



Navigation Protection Program (NPP)
344 Edmonton Street
Winnipeg MB R3C 0P6

Your file:
Our file: 2021-603773
Registry Number: 4427

December 23, 2021

Department of Fisheries and Oceans Canada
Small Craft Harbours Branch
501 University Crescent
Winnipeg, MB R3T 2N6

Attention: Eleanor McEwan

RE: Approval under the *Canadian Navigable Waters Act* (CNWA), for the construction of the following work(s) below located in Patricia Bay, at approximately 70°28'04.3"N, 68°35'49.6"W, in Clyde River, in the Territory of Nunavut.

Approved work(s):

- Harbour
- Breakwater
- Wharf
- Slipway
- Boat basin
- Dredging
- Dock
- Mooring system

Please find enclosed an approval for the above-noted work issued by the Minister of Transport under subsection 7(6) of the CNWA. This approval replaces any previous approvals that have been issued in relation to this work (if any) and will be the sole approval for this work until such time as a new approval is issued for any future changes.

In order to issue this approval, the Minister has considered each of the factors listed in subsection 7(7) of the Act, additional information provided by you (if applicable) and any adverse effects that the decision to approve the work may have on the rights of the Indigenous peoples of Canada recognized and affirmed by section 35 of the *Constitution Act, 1982*.

Please note that the CNWA, amongst other obligations, requires the owner to immediately notify the Minister if the work causes or is likely to cause serious and imminent danger to navigation, to take reasonable measures to mitigate potential dangers and to remedy any adverse effects that result from that danger to navigation.

This approval relates only to the interference of your work with navigation under the CNWA and does not grant any rights related to the ownership of the bed of the navigable water.

Please note that it is the owner's responsibility to comply with any other applicable laws and regulations.

Please contact our office in Prairie and Northern for any questions, by phone at 1-844-425-7787 or by e-mail at NPPPNR-PPNRPN@tc.gc.ca.

Respectfully,

Racquel Creces
NPP Officer
Programs Group
Transport Canada
Prairie and Northern Region

Attachment(s): Approval Package

cc: Loretta Hardwick, CBCL
Canadian Hydrographic Services

Navigation Protection Program (NPP)
344 Edmonton Street
Winnipeg MB R3C 0P6

Your file:
Our file: 2021-603773
Registry number: 4427

APPROVAL

OWNER: Department of Fisheries and Oceans Canada
Small Craft Harbours Branch
501 University Crescent
Winnipeg, MB R3T 2N6

SITE LOCATION: Located in Patricia Bay, at approximately 70°28'04.3"N,
68°35'49.6"W, in Clyde River, in the Territory of Nunavut.

WORK(S):

- Harbour
- Breakwater
- Wharf
- Dredging
- Dock
- Mooring system

As per the application (detailed above) to the Minister of Transport, submitted pursuant to the *Canadian Navigable Waters Act*, for an approval of the work per the attached plan(s): Clyde River Harbour Location Map, Harbour Layout, M01, M05, M06, M07, M08, M09, M10, M11, M12, M13, M16, M17, M18, M20, M21, M22, Pages 10 and 11 of "Clyde River NWP Partial Review" and/or described in the attached document(s), the Minister hereby approves the work pursuant to subsection 7(6) for the construction, of the above mentioned work, in accordance with the following terms and conditions:

1. Signs stating "Construction Ahead":
 - must be legible from a minimum distance of 100 metres,
 - must be marked with retro-reflective material,
 - must be visible from all points of marine approach,
 - must display black lettering on a yellow or orange background; and,
 - must be visible from all points of marine approach.
2. Cautionary buoy(s) (yellow) must be:
 - marked with retro-reflective material,
 - must be placed at each end of the work; and,
 - must be placed at the end of the work(s) that is farthest from the nearest bank or shore.
3. Any portion of the work that is partially constructed shall be marked with cautionary buoy(s) and shall be maintained through all tidal ranges.
4. The perimeter of the work shall be marked with cautionary buoys spaced at 10 metre distances during open water conditions.
5. Safe navigational access shall be provided for all users to the shoreline and shelter area during construction.
6. All dredged material must be deposited above the high-water mark or in accordance with the Environment and Climate Change Canada's Disposal at Sea permit.
7. Navigation aids and markings must be maintained in accordance with pages 10 and 11 of the attached documents titled "Clyde River NWP Partial Review".

8. Navigation light on the southwest breakwater shall, as depicted on page 10 of "Clyde River NWP Partial Review" document must:
 - be green in colour,
 - have a 4 second flash with a nominal range of 7 nautical miles,
 - have a 360-degree arc of visibility,
 - have a focal height of 3m above HHWL,
 - have a 1.08m port hand day beacon facing seaward; and,
 - be functional at all times.
9. Navigation light on the northeast breakwater shall, as depicted on page 11 of "Clyde River NWP Partial Review" document must:
 - be red in colour,
 - have a 4 second flash with a nominal range of 4 nautical miles,
 - have a 360-degree arc of visibility,
 - have a focal height of 4m above HHWL; and,
 - be functional at all times.
10. As built drawings shall be submitted to Fisheries and Oceans Canada- Canadian Hydrographic Service within 1 year of completion of the project.
11. Any proposed changes shall be reviewed and accepted by the Navigation Protection Program prior to implementation of the same.

SIGNED ON December 23, 2021 at the NPP regional office of Prairie and Northern



Racquel Creces
NPP Officer
Programs Group
Transport Canada
Prairie and Northern Region
For the Minister of Transport



Transport
Canada

Transports
Canada

Reviewed / Examiné

Date : December 23, 2021

By/par : *Racquel Creces*
RACQUEL CRECES
Navigation Protection Program /
Programme de Protection de la Navigation

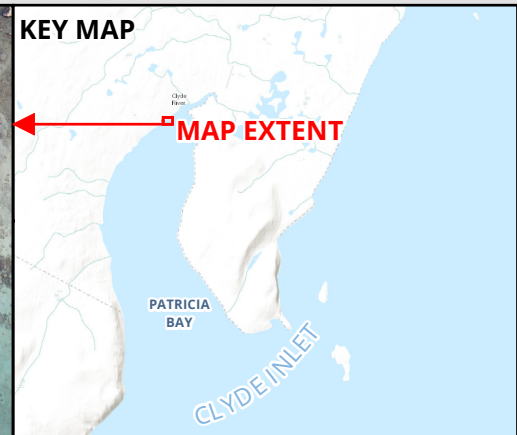
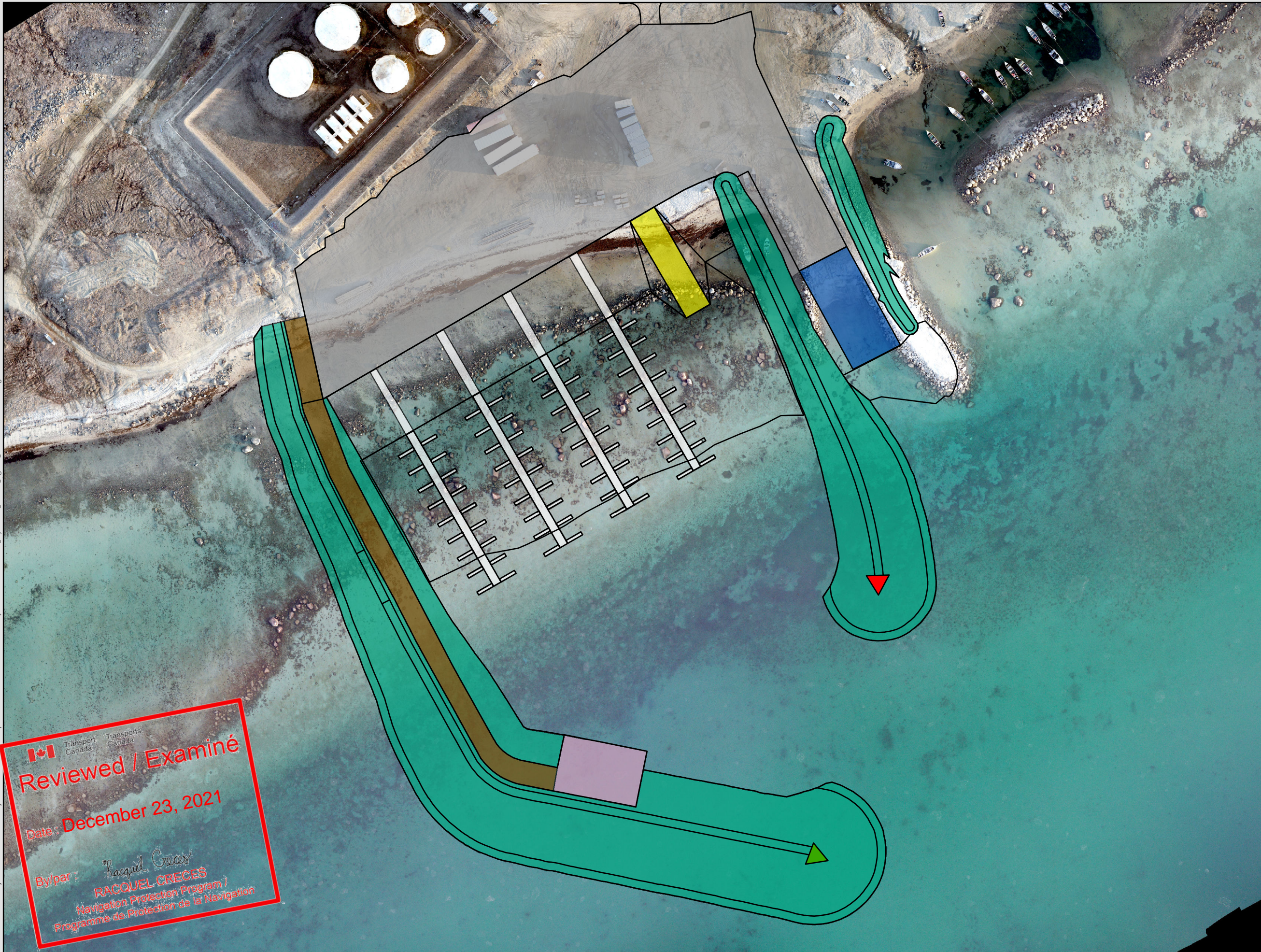
CLYDE RIVER



BAFFIN IS.

