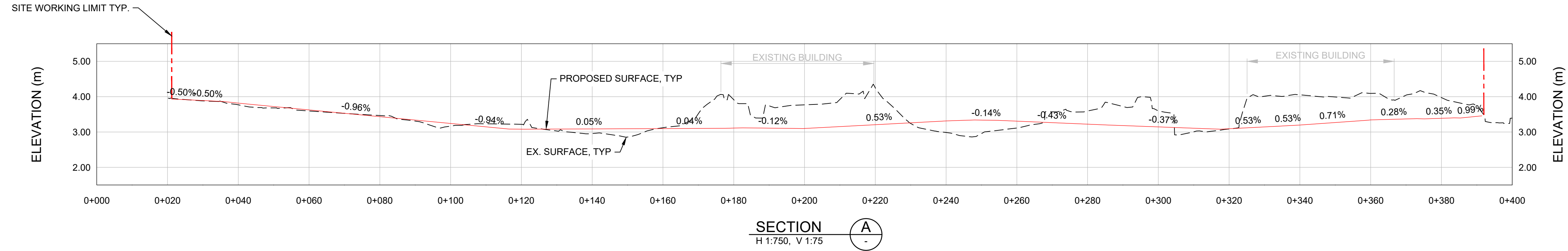
PORT of  
vancouver

Vancouver Fraser  
Port Authority

DESIGN BY A. L.	DRAWN BY K. W.
APPROVED A. K.	DATE 2023-JAN-31
SCALE AS SHOWN	
VFPA SITE CNVXXX	

VANCOUVER FRASER PORT AUTHORITY TDK METRO TERMINALS EXPANSION	
GRADING PLAN	
DWG 21-098-CI-001	SHEET 1 of 1
REV B	REV B





**FOR PERMITTING**  
**NOT FOR CONSTRUCTION**

Ref. No.	REFERENCE

**M MOTT MACDONALD**  
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PERMIT TO PRACTICE NUMBER: 1001591  
514100592-MMD-00-PO-DR-CV-0002

No.	Date	REVISION	Dr'n	Ch'd
A	2023/01/31	ISSUED FOR PERMIT	KW	AL

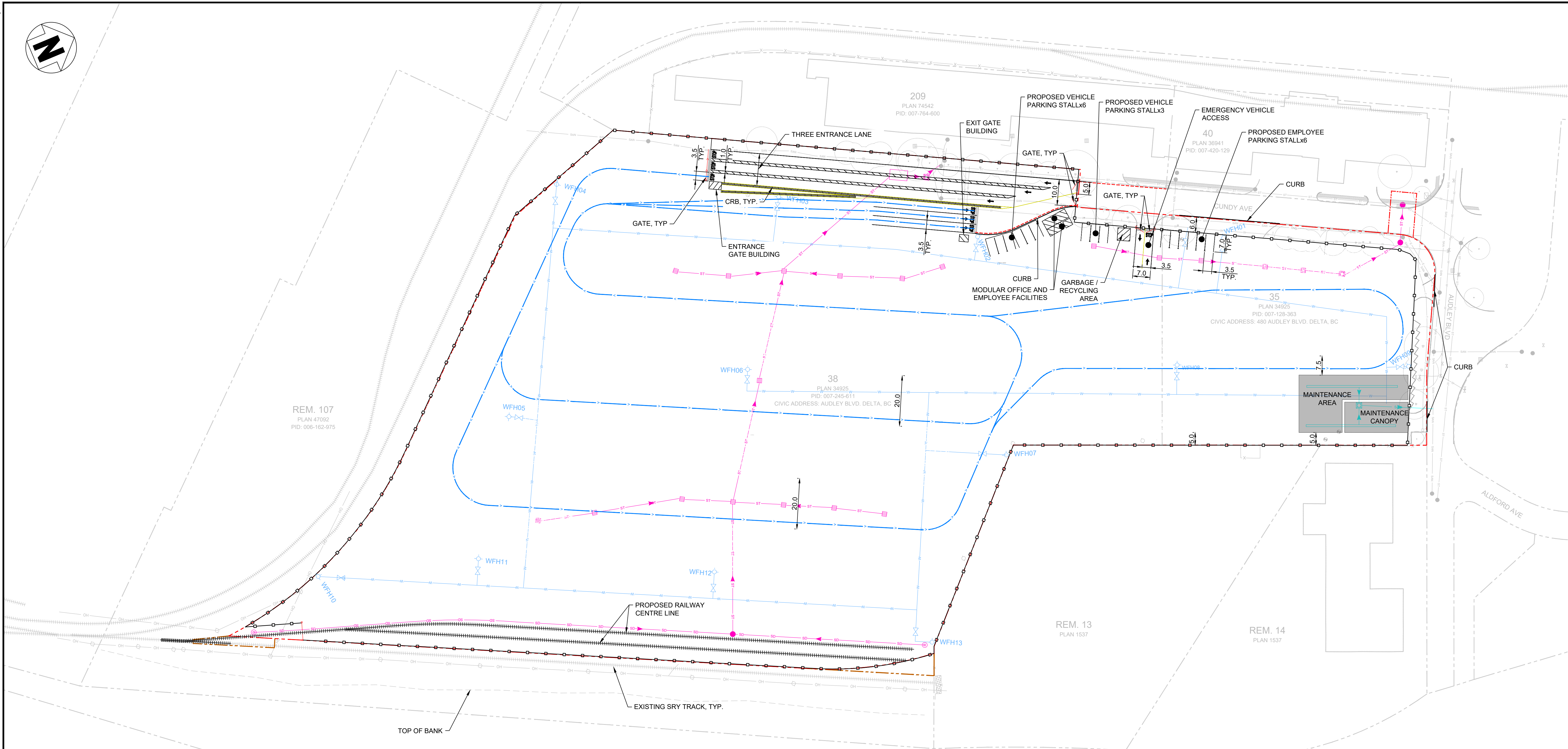
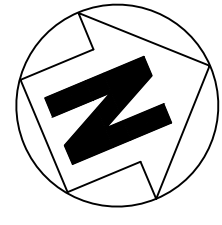
**PORT of vancouver**  
Vancouver Fraser Port Authority  
ENGINEERING DEPARTMENT

DESIGN BY	A. L.
DRAWN BY	K. W.
APPROVED	A. K.
DATE	2023-JAN-31
SCALE	AS SHOWN
VFPA SITE	CNVXXX

VANCOUVER FRASER PORT AUTHORITY TDK METRO TERMINALS EXPANSION		GRADING SECTIONS	
		SIZE DWG	SHEET
21-098-CI-002		1 of 1	REV A

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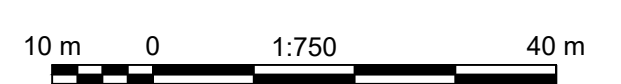
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**FOR PERMITTING**  
**NOT FOR CONSTRUCTION**

