



parkscanada.gc.ca parcscanada.gc.ca

# Sault Ste. Marie Canal National Historic Site

Northern Ontario Field Unit

Parks Canada Agency

## 511 SSM

# POWERHOUSE STRUCTURAL STABILIZATION PROJECT

## PASSIVE GROUND WATER MANAGEMENT

### PROJECT DRAWINGS

Issued For Tender

Date: July 2021

Prepared For:

Northern Ontario Field Unit

Prepared By:

WSP Canada Inc.

Project Consultant

#### LIST OF DRAWINGS

##### PROJECT DRAWINGS

- C1.0 DRAWING COVER SHEET
- C1.1 GENERAL NOTES/SITE PLAN
- C1.2 REFERENCE PHOTOS AND DRAWINGS 10F2
- C1.3 REFERENCE PHOTOS AND DRAWINGS 20F2
- C2.0 EXISTING PENSTOCK CONCRETE RESERVOIR COVER AND INTERIOR PLAN VIEW
- C2.1 EXISTING PENSTOCK CONCRETE RESERVOIR AND VALVE CHAMBER CROSS-SECTIONS
- C2.2 EXISTING PENSTOCK CONCRETE RESERVOIR AND VALVE CHAMBER CROSS-SECTIONS
- C3.0 PENSTOCK CONCRETE RESERVOIR COVER AND INTERIOR PLAN VIEW REMOVALS
- C3.1 PENSTOCK CONCRETE RESERVOIR AND VALVE CHAMBER CROSS-SECTIONS REMOVALS
- C3.2 PENSTOCK CONCRETE RESERVOIR AND VALVE CHAMBER CROSS-SECTIONS REMOVALS
- C4.0 PROPOSED PENSTOCK CONCRETE RESERVOIR INTERIOR FLOOR/FOOTINGS/FOUNDATION PLAN VIEW
- C4.1 PROPOSED PENSTOCK CONCRETE RESERVOIR CROSS-SECTIONS
- C4.2 PROPOSED PENSTOCK CONCRETE RESERVOIR CROSS-SECTIONS,FOOTING/FOUNDATION SECTIONS
- C4.3 PROPOSED CONTEMPORARY VALVE CHAMBER SECTION/DETAILS
- C4.4 PROPOSED CONTEMPORARY VALVE CHAMBER SECTION/DETAILS
- C4.5 PROPOSED HYDRO GENERATION TURBINE (NIC) REFERENCE ONLY
- C5.0 TEMPORARY DEWATERING AND TREATMENT LAYOUT
- C5.1 PASSIVE WATER SYSTEM LAYOUT
- C6.0 PROPOSED VALVE TOWER SUPPORT WALL ELEVATIONS AND DETAILS
- C7.0 PROPOSED PENSTOCK CONCRETE RESERVOIR COVER PLAN VIEW AND NORTH WALL ELEVATIONS/SECTIONS/DETAILS
- C7.1 PROPOSED PENSTOCK CONCRETE RESERVOIR CROSS-SECTION
- C7.2 PROPOSED PENSTOCK CONCRETE RESERVOIR CROSS-SECTION AND STAIR ELEVATION/SECTION
- C7.3 PROPOSED REDI-ROCK WALL ELEVATIONS/SECTIONS/DETAILS
- C7.4 PROPOSED PENSTOCK CONCRETE RESERVOIR SITE RESTORATION PLAN VIEW

APPENDIX-A: AS FOUND DRAWINGS AS OF COMPLETION OF SANITARY SYSTEM IMPROVEMENT- FOR REFERENCE PURPOSE ONLY

CONSULTANT:



1345 ROSEMOUNT AVENUE  
CORNWALL ONTARIO CANADA K6J 3E5  
TEL.: 613-933-5602 | FAX: 705-936-0335 | WWW.WSP.COM  
WSP-5P301-15-0001-001 (WSP# 151-06165-14)



Parks Canada  
Parcs Canada





**GENERAL**

- DRAWINGS TO BE READ IN CONJUNCTION WITH THE PROJECT SPECIFICATIONS AND REFERENCE DRAWINGS.
- NOTIFY DEPARTMENTAL REPRESENTATIVE IF ANY DISCREPANCIES ARE FOUND BETWEEN NOTES IN THIS SET OF DRAWINGS AND THE SPECIFICATIONS.
- IN CASE OF CONFLICTING INFORMATION BETWEEN CONTRACT DRAWINGS AND SPECIFICATIONS, THE MORE STRINGENT SHALL GOVERN OR CONTRACTOR MUST SEEK CLARIFICATION IN WRITING FROM DEPARTMENTAL REPRESENTATIVE.
- ALL WORK IS TO CONFORM TO LATEST EDITION OF THE NATIONAL BUILDING CODE OF CANADA AND WITH ALL APPLICABLE CODES AND BYLAWS.
- BEFORE PROCEEDING WITH WORK, VERIFY DIMENSIONS SHOWN ON THE DRAWINGS AND REPORT DISCREPANCIES TO THE DEPARTMENTAL REPRESENTATIVE. REFER TO OTHER DRAWINGS FOR LOCATIONS AND DIMENSIONING OF APPURTENANCES NOT SHOWN ON THE STRUCTURAL DRAWINGS. OBTAIN THE DEPARTMENTAL REPRESENTATIVE'S APPROVAL BEFORE MODIFYING WORK TO SUIT EXISTING CONDITIONS WHICH ARE NOT SHOWN ON THE DRAWINGS.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO RELOCATE, FIELD FIT, INSTALL AND PROVIDE ANCILLARY MATERIALS RELATED TO THE INSTALLATION FOR ANY OWNER SUPPLIED EQUIPMENT. ALL OWNER SUPPLIED EQUIPMENT WILL BE AVAILABLE AT THE SAULT STE. MARIE CANAL NHS.
- ALL DIMENSIONS GIVEN ON DRAWINGS ARE IN METRIC SYSTEM UNLESS OTHERWISE NOTED. DO NOT SCALE DRAWINGS.
- THE CONTRACTOR SHALL FACILITATE ALL MATERIAL TESTING REQUIRED BY THE DEPARTMENTAL REPRESENTATIVE AND AS OUTLINED IN THE CONTRACT SPECIFICATIONS. CONTRACTOR TO ORGANIZE AND COORDINATE AS REQUESTED.
- THE PROJECT IS LOCATED IN A NATIONAL HISTORIC SITE (NHS) OF CANADA. THEREFORE STANDARDS FOR ENVIRONMENTAL PROTECTION, CULTURAL RESOURCE PROTECTION AND FOR VISUAL AESTHETICS OF FINAL PRODUCT SHALL BE OF THE HIGHEST QUALITY STANDARD. CONTRACT LIMITS SHALL BE STRICTLY ADHERED TO AND CONTRACTOR IS TO TAKE SPECIAL CARE TO MINIMIZE DAMAGE, DISRUPTION, AND PROTECT EXISTING FEATURES OF THE NHS. THE DEPARTMENTAL REPRESENTATIVE OR DELEGATE IS TO BE NOTIFIED IMMEDIATELY IF ANY NATURAL OR CULTURAL RESOURCES OF INTEREST ARE LOCATED DURING CONSTRUCTION.
- ALL WORK IS TO BE CONDUCTED IN ACCORDANCE WITH THE ONTARIO OCCUPATIONAL HEALTH AND SAFETY ACT.
- THE CONTRACTOR SHALL SUBMIT A RISK MANAGEMENT PLAN TO THE DEPARTMENTAL REPRESENTATIVE OR DELEGATE FOR REVIEW. THE CONTRACTOR SHALL MAINTAIN AND CONSTANTLY UPDATE THE PLAN THROUGHOUT THE PROJECT LIFECYCLE.
- ALL STRUCTURES SHALL BE IN CONFORMANCE WITH THE FOLLOWING DESIGN STANDARDS:
  - ONTARIO BUILDING CODE (LATEST EDITION)
  - NATIONAL BUILDING CODE OF CANADA 2015 (NBC) OR NEWER IF IN EFFECT
  - HANDBOOK OF STEEL CONSTRUCTION (CISC, CSA S16-14)
  - CAN/CSA A23.3-14 DESIGN OF CONCRETE STRUCTURES
- ALL ELECTRICAL WORK SHALL CONFORM TO THE ONTARIO ELECTRICAL CODE. CONTRACTOR SHALL ARRANGE, AND PAY FOR ALL ELECTRICAL PERMITS AND ELECTRICAL SAFETY AUTHORITY (ESA) INSPECTIONS.
- ALL CONTRACTOR SUBMITTALS SHALL BE DONE IN S.I. UNITS (METRIC).
- THE CONTRACTOR SHALL SUBMIT A PROJECT SPECIFIC HEALTH AND SAFETY PLAN FOR REVIEW PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL ONLY PROCEED WITH CONSTRUCTION UPON ACCEPTANCE OF THE PROJECT SPECIFIC HEALTH AND SAFETY PLAN BY THE DEPARTMENTAL REPRESENTATIVE OR DELEGATE.
- THE CONTRACTOR SHALL SUBMIT A DEMOLITION PLAN FOR REVIEW BY THE DEPARTMENTAL REPRESENTATIVE PRIOR TO SITE REMOVALS. THE CONTRACTOR SHALL ONLY PROCEED WITH CONSTRUCTION UPON COMPLETION OF REVIEW OF THE DEMOLITION PLAN BY THE DEPARTMENTAL REPRESENTATIVE OR DELEGATE.
- THE CONTRACTOR SHALL SUBMIT A TEMPORARY PEDESTRIAN CROSSING PLAN FOR REVIEW PRIOR TO COMMENCING CONSTRUCTION FOR ALL STRUCTURES WHERE PUBLIC ACCESS WILL BE IMPACTED DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING PEDESTRIAN TRAFFIC SAFE MEANS OF CROSSING DURING CONSTRUCTION AS THE NHS WILL REMAIN OPEN TO THE PUBLIC IN PART OR WHOLE OF THE CONTRACT PERIOD.
- THE CONTRACTOR SHALL MAINTAIN THE WORKSITE IN A TIDY CONDITION AND FREE FROM THE ACCUMULATION OF WASTE PRODUCTS AND DEBRIS.
- USE ONLY THE DRAWINGS THAT ARE MARKED "ISSUED FOR CONSTRUCTION" AND WHICH ARE STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE OF ONTARIO. CONFIRM WITH THE DEPARTMENTAL REPRESENTATIVE OR DELEGATE.
- ALL SECTIONS, DETAILS AND STATEMENTS NOTED AS "TYPICAL" APPLY TO LIKE/SIMILAR CONDITIONS.
- THE CONSULTANT AND THE DEPARTMENTAL REPRESENTATIVE, AT TIMES, WILL CONDUCT INSPECTIONS OF THE WORK TO ENSURE GENERAL CONFORMANCE WITH THE DESIGN DRAWINGS. THIS DOES NOT REPLACE THE CONTRACTOR'S RESPONSIBILITY TO IMPLEMENT AND MAINTAIN A QUALITY CONTROL PROGRAM.
- SUBSTANTIAL COMPLETION OF THE PROJECT WILL NOT BE ISSUED UNTIL AS-BUILT RECORD DRAWINGS HAVE BEEN PROVIDED WITH ALL REQUIRED INFORMATION TO THE SATISFACTION OF THE CONSTRUCTION ADMINISTRATOR.
- THE CONTRACTOR SHALL PROVIDE FOUR (4) COMPLETE SETS OF AS-BUILT RECORD DRAWINGS. ALL CHANGES ARE TO BE MARKED IN RED AND MUST BE CLEAN AND LEGIBLE.
- NO BURNING IS PERMITTED WITHIN THE NATIONAL HISTORIC SITE.
- THE CONTRACTOR SHALL ERECT SILT FENCING ALONG ALL WATER COURSES DURING CONSTRUCTION.
- THE CONTRACTOR SHALL SUBMIT A SEDIMENT AND EROSION CONTROL PLAN PRIOR TO CONSTRUCTION. CONSTRUCTION WORK CAN COMMENCE ONLY AFTER SITE SPECIFIC ENVIRONMENTAL PROTECTION PLAN THAT INCLUDES ACCEPTANCE OF THIS PLAN BY DEPARTMENTAL REPRESENTATIVE OR DELEGATE.
- THE CONTRACTOR SHALL PROVIDE ALL SHOP DRAWINGS IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS. ALL SHOP DRAWING SUBJECT TO REVIEW FROM DEPARTMENTAL REPRESENTATIVE OR DELEGATE.
- ALL WORK WITHIN A 30 METER DISTANCE OF A WATER WAY SHALL ADHERE TO THE FISHERIES ACT. THE CONTRACTOR SHALL SUBMIT A WORK PLAN FOR ALL WORK.
- ALL WORK SHALL CONFORM TO THE ENVIRONMENTAL BASIC IMPACT ANALYSIS (BIA), APPENDIXED TO THE CONTRACT SPECIFICATIONS.
- ITEMS OF WORK THAT THE PARKS CANADA AGENCY WOULD LIKE TO COMPLETE, BUT MAY CHOOSE NOT TO COMPLETE DUE TO BUDGETARY RESTRAINTS, ARE SHOWN AS "PROVISIONAL ITEM". THE CONTRACTOR SHALL PRICE THESE ITEMS ACCORDINGLY AND SHALL NOT CLAIM ANY ANTICIPATED LOSS OF PROFIT OR INCREASED OVERHEAD IF ANY OR ALL OF THESE ITEMS ARE DELETED ALTOGETHER. THE CONTRACTOR SHALL BE NOTIFIED AT THE TIME OF AWARD OF CONTRACT AND THROUGH THE DRAWINGS SET ISSUED FOR CONSTRUCTION UPON AWARD OF CONTRACT IF PARKS CANADA AGENCY WISHES TO PROCEED WITH DELETION OF ANY OF THESE ITEMS.

