



Public Works and
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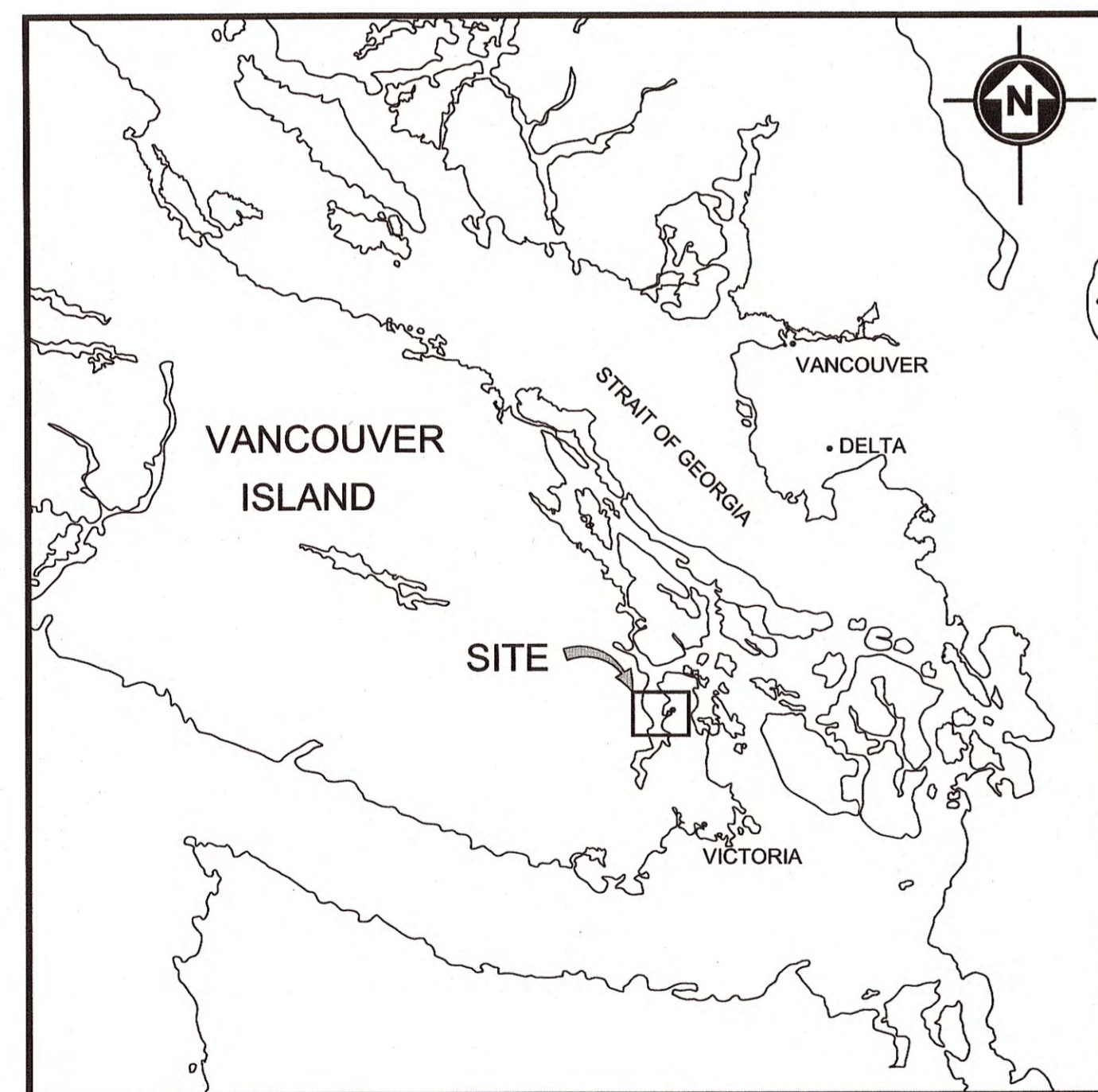
REAL PROPERTY SERVICES
Pacific Region

SERVICES IMMOBILIERS
Région de Pacifique

INSTITUTE OF OCEAN SCIENCES (IOS)
TIMBER AND CONCRETE FLOATS
A, B1, B2, C & D INSTALLATION



DRAWING LIST



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Revision/	Description/Description	Date/Date
5	ISSUED FOR TENDER	16/09/23
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1	ISSUED FOR CLIENT REVIEW	16/02/24
0	ISSUED FOR INTERNAL REVIEW	16/02/19

Client/Client
**FISHERIES AND OCEANS
SMALL CRAFT
HARBOURS BRANCH**

Project title/Titre du projet
**INSTITUTE OF OCEAN SCIENCES (IOS)
TIMBER AND CONCRETE FLOATS
A, B1, B2, C & INSTALLATION**

Consultant Signature Only
Designed by/Concept par
C. LEHANE / JANUARY 20, 2016
Drawn by/Dessiné par
E. YANG / JANUARY 14, 2016
PWGSC Project Manager/Administrateur de Projets TPSGC
Regional Manager, Architectural and Engineering Services
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Drawing title/Titre du dessin
COVER SHEET AND DRAWING LIST

Project No./No. du projet	Sheet/Feuille	Revision no./no. de Révision
9R306-2	000 OF XX	5

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DESIGN CRITERIA

1.0 CODE AND STANDARDS

THE STRUCTURE WILL BE DESIGNED TO CONFORM TO THE MOST CURRENT VERSION OF THE FOLLOWING CODES AND STANDARDS AT THE TIME OF DESIGN:

- BS6349 - MARINE STRUCTURES
- NATIONAL BUILDING CODE OF CANADA (NBCC)
- CSA S6 - "CANADIAN HIGHWAY BRIDGE DESIGN CODE"

2.0 MATERIALS AND TESTING

MATERIALS AND TESTING WILL BE SPECIFIED TO CONFORM TO THE MOST CURRENT EDITION OF THE RELEVANT STANDARDS, WHERE APPLICABLE, AS PUBLISHED BY THE FOLLOWING ORGANIZATIONS:

- CANADIAN STANDARDS ASSOCIATION (CSA)
- AMERICAN SOCIETY OF TESTING AND MATERIALS (ASTM)

3.0 DESIGN LIFE

THE COMPONENTS OF THE WORKS ARE DESIGNED FOR THE FOLLOWING SERVICE LIFE:

- PRIMARY COMPONENTS OF MARINE STRUCTURES (PILES, REINFORCED CONCRETE, STRUCTURAL STEEL, GANGWAYS): 40 YEARS
- MISCELLANEOUS STEEL COMPONENTS (GUARDRAILS, HANDRAILS, LADDERS, BOLLARDS): 25 YEARS
- FENDERS, CHAINS, WIRE ROPE AND ASSOCIATED HARDWARE: 20 YEARS
- TIMBER FLOATS: 20 YEARS

4.0 ENVIRONMENTAL LOADS AND EFFECTS

ENVIRONMENTAL LOADS ARE IN ACCORDANCE WITH THE DATA PUBLISHED IN CSA S6. THE RELEVANT DATA ARE AS FOLLOWS:

- HOURLY WIND PRESSURE: 0.595 kPa
- MAXIMUM TEMPERATURE: 24°C
- MINIMUM TEMPERATURE: -14°C

5.0 MARINE DESIGN CRITERIA

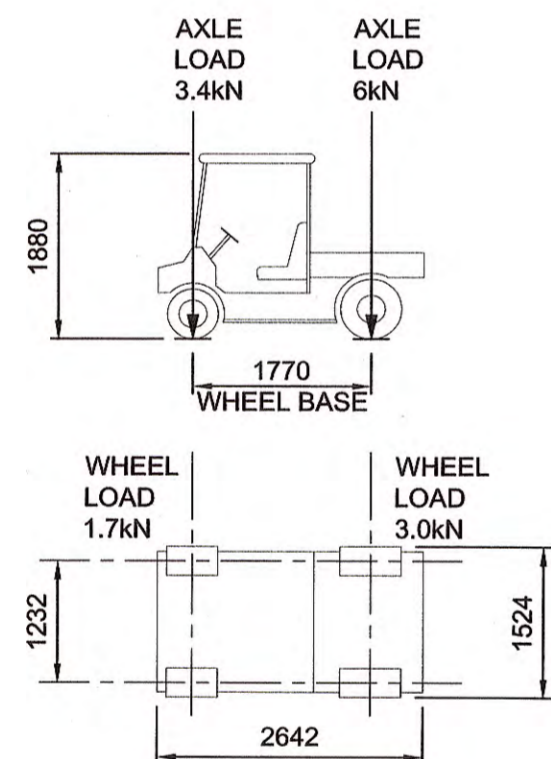
DESIGN WATER LEVELS (CD):

- HISTORIC EXTREME HIGH WATER LEVEL (H.E.H.W.L.): 4.38m
- HIGHER HIGH WATER LARGE TIDE (H.H.W.L.T.): 3.7m
- MEAN WATER LEVEL (M.W.L.): 2.3m
- LOWER LOW WATER LARGE TIDE (L.L.W.L.T.): -0.1m
- HISTORIC EXTREME LOW WATER LEVEL (H.E.L.W.L.): -0.43m

6.0 DESIGN LOADS

6.1 DESIGN VEHICLE

JOHN DEERE GATOR TS 4x2 AS SHOWN BELOW:



DESIGN VEHICLE ON FLOAT B1 RAMP ABUTMENT AS PER VILLHOLTH JENSEN & ASSOC. LTD DRAWING 215132-101_REV A, DATED 2015-12-14.

6.2 TIMBER FLOATS

- STRENGTH: UDL OF 2.4kPa, 3kN POINT LOAD OVER 200mmx200mm AREA, OR LOAD FROM DESIGN VEHICLE (GATOR).
- STABILITY: MEET FREEBOARD REQUIREMENTS WITH GATOR POSITIONED ASYMMETRICALLY AND 2.4kPa UDL.
- BUOYANCY: MIN 250mm FREEBOARD (MIN RESERVE FREEBOARD OF 50mm) UNDER DEAD AND LIVE LOADS.

6.3 GANGWAY AND ABUTMENTS

- STRENGTH: UDL OF 4.8kPa, 3kN POINT LOAD OVER 200mmx200mm AREA, OR LOAD FROM DESIGN VEHICLE (GATOR).

6.4 MOORING LOADS

	FLOAT A, B & C	FLOAT D
WORKING LOAD	39kN	89kN
HORIZONTAL RANGE	±90°	±90°
VERTICAL RANGE	±45°	±45°

6.5 BERTHING LOADS

NEW FLOATS SHALL BE DESIGNED FOR THE FOLLOWING:

- APPROACH VELOCITY (ALONG VESSEL AXIS): 0.3m/s
- BERTHING ANGLE: 30°
- IMPACT POINT: 1/3 POINT
- FRICTION FACTOR: STEEL/TIMBER 0.4, STEEL/FENDER 0.3

6.6 SEISMIC LOADS

SEISMIC LOADS ARE IN ACCORDANCE WITH CSA S6-14. THE HORIZONTAL GROUND MOTIONS FOR THE REFERENCE SITE CONDITIONS AND FOR THE 2475 YEARS RETURN PERIOD ARE AS FOLLOWS:

Sa (0.2)	Sa (0.5)	Sa (1.0)	Sa (2.0)	PGA
1.231	1.108	0.641	0.378	0.544

7.0 DESIGN VESSELS

VESSEL	LOA (m)	BEAM (m)	DRAFT (m)	DISP. (m)	LOCATION
SEVERN CLASS MOTOR LIFEBOAT - FUTURE	17.5	6.3	1.67	62.5	FLOAT A, B & C
KELSO CLASS VESSEL - FUTURE	17.95	5.2	1.5	59.4	FLOAT A, B & C
ATLIN POSTKITIMAT #Sooke - CURRENT	19.8	5.2	1.5	57.0	FLOAT A, B & C
MSV JOHN STRICKLAND - CURRENT	16.0	4.5	2.6	39.9	FLOAT A, B & C
MOTOR LIFEBOAT - CURRENT	14.6	4.27	1.37	34.0	FLOAT A, B & C
OTTER BAY - CURRENT	13.4	4.2	1.5	21.3	FLOAT A, B & C
RCMP CATAMARAN - CURRENT	19.75	6.7	1.0	-	FLOAT A, B & C
MID SHORE PATROL VESSEL(MSPV) - CURRENT	43.0	7.0	2.85	260	FLOAT D

MINIMUM UNDER KEEL CLEARANCE IS 0.5M.

8.0 DURABILITY

CORROSION ALLOWANCE IS:

- STEEL ABOVE THE SPLASH ZONE AND BELOW THE INTERTIDAL ZONE: 1mm
- ALL EXPOSED SURFACES WITHIN THE SPLASH AND INTERTIDAL ZONES: 3mm
- EXPOSED SURFACES PERMANENTLY SUBMERGED: 1mm
- BURIED STEEL: 1mm

SPLASH AND INTERTIDAL ZONE IS FROM EL -0.43m CD TO EL 4.4m CD. NO COATING OR CORROSION ALLOWANCE TO PILES OR GANGWAYS.

9.0 GEOTECHNICAL INFORMATION

- GEOTECHNICAL MEMO NO.1 - IOS FLOAT REPLACEMENT, 2015.
- COOK PICKERING & DOYLE LTD. SOILS INVESTIGATION PATRICIA BAY, BC, 1974.
- PILE LOGS INFORMATION FROM "NEW FLOAT FOR MSPV MOORAGE AS-BUILT DRAWING DWG 496-003_REV F, DATED NOV 26, 2014, BY HUGH TUTTLE, P. ENG.
- THURBER ENGINEERING LTD. INSTITUTE OF OCEAN SCIENCES MARINE SIDE ELECTRICAL UPGRADE GEOTECHNICAL ASSESSMENT, 2016.
- THURBER ENGINEERING LTD. INSTITUTE OF OCEAN SCIENCES MARINE SIDE ELECTRICAL UPGRADE RESPONSE TO DESIGN QUESTIONS, 2016.

GENERAL NOTES

1.0 GENERAL

- THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE SPECIFICATIONS. FOR CONVENIENCE, CERTAIN EXTRACTS ARE REPRODUCED HERE, IN THE EVENT OF CONFLICT, THE SPECIFICATIONS WILL GOVERN.
- TOPOGRAPHY IS FROM JE. ANDERSON & ASSOCIATES, DISTRICT LOT 549, COWICHAN DISTRICT, INSTITUTE OF OCEAN SCIENCES, DATED FEBRUARY 3, 2016.
- BATHYMETRY IS DEVELOPED FROM POINT FILE INFORMATION. "IOS_BATHY_CLEANED_OHS" RECEIVED FROM CLIENT (DFO) ON DECEMBER 22, 2015.
- ALL DEPTHS ARE IN METRES AND ARE REFERENCED TO CHART DATUM. TO CONVERT FROM CHART DATUM TO GEODETIC, SUBTRACT 2.097 METRES.
- HORIZONTAL DATUM IS UTM NAD83 GROUND.
- DIMENSIONS ARE IN MILLIMETRES, UNLESS NOTED OTHERWISE.
- THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND DETAILS PRIOR TO FABRICATION AND/OR CONSTRUCTION. ANY DISCREPANCIES SHALL BE PROMPTLY BROUGHT TO THE ATTENTION OF THE ENGINEER.

2.0 STEEL PIPE PILE FABRICATION

- THE STEEL PIPES TO BE INSTALLED UNDER THIS CONTRACT ARE SUPPLIED BY THE CLIENT.
- THE STEEL PIPE SUPPLIED BY THE CLIENT CONFORMS TO ASTM A252 GRADE 3.
- IF FIELD SPlicing BECOMES NECESSARY, SPLICES SHALL BE MADE BY FULL PENETRATION BUTT WELDS WITH BACKING PLATE PROCEDURES CONFORMING TO CSA W59, CLAUSE 12. FIELD SPlicing IS ONLY PERMITTED AS SHOWN ON THE DRAWINGS OR WHEN APPROVED BY THE ENGINEER.
- PIPE SECTIONS SHORTER THAN 3 METRES IN LENGTH SHALL NOT BE USED FOR FABRICATION INTO PILES UNLESS APPROVED BY THE ENGINEER.

3.0 STEEL PIPE PILE INSTALLATION

- CONTRACTOR SHALL PROVIDE A HAMMER OF SUITABLE SIZE AND ENERGY TO INSTALL THE PILES TO THE REQUIRED PENETRATION WITHOUT DAMAGE TO THE PILES.
- PRIOR TO DRIVING, THE PILES SHALL BE LOCATED WITH PROPER ALLOWANCES FOR THEIR MOVEMENT DURING DRIVING OPERATIONS TO ACHIEVE THE POSITION INDICATED ON THE DRAWINGS.
- PILE LOCATIONS PROVIDED ON THE DRAWINGS ARE TO CUT-OFF ELEVATIONS.
- CLEARLY MARK EACH PILE WITH ITS NUMBER AND ITS OVERALL LENGTH. IN ADDITION, CLEARLY MARK EACH PILE AT INTERVALS OF 300mm ALONG ITS FULL LENGTH PRIOR TO INSTALLATION.
- MAINTAIN ACCURATE RECORDS OF THE BLOW COUNTS FOR EACH 300mm OF PENETRATION FOR THE ENTIRE LENGTH OF THE PILE AND FOR EACH 25mm FOR THE FINAL 150mm OF PENETRATION.
- CUT OFF PILES NEATLY AND SQUARELY AT THE ELEVATIONS INDICATED. REMOVE CUT-OFF LENGTHS FROM SITE.
- THE INTEGRITY OF THE PILES DURING CONSTRUCTION SHALL REMAIN AT ALL TIMES THE RESPONSIBILITY OF THE CONTRACTOR.
- THE ADVANCED PILES SHALL HAVE A MAXIMUM TOLERANCE OF ±2% FROM INTENDED BATTER OR VERTICALITY. PILES SHALL BE DRIVEN TO WITHIN 75mm OF THE TRUE POSITION AND THE PILE CUT-OFF ELEVATION SHALL NOT BE MORE THAN 20mm FROM THAT INDICATED ON DRAWINGS.
- INSTALLATION OF EACH PILE SHALL BE APPROVED BY THE ENGINEER.

4.0 CONCRETE

- CONCRETE MATERIALS AND CONSTRUCTION SHALL CONFORM TO CSA A23.1/A23.2.
- ENSURE CONCRETE SUPPLIER'S CERTIFICATION FOR BOTH BATCH PLANT AND MATERIALS MEET CSA A23.1/A23.2 REQUIREMENTS.
- CONTRACTOR'S CONCRETE MIX DESIGNS SHALL CONFORM TO THE FOLLOWING REQUIREMENTS AND BE SUBMITTED TO THE ENGINEER FOR REVIEW:

- CLASS OF EXPOSURE ACCORDING TO CSA A23.1: C-1 AND S-3
- MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS: 35MPA
- MAXIMUM AGGREGATE SIZE: 20mm

4.1 MINIMUM COVER TO REINFORCEMENT:

- CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 75mm
- SOFFITS OF ELEVATED STRUCTURES: 100mm
- ELSEWHERE (UNLESS NOTED OTHERWISE): 60mm

4.2 SET EMBEDDED STEEL TRUE TO POSITION SHOWN WITHIN ±3mm.

4.3 PLACE ANCHOR BOLTS TO MEET THE FOLLOWING TOLERANCES:

- BOLTS WITHIN A GROUP: ±3mm
- BOLT GROUP TO ADJACENT BOLT GROUP: ±6mm
- PROJECTION FROM DESIGNATED SURFACES: ±6mm

4.4 POUR JOINT LOCATIONS SHALL BE PROPOSED BY THE CONTRACTOR AND ARE SUBJECT TO PRIOR APPROVAL BY THE ENGINEER. ALL POUR JOINTS SHALL BE ROUGHENED TO 5mm AMPLITUDE AND THOROUGHLY CLEANED.

5.0 CONCRETE REINFORCEMENT

- REINFORCEMENT STEEL SHALL BE DEFORMED BARS TO CSA-G30.18, GRADE 400R.
- REINFORCEMENT STEEL FABRICATION SHALL BE IN ACCORDANCE WITH CSA-A23.1/A23.2.
- SPLICES SHALL BE USED ONLY AS PERMITTED BY THE ENGINEER. APPROVED LAP SPLICES TO BE CLASS B TENSION SPLICES UNLESS DIRECTED OTHERWISE.
- SPLICE SHALL BE STAGGERED TO AVOID CONGESTION.
- NO WELDING OF REINFORCEMENT STEEL IS PERMITTED UNLESS DIRECTED OTHERWISE BY THE ENGINEER IN WRITING.
- ONLY NON-FERROUS REINFORCEMENT BAR SUPPORTS (CHAIRS) SHALL BE USED.

6.0 STRUCTURAL STEEL

- FABRICATE AND ERECT STRUCTURAL STEEL TO CSA S16.
- STRUCTURAL STEEL SHALL CONFORM TO CSA G40.20/G40.21 WITH THE FOLLOWING GRADES:
 - PLATES < 13mm: GRADE 300W OR GRADE 350W
 - PLATES > 13mm AND HSS: GRADE 350W
 - STANDARD CHANNELS AND ANGLES: GRADE 300W
 - WELDED AND ROLLED SECTIONS: GRADE 350W
- SUBMIT FABRICATION DRAWINGS FOR ALL STEEL WORK PRIOR TO COMMENCING FABRICATION. THE ENGINEER'S REVIEW OF FABRICATION DRAWINGS WILL BE TO ASCERTAIN COMPLIANCE WITH THE DESIGN CONCEPT ONLY AND SHALL NOT RELIEVE THE FABRICATOR OF RESPONSIBILITIES UNDER THEIR CONTRACT.

7.0 MISCELLANEOUS METALS

- MISCELLANEOUS PIPE FOR METAL FABRICATIONS AND HANDRAILS SHALL CONFORM TO ASTM A53 TYPE XS, GRADE A.
- GUSSET PLATES AND STIFFENER PLATES SHALL HAVE A MINIMUM THICKNESS OF 8mm UNLESS NOTED OTHERWISE.
- END COVER PLATES SHALL HAVE A MINIMUM THICKNESS OF 6mm AND BE SEAL WELDED UNLESS NOTED OTHERWISE.
- BOLTED CONNECTIONS SHALL BE COMPRISED OF ASTM A325, TYPE 1 HIGH STRENGTH BOLTS, GALVANIZED UNLESS NOTED OTHERWISE.
- ANCHOR BOLTS SHALL BE HOT-DIP GALVANIZED AND CONFORM TO ASTM A307, GRADE A UNLESS NOTED OTHERWISE.
- GALVANIZING TO ASTM A123 OR ASTM A153 OR ASTM F2329 AS APPLICABLE.
- ALL BOLTS SHALL BE 19mm DIAMETER, WITH THREADS EXCLUDED FROM SHEAR PLANES UNLESS NOTED OTHERWISE.
- ALL BOLT SIZES ARE SOFT CONVERSIONS FROM IMPERIAL SERIES BOLTS.
- GRATING TO BE STRONG WELL FRP "DURAGRATE" MINI-GRID 38mm DEEP WITH NON-SLIP SURFACE USING SURFACE MOUNTED FASTENERS OR APPROVED EQUIVALENT. GRATING PANEL WEIGHT NOT TO EXCEED 40kg, MINIMUM OF 4 FASTENERS PER PANEL.
- ALL BOLTED CONNECTIONS TO INCLUDE A COAT OF BRUSHABLE BITUMEN BASED WATERPROOF.

8.0 WELDING

- PERFORM WELDING IN ACCORDANCE WITH CSA W59.
- ENSURE COMPANIES UNDERTAKING WELDING WORK ARE QUALIFIED AND CERTIFIED AS STATED IN THE REQUIREMENTS IN CSA W47.1.
- WELDING ELECTRODES SHALL CONFORM TO CSA W48, CLASS E49XX (E70XX).
- MINIMUM WELD SIZE TO BE 6mm AND ALL WELDS TO BE CONTINUOUS UNLESS NOTED OTHERWISE.

9.0 COATINGS

- ALL STEEL COMPONENTS SHALL BE COATED IN ACCORDANCE WITH THE SPECIFICATIONS.

10.0 TIMBER

- ALL TIMBER TO BE DOUGLAS FIR GRADE #1 OR GREATER.
- ALL HARDWARE TO BE HOT-DIP GALVANIZED.

11.0 DEMOLITION

- VERIFY WITH ENGINEER THE EXTENT AND LOCATION OF ITEMS TO BE REMOVED AND ITEMS TO REMAIN.
- REMOVE AND STORE MATERIALS TO BE SALVAGED IN A MANNER TO PREVENT DAMAGE.
- PREVENT MOVEMENT, SETTLEMENT OR DAMAGE TO ADJACENT STRUCTURES TO REMAIN IN PLACE.

REFERENCE DRAWINGS

- TIMBER FLOAT**
- FOR TIMBER FLOAT FRAMING AND DETAILS REFER TO FISHERIES AND OCEANS CANADA SMALL CRAFT HARBOURS BRANCH DRAWINGS:
- DWG FM12-HV-000_REV G - "2011 REVISION" 3.657M WIDE HEAVY FLOAT MODULE ASSEMBLY
 - DWG FM12-HV-001_REV G - "2011 REVISION" 3.657M WIDE HEAVY FLOAT MODULE ASSEMBLY
 - DWG FM12-HV-002_REV B - "2005 REVISION" 3.657M WIDE HEAVY FLOAT MODULE ASSEMBLY
 - DWG FM12-HV-003_REV B - "2005 REVISION" 3.657M WIDE HEAVY FLOAT MODULE ASSEMBLY
 - DWG FM12-HV-END-000_REV I, 3.657M WIDE FLOAT MODULE 2011 REVISION
 - DWG FM12-HV-END-001_REV I, 2011 REVISION 3.657M WIDE HEAVY END MODULES ASSEMBLY

CONCRETE FLOAT

- FOR CONCRETE FLOAT AND DETAILS REFER TO TETRA TECH DRAWINGS DATED 2015-11-18:
- 56134-0801-R8-CONCRETE FLOAT-SHEET 2 - CONCRETE OUTLINE, PLANS
 - 56134-0801-R8-CONCRETE FLOAT-SHEET 3 - REINFORCEMENT, FLOAT PLAN AND SECTIONS
 - 56134-0801-R6-CONCRETE FLOAT-SHEET 5 - REINFORCEMENT AT FLOAT CORNERS & WALL SECTIONS
 - 56134-0801-R9-CONCRETE FLOAT-SHEET 6 - METALWORK DETAILS
 - 56134-0801-R5-CONCRETE FLOAT-SHEET 7 - FLOATATION BILLET LAYOUTS AND HOISTING GUIDELINES
 - 56134-0801-R7-CONCRETE FLOAT-SHEET 8 - DUAL TYPE I TWO END TO END FLOAT LAYOUT
 - 56134-0801-R5-CONCRETE FLOAT-SHEET 12 - MODIFICATION DETAILS - FLOAT CORNER WITHOUT FLOAT TO FLOAT STEEL BAR CONNECTOR
 - 56134-0801-R7-CONCRETE FLOAT-SHEET 13 - PLAN VIEW LAYOUT - CONCRETE OUTLINE, QUAD FLOAT WITH STAGGERED SHELLS
 - 56134-0801-R2-CONCRETE FLOAT-SHEET 15 - DRAIN HOLE & EMBED LAYOUT - SINGLE, DUAL TYPE I, QUAD TYPE II
 - 56134-0801-R2-CONCRETE FLOAT-SHEET 18 - DUAL TYPE II - TWO FLOAT SIDE BY SIDE LAYOUT
 - 56134-0801-0-CONCRETE FLOAT-SHEET 21 - FLOAT JOINING DETAILS

VEHICLE RAMP

- FOR VEHICLE RAMP REFER TO VILLHOLTH JENSEN & ASSOC. LTD DRAWINGS DATED 2015-12-14:
- 215132 - 101_REV A - GENERAL ARRANGEMENT
 - 215132 - 102_REV A - ELEVATION IN HIGH/LOW POSITION
 - 215132 - 103_REV A - RAMP ARRANGEMENT
 - 215132 - 104_REV A - RAMP DETAILS - SHEET 1 OF 2
 - 215132 - 105_REV A - RAMP DETAILS - SHEET 2 OF 2
 - 215132 - 106_REV A - ABUTMENT APRON - PLAN, SECTIONS AND DETAILS
 - 215132 - 107_REV A - FLOAT APRON - PLAN, SECTIONS AND DETAILS
 - 215132 - 108_REV A - FLOAT & ABUTMENT APRONS - SECTIONS & DETAILS
 - 215132 - 109_REV A - RAMP GRATING - ARRANGEMENT AND DETAILS



2016-08-23

Revision/Revision	Description/Description	Date/Date
5		
4		
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Client/client

FISHERIES AND OCEANS SMALL CRAFT HARBOURS BRANCH

Project title/Titre du projet

INSTITUTE OF OCEAN SCIENCES (IOS) TIMBER AND CONCRETE FLOATS A, B1, B2, C & D INSTALLATION

Consultant Signature Only

Designed by/Concept par C. LEHANE / FEBRUARY 25, 2016

Drawn by/Desainé par E. YANG / FEBRUARY 25, 2016

PWOSC Project Manager/Administrateur de Projets TPWSC

Regional Manager, Architectural and Engineering Services / Gérant régional, Services d'architectural et de génie, TPWSC

Drawing title/Titre du dessin

DESIGN CRITERIA AND GENERAL NOTES

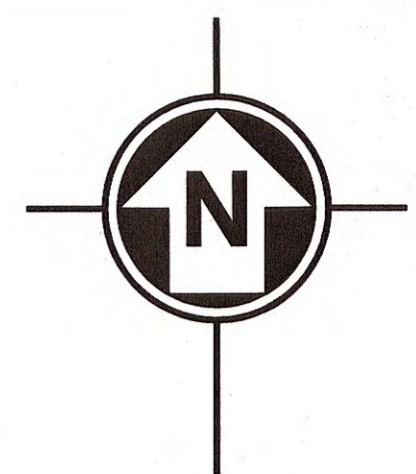
Project No./No. du projet: 9R306-2

Sheet/Fauille: 001 OF

Revision no./La Révision no.: 3

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5	ISSUED FOR TENDER	16/08/23
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2	ISSUED FOR CLIENT REVIEW	16/04/08
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**FISHERIES AND OCEANS
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Designed by/Conçu par
E. YANG / JANUARY 01, 2016

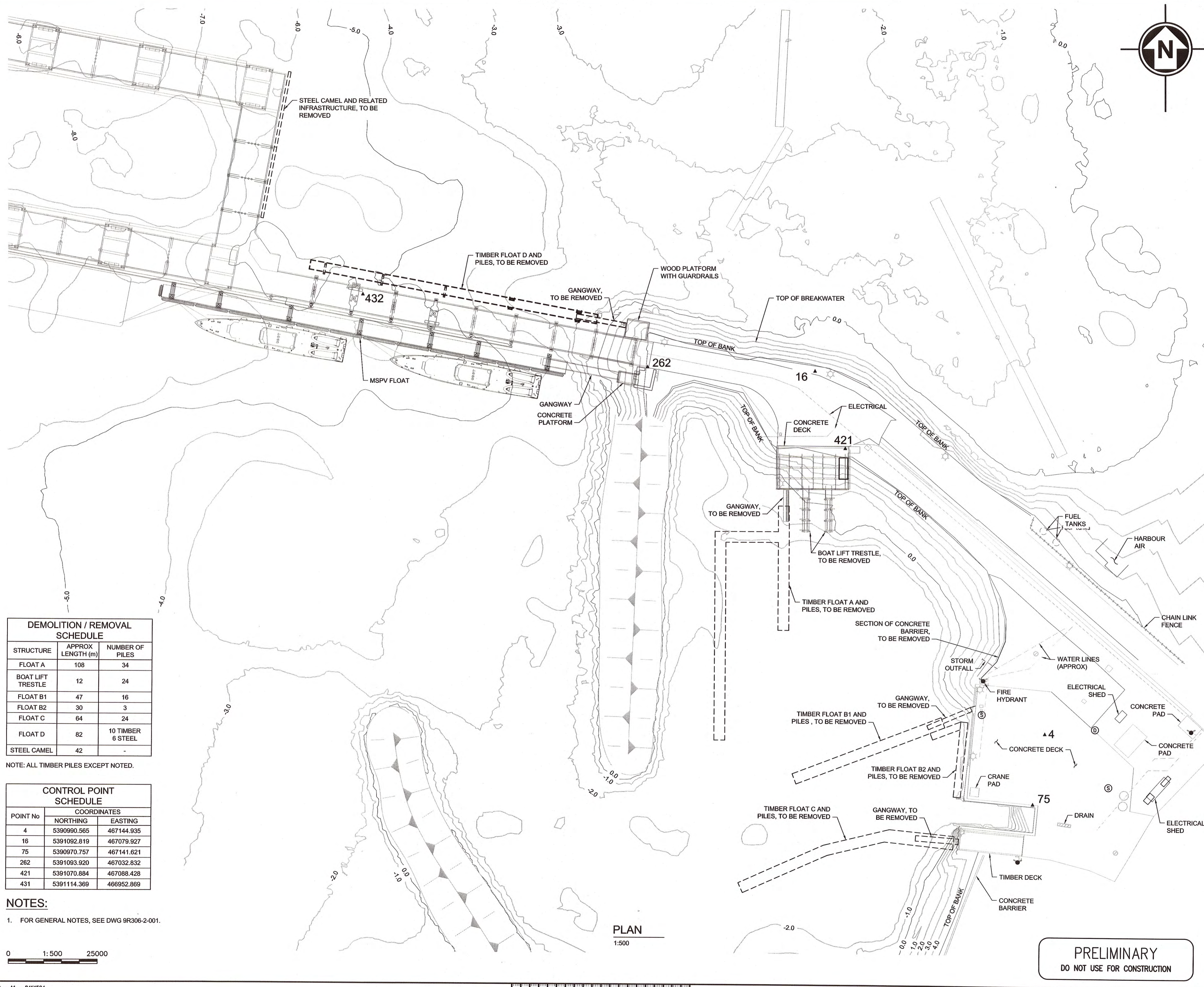
Drawn by/Dessiné par
E. YANG / JANUARY 21, 2016

PWSC Project Manager/Administrateur de Projets TPSGC

Regional Manager, Architectural and Engineering Services
Gestionnaire régional, Services d'architecture et de génie, TPSGC

Drawing title/Titre du dessin
**EXISTING SITE PLAN AND
DEMOLITION**

Project No./No. du projet 9R306-2	Sheet/Feuille 002 OF XX	Revision no./ La Révision no. 5
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DEMOLITION / REMOVAL SCHEDULE

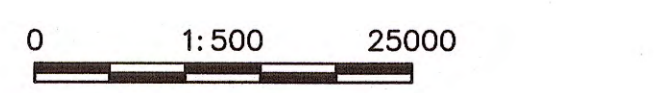
STRUCTURE	APPROX LENGTH (m)	NUMBER OF PILES
FLOAT A	108	34
BOAT LIFT TRESTLE	12	24
FLOAT B1	47	16
FLOAT B2	30	3
FLOAT C	64	24
FLOAT D	82	10 TIMBER 6 STEEL
STEEL CAMEL	42	-

NOTE: ALL TIMBER PILES EXCEPT NOTED.

CONTROL POINT SCHEDULE

POINT No	COORDINATES	
	NORTHING	EASTING
4	5390990.565	467144.935
16	5391092.819	467079.927
75	5390970.757	467141.621
262	5391093.920	467032.832
421	5391070.884	467088.428
431	5391114.369	466952.869

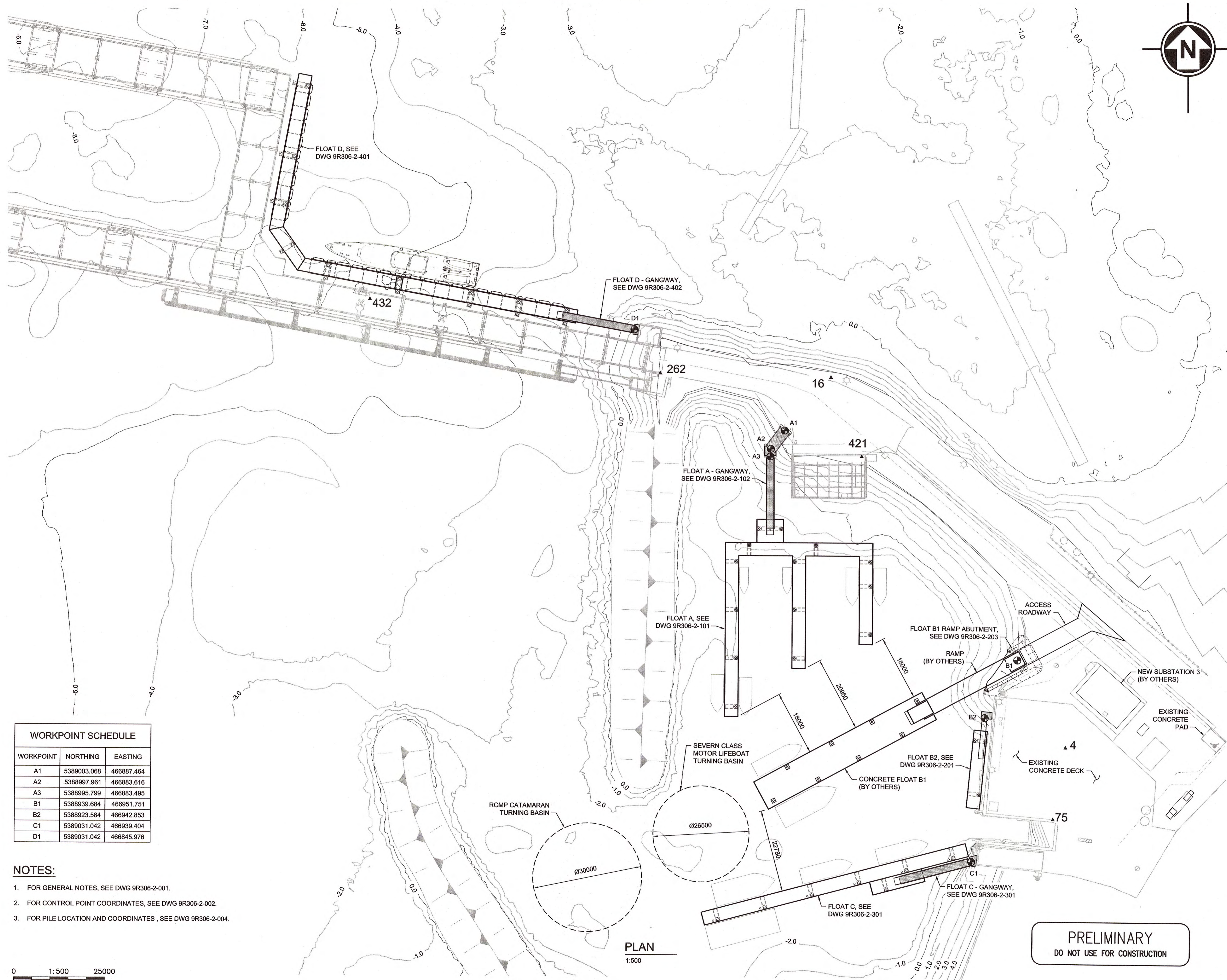
NOTES:
1. FOR GENERAL NOTES, SEE DWG 9R306-2-001.



PLAN
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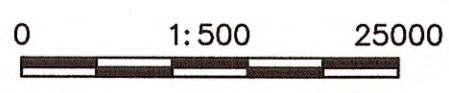
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JUST SAVE: 2016/08/23 - 10:08am
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 PWSC - A1 - 841X594



WORKPOINT SCHEDULE		
WORKPOINT	NORTHING	EASTING
A1	5389003.068	466887.464
A2	5388997.961	466883.616
A3	5388995.799	466883.495
B1	5388939.684	466951.751
B2	5388923.584	466942.853
C1	5389031.042	466939.404
D1	5389031.042	466845.976

- NOTES:**
- FOR GENERAL NOTES, SEE DWG 9R306-2-001.
 - FOR CONTROL POINT COORDINATES, SEE DWG 9R306-2-002.
 - FOR PILE LOCATION AND COORDINATES, SEE DWG 9R306-2-004.



PLAN
1:500

PRELIMINARY
DO NOT USE FOR CONSTRUCTION

Revision/Revision	Description/Description	Date/Date
5	ISSUED FOR TENDER	16/08/23
4	ISSUED FOR CLIENT REVIEW	16/07/13
3	ISSUED FOR CLIENT REVIEW	16/05/13
2	ISSUED FOR CLIENT REVIEW	16/04/08
1	ISSUED FOR CLIENT REVIEW	16/02/24
0	ISSUED FOR INTERNAL REVIEW	16/02/19

**FISHERIES AND OCEANS
SMALL CRAFT
HARBOURS BRANCH**

**INSTITUTE OF OCEAN SCIENCES (IOS)
TIMBER AND CONCRETE FLOATS
A, B1, B2, C & D INSTALLATION**

Client/client
Project title/Titre du projet
Consultant Signature Only
Designed by/Concept par
C. LEHANE / JANUARY 01, 2016
Drawn by/Designé par
E. YANG / JANUARY 21, 2016
PWSC Project Manager/Administrateur de Projets TPSC
Regional Manager, Architectural and Engineering Services
Gestionnaire régional, Services d'architecture et de génie, TPSC

Drawing title/Titre du dessin
GENERAL ARRANGEMENT

Project No./No. du projet 9R306-2	Sheet/Feuille 003 OF XX	Revision no./ La Révision no. 5
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 PWSC - A1 - 841X594



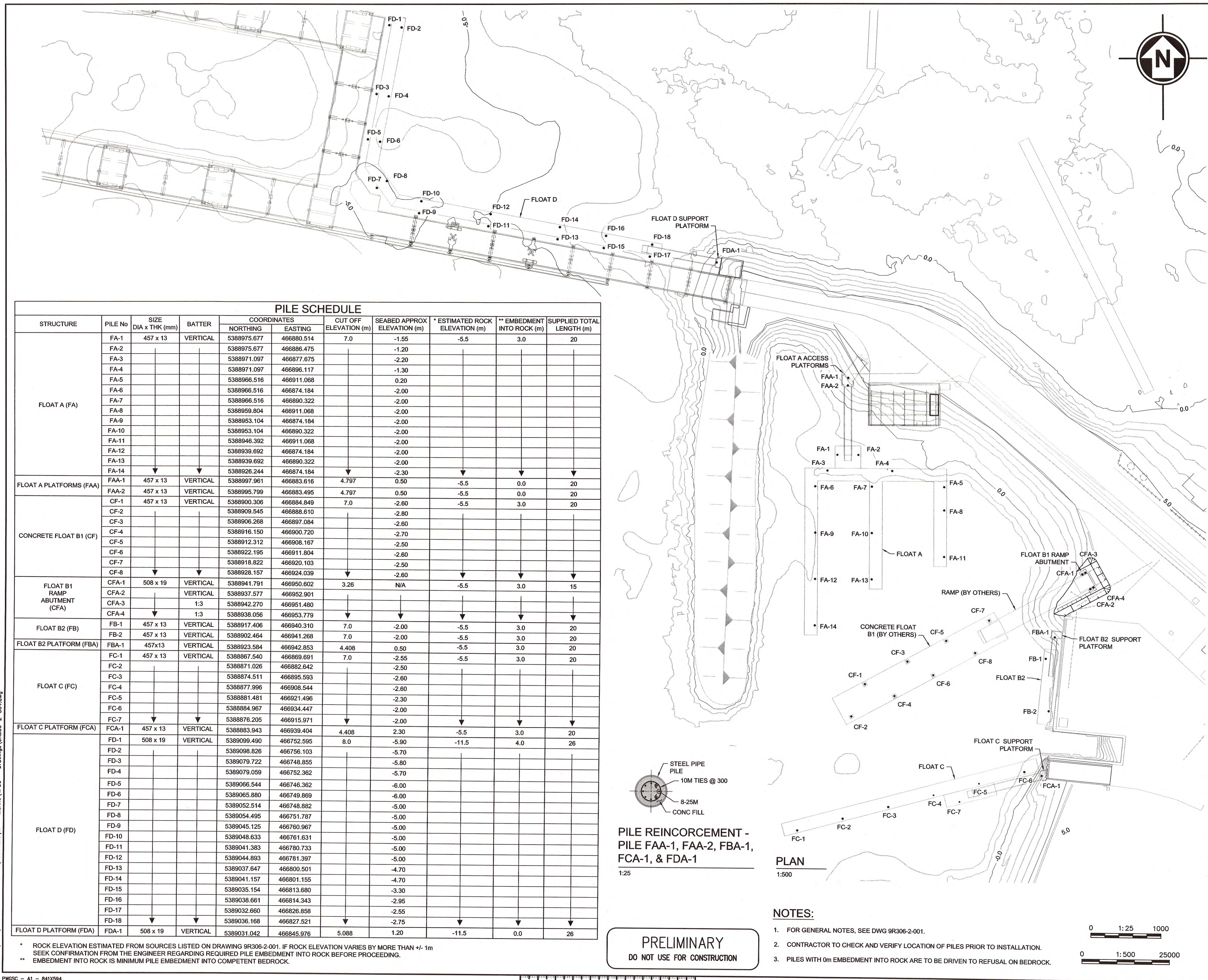
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2	ISSUED FOR CLIENT REVIEW	16/07/13
1	ISSUED FOR CLIENT REVIEW	16/05/13
0	ISSUED FOR CLIENT REVIEW	16/04/08

**FISHERIES AND OCEANS
 SMALL CRAFT
 HARBOURS BRANCH**

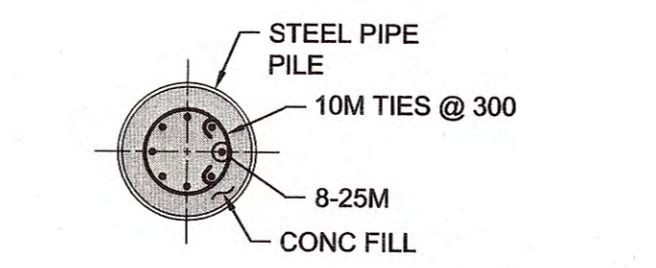
**INSTITUTE OF OCEAN SCIENCES (IOS)
 TIMBER AND CONCRETE FLOATS
 A, B1, B2, C & D INSTALLATION**

Client/client
 Consultant Signature Only
 Designed by/Conçu par
 C. LEHANE / JANUARY 25, 2016
 Drawn by/Dessiné par
 E. YANG / JANUARY 25, 2016
 PWGSC Project Manager/Administrateur de Projets TPSGC
 Regional Manager, Architectural and Engineering Services
 Gestionnaire régionale, Services d'architecture et de génie, TPSGC
 Drawing Title/Titre du dessin
PILE PLAN AND SCHEDULE

Project No./No. du projet 9R306-2	Sheet/Feuille 004 OF XX	Revision no./ La Révision no. 3
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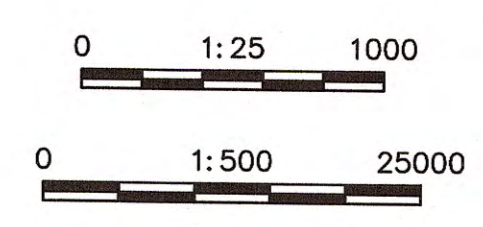
STRUCTURE	PILE No	SIZE DIA x THK (mm)	BATTER	COORDINATES		CUT OFF ELEVATION (m)	SEABED APPROX ELEVATION (m)	* ESTIMATED ROCK ELEVATION (m)	** EMBEDMENT INTO ROCK (m)	SUPPLIED TOTAL LENGTH (m)
				NORTHING	EASTING					
FLOAT A (FA)	FA-1	457 x 13	VERTICAL	5388975.677	466880.514	7.0	-1.55	-5.5	3.0	20
	FA-2			5388975.677	466886.475		-1.20			
	FA-3			5388971.097	466877.675		-2.20			
	FA-4			5388971.097	466896.117		-1.30			
	FA-5			5388966.516	466911.068		0.20			
	FA-6			5388966.516	466874.184		-2.00			
	FA-7			5388966.516	466890.322		-2.00			
	FA-8			5388959.804	466911.068		-2.00			
	FA-9			5388953.104	466874.184		-2.00			
	FA-10			5388953.104	466890.322		-2.00			
	FA-11			5388946.392	466911.068		-2.00			
	FA-12			5388939.692	466874.184		-2.00			
	FA-13			5388939.692	466890.322		-2.00			
	FA-14			5388926.244	466874.184		-2.30			
FLOAT A PLATFORMS (FAA)	FAA-1	457 x 13	VERTICAL	5388997.961	466883.616	4.797	0.50	-5.5	0.0	20
	FAA-2	457 x 13	VERTICAL	5388995.799	466883.495	4.797	0.50	-5.5	0.0	20
CONCRETE FLOAT B1 (CF)	CF-1	457 x 13	VERTICAL	5388900.306	466884.849	7.0	-2.60	-5.5	3.0	20
	CF-2			5388909.545	466888.610		-2.80			
	CF-3			5388906.268	466897.084		-2.60			
	CF-4			5388916.150	466900.720		-2.70			
	CF-5			5388912.312	466908.167		-2.50			
	CF-6			5388922.195	466911.804		-2.60			
	CF-7			5388918.822	466920.103		-2.50			
	CF-8			5388928.157	466924.039		-2.60			
FLOAT B1 RAMP ABUTMENT (CFA)	CFA-1	508 x 19	VERTICAL	5388941.791	466950.602	3.26	N/A	-5.5	3.0	15
	CFA-2		VERTICAL	5388937.577	466952.901					
	CFA-3		1:3	5388942.270	466951.480					
	CFA-4		1:3	5388938.056	466953.779					
FLOAT B2 (FB)	FB-1	457 x 13	VERTICAL	5388917.406	466940.310	7.0	-2.00	-5.5	3.0	20
	FB-2	457 x 13	VERTICAL	5388902.464	466941.268	7.0	-2.00	-5.5	3.0	20
FLOAT B2 PLATFORM (FBA)	FBA-1	457x13	VERTICAL	5388923.584	466942.853	4.408	0.50	-5.5	3.0	20
FLOAT C (FC)	FC-1	457 x 13	VERTICAL	5388867.540	466869.691	7.0	-2.55	-5.5	3.0	20
	FC-2			5388871.026	466882.642		-2.50			
	FC-3			5388874.511	466895.593		-2.60			
	FC-4			5388877.996	466908.544		-2.60			
	FC-5			5388881.481	466921.496		-2.30			
	FC-6			5388884.967	466934.447		-2.00			
	FC-7			5388876.205	466915.971		-2.00			
FLOAT C PLATFORM (FCA)	FCA-1	457 x 13	VERTICAL	5388883.943	466939.404	4.408	2.30	-5.5	3.0	20
	FCA-2			5389099.490	466752.595	8.0	-5.90	-11.5	4.0	26
FLOAT D (FD)	FD-1	508 x 19	VERTICAL	5389098.826	466756.103		-5.70			
	FD-2			5389079.722	466748.855		-5.80			
	FD-3			5389079.059	466752.362		-5.70			
	FD-4			5389066.544	466746.362		-6.00			
	FD-5			5389065.880	466749.869		-6.00			
	FD-6			5389052.514	466748.882		-5.00			
	FD-7			5389054.495	466751.787		-5.00			
	FD-8			5389045.125	466760.967		-5.00			
	FD-9			5389048.633	466761.631		-5.00			
	FD-10			5389041.383	466780.733		-5.00			
	FD-11			5389044.893	466781.397		-5.00			
	FD-12			5389037.647	466800.501		-4.70			
	FD-13			5389041.157	466801.155		-4.70			
	FD-14			5389035.154	466813.680		-3.30			
	FD-15			5389038.661	466814.343		-2.95			
	FD-16			5389032.660	466826.858		-2.55			
	FD-17			5389036.168	466827.521		-2.75			
	FLOAT D PLATFORM (FDA)	FDA-1	508 x 19	VERTICAL	5389031.042	466845.976	5.088	1.20	-11.5	0.0



**PILE REINFORCEMENT -
 PILE FAA-1, FAA-2, FBA-1,
 FCA-1, & FDA-1**
 1:25

PLAN
 1:500

- NOTES:**
- FOR GENERAL NOTES, SEE DWG 9R306-2-001.
 - CONTRACTOR TO CHECK AND VERIFY LOCATION OF PILES PRIOR TO INSTALLATION.
 - PILES WITH 0m EMBEDMENT INTO ROCK ARE TO BE DRIVEN TO REFUSAL ON BEDROCK.