LEGEND:

- PROPOSED WORK LIMIT/ LIMIT OF VFPA JURISDICTION
- PROPOSED WORK LIMIT/ LIMIT OF DELTA JURISDICTION
- PROPOSED WORK LIMIT/ LIMIT OF SRY LAND JURISDICTION
- PROPOSED FENCE
- PROPOSED RAILWAY CENTRE LINE
- PROPOSED TRUCK MOVEMENT DIRECTION
- PROPOSED STORM PIPE
- PROPOSED SANITARY
- PROPOSED WATER LINE
- EX. FENCE
- EX. RAILWAY CENTRE LINE
- PROPOSED STORM MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED WATER VALVE
- EX. MONITORING WELL
- PROPOSED SEWER OIL WATER SEPARATOR
- PROPOSED STORM OIL WATER SEPARATOR
- PROPOSED FIRE HYDRANT
- PROPOSED CONTAINER AREA
- PROPOSED PAVING AREA
- EX. BUILDING
- EX. TREE



DATE: 2023/06/30 - 2:35pm  
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Ref. No.	REFERENCE

**M MOTT MACDONALD**  
ENGINEERS AND GEOSCIENTISTS BRITISH COLUMBIA  
PERMIT TO PRACTICE NUMBER: 1001591  
514100592-MMD-00-PO-DR-CV-0003

Suite 1888, Bentall 5  
550 Burrard Street  
Vancouver, BC, V6C 2B5  
Canada  
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B	2023/06/30	ISSUED FOR PERMIT	CA	AL
A	2023/01/31	ISSUED FOR PERMIT	KW	AL
No.	Date	REVISION	Dr'n	Ch'd

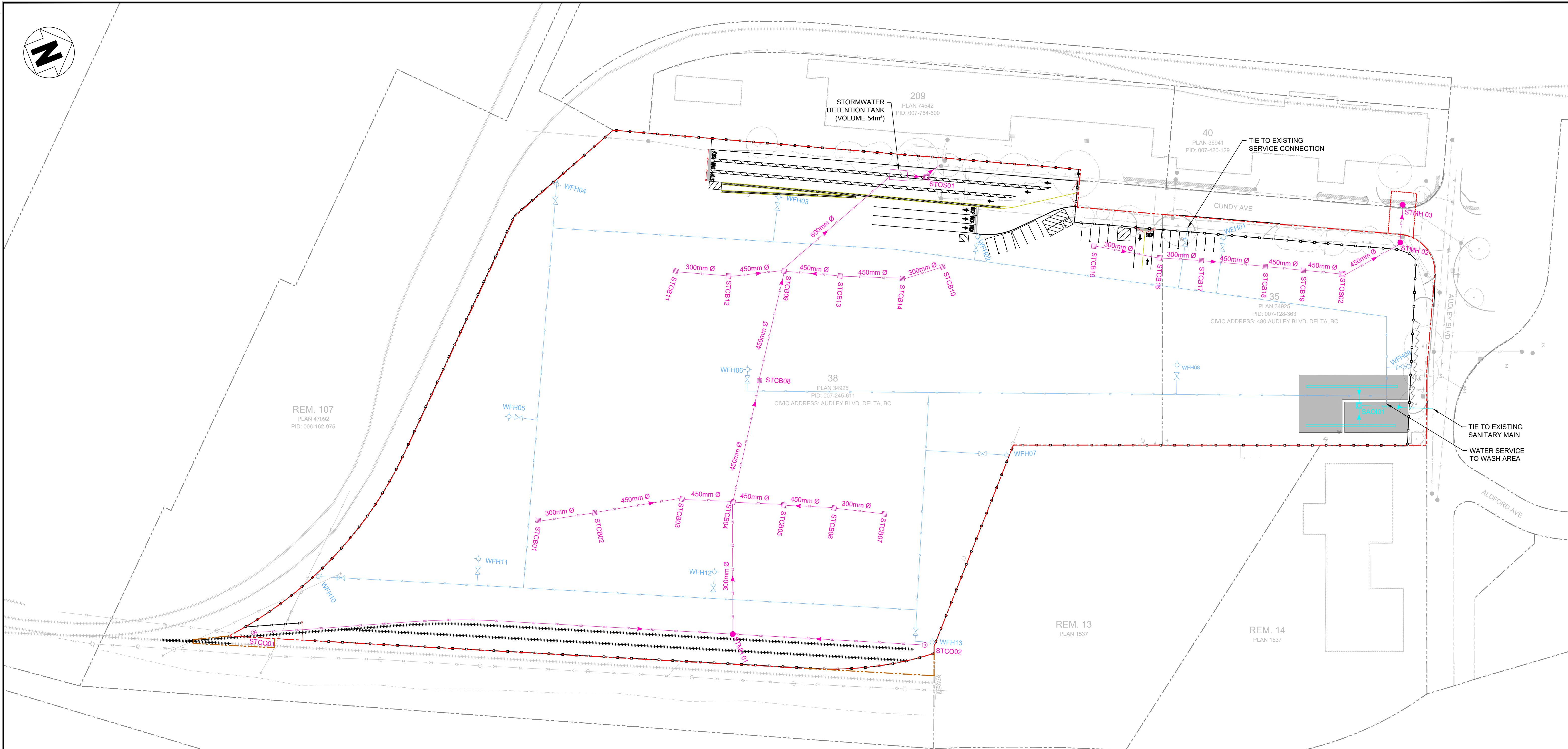
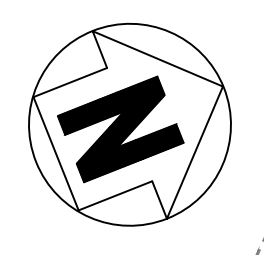
**PORT of vancouver**  
**Vancouver Fraser Port Authority**  
ENGINEERING DEPARTMENT

DESIGN BY: A. L.  
DRAWN BY: K. W.  
APPROVED: A. K.  
DATE: 2023-JAN-31  
SCALE: AS SHOWN  
VFPA SITE: CNVXXX

**VANCOUVER FRASER PORT AUTHORITY**  
**TDK METRO TERMINALS EXPANSION**  
**PROPOSED PARKING AND ACCESS PLAN**

SIZE	DWG	21-098-CI-003	SHEET	REV
D			1 of 1	B

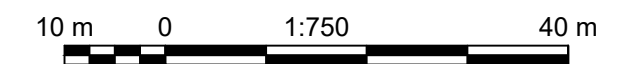
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**FOR PERMITTING**  
**NOT FOR CONSTRUCTION**

LEGEND:

- PROPOSED WORK LIMIT/ LIMIT OF VFPA JURISDICTION
- PROPOSED WORK LIMIT/ LIMIT OF DELTA JURISDICTION
- PROPOSED WORK LIMIT/ LIMIT OF SRY LAND JURISDICTION
- PROPOSED TRACK
- PROPOSED FENCELINE
- PROPOSED STORM PIPE
- PROPOSED STORM SUBDRAIN PIPE
- PROPOSED ELECTRICAL LINE DUCT BANK (BY OTHERS)
- PROPOSED SANITARY DUCT BANK
- PROPOSED WATER MAIN/ WATER MAIN DUCT BANK
- EX. STORM PIPE
- EX. ELECTRICAL LINE
- EX. GAS LINE
- EX. SANITARY
- EX. WATER LINE
- EX. FENCE
- STORM FLOW DIRECTION
- PROPOSED MANHOLE
- PROPOSED OIL GRIT SEPARATOR
- CLEAN OUT
- PROPOSED FIRE HYDRANT
- PROPOSED WATER VALVE
- PROPOSED SEWER OIL WATER SEPARATOR
- EX. POWER POLE
- EX. UTILITY BOX
- EX. LAMP STANDARD
- EX. SIGN POST
- ⊗ EX. VALVE
- ⊗ EX. FIRE HYDRANT
- ⊗ EX. CATCH BASIN
- EX. MANHOLE



DATE: 2023/06/30 - 2:47pm  
PATH: C:\pwworking\mottmac\autocad\100163238\1514100592-MMD-00-PO-DR-UT-0001.dwg

Ref. No.	REFERENCE

**M MOTT MACDONALD**  
ENGINEERS AND GEOSCIENTISTS BRITISH COLUMBIA  
PERMIT TO PRACTICE NUMBER: 1001591  
514100592-MMD-00-PO-DR-UT-0001

Suite 1888, Bentall 5  
550 Burrard Street  
Vancouver, BC, V6C 2B5  
Canada  
T 604.681.4400  
W www.mottmac.com

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No.	Date	REVISION	Dr'n	Ch'd

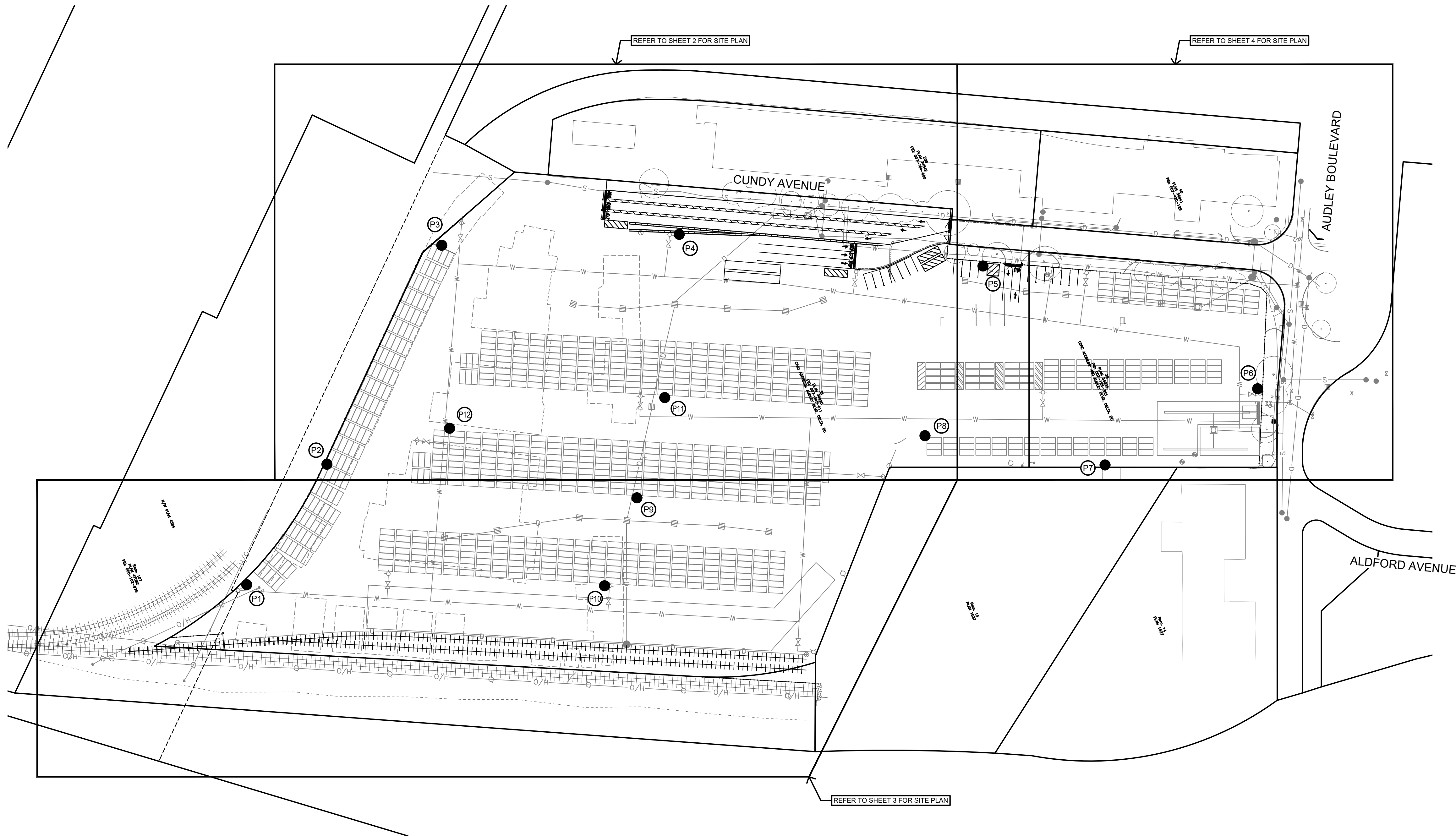
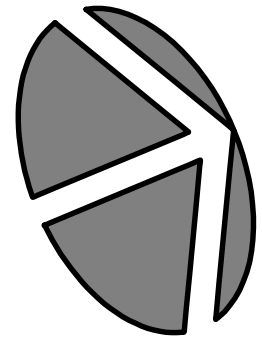
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Vancouver Fraser Port Authority  
ENGINEERING DEPARTMENT