**REMOVALS**

- CONTRACTOR SHALL ERECT TEMPORARY GUARDS (CHAIN LINK OR WELDED WIRE FENCE WITH A MINIMUM HEIGHT OF 1.8m) AROUND EXCAVATION AS PER OBC. GUARDS SHALL REMAIN IN PLACE UNTIL COMPLETION OF CONSTRUCTION.
- VIBRATION MONITORING SHALL BE INSTALLED IN THE POWERHOUSE PRIOR TO ANY REMOVALS.
- ALL REMOVALS ARE TO BE CARRIED OUT WITH PRECAUTIONS FOR THE SAFETY OF THE PUBLIC AND PARKS CANADA'S EMPLOYEES, AND PROPERTY.
- DEMOLITION WORK SHALL BE CARRIED OUT WITHOUT CAUSING OVERSTRESS OR EXCESSIVE DEFLECTION TO ANY PART OF THE EXISTING WORK WHICH IS TO REMAIN. THE CONTRACTOR IS RESPONSIBLE TO MAKE GOOD ANY DAMAGE CAUSED DURING DEMOLITION.
- THE CONSTRUCTION SITE SHALL REMAIN FREE OF ANY DEBRIS AND / OR GARBAGE.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL DISPOSAL/TIPPING FEES.
- THE CONTRACTOR SHALL DISPOSE OF CONSTRUCTION DEBRIS AT LEGALLY DESIGNATED SITES IN ACCORDANCE WITH APPLICABLE LAWS.
- ALL REMOVALS ARE TO BE COMPLETED WITH REFERENCE TO THE CONTRACT DRAWING SPECIFICATIONS.
- STORE ALL STONE FROM WEST AND SOUTH VALVE CHAMBER WALL AT PCA DESIGNATED LOCATION.
- STORE ALL REMOVED SIGNAGE FOR HISTORIC VALVE AT A PCA DESIGNATED LOCATION.
- TAGGING OF SANDSTONE WALL BLOCKS IS NOT REQUIRED DURING REMOVAL AND STORAGE
- ALL UTILITIES EXPOSED THROUGH HYDROVAC EXCAVATION SHALL BE SUPPORTED FOR DURATION OF CONSTRUCTION WORK.
- VALVE CHAMBER WALL REMOVAL PROCEDURE WILL FOLLOW A LAYERED "TOP DOWN, OUTSIDE-IN" APPROACH. THE CONTRACTOR SHALL REMOVE THE TOP LAYERS OF STONE FURTHEST FROM THE FACE OF THE POWERHOUSE FIRST, WORKING THEIR WAY TOWARDS THE POWERHOUSE WALL. BLOCK WALL REMOVAL PROCEDURES ARE OUTLINED BELOW:
  - IMPLEMENT PROTECTIVE BUFFER SYSTEM FOR THE POWERHOUSE WALL TO PROTECT THE POWERHOUSE WALL AGAINST EXTERNAL FORCES (FALLING DEBRIS, MACHINERY IMPACT, ETC.)
  - SAWCUT AND REMOVE CONCRETE ROOFING SLABS AS SHOWN IN THE REMOVALS PENSTOCK CONCRETE RESERVOIR COVER PLAN VIEW.
  - SMALLER STONE FILL BENEATH ROOF SLAB TO BE REMOVED WITH MANUAL HYDRAULIC AIR HAMMERS OR BOOM MOUNTED HYDRAULIC BREAKER. MOUNTED ON A MINI-EXCAVATOR CAPABLE OF NAVIGATING THE SPACE BETWEEN THE EXISTING WALLS. IF THE BOOM MOUNTED HYDRAULIC BREAKER IS USED, VIBRATIONS CAUSED BY THE USE OF BREAKER MUST BE MONITORED TO ENSURE VIBRATIONS REMAIN UNDER DESTRUCTIVE LIMITS. REFER TO APPENDIX E "NOISE, VIBRATION AND AMBIENT LIGHT MANAGEMENT COMPONENT PLAN" (2019) OF HPN ENGINEERING'S SITE SPECIFIC ENVIRONMENTAL PLAN FOR VIBRATION MONITORING PROTOCOL.
  - MORTAR OF THE LARGEST STONES BENEATH THE SMALLER STONE FILL WILL BE CHISELED OFF PRIOR TO REMOVAL EFFORTS.
  - BLOCKS LARGER THAN 2 CUBIC METERS, ARE TO BE BROKEN DOWN INTO SMALLER, MORE MANAGEABLE PIECES IF STONES CAN NOT BE FEASIBLY REMOVED AS A WHOLE. APPROVAL MUST BE GRANTED TO BREAK BLOCKS BY A DEPARTMENTAL REPRESENTATIVE OR THE CONTRACT ADMINISTRATOR PRIOR TO BREAKING BLOCKS.
  - REMOVED BLOCKS SHALL BE PRESERVED AND STORED ON SITE IN A PCA DESIGNATED LOCATION.
  - CARE MUST BE TAKEN SO AS NOT TO DESTROY THE BLOCKS DURING REMOVAL AND TRANSPORTATION.
- ANY STONES OF 0.5m DIAMETER OR LARGER FOUND DURING HYDROVAC EXCAVATION AROUND PENSTOCK CONCRETE RESERVOIR WALLS IS TO BE REMOVED AND STORED AT A PCA DESIGNATED LOCATION.