PRELIMINARY
 DO NOT USE FOR CONSTRUCTION

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2016-08-23

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4	ISSUED FOR CLIENT REVIEW	16/07/13
3	ISSUED FOR CLIENT REVIEW	16/05/13
2	ISSUED FOR CLIENT REVIEW	16/04/08
1	ISSUED FOR CLIENT REVIEW	16/02/24
0	ISSUED FOR INTERNAL REVIEW	16/02/19

Revision/Revisions: Description/Description Date/Date

FISHERIES AND OCEANS SMALL CRAFT HARBOURS BRANCH

Project Title/Titre du projet

INSTITUTE OF OCEAN SCIENCES (IOS) TIMBER AND CONCRETE FLOATS A, B1, B2, C & D INSTALLATION

Consultant Signature Only

Designed by/Concept par C. LEHANE / JANUARY 21, 2016

Drawn by/Dessiné par E. YANG / JANUARY 21, 2015

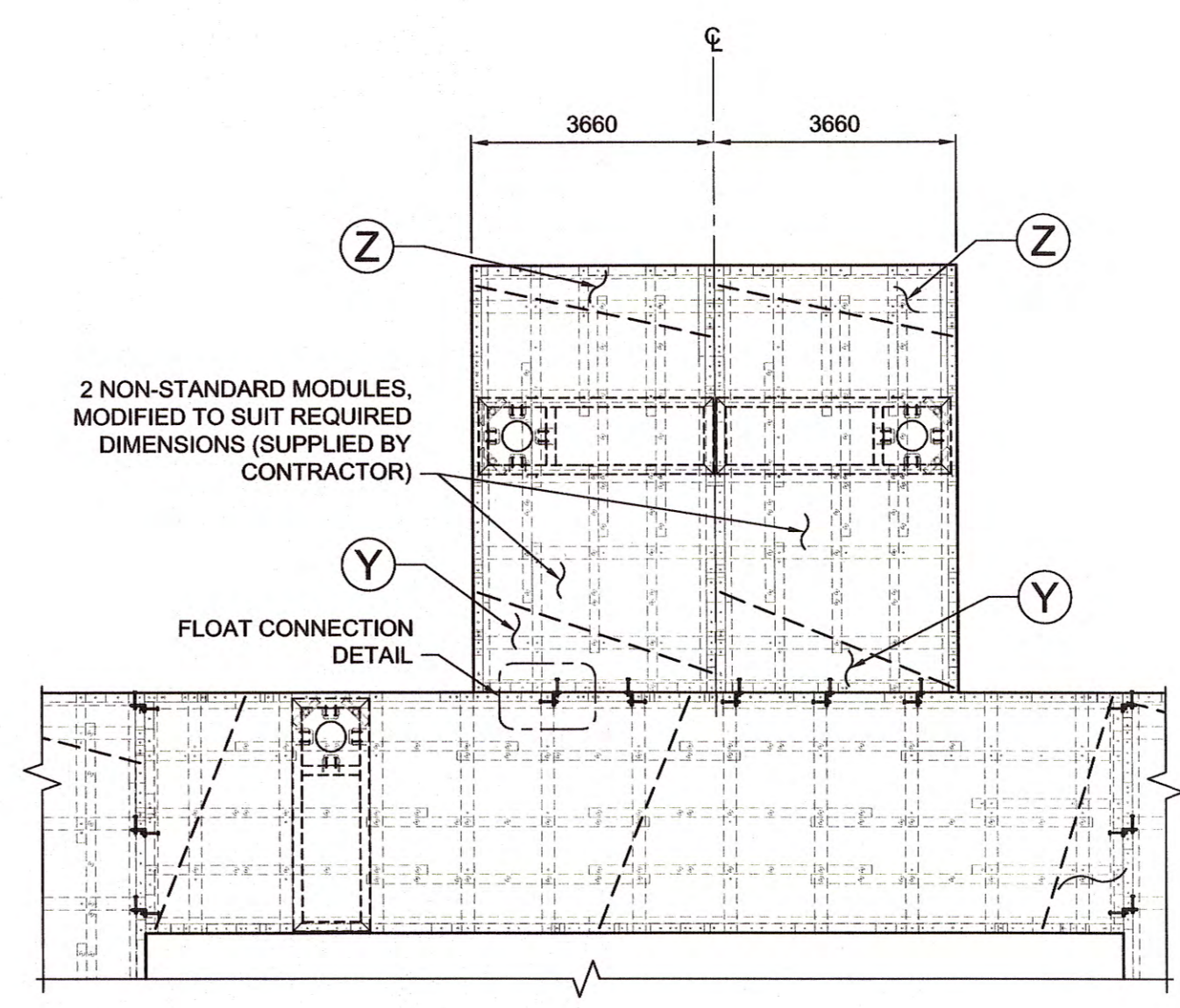
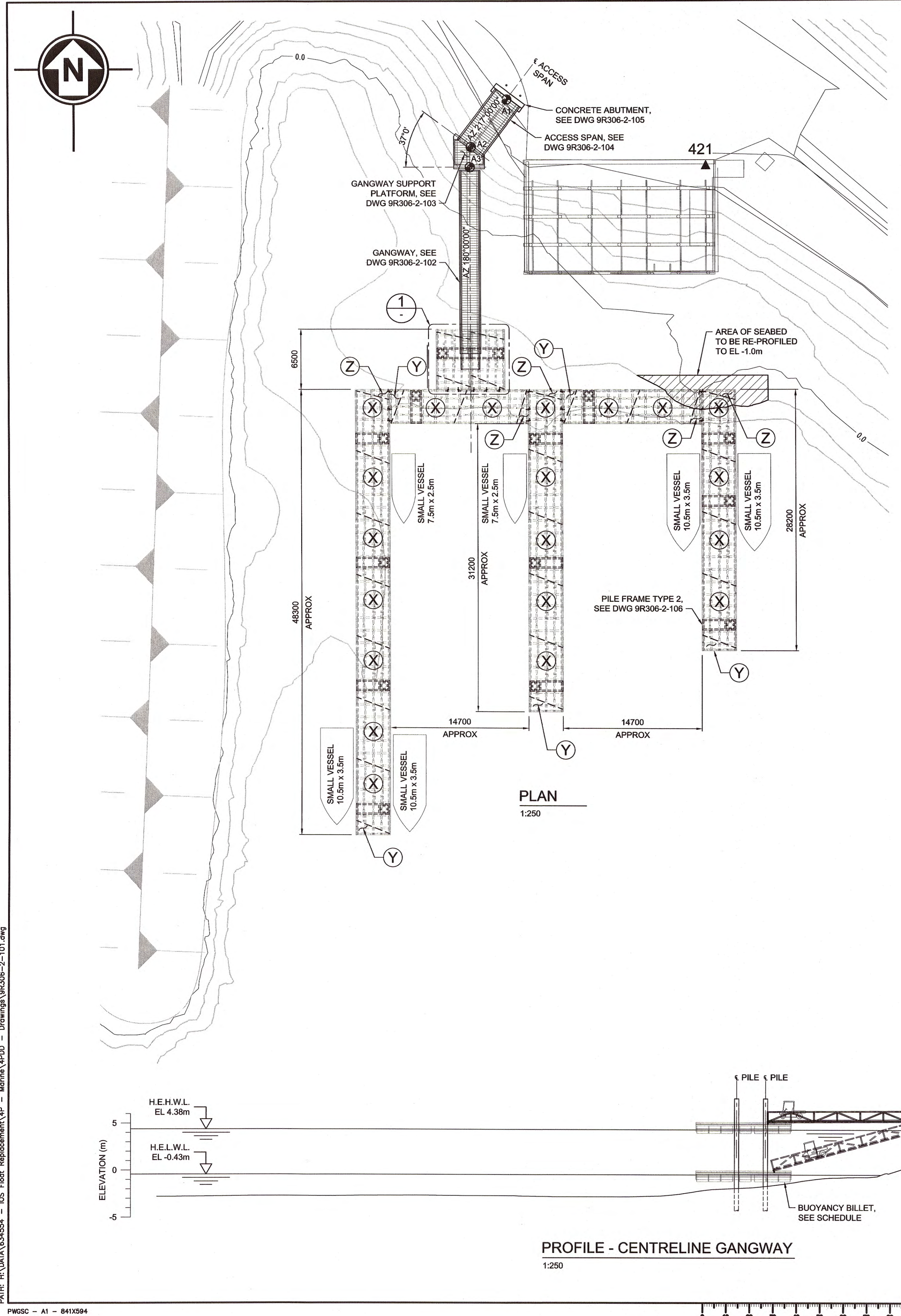
PWGSC Project Manager/Administrateur de Projets YPSGC

Regional Manager, Architectural and Engineering Services, Gestionnaire régional, Services d'architecture et de génie, YPSGC

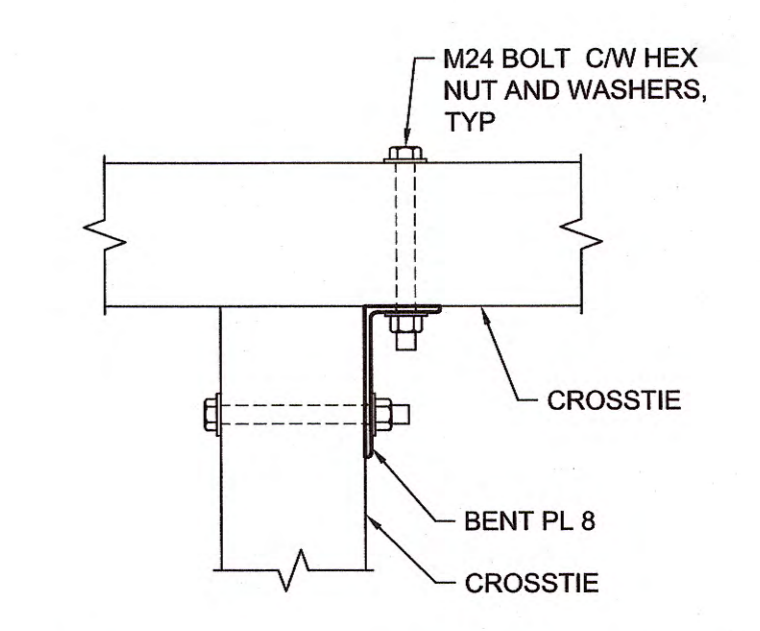
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FLOAT A PLAN

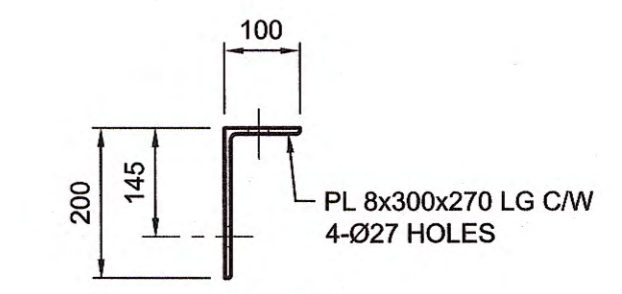
Project No./No. du projet	Sheet/Feuille	Revision no./no. de révision
9R306-2	101 OF XX	5



1 DETAIL
1:100



TYPICAL FLOAT CONNECTION
1:10



BENT PLATE
1:10

BUOYANCY BILLET SCHEDULE		
LOCATION	QUANTITY	BILLET DIMENSIONS L x W x H (mm)
PILE FRAME	14	2200 x 1160 x 400
GANGWAY LANDING (IN 1ST AND 3RD BAY ON BOTH SIDES)	4	3352 X 1000 X 715
ALL OTHER CROSSTIE BAYS	90	3352 X 1000 X 597

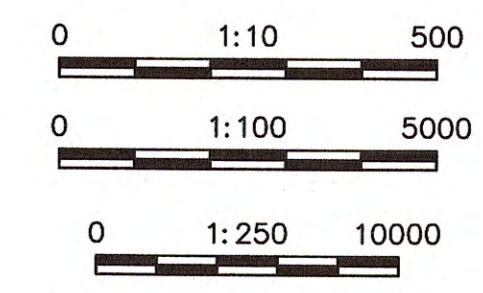
NOTES: PILE FRAME & GANGWAY LANDING BILLETS TO BE SUPPLIED BY CONTRACTOR.

LEGENDS:

- (X) STANDARD 3.657m WIDE HEAVY FLOAT MODULE, SEE DWG FM12-HV-000-REV G.
- (Y) STANDARD SINGLE JOIST FLOAT END WITH FLANGE SPLICE, SEE DWG FM12-HV-END-000_REV I.
- (Z) STANDARD THREE JOIST FLOAT END, SEE DWG FM12-HV-END-000_REV I.

NOTES:

1. FOR GENERAL NOTES, SEE DWG 9R306-2-001.
2. FOR CONTROL POINT COORDINATES, SEE DWG 9R306-2-002.
3. FOR WORKPOINT COORDINATES, SEE DWG 9R306-2-003.
4. FOR PILE LOCATION AND COORDINATES, SEE DWG 9R306-2-004.
5. FOR TIMBER FLOAT FRAMING AND DETAILS, SEE FISHERIES AND OCEANS CANADA SMALL CRAFT HARBOURS BRANCH DRAWINGS.



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PWGSC - A1 - 841X594





5		
4		
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2	ISSUED FOR CLIENT REVIEW	16/07/13
1	ISSUED FOR CLIENT REVIEW	16/06/13
0	ISSUED FOR CLIENT REVIEW	16/04/08

Revision/Description/Date/Date

Client/client
**FISHERIES AND OCEANS
SMALL CRAFT
HARBOURS BRANCH**

Project title/Titre du projet

**INSTITUTE OF OCEAN SCIENCES (IOS)
TIMBER AND CONCRETE FLOATS
A, B1, B2, C & D INSTALLATION**

Consultant Signature Only

Designed by/Concept par
B. LANE / JANUARY 12, 2016

Drawn by/Dessiné par
E. YANG / JANUARY 12, 2016

PWSC Project Manager/Administrateur de Projets TPSGC

Regional Manager, Architectural and Engineering Services
Gestionnaire régional, Services d'architecture et de génie, TPSGC

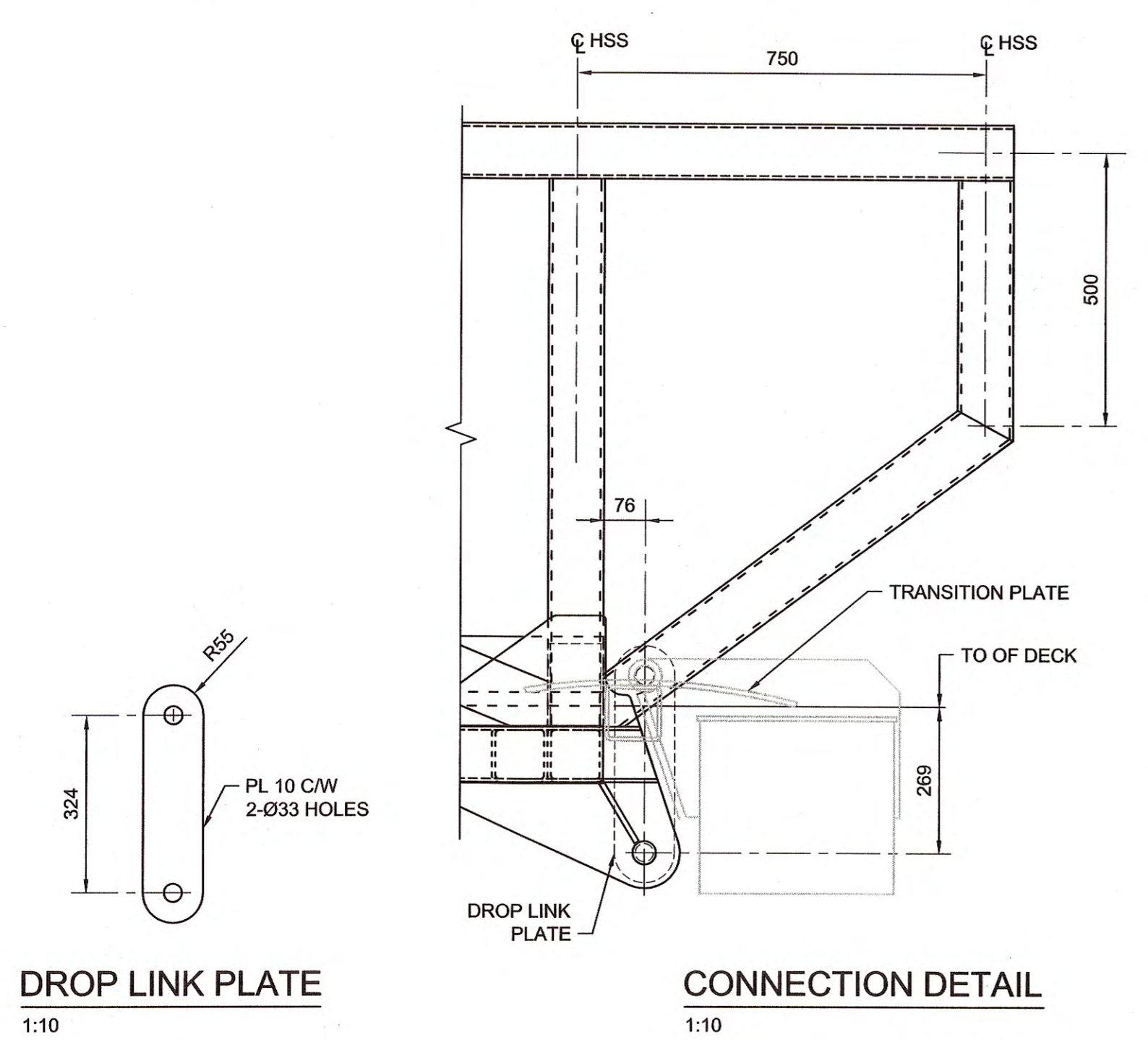
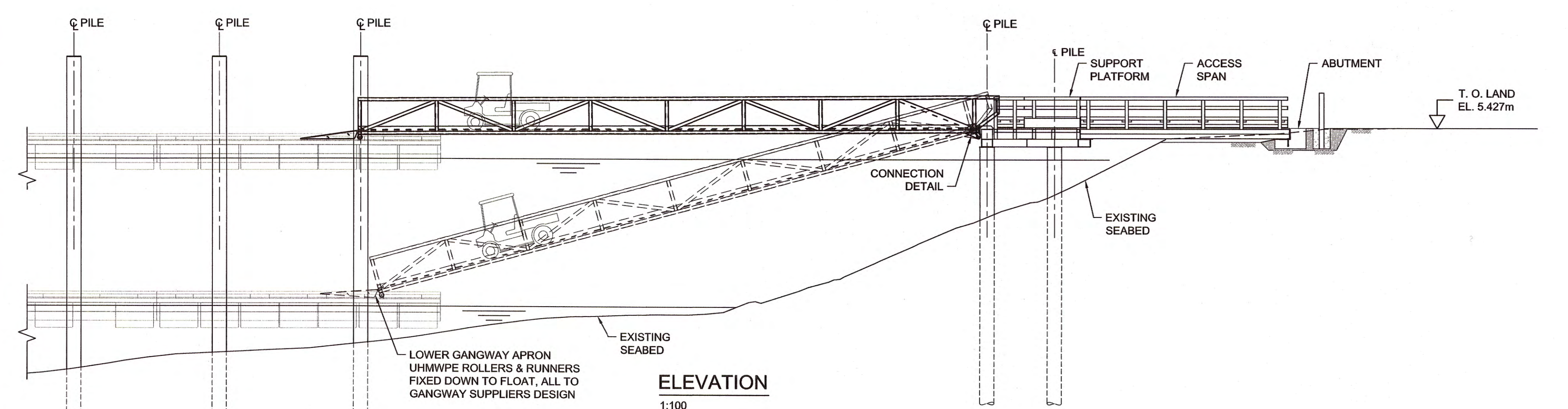
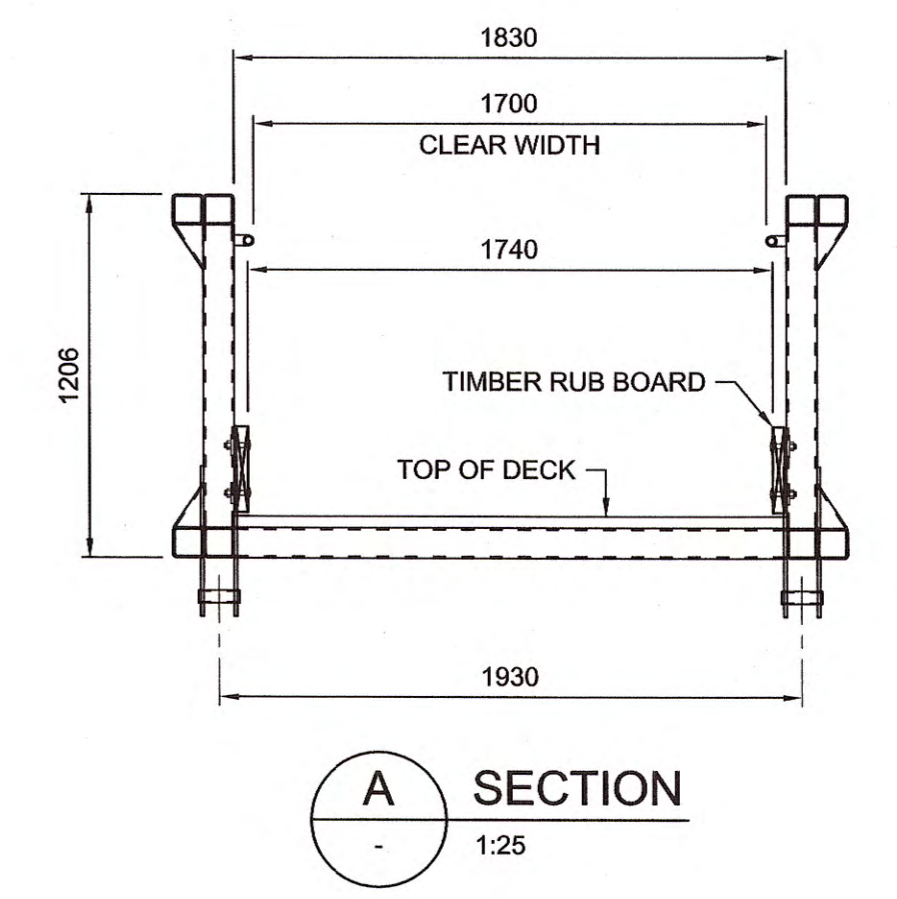
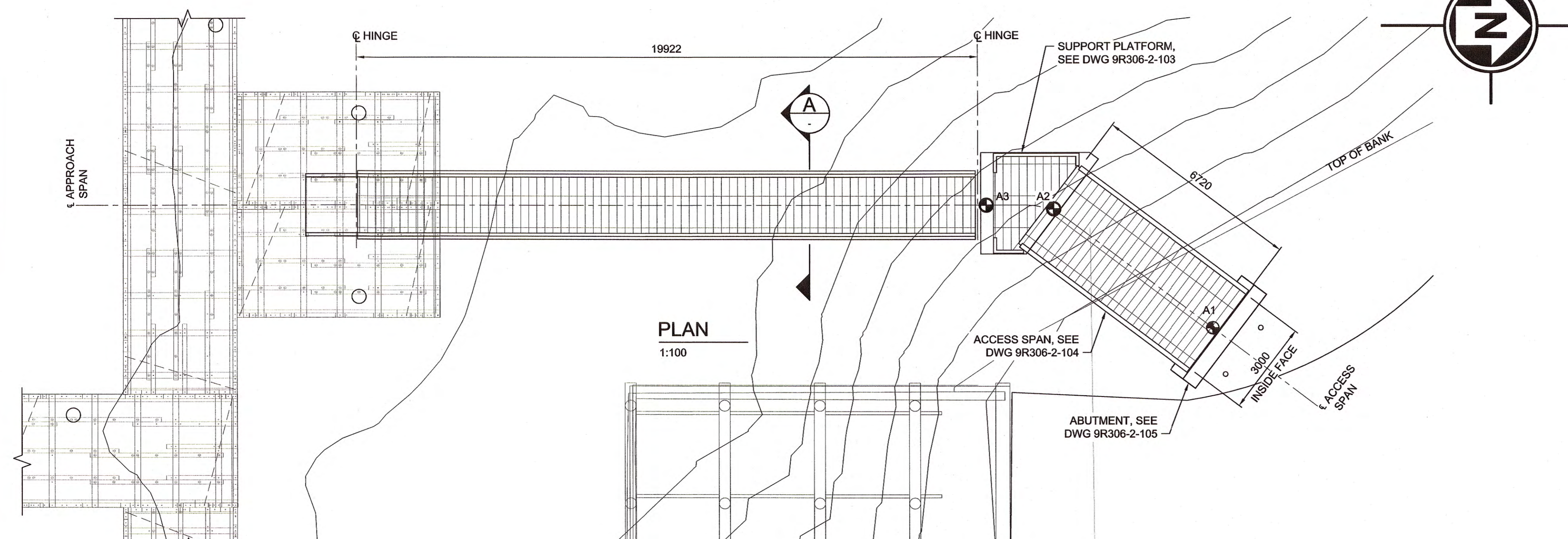
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**FLOAT A
GANGWAY
ELEVATION, SECTION AND DETAILS**

Project No./No. du projet
9R306-2

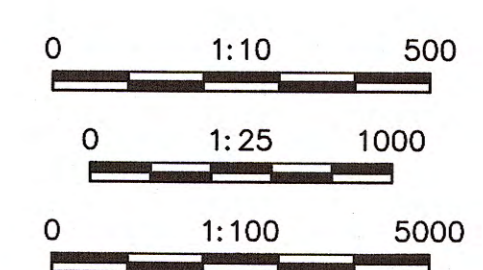
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102
OF XX

Revision no./
La Révision
no.
3



PRELIMINARY
DO NOT USE FOR CONSTRUCTION

- NOTES:**
- FOR GENERAL NOTES, SEE DWG 9R306-2-001.
 - FOR WORKPOINT COORDINATES, SEE DWG 9R306-2-003.



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PROFESSIONAL
B.C.E. LANE
39671
Aug 23 2016

5		
4		
3	ISSUED FOR TENDER	16/08/23
2	ISSUED FOR CLIENT REVIEW	16/07/13
1	ISSUED FOR CLIENT REVIEW	16/05/13
0	ISSUED FOR CLIENT REVIEW	16/04/08

Revision/Revisions Description/Description Date/Date

**FISHERIES AND OCEANS
SMALL CRAFT
HARBOURS BRANCH**

Project title/Titre du projet

**INSTITUTE OF OCEAN SCIENCES (IOS)
TIMBER AND CONCRETE FLOATS
A, B1, B2, C & D INSTALLATION**

Consultant Signature Only

Designed by/Concept par
B. LANE / MARCH 04, 2016

Drawn by/Dessiné par
E. YANG / MARCH 08, 2016

PWGC Project Manager/Administrateur de Projets TPSCG

Regional Manager, Architectural and Engineering Services
Gestionnaire régionale, Services d'architecture et de génie, TPSCG

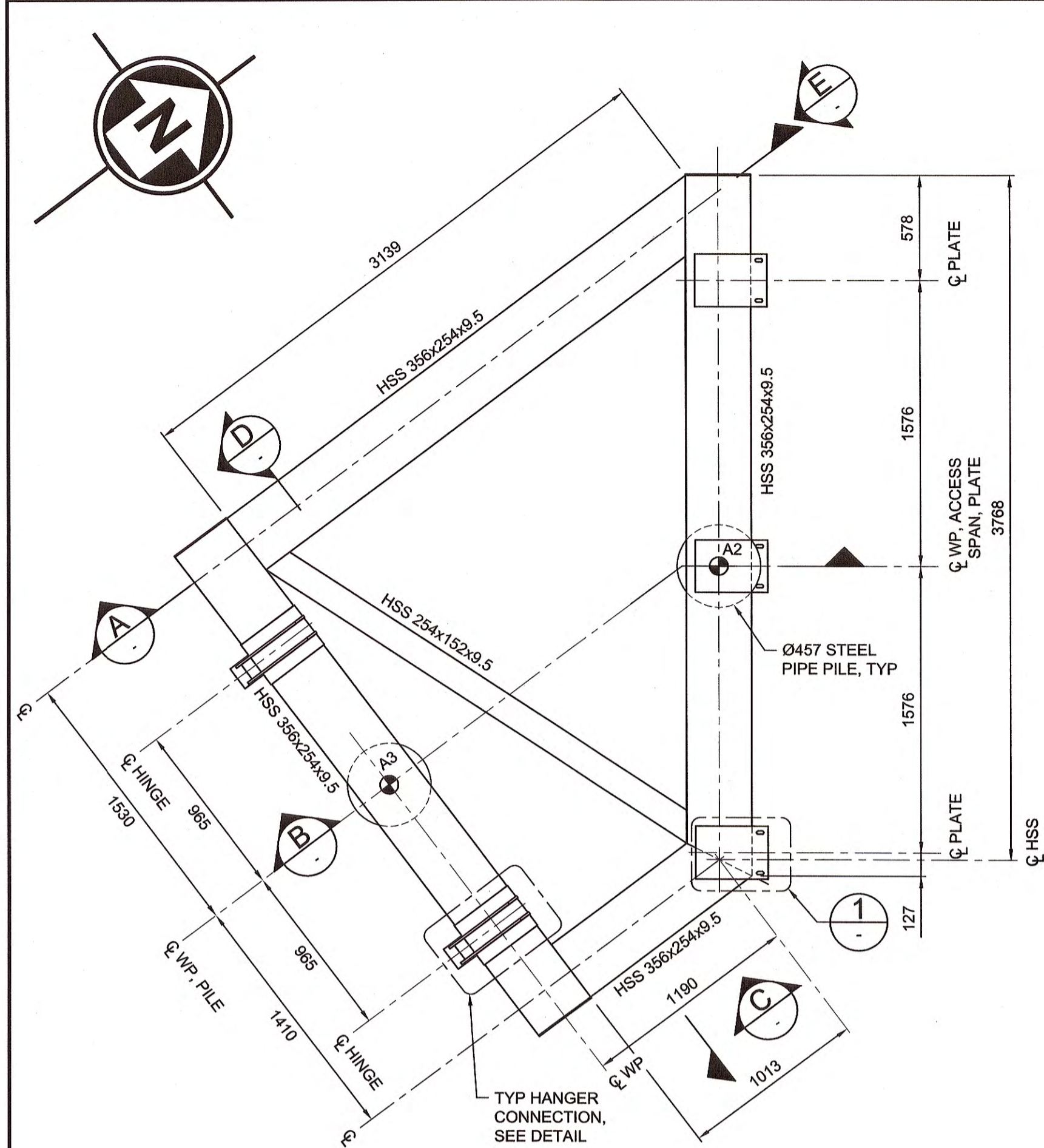
Drawing title/Titre du dessin

**FLOAT A
SUPPORT PLATFORM
PLAN, SECTION AND DETAILS**

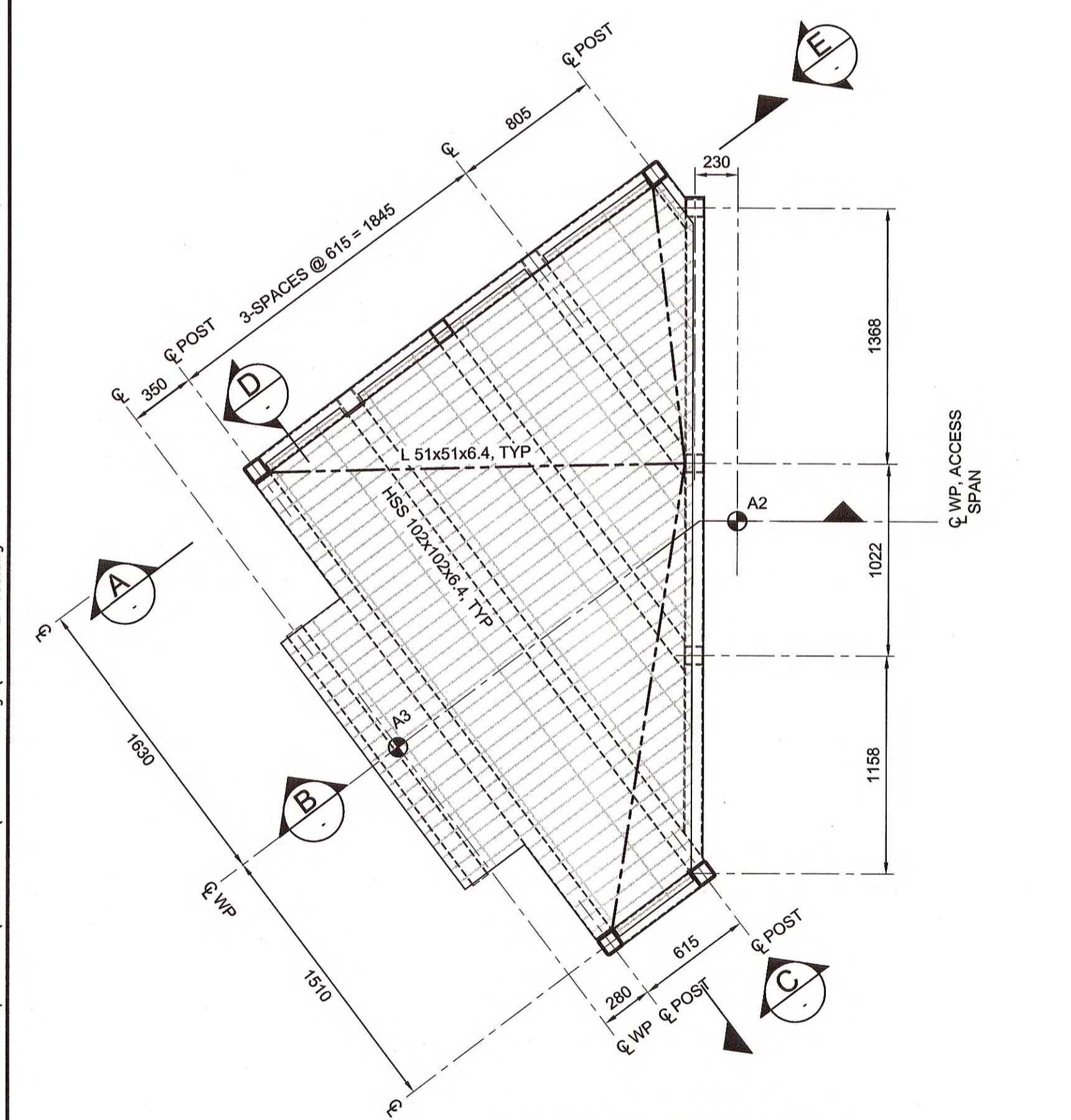
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9R306-2