ARCTIC OCEAN

Document Path: K:\Projects\200235\00 PWGSC Clyde River Harbour Development\20 CAD\08 GIS\WXD\NIRB PROJECT PROPOSAL\200235_ClydeRiver_NIRBPP_Figure4_1.mxd - sfewkes - 13/Aug/2021



LEGEND

Project Layout

- Access Road
- Breakwater
- Community Boat Launch
- Fixed Wharf
- Floating Docks
- Sea Lift
- Service Area



CLYDE RIVER HARBOUR
DEVELOPMENT PROJECT PROPOSAL

**Small Craft
Harbour Location**

DATE: 2021-08-13	PROJ N°: 200235	FIGURE: 4.1
DRAWN BY: SF	CHECKED BY: AC	APPROVED: LH

NOTES:

0 15 30 60 m

SCALE: 1:1,300

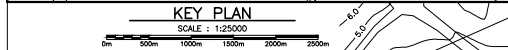
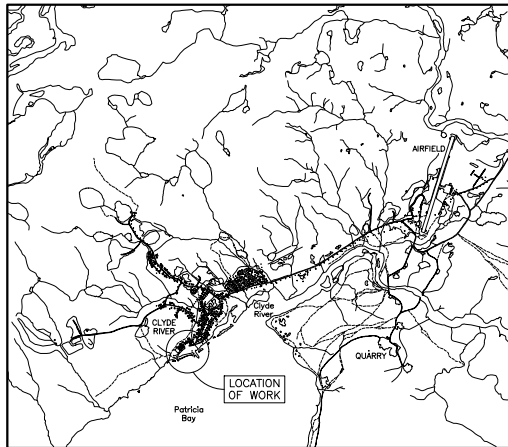
Coordinate System: NAD 1983 UTM Zone 19N

Units: Meter

Reviewed / Examiné

Date: December 23, 2021

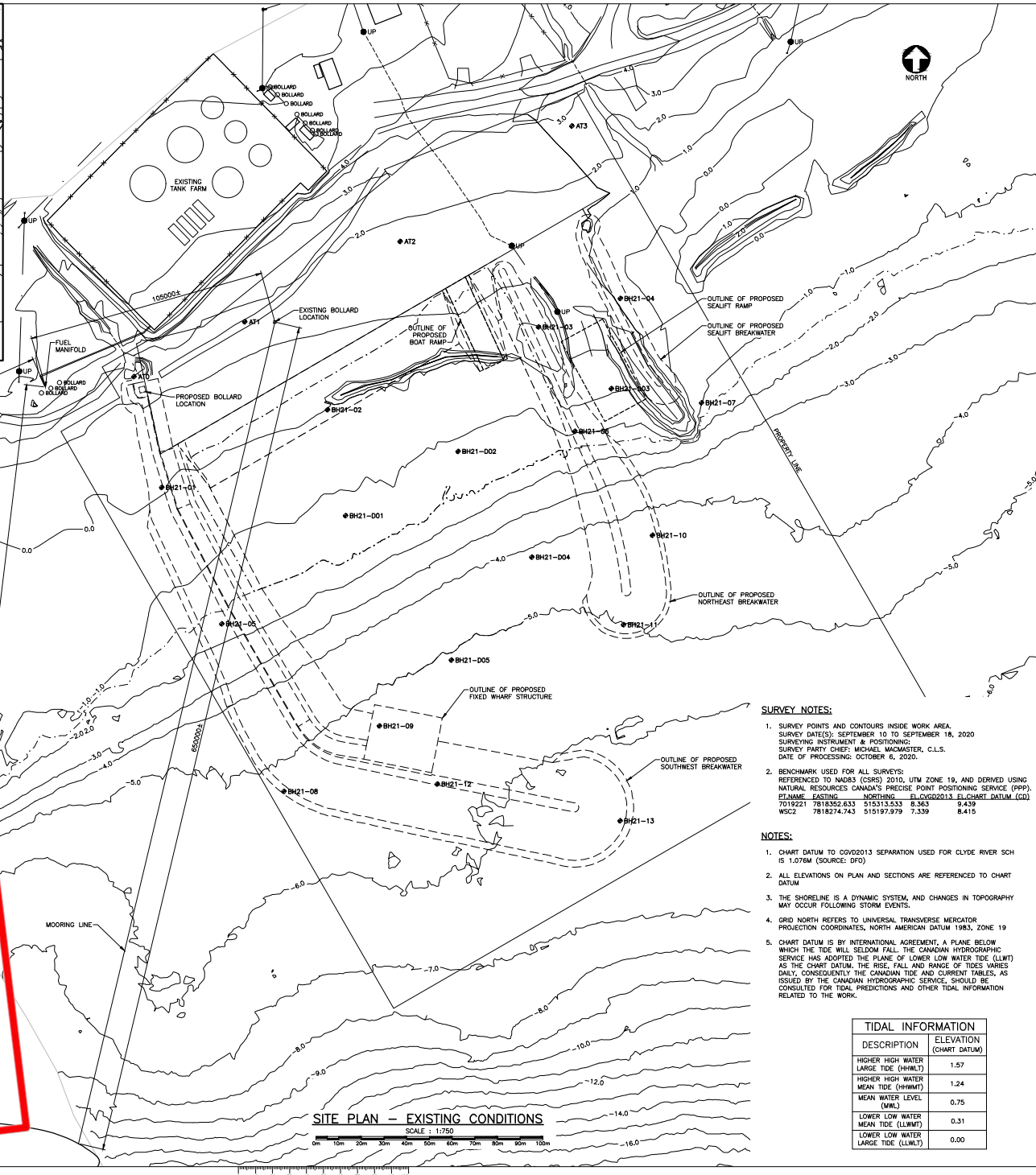
By/par: *Racquel Crepes*
RACQUEL CREPES
Navigation Protection Program /
Programme de Protection de la Navigation



MARK	EASTING	NORTHING
AT0	E 514 934.688	N 7 818 106.018
AT1	E 514 983.503	N 7 818 130.172
AT2	E 515 051.981	N 7 818 165.574
AT3	E 515 127.654	N 7 818 216.454
BH21-01	E 514 946.907	N 7 818 057.208
BH21-02	E 515 020.002	N 7 818 091.400
BH21-03	E 515 112.990	N 7 818 127.869
BH21-04	E 515 146.999	N 7 818 140.462
BH21-05	E 514 973.376	N 7 817 997.088
BH21-06	E 515 128.954	N 7 818 091.538
BH21-07	E 515 184.798	N 7 818 094.498
BH21-08	E 515 000.746	N 7 817 923.284
BH21-09	E 515 142.854	N 7 817 962.128
BH21-10	E 515 163.155	N 7 818 036.111
BH21-11	E 515 150.421	N 7 817 996.685
BH21-12	E 515 168.347	N 7 817 928.501
BH21-13	E 515 148.896	N 7 817 910.319
BH21-001	E 515 027.907	N 7 818 044.746
BH21-002	E 515 077.512	N 7 818 073.075
BH21-003	E 515 145.042	N 7 818 100.749
BH21-004	E 515 109.984	N 7 818 026.484
BH21-005	E 515 074.537	N 7 817 981.116

Reviewed / Examiné
 Date : December 23, 2021
 By/par : *Racquel Crêces*
RACQUEL CRÊCES
 Navigation Protection Program
 Programme de Protection de la Navigation

MOORING LINE



SITE PLAN — EXISTING CONDITIONS

SURVEY NOTES:

1. SURVEY POINTS AND CONTOURS INSIDE WORK AREA. SURVEY DATE(S): SEPTEMBER 10 TO SEPTEMBER 18, 2020. SURVEYING INSTRUMENT & POSITIONING: SURVEY PARTY CHIEF: MICHAEL WICKMASTER, C.L.S. DATE OF PROCESSING: OCTOBER 6, 2020.
2. BENCHMARK USED FOR ALL SURVEYS: REFERENCED TO NAD83 (CSRS) 2010, UTM ZONE 18, AND DERIVED USING NATURAL RESOURCES CANADA'S PRECISE POINT POSITIONING SERVICE (PPP). PTNAME EASTING NORTHING EL CVG02013 EL CHART DATUM (CGD) 7019221 7818352.633 5151313.533 8.343 9.439 WSC2 7818274.743 515197.979 7.339 8.415

NOTES:

1. CHART DATUM TO CGD2013 SEPARATION USED FOR CLYDE RIVER SCH IS 1.076M (SOURCE: DFO)
2. ALL ELEVATIONS ON PLAN AND SECTIONS ARE REFERENCED TO CHART DATUM
3. THE SHORELINE IS A DYNAMIC SYSTEM, AND CHANGES IN TOPOGRAPHY MAY OCCUR FOLLOWING STORM EVENTS.
4. GRID NORTH REFERS TO UNIVERSAL TRANSVERSE MERCATOR PROJECTION COORDINATES, NORTH AMERICAN DATUM 1983, ZONE 19
5. CHART DATUM IS BY INTERNATIONAL AGREEMENT, A PLANE BELOW WHICH THE TIDE WILL SELDOM FALL. THE CANADIAN HYDROGRAPHIC SERVICE HAS ADOPTED THE PLANE OF LOWER LOW WATER TIDE (LLWT) AS THE CHART DATUM. THE RISE, FALL AND RANGE OF TIDES VARIES DAILY, CONSEQUENTLY THE CANADIAN TIDE AND CURRENT TABLES, AS ISSUED BY THE CANADIAN HYDROGRAPHIC SERVICE, SHOULD BE CONSULTED FOR TIDAL PREDICTIONS AND OTHER TIDAL INFORMATION RELATED TO THE WORK.