**EXCAVATION**

- ANY ARTIFACTS UNEARTHED DURING THE WORK SHALL BE LEFT UNTOUCHED UNTIL INSPECTED BY PARKS CANADA. ANY ARTIFACTS SHALL REMAIN THE PROPERTY OF PARKS CANADA.
- ANY SANDSTONE, LIMESTONE, OR LARGE BOULDERS IN EXCESS OF 1.0 CU.METRES SHALL BE LEFT IN THE LAYDOWN AREA. OTHER EXCAVATED MATERIALS SHALL BE HAULED AND DISPOSED OF OFF-SITE.

**MATERIALS**

- ALL PROPOSED WORKS SHALL BE CONSTRUCTED WITH NEW MATERIAL ONLY. MATERIALS IDENTIFIED FOR DEMOLITION ARE TO BE REMOVED FROM THE SITE AND PROPERLY DISPOSED OF IN STRICT ACCORDANCE WITH APPLICABLE STANDARDS.
- MATERIAL USED FOR CONSTRUCTION SHALL BE FREE OF ANY DEFECTS.
- THE CONTRACTOR SHALL REPAIR AT THEIR COST ANY DAMAGES AS A RESULT OF CONSTRUCTION THAT IS NOT SPECIFIED FOR REMOVAL. ALL REPAIRS MUST BE COMPLETED TO THE SATISFACTION OF THE DEPARTMENTAL REPRESENTATIVE.
- ALTERNATIVES MAY BE CONSIDERED AFTER CONTRACT AWARD ONLY. SUBMIT PROPOSAL IN WRITING FOR ALTERNATIVE PRODUCTS AND ALLOW FOR RESPONSE TIME OF 7 CALENDAR DAYS FOR DEPARTMENTAL REPRESENTATIVE REVIEW AND APPROVALS. ALTERNATIVES WILL ONLY BE CONSIDERED IF THERE IS A SUBSTANTIVE CREDIT TO THE OWNER, OR THE SPECIFIED MATERIALS WILL CAUSE A SCHEDULE DELAY IMPACTING THE PROJECT CRITICAL PATH.