Sheet/Feuille
103
OF XX

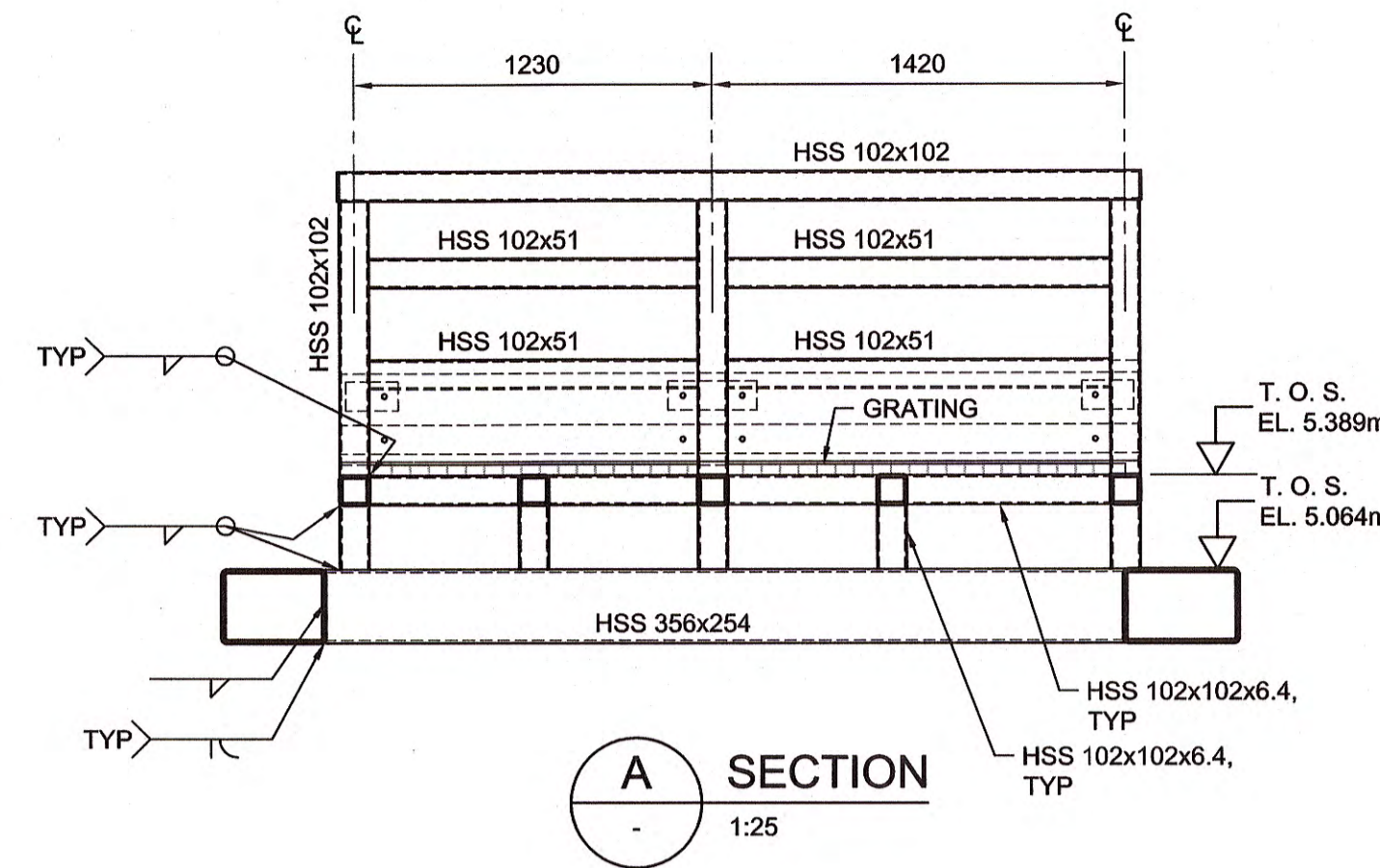
Revision no./
La Révision
no.
3



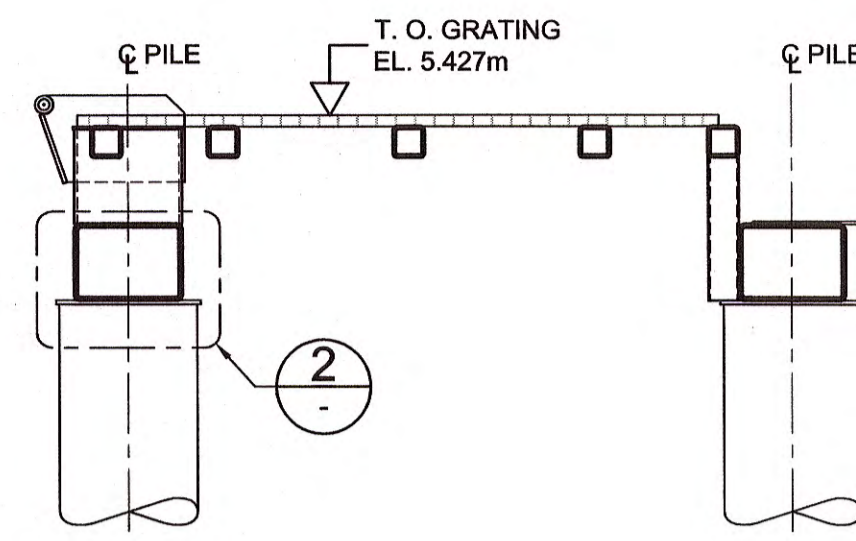
PLAN - LOWER FRAME
1:25



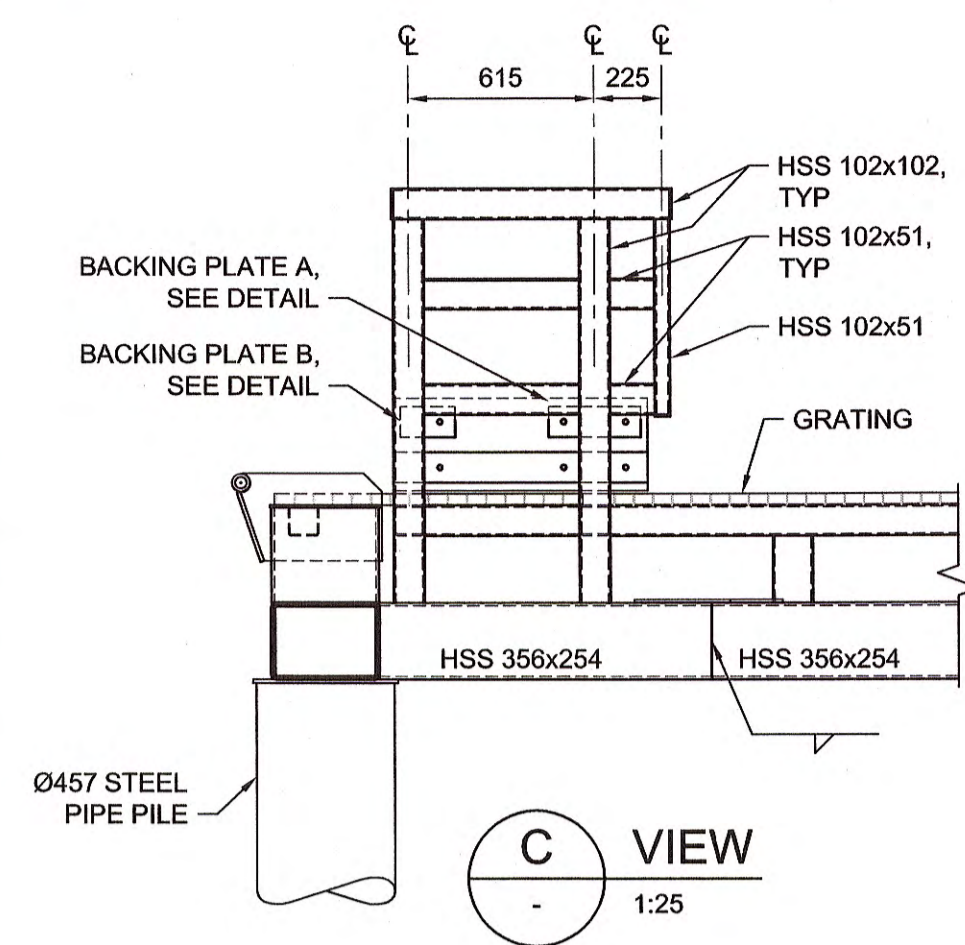
PLAN - UPPER FRAME
1:25



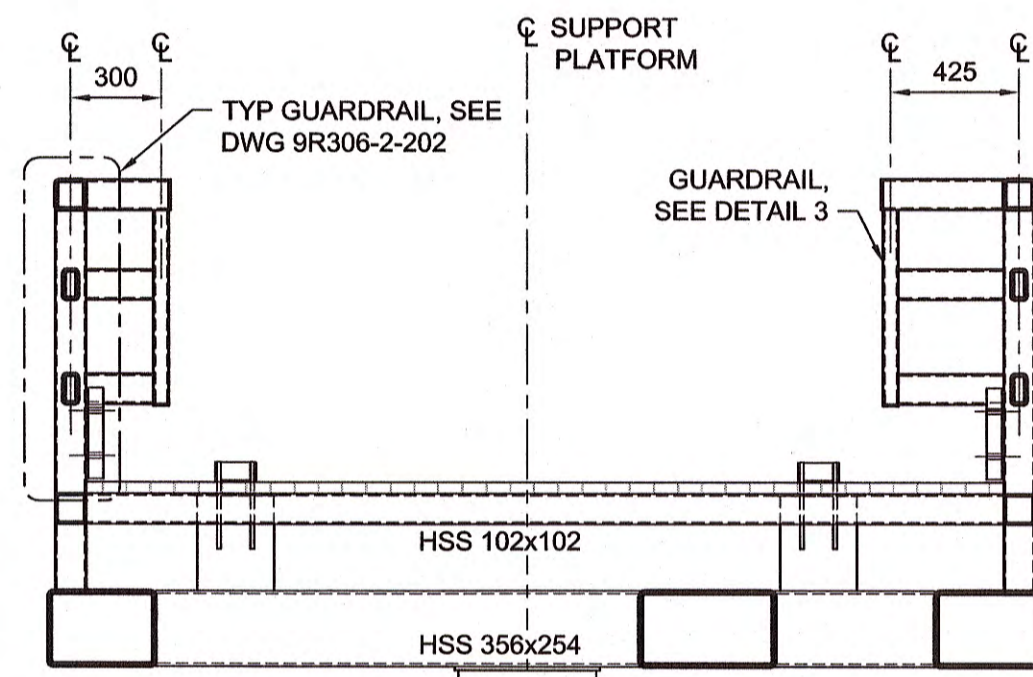
SECTION A
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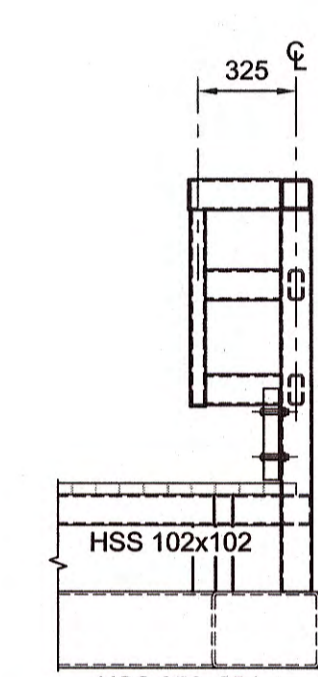
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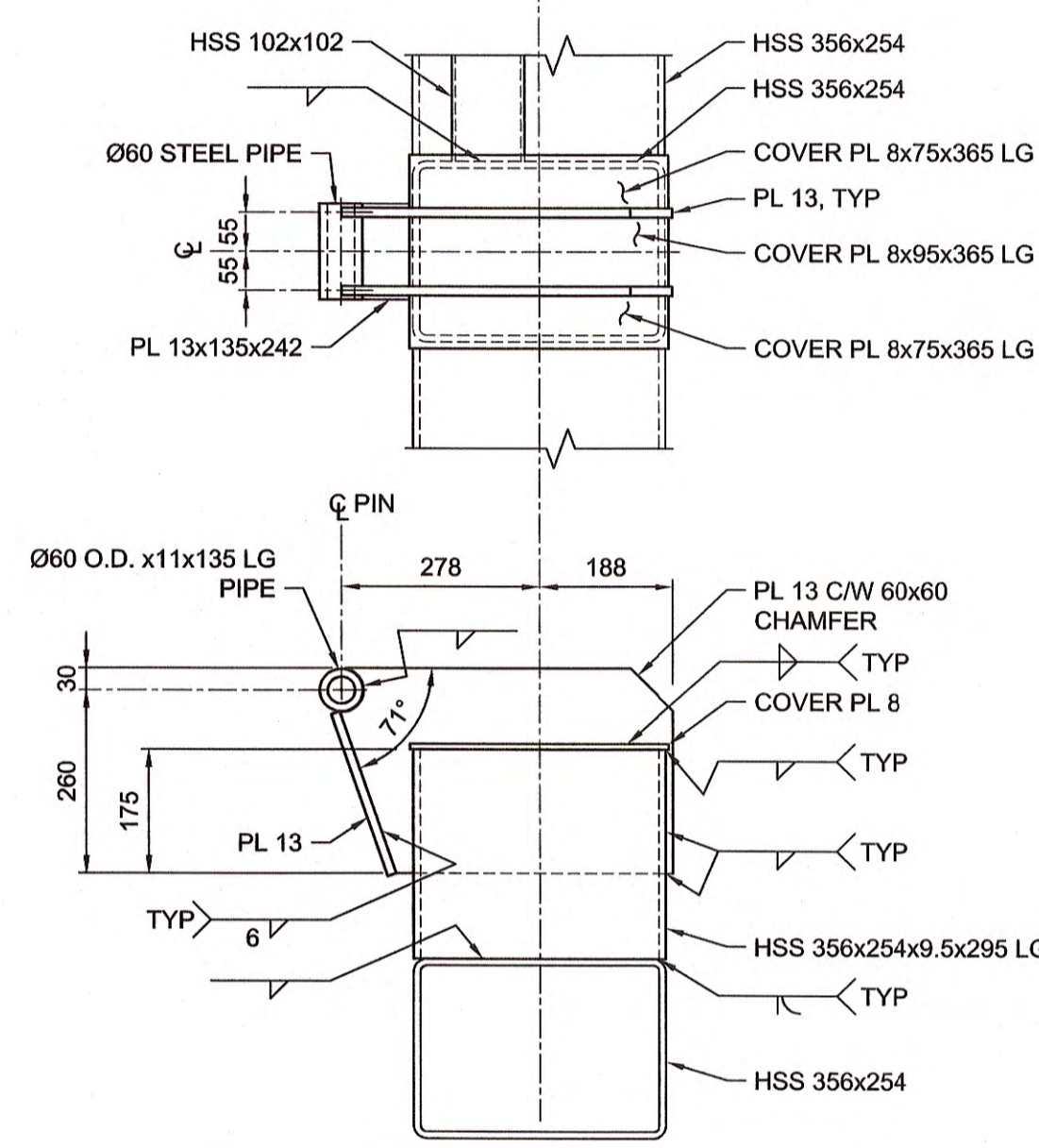
VIEW C
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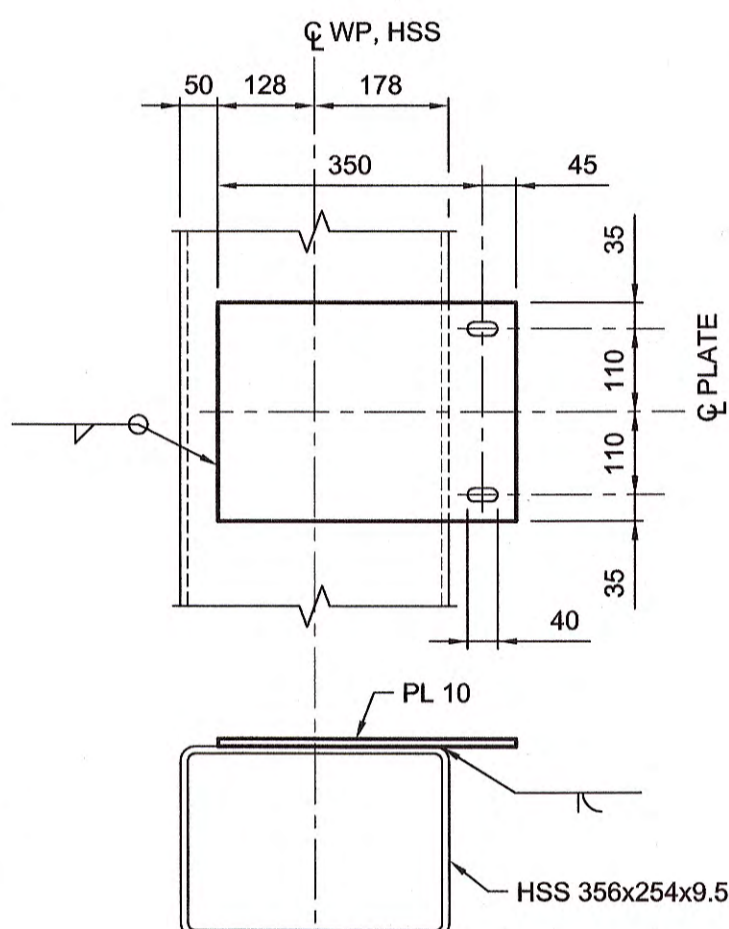
SECTION D
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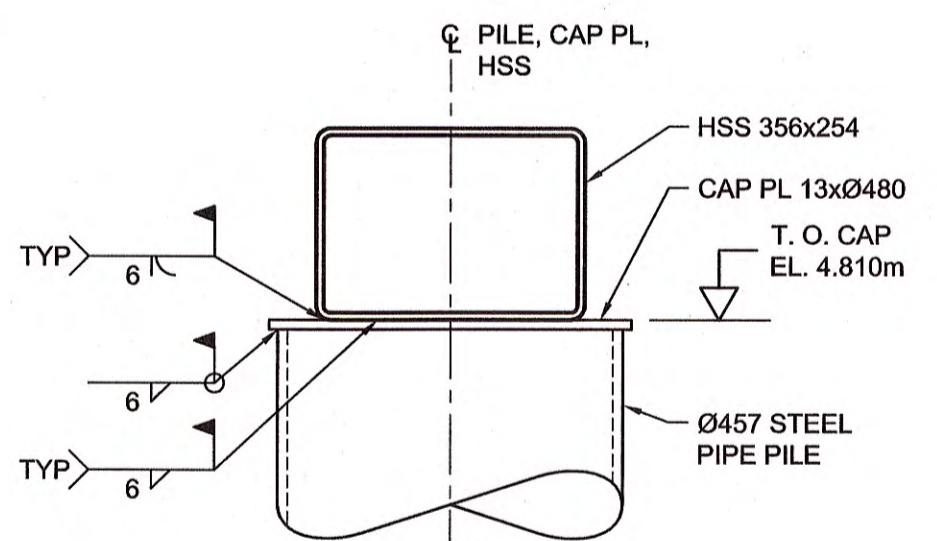
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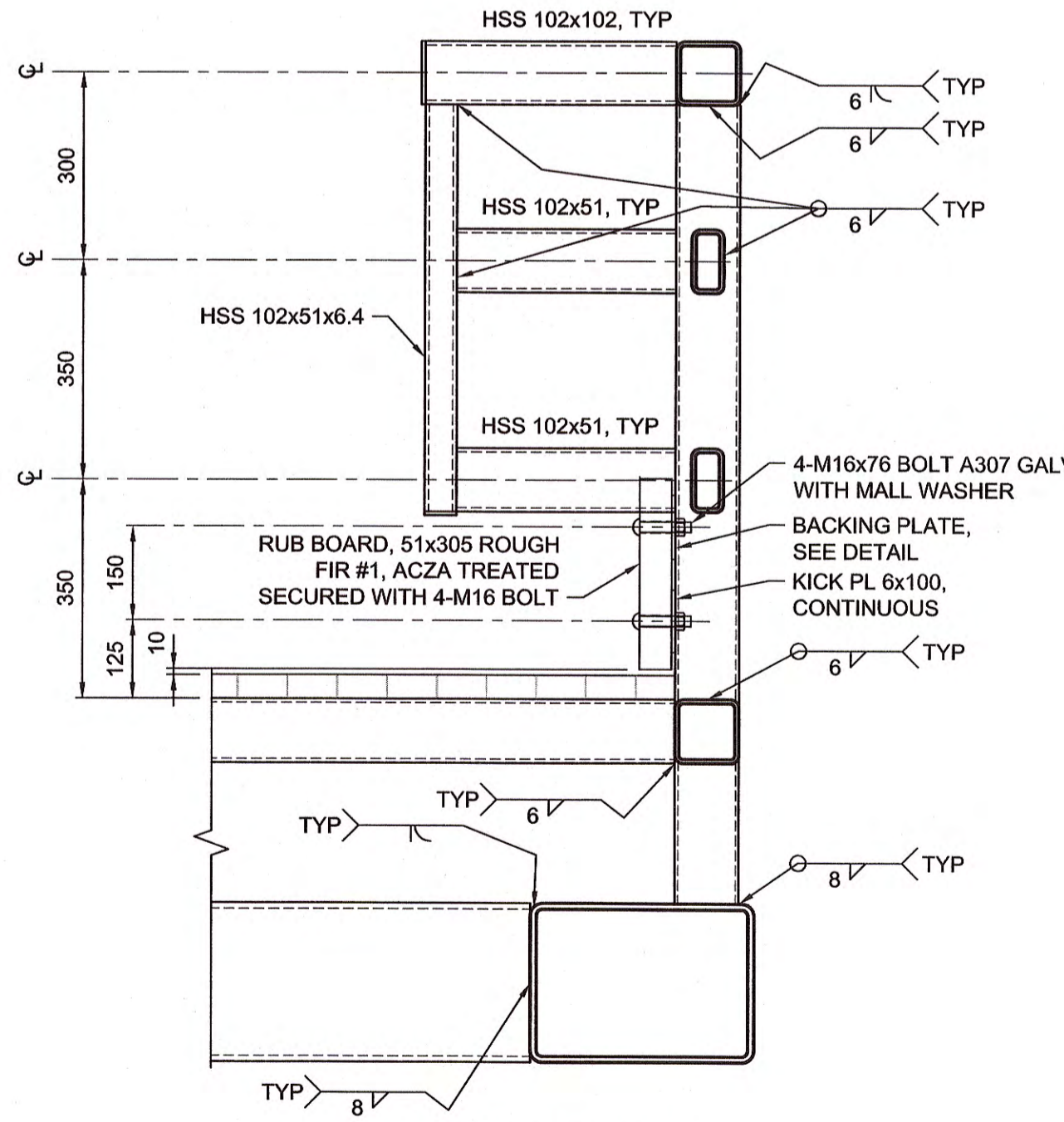
TYPICAL HANGER CONNECTION
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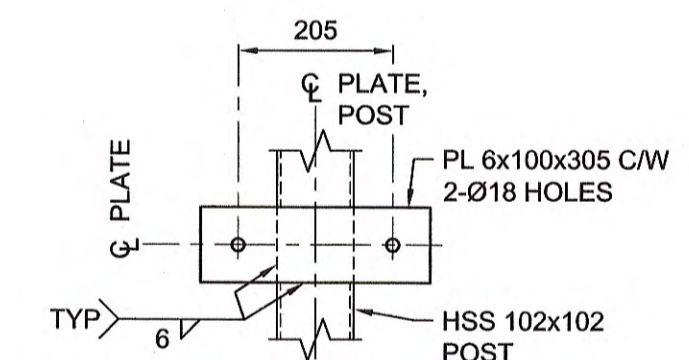
DETAIL 1
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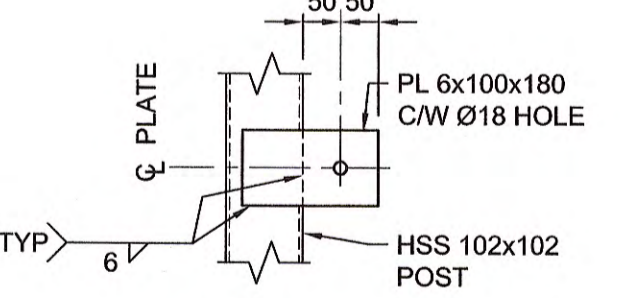
DETAIL 2
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9R306-2-202
9R306-2-302



DETAIL 3
1:10



BACKING PLATE A
1:10
NOTE: REQUIRED AT ALL POSTS.

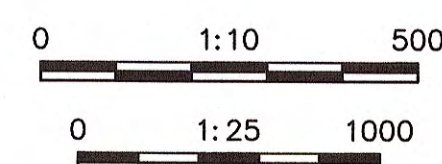


BACKING PLATE B
1:10

NOTES:

- FOR GENERAL NOTES, SEE DWG 9R306-2-001.
- FOR WORKPOINT, SEE DWG 9R306-2-004.

PRELIMINARY
DO NOT USE FOR CONSTRUCTION



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PWGC - A1 - 841X594





PROFESSIONAL ENGINEER
B. C. E. LANE
39671
July 23, 2016

Revision/	Description/Description	Date/Date
5		
4		
3	ISSUED FOR TENDER	16/08/23
2	ISSUED FOR CLIENT REVIEW	16/07/13
1	ISSUED FOR CLIENT REVIEW	16/05/13
0	ISSUED FOR CLIENT REVIEW	16/04/08

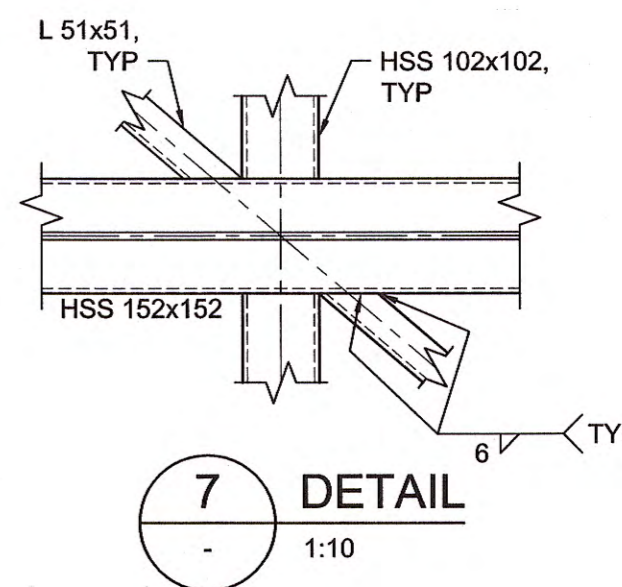
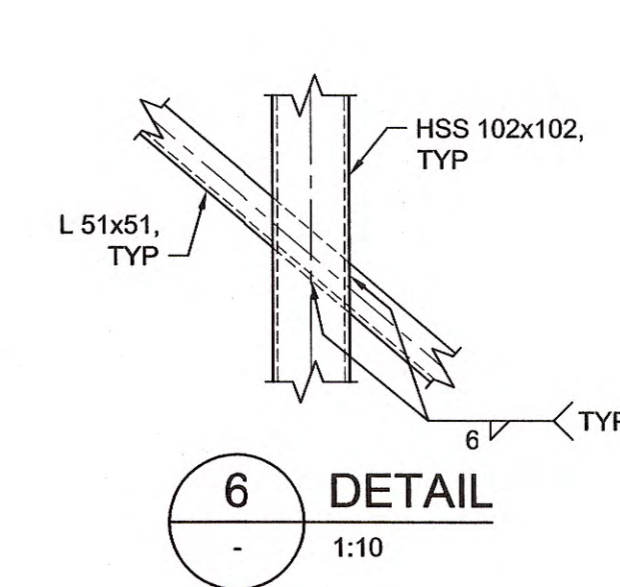
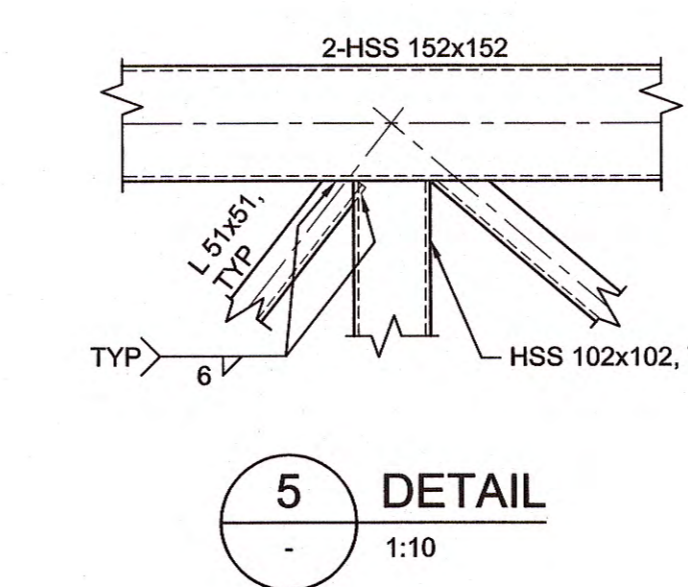
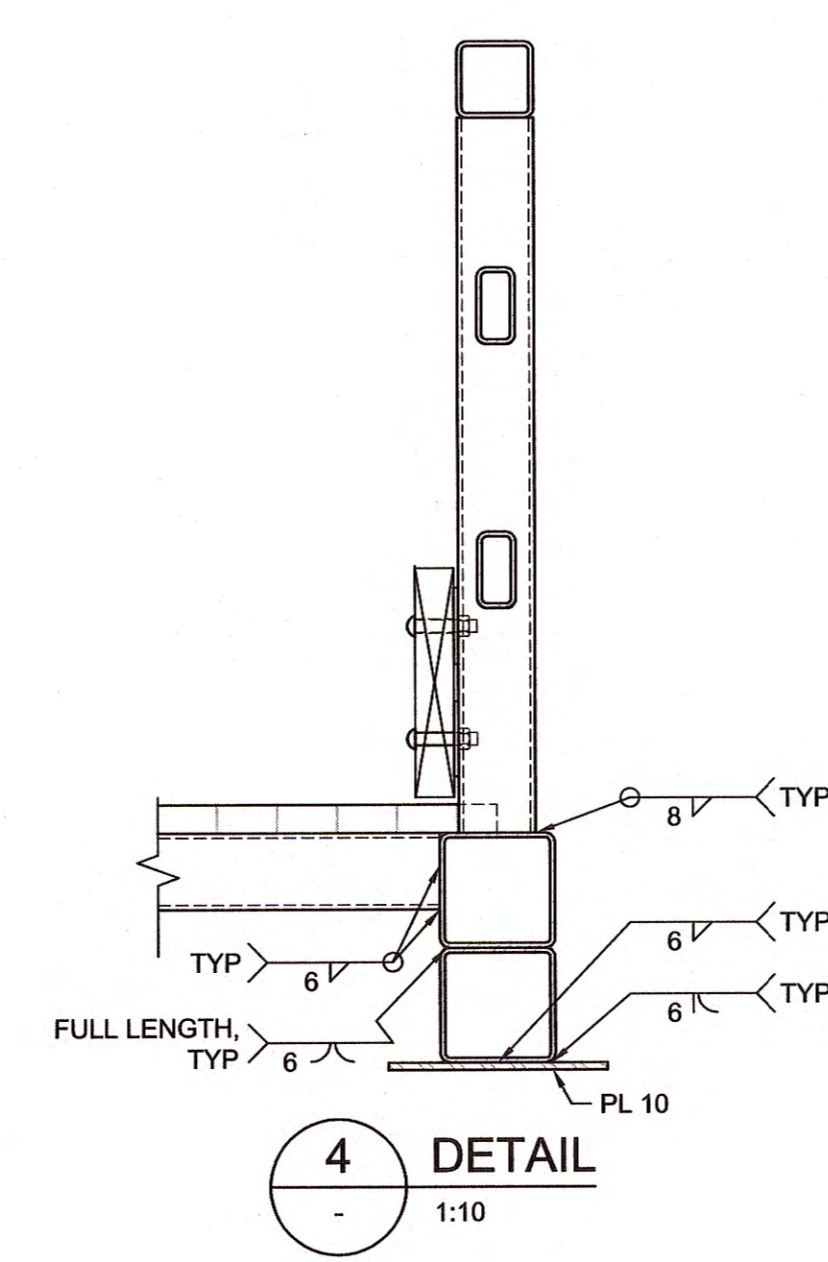
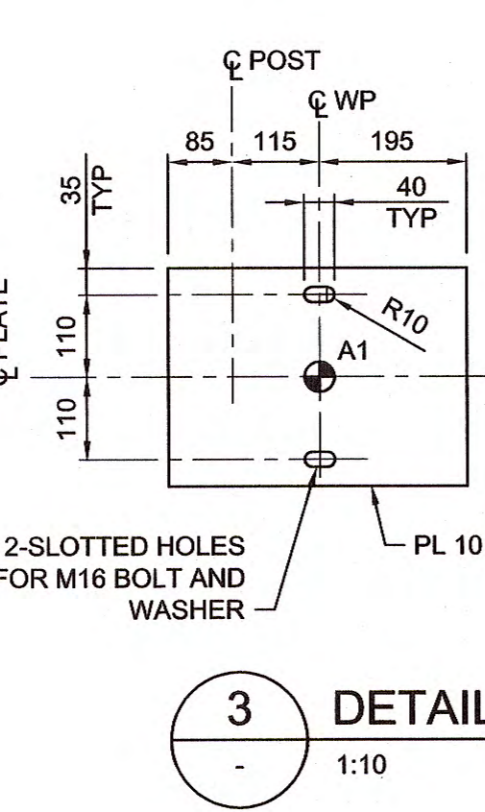
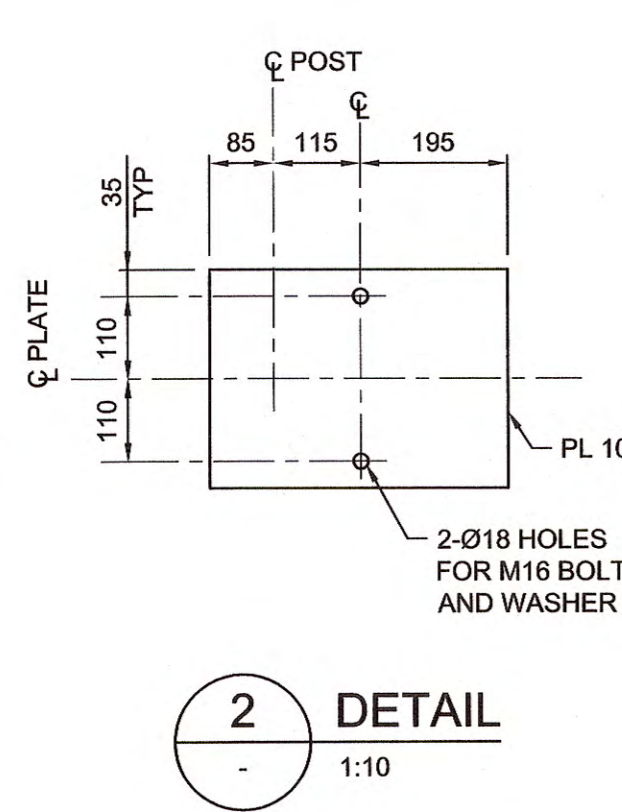
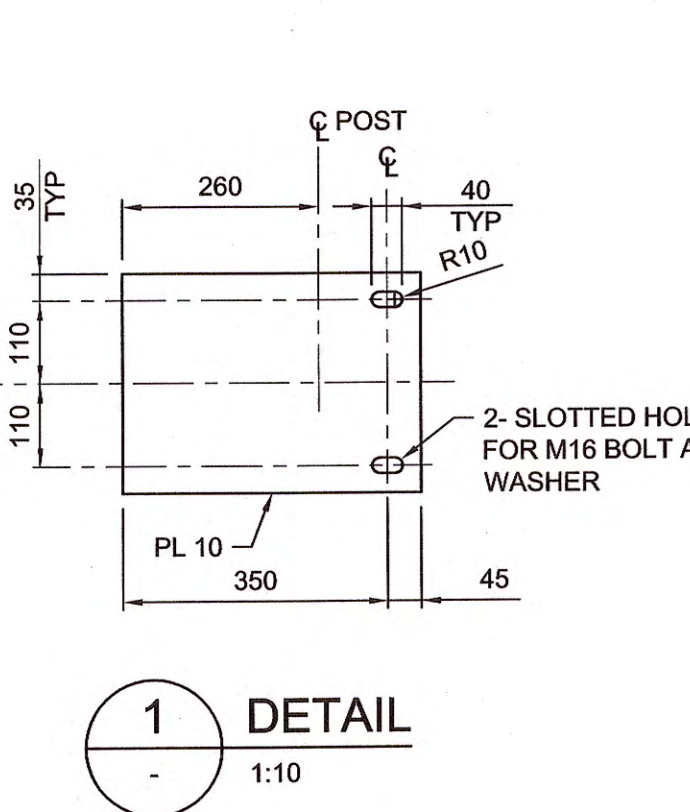
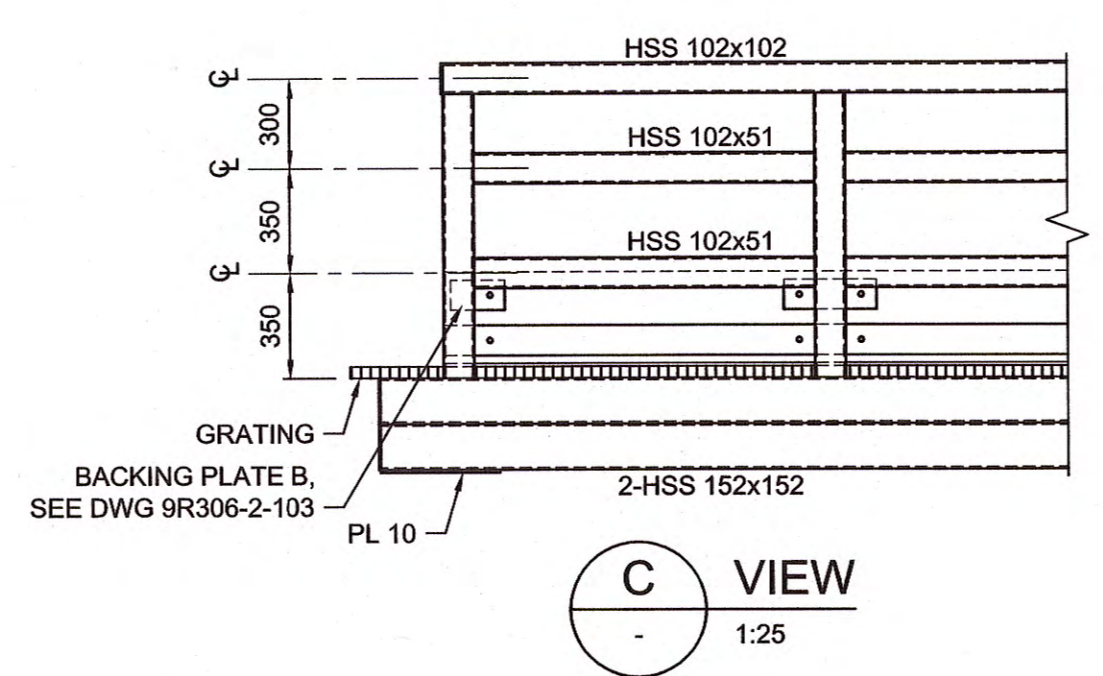
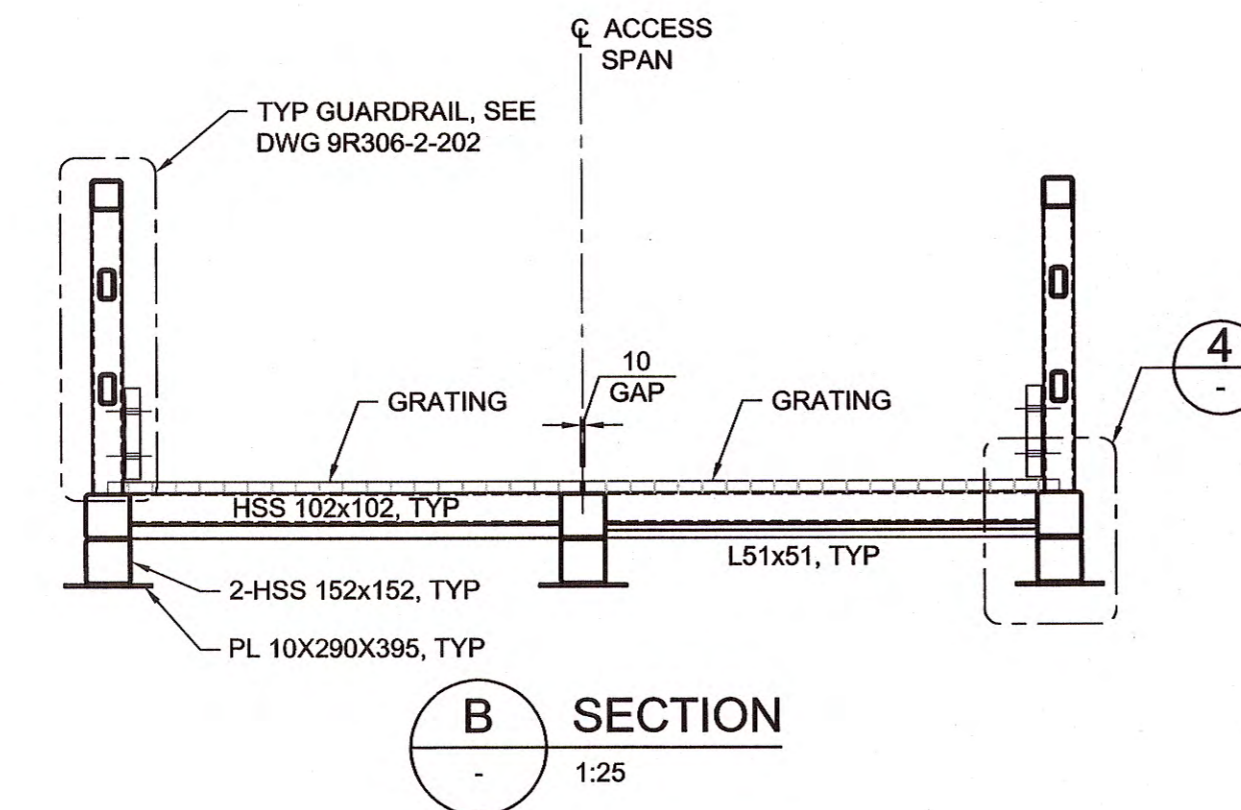
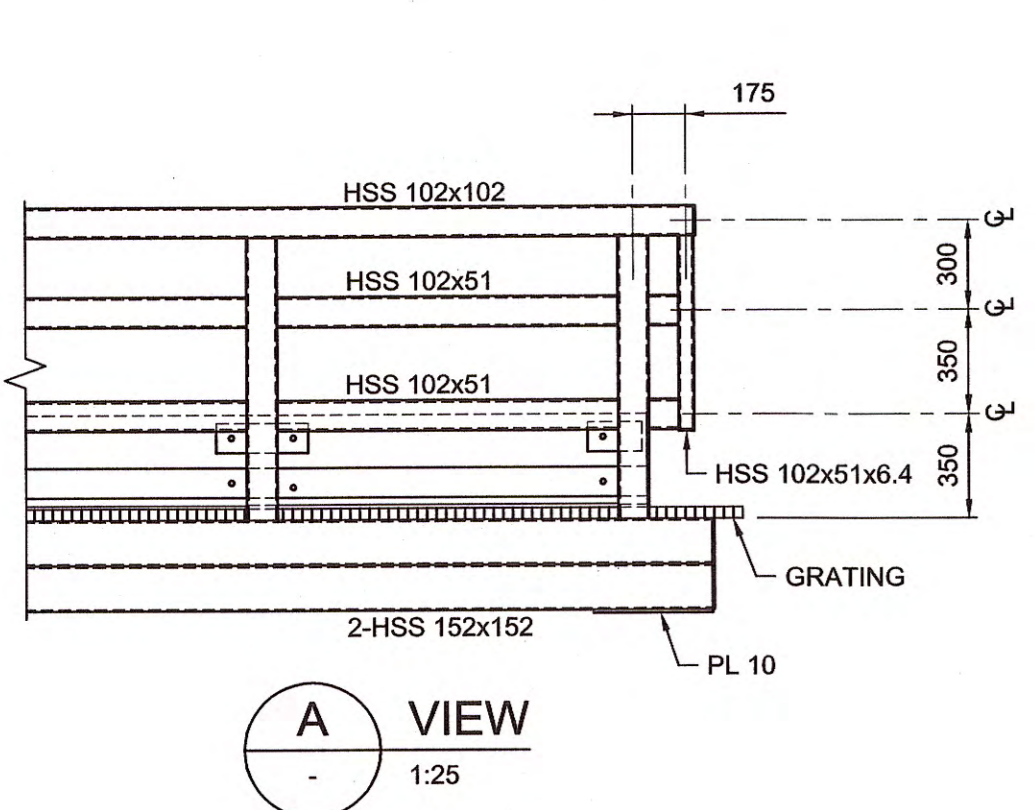
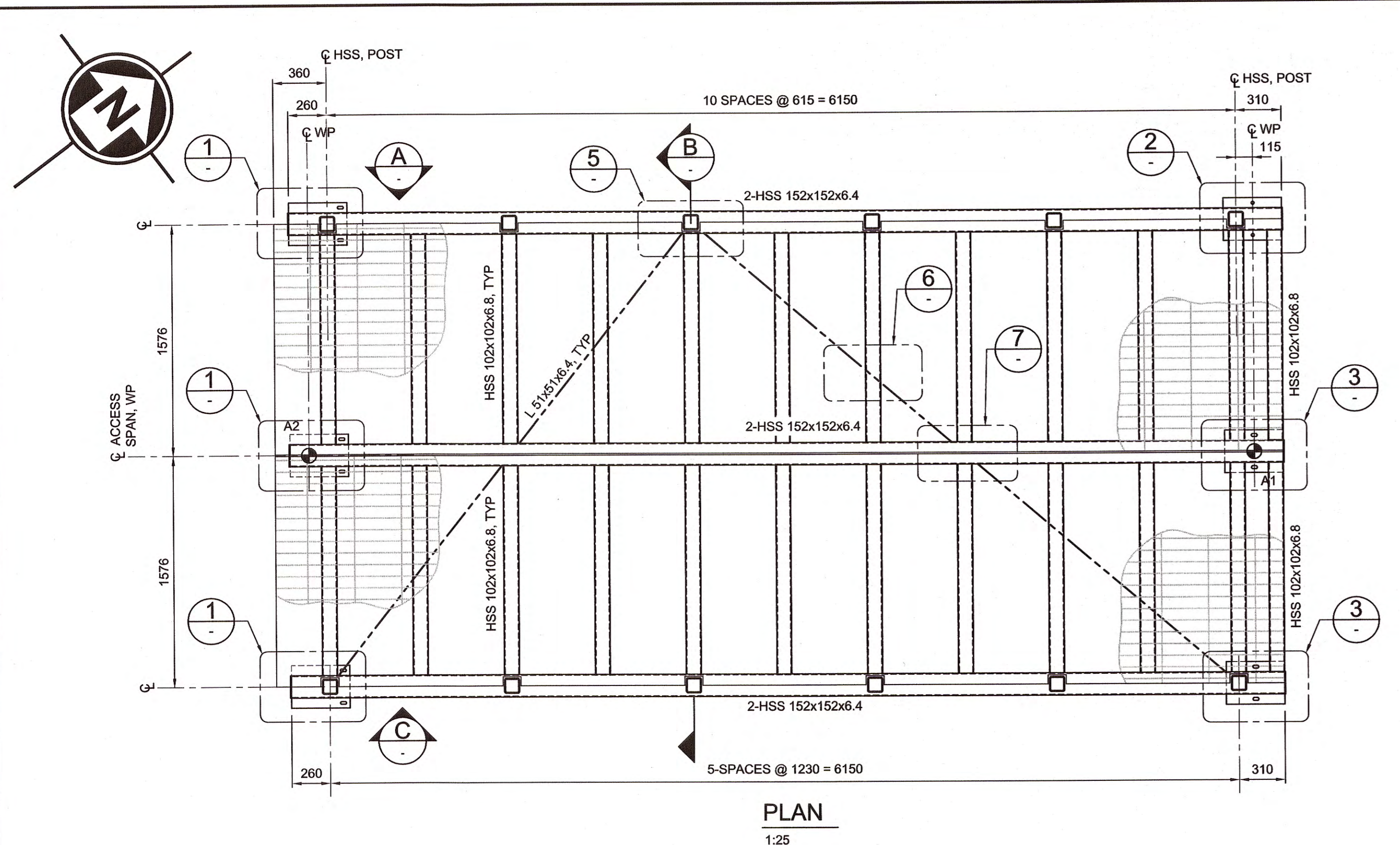
Client/client
**FISHERIES AND OCEANS
SMALL CRAFT
HARBOURS BRANCH**

Project title/Titre du projet
**INSTITUTE OF OCEAN SCIENCES (IOS)
TIMBER AND CONCRETE FLOATS
A, B1, B2, C & D INSTALLATION**

Consultant Signature Only
Designed by/Concept par
B. LANE / MARCH 03, 2016
Drawn by/Designé par
E. YANG / MARCH 03, 2016
PWSSC Project Manager/Administrateur de Projets TPSGC
Regional Manager, Architectural and Engineering Services
Gestionnaire régionale, Services d'architecture et de génie, TPSGC

Drawing title/Titre du dessin
**FLOAT A
ACCESS SPAN
PLAN, SECTION AND DETAILS**

Project No./No. du projet 9R306-2	Sheet/Feuille 104 OF XX	Revision no./ La Révision 3
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PRELIMINARY
DO NOT USE FOR CONSTRUCTION

NOTES:
1. FOR GENERAL NOTES, SEE DWG 9R306-2-001.

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PWSSC - A1 - 841X594



PROFESSIONAL
 B.C.E. LANE
 # 39671
 Aug. 23, 2016

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4		
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2	ISSUED FOR CLIENT REVIEW	16/07/13
1	ISSUED FOR CLIENT REVIEW	16/05/13
0	ISSUED FOR CLIENT REVIEW	16/04/08