TIDAL INFORMATION

DESCRIPTION	ELEVATION (CHART DATUM)
HIGHER HIGH WATER (HHWT)	1.57
HIGHER HIGH WATER (HHWT)	1.24
MEAN TIDE (HHWT)	0.75
MEAN WATER LEVEL (MWL)	0.31
LOWER LOW WATER (LLWT)	0.00
LOWER LOW WATER (LLWT)	0.00

REAL PROPERTY SERVICES
 Western Region
 SERVICES IMMOBILIERS
 Région de l'ouest

PRELIMINARY
 NOT FOR CONSTRUCTION

SMALL CRAFT HARBOURS
 ONTARIO AND PRAIRIE REGION

Small Craft Harbours
 (Petit Port de Quai)

CANADIAN CBCL

Revision	Description	Date
1	PRELIMINARY	2021

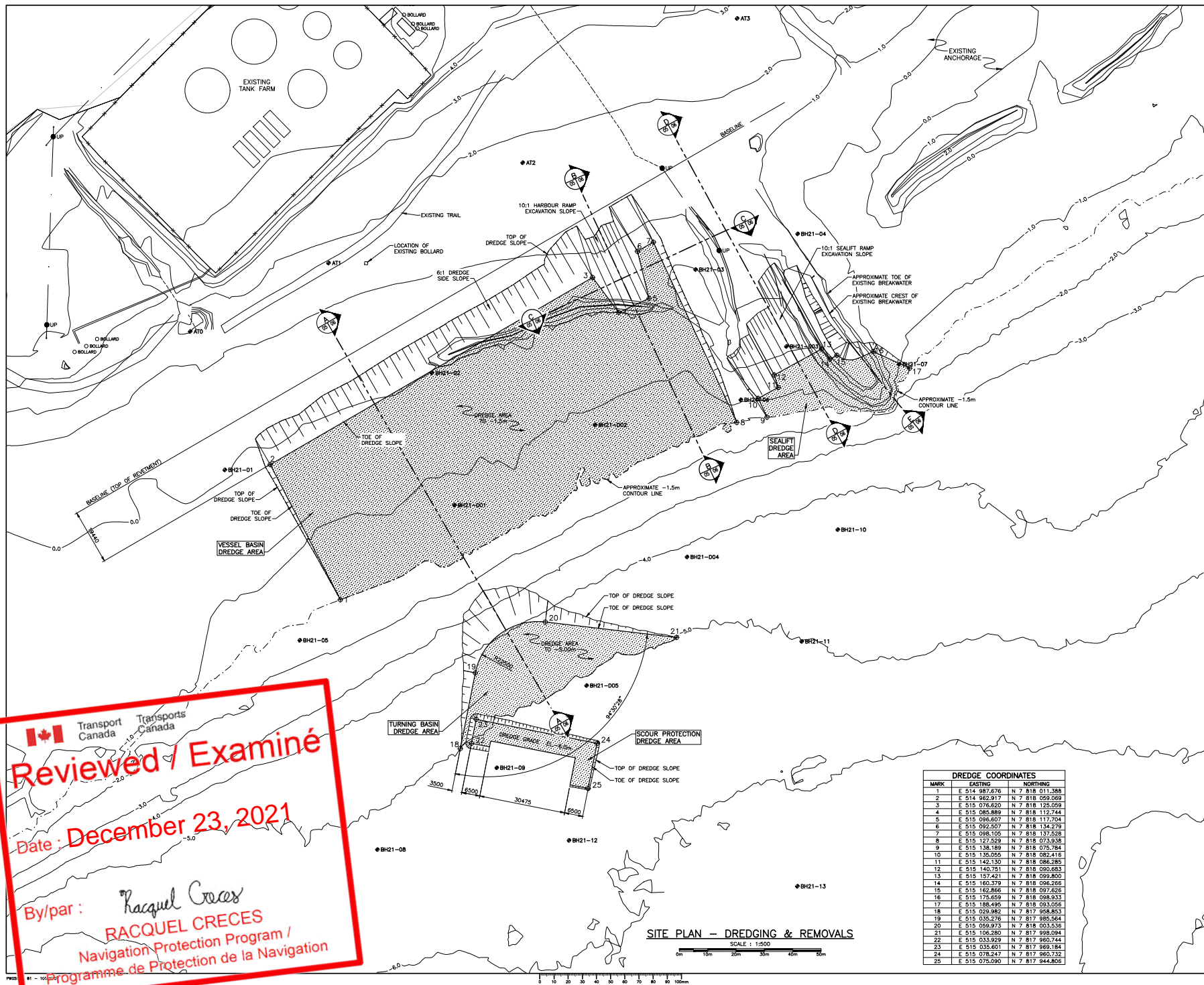
SMALL CRAFT HARBOURS
 ONTARIO AND PRAIRIE REGION

CLYDE RIVER, NU
HARBOUR CONSTRUCTION

Designed by: *Congo par*
 Drawn by: *SLORACE* Dessiné par
 Approved by: *Apprové par*
 Project Manager: *Administrateur de Projets* PMSC
 Drawing title: *Titre du dessin*

SITE PLAN AND
BOREHOLE LOCATIONS

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
R.111193.001	M01	0
	OF XX	



Public Works and
Government Services
Canada

Travaux publics et
Services gouvernementaux
Canada

REAL PROPERTY SERVICES
Western Region
SERVICES IMMOBILIERS
Région de l'ouest

PRELIMINARY
NOT FOR CONSTRUCTION

SMALL CRAFT HARBOURS
ONTARIO AND PRAIRIE REGION

Revision	Description	Date
A	ISSUED FOR 642 REVIEW	2021

Client

Small Craft Harbours
ONTARIO
AND PRAIRIE REGION

Project

Clyde River, NU
Harbour Construction

Designed by

Drawn by

Approved by

PMSC Project Manager

Drawing Title

Concep. par

Dessiné par

Approuvé par

Administrateur de Projets (PMSC)

Titre du dessin

EXISTING CONDITIONS,
REMOVALS AND
DREDGE PLAN

Project no./No. du projet

Drawing no./No. du dessin

Revision no.

R.111193.001

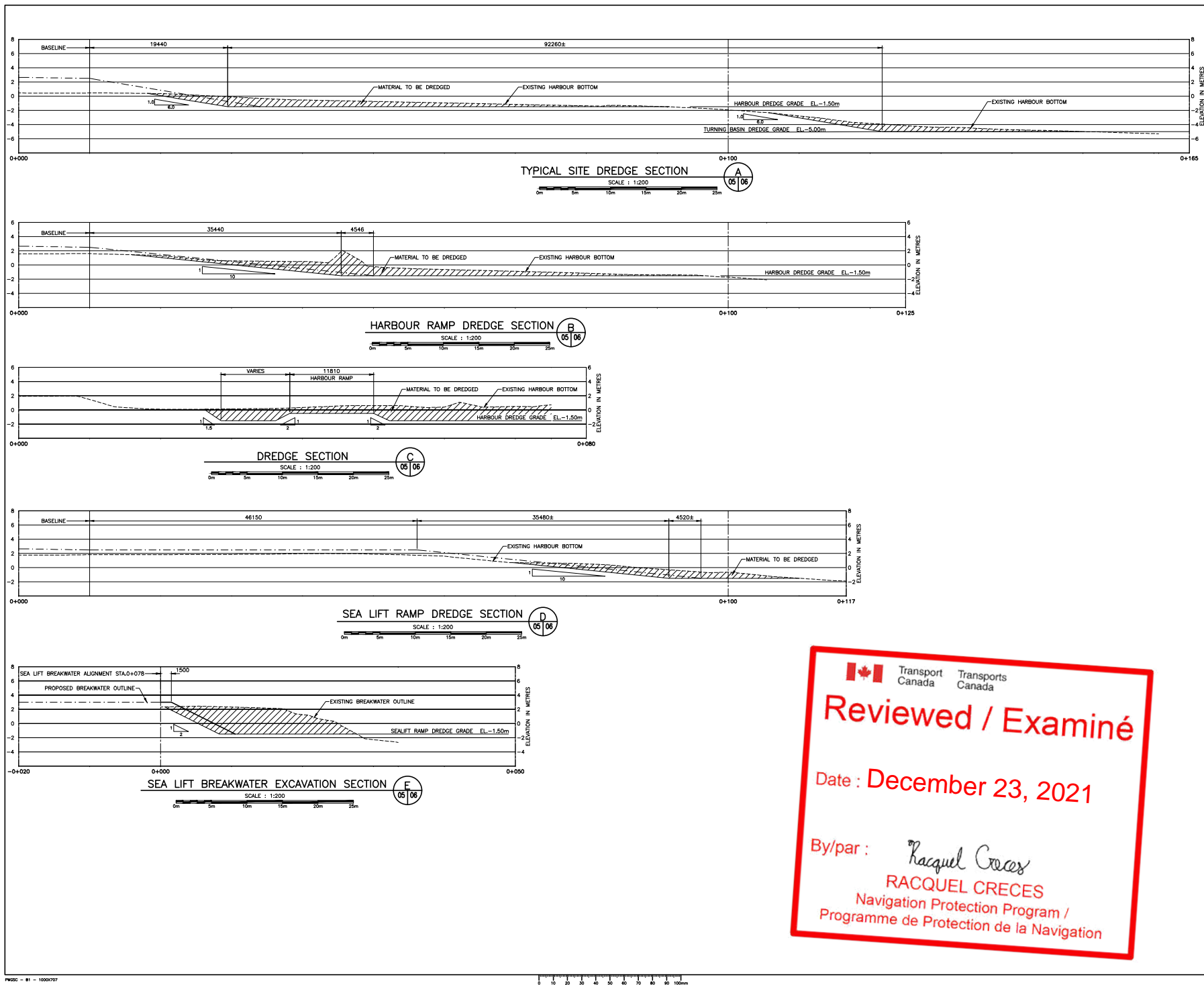
M05

0

OF XX

DREDGE COORDINATES		
MARK	EASTING	NORTHING
1	E 514 987.676	N 7 818 011.388
2	E 514 982.817	N 7 818 050.069
3	E 515 076.620	N 7 818 125.059
4	E 515 085.889	N 7 818 112.744
5	E 515 096.607	N 7 818 117.704
6	E 515 092.507	N 7 818 134.279
7	E 515 098.105	N 7 818 137.528
8	E 515 127.529	N 7 818 073.938
9	E 515 138.189	N 7 818 075.784
10	E 515 135.055	N 7 818 082.416
11	E 515 142.130	N 7 818 086.285
12	E 515 140.751	N 7 818 090.683
13	E 515 157.421	N 7 818 099.800
14	E 515 160.379	N 7 818 096.265
15	E 515 162.866	N 7 818 097.626
16	E 515 175.659	N 7 818 098.933
17	E 515 168.495	N 7 818 093.056
18	E 515 029.982	N 7 817 958.823
19	E 515 035.276	N 7 817 985.264
20	E 515 059.973	N 7 818 003.536
21	E 515 106.280	N 7 817 998.094
22	E 515 033.929	N 7 817 960.744
23	E 515 035.661	N 7 817 960.184
24	E 515 078.247	N 7 817 960.732
25	E 515 075.090	N 7 817 944.806