DESIGN BY: M.L.  
DRAWN BY: M.L.  
APPROVED: A.K.  
DATE: 2023-JAN-31  
SCALE: AS SHOWN  
VFPA SITE: CNVXXX

**VANCOUVER FRASER PORT AUTHORITY**  
TDK METRO TERMINALS EXPANSION

**PROPOSED UTILITIES PLAN**

DWG: 21-098-UT-001  
SHEET: 1 of 1  
REV: B



**NOTES**

- ALL WORKS SHALL BE DONE IN ACCORDANCE WITH MASTER THE MUNICIPAL CONSTRUCTION DOCUMENTS (MMCD) PLATINUM EDITION AND CANADIAN ELECTRICAL CODE.
- ALL CONDUCTORS SHALL BE RW90 STRANDED COPPER (UNLESS OTHERWISE NOTED), LIGHTING AND FEEDER CONDUCTORS SHALL RUN CONTINUOUS WITH NO SPLICES.
- CONTRACTOR SHALL GAIN APPROVAL FROM LIGHTING SUPPLIER'S GEOTECHNICAL ENGINEER PRIOR TO FOUNDATION INSTALLATION. BACK FILL SHALL MEET THE APPROVAL OF THE GEOTECHNICAL ENGINEER.
- CONDUITS SHALL BE BURIED A MIN. 1000mm DEEP (UNLESS OTHERWISE NOTED), A 'BURIED CABLE' MARKER TAPE SHALL BE INSTALLED IN ALL TRENCHES.
- CONTRACTOR SHALL OBTAIN ALL PERMITS AND LICENSES PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL LOCATE AND AVOID ALL UNDERGROUND SERVICES.
- THE CONTRACTOR SHALL REPLACE ALL ASPHALT, CONCRETE SIDEWALK PANELS, CURB & GUTTER, LANDSCAPE, ETC. REMOVED OR DAMAGED DURING CONSTRUCTION TO THE SATISFACTION OF THE OWNER.
- CONDUITS SHALL BE RIGID P.V.C. MANUFACTURED IN ACCORDANCE WITH C.S.A. C22.2 No. 211.2. (NOT DB2) (UNLESS OTHERWISE NOTED), ABOVE GROUND CONDUIT SHALL BE RIGID METAL.
- ALL EQUIPMENT SHALL BE BONDED IN COMPLIANCE WITH THE CANADIAN ELECTRICAL CODE.
- CONTRACTOR SHALL ENSURE ALL LOADS ARE BALANCED
- SEE B.C. HYDRO REGULATIONS FOR SERVICE CONNECTION DETAILS.
- CONTRACTOR TO COORDINATE DE-ENERGIZATION OF EXISTING SERVICE AND ENERGIZATION OF NEW SERVICE TO MINIMIZE DOWNTIME OF EXISTING YARD.

**LEGEND**

- 30.5m HIGH MAST LIGHTING, C/W PILE CAP SPREAD FOOT FOUNDATION. CONTACT MARK PACKER 604-353-4500 (DESIGN No. 223886A) (TYP.)
- LARGE ROUND JUNCTION BOX (MOTI SPEC) 2 SECTIONS DEEP C/W BOTTOM SECTION AND BONDED GALVANIZED STEEL SECURITY LID MARKED "ELEC".
- ⊕ 480V CONCRETE VAULT (MANHOLE COVER)
- ⊗ TYPE 4040 SERVICE VAULT WITH MANHOLE COVER MARKED "ELEC"
- UNDERGROUND RPVC ELECTRICAL CONDUIT (277/480 UNLESS OTHERWISE NOTED) (SIZE AS SHOWN)
- - - UNDERGROUND RPVC COMMUNICATIONS CONDUIT (SIZE AS SHOWN)
- ⊗ LIGHTING POLE NUMBER
- ⊙ EXISTING OVERHEAD UTILITY POLE
- ┆ CONDUIT STUB

LIGHTING DESIGN CRITERIA		
ITEM	DESIGN REQUIREMENTS	DESIGN ACHIEVED **
LOCATION	TDK METRO TERMINALS	
FIELD TYPE	CARGO HANDLING FACILITY	
EQUIPMENT TYPE	TLC-LED-900 (890 MAX)	
MAINTAINED ILLUMINANCE LEVEL (AVG.)	38.0 LUX*	54.6 LUX
ILLUMINANCE UNIFORMITY RATIO (MAX-MIN.)	6.0:1*	6.0:1

\* BASED ON IES RP-40-19 PORT LIGHTING, CARGO HANDLING FACILITY  
 \*\* FOR SPILL LIGHTING CALCULATIONS ON WATER SIDE OF THE PROJECT REFER TO SUPPLIERS LIGHTING LAYOUT

**DMD**  
**DMD & Associates**  
**Electrical Consultants Ltd.**  
 #12-17358 104A Avenue  
 Surrey, BC, Canada V4N 5M3  
 604/589-9010  
 office@dmdeng.com Fax 604/589-9012

**12.5kV**  
**277/480V**  
**120/208V**

PERMIT TO PRACTICE  
 NUMBER: 1000771  
 ENGINEERS AND GEOSCIENTISTS BRITISH COLUMBIA

**NOT FOR CONSTRUCTION**  
 2023-01-27

DESIGNED	MARTIN STERLING
DRAWN	ED KITTSOON
CHECKED	DONATO SPEIDEL
E.O.R.	MARTIN STERLING
DATE	JANUARY 18, 2023
SCALE:	1:1000

SEAL

**OVERHEAD POWER LINE CONFLICTS**  
 CONTRACTOR SHALL CONFIRM ON SITE PRIOR TO CONSTRUCTION THAT POLES & EQUIPMENT WILL MEET WorkSafeBC CLEARANCE REQUIREMENTS FOR OVERHEAD PRIMARY AND SECONDARY LINES. CONTRACTOR TO REPORT ANY CONFLICTS OR DISCREPANCIES TO DMD & ASSOCIATES PRIOR TO ORDERING POLES AND INSTALLING CONCRETE BASES.