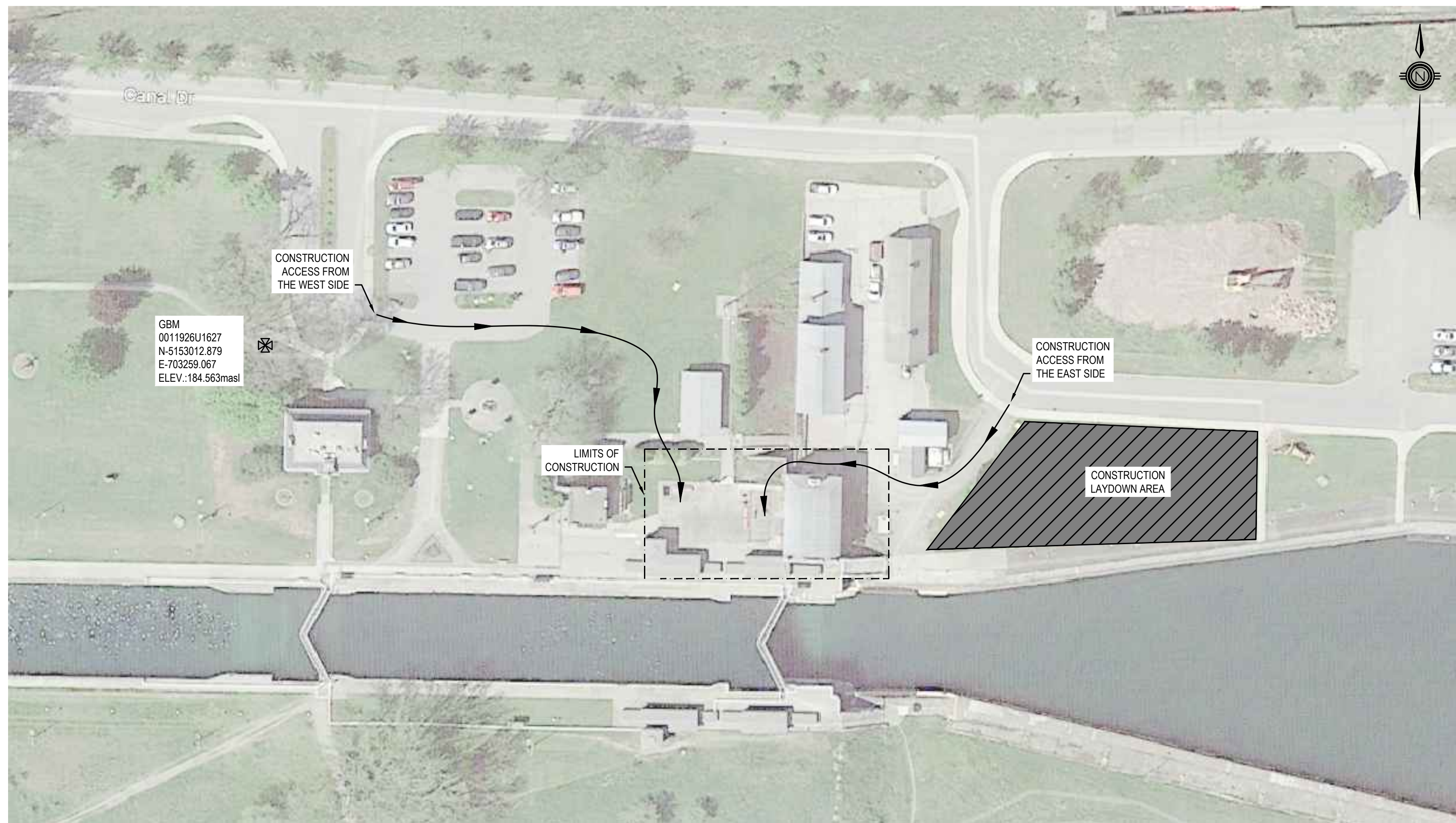
**CONSTRUCTION SEQUENCING**

STEP	DRAWING REFERENCE
1. CONFIRM BEDROCK ELEVATION WITHIN THE PENSTOCK, ALONG THE WEST PENSTOCK CONCRETE RESERVOIR WALL, AND AT THE LOCATION OF THE NEW SEDIMENTATION MANHOLES.	C3.0
2. INSTALL ADDITIONAL TEMPORARY PERIMETER FENCING (AS REQUIRED UNDER OBC COMPLIANCE).	C1.1
3. IMPLEMENT VIBRATION MONITORING PROGRAM WITHIN THE POWERHOUSE.	
4. REMOVE ALL PENSTOCK CONCRETE RESERVOIR ROOF PANELS.	C3.0
5. HYDROVAC SOIL ALONG THE EXTERIOR OF THE WEST AND NORTH WALLS OF THE PENSTOCK CONCRETE RESERVOIR TO THE REQUIRED DEPTH AND OFFSET. A MAXIMUM EXCAVATION SLOPE OF 1:1 MUST BE MAINTAINED.	C3.0
6. RELOCATE EXISTING BELL COMMUNICATIONS LINE TO MOTORHOUSE.	C3.0
7. SAW CUT ALONG WEST WALL OF POWERHOUSE TO ENSURE ISOLATION FOR DEMOLITION OF VALVE CHAMBER FLOOR AND SOUTH VALVE CHAMBER WALL.	C3.0
8. DISASSEMBLE SOUTH AND WEST WALL OF THE EXISTING VALVE CHAMBER. SANDSTONE WALL BLOCKS STORED FOR RE-PURPOSE LATER.	C3.0
9. INSTALL TEMPORARY SUBMERSIBLE PUMPS FOR DEWATERING AND TREATMENT DURING DEMOLITION.	C5.0
10. REMOVE BEAMS AND COLUMNS, CONCRETE INLET AND OUTLET FLUMES AND REMAINING CONCRETE FLOOR AND UNDERLYING FILL DOWN TO DESIGNATED DEPTH WITHIN THE PENSTOCK CONCRETE RESERVOIR. EXISTING FILL TO BE KEPT ON SITE IN A DESIGNATED AREA TO BE REUSED IN THE PENSTOCK CONCRETE RESERVOIR FLOOR SYSTEM.	C3.0,C3.1
11. INSTALL SUBMERSIBLE PUMPS IN THE AREA OF THE PROPOSED VALVE CHAMBER TO ADEQUATELY DEWATER THE WORK AREA. INSTALL SUBMERSIBLE PUMPS IN A MANNER THAT ENABLES EASY REMOVAL POST GROUTING WORKS.	C5.0
12. PLACE NON-SHRINK CONCRETE GROUT TO FORM BASE FOR NEW CONTEMPORARY VALVE CHAMBER AND VALVE TOWER SUPPORT WALL IN THE DESIGNATED AREA OF THE PENSTOCK CONCRETE RESERVOIR.	C4.0
13. INSTALL PASSIVE WATER MANAGEMENT PIPING ALONG THE SOUTH WALL OF THE PENSTOCK CONCRETE RESERVOIR AND WEST WALL OF THE POWERHOUSE C/W CONNECTION INTO SEDIMENTATION MANHOLES AND ASSOCIATED TREATMENT STATION.	C5.1
14. INSTALL NEW CAST-IN-PLACE CONCRETE VALVE CHAMBER	C4.0
15. INSTALL NEW KEYED VALVE TOWER WALL SUPPORT AT SOUTH WEST CORNER OF THE PENSTOCK CONCRETE RESERVOIR.	C4.0
16. INSTALL STEEL PIPING CONNECTION PCA SUPPLIED NEW CONTEMPORARY VALVE.	C4.0,C4.1,C4.2
17. INSTALL CAST-IN-PLACE FOOTING FOR THE PENSTOCK CONCRETE RESERVOIR NORTH WALL.	C4.0,C4.2
18. INSTALL CAST-IN-PLACE FOUNDATION FOR FUTURE HYDRO GENERATIONS PROJECT.	C4.0,C4.2
19. POUR NON-SHRINK FILL FLOOR COMPLETE WITH USEABLE FILL REMOVED IN STEP 10 THROUGHOUT PENSTOCK CONCRETE RESERVOIR FLOOR.	C4.0
20. INSTALL NORTH AND SOUTH HISTORIC VALVES C/W CAST-IN-PLACE CONCRETE SUPPORTS	C4.5
21. SUPPLY AND INSTALL 1.83m Ø X 1.83m Ø X 1.52m Ø MANIFOLD TO OUTLET OF CONTEMPORARY VALVE.	C4.5
22. INSTALL PCA SUPPLIED BLIND FLANGE TO THE 1.83m Ø NORTH LEG OF "Y" PIPE SYSTEM.	
23. SUPPLY AND INSTALL 1.52m Ø STEEL PIPE BETWEEN MANIFOLD AND SOUTH HISTORIC VALVE.	C4.5
24. INSTALL CAST-IN-PLACE PENSTOCK CONCRETE RESERVOIR NORTH WALL C/W STEEL DOUBLE DOOR AND SANDSTONE VENEER ON EXTERIOR FACE OF WALL.	C7.0,C7.1
25. INSTALL NEW HOLLOW CORE PENSTOCK CONCRETE RESERVOIR ROOF PANELS WITH CAST-IN PLACE TOP COAT TO MATCH EXISTING.	C7.0,C7.1
26. INSTALL CAST-IN-PLACE CONCRETE STAIRS NORTH OF THE POWERHOUSE/PENSTOCK CONCRETE RESERVOIR.	C7.2
27. INSTALL RED-ROCK WALL RETAINING WALL BETWEEN THE NEW STAIRS AND THE PENSTOCK CONCRETE RESERVOIR NORTH WALL.	C7.3
28. SITE CLEANUP AND RESTORATION.	

NOTE: THIS CONSTRUCTION SEQUENCE IS A GUIDE ONLY AND IS NOT MEANT TO CONTROL THE CONTRACTOR'S SEQUENCING OF THE WORK. THE CONTRACTOR SHALL SUBMIT A WORK PLAN AND PROPOSED CONSTRUCTION SEQUENCING FOR REVIEW PRIOR TO THE WORK.

**LEGEND**

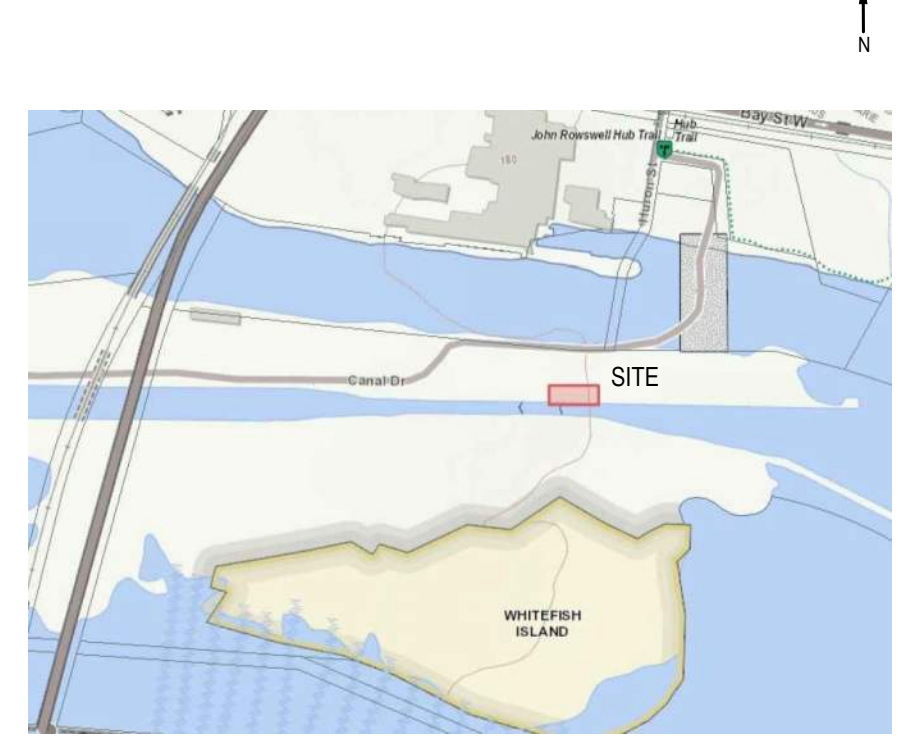
- EXISTING EDGE OF CONCRETE
- EXISTING BURIED COMMUNICATION
- EXISTING BURIED HYDRO
- EXISTING BURIED WATER
- EXISTING BURIED SANITARY
- EXISTING BURIED STORM
- EXISTING BURIED UTILITY
- EXISTING CONCRETE
- EXISTING INTERLOCKING BRICK
- EXISTING BUILDING
- EXISTING SIGNS
- EXISTING SHRUB
- EXISTING TREE
- EXISTING BOLLARD
- EXISTING SANITARY MANHOLE
- EXISTING STORM MANHOLE
- EXISTING CATCHBASIN
- EXISTING WATER WELL
- EXISTING FIRE HYDRANT
- EXISTING ELECTRICAL HANDHOLE
- EXISTING HANDHOLE
- REFERENCE PHOTO VIEW POINT
- PROPOSED BURIED UTILITY
- PROPOSED CONCRETE
- PROPOSED SANITARY MANHOLE
- PROPOSED STORM MANHOLE



Government of Canada / Gouvernement du Canada				
Parks Canada / Parcs Canada				
Northern Ontario Field Unit / Unité de gestion du Nord de l'Ontario				
<b>KEY PLAN:</b> SAULT STE. MARIE, ONTARIO				
4	16JULY21	ISSUED FOR TENDER	M.CARBONE	D.SPACEK
3	25APR21	99% REVIEW	M.CARBONE	D.SPACEK
2	18MAR21	90% REVIEW	M.CARBONE	D.SPACEK
1	26JUNE20	75% REVIEW	M.CARBONE	D.SPACEK
0	21APR20	66% REVIEW	M.CARBONE	D.SPACEK
<b>No.</b>	<b>Date</b>	<b>Description</b>	<b>Drawn by / Dessiné par</b>	<b>Approved / Approuvé</b>
<b>Revision / Révision</b>				
A	<b>Detail number</b>	<b>A Numéro de détail</b>		
B	<b>Sheet number</b>	<b>B Numéro de la feuille</b>		
<b>Linear dimensions in millimetres</b>		<b>Dimensions linéaires en millimètres</b>		
<b>Consultant's Name / Nom de l'expert-conseil</b>		<b>Eng. Stamp / Sceau de l'ingénieur</b>		
WSP 1348 ROSERACQUET AVENUE CORNWALL, ONTARIO CANADA K6J 3E5 TEL: 613-833-8801   FAX: 755-638-0335   WWW.WSP.COM WSP-SP201-15-001-001 (WSP# 151 00185-14)		D. M. SPACEK July 16, 2021 PROFESSIONAL ENGINEER PROVINCE OF ONTARIO		
<b>Project title / Titre du projet</b>				
511SSM POWERHOUSE STRUCTURAL STABILIZATION PROJECT				
<b>Drawing title / Titre du dessin</b>				
GENERAL NOTES / SITE PLAN				
<b>Designed by / Conçeut par</b>		<b>Date</b>		
J.DICERBO / D.SPACEK		MAY 25, 2021		
<b>Drawn by / Dessiné par</b>		<b>Date</b>		
M.CARBONE		MAY 25, 2021		
<b>Checked by / Vérifié par</b>		<b>Date</b>		
J.DICERBO		MAY 25, 2021		
<b>Approved by / Approuvé par</b>		<b>Date</b>		
D.SPACEK		MAY 25, 2021		
<b>Project No. / N° du projet</b>	<b>Scale / Échelle</b>	<b>Sheet No. / N° de la feuille</b>		
511SSM	1:150	C1.1		
<b>Drawing Set No. / N° de série du dessin</b>				
-				



KEY PLAN:

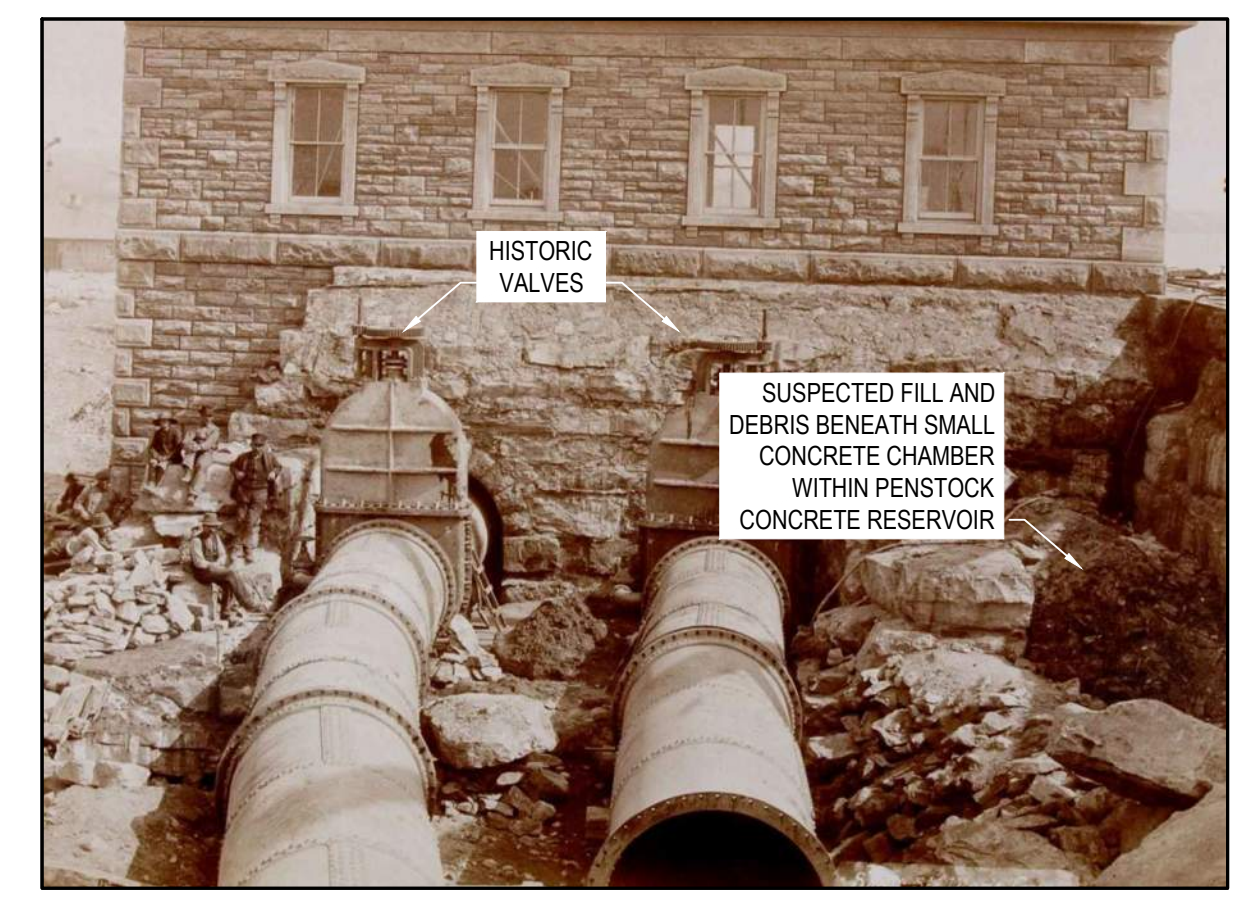


SAULL STE. MARIE, ONTARIO

NOTE: PHOTO ARE FOR REFERENCE ONLY. ACTUAL CONDITIONS MAY VARY.