SITE PLAN - DREDGING & REMOVALS
 SCALE: 1:1500
 0m 10m 20m 30m 40m 50m



Public Works and Government Services Canada / Travaux publics et Services gouvernementaux Canada

REAL PROPERTY SERVICES
Western Region
SERVICES IMMOBILIERS
Région de l'ouest

PRELIMINARY
NOT FOR CONSTRUCTION

SMALL CRAFT HARBOURS
ONTARIO AND PRAIRIE REGION

Revision	Description	Date
A	ISSUED FOR 642 REVIEW	2021

Client: _____

**SMALL CRAFT HARBOURS
ONTARIO
AND PRAIRIE REGION**

Project: _____

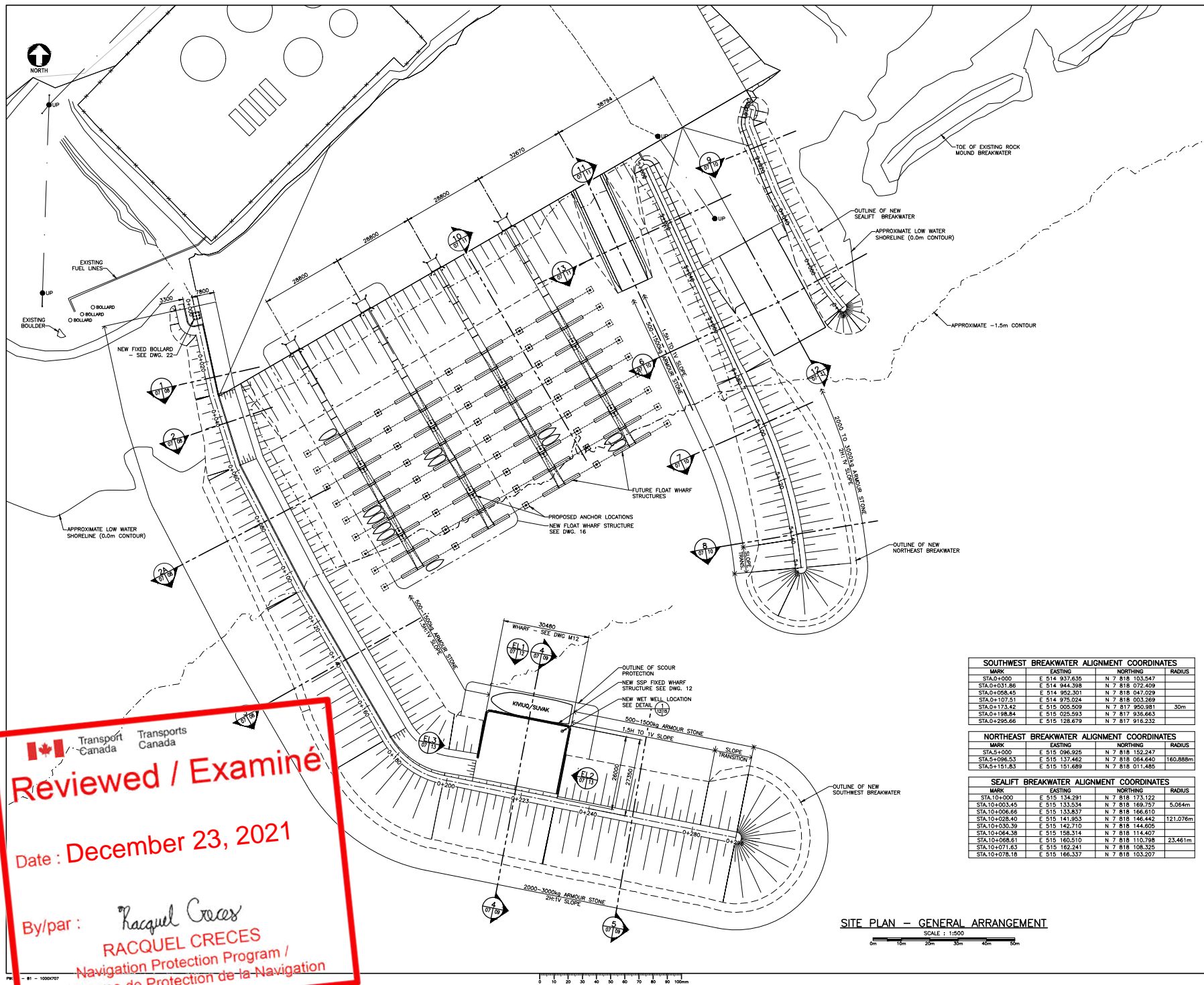
**CLYDE RIVER, NU
HARBOUR CONSTRUCTION**

Designed by: _____ Drawn by: SLGRACE
Approved by: _____ Project Manager: _____

Drawing Title: **DREDGE SECTIONS**

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
R.111193.001	M06 OF XX	0

Reviewed / Examiné
Date : December 23, 2021
By/par : *Racquel Creces*
RACQUEL CRECES
Navigation Protection Program /
Programme de Protection de la Navigation



SOUTHWEST BREAKWATER ALIGNMENT COORDINATES				
MARK	EASTING	NORTHING	RADIUS	
STA.0+000	E 514 937.635	N 7 818 103.547		
STA.0+031.86	E 514 944.398	N 7 818 072.409		
STA.0+056.45	E 514 952.501	N 7 818 047.029		
STA.0+107.51	E 514 975.024	N 7 818 003.569		
STA.0+173.42	E 515 005.509	N 7 817 950.981	30m	
STA.0+198.84	E 515 025.593	N 7 817 936.463		
STA.0+295.66	E 515 128.679	N 7 817 916.232		

NORTHEAST BREAKWATER ALIGNMENT COORDINATES				
MARK	EASTING	NORTHING	RADIUS	
STA.5+000	E 515 096.925	N 7 818 152.247		
STA.5+096.53	E 515 137.462	N 7 818 064.640	160.888m	
STA.5+151.83	E 515 151.689	N 7 818 011.485		

SEALIFT BREAKWATER ALIGNMENT COORDINATES				
MARK	EASTING	NORTHING	RADIUS	
STA.10+000	E 515 134.291	N 7 818 173.122		
STA.10+003.45	E 515 133.534	N 7 818 169.757	5.064m	
STA.10+006.66	E 515 133.837	N 7 818 166.810		
STA.10+028.40	E 515 141.953	N 7 818 146.442	121.076m	
STA.10+030.39	E 515 142.710	N 7 818 144.805		
STA.10+044.38	E 515 158.314	N 7 818 114.407		
STA.10+068.61	E 515 160.510	N 7 818 110.798	23.461m	
STA.10+071.63	E 515 162.241	N 7 818 108.325		
STA.10+078.18	E 515 166.337	N 7 818 103.207		

SITE PLAN - GENERAL ARRANGEMENT
SCALE : 1:500
0m 15m 30m 45m 60m

Reviewed / Examiné
Date : December 23, 2021
By/par : *Racquel Creces*
RACQUEL CRECES
Navigation Protection Program /
Programme de Protection de la Navigation

REAL PROPERTY SERVICES
Western Region
SERVICES IMMOBILIERS
Région de l'ouest

PRELIMINARY
NOT FOR CONSTRUCTION

SMALL CRAFT HARBOURS
ONTARIO AND PRAIRIE REGION

Revision	Issued for Review	2021
Client	Drawn/By	Date

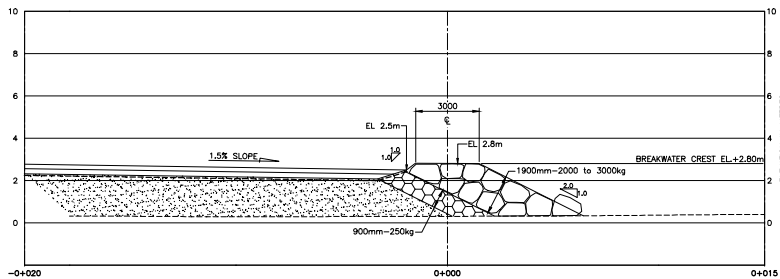
SMALL CRAFT HARBOURS
ONTARIO
AND PRAIRIE REGION

CLYDE RIVER, NU
HARBOUR CONSTRUCTION

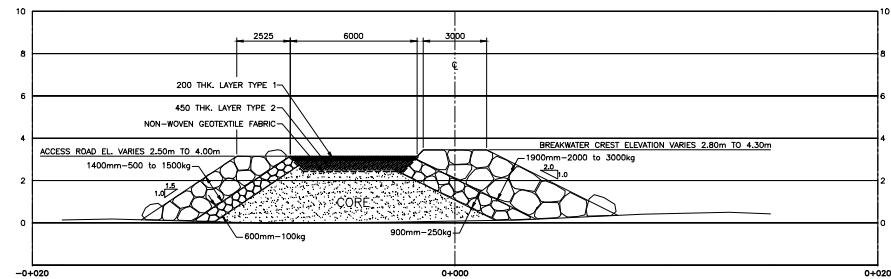
Designed by	Conço par
Drawn by	Dessiné par
Approved by	Approuvé par
PMSC Project Manager	Administrateur de Projets PMSC
Drawing title	Titre du dessin