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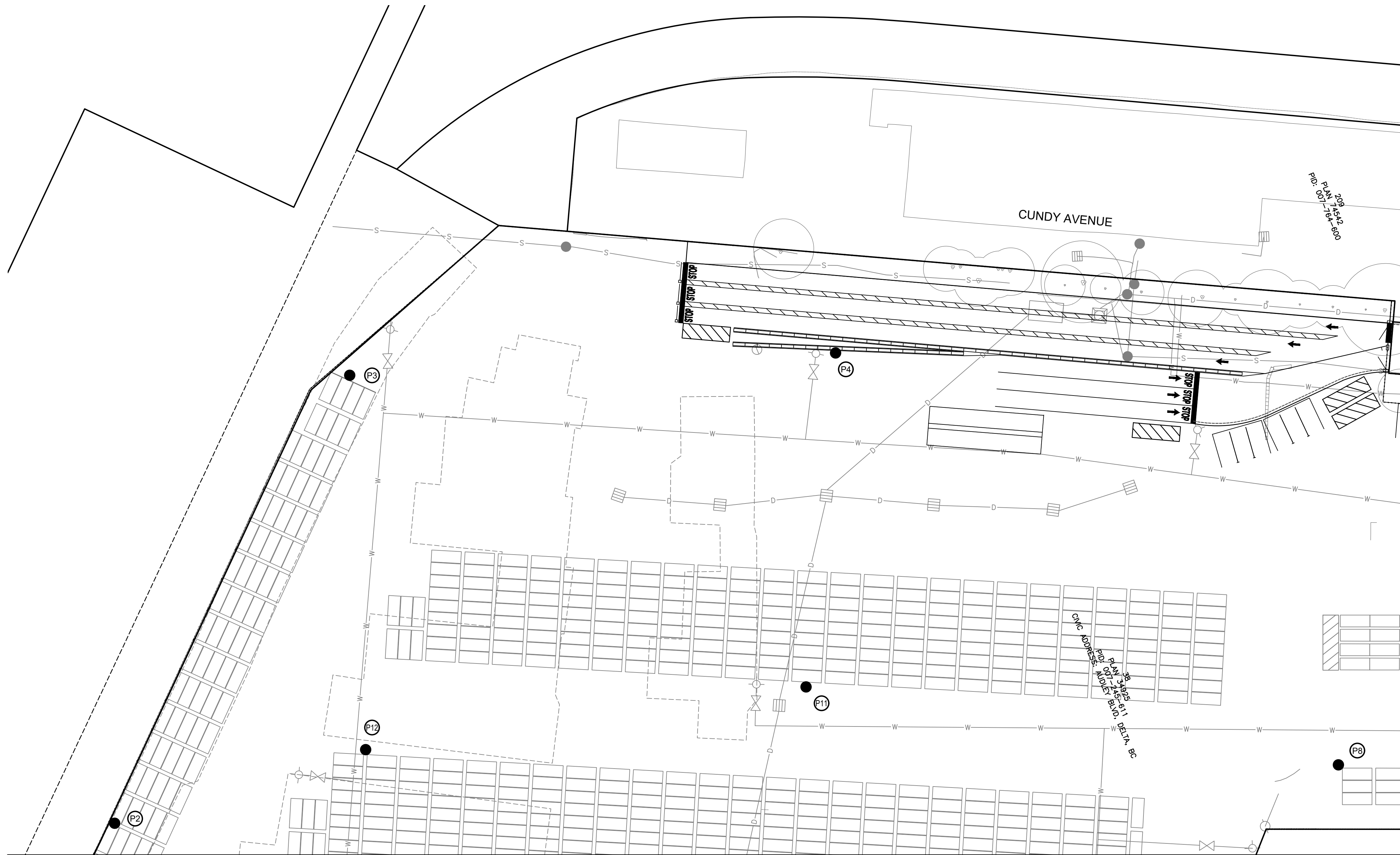
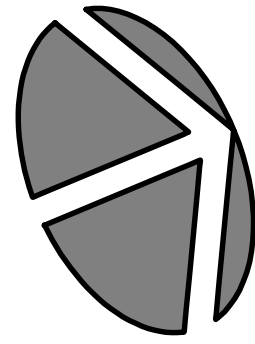
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No.	DATE	BY	CHK'D	REVISION
1	2023-01-27	EK	MGDS	PRELIMINARY LIGHTING LAYOUT - ISSUE FOR PERMIT

Mott MacDonald  
 550 Burrard Street, Suite 1888, Vancouver, BC V6C2B5 TEL: 604 681 4400

**TDK METRO TERMINALS EXPANSION**  
**KEY PLAN, LEGEND, & NOTES**  
**480 AUDLEY BLVD #10**  
 DELTA, B.C.

PROJECT No.	7737-22-01 of 04	SHEET No.	1 of 4	REVISION	.
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A - MATCH LINE - REFER TO SHEET 03 - A



SITE PLAN

B - MATCH LINE - REFER TO SHEET 04 - B

12.5kV

277/480V

120/240V

PERMIT TO PRACTICE  
NUMBER: 1000771  
ENGINEERS AND GEOSCIENTISTS BRITISH COLUMBIA

NOT FOR CONSTRUCTION  
2023-01-27

**DMD**  
DMD & Associates  
Electrical Consultants Ltd.  
#12-17358 104A Avenue  
Surrey, BC, Canada V4N 5M3  
www.dmdeng.com office@dmdeng.com  
604/589-9010 Fax 604/589-9012

DESIGNED	MARTIN STERLING
DRAWN	ED KITTSOON
CHECKED	DONATO SPEIDEL
E.O.R.	MARTIN STERLING
DATE	JANUARY 18, 2023
SCALE:	1:500

SEAL

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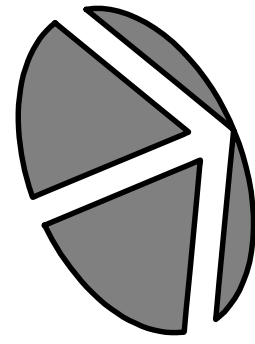
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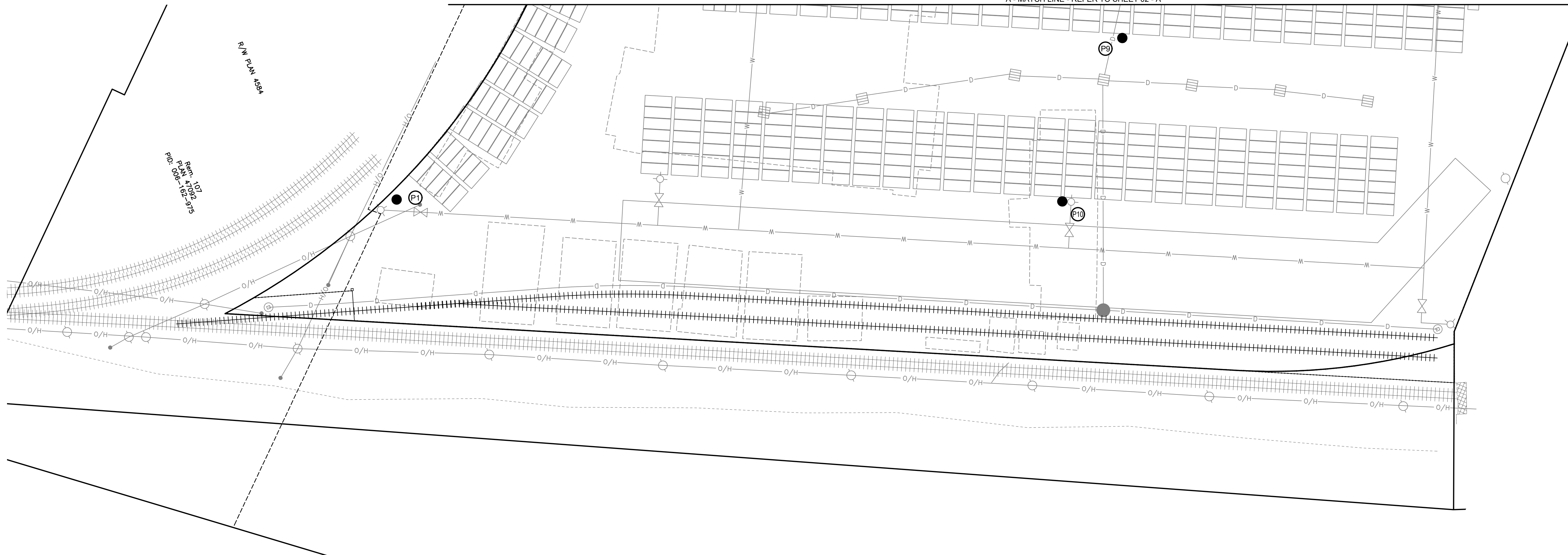
Mott MacDonald  
550 Burrard Street, Suite 1888, Vancouver, BC V6C2B5 TEL: 604 681 4400