1 REFERENCE PHOTO  
C2.0 SCALE: NTS



2 REFERENCE PHOTO  
C2.0 SCALE: NTS



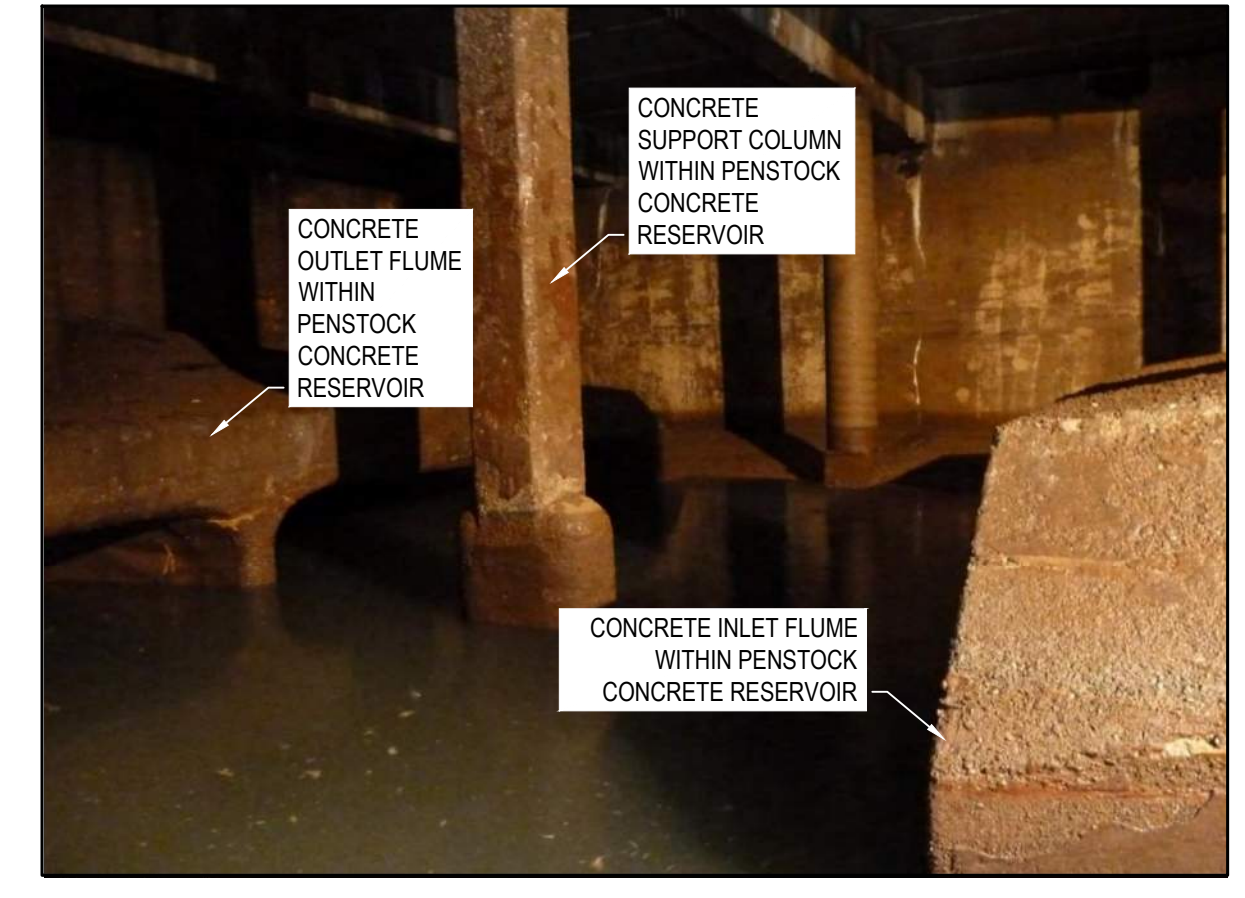
3 REFERENCE PHOTO  
C2.0 SCALE: NTS



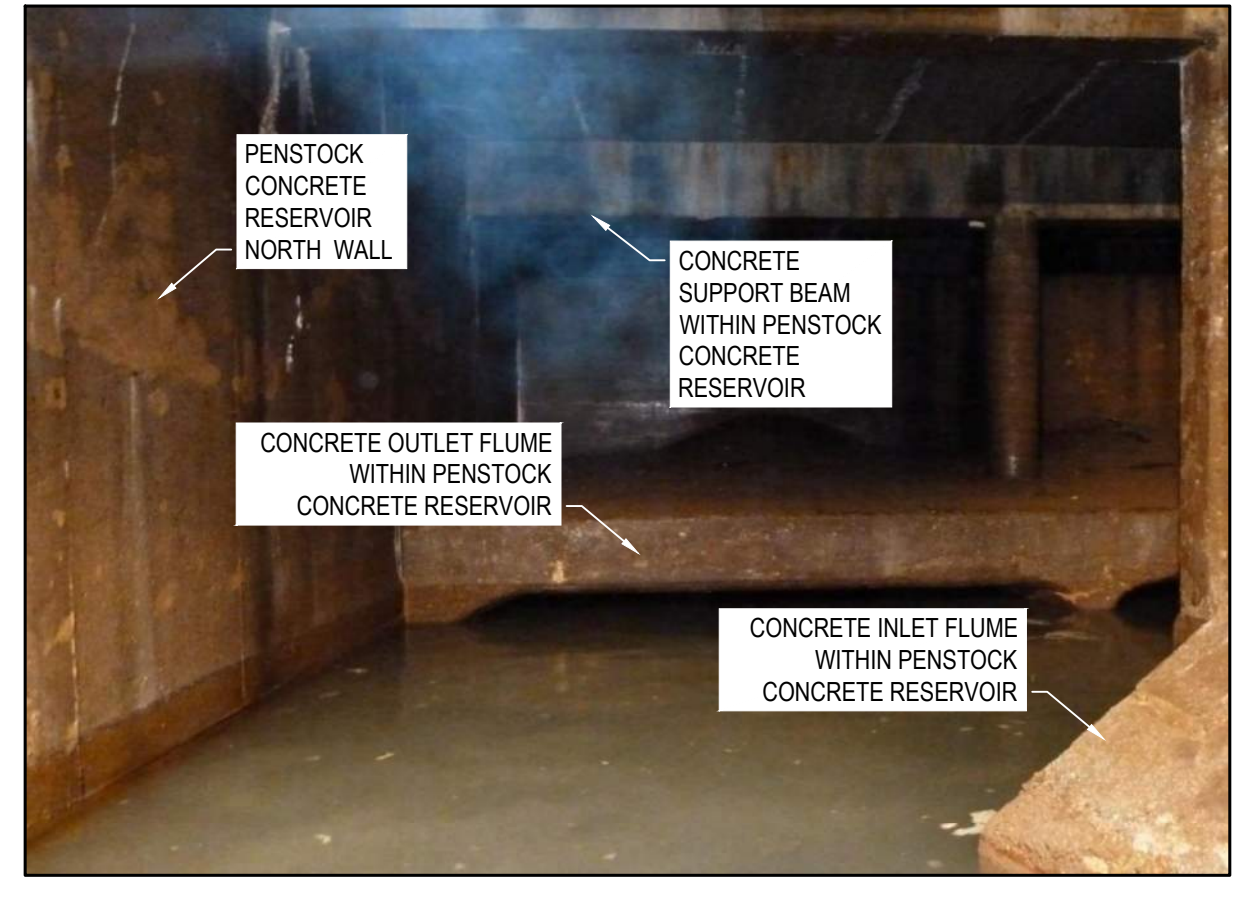
4 REFERENCE PHOTO  
C2.0 SCALE: NTS



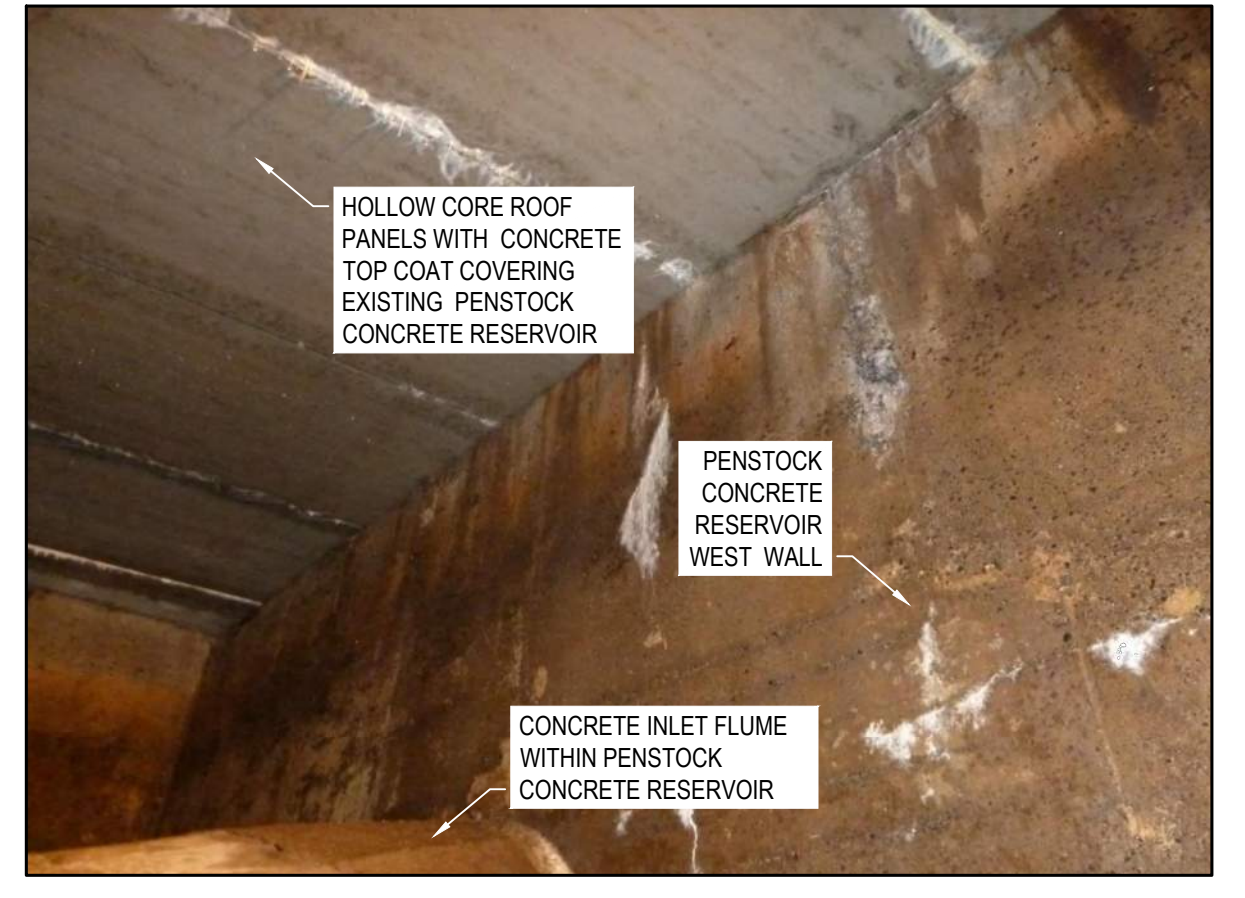
5 REFERENCE PHOTO  
C2.0 SCALE: NTS



6 REFERENCE PHOTO  
C2.0 SCALE: NTS



7 REFERENCE PHOTO  
C2.0 SCALE: NTS



8 REFERENCE PHOTO  
C2.0 SCALE: NTS



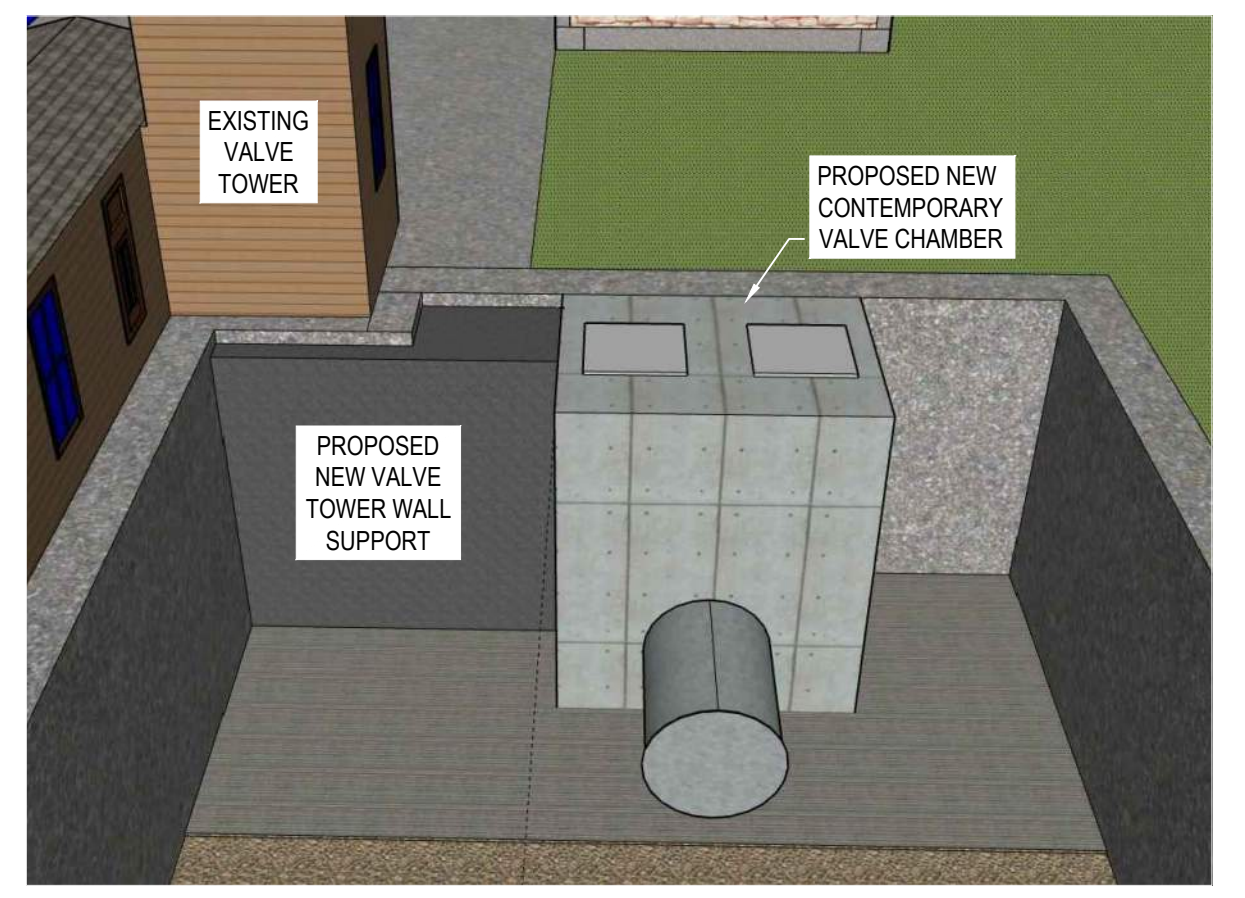
9 REFERENCE PHOTO  
C2.0 SCALE: NTS



10 REFERENCE PHOTO  
C2.0 SCALE: NTS



11 REFERENCE PHOTO  
C2.0 SCALE: NTS



12 REFERENCE DRAWING  
C4.0 SCALE: NTS



13 REFERENCE PHOTO  
C2.0 SCALE: NTS



14 REFERENCE PHOTO  
C2.0 SCALE: NTS

DRAWING	LOCATION	COMMENT
REFERENCE PHOTO 1	LOOKING SOUTHEAST AT POWERHOUSE DURING CONSTRUCTION CIRCA 1890	PRIOR TO VALVE CHAMBER CONSTRUCTION
REFERENCE PHOTO 2	LOOKING EAST AT POWERHOUSE AND HISTORICAL VALVES/PENSTOCK	PRIOR TO PENSTOCK CONCRETE RESERVOIR CONSTRUCTION- SHOWS CONSTRUCTION OF SOUTH WALL OF VALVE CHAMBER.
REFERENCE PHOTO 3	LOOKING EAST AT CONCRETE HOLLOW CORE ROOF PANELS COVERING PENSTOCK CONCRETE RESERVOIR	TO BE REMOVED AND DISPOSED OFF SITE
REFERENCE PHOTO 4	LOOKING SOUTHEAST AT PENSTOCK CONCRETE RESERVOIR ACCESS HATCH WITH WOOD COVER	POST VALVE CHAMBER CONSTRUCTION
REFERENCE PHOTO 5	LOOKING UP AT PENSTOCK CONCRETE RESERVOIR ACCESS HATCH AND STEEL GRADING FROM WITHIN THE PENSTOCK CONCRETE RESERVOIR	TO BE REMOVED AND DISPOSED OFF SITE
REFERENCE PHOTO 6	WITHIN PENSTOCK CONCRETE RESERVOIR LOOKING SOUTHEAST AT OUTLET CONCRETE FLUMES AND SUPPORT COLUMNS	REFER TO LIMITS OF EXCAVATION ON DRAWING C3.0
REFERENCE PHOTO 7	WITHIN PENSTOCK CONCRETE RESERVOIR LOOKING EAST AT CONCRETE OUTLET FLUMES	REFER TO LIMITS OF EXCAVATION ON DRAWING C3.0
REFERENCE PHOTO 8	WITHIN PENSTOCK CONCRETE RESERVOIR LOOKING SOUTHWEST AT CONCRETE INLET FLUMES AND EXISTING CONCRETE HOLLOW CORE ROOF PANELS	REFER TO LIMITS OF EXCAVATION ON DRAWING C3.0 REMOVALS TO BE DISPOSED OFF SITE
REFERENCE PHOTO 9	WITHIN PENSTOCK CONCRETE RESERVOIR LOOKING EAST INTO THE SOUTHEAST CORNER AT THE SMALL CONCRETE CHAMBER	TO BE REMOVED AND DISPOSED OFF SITE
REFERENCE PHOTO 10	LOOKING SOUTHEAST AT POWERHOUSE WALL AND EXISTING VALVE CHAMBER EXPOSED	CONTRACTOR TO ASSUME SANDSTONE BLOCK TO EXTENT DOWNWARD AND SPAN THE LENGTH OF POWERHOUSE WEST WALL