HARBOUR GENERAL
ARRANGEMENT PLAN

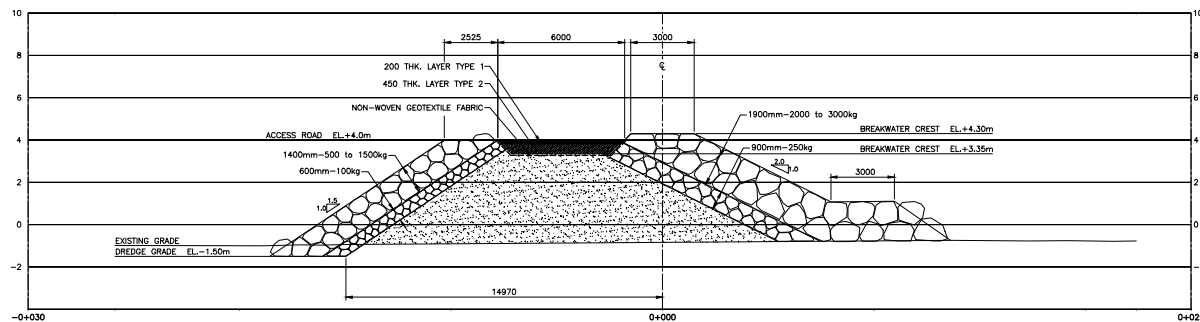
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R.111193.001	M07 OF XX	0



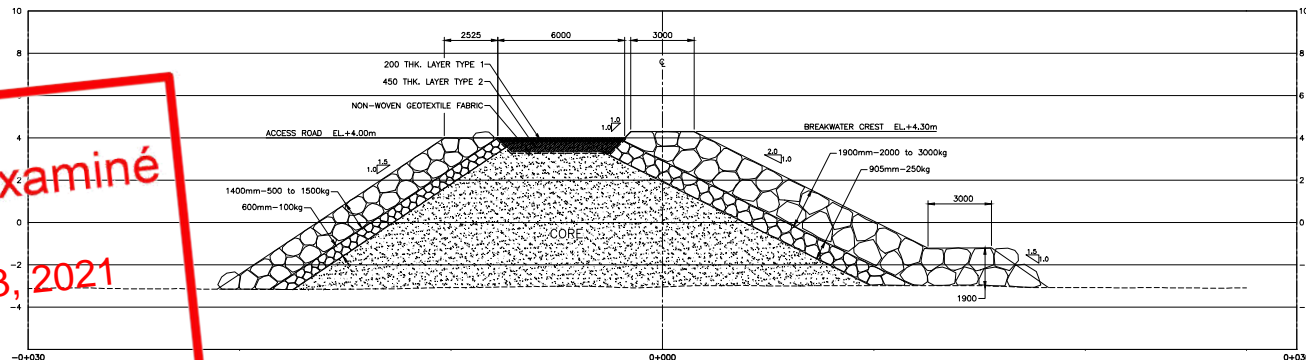
SOUTHWEST BREAKWATER
STATION 0+000 TO 0+030 (BASED ON SECTION 0+026) 1
SCALE : 1:100



SOUTHWEST BREAKWATER
STATION 0+030 TO 0+060 (BASED ON SECTION 0+042) 2
SCALE : 1:100



SOUTHWEST BREAKWATER AT DREDGE AREA
STATION 0+060 TO 0+108 (BASED ON SECTION 0+080) 2A
SCALE : 1:100



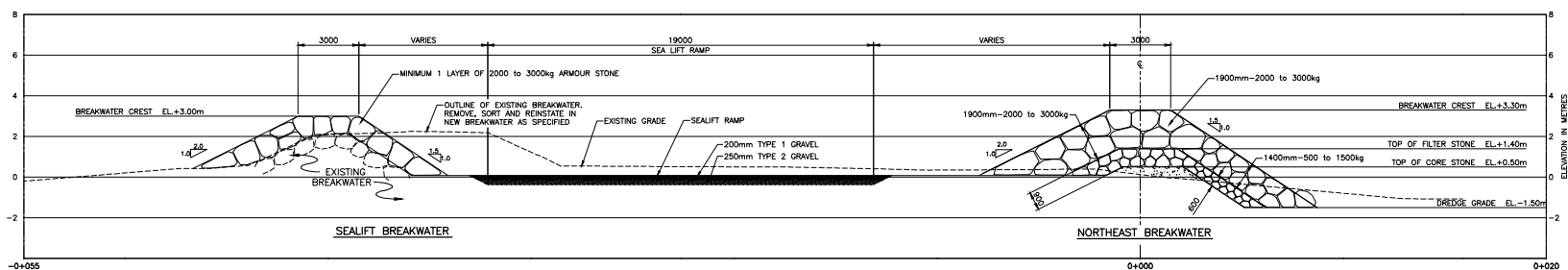
SOUTHWEST BREAKWATER
STATION 0+108 TO 0+204 (BASED ON SECTION 0+138) 3
SCALE : 1:100

Reviewed / Examiné

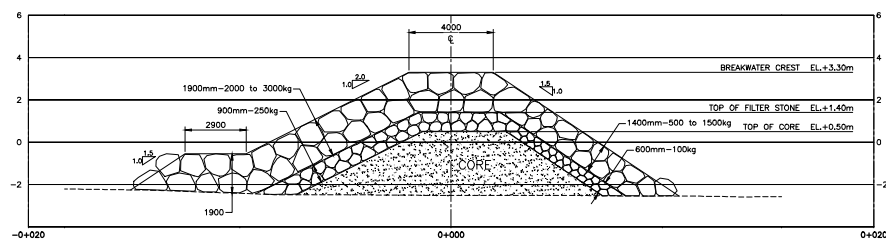
Date : December 23, 2021

By/par : *Racquel Creces*
RACQUEL CRECES
Navigation Protection Program /
Programme de Protection de la Navigation

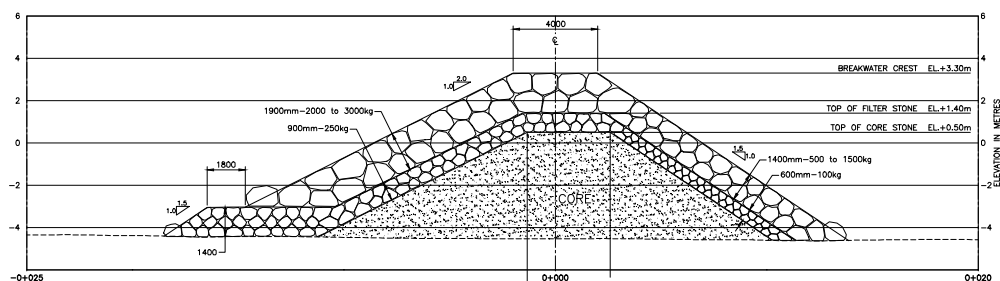
A		ISSUED FOR 642 REVIEW	2021
Revision	Description	Date	
Client			client
SMALL CRAFT HARBOURS ONTARIO AND PRAIRIE REGION			
Project			Projet
CLYDE RIVER, NU HARBOUR CONSTRUCTION			
Designed by		Conçu par	
Drawn by		Dessiné par	
Approved by		Approuvé par	
PMSC Project Manager		Administrateur de Projets PMSC	
Drawing title			Titre du dessin
SOUTHWEST BREAKWATER SECTIONS SHEET 1 OF 2			
Project no./No. du projet	Drawing no./No. du dessin	Revision no.	
R.111193.001	M08 OF XX	0	



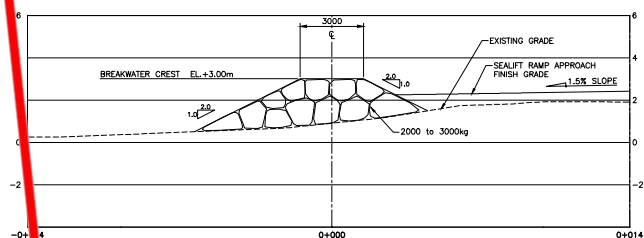
NORTHEAST BREAKWATER AND SEALIFT BREAKWATER
STATION 0+000 TO 0+080 (BASED ON SECTION 0+065)



NORTHEAST BREAKWATER
STATION 0+080 TO 0+120 (BASED ON SECTION 0+098)



NORTHEAST BREAKWATER
STATION 0+120 TO 0+152 (BASED ON SECTION 0+140)