**TDK METRO TERMINALS EXPANSION**  
SITE PLAN  
480 AUDLEY BLVD #10  
DELTA, B.C.

PROJECT No.	7737-22-02 of 04	SHEET No.	2 of 4	REVISION	.
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A - MATCH LINE - REFER TO SHEET 02 - A



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**DMD & Associates**  
**Electrical Consultants Ltd.**  
 #12-17358 104A Avenue  
 Surrey, BC, Canada V4N 5M3  
 604/589-9010  
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 www.dmdeng.com

**12.5kV**

**277/480V**

**120/240V**

PERMIT TO PRACTICE  
 NUMBER: 1000771  
 ENGINEERS AND GEOSCIENTISTS BRITISH COLUMBIA

**NOT FOR CONSTRUCTION**  
 2023-01-27

DESIGNED	MARTIN STERLING
DRAWN	ED KITTSO
CHECKED	DONATO SPEIDEL
E.O.R.	MARTIN STERLING
DATE	JANUARY 18, 2023
SCALE:	1:500

SEAL

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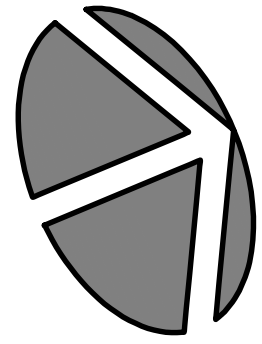
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Mott MacDonald  
 550 Burrard Street, Suite 1888, Vancouver, BC V6C2B5 TEL: 604 681 4400

**TDK METRO TERMINALS EXPANSION**  
**SITE PLAN**  
**480 AUDLEY BLVD #10**  
 DELTA, B.C.

PROJECT No.	7737-22-03 of 04	SHEET No.	3 of 4	REVISION	.
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B - MATCH LINE - REFER TO SHEET 02 - B

PAN 35841-29  
P.O.P. 007-242-1-29

CIVIC ADDRESS: 480  
P.O.P. 007-242-1-29  
AUDLEY BLVD, DELTA, BC

**DMD & Associates**  
**Electrical Consultants Ltd.**  
 #12-17358 104A Avenue  
 Surrey, BC, Canada V4N 5M3  
 604/589-9010  
 www.dmdeng.com office@dmdeng.com

**12.5kV**

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**120/240V**

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DRAWN	ED KITTSOON
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Mott MacDonald  
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**TDK METRO TERMINALS EXPANSION**  
**SITE PLAN**  
**480 AUDLEY BLVD #10**  
 DELTA, B.C.

PROJECT No.	7737-22-04 of 04	SHEET No.	4 of 4	REVISION	.
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# TDK Metro Container Terminal

Delta, BC

## Lighting System

Pole / Fixture Summary								
Pole ID	Pole Height	Mtg Height	Fixture Qty	Luminaire Type	Avg Load	Max Load	Circuit	
P1-P3, P7, P11	30.5	30.5	3	TLC-LED-900	2.40 kW	2.67 kW	A	
P4	30.5	30.5	7	TLC-LED-900	5.61 kW	6.23 kW	A	
P5, P8	30.5	30.5	4	TLC-LED-900	3.20 kW	3.56 kW	A	
P6	30.5	30.5	2	TLC-LED-900	1.60 kW	1.78 kW	A	
P9, P12	30.5	30.5	5	TLC-LED-900	4.01 kW	4.45 kW	A	
P10	30.5	30.5	6	TLC-LED-900	4.81 kW	5.34 kW	A	
<b>12</b>			<b>48</b>		<b>38.45 kW</b>	<b>42.72 kW</b>		

Circuit Summary				
Circuit	Description	Avg Load	Max Load	Fixture Qty
A	Container Terminal	38.45 kW	42.72 kW	48

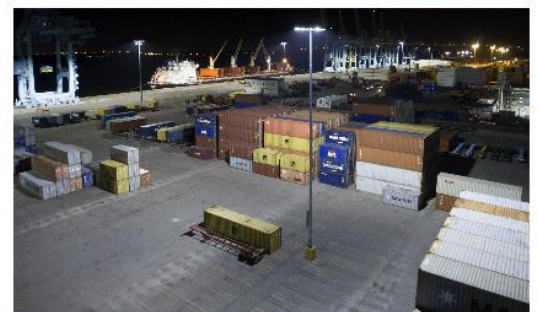
Fixture Type Summary						
Type	Source	Avg Wattage	Max Wattage	Constant Lumens	Application	Quantity
TLC-LED-900	LED 5700K - 75 CRI	801W	890W	76,160	100K	48

Single Luminaire Amperage Draw Chart								
Driver (.90 min power factor)	Max Line Amperage Per Luminaire							
Single Phase Voltage	208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	380 (60)	480 (60)	
TLC-LED-900	5.3	5.0	4.6	4.0	3.2	2.9	2.3	

## Light Level Summary

Calculation Grid Summary								
Grid Name	Calculation Metric	Illumination					Circuits	Fixture Qty
		Ave	Min	Max	Max/Min	Ave/Min		
45 Meter Spill Grid	Horizontal Illuminance	0.06	0	0.61	0.00		A	48
45 Meter Spill Grid	Max Candela (by Fixture)	1589	0	4980	0.00		A	48
45 Meter Spill Grid	Max Vert Illuminance (by Light Bank)	0.18	0	1.31	0.00		A	48
Container W Blockage	Horizontal	42.2	3.3	117	35.25	12.8	A	48
Container W/O Blockage	Horizontal	54.6	14.1	117	8.31	3.86	A	48