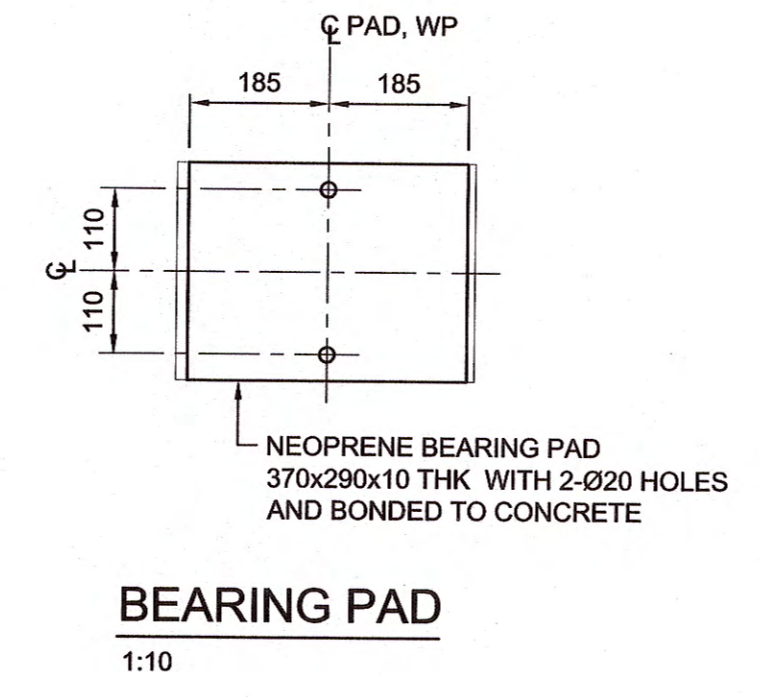
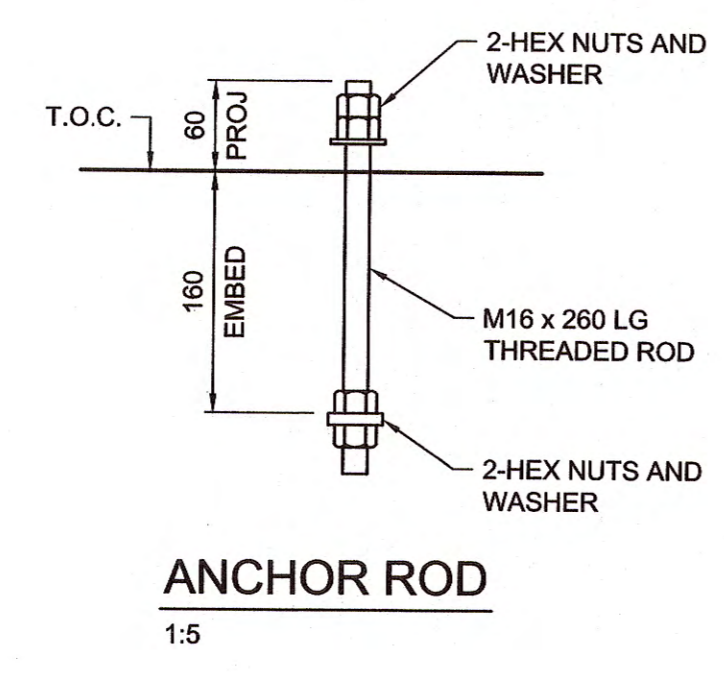
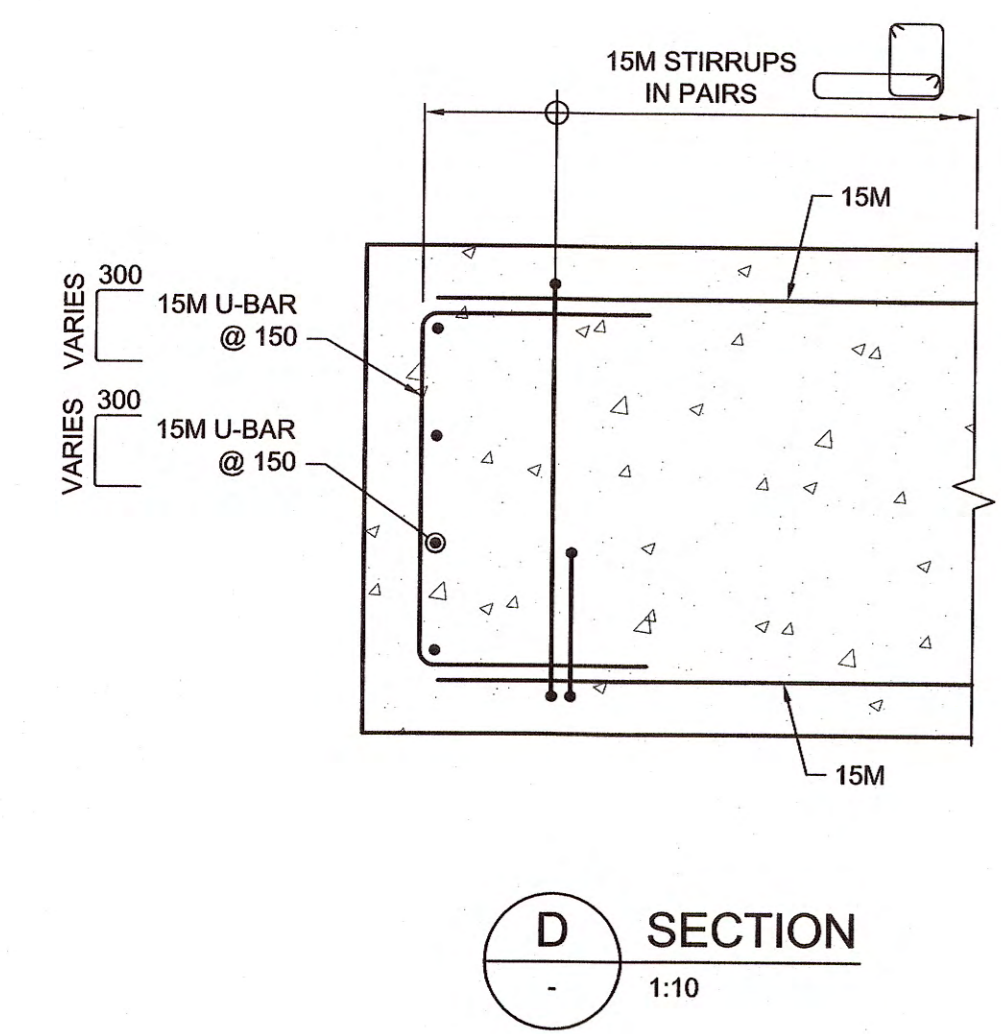
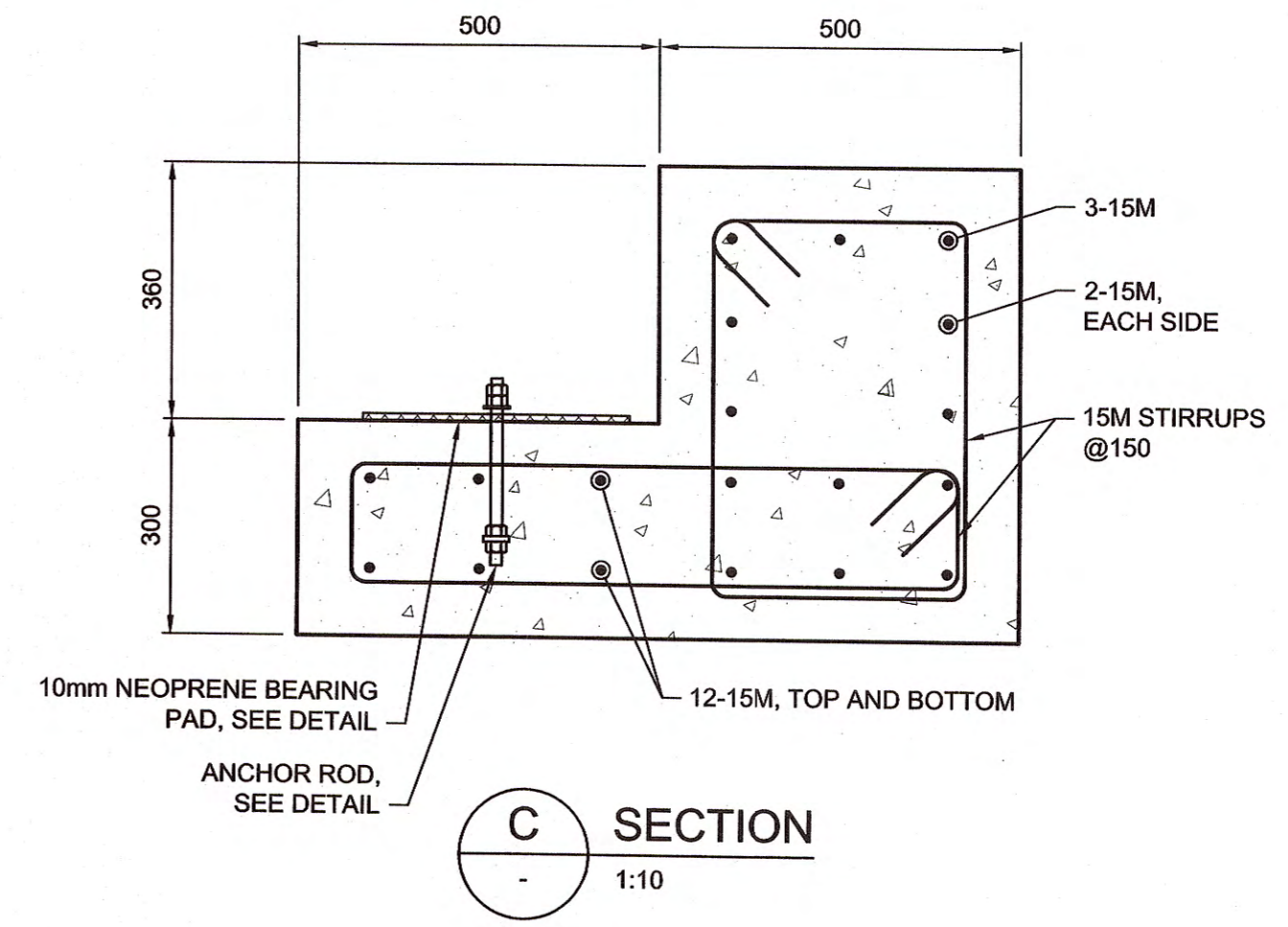
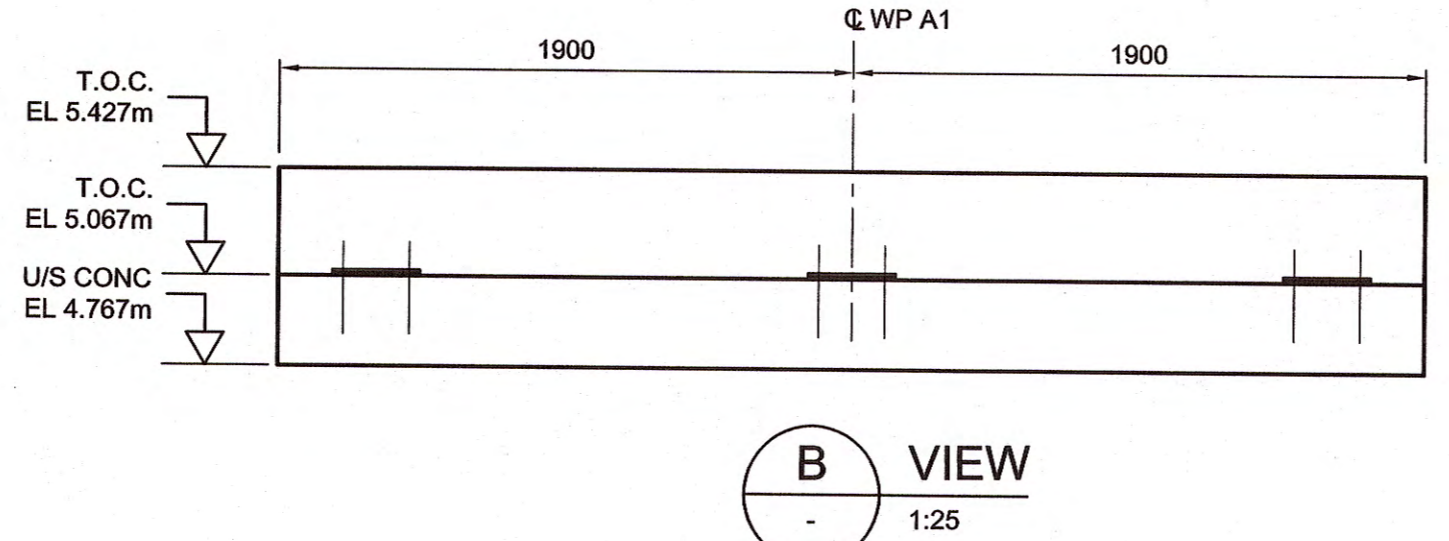
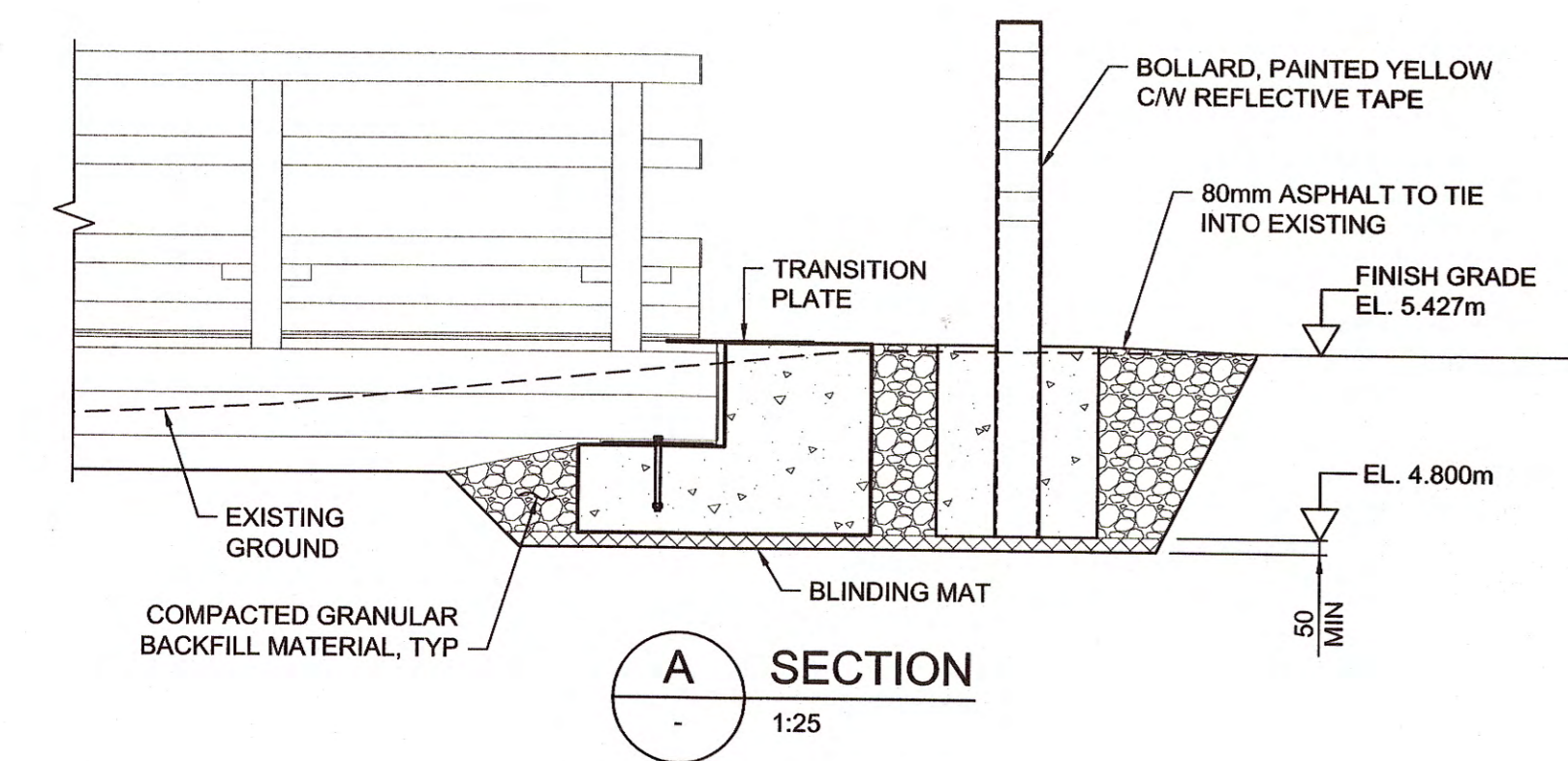
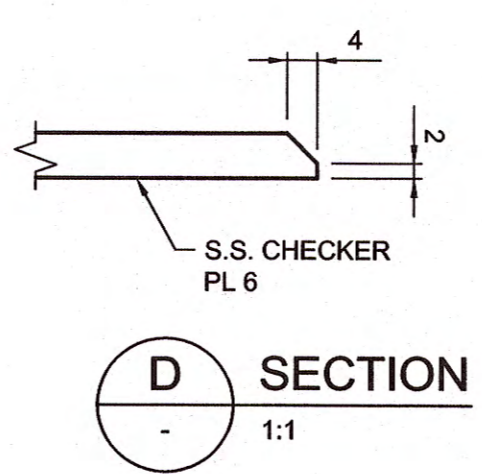
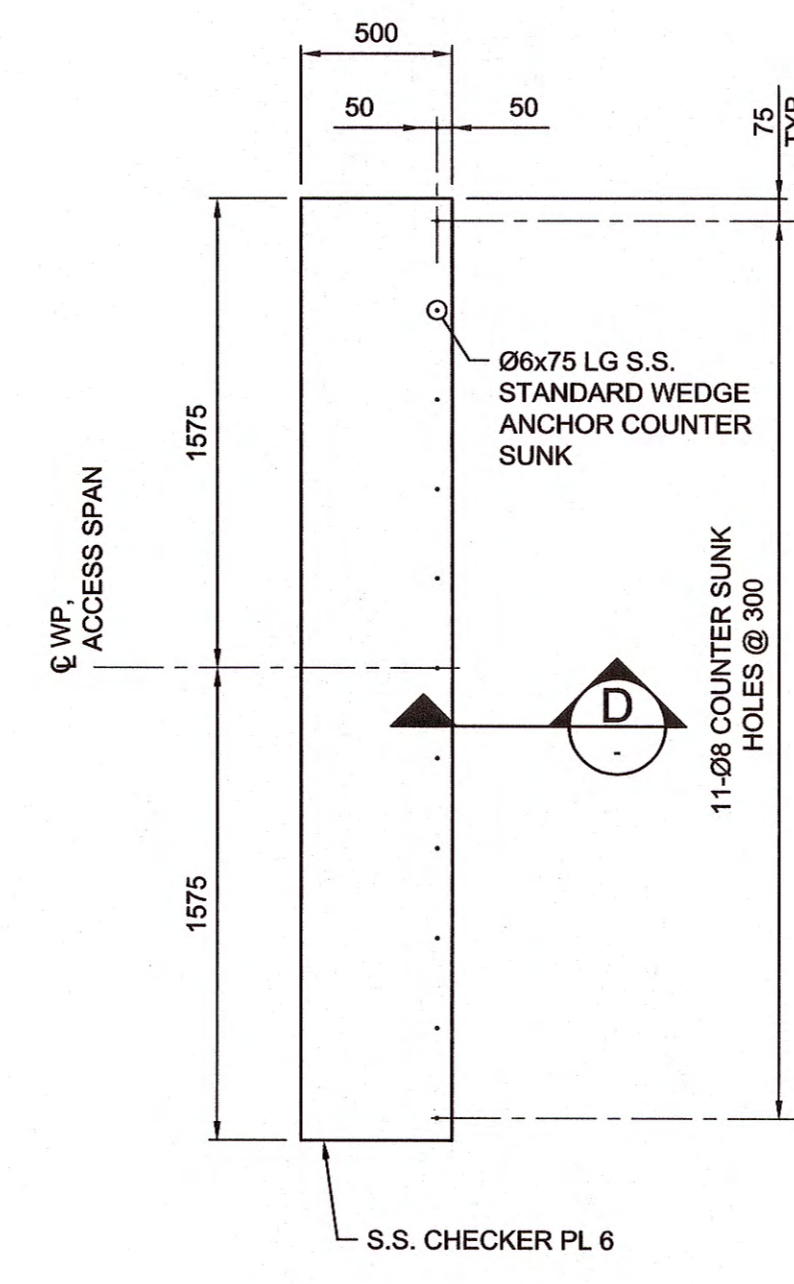
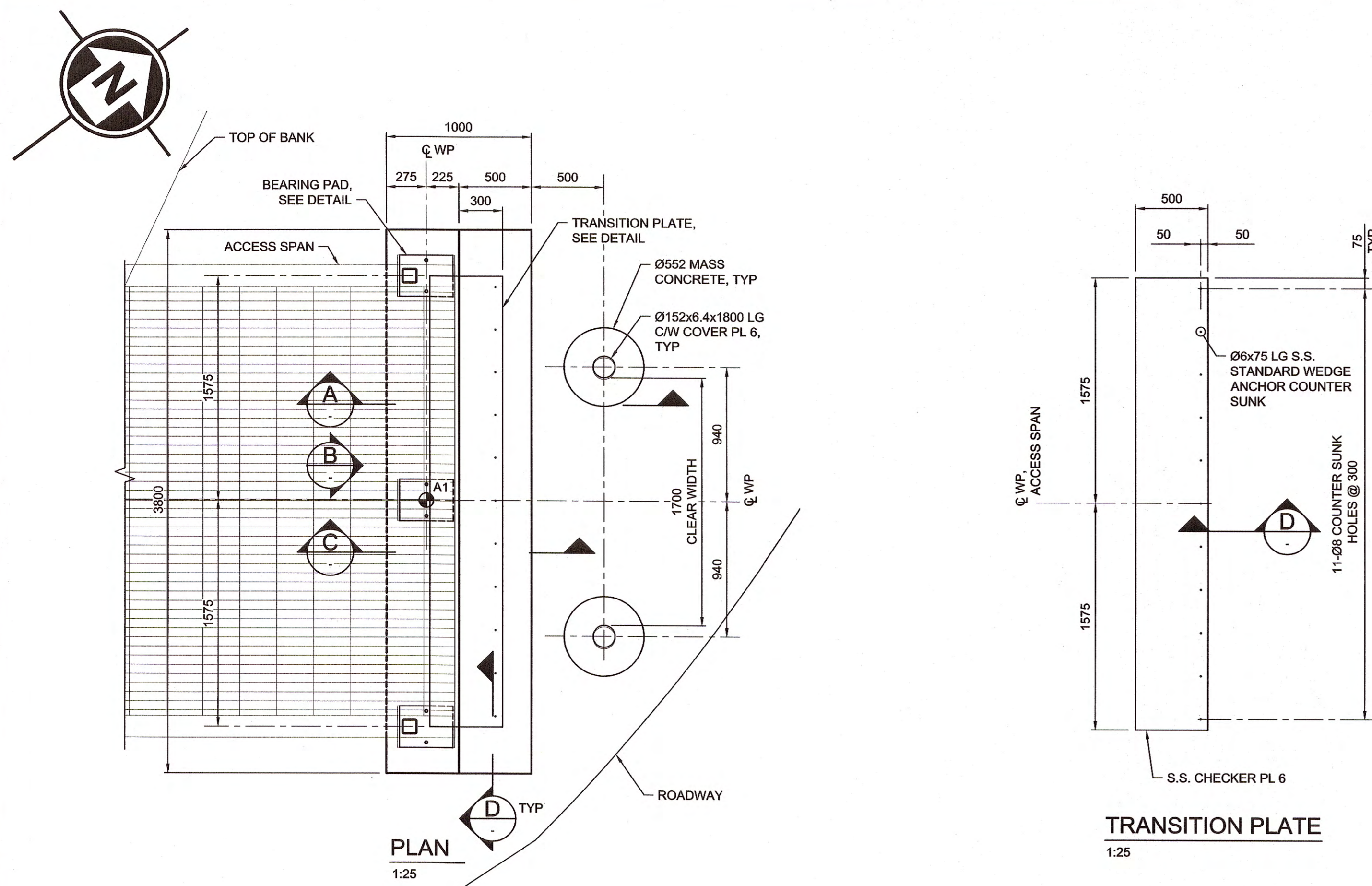
**FISHERIES AND OCEANS
 SMALL CRAFT
 HARBOURS BRANCH**

Project title/Titre du projet
**INSTITUTE OF OCEAN SCIENCES (IOS)
 TIMBER AND CONCRETE FLOATS
 A, B1, B2, C & D INSTALLATION**

Consultant Signature Only
 Designed by/Conçue par
 B. LANE / MARCH 11, 2016
 Drawn by/Dessiné par
 E. YANG / MARCH 11, 2016
 PWGSC Project Manager/Administrateur de Projets TPSGC
 Regional Manager, Architectural and Engineering Services
 Gérant régional, Services d'architecture et de génie, TPSGC

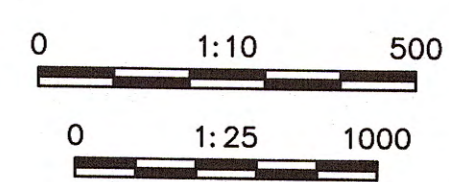
Drawing title/Titre du dessin
**FLOAT A
 ABUTMENT
 PLAN, SECTION AND DETAILS**

Project No./No. du projet 9R306-2	Sheet/Feuille 105 OF XX	Revision no./ La Révision no. 3
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PRELIMINARY
 DO NOT USE FOR CONSTRUCTION

NOTES:
 1. FOR GENERAL NOTES, SEE DWG 9R306-2-001.



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 PWGSC - A1 - 841X594





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2	ISSUED FOR CLIENT REVIEW	16/07/13
1	ISSUED FOR CLIENT REVIEW	16/05/13
0	ISSUED FOR CLIENT REVIEW	16/04/08

Revision/Revision Description/Description Date/Date

Client/client
**FISHERIES AND OCEANS
SMALL CRAFT
HARBOURS BRANCH**

Project title/Titre du projet

**INSTITUTE OF OCEAN SCIENCES (IOS)
TIMBER AND CONCRETE FLOATS
A, B1, B2, C & D INSTALLATION**

Consultant Signature Only

Designed by/Conçu par
C. LEHANE / FEBRUARY 29, 2016

Drawn by/Dessiné par
E. YANG / FEBRUARY 29, 2016

PWGSC Project Manager/Administrateur de Projets TPSGC

Regional Manager, Architectural and Engineering Services
Gestionnaire régional, Services d'architectural et de génie, TPSGC

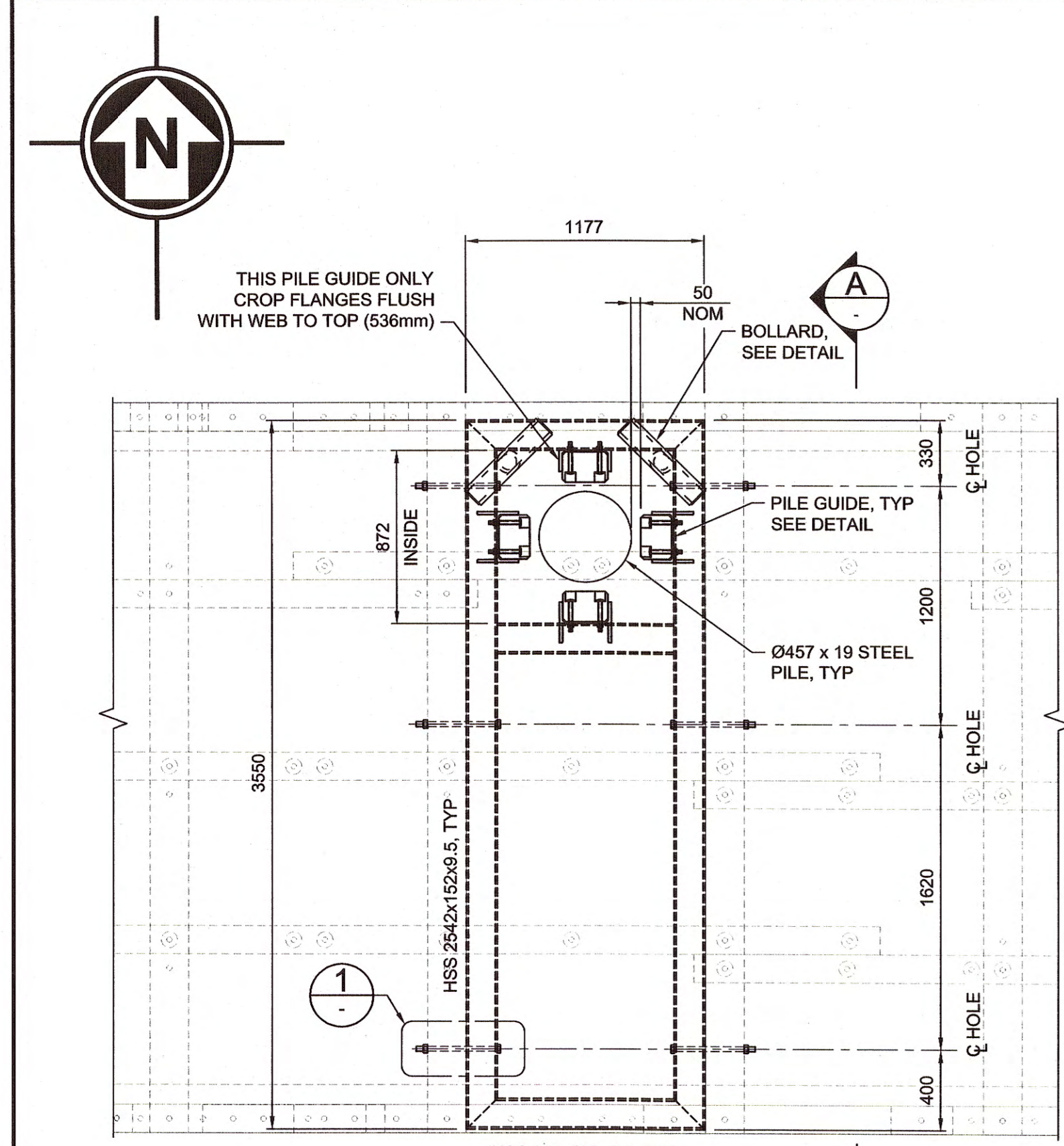
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**FLOAT A
PILE FRAME
SECTIONS AND DETAILS**

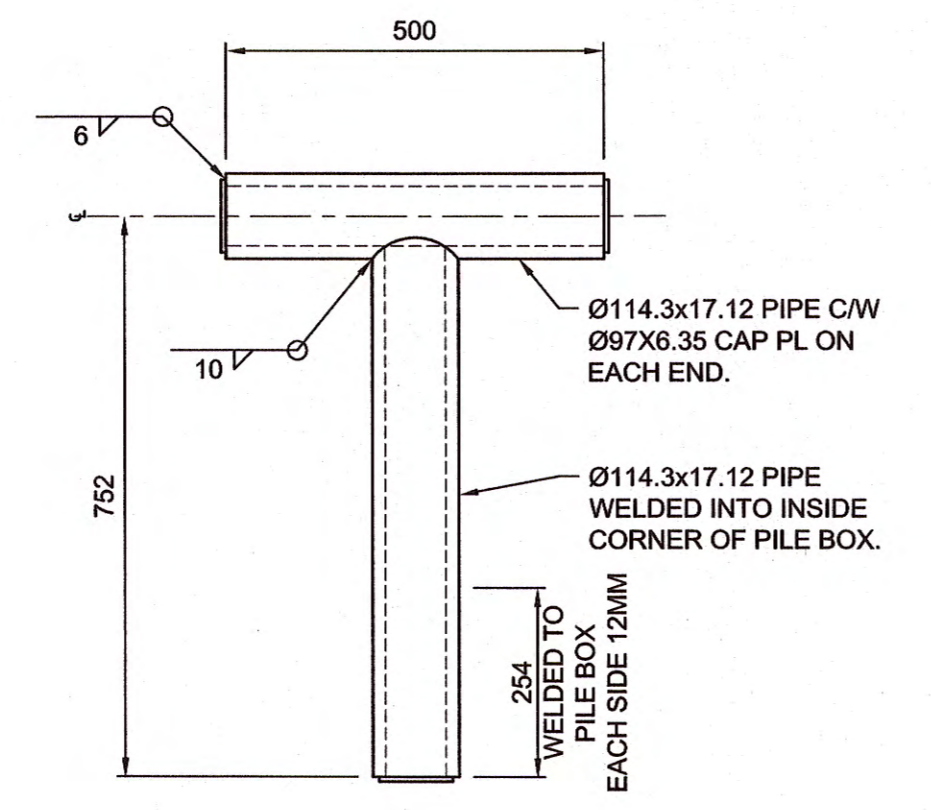
Project No./No. du projet
9R306-2

Sheet/Feuille
106
OF XX

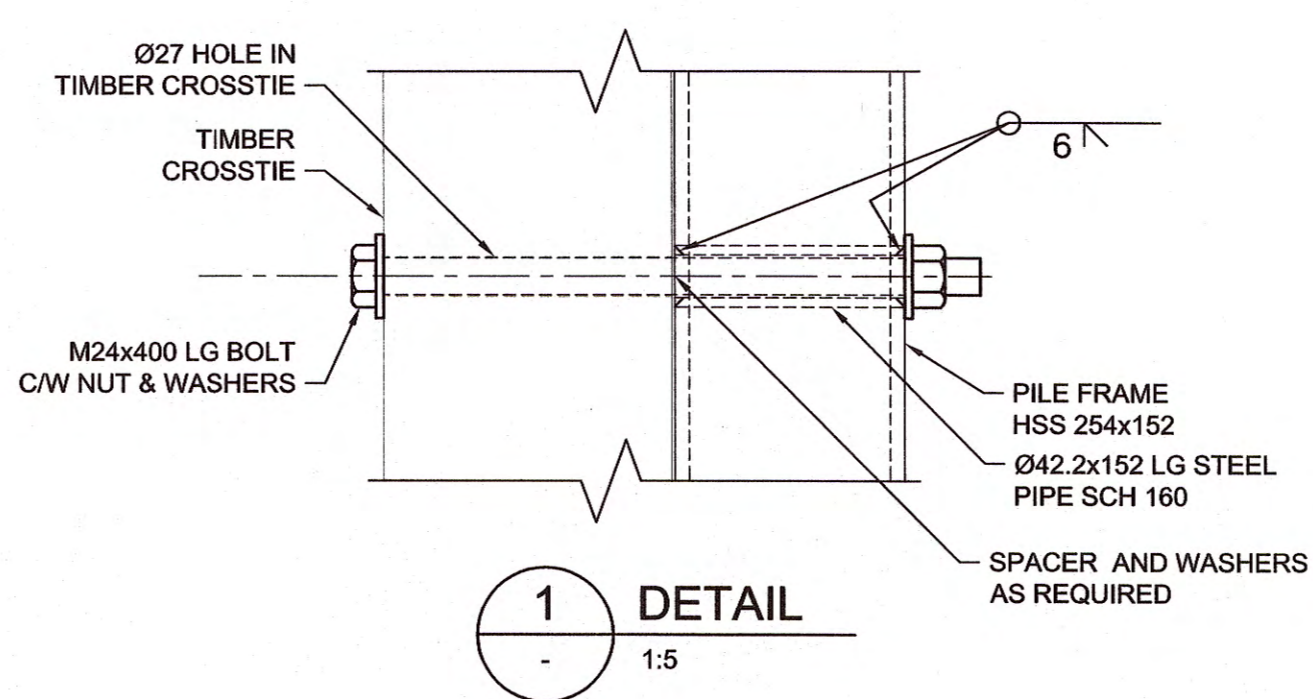
Revision no./La Révision no.
3



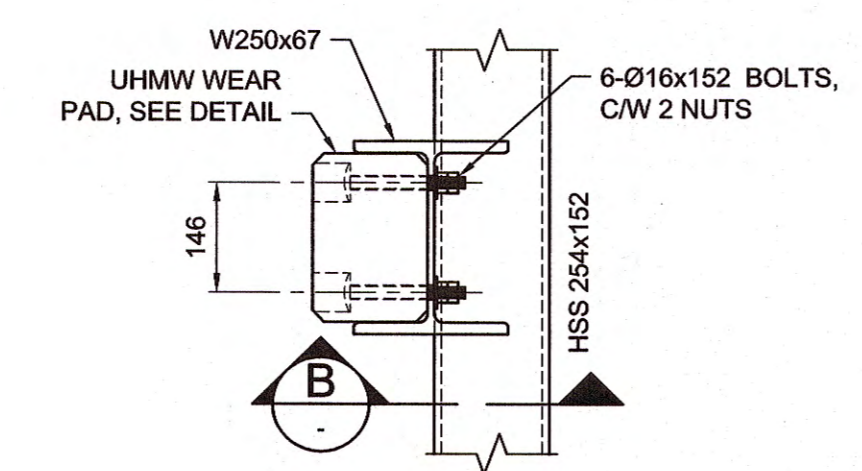
PLAN
1:25



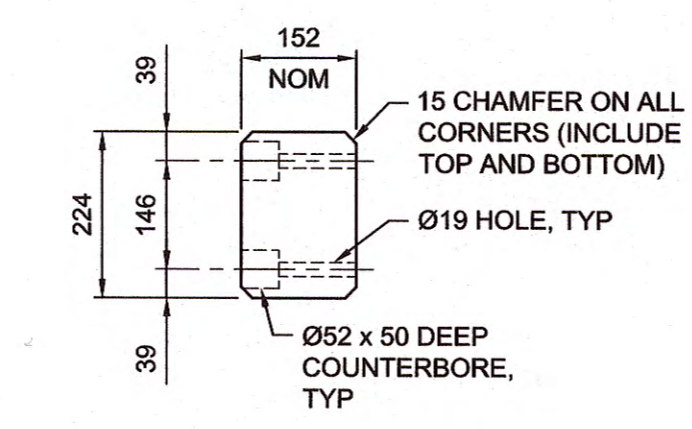
BOLLARD
1:10



1 DETAIL
1:5

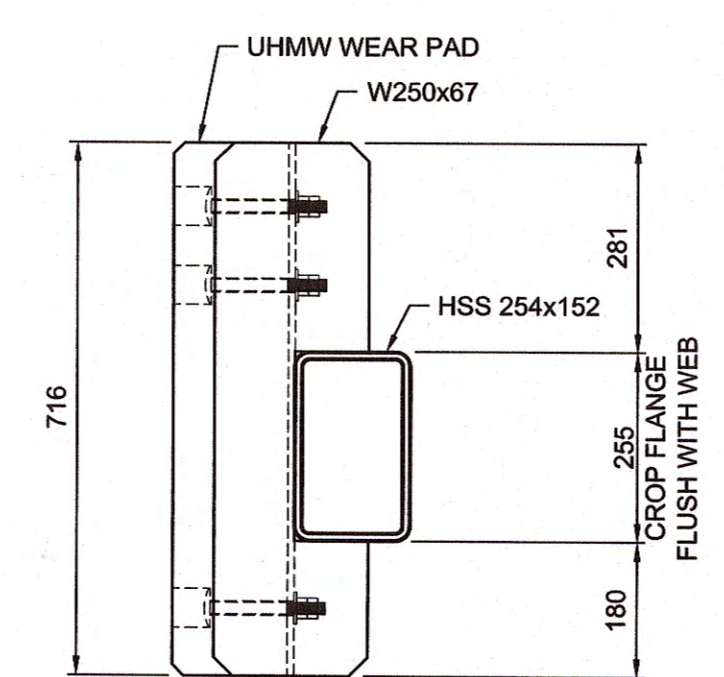


PLAN - PILE GUIDE
1:10

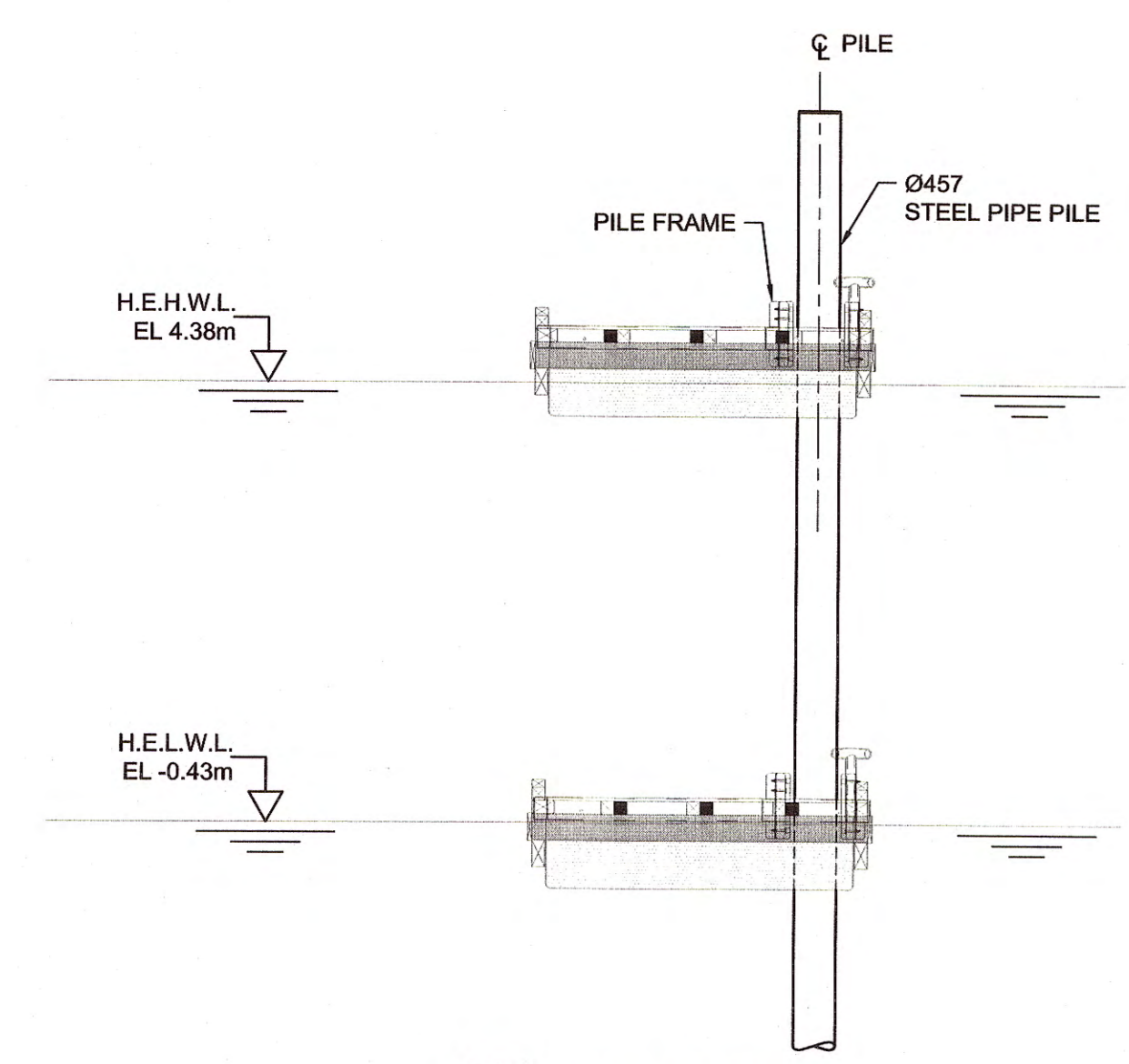


UHMW WEAR PAD
1:10

NOTE: THICKNESS TO BE ADJUSTED ON-SITE TO GIVE NOMINAL CLEARANCE TO INSTALLED PILE POSITIONS.



B SECTION
1:10

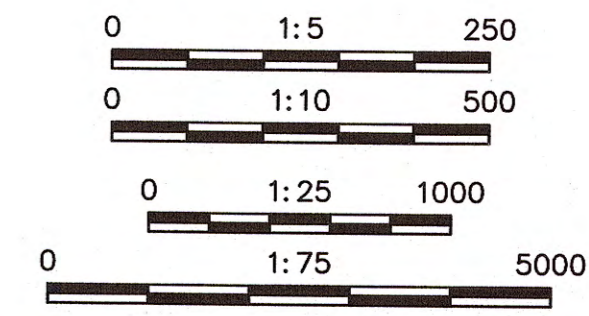


A SECTION
1:75

NOTES:

- FOR GENERAL NOTES, SEE DWG 9R306-2-001.
- COMPLETE PILE BOX ASSEMBLY TO BE GALVANIZED AFTER FABRICATION. DRAIN HOLES TO BE INSTALLED IN ACCORDANCE WITH GALVANIZING REQUIREMENTS, AND RE-SEALED AFTER GALVANIZING.
- ALL PILE GUIDES TO BE NOMINAL 50mm CLEAR FROM PILES. CONTRACTOR TO ALLOW FOR SUPPLY OF UHMW GUIDES AS SHOWN (152x223x715, 4 EACH PER PILE BOX). FIELD ADJUSTMENT WILL BE REQUIRED AS FOLLOWS: TRIM BACK (BAND-SAW) TO MINIMUM 110mm THICKNESS (IE: 42mm REMOVED AND 15mm BEVELED), OR INSERT 38mm CUT PIECE AS SPACER. THIS WILL PROVIDE UP TO 80mm OF ADJUSTMENT TO COMPENSATE FOR PILE POSITION.
- TACK WELD NUTS AFTER FINAL FITTING AND REPAIR GALVANIZATION.

PRELIMINARY
DO NOT USE FOR CONSTRUCTION



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4	ISSUED FOR CLIENT REVIEW	16/07/23
3	ISSUED FOR CLIENT REVIEW	16/05/23
2	ISSUED FOR CLIENT REVIEW	16/04/23
1	ISSUED FOR CLIENT REVIEW	16/02/24
0	ISSUED FOR INTERNAL REVIEW	16/02/19

Revision/Revised	Description/Description	Date/Date
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Client/client
**FISHERIES AND OCEANS
 SMALL CRAFT
 HARBOURS BRANCH**

Project title/Titre du projet

**INSTITUTE OF OCEAN SCIENCES (IOS)
 TIMBER AND CONCRETE FLOATS
 A, B1, B2, C & D INSTALLATION**

Consultant Signature Only

Designed by/Concept par
 C. LEHANE / JANUARY 21, 2016

Drawn by/Designé par
 E. YANG / JANUARY 21, 2015

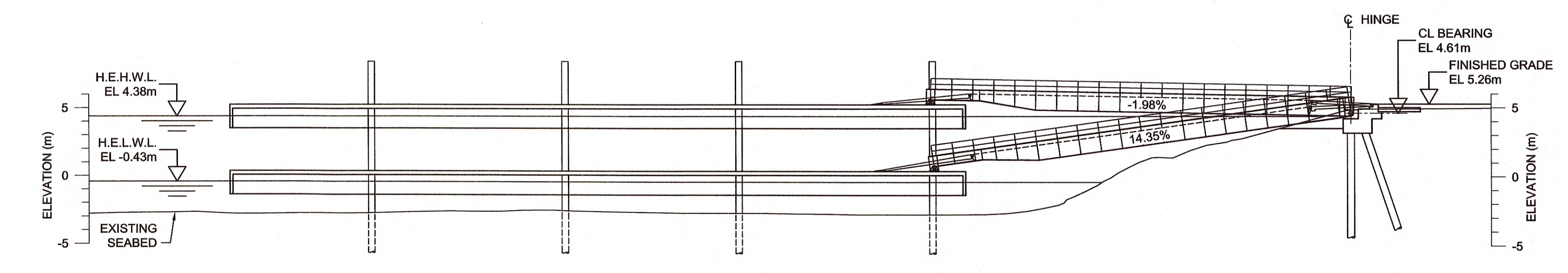
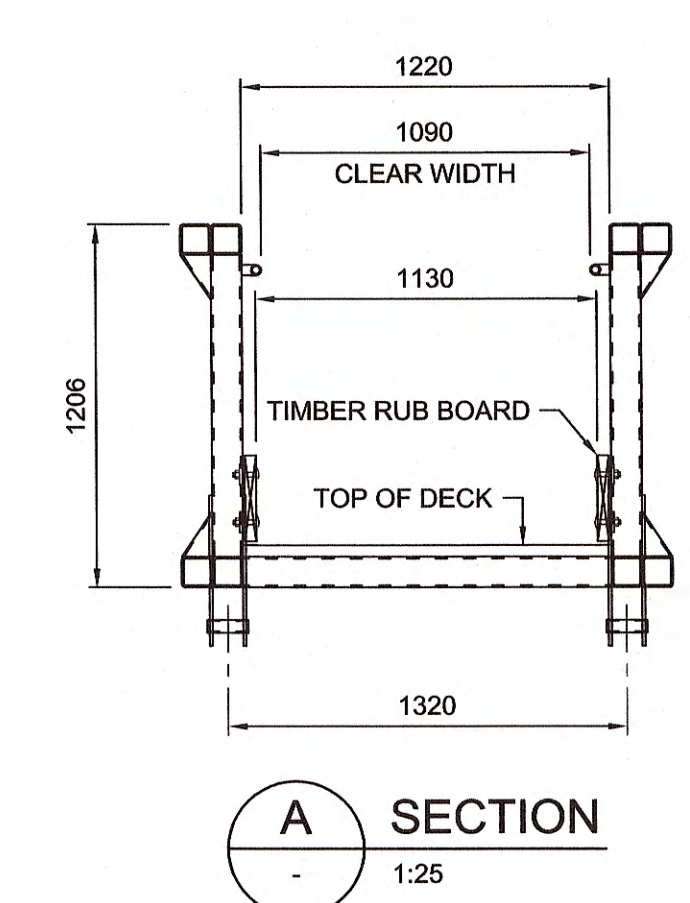
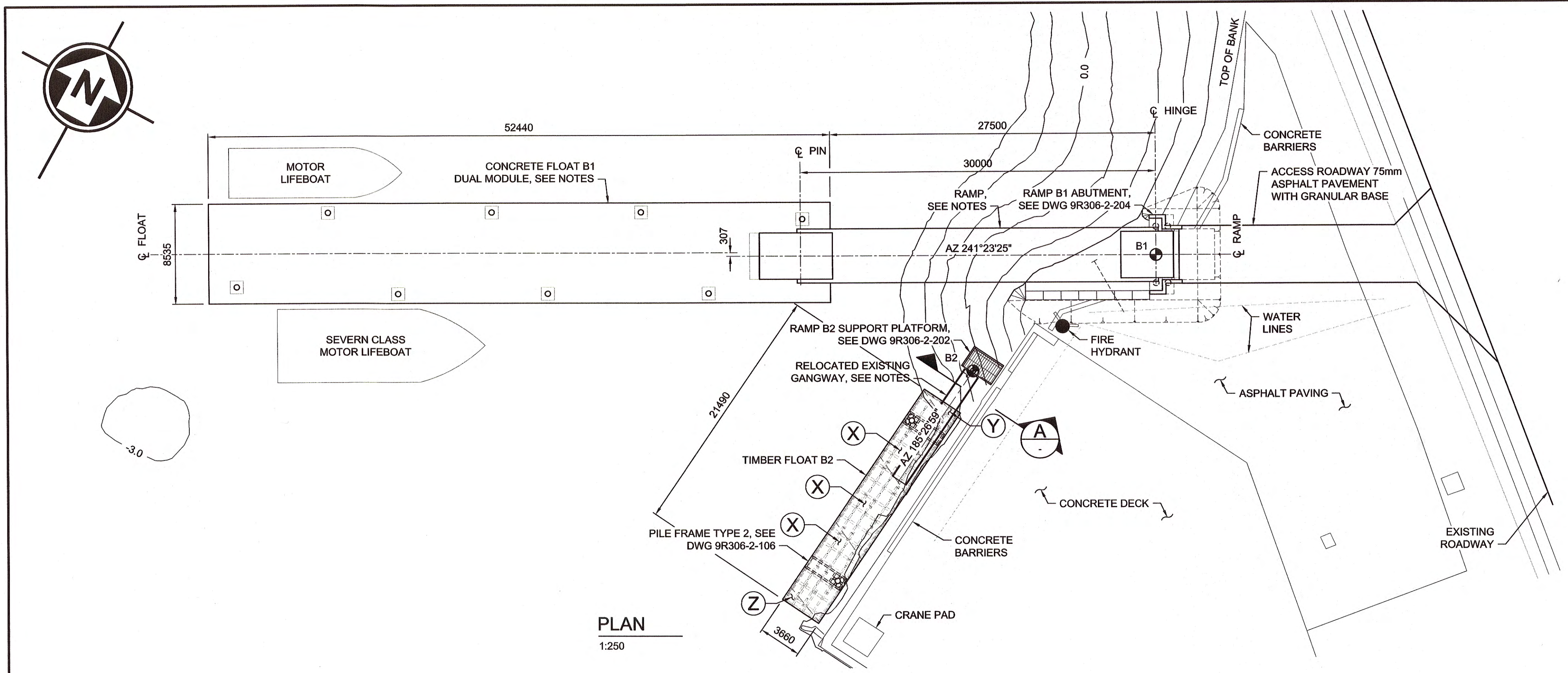
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Regional Manager, Architectural and Engineering Services / Gestionnaire régionale, Services d'architecture et de génie, TP566

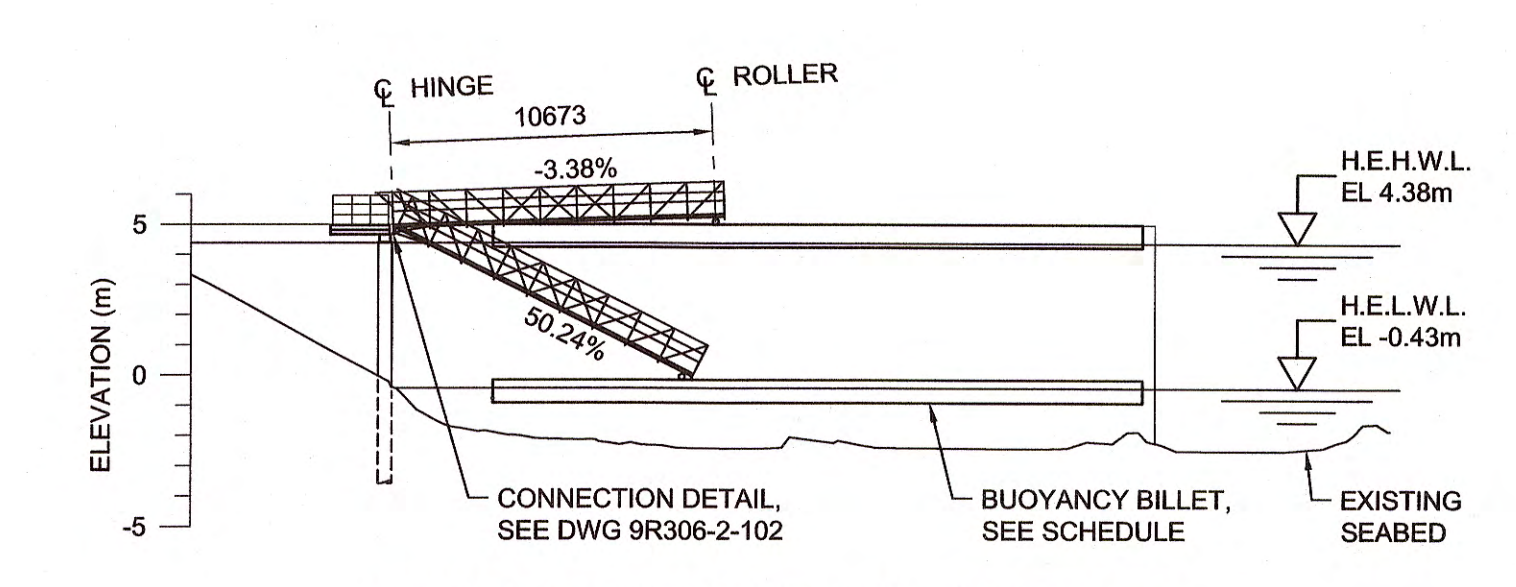
Drawing title/Titre du dessin

**FLOAT B
 PLAN**

Project No./No. du projet 9R306-2	Sheet/Fauille 201 OF XX	Revision no./La révision no. 5
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PROFILE - CENTRELINE RAMP
1:250



PROFILE - CENTRELINE GANGWAY
1:250

B2 BUOYANCY BILLET SCHEDULE

LOCATION	QUANTITY	BILLET DIMENSIONS L x W x H (mm)
PILE FRAME	2	2200 x 1160 x 400
GANGWAY LANDING (IN 4TH AND 6TH BAY)	2	3352 x 1000 x 715
ALL OTHER CROSSTIE BAYS	11	3352 x 1000 x 597

NOTES: PILE FRAME & GANGWAY LANDING BILLETS TO BE SUPPLIED BY CONTRACTOR.

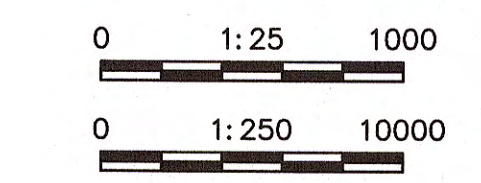
LEGENDS:

- (X) STANDARD 3.657m WIDE HEAVY FLOAT MODULE, SEE DWG FM12-HV-000-REV G.
- (Y) STANDARD SINGLE JOIST FLOAT END WITH FLANGE SPLICE, SEE DWG FM12-HV-END-000_REV I.
- (Z) STANDARD THREE JOIST FLOAT END, SEE DWG FM12-HV-END-000_REV I.

NOTES:

1. FOR GENERAL NOTES, SEE DWG 9R306-001.
2. FOR WORKPOINT COORDINATES, SEE DWG 9R306-003.
3. FOR PILE LOCATION AND COORDINATES, SEE DWG 9R306-004.
4. FOR CONCRETE FLOAT B1 DUAL MODULE, SEE SMALL CRAFT HARBOURS STANDARD CONCRETE FLOAT MODULE DWG 56134-0801-R13CONCRETE FLOAT-SHEET 1 TO 56134-0801-0-CONCRETE FLOAT-SHEET 21.
5. FOR RAMP, SEE VEHICLE RAMP TO FLOATING DOCK FOR 20,000 kg GVW STRAIGHT TRUCKS TENDER DWG 215132-101 TO 215-32-109.