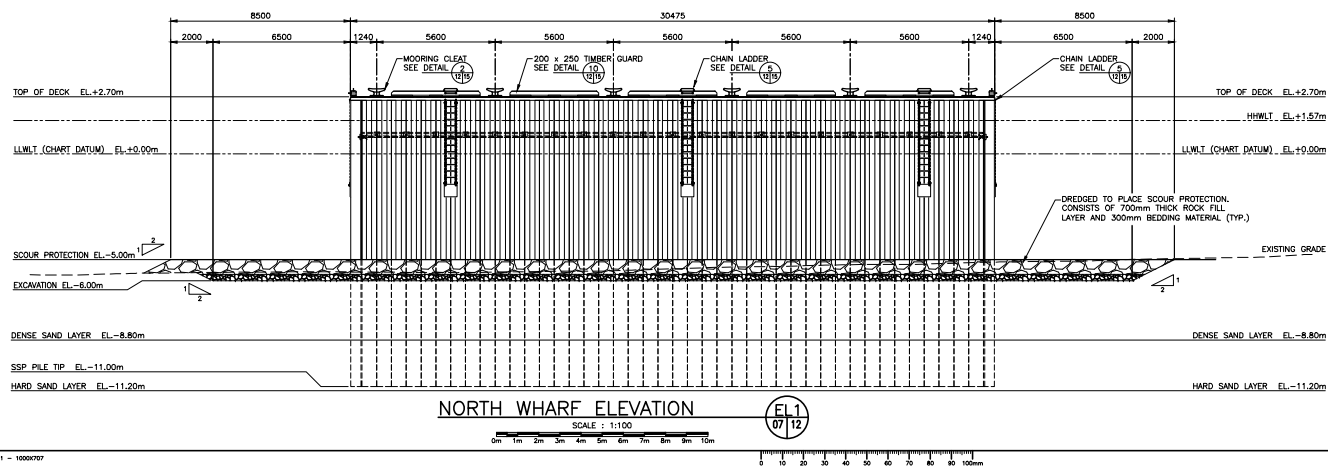
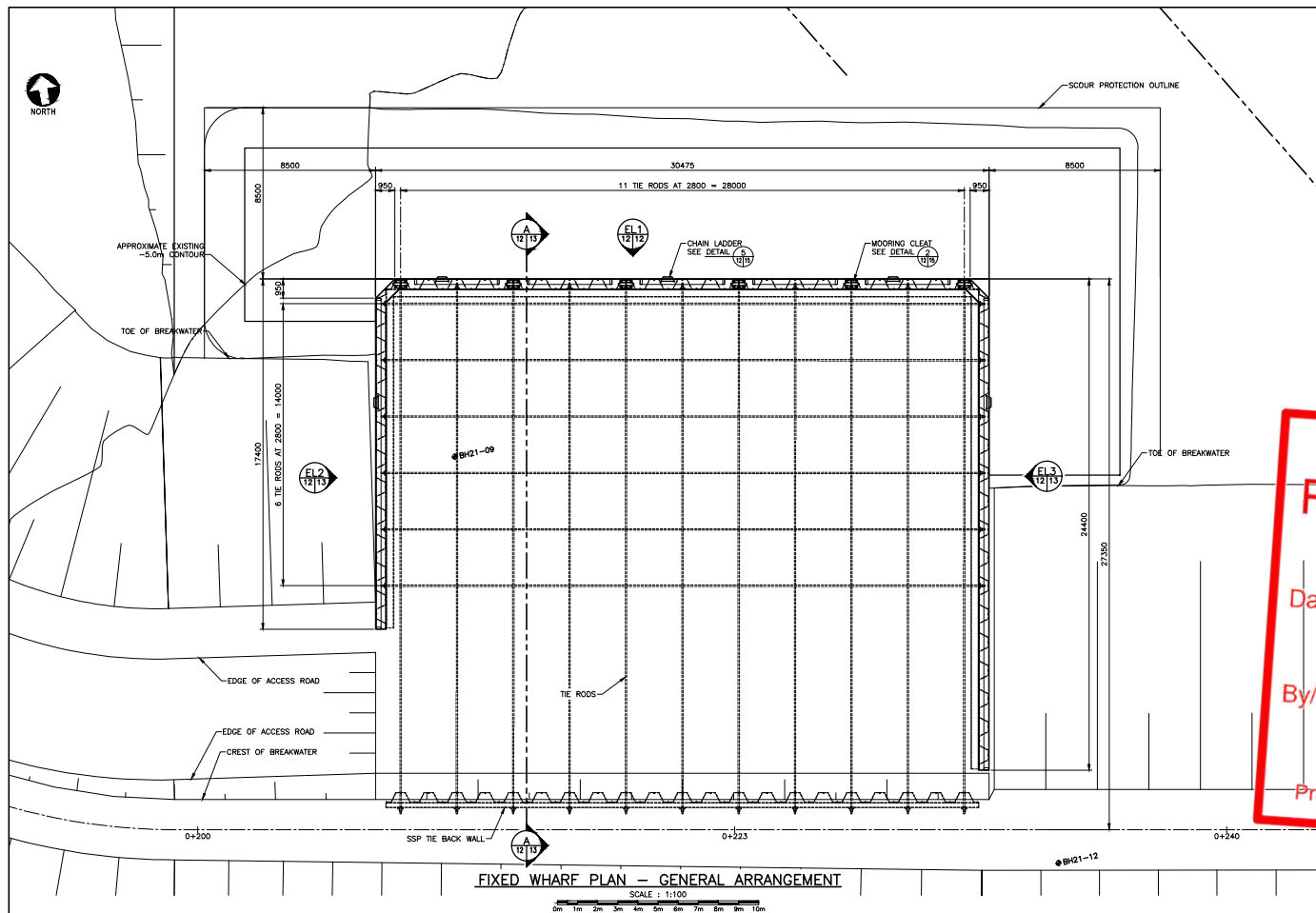
SEALIFT BREAKWATER
STATION 0+000 TO 0+078 (BASED ON SECTION 0+014)

Reviewed / Examiné

Date : December 23, 2021

By/par : *Racquel Creces*
RACQUEL CRECES
Navigation Protection Program /
Programme de Protection de la Navigation

REAL PROPERTY SERVICES Western Region SERVICES IMMOBILIERS Région de l'ouest													
PRELIMINARY NOT FOR CONSTRUCTION													
SMALL CRAFT HARBOURS ONTARIO AND PRAIRIE REGION													
<table border="1"> <tr> <td colspan="2">A</td> <td>ISSUED FOR 642 REVIEW</td> <td>2021</td> </tr> <tr> <td>Revision</td> <td>Drawn/élu</td> <td>Date</td> <td></td> </tr> <tr> <td>Client</td> <td colspan="2"></td> <td>client</td> </tr> </table>		A		ISSUED FOR 642 REVIEW	2021	Revision	Drawn/élu	Date		Client			client
A		ISSUED FOR 642 REVIEW	2021										
Revision	Drawn/élu	Date											
Client			client										
SMALL CRAFT HARBOURS ONTARIO AND PRAIRIE REGION													
CLYDE RIVER, NU HARBOUR CONSTRUCTION													
<table border="1"> <tr> <td>Designed by</td> <td>Conçu par</td> </tr> <tr> <td>Drawn by</td> <td>Dessiné par</td> </tr> <tr> <td>Approved by</td> <td>Approuvé par</td> </tr> <tr> <td>PMSC Project Manager</td> <td>Administrateur de Projets (PMS)</td> </tr> <tr> <td>Drawing title</td> <td>Titre du dessin</td> </tr> </table>		Designed by	Conçu par	Drawn by	Dessiné par	Approved by	Approuvé par	PMSC Project Manager	Administrateur de Projets (PMS)	Drawing title	Titre du dessin		
Designed by	Conçu par												
Drawn by	Dessiné par												
Approved by	Approuvé par												
PMSC Project Manager	Administrateur de Projets (PMS)												
Drawing title	Titre du dessin												
NORTHEAST BREAKWATER AND SEALIFT BREAKWATER SECTIONS													
Project no./No. du projet R.111193.001	Drawing no./No. du dessin M10 OF XX												
Revision no. 0													



Reviewed / Examiné
Date : December 23, 2021
By/par : *Racquel Creces*
RACQUEL CRECES
Navigation Protection Program /
Programme de Protection de la Navigation

PRELIMINARY
NOT FOR CONSTRUCTION

SMALL CRAFT HARBOURS
ONTARIO AND PRAIRIE REGION

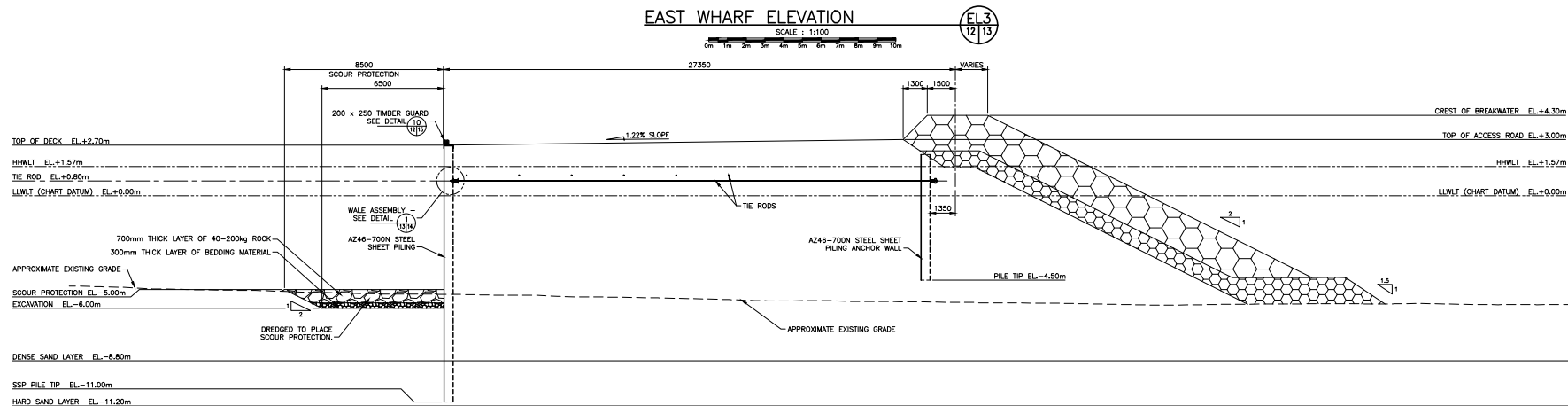
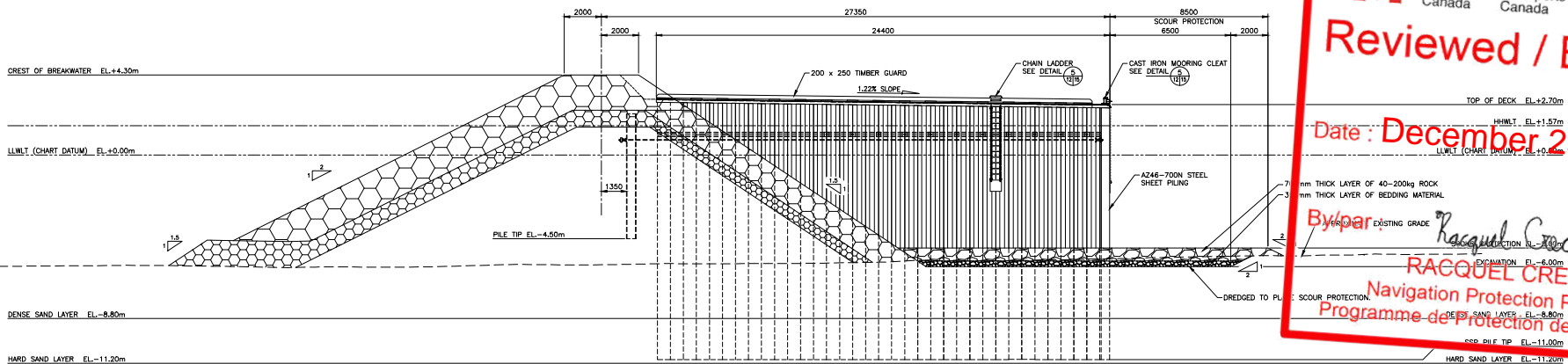
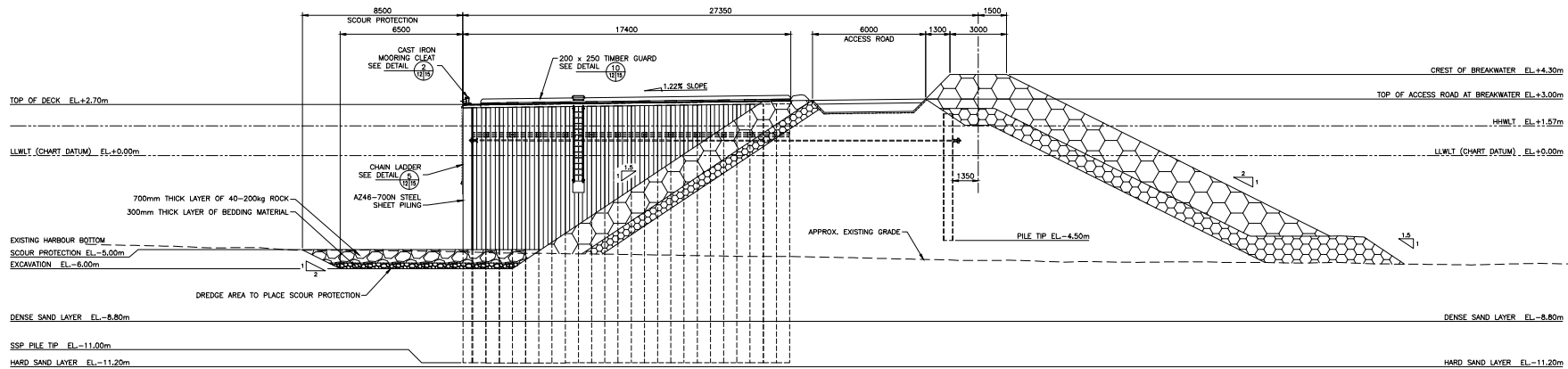