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EQUIPMENT LIST FOR AREAS SHOWN								
Pole			Luminaires					
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
5	P1-P3, P7 P11	30.5m	-	30.5m	TLC-LED-900	3	3	0
1	P4	30.5m	-	30.5m	TLC-LED-900	4/3*	7	0
1	P5	30.5m	-	30.5m	TLC-LED-900	4	4	0
1	P6	30.5m	-	30.5m	TLC-LED-900	2	2	0
1	P8	30.5m	-	30.5m	TLC-LED-900	3/1*	4	0
1	P9	30.5m	-	30.5m	TLC-LED-900	2/3*	5	0
1	P10	30.5m	-	30.5m	TLC-LED-900	3/3*	6	0
1	P12	30.5m	-	30.5m	TLC-LED-900	3/2*	5	0
12	TOTALS					48	48	0

\* This structure utilizes a back-to-back mounting configuration

## TDK Metro Container Terminal

Delta, BC

GRID SUMMARY	
Name:	Container W/O Blockage
Size:	0.0m x 0.0m
Spacing:	10.0m x 10.0m
Height:	0.0m above grade

ILLUMINATION SUMMARY	
MAINTAINED HORIZONTAL LUX	
	Entire Grid
Scan Average:	54.56
Maximum:	117.35
Minimum:	14.12
Avg / Min:	3.86
Max / Min:	8.31
UG (adjacent pts):	3.04
CU:	0.93
No. of Points:	596
LUMINAIRE INFORMATION	
Applied Circuits:	A
Design Usage Hours:	100,000
No. of Luminaires:	48
Avg Load:	38.45 kW
Max Load:	42.72 kW

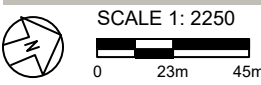


**Guaranteed Performance:** The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

**Field Measurements:** Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

**Electrical System Requirements:** Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

**Installation Requirements:** Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗



**EQUIPMENT LIST FOR AREAS SHOWN**

Pole			Luminaires					
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
5	P1-P3, P7 P11	30.5m	-	30.5m	TLC-LED-900	3	3	0
1	P4	30.5m	-	30.5m	TLC-LED-900	4/3*	7	0
1	P5	30.5m	-	30.5m	TLC-LED-900	4	4	0
1	P6	30.5m	-	30.5m	TLC-LED-900	2	2	0
1	P8	30.5m	-	30.5m	TLC-LED-900	3/1*	4	0
1	P9	30.5m	-	30.5m	TLC-LED-900	2/3*	5	0
1	P10	30.5m	-	30.5m	TLC-LED-900	3/3*	6	0
1	P12	30.5m	-	30.5m	TLC-LED-900	3/2*	5	0
12	TOTALS					48	48	0

\* This structure utilizes a back-to-back mounting configuration

**TDK Metro Container Terminal**

Delta, BC

GRID SUMMARY	
Name:	Container W Blockage
Size:	0.0m x 0.0m
Spacing:	10.0m x 10.0m
Height:	0.0m above grade

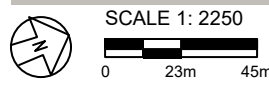
ILLUMINATION SUMMARY	
MAINTAINED HORIZONTAL LUX	
	Entire Grid
Scan Average:	42.25
Maximum:	116.31
Minimum:	3.30
Avg / Min:	12.80
Max / Min:	35.25
UG (adjacent pts):	23.84
CU:	0.58
No. of Points:	478
LUMINAIRE INFORMATION	
Applied Circuits:	A
Design Usage Hours:	100,000
No. of Luminaires:	48
Avg Load:	38.45 kW
Max Load:	42.72 kW

**Guaranteed Performance:** The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

**Field Measurements:** Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

**Electrical System Requirements:** Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

**Installation Requirements:** Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗



EQUIPMENT LIST FOR AREAS SHOWN								
Pole			Luminaires					
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
5	P1-P3, P7 P11	30.5m	-	30.5m	TLC-LED-900	3	3	0
1	P4	30.5m	-	30.5m	TLC-LED-900	4/3*	7	0
1	P5	30.5m	-	30.5m	TLC-LED-900	4	4	0
1	P6	30.5m	-	30.5m	TLC-LED-900	2	2	0
1	P8	30.5m	-	30.5m	TLC-LED-900	3/1*	4	0
1	P9	30.5m	-	30.5m	TLC-LED-900	2/3*	5	0
1	P10	30.5m	-	30.5m	TLC-LED-900	3/3*	6	0
1	P12	30.5m	-	30.5m	TLC-LED-900	3/2*	5	0
12	TOTALS					48	48	0

\* This structure utilizes a back-to-back mounting configuration



## TDK Metro Container Terminal Delta, BC

GRID SUMMARY	
Name:	45 Meter Spill Grid
Spacing:	10.0m
Height:	1.5m above grade

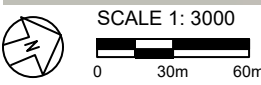
ILLUMINATION SUMMARY	
CANDELA (PER FIXTURE)	
Scan Average:	Entire Grid 1588.7081
Maximum:	4979.7612
Minimum:	0.0000
No. of Points:	171
LUMINAIRE INFORMATION	
Applied Circuits:	A
Design Usage Hours:	100,000
<b>No. of Luminaires:</b>	<b>48</b>
Avg Load:	38.45 kW
Max Load:	42.72 kW

**Guaranteed Performance:** The ILLUMINATION described above is guaranteed per your Musco Warranty document.

**Field Measurements:** Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

**Electrical System Requirements:** Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

**Installation Requirements:** Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗



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# TDK Metro Container Terminal Delta, BC

## EQUIPMENT LAYOUT

### INCLUDES:

· Container Terminal

**Electrical System Requirements:** Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

**Installation Requirements:** Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

## EQUIPMENT LIST FOR AREAS SHOWN

QTY	LOCATION	SIZE	GRADE ELEVATION	Luminaires		QTY / POLE
				MOUNTING HEIGHT	LUMINAIRE TYPE	
5	P1-P3, P7, P11	30.5m	-	30.5m	TLC-LED-900	3
1	P4	30.5m	-	30.5m	TLC-LED-900	4/3*
1	P5	30.5m	-	30.5m	TLC-LED-900	4
1	P6	30.5m	-	30.5m	TLC-LED-900	2
1	P8	30.5m	-	30.5m	TLC-LED-900	3/1*
1	P9	30.5m	-	30.5m	TLC-LED-900	2/3*
1	P10	30.5m	-	30.5m	TLC-LED-900	3/3*
1	P12	30.5m	-	30.5m	TLC-LED-900	3/2*
12	TOTALS					48