REFERENCE PHOTO 11	LOOKING SOUTHWEST AT THE EXISTING VALVE CHAMBER PRE-CONSTRUCTION OF NEW STORM MANHOLES (2) INSTALLED DECEMBER 2020 FOR PASSIVE WATER MANAGEMENT SYSTEM	SANITARY LINE IN PHOTO HAS BEEN CONNECTED TO DOWNSTREAM SANITARY MAN HOLE AS PART OF A PREVIOUS CONTRACT (PART A), THE SANITARY LINE LEADING INTO THE POWERHOUSE IS NOW ABANDONED AND CAN BE DELETED.
REFERENCE PHOTO 12	LOOKING EAST AT PROPOSED VALVE TOWER KEYED SUPPORT WALL AND CAST-IN-PLACE CONTEMPORARY VALVE CHAMBER	CONCEPTUAL CAD RENDERING OF PROPOSED KEYED WALL TO ASSIST IN MOTOR HOUSE WALL STABILIZATION.
REFERENCE PHOTO 13	LOOKING WEST AT CANALMAN'S SHELTER	VISIBLE GRADE DROP AT EDGE OF EXISTING SIDEWALK AND SOD
REFERENCE PHOTO 14	LOOKING NORTHWEST AT GRAVEL ACCESS PATH TO SITE	REFER TO DRAWING 4.0 FOR PROPOSED NEW SIDEWALK AND SOD WORK

No.	Date	Description	Drawn by / Dessiné par	Approved / Approuvé
4	16JULY21	ISSUED FOR TENDER	M.CARBONE	D.SPACEK
3	25APR21	99% REVIEW	M.CARBONE	D.SPACEK
2	18MAR21	90% REVIEW	M.CARBONE	D.SPACEK
1	26JUNE20	75% REVIEW	M.CARBONE	D.SPACEK
0	21APR20	66% REVIEW	M.CARBONE	D.SPACEK

Revision / Révision	
A	Detail number / Numéro de détail
B	Sheet number / Numéro de la feuille
Linear dimensions in millimetres / Dimensions linéaires en millimètres	

Consultant's Name / Nom de l'expert-conseil: **wsp**

Eng. Stamp / Sceau de l'ingénieur: **D. M. SPACEK**, July 16, 2021

1348 ROSEMOUNT AVENUE, CORNWALL, ONTARIO CANADA, K6J 3E5  
TEL: 613-933-9821 | FAX: 705-638-4035 | WWW.WSP.COM  
WSP-SP201-15-001-001 (WSP# 15100185-14)

Project title / Titre du projet: **511SSM POWERHOUSE STRUCTURAL STABILIZATION PROJECT**

Drawing title / Titre du dessin: **REFERENCE PHOTOS AND DRAWING 1 OF 2**

Designed by / Concept par: <b>J.DICERBO / D.SPACEK</b>	Date: <b>MAY 25, 2021</b>
Drawn by / Dessiné par: <b>M.CARBONE</b>	Date: <b>MAY 25, 2021</b>
Checked by / Vérifié par: <b>J.DICERBO</b>	Date: <b>MAY 25, 2021</b>
Approved by / Approuvé par: <b>D.SPACEK</b>	Date: <b>MAY 25, 2021</b>
Project No. / N° du projet: <b>511SSM</b>	Scale / Echelle: <b>VARIABLE</b>
Drawing Set No. / N° de série du dessin: <b>-</b>	Sheet No. / N° de la feuille: <b>C1.2</b>



KEY PLAN:



SAULL STE. MARIE, ONTARIO

NOTE: PHOTO ARE FOR REFERENCE ONLY. ACTUAL CONDITIONS MAY VARY.