**PRELIMINARY
 DO NOT USE FOR CONSTRUCTION**



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 PWOSC - A1 - 841X594





PROFESSIONAL
Stamp of B. C. E. LANE
28871
Signature
Aug 23, 2016

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4		
3		
2	ISSUED FOR TENDER	16/08/23
1	ISSUED FOR CLIENT REVIEW	16/07/13
0	ISSUED FOR CLIENT REVIEW	16/05/13
Revision/Édition	Description/Description	Date/Date

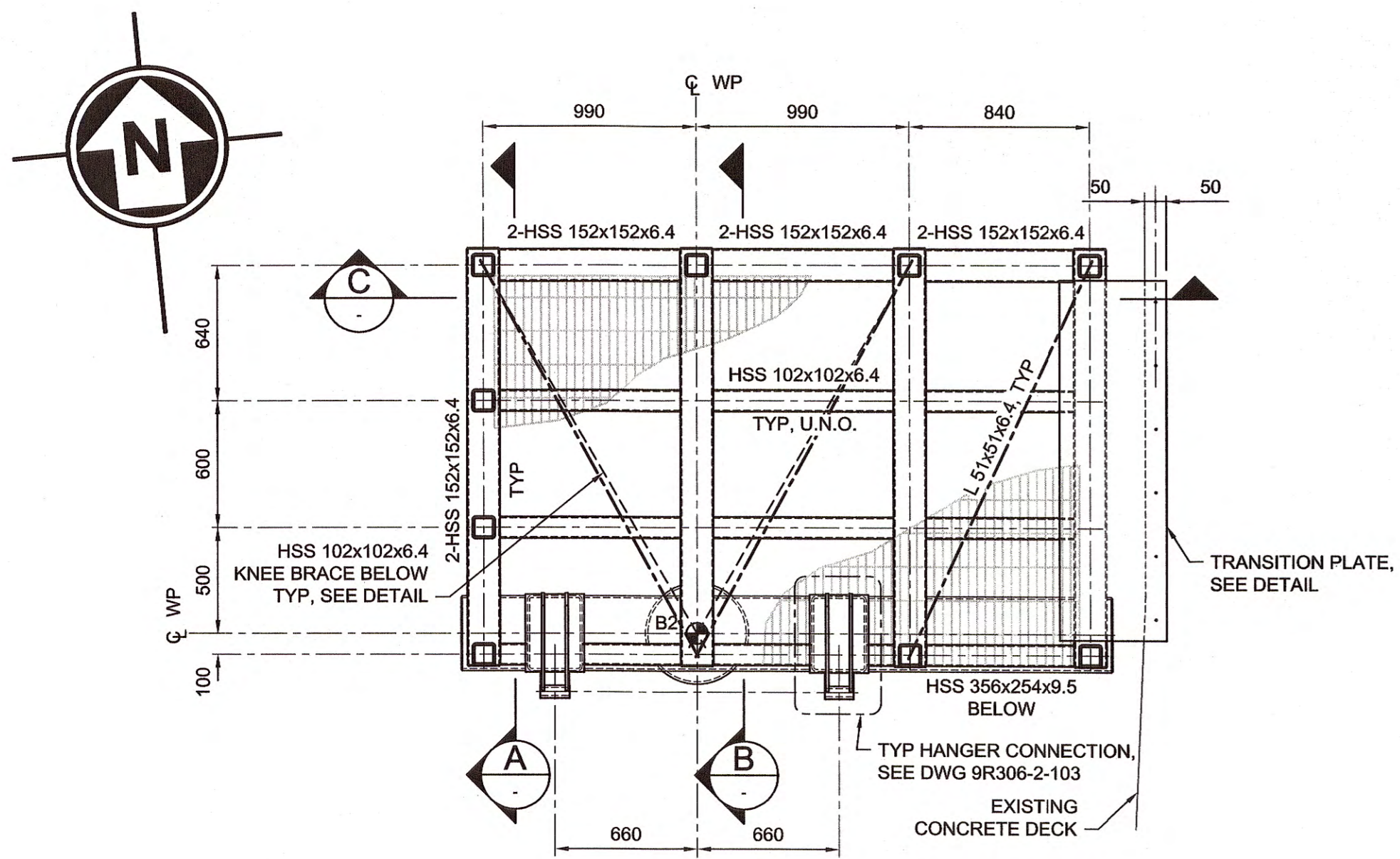
Client/client
**FISHERIES AND OCEANS
SMALL CRAFT
HARBOURS BRANCH**

Project title/Titre du projet
**INSTITUTE OF OCEAN SCIENCES (IOS)
TIMBER AND CONCRETE FLOATS
A, B1, B2, C & D INSTALLATION**

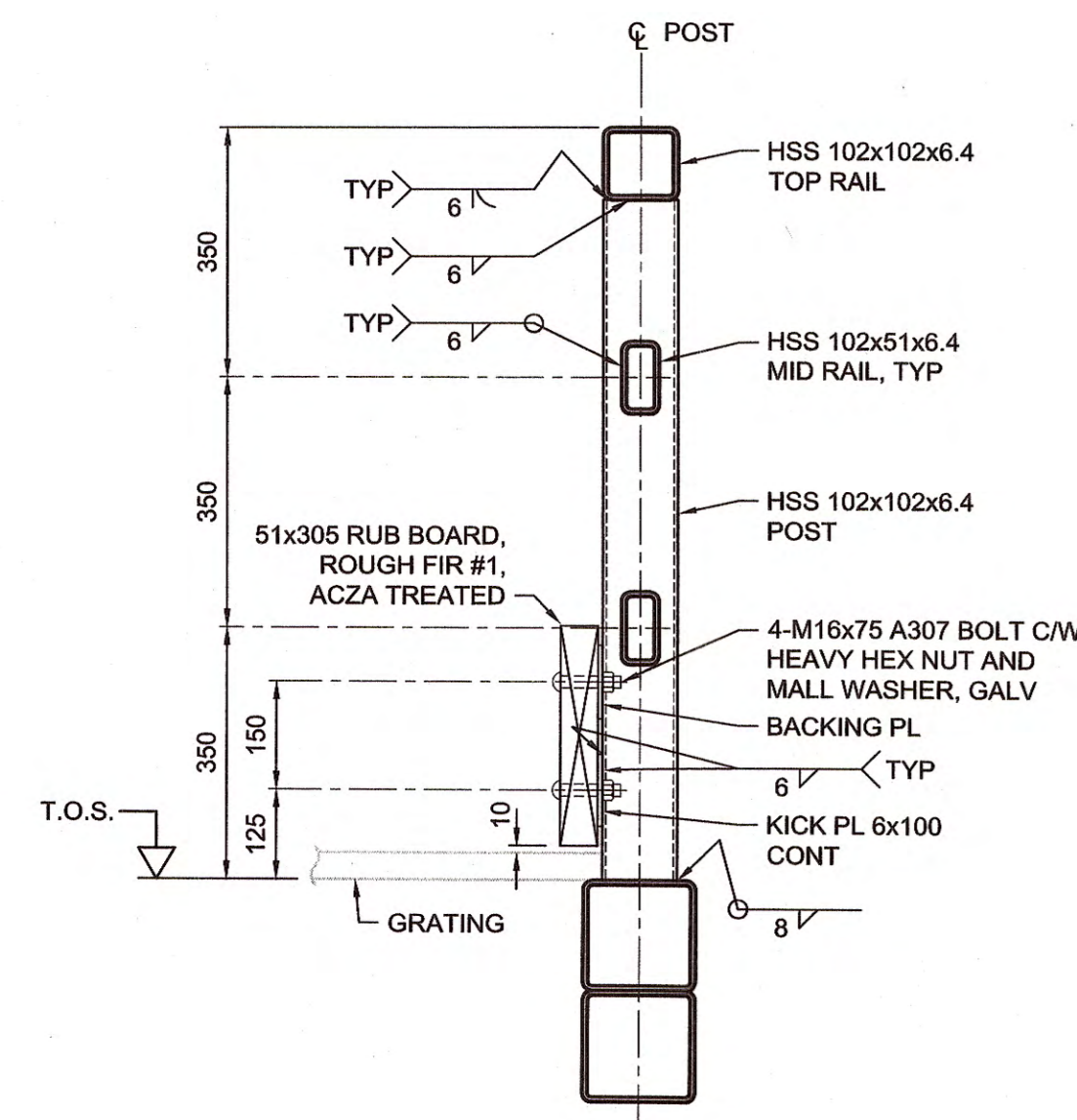
Consultant Signature Only
Designed by/Conçue par
B. LANE / MAY 2, 2016
Drawn by/Dessiné par
R. MARTIN / MAY 2, 2016
PWSC Project Manager/Administrateur de Projets TPSGC

Regional Manager, Architectural and Engineering Services
Gestionnaire régional, Services d'architecture et de génie, TPSGC
Drawing title/Titre du dessin
**FLOAT B2
SUPPORT PLATFORM
PLAN, SECTION AND DETAILS**

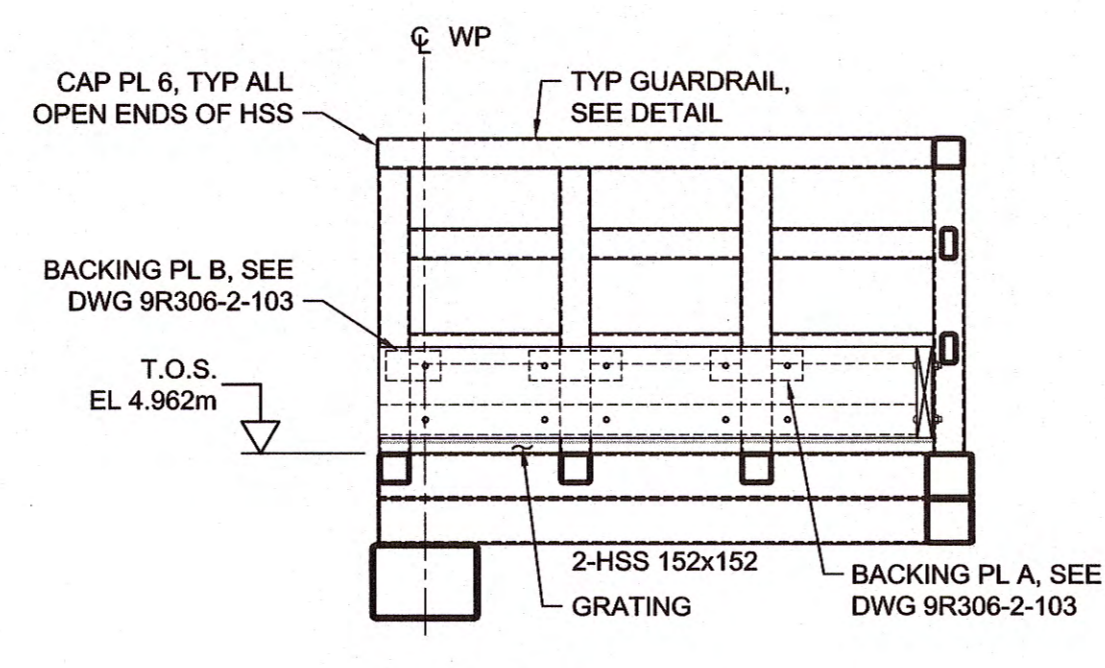
Project No./No. du projet 9R306-2	Sheet/Fauille 202 OF XX	Revision no./ La Révision no. 2
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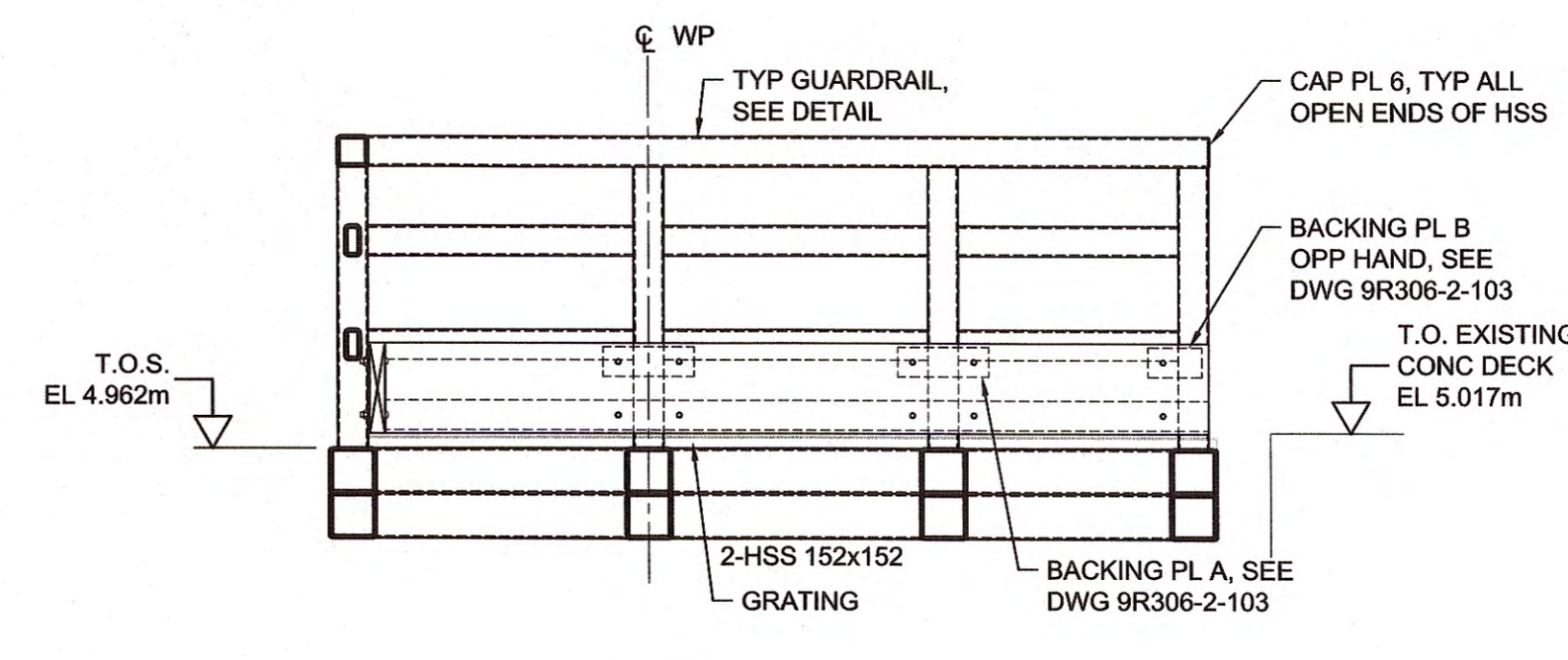
PLAN - FLOAT B2 SUPPORT PLATFORM
1:25



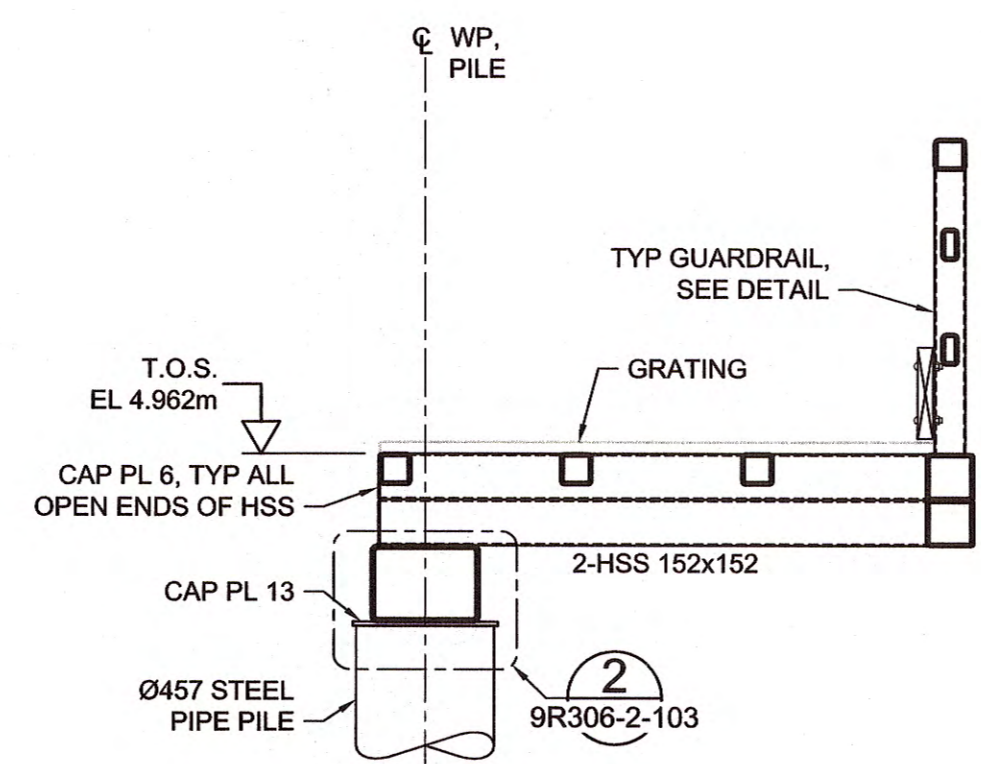
TYPICAL GUARDRAIL
1:10



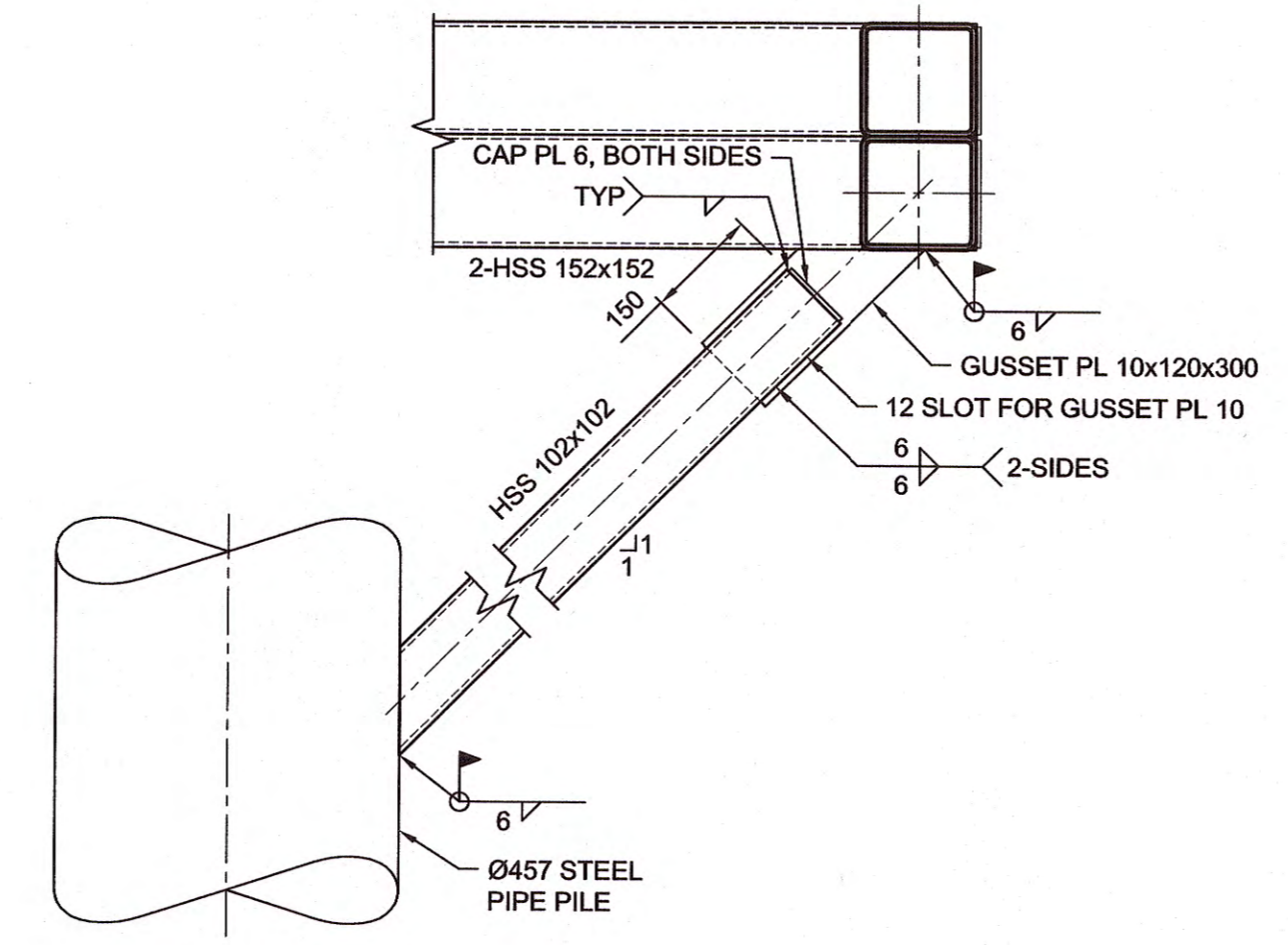
A SECTION
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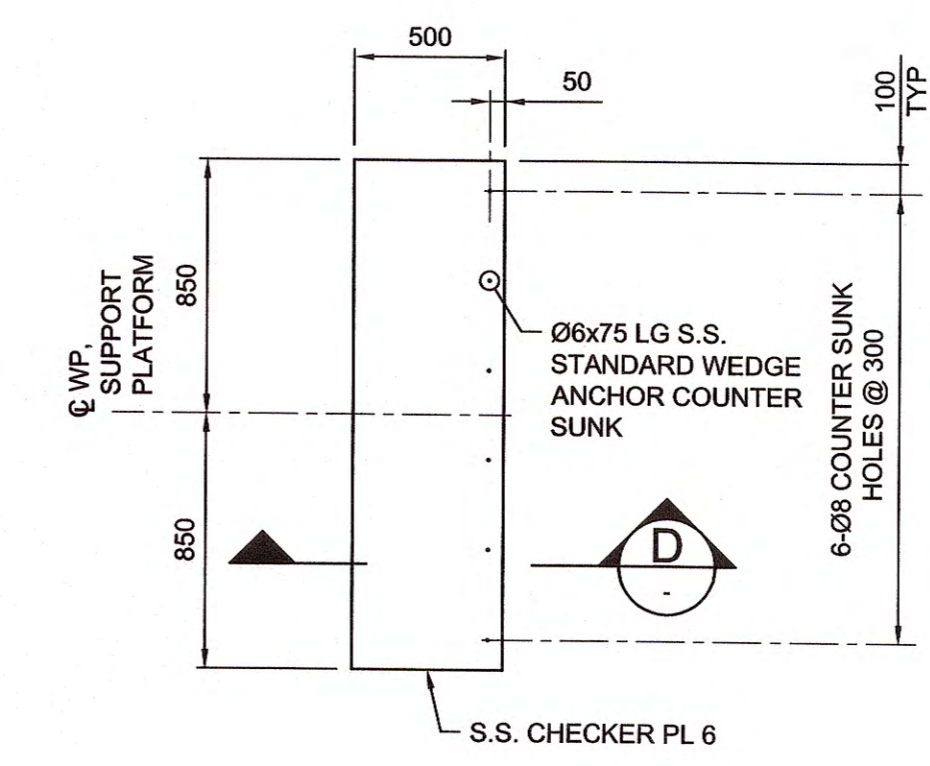
C SECTION
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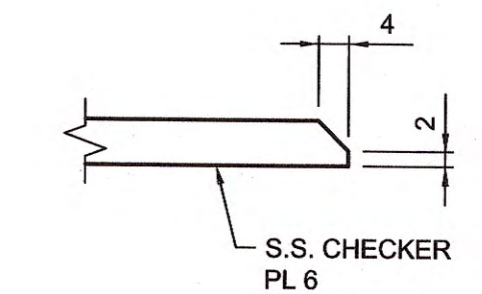
B SECTION
1:25



KNEE BRACE
1:10



TRANSITION PLATE
1:25

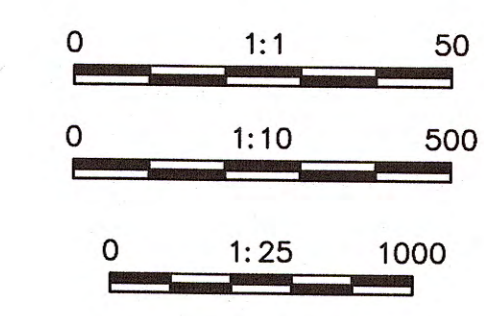


D SECTION
1:1

NOTES:

- FOR GENERAL NOTES, SEE DWG 9R306-001.
- FOR WORKPOINT COORDINATES, SEE DWG 9R306-003.
- FOR PILE LOCATION AND COORDINATES, SEE DWG 9R306-004.

PRELIMINARY
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Revision/	Description/	Date/Date
5		
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1	ISSUED FOR CLIENT REVIEW	16/07/13
0	ISSUED FOR CLIENT REVIEW	16/06/13

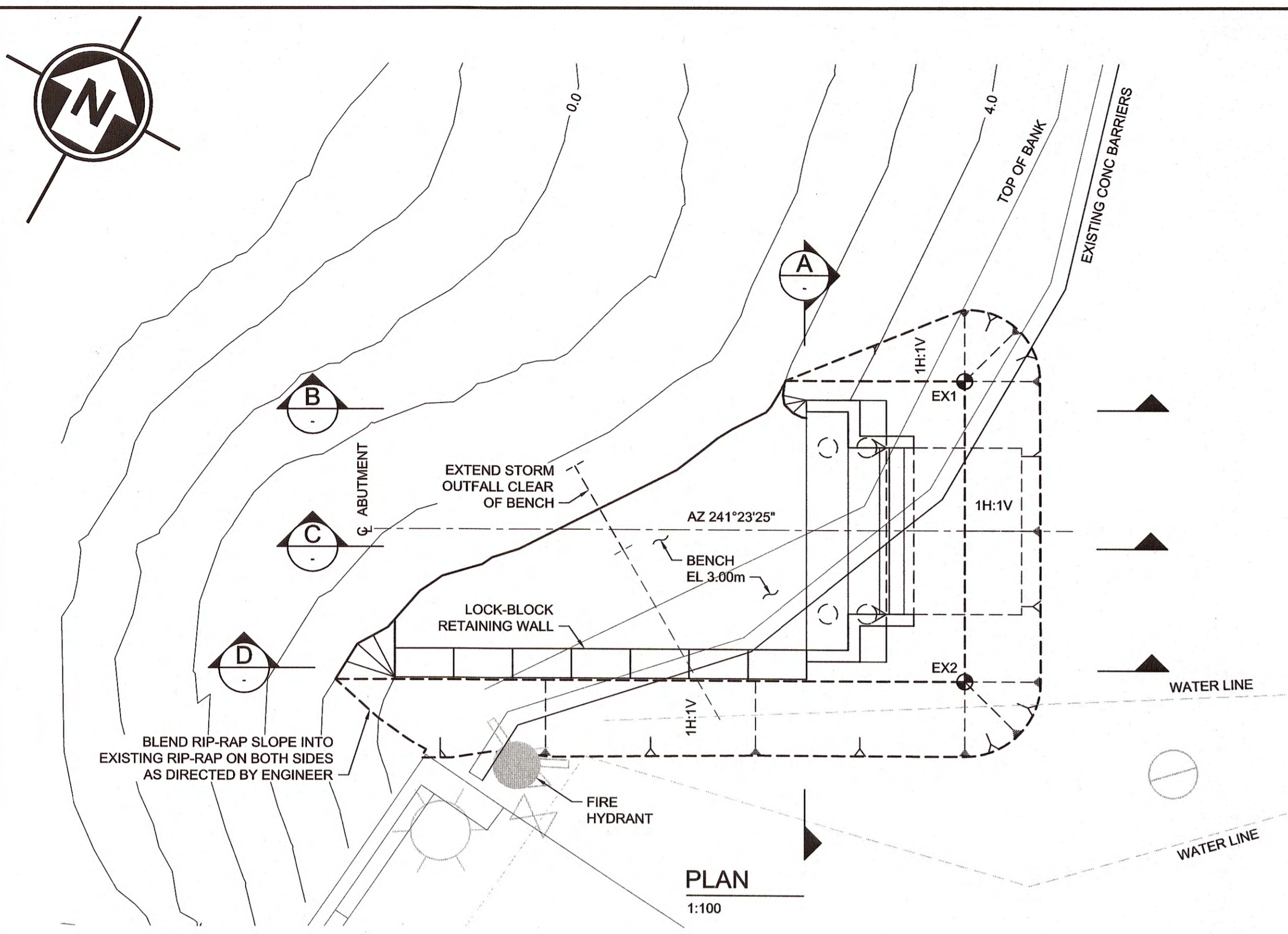
Client/client
FISHERIES AND OCEANS
SMALL CRAFT
HARBOURS BRANCH

Project title/Titre du projet
INSTITUTE OF OCEAN SCIENCES (IOS)
TIMBER AND CONCRETE FLOATS
A, B1, B2, C & D INSTALLATION

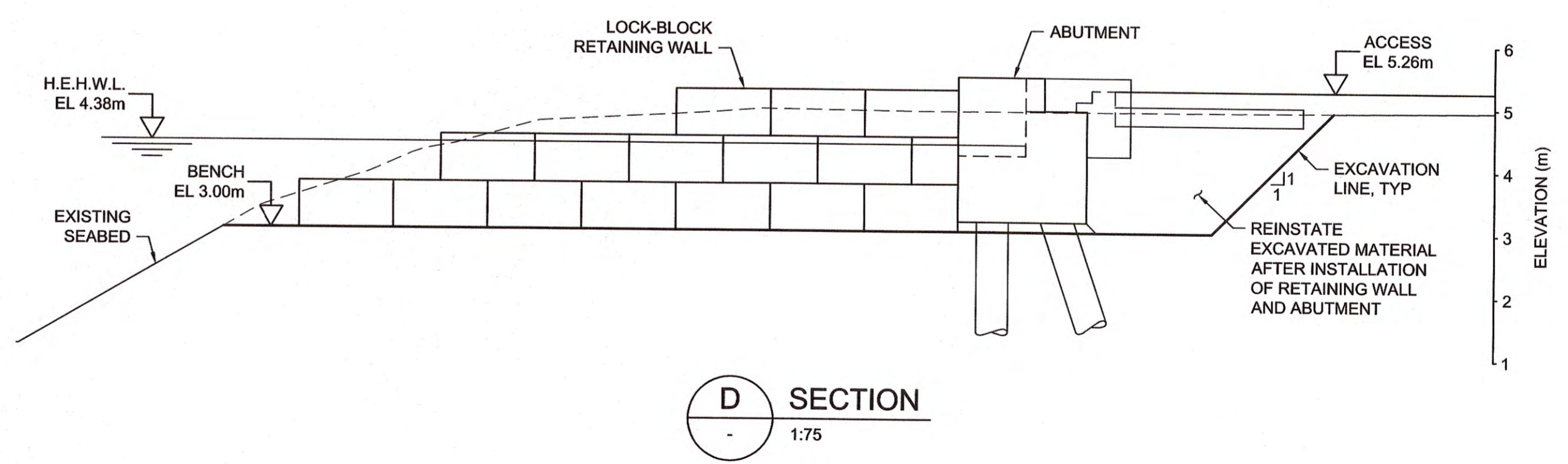
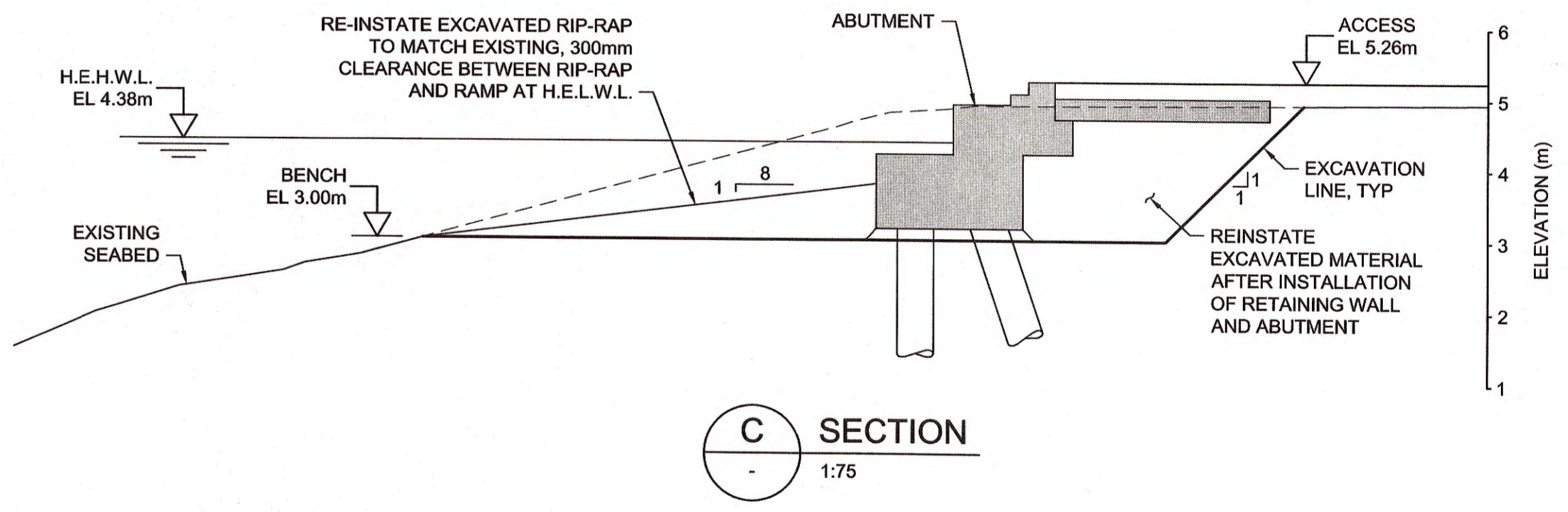
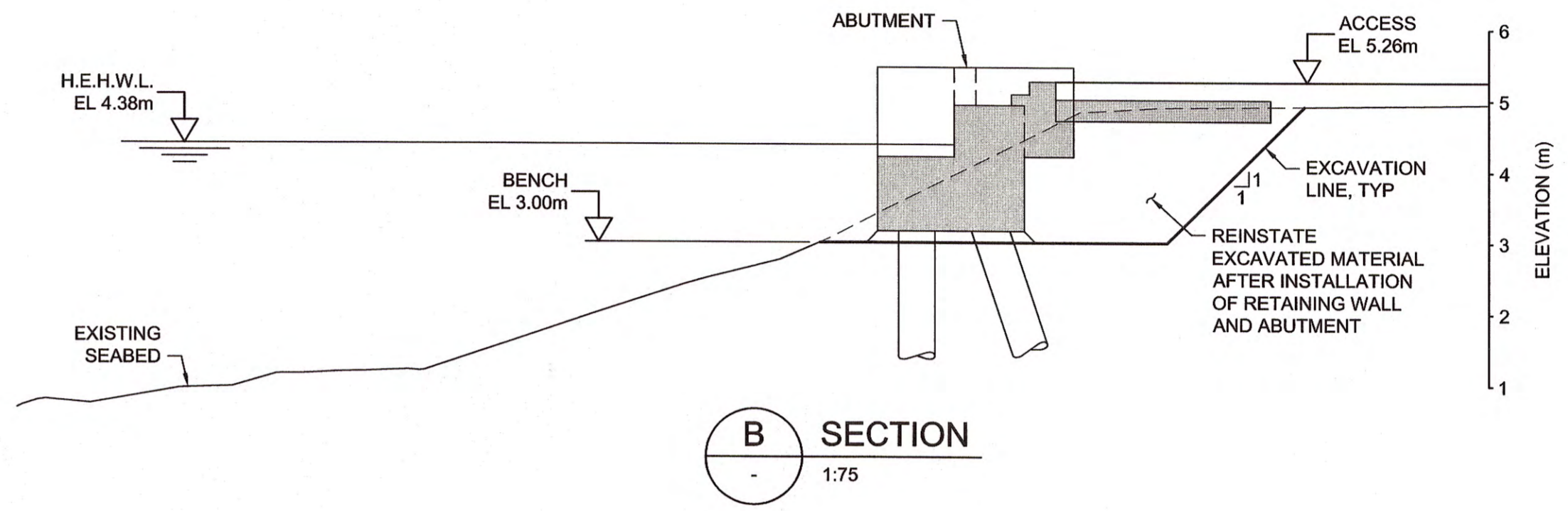
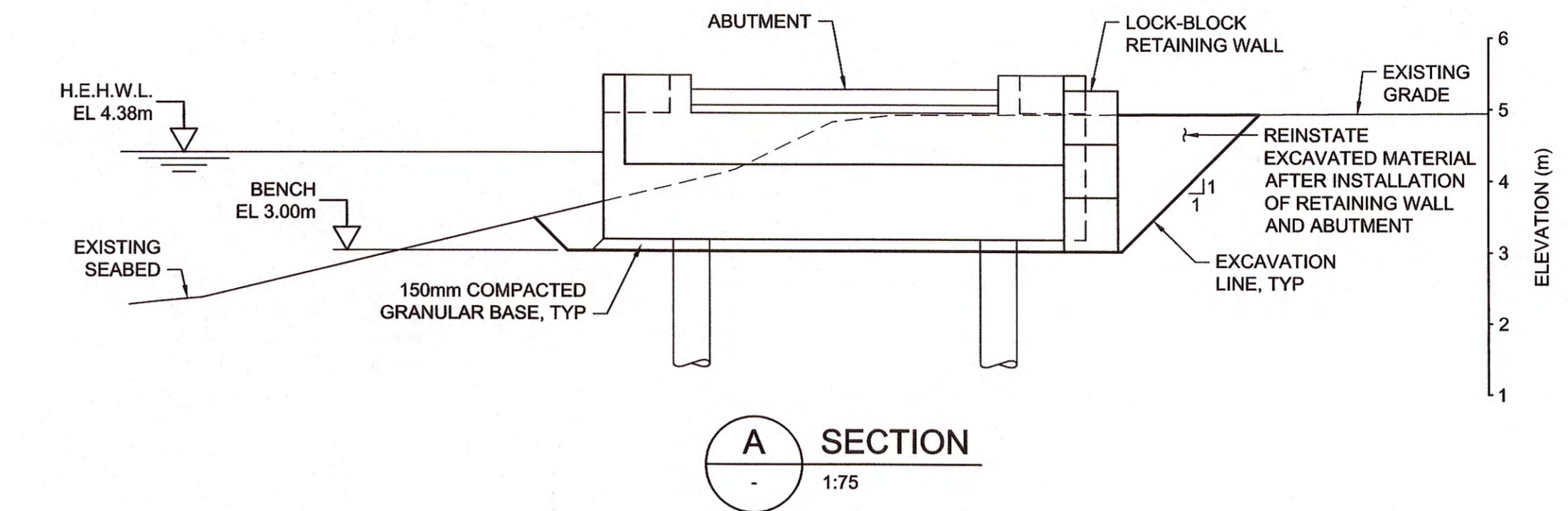
Consultant Signature Only
 Designed by/Conçopi par
 C. LEHANE / MAY 12, 2016
 Drawn by/Designé par
 R. MARTIN / MAY 12, 2016
 PWGSC Project Manager/Administrateur de Projets TPSGC
 Regional Manager, Architectural and Engineering Services
 Gestionnaire régionale, Services d'architectural et de génie, TPSGC

Drawing title/Titre du dessin
FLOAT B1
RAMP ABUTMENT
EXCAVATION AND FILL

Project No./No. du projet 9R306-2	Sheet/Feuille 203 OF XX	Revision no./ La Révision no. 2
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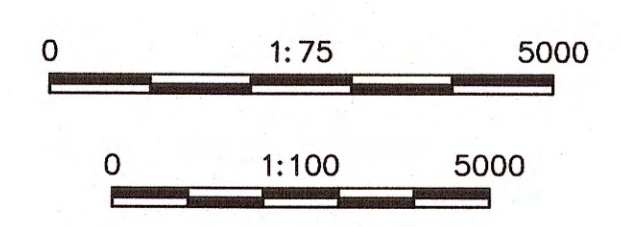


EXCAVATION WORKPOINT SCHEDULE			
WORKPOINT	NORTHING	EASTING	ELEVATION (m)
EX1	5388944.762	466952.969	3.00
EX2	5388937.958	466956.680	3.00



PRELIMINARY
DO NOT USE FOR CONSTRUCTION

- NOTES:**
- FOR GENERAL NOTES, SEE DWG 9R306-2-001.
 - FOR WORKPOINT COORDINATES, SEE DWG 9R306-2-003.



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4		
3		
2	ISSUED FOR TENDER	16/06/23
1	ISSUED FOR CLIENT REVIEW	18/07/13
0	ISSUED FOR CLIENT REVIEW	16/05/13

FISHERIES AND OCEANS
SMALL CRAFT
HARBOURS BRANCH

Project title/Titre du projet

INSTITUTE OF OCEAN SCIENCES (IOS)
TIMBER AND CONCRETE FLOATS
A, B1, B2, C & D INSTALLATION

Consultant Signature Only

Designed by/Concept par
M. MARTI LOPEZ / MAY 02, 2016

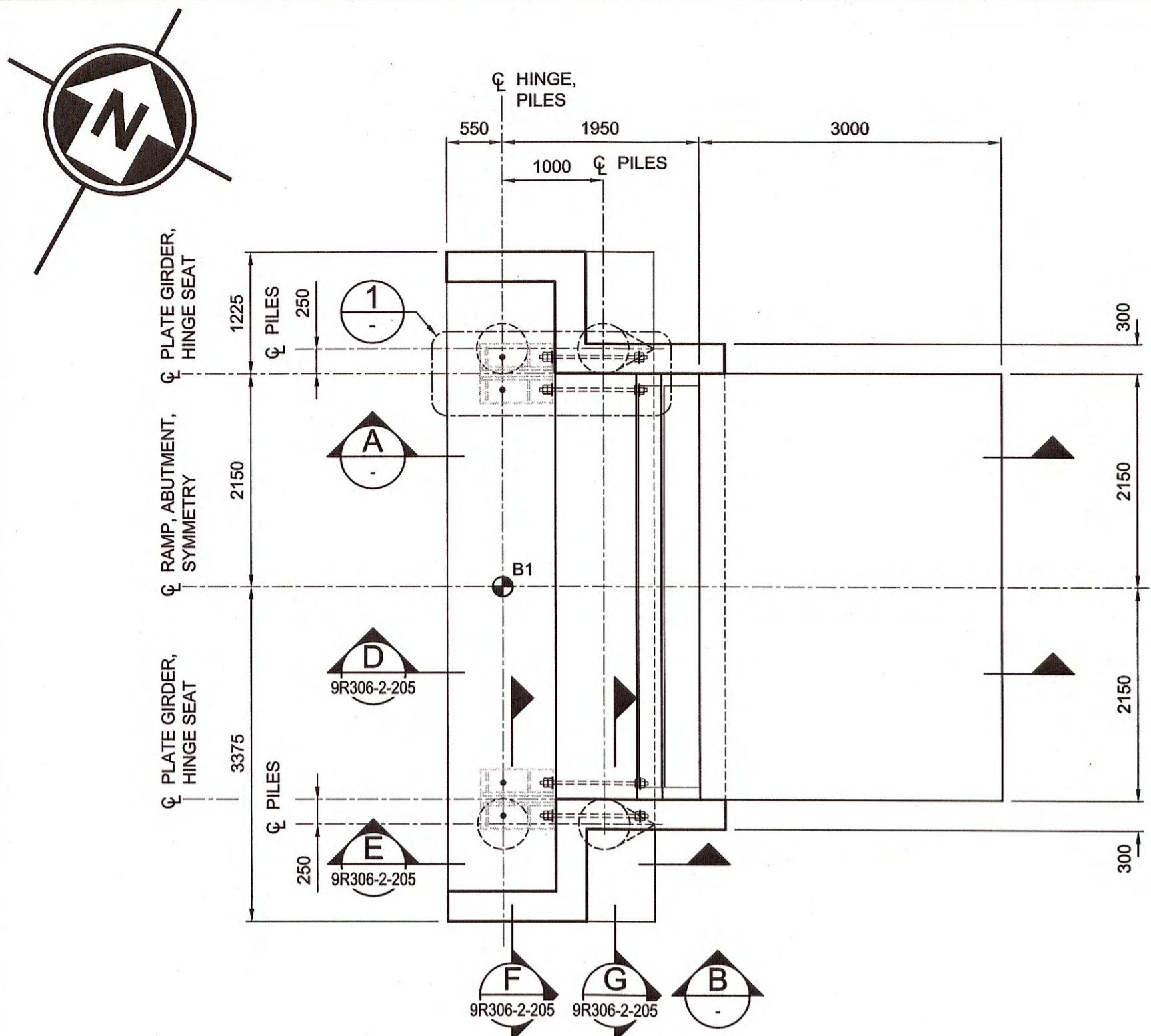
Drawn by/Desiné par
R. MARTIN / MAY 02, 2016

PWGSC Project Manager/Administrateur de Projets TPSCG

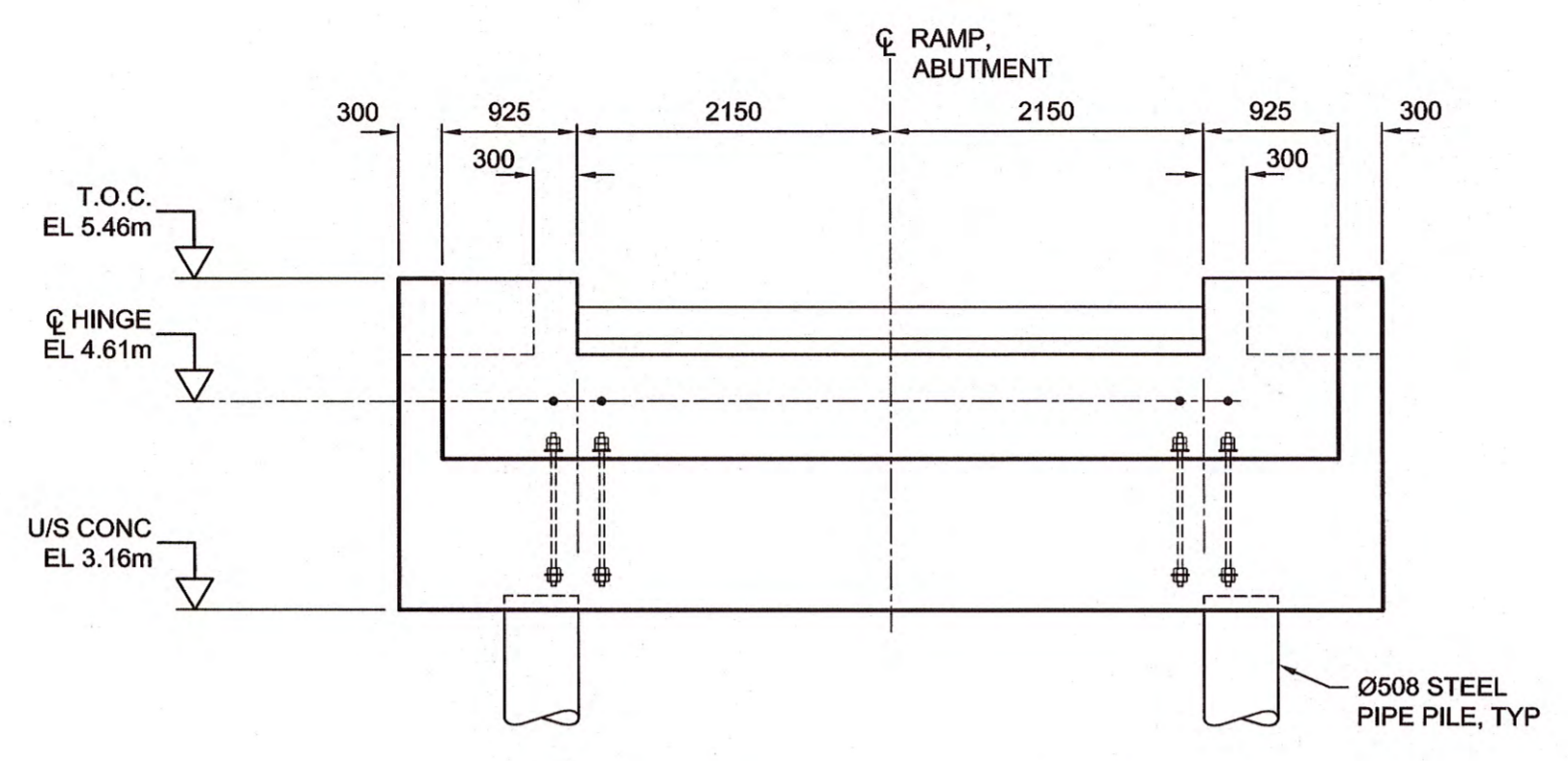
Regional Manager, Architectural and Engineering Services
Gestionnaire régional, Services d'architecture et de génie, TPSCG

Drawing title/Titre du dessin
FLOAT B1
RAMP ABUTMENT
SHEET 1

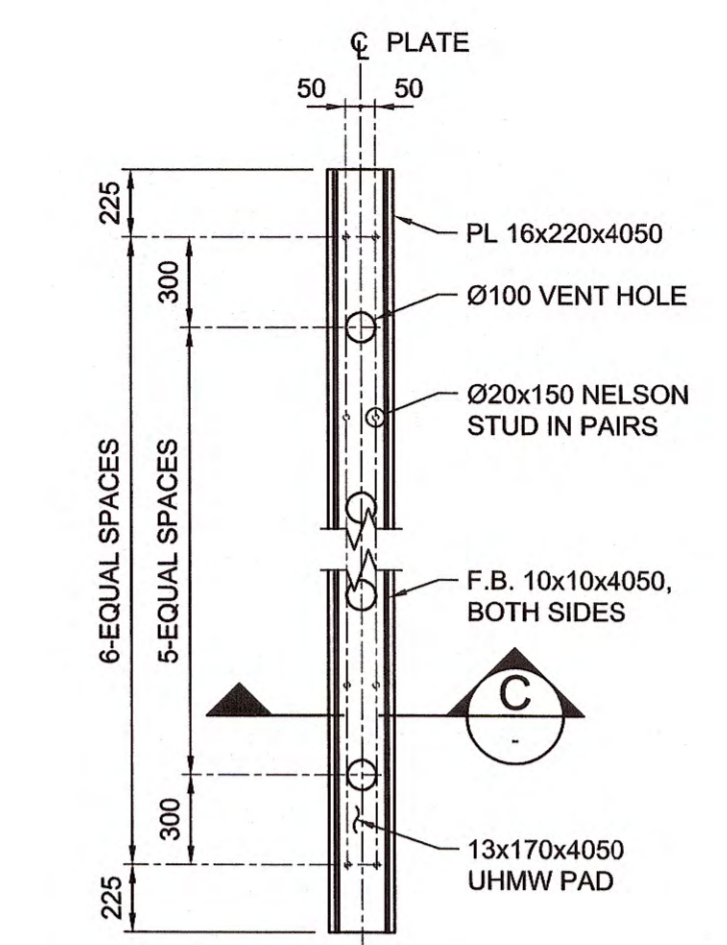
Project No./No. du projet 9R306-2	Sheet/Feuille 204 OF XX	Revision no./ Révision no. 2
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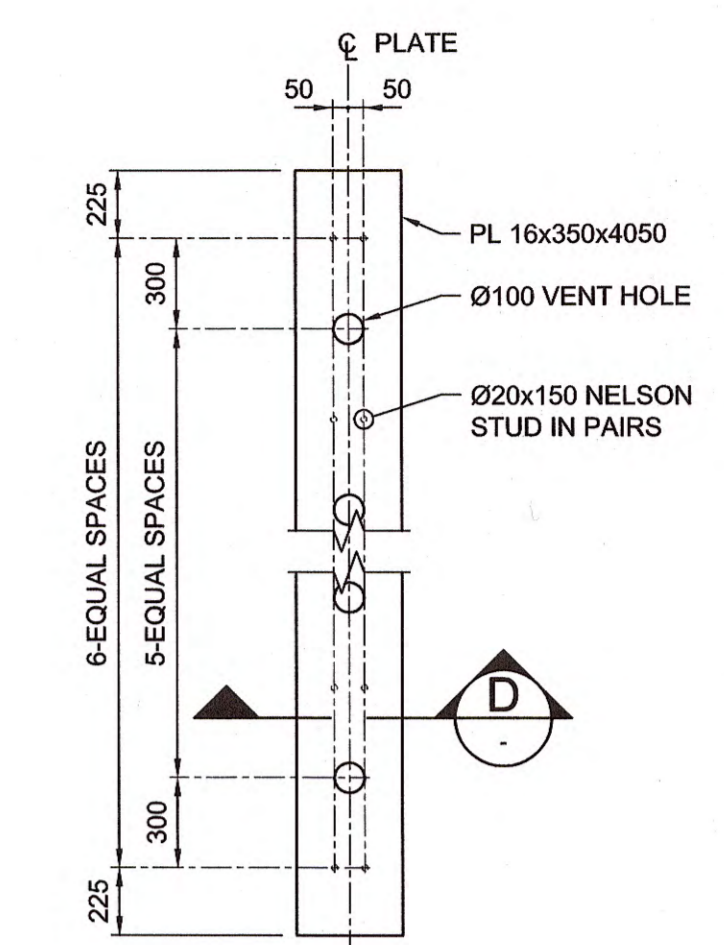
PLAN - RAMP ABUTMENT
1:50