\* This structure utilizes a back-to-back mounting configuration

## SINGLE LUMINAIRE AMPERAGE DRAW CHART

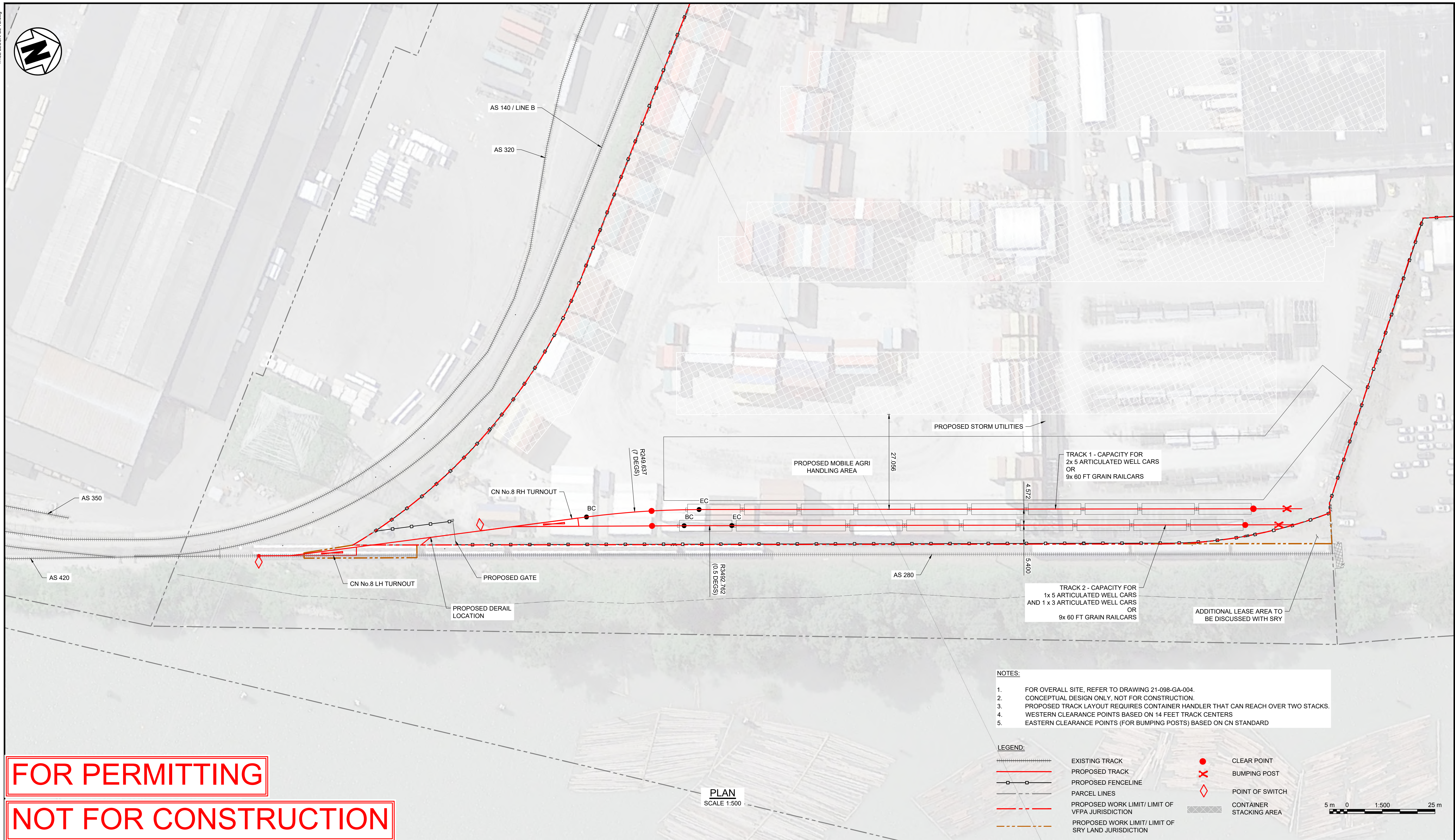
Driver (.90 min power factor)	Line Amperage Per Luminaire (max draw)						
	208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	380 (60)	480 (60)
Single Phase Voltage	208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	380 (60)	480 (60)
TLC-LED-900	5.3	5.0	4.6	4.0	3.2	2.9	2.3



SCALE 1: 3000  
0 30m 60m

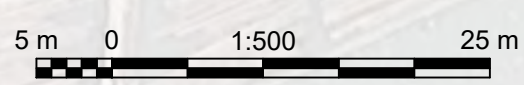
Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗





- NOTES:**
- FOR OVERALL SITE, REFER TO DRAWING 21-098-GA-004.
  - CONCEPTUAL DESIGN ONLY, NOT FOR CONSTRUCTION.
  - PROPOSED TRACK LAYOUT REQUIRES CONTAINER HANDLER THAT CAN REACH OVER TWO STACKS.
  - WESTERN CLEARANCE POINTS BASED ON 14 FEET TRACK CENTERS
  - EASTERN CLEARANCE POINTS (FOR BUMPING POSTS) BASED ON CN STANDARD

- LEGEND:**
- EXISTING TRACK
  - PROPOSED TRACK
  - PROPOSED FENCELINE
  - PARCEL LINES
  - PROPOSED WORK LIMIT/ LIMIT OF VFPA JURISDICTION
  - PROPOSED WORK LIMIT/ LIMIT OF SRY LAND JURISDICTION
  - CLEAR POINT
  - BUMPING POST
  - POINT OF SWITCH
  - CONTAINER STACKING AREA



**FOR PERMITTING**  
**NOT FOR CONSTRUCTION**

**PLAN**  
SCALE 1:500

<p>Suite 1888, Bentall 5 550 Burrard Street Vancouver, BC, V6C 2B5 Canada T 604.681.4400 W www.mottmac.com</p> <p>ENGINEERS AND GEOSCIENTISTS BRITISH COLUMBIA PERMIT TO PRACTICE NUMBER: 1001591</p> <p>514100592-MMD-00-P0-DR-RW-0001</p>		<p>Vancouver Fraser Port Authority</p> <p>ENGINEERING DEPARTMENT</p>		<p>DESIGN BY: C. A.</p> <p>DRAWN BY: C. A.</p> <p>APPROVED: A. W.</p> <p>DATE: 2023-JAN-31</p> <p>SCALE: AS SHOWN</p> <p>VFPA SITE: CNVXXX</p>		<p><b>VANCOUVER FRASER PORT AUTHORITY</b> <b>TDK METRO TERMINALS EXPANSION</b></p> <p><b>RAIL PLAN</b></p> <p>DWG: <b>21-098-RL-001</b></p>		<p>SHEET: <b>1 of 1</b></p> <p>REV: <b>A</b></p>	
Ref. No.	REFERENCE	No.	Date	REVISION	Dr'n	Ch'd	CA	AW	
		A	2023/01/31	ISSUED FOR PERMIT					