SMALL CRAFT HARBOURS
ONTARIO
AND PRAIRIE REGION

CLYDE RIVER, NU
HARBOUR CONSTRUCTION

FIXED WHARF
GENERAL ARRANGEMENT PLAN
AND ELEVATION

Project no./No. du projet: R.111193.001
Drawing no./No. du dessin: M12
Revision no.: 0



TYPICAL WHARF SECTION

SCALE: 1:100

Reviewed / Examiné
Date: December 23, 2021
By: par: *Racquel Creses*
RACQUEL CRESES
Navigation Protection Program /
Programme de Protection de la Navigation

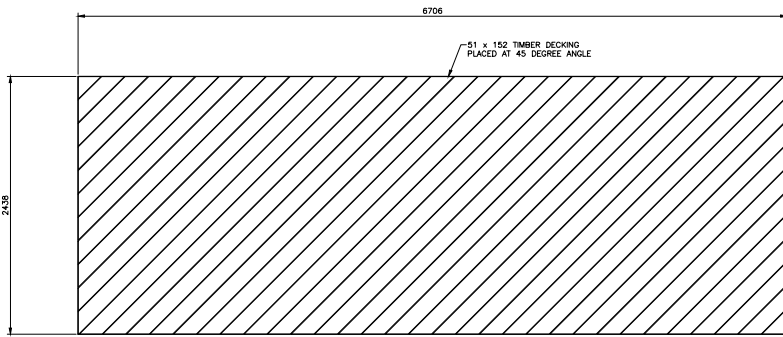
Public Works and Government Services Canada / Travaux publics et Services gouvernementaux Canada

REAL PROPERTY SERVICES / Services Immobiliers / Western Region / Région de l'ouest

PRELIMINARY
NOT FOR CONSTRUCTION

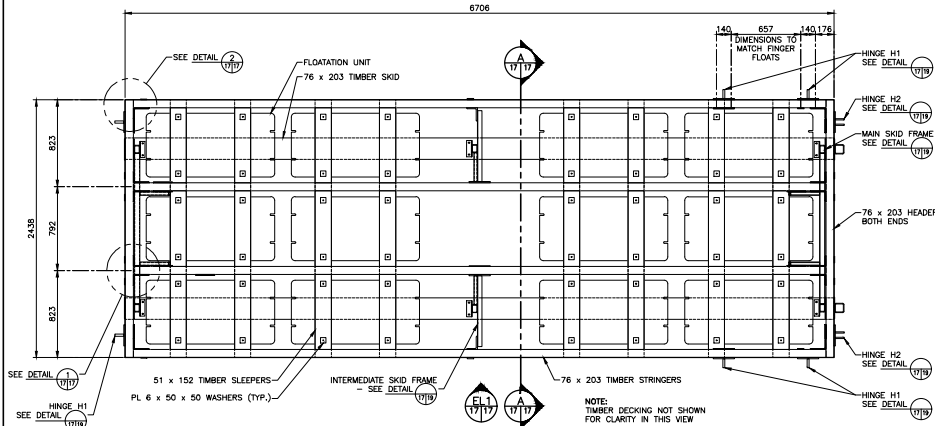
SMALL CRAFT HARBOURS ONTARIO AND PRAIRIE REGION

SMALL CRAFT HARBOURS ONTARIO AND PRAIRIE REGION	
Project	Projet
CLYDE RIVER, NU HARBOUR CONSTRUCTION	
Designed by	Conçu par
Drawn by	Dessiné par
Approved by	Approuvé par
PMSC Project Manager	Administrateur de Projets PMSC
Drawing title	Titre du dessin
FIXED WHARF ELEVATIONS AND SECTIONS	
Project no./No. du projet	Drawing no./No. du dessin
R.111193.001	M13
	OF XX
	0



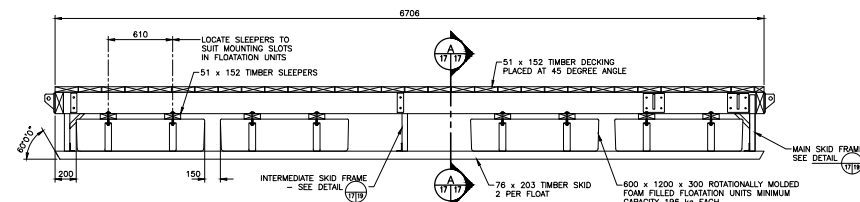
PRINCIPAL FLOAT WHARF OVERVIEW PLAN

SCALE: 1:20
0mm 500mm 1000mm 1500mm 2000mm 2500mm



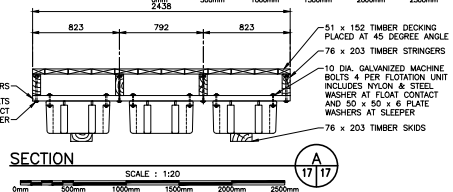
PRINCIPAL FLOAT WHARF MODULE PLAN

SCALE: 1:20
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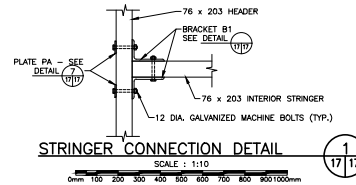
PRINCIPAL FLOAT WHARF MODULE ELEVATION

SCALE: 1:20
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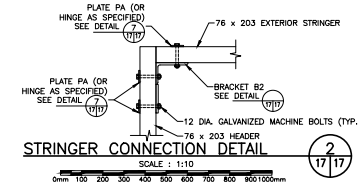
SECTION A-A

SCALE: 1:20
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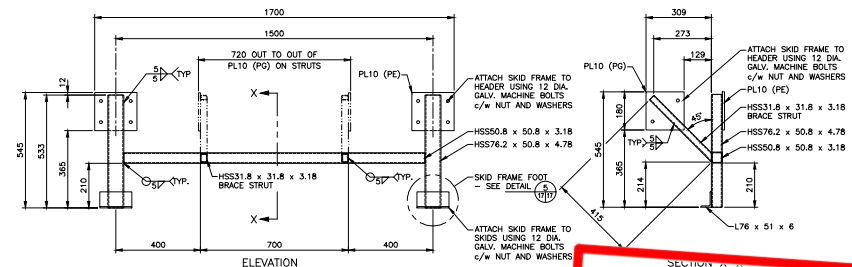
STRINGER CONNECTION DETAIL 1

SCALE: 1:10
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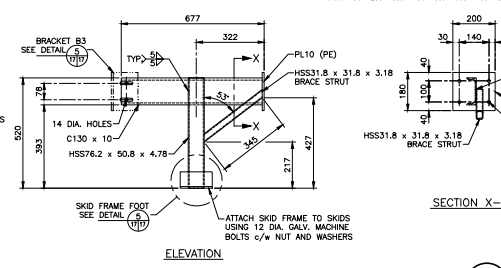
STRINGER CONNECTION DETAIL 2

SCALE: 1:10
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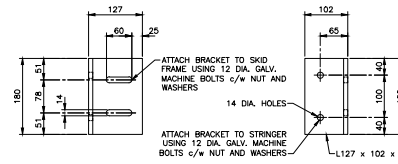
MAIN SKID FRAME DETAIL