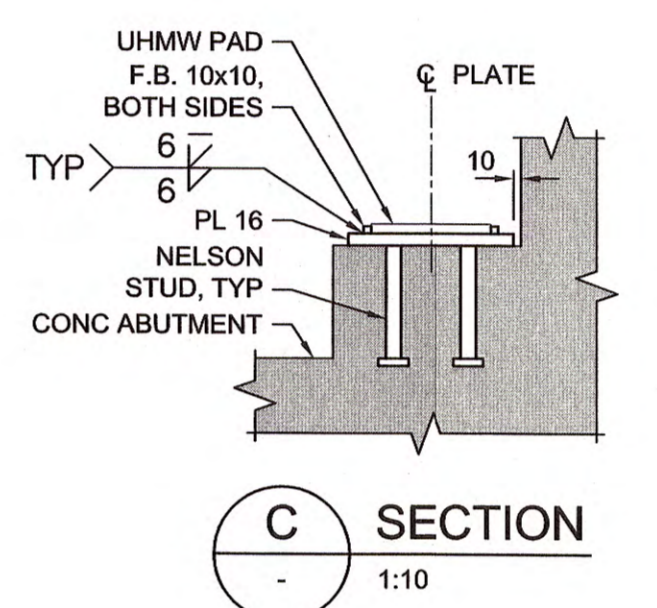
ELEVATION - LOOKING EAST
1:50



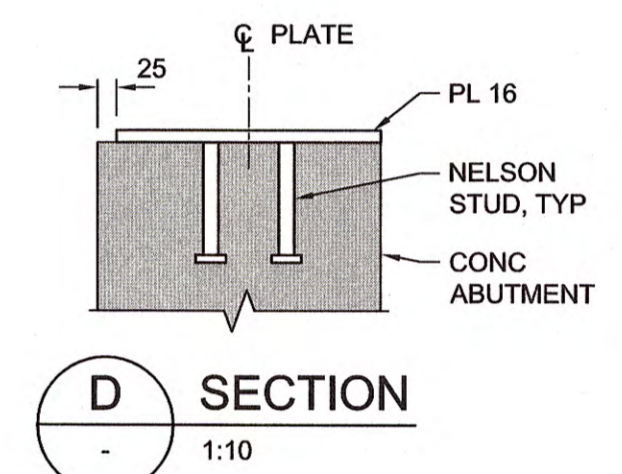
PLAN - APRON SLIDE PLATE
1:25



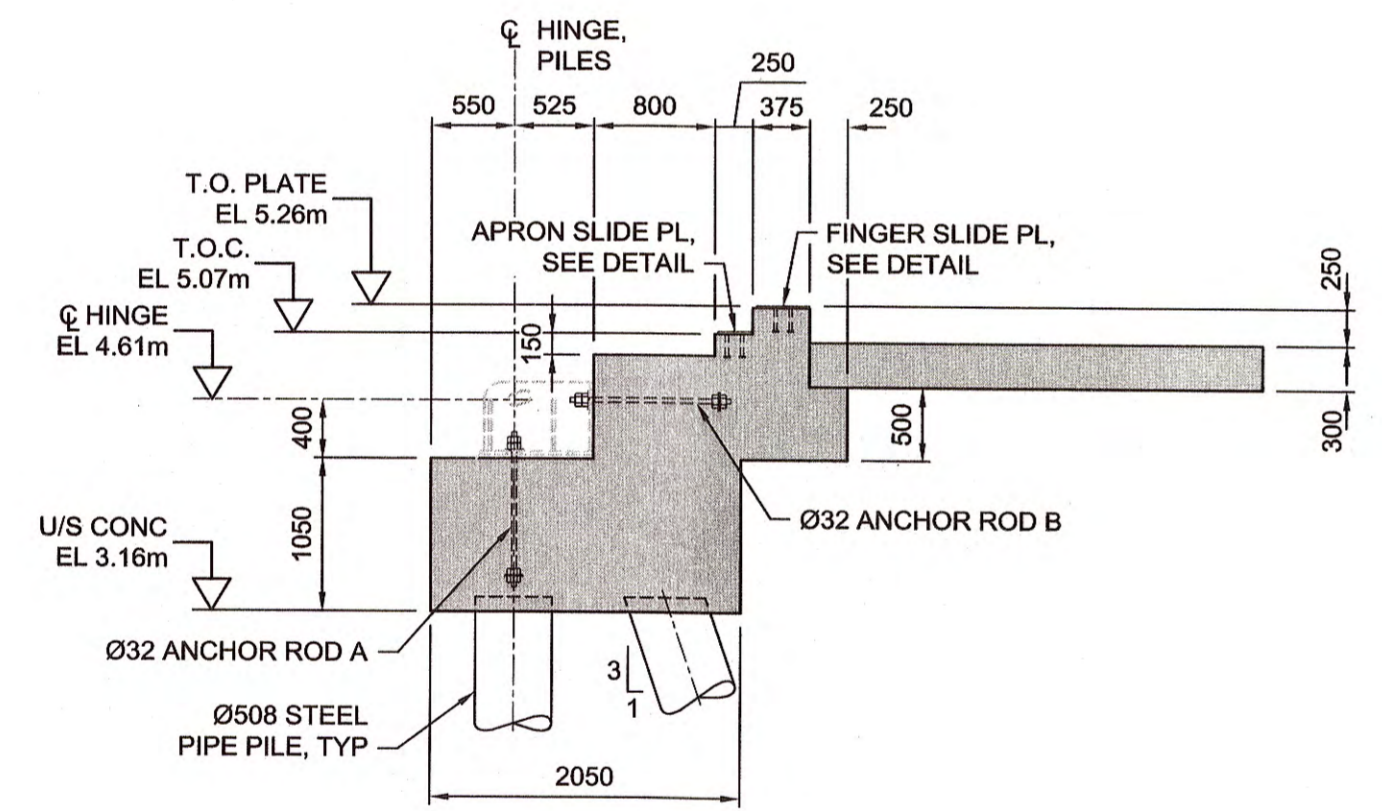
PLAN - FINGER SLIDE PLATE
1:25



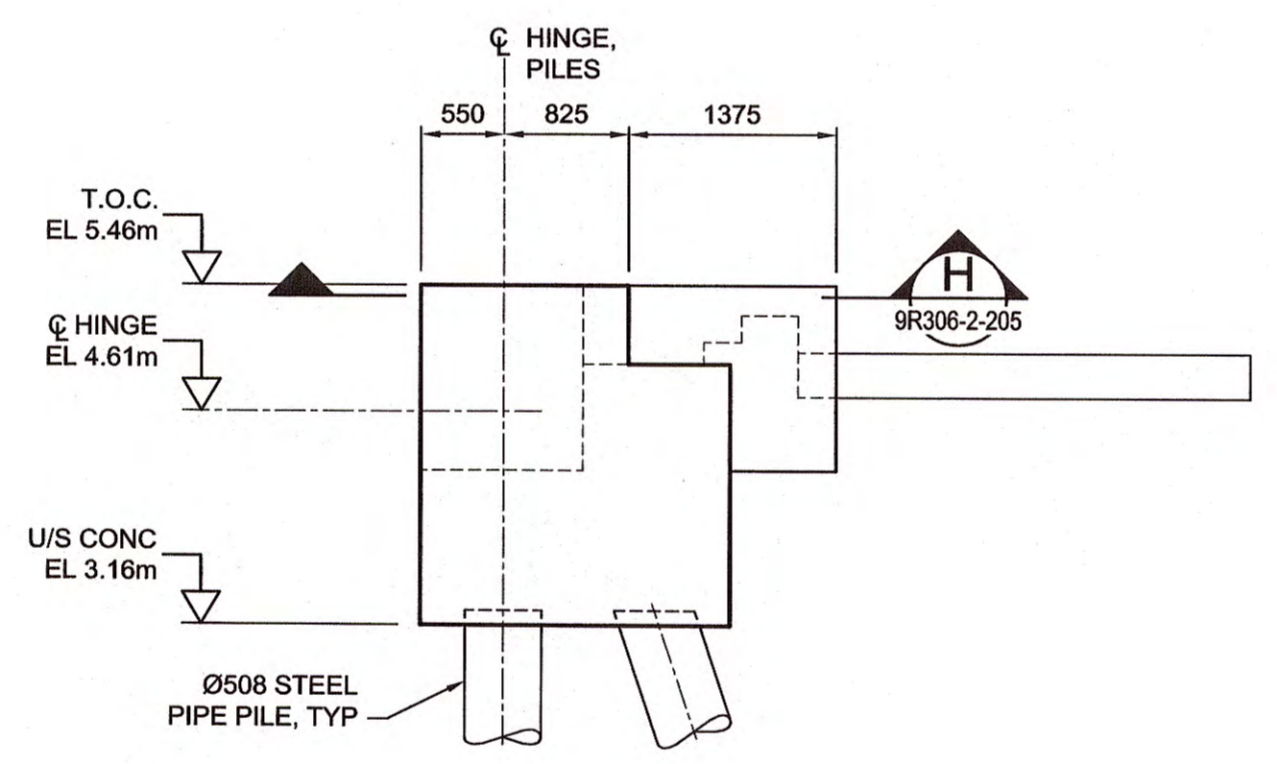
SECTION C
1:10



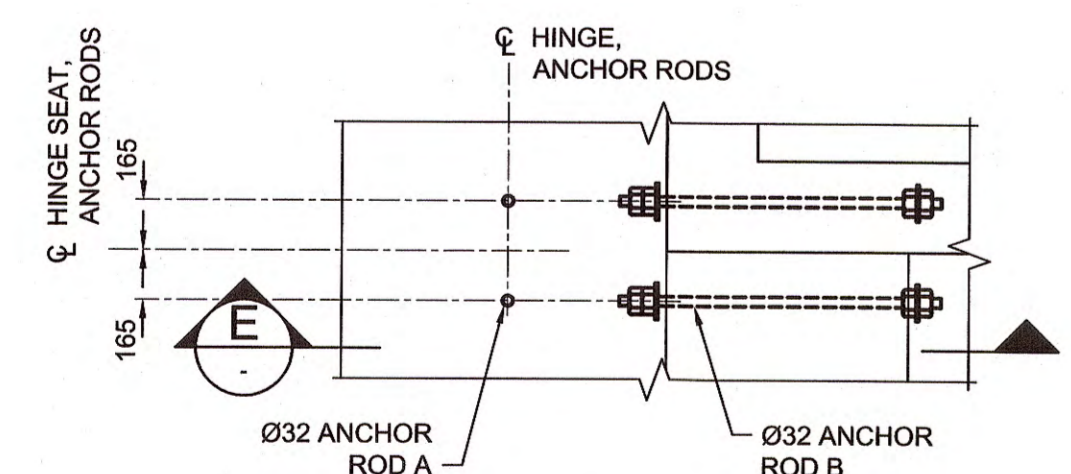
SECTION D
1:10



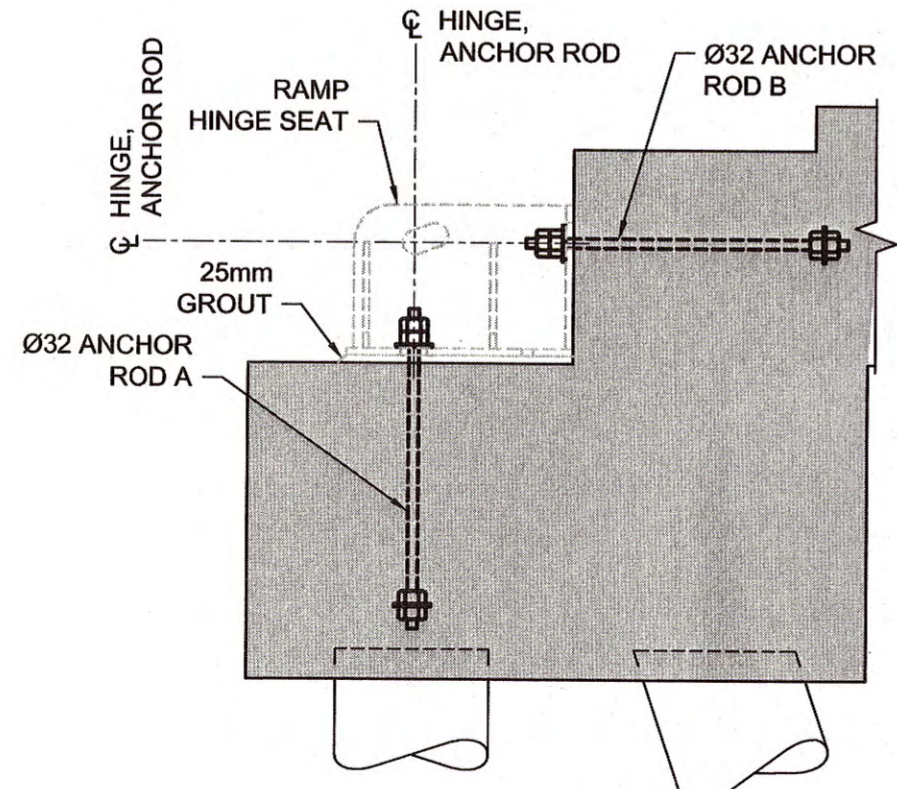
SECTION A
1:50



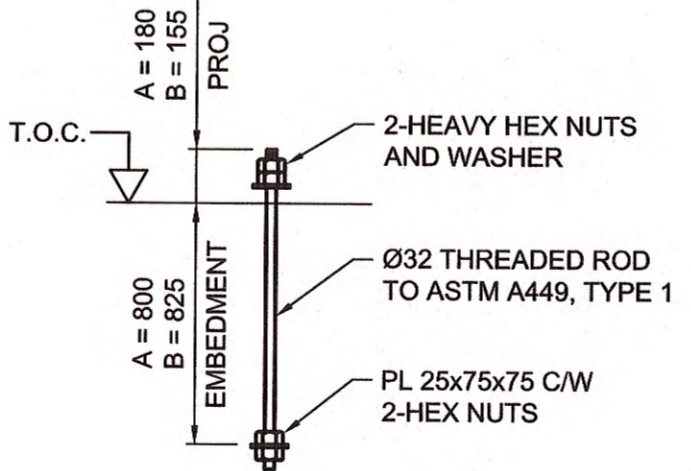
VIEW B
1:50



DETAIL 1
1:25



SECTION E
1:25

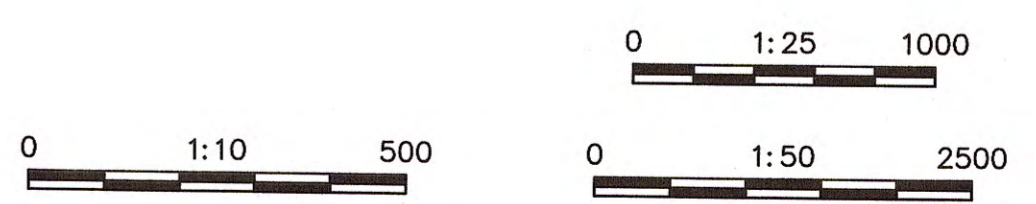


ANCHOR ROD
1:25

PRELIMINARY
DO NOT USE FOR CONSTRUCTION

NOTES:

- FOR GENERAL NOTES, SEE DWG 9R306-2-001.
- FOR WORKPOINT COORDINATES, SEE DWG 9R306-2-003.
- FOR RAMP, SEE VEHICLE RAMP TO FLOATING DOCK FOR 20,000 kg GVW STRAIGHT TRUCKS TENDER DWG 215132-101 TO 21532-109.



LAST SAVE: 2016/05/23 - 10:56am
PATH: R:\DATA\65454 - IOS float replacement\EP - Marine\EPD - Drawings\9R306-2-204.dwg
PWSC - A1 - 841X594





5		
4		
3		
2	ISSUED FOR TENDER	16/06/13
1	ISSUED FOR CLIENT REVIEW	16/07/13
0	ISSUED FOR CLIENT REVIEW	16/05/13

Revision/	Description/	Date/Date

Client/client
**FISHERIES AND OCEANS
SMALL CRAFT
HARBOURS BRANCH**

Project title/Titre du projet

**INSTITUTE OF OCEAN SCIENCES (IOS)
TIMBER AND CONCRETE FLOATS
A, B1, B2, C & D INSTALLATION**

Consultant Signature Only

Designed by/Conçue par
M. MARTI LOPEZ / MAY 10, 2016

Drawn by/Dessiné par
R. MARTIN / MAY 10, 2016

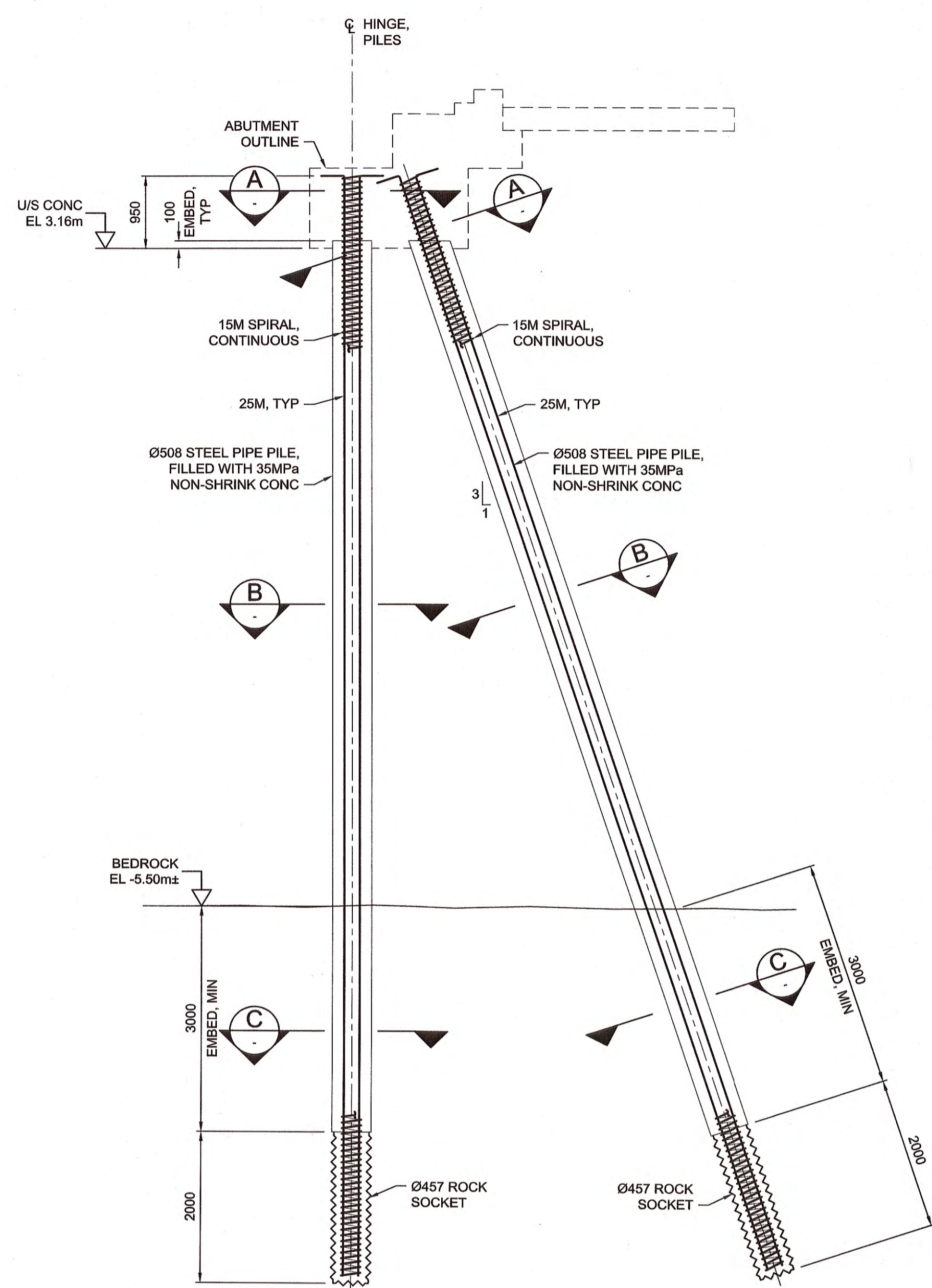
PWSC Project Manager/Administrateur de Projets TPSGC

Regional Manager, Architectural and Engineering Services
Gestionnaire régional, Services d'architecture et de génie, TPSGC

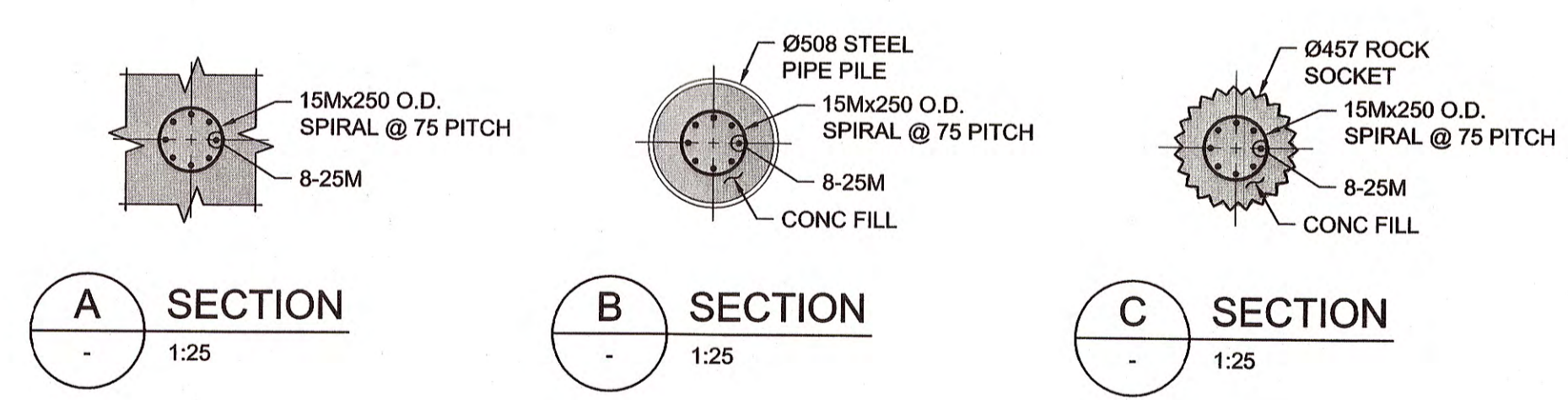
Drawing title/Titre du dessin

**FLOAT B1
RAMP ABUTMENT
SHEET 2**

Project No./No. du projet 9R306-2	Sheet/Feuille 205 OF XX	Revision no./La Révision no. 2
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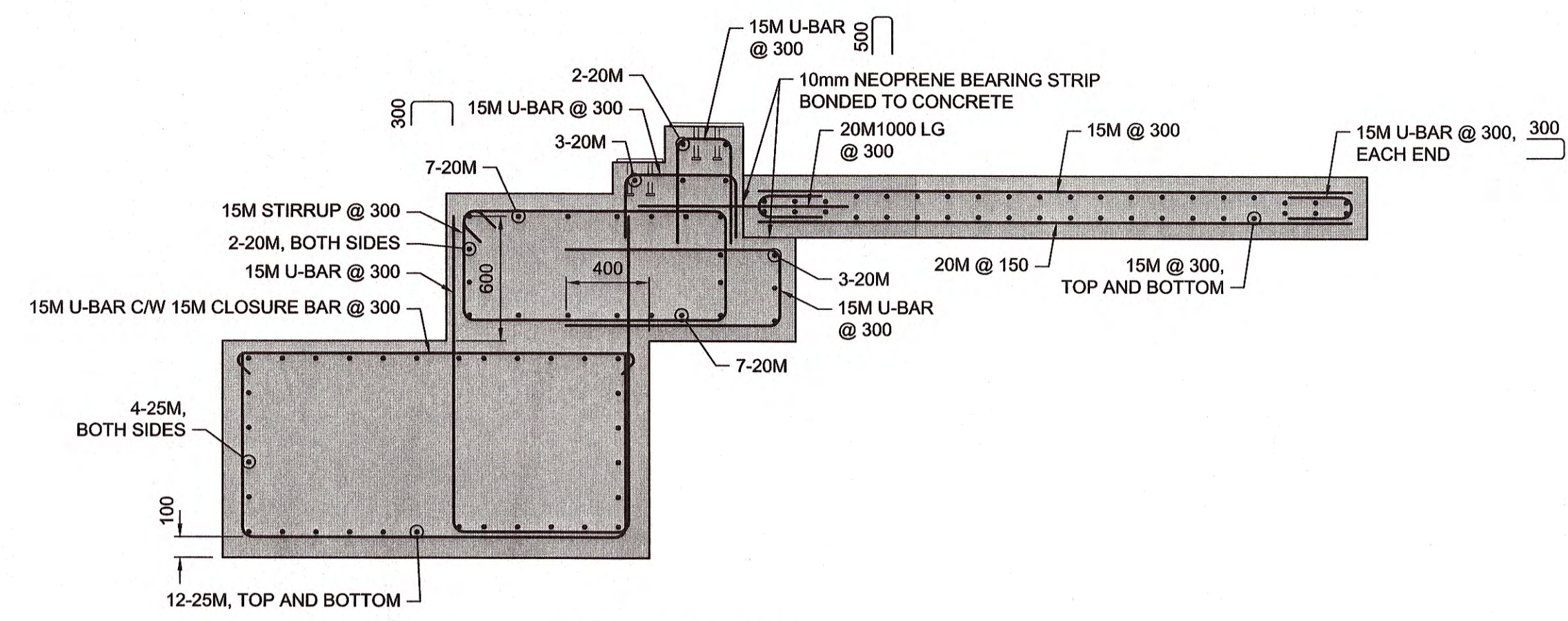
ELEVATION - LOOKING NORTH
1:50



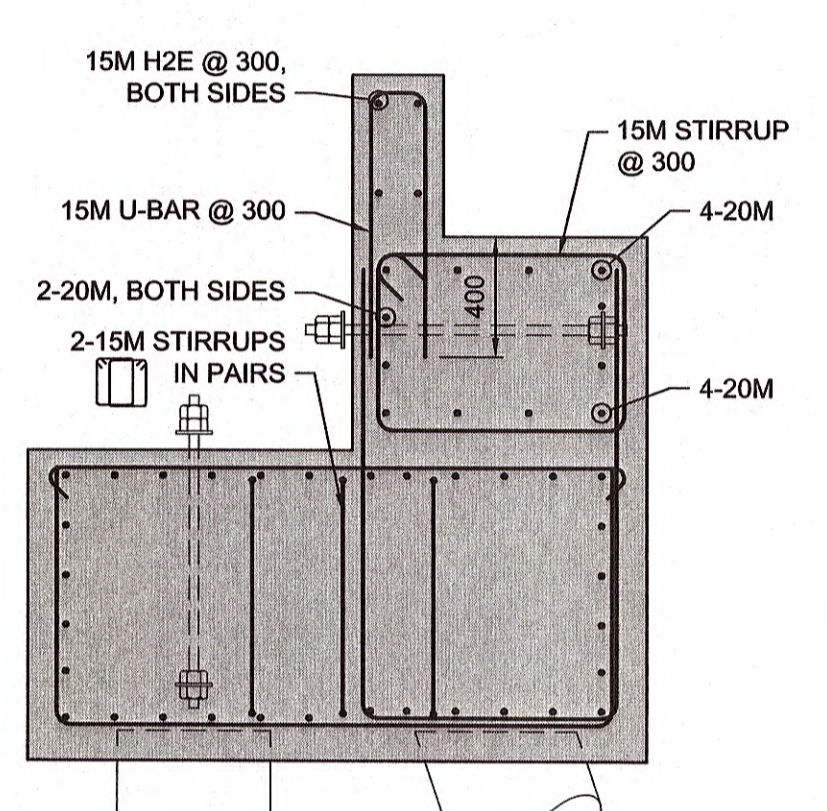
A SECTION
1:25

B SECTION
1:25

C SECTION
1:25

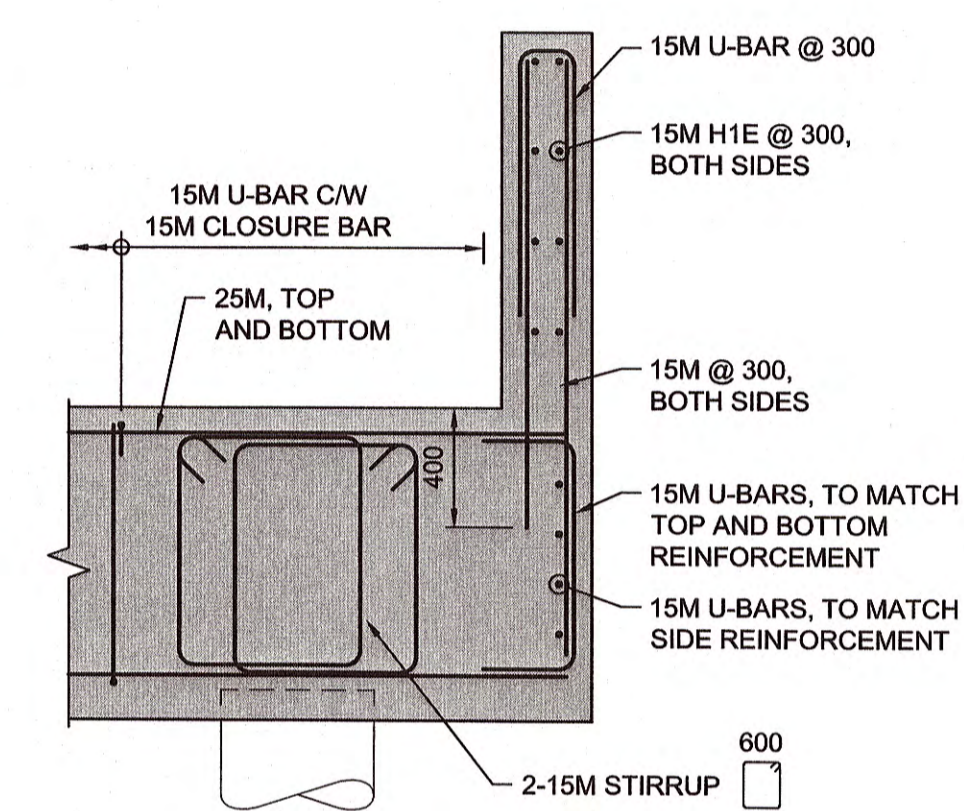


D SECTION
9R306-2-204 1:25



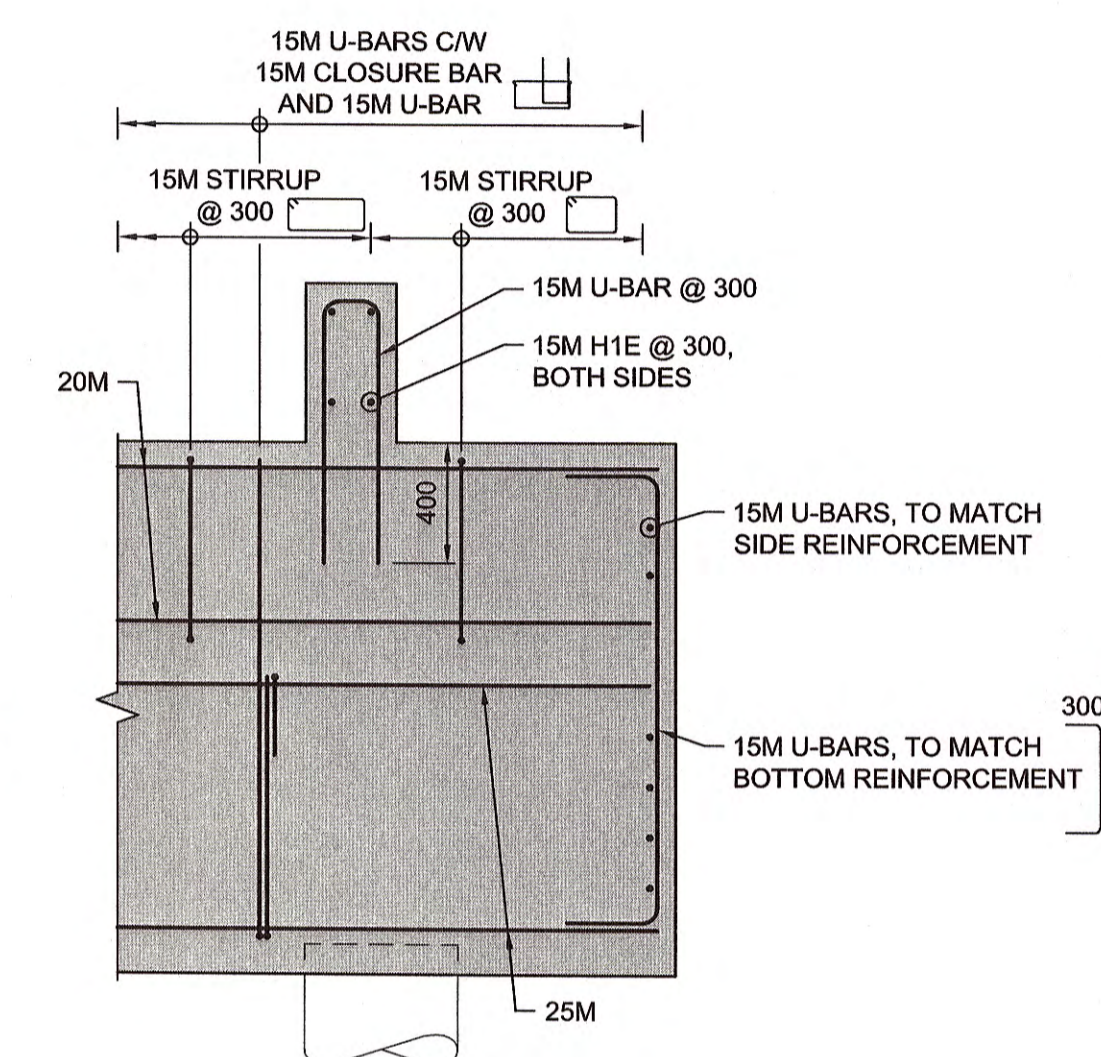
E SECTION
9R306-2-204 1:25

NOTE: REINFORCEMENT SIMILAR TO SECTION D, UNLESS NOTED OTHERWISE.



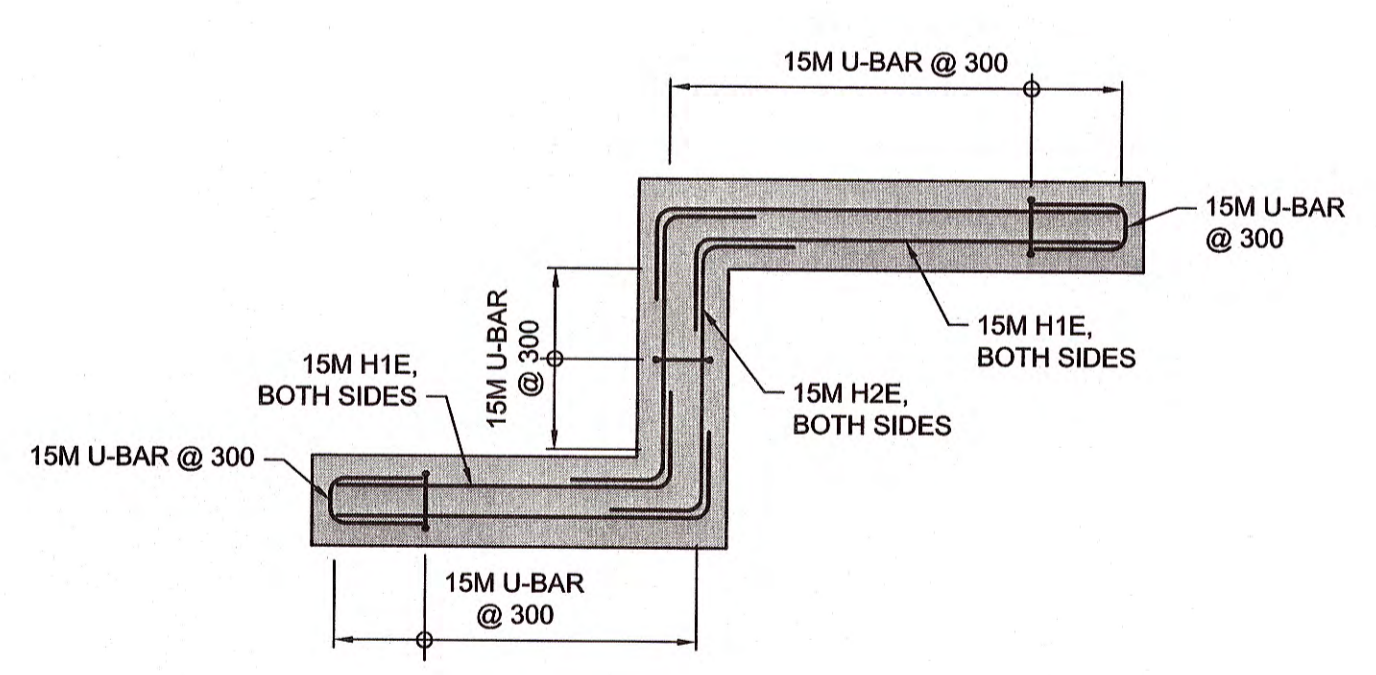
F SECTION
9R306-2-204 1:25

NOTE: PILE REINFORCEMENT NOT SHOWN FOR CLARITY.



G SECTION
9R306-2-204 1:25

NOTE: PILE REINFORCEMENT NOT SHOWN FOR CLARITY.

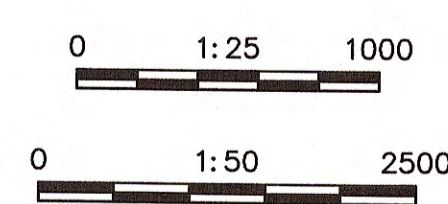


H SECTION
9R306-2-204 1:25

PRELIMINARY
DO NOT USE FOR CONSTRUCTION

NOTES:

- FOR GENERAL NOTES, SEE DWG 9R306-2-001.
- FOR PILE PLAN, SEE DWG 9R306-2-000A.



LAST SAVE: 2016/05/23 - 10:57am
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PWSC - A1 - 841X594





5	ISSUED FOR TENDER	18/08/23
4	ISSUED FOR CLIENT REVIEW	18/07/13
3	ISSUED FOR CLIENT REVIEW	18/05/13
2	ISSUED FOR CLIENT REVIEW	18/04/08
1	ISSUED FOR CLIENT REVIEW	16/02/14
0	ISSUED FOR INTERNAL REVIEW	18/02/19

FISHERIES AND OCEANS SMALL CRAFT HARBOURS BRANCH

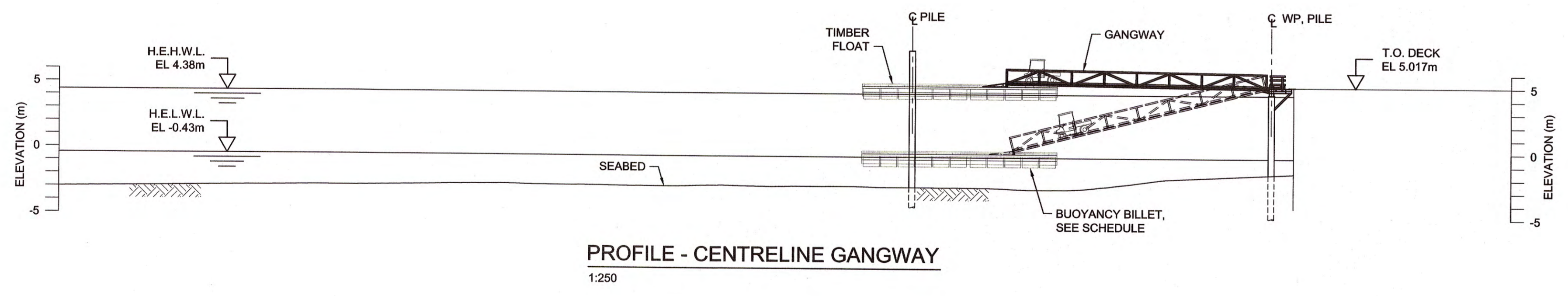
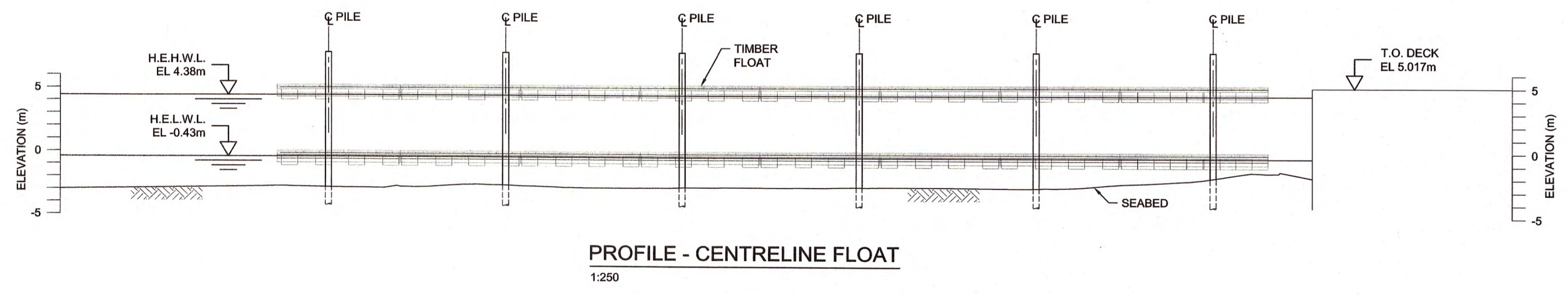
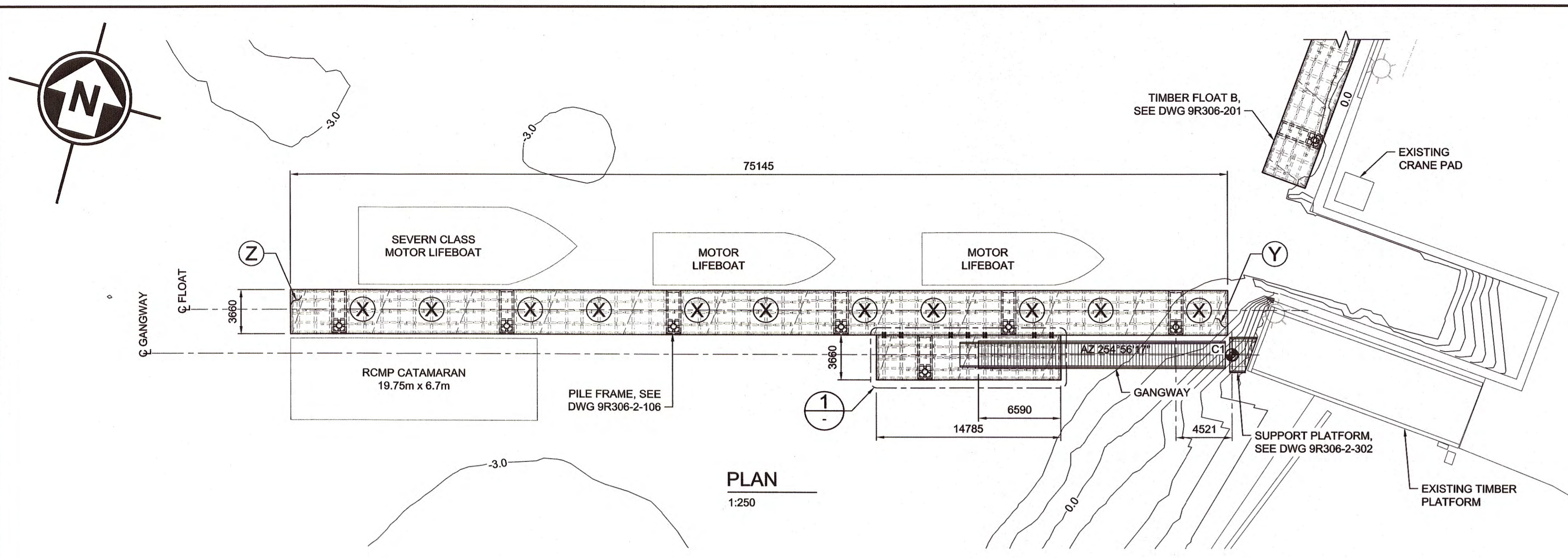
INSTITUTE OF OCEAN SCIENCES (IOS) TIMBER AND CONCRETE FLOATS A, B1, B2, C & D INSTALLATION

Client/client
 Consultant Signature Only
 Designed by/Concept par C. LEHANE / JANUARY 21, 2016
 Drawn by/Desiné par E. YANG / JANUARY 21, 2016
 PWSC Project Manager/Administrateur de Projets TPSCC

Regional Manager, Architectural and Engineering Services / Directeur régional, Services d'architecture et de génie, TPSCC

Drawing title/Titre du dessin
FLOAT C PLAN

Project No./No. du projet 9R306-2	Sheet/Feuille 301 OF XX	Revision no./La Révision no. 5
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BUOYANCY BILLET SCHEDULE

LOCATION	QUANTITY	BILLET DIMENSIONS L x W x H (mm)
PILE FRAME	7	2200 x 1160 x 400
GANGWAY LANDING (IN 2ND AND 4TH BAY)	2	3352 X 1000 X 835
ALL OTHER CROSSTIE BAYS	56	3352 X 1000 X 597

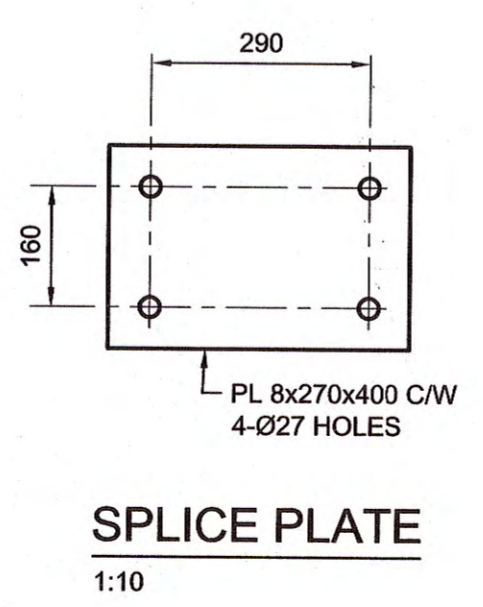
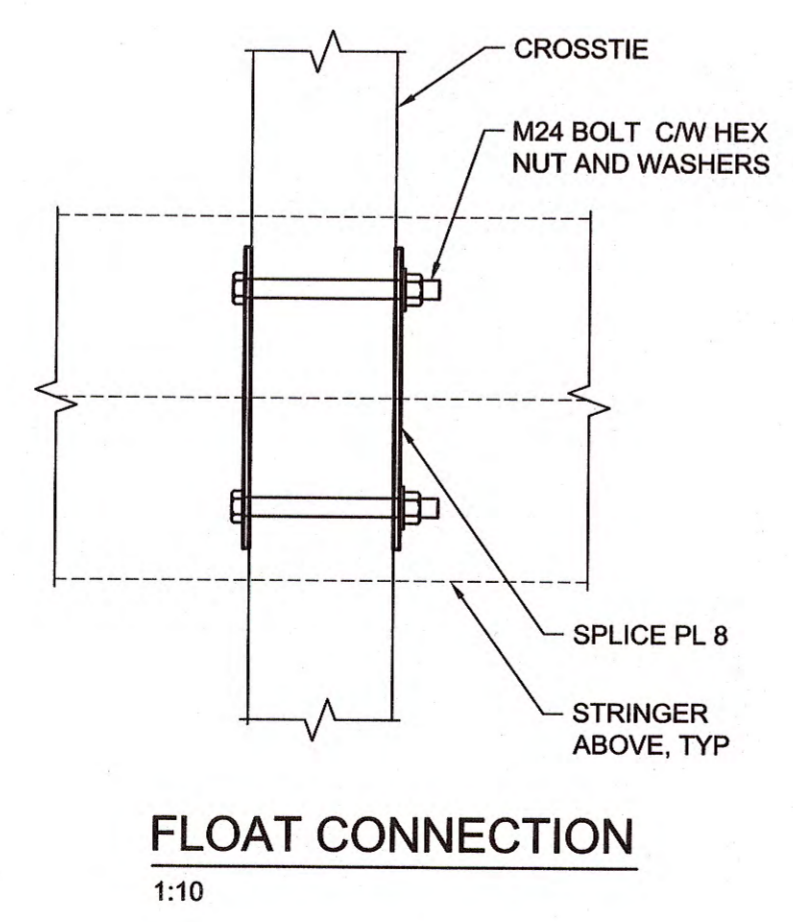
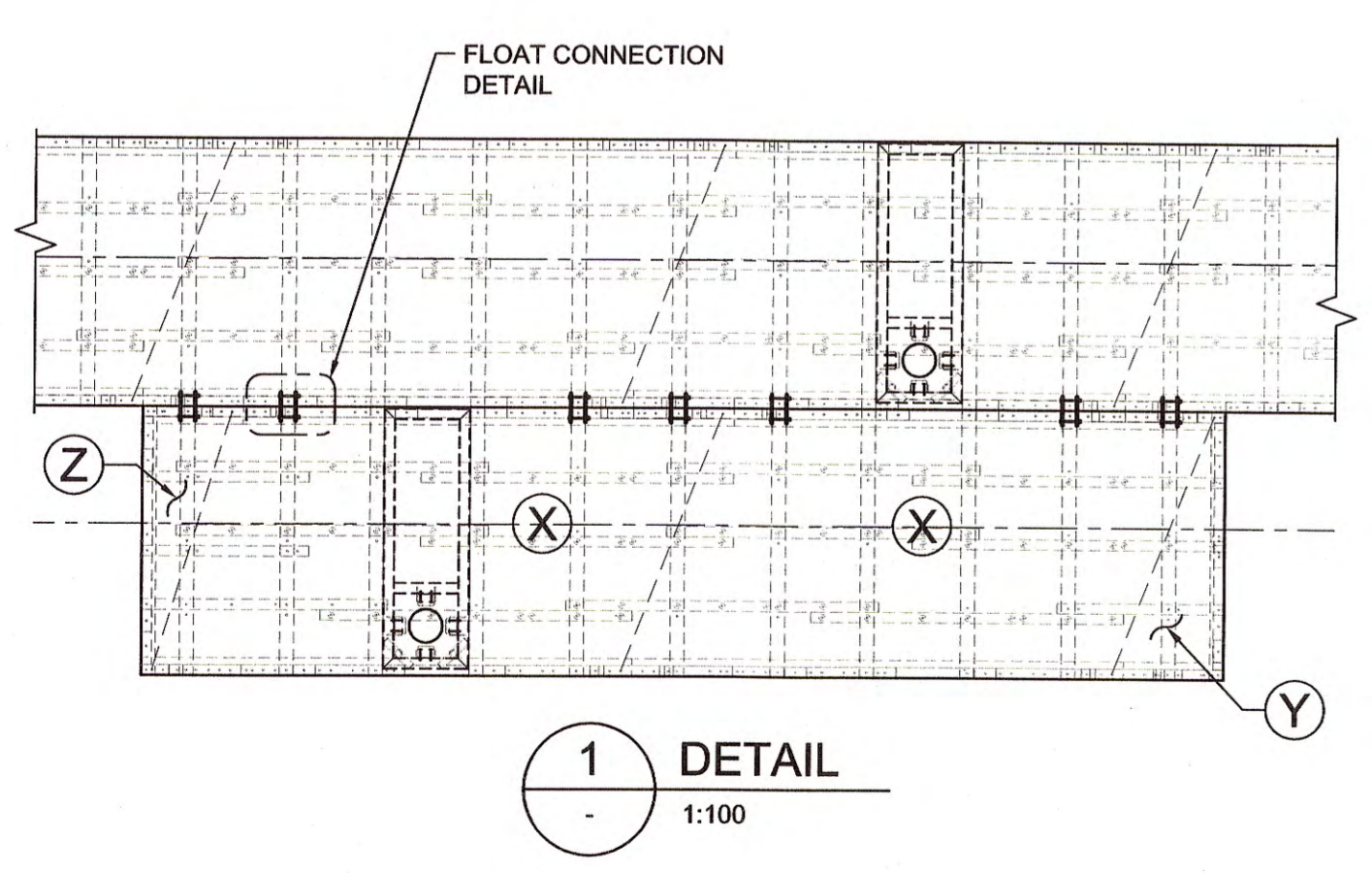
NOTES: PILE FRAME & GANGWAY LANDING BILLETS TO BE SUPPLIED BY CONTRACTOR.