SCALE: 1:10
0mm 100 200 300 400 500 600 700 800 900 1000mm



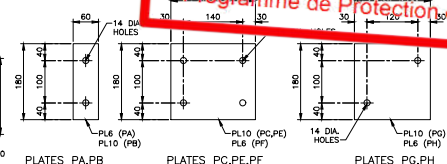
INTERMEDIATE SKID FRAME DETAIL

SCALE: 1:10
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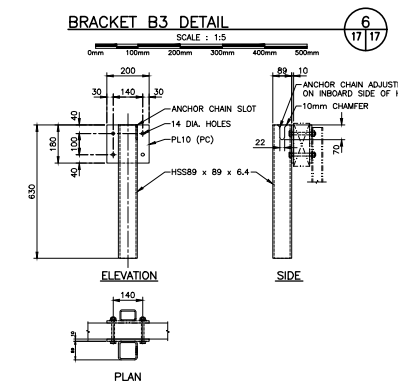
BRACKET B3 DETAIL

SCALE: 1:5
0mm 100mm 200mm 300mm 400mm 500mm



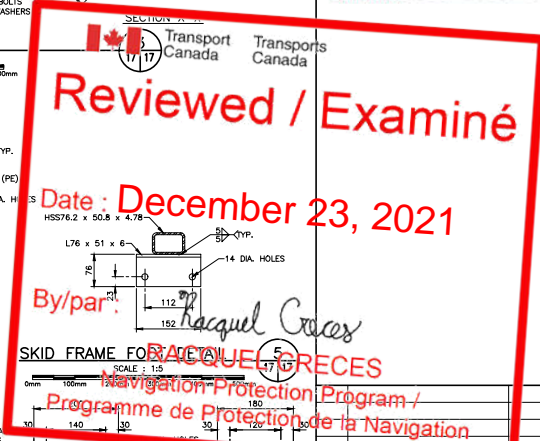
TYPICAL PLATE DETAILS

SCALE: 1:5
0mm 100mm 200mm 300mm 400mm 500mm



ANCHOR CHAIN GUIDE SLEEVE DETAIL

SCALE: 1:10
0mm 100 200 300 400 500 600 700 800 900 1000mm



PRELIMINARY
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SMALL CRAFT HARBOURS
ONTARIO AND PRAIRIE REGION



Revision	Issued For	Description	Date
A	ISSUED FOR 642 REVIEW		

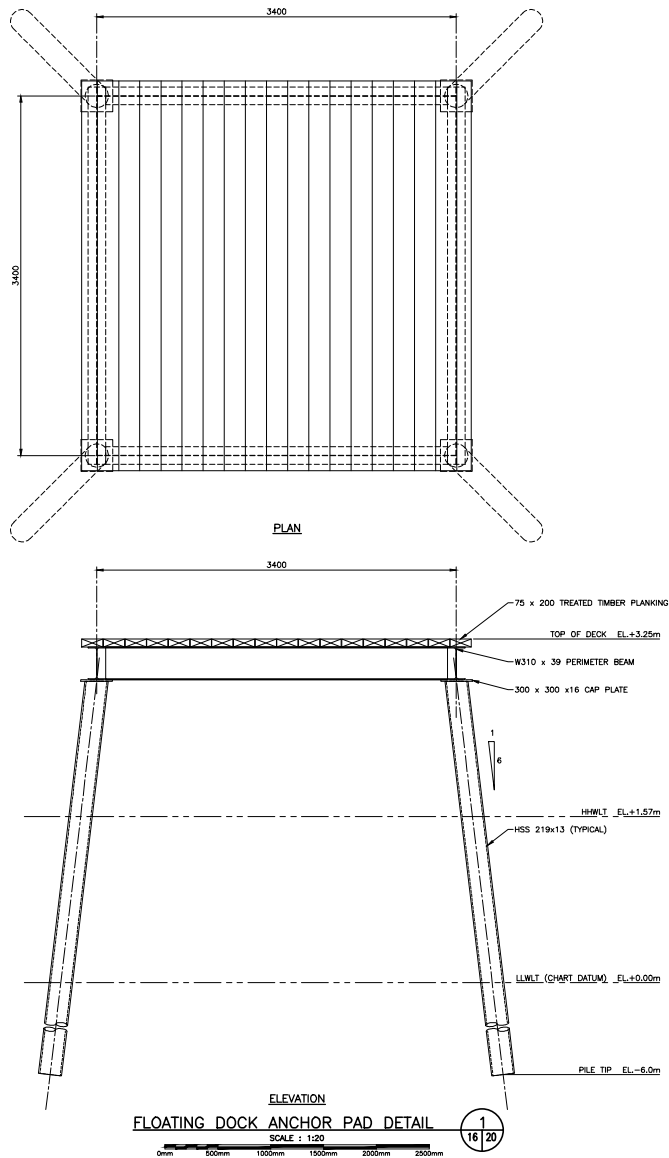
SMALL CRAFT HARBOURS
ONTARIO AND PRAIRIE REGION

CLYDE RIVER, NU
HARBOUR CONSTRUCTION

Designed by	Conçu par
Drawn by	Dessiné par
Approved by	Approuvé par
PMSC Project Manager	Administrateur de Projets PMSC
Drawing title	Titre du dessin

PRINCIPAL FLOAT WHARF
PLAN, SECTIONS AND
DETAILS

Project no./No. du projet	Drawing no./No. du dessin	Revision no.
R.111193.001	M17 OF XX	0



PRELIMINARY
NOT FOR CONSTRUCTION

SMALL CRAFT HARBOURS
ONTARIO AND PRAIRIE REGION



A	ISSUED FOR 642 REVIEW	2021
Revision	Description	Date
Client		Client

SMALL CRAFT HARBOURS
ONTARIO
AND PRAIRIE REGION

Project

CLYDE RIVER, NU
HARBOUR CONSTRUCTION

Designed by

Drawn by

Approved by

PMSC Project Manager

Drawing title

FLOAT WHARF ANCHOR
PAD PLAN, SECTION AND
DETAILS

Project no./No. du projet

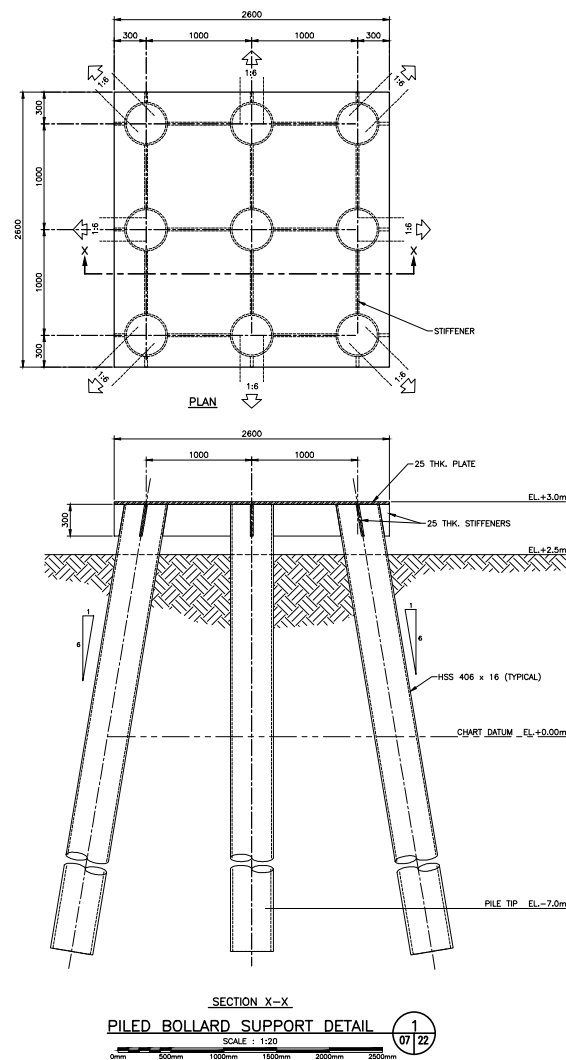
R.111193.001

Drawing no./No. de dessin

M20
OF XX

Revision no.

0





Southwest Breakwater (port hand side of harbour entrance):

Perception = Danger + Safety

Where Danger = 30m (0.016nm)

Safety = 1nm

$P = 0.016 + 1$

$P = 1.016\text{nm}$ (1nm)

A 7nm nominal range port hand light (Fl4s) has been recommended (270cd). In 2.2 nm design visibility with some residential background lighting, a luminous range of 1.8nm will be attained. In good visibility this light will be seen at the entrance of Patricia Bay. A 1 mile port hand daybeacon will enhance the visibility of the aid during daylight hours. In order to obtain a sufficient sized lantern, considerable background lighting has been used.

Recommendation:

Establish a green port hand light, on the end of the southwest breakwater, Fl4s (Fl1sEc3s), 270 cd, NR 7nm, LR 1.8nm using some background lighting, 10 degree vertical divergence operating at night only. A minimum sized pole of 3m (10ft) with a 1.08m port hand daybeacon facing to sea. Suggested Aid ID, Kanngiqtugaapik Breakwater Light LL#2630.

Northeast Breakwater (starboard hand side of harbour entrance):

Perception = Danger + Safety

Where Danger = 30m (0.016nm)

Safety = 1nm

$P = 0.016 + 1$

$P = 1.016\text{nm}$ (1nm)

With a larger lantern on the port hand side of the entrance to the port, the starboard hand light can be reduced in intensity. A 4nm nominal range starboard hand light (Fl4s) has been recommended (36cd). In 2.2 nm design visibility with some background lighting, a luminous range of 1.1nm will be attained. In order to obtain a sufficient sized lantern, considerable background lighting has been used.

Recommendation:

Establish a red starboard hand light, on the end of the northeast breakwater, Fl4s (Fl1sEc3s), 36 cd, NR 4nm, LR 1.1nm using some background lighting, 10 degree vertical divergence operating at night only. A minimum sized pole of 4m (13ft) with 3 horizontal bands of retroreflective tape. Suggested Aid ID, Kanngiqtugaapik Breakwater Light LL#2631.

RECOMMENDATIONS

Options/Recommendations



1. Establish port hand light on southwest breakwater.
2. Establish starboard hand light on northeast breakwater.