LEGENDS:

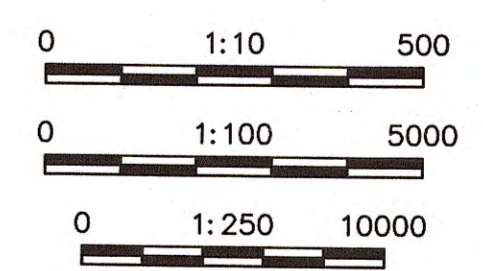
- (X) STANDARD 3.657m WIDE HEAVY FLOAT MODULE, SEE DWG FM12-HV-000-REV G.
- (Y) STANDARD SINGLE JOIST FLOAT END WITH FLANGE SPLICE, SEE DWG FM12-HV-END-000_REV I.
- (Z) STANDARD THREE JOIST FLOAT END, SEE DWG FM12-HV-END-000_REV I.

NOTES:

1. FOR GENERAL NOTES, SEE DWG 9R306-2-001.
2. FOR WORKPOINT COORDINATES, SEE DWG 9R306-2-003.
3. FOR PILE LOCATION AND COORDINATES, SEE DWG 9R306-2-004.



PRELIMINARY
DO NOT USE FOR CONSTRUCTION



LAST SAVE: 2016/06/23 - 1:39pm
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 PWSC - A1 - 841X584





PROFESSIONAL ENGINEER
 B. C. E. LANE
 # 39771
[Signature]
 Aug 23, 2016

5		
4		
3	ISSUED FOR TENDER	16/08/23
2	ISSUED FOR CLIENT REVIEW	16/07/13
1	ISSUED FOR CLIENT REVIEW	16/05/13
0	ISSUED FOR CLIENT REVIEW	16/04/08
Revision/Revisão	Description/Description	Date/Date

**FISHERIES AND OCEANS
 SMALL CRAFT
 HARBOURS BRANCH**

Project title/Titre du projet
**INSTITUTE OF OCEAN SCIENCES (IOS)
 TIMBER AND CONCRETE FLOATS
 A, B1, B2, C & D INSTALLATION**

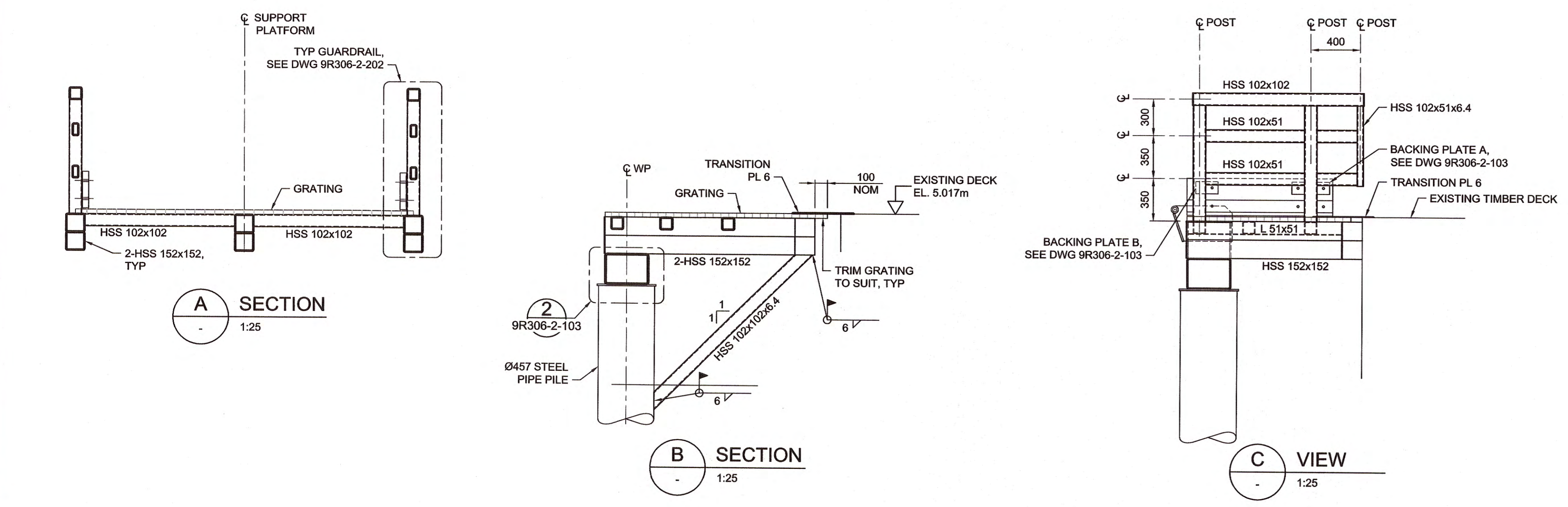
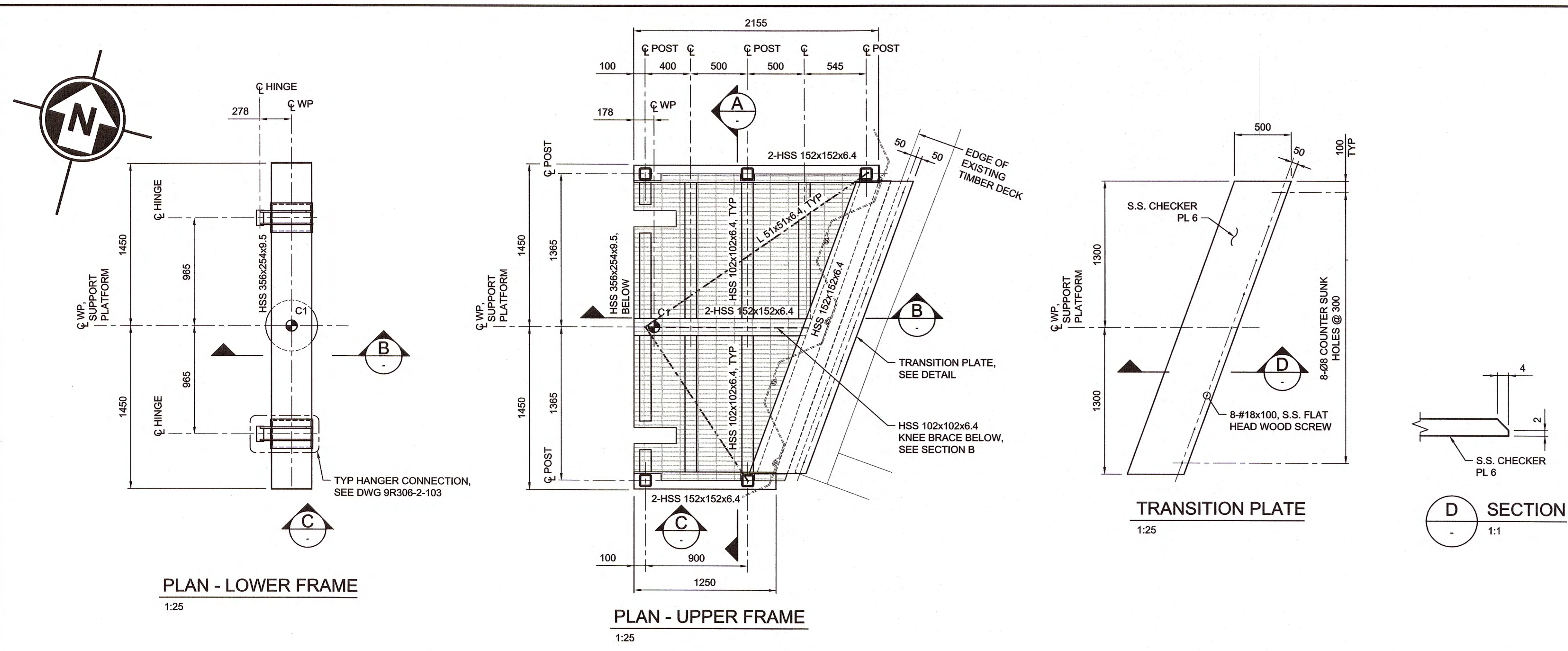
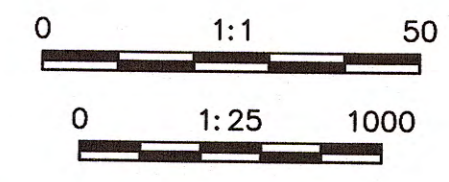
Consultant Signature Only
 Designed by/Concept par
 B. LANE / MARCH 08, 2016
 Drawn by/Designé par
 E. YANG / MARCH 08, 2016
 PWGSC Project Manager/Administrateur de Projets TPSGC
 Regional Manager, Architectural and Engineering Services
 Gestionnaire régionale, Services d'architectural et de génie, TPSGC

Drawing title/Titre du dessin
**FLOAT C
 SUPPORT PLATFORM
 PLAN, SECTION AND DETAILS**

Project No./No. du projet 9R306-2	Sheet/Fauille 302 OF XX	Revision no./ La Révision no. 3
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PRELIMINARY
 DO NOT USE FOR CONSTRUCTION

- NOTES:**
- FOR GENERAL NOTES, SEE DWG 9R306-2-001.
 - FOR WORKPOINT AND PILE LOCATION, SEE DWG 9R306-2-004.



LAST SAVE: 2016/08/23 - 1:41pm
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 PWGSC - A1 - 841X594





5	ISSUED FOR TENDER	16/06/23
4	ISSUED FOR CLIENT REVIEW	16/07/13
3	ISSUED FOR CLIENT REVIEW	16/05/13
2	ISSUED FOR CLIENT REVIEW	16/04/08
1	ISSUED FOR CLIENT REVIEW	16/02/24
0	ISSUED FOR INTERNAL REVIEW	16/02/19

Client/client
**FISHERIES AND OCEANS
SMALL CRAFT
HARBOURS BRANCH**

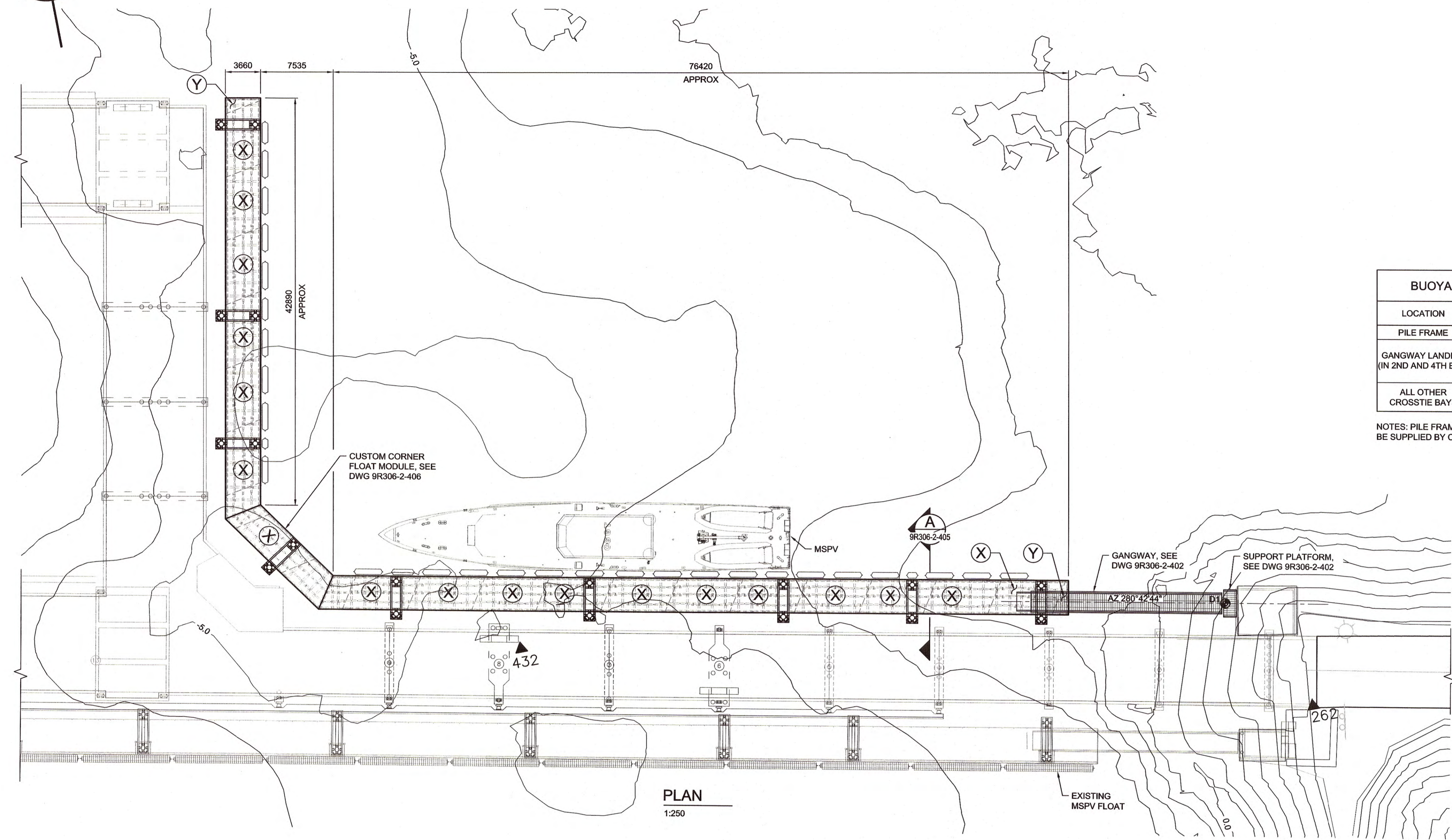
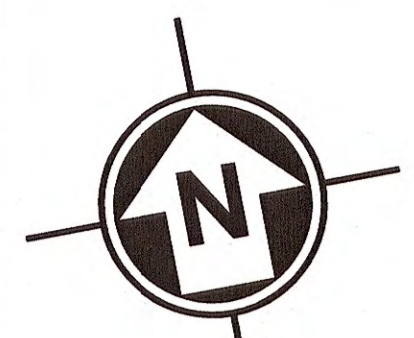
Project title/Titre du projet

**INSTITUTE OF OCEAN SCIENCES (IOS)
TIMBER AND CONCRETE FLOATS
A, B1, B2, C & D INSTALLATION**

Consultant Signature Only
Designed by/Concept par
C. LEHANE / JANUARY 21, 2016
Drawn by/Dessiné par
E. YANG / JANUARY 21, 2016
PWGSC Project Manager/Administrateur de Projets TPSGC

Drawing title/Titre du dessin
**FLOAT D
PLAN, PROFILE, AND SECTION**

Project No./No. du projet 9R306-2	Sheet/Feuille 401 OF XX	Revision no./ La Révision no. 5
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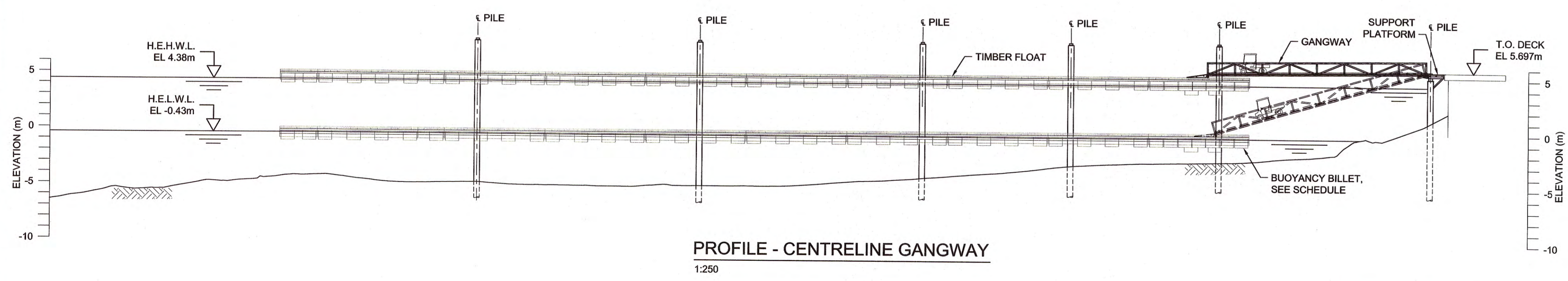


PLAN
1:250

BUOYANCY BILLET SCHEDULE

LOCATION	QUANTITY	BILLET DIMENSIONS L x W x H (mm)
PILE FRAME	9	2200 x 1160 x 400
GANGWAY LANDING (IN 2ND AND 4TH BAY)	2	3352 X 1000 X 955
ALL OTHER CROSSTIE BAYS	83	3352 X 1000 X 597

NOTES: PILE FRAME & GANGWAY LANDING BILLETS TO BE SUPPLIED BY CONTRACTOR.



PROFILE - CENTRELINE GANGWAY
1:250

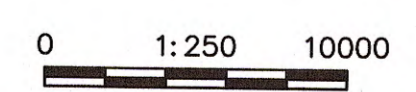
LEGENDS:

- (X) STANDARD 3.65m WIDE HEAVY FLOAT MODULE, SEE DWG FM12-HV-000-REV G.
- (Y) STANDARD SINGLE JOIST FLOAT END WITH FLANGE SPLICE, SEE DWG FM12-HV-END-000_REV I.
- (Z) STANDARD THREE JOIST FLOAT END, SEE DWG FM12-HV-END-000_REV I.

NOTES:

1. FOR GENERAL NOTES, SEE DWG 9R306-2-001.
2. FOR CONTROL POINT COORDINATES, SEE DWG 9R306-2-002.
3. FOR PILE LOCATION AND COORDINATES, SEE DWG 9R306-2-004.

PRELIMINARY
DO NOT USE FOR CONSTRUCTION



LAST SAVE: 2016/08/23 - 1:43pm
PATH: R:\DATA\54554 - IOS Float Replacement\401 - Marine\4PDD - Drawings\9R306-2-401.dwg
PWGSC - A1 - 841X594





PROFESSIONAL ENGINEER
 B. C. E. LANE
 # 36671
 Aug 23, 2016

5		
4		
3	ISSUED FOR TENDER	16/08/23
2	ISSUED FOR CLIENT REVIEW	16/07/13
1	ISSUED FOR CLIENT REVIEW	16/05/13
0	ISSUED FOR CLIENT REVIEW	16/04/08
Revision/	Description/Description	Date/Date
Client/client		

**FISHERIES AND OCEANS
 SMALL CRAFT
 HARBOURS BRANCH**

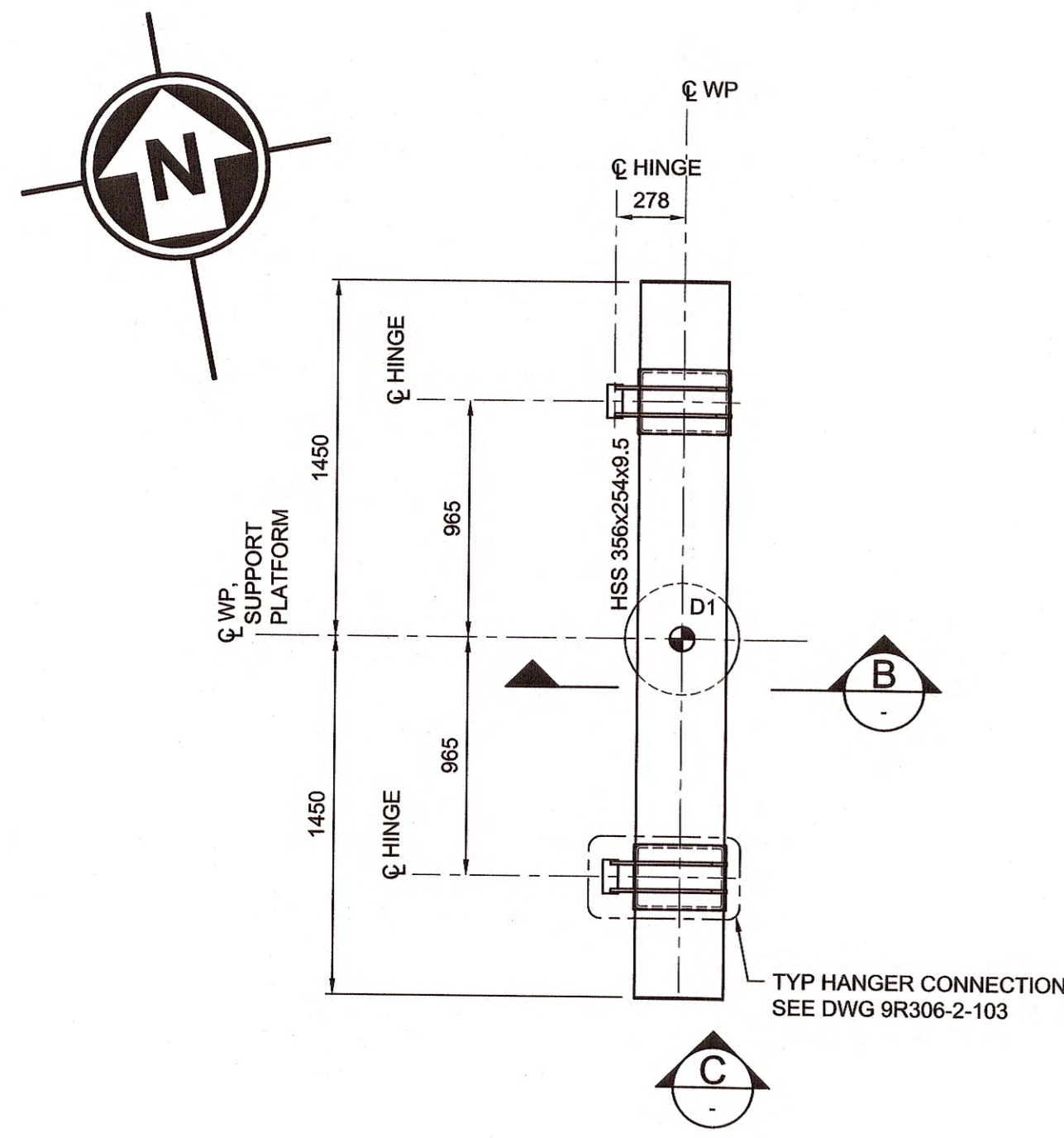
Project title/Titre du projet
**INSTITUTE OF OCEAN SCIENCES (IOS)
 TIMBER AND CONCRETE FLOATS
 A, B1, B2, C & D INSTALLATION**

Consultant Signature Only
 Designed by/Conçue par
 B. LANE / JANUARY 20, 2016
 Drawn by/Desiné par
 E. YANG / JANUARY 12, 2016
 PWSC Project Manager/Administrateur de Projets TPSCG

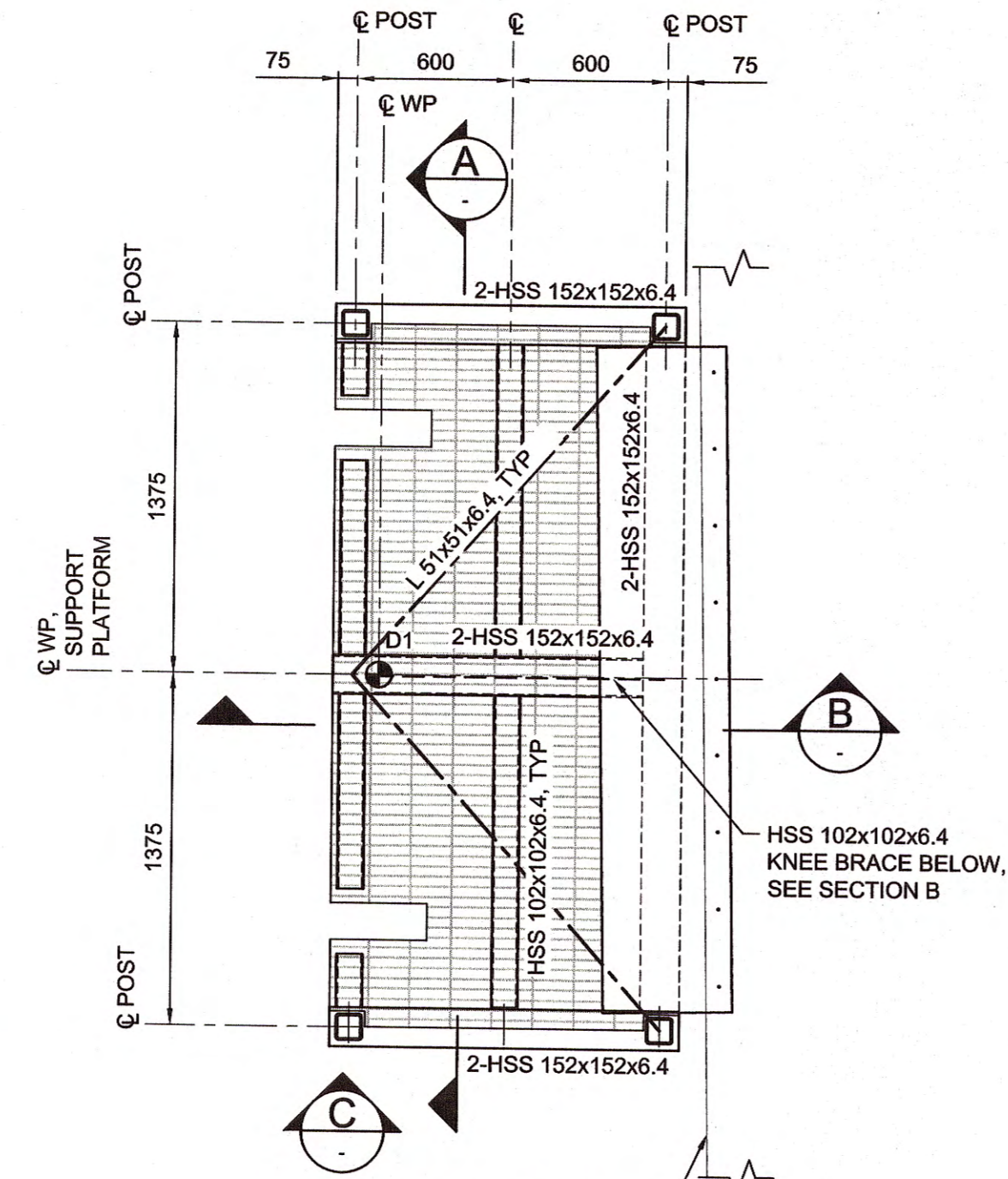
Regional Manager, Architectural and Engineering Services
 Directeur régional, Services d'architecture et de génie, TPSCG

Drawing title/Titre du dessin
**FLOAT D
 SUPPORT PLATFORM
 PLAN, SECTION AND DETAILS**

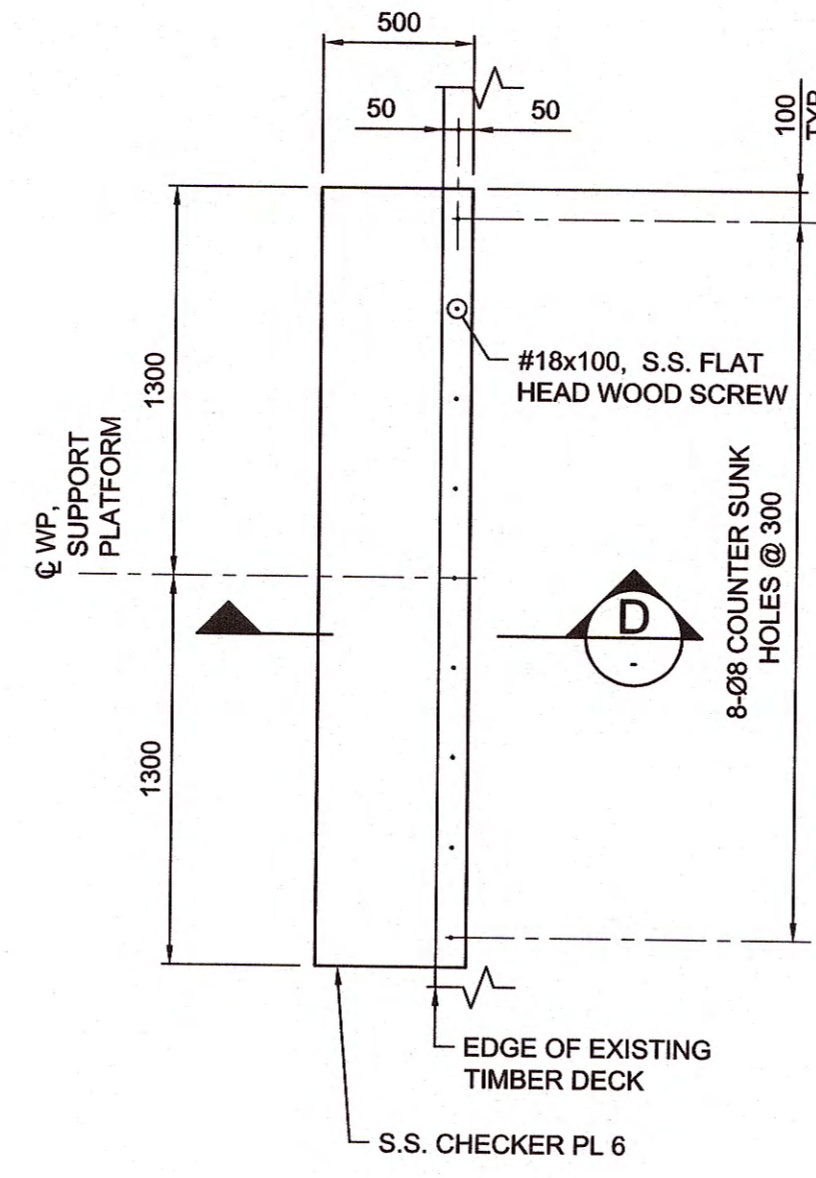
Project No./No. du projet
9R306-2
 Sheet/Fauille
402
 OF XX
 Revision no./La Revision no.
3



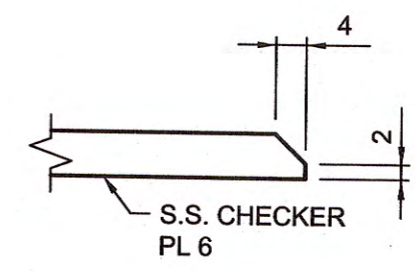
PLAN - LOWER FRAME
 1:25



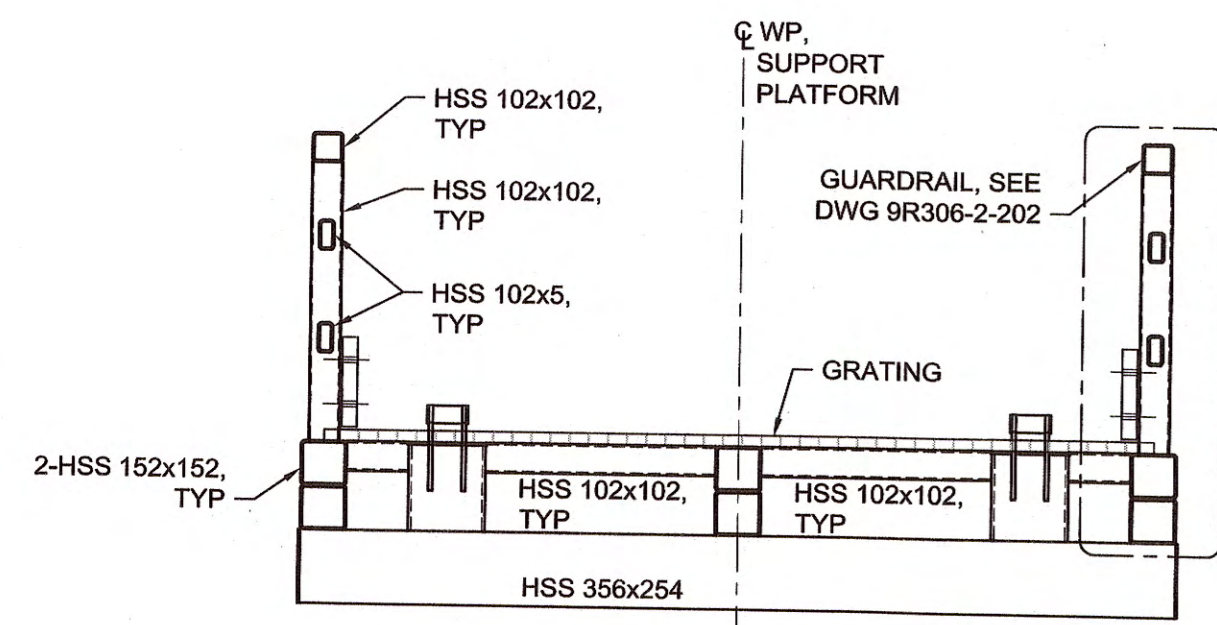
PLAN - UPPER FRAME
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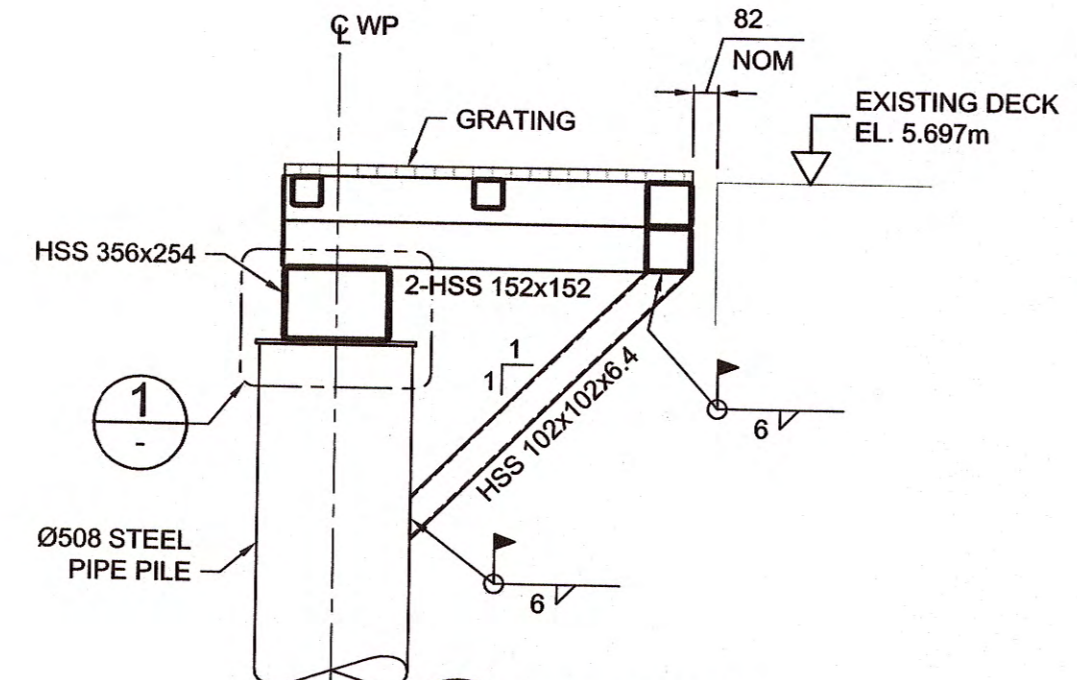
TRANSITION PLATE
 1:25



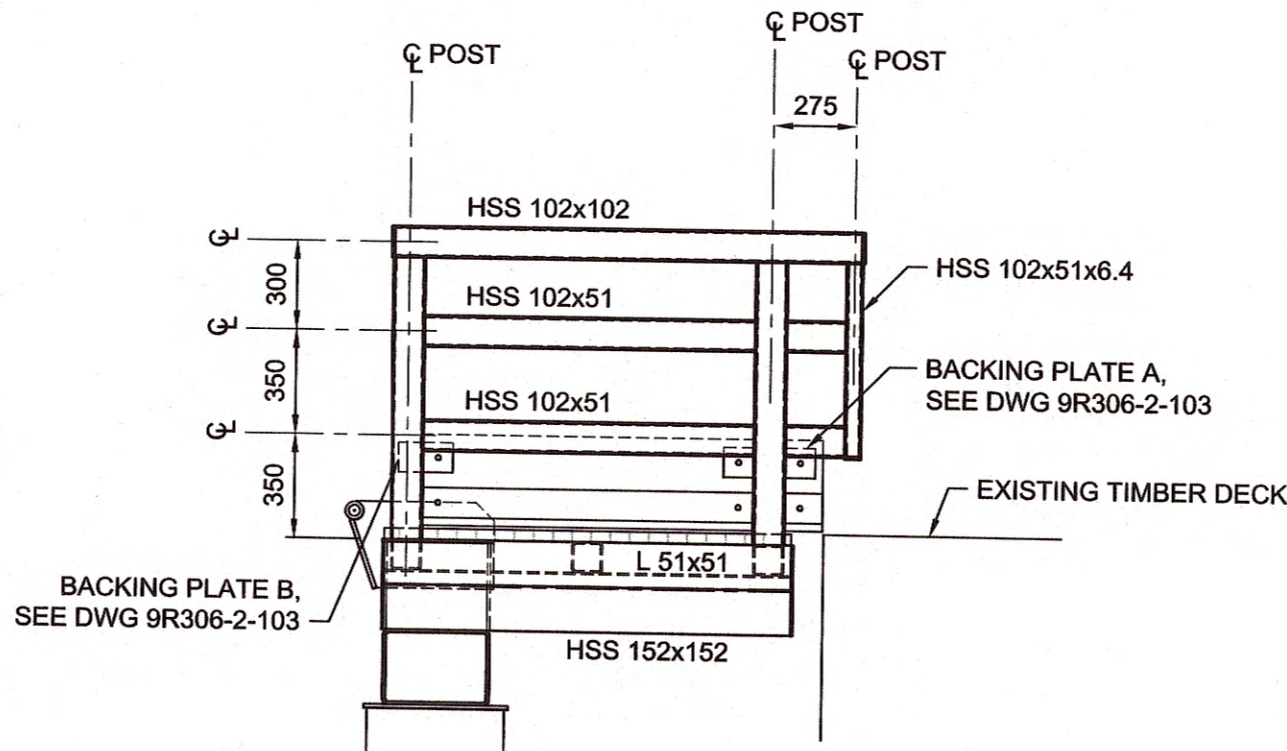
D SECTION
 1:1



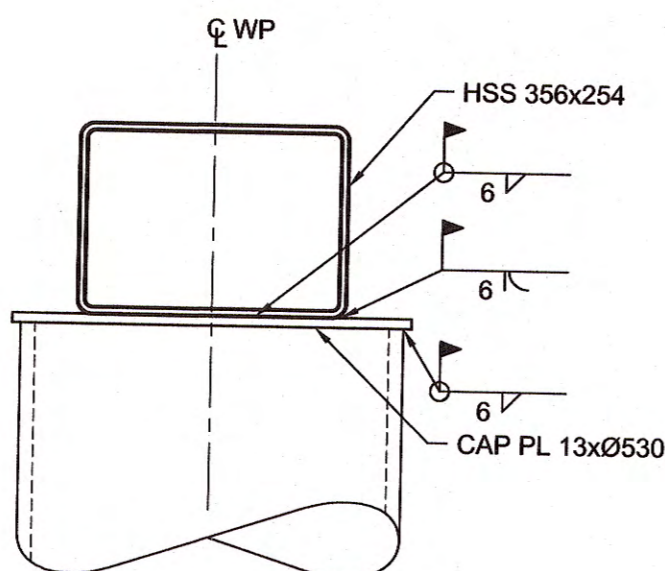
A SECTION
 1:25



B SECTION
 1:25



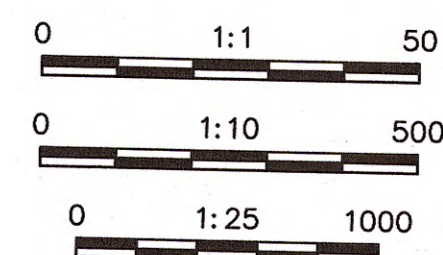
C VIEW
 1:25

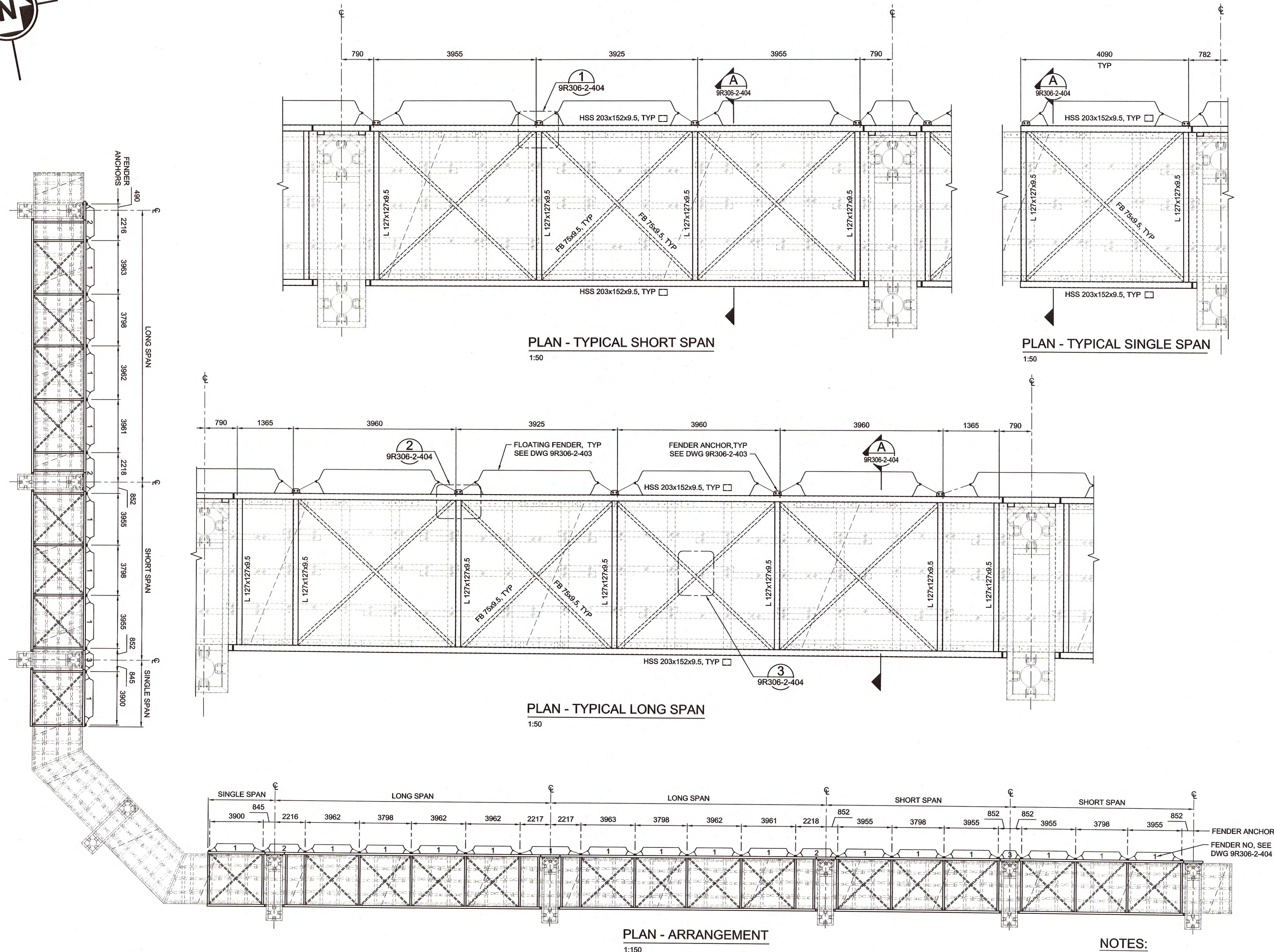
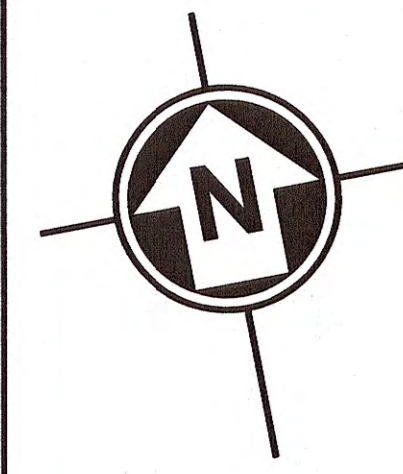


1 DETAIL
 1:10

PRELIMINARY
 DO NOT USE FOR CONSTRUCTION

- NOTES:**
- FOR GENERAL NOTES, SEE DWG 9R306-2-001.
 - FOR WORKPOINT AND PILE LOCATION, SEE DWG 9R306-2-004.





PLAN - TYPICAL SHORT SPAN

1:50

PLAN - TYPICAL SINGLE SPAN

1:50

PLAN - TYPICAL LONG SPAN

1:50

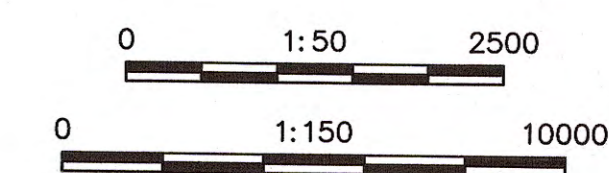
PLAN - ARRANGEMENT

1:150

NOTES:

- FOR GENERAL NOTES, SEE DWG 9R306-2-001.
- FOR PILE LOCATION AND COORDINATES, SEE DWG 9R306-2-004.

PRELIMINARY
DO NOT USE FOR CONSTRUCTION



5		
4		
3	ISSUED FOR TENDER	16/08/23
2	ISSUED FOR CLIENT REVIEW	16/07/13
1	ISSUED FOR CLIENT REVIEW	16/05/13
0	ISSUED FOR CLIENT REVIEW	16/04/08
Revision/	Description/Description	Date/Date

Client/client
**FISHERIES AND OCEANS
SMALL CRAFT
HARBOURS BRANCH**

Project title/Titre du projet

**IOS TIMBER AND
CONCRETE FLOATS
A, B, C & D**

Consultant Signature Only

Designed by/Conçu par
C. LEHANE / MARCH 21, 2016

Drawn by/Dessiné par
E. YANG / MARCH 21, 2016

PWOSC Project Manager/Administrateur de Projets TPSC

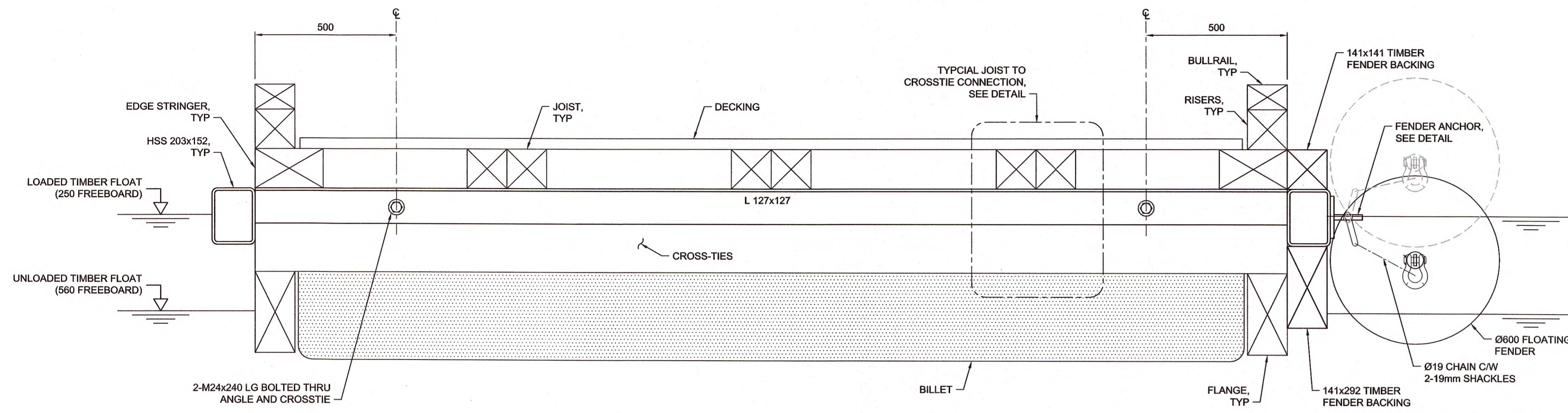
Regional Manager, Architectural and Engineering Services
Gestionnaire régionale, Services d'architectural et de génie, TPSC

Drawing title/Titre du dessin

**FLOAT D
STEEL REINFORCING FRAME
PLAN**

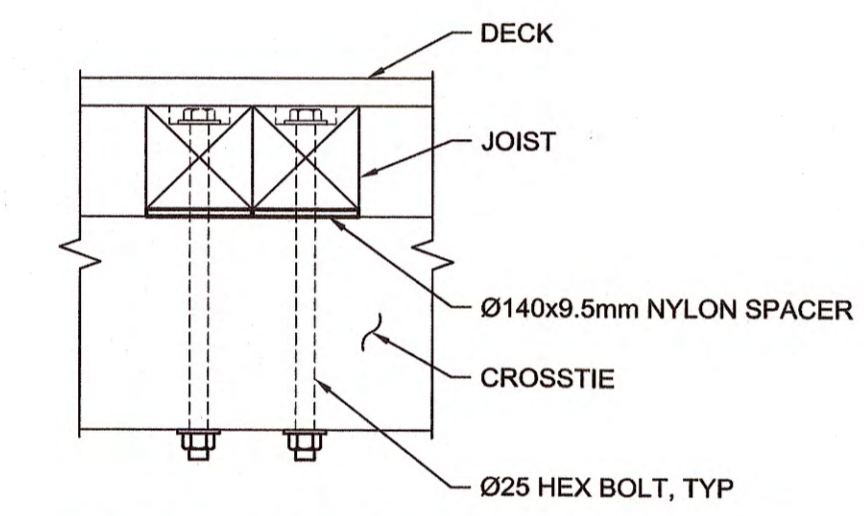
Project No./No. du projet 9R306-2	Sheet/Feuille 403 OF XX	Revision no./La Révision no. 3
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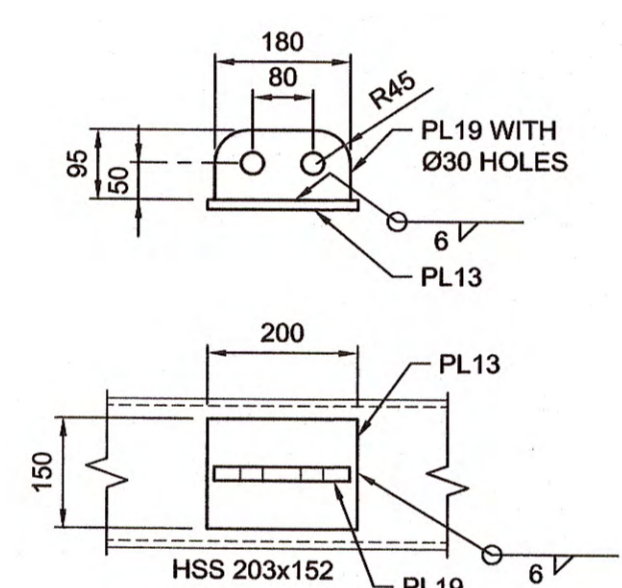


A SECTION
9R306-2-403 1:10

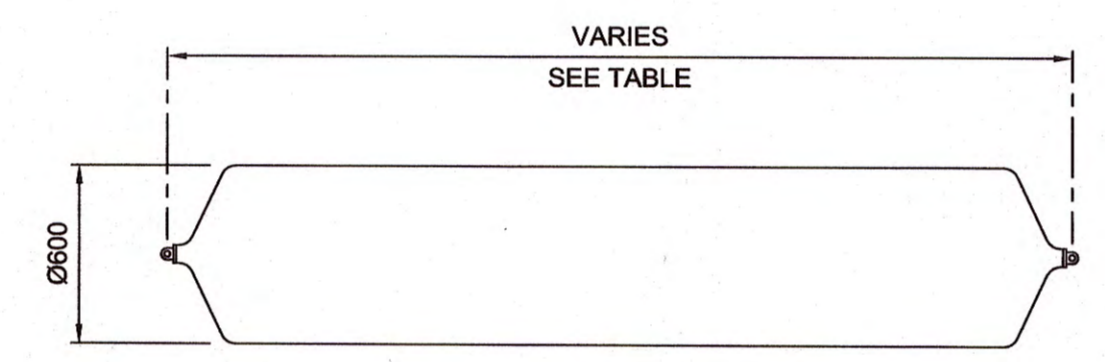
NOTE: TIMBER FENDER BACKING CONTINUOUS ALONG STEEL FRAME ON BERTH FACE BOLTED THRU EDGE STRINGER/FLANGE. M25 HEX BOLT @ 1200 AND @ 200 FROM EACH END OF TIMBER LENGTH. BOLT HOLE TO BE COUNTERSUNK ON BERTH FACE.



TYPICAL JOIST TO CROSSTIE CONNECTION
1:10

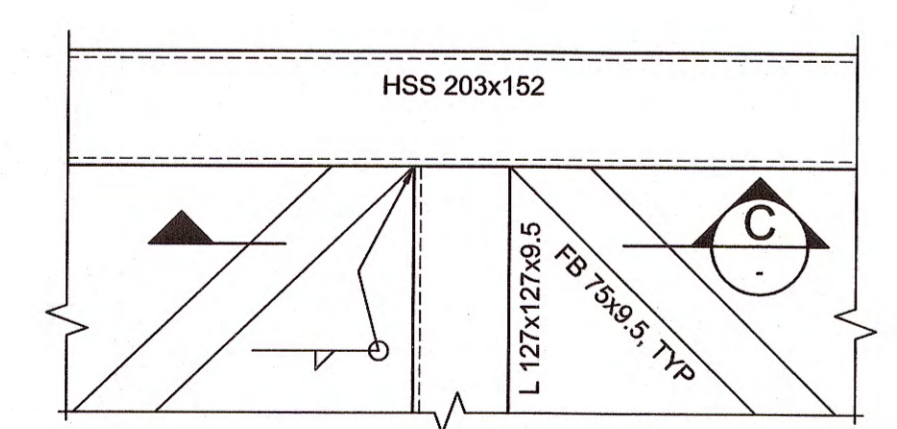


FENDER ANCHOR
1:10
NOTE: ANCHOR ALIGNED WITH L 127x127 OF STEEL REINFORCING FRAME.

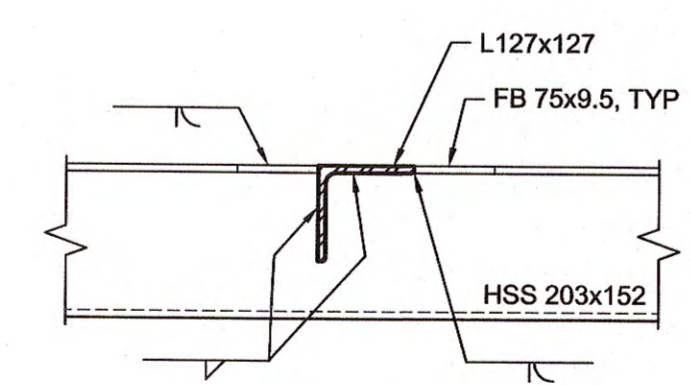


FLOATING FENDER		
FENDER No	LENGTH (mm)	No REQUIRED
1	3000	24
2	2400	4
3	1200	2

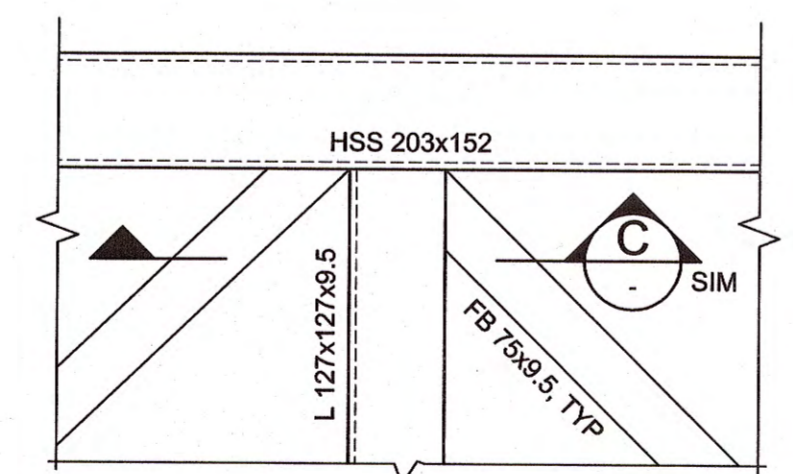
FENDER
1:25
NOTE:
- FLOATING FENDER WITH A RATED ENERGY ABSORPTION CAPACITY OF 57kJ/m AND A RATED REACTION OF 347kN/m.
- FENDER SPECIFICATION BE TO SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL.



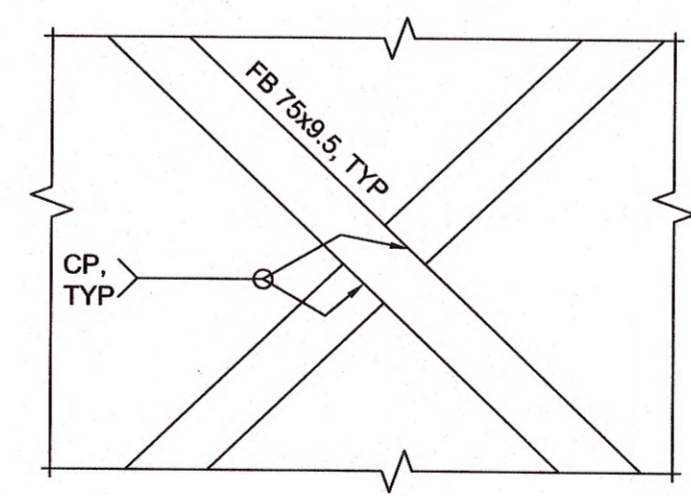
1 DETAIL
9R306-2-403 1:10



C SECTION
1:10



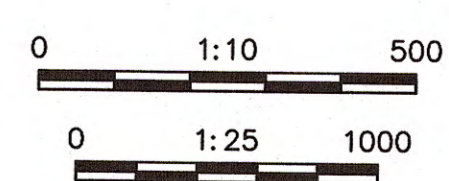
2 DETAIL
9R306-2-403 1:10



3 DETAIL
9R306-2-403 1:10

- NOTES:**
- FOR GENERAL NOTES, SEE DWG 9R306-2-001.
 - FOR PILE LOCATION AND COORDINATES, SEE DWG 9R306-2-004.

PRELIMINARY
DO NOT USE FOR CONSTRUCTION



Revision/Modification	Description/Description	Date/Date
5		
4		
3	ISSUED FOR TENDER	16/06/23
2	ISSUED FOR CLIENT REVIEW	16/07/13
1	ISSUED FOR CLIENT REVIEW	16/05/13
0	ISSUED FOR CLIENT REVIEW	16/04/08

FISHERIES AND OCEANS SMALL CRAFT HARBOURS BRANCH

IOS TIMBER AND CONCRETE FLOATS A, B, C & D

Consultant Signature Only
 Designed by/Concept par C. LEHANE / MARCH 21, 2016
 Drawn by/Dessiné par E. YANG / MARCH 21, 2016
 PWGSC Project Manager/Administrateur de Projets TPSSC
 Regional Manager, Architectural and Engineering Services / Gestionnaire régionale, Services d'architectural et de génie, TPSSC

FLOAT D STEEL REINFORCING FRAME SECTIONS AND DETAILS

Project No./No. du projet 9R306-2	Sheet/Feuille 404 OF XX	Revision no./La Révision no. 3
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5		
4		
3	ISSUED FOR TENDER	16/08/23
2	ISSUED FOR CLIENT REVIEW	16/07/13
1	ISSUED FOR CLIENT REVIEW	18/05/13
0	ISSUED FOR CLIENT REVIEW	16/04/08

Revision/Description/Description Date/Date

Client/client
**FISHERIES AND OCEANS
SMALL CRAFT
HARBOURS BRANCH**

Project title/Titre du projet

**IOS TIMBER AND
CONCRETE FLOATS
A, B, C & D**

Consultant Signature Only

Designed by/Concept par
C. LEHANE / JANUARY 19, 2016

Drawn by/Designé par
E. YANG / JANUARY 19, 2016

PWGSC Project Manager/Administrateur de Projets TPSGC

Regional Manager, Architectural and Engineering Services
Gestionnaire régionale, Services d'architectural et de génie, TPSGC

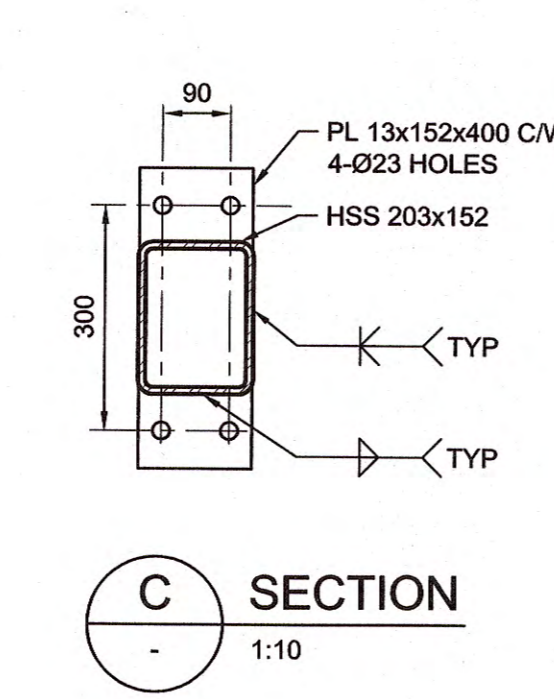
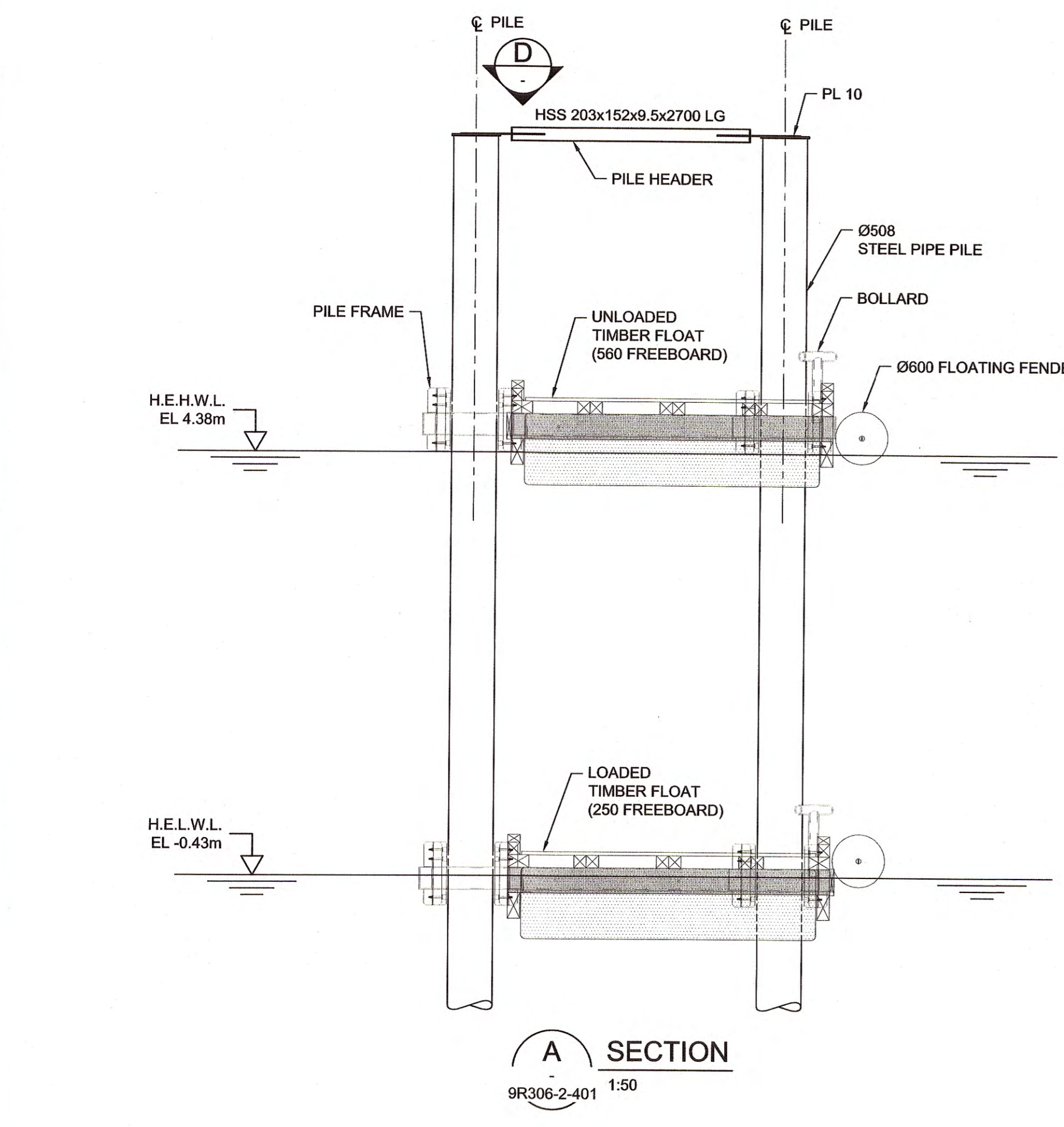
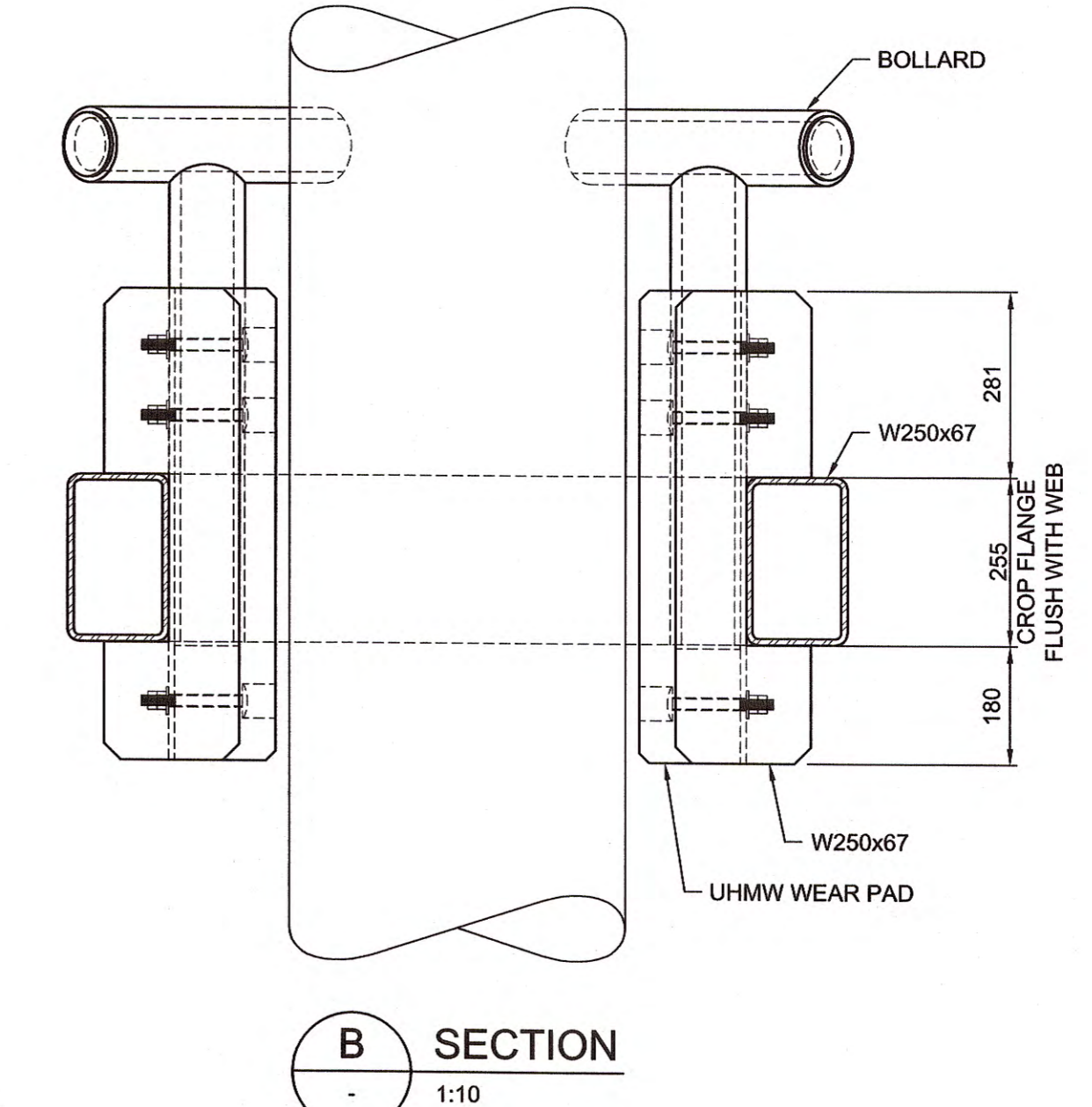
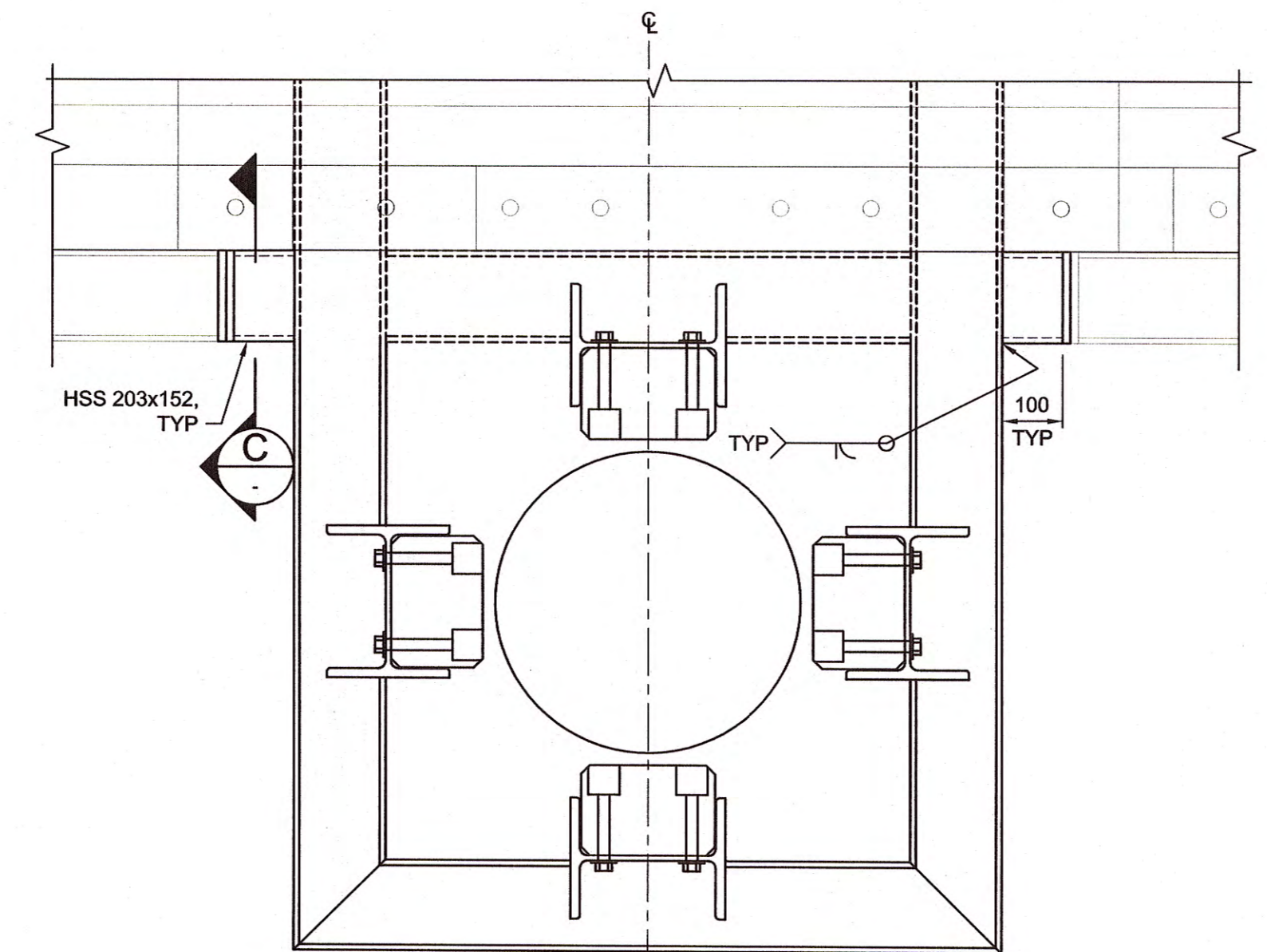
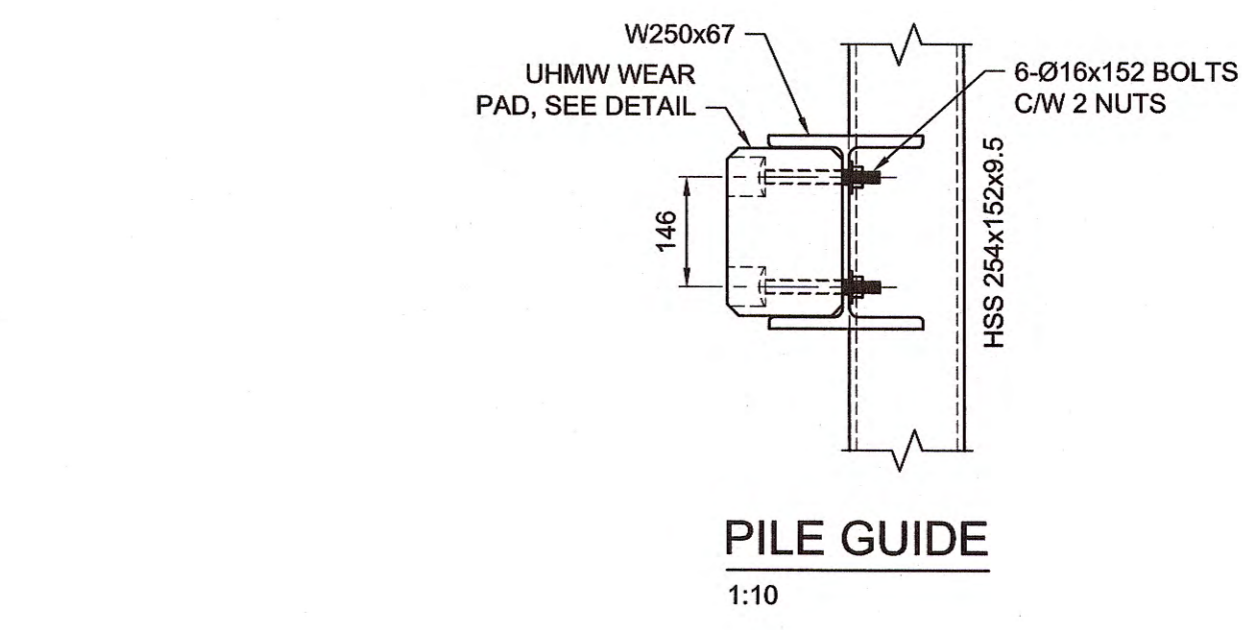
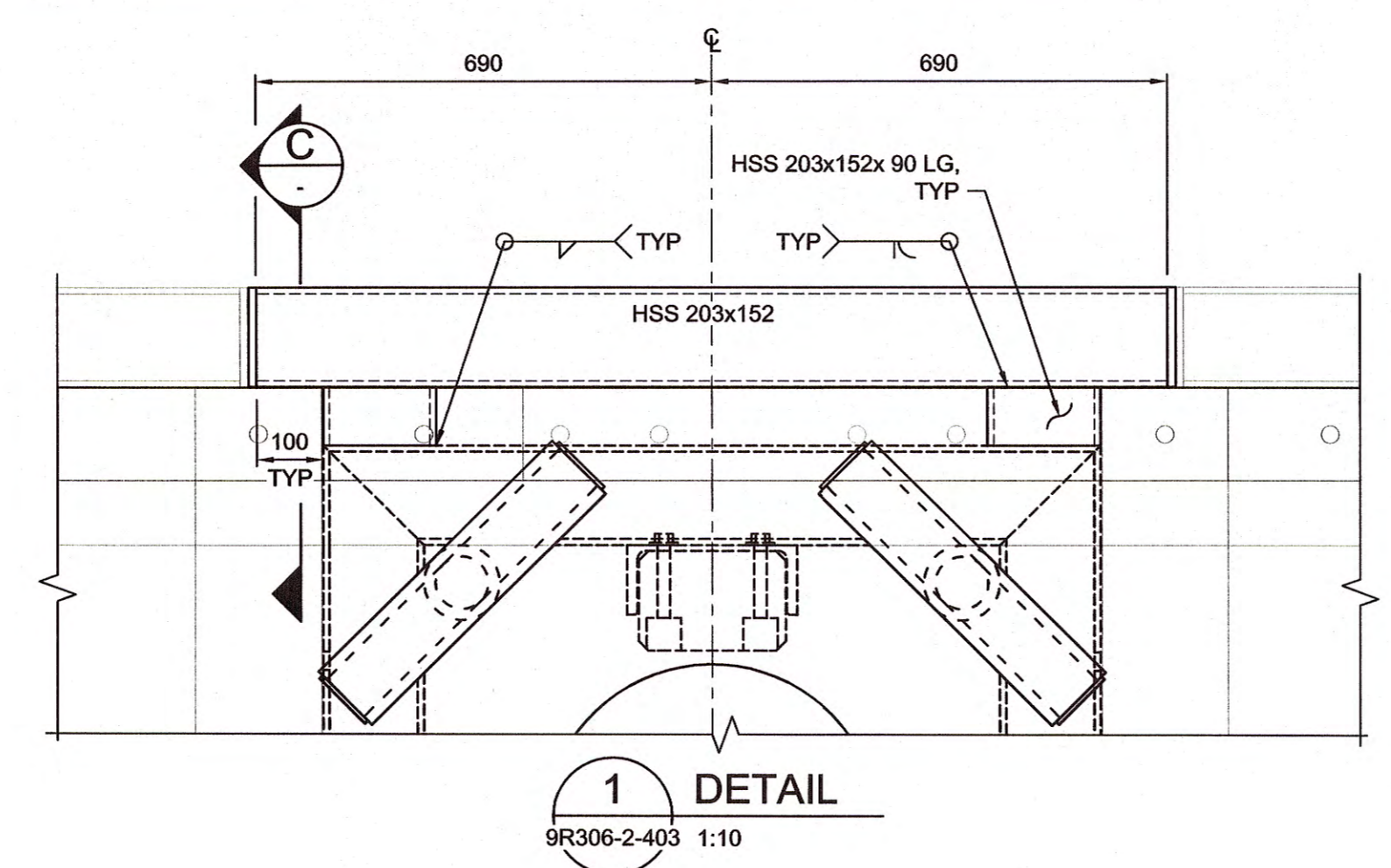
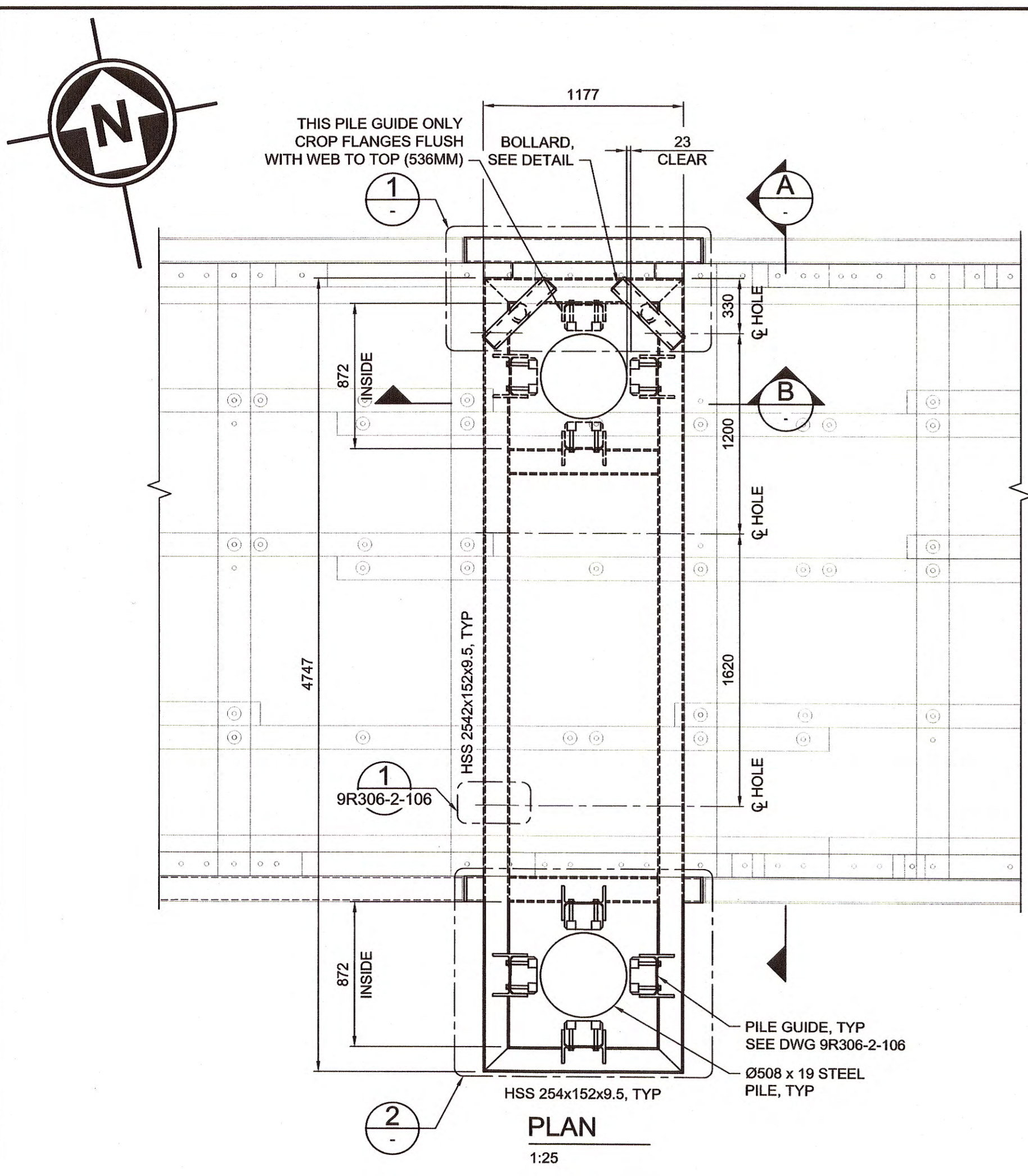
Drawing title/Titre du dessin

**FLOAT D
PILE FRAME
SECTIONS AND DETAILS**

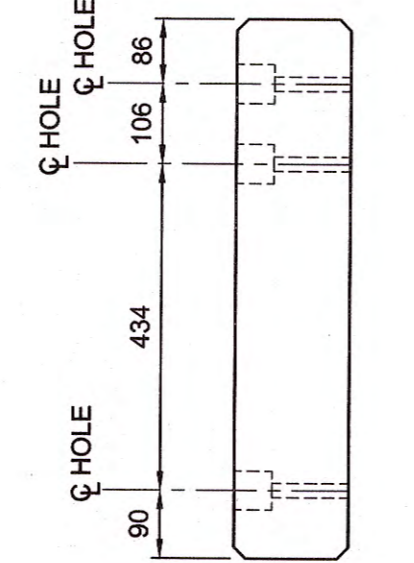
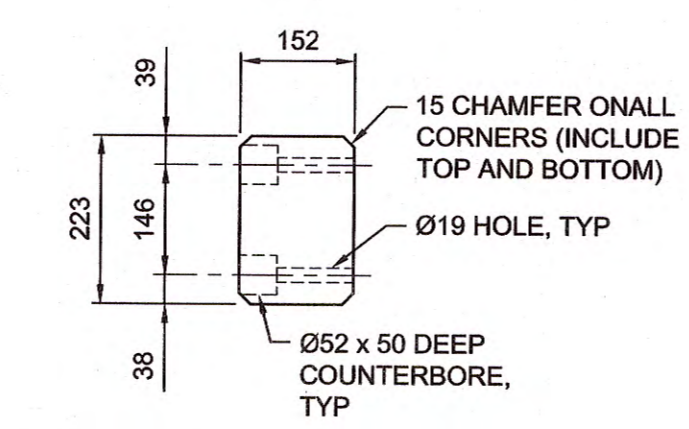
Project No./No. du projet
9R306-2

Sheet/Feuille
405
OF XX

Revision no./
La Révision no.
3

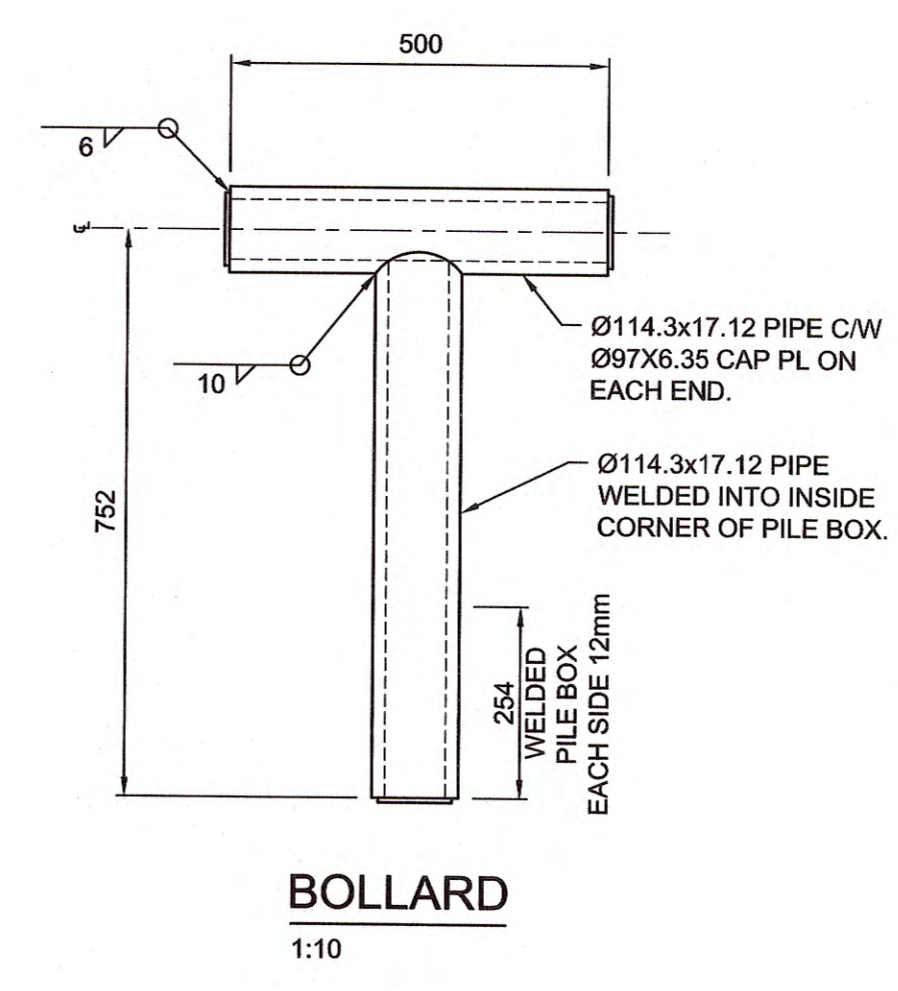


2 DETAIL
9R306-2-403 1:10



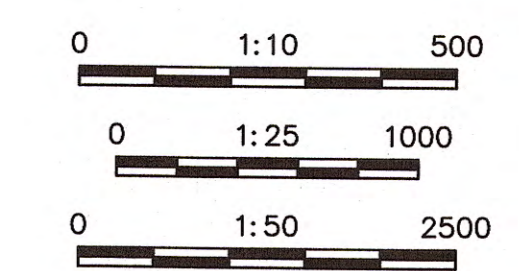
D VIEW
1:25

WEAR PAD
1:10
NOTE: THICKNESS TO BE ADJUSTED
ONSITE TO GIVE NOMINAL CLEARANCE
TO INSTALLED PILE POSITIONS.



- NOTES:**
- FOR GENERAL NOTES, SEE DWG 9R306-001.
 - COMPLETE PILE BOX ASSEMBLY TO BE GALVANIZED AFTER FABRICATION. DRAIN HOLES TO BE INSTALLED IN ACCORDANCE WITH GALVANIZING REQUIREMENTS.
 - THE INTENTION IS FOR ALL PILE GUIDES TO BE NOMINAL 50mm CLEAR FROM PILES. CONTRACTOR TO ALLOW FOR SUPPLY OF UHMW GUIDES AS SHOWN (152x223x715, 8 EACH PER PILE BOX). FIELD ADJUSTMENT WILL BE REQUIRED AS FOLLOWS: TRIM BACK (BAN-SAW) TO MINIMUM 110mm THICKNESS (IE: 42mm REMOVED AND 15mm BEVELED), OR INSERT 38mm CUT PIECE AS SPACER. THIS WILL PROVIDE UP TO 80mm OF ADJUSTMENT TO COMPENSATE FOR PILE POSITION.
 - TACK WELD NUTS AFTER FINAL FITTING.

PRELIMINARY
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4		
3	ISSUED FOR TENDER	16/07/13
2	ISSUED FOR CLIENT REVIEW	16/07/13
1	ISSUED FOR CLIENT REVIEW	16/06/13
0	ISSUED FOR CLIENT REVIEW	16/04/08
Revision/	Description/Description	Date/Date

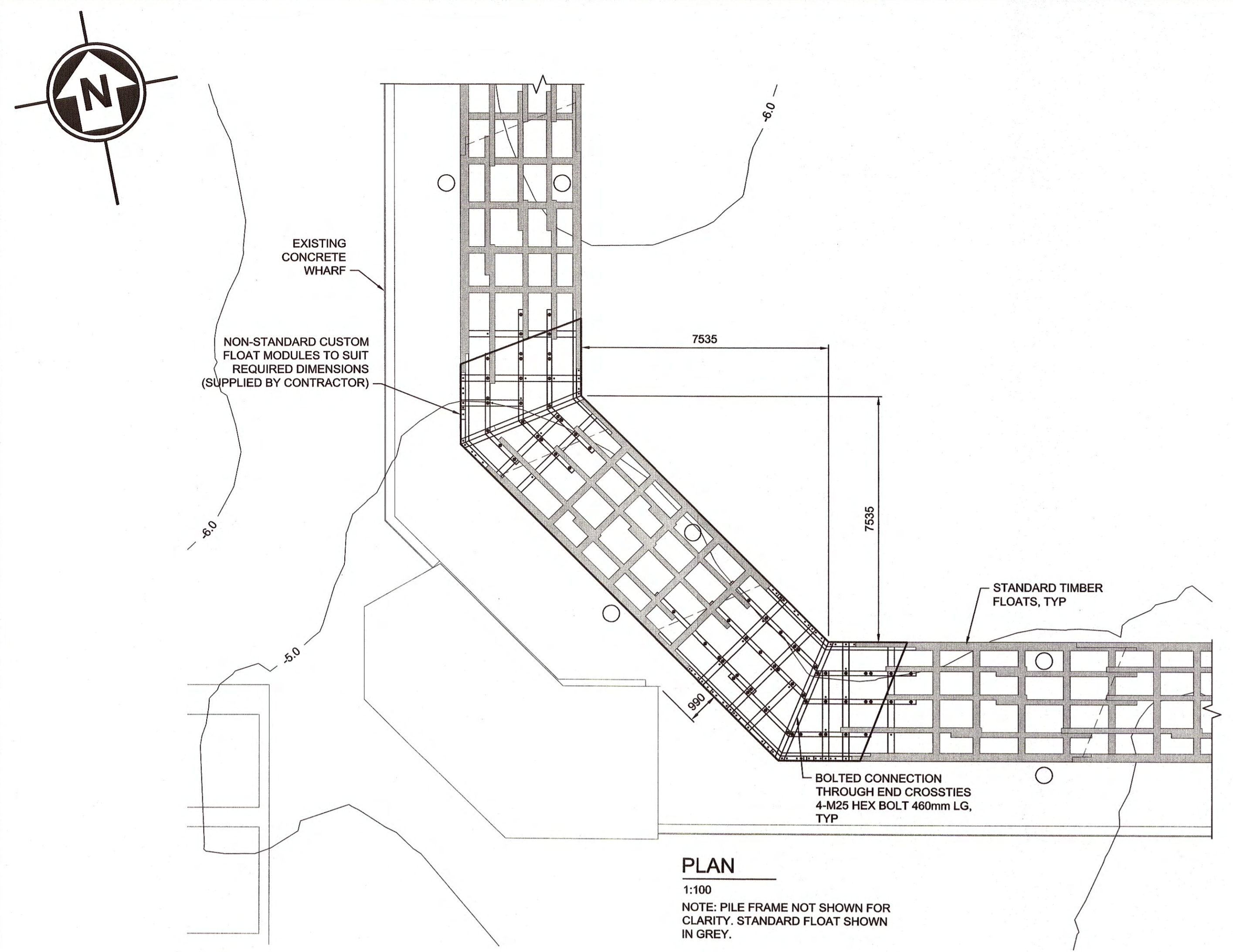
Client/client
**FISHERIES AND OCEANS
SMALL CRAFT
HARBOURS BRANCH**

Project title/Titre du projet
**IOS TIMBER AND
CONCRETE FLOATS
A, B, C & D**

Consultant Signature Only
-
Designed by/Concept par
C. LEHANE / JANUARY 19, 2016
Drawn by/Dessiné par
E. YANG / JANUARY 19, 2016
PWGSC Project Manager/Administrateur de Projets TPSGC
-
Regional Manager, Architectural and Engineering Services
Généraliste régionale, Services d'architecture et de génie, TPSGC
-

Drawing title/Titre du dessin
**FLOAT D
CUSTOM CORNER FLOAT MODULE
DETAILS**

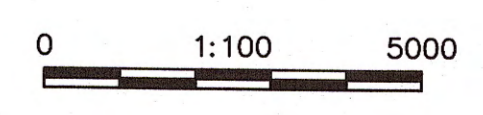
Project No./No. du projet 9R306-2	Sheet/Feuille 406 OF XX	Revision no./ La Révision no. 3
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NOTES:

- FOR GENERAL NOTES, SEE DWG 9R306-2-001.
- FOR PILE LOCATION AND COORDINATES, SEE DWG 9R306-2-004.
- FOR TIMBER FLOAT ARRANGEMENT, SEE GENERAL NOTES FOR REFERENCES.

PRELIMINARY
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