13 REFERENCE PHOTO  
C2.0 SCALE: NTS



14 REFERENCE PHOTO  
C2.0 SCALE: NTS



15 REFERENCE PHOTO  
C2.0 SCALE: NTS



16 REFERENCE PHOTO  
C2.0 SCALE: NTS



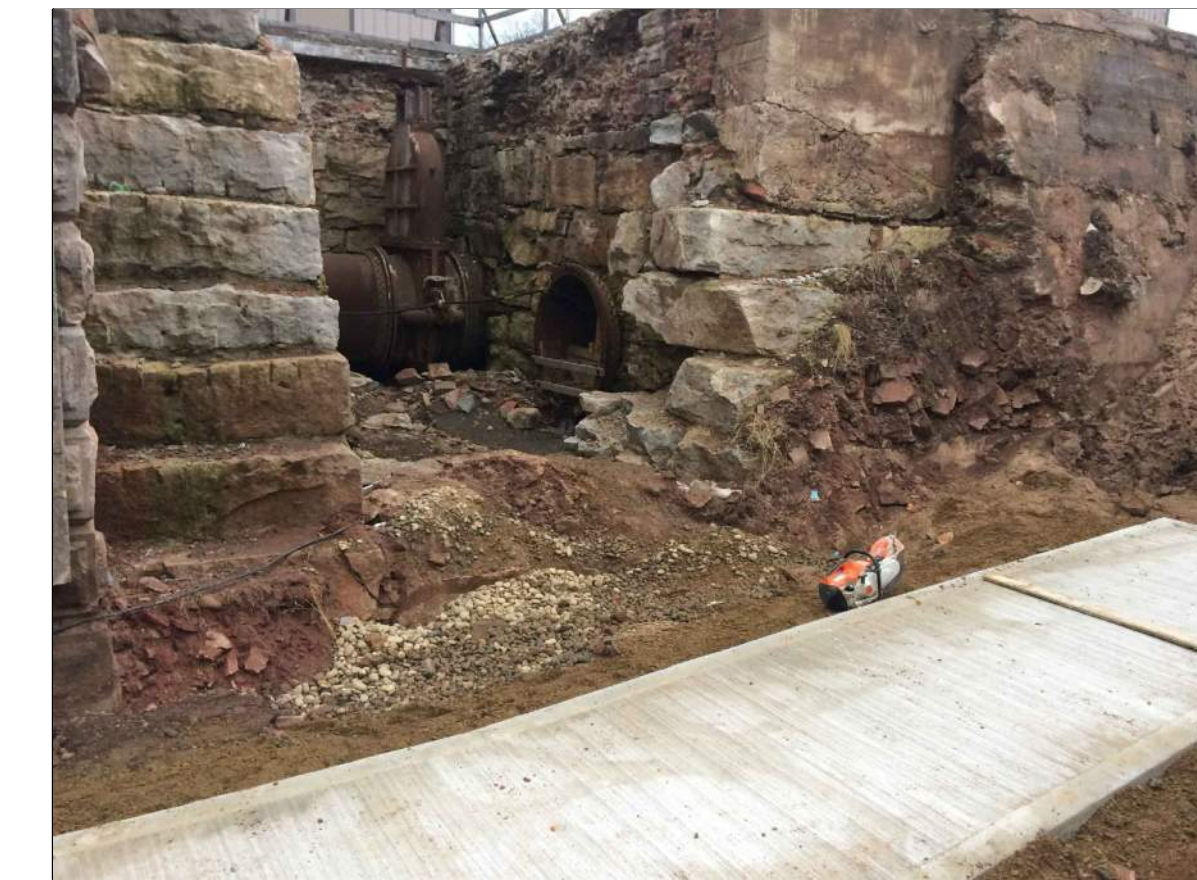
17 REFERENCE PHOTO  
C2.0 SCALE: NTS



18 REFERENCE PHOTO  
C2.0 SCALE: NTS



19 REFERENCE PHOTO  
C2.0 SCALE: NTS



20 REFERENCE PHOTO  
C2.0 SCALE: NTS



21 REFERENCE PHOTO  
C2.0 SCALE: NTS



22 REFERENCE PHOTO  
C2.0 SCALE: NTS



23 REFERENCE PHOTO  
C2.0 SCALE: NTS



24 REFERENCE DRAWING  
C2.0 SCALE: NTS

DRAWING	LOCATION	COMMENT
REFERENCE PHOTO 13	LOOKING SOUTHEAST AT POWERHOUSE PRIOR TO INSTALLATION OF MANHOLES FOR PASSIVE WATER MANAGEMENT (2020)	SANDSTONE BLOCK ENCOUNTERED IN FLOOR AREA OF EXISTING VALVE CHAMBER CONTRACTOR TO ASSUME SANDSTONE BLOCK TO BE CONTINUOUS THROUGHOUT EXISTING VALVE CHAMBER FLOOR.
REFERENCE PHOTO 14	LOOKING SOUTHEAST AT POWERHOUSE AFTER INSTALLATION OF SEDIMENTATION MANHOLE (1 OF 2) FOR PASSIVE WATER MANAGEMENT (2020)	SANDSTONE BLOCK ENCOUNTERED IN FLOOR AREA OF EXISTING VALVE CHAMBER APPEARS TO EXTEND TO THE BASE OF THE NEW MAN HOLE.
REFERENCE PHOTO 15	LOOKING SOUTHEAST AT POWERHOUSE AFTER INSTALLATION OF SEDIMENTATION MANHOLES FOR PASSIVE WATER MANAGEMENT AND NEW SANITARY LINE FROM PREVIOUS CONTRACT (2020)	PRECAST MAN HOLE BASE PREDRILLED TO ACCEPT BIG 'O' PASSIVE WATER PIPING SYSTEM.
REFERENCE PHOTO 16	LOOKING SOUTHWEST AT POWERHOUSE/PENSTOCK CONCRETE RESERVOIR AFTER INSTALLATION OF SECOND MAN HOLE TIED INTO POWERHOUSE	HEAVY EQUIPMENT TRAFFIC SHOULD BE MINIMIZED TO AVOID DISRUPTION PIPING, 3/4" PLY SHOULD BE LAID DOWN TO AVOID MOVEMENT FROM ROTATION OF TRACKED EQUIPMENT.
REFERENCE PHOTO 17	LOOKING WEST AT EXCAVATED AREA BETWEEN THE PENSTOCK CONCRETE RESERVOIR NORTH WALL AND PUBLIC WASHROOM FACILITY.	NOTE SHOULD BE TAKEN TO LOCATION AND MINIMAL COVERAGE OF THE NEW SANITARY PIPE SHOWN (2020), A CONCRETE SIDEWALK HAS BEEN PLACED DIRECT ON TOP OF 4" RIDGID INSULATION RESTING ON SANITARY PIPE.
REFERENCE PHOTO 18	LOOKING SOUTHWEST AT THE POWERHOUSE/PENSTOCK CONCRETE RESERVOIR DURING INSTALLATION OF PASSIVE WATER MANAGEMENT SYSTEM MAN HOLES.	REFER TO LIMITS OF EXCAVATION ON DRAWING C4.0 PLAN VIEW FOR LOCATION
REFERENCE PHOTO 19	LOOKING EAST AT NEW CONCRETE SIDEWALK BETWEEN POWERHOUSE AND STORES BUILDING COVERING NEW SANITARY PIPE (2020)	REFER TO EXISTING CONDITIONS ON DRAWING C2.0
REFERENCE PHOTO 20	LOOKING SOUTHWEST AT THE EXISTING CONDITIONS OF VALVE CHAMBER AFTER THE INSTALLATION OF THE TWO MAN HOLES FOR THE PASSIVE WATER MANAGEMENT SYSTEM (2020)	REFER TO EXISTING CONDITIONS ON DRAWING C2.0
REFERENCE PHOTO 21	LOOKING SOUTHWEST AT NATIVE SOIL BACKFILL COVERED WITH GEOTEXTILE FROM RECENT GROUND WORK AND INSTALLATION OF NEW SANITARY LINE BETWEEN EXISTING PENSTOCK CONCRETE RESERVOIR AND PUBLIC WASHROOM FACILITY.	NATIVE FILL COVERED WITH GEOTEXTILE PRIOR TO RIPRAP TOPCOAT.
REFERENCE PHOTO 22	LOOKING DOWN IN A SOUTHWESTERLY DIRECTION FROM TOP OF RECENT GROUND WORK LOOKING AT EXPOSED PORTION OF THE PENSTOCK CONCRETE RESERVOIR NORTH WALL TO BE REMOVED.	REFER TO C4.0 FOR LIMITS OF PENSTOCK CONCRETE RESERVOIR NORTH WALL TO BE REMOVED.
REFERENCE PHOTO 23	LOOKING WEST AT GEOTEXTILE FROM RECENT GROUND WORK AND INSTALLATION OF NEW SANITARY LINE BETWEEN EXISTING PENSTOCK CONCRETE RESERVOIR AND PUBLIC WASHROOM FACILITY PRIOR TO RIPRAP TOP COAT.	RIPRAP WILL NEED TO BE REMOVED AND STORE FOR REPURPOSE TO ACCESS NORTH PORTION OF PENSTOCK CONCRETE RESERVOIR WALL TO BE REMOVED. REFER TO C4.0 FOR LIMITS OF PENSTOCK CONCRETE RESERVOIR NORTH WALL TO BE REMOVED.
REFERENCE PHOTO 24	LOOKING SOUTHWEST AT EXISTING CONDITIONS AT THE COMPLETION OF CONSTRUCTION (2020)	REFER TO EXISTING CONDITIONS ON DRAWING C2.0

No.	Date	Description	Drawn by / Dessiné par	Approved / Approuvé
4	16JULY21	ISSUED FOR TENDER	M.CARBONE	D.SPACEK
3	25APR21	99% REVIEW	M.CARBONE	D.SPACEK
2	18MAR21	90% REVIEW	M.CARBONE	D.SPACEK
1	26JUNE20	75% REVIEW	M.CARBONE	D.SPACEK
0	21APR20	66% REVIEW	M.CARBONE	D.SPACEK

Revision / Révision

A	Detail number	A Numéro de détail
B	Sheet number	B Numéro de la feuille

Linear dimensions in millimetres / Dimensions linéaires en millimètres

Consultant's Name / Nom de l'expert-conseil: **wsp**

Eng. Stamp / Sceau de l'ingénieur: **D. M. SPACEK**, July 16, 2021

1348 ROSERACOUNT AVENUE, CORNWALL, ONTARIO CANADA, K6J 3E5  
TEL: 613-933-9802 | FAX: 705-638-0335 | WWW.WSP.COM  
WSP-SP201-15-001-001 (WSP# 15100185-14)

Project title / Titre du projet

511SSM  
POWERHOUSE STRUCTURAL STABILIZATION PROJECT

Drawing title / Titre du dessin

REFERENCE PHOTOS AND DRAWING  
2 OF 2

Designed by / Conçeut par: J.DICERBO / D.SPACEK

Date: MAY 25, 2021

Drawn by / Dessiné par: M.CARBONE

Date: MAY 25, 2021

Checked by / Vérifié par: J.DICERBO

Date: MAY 25, 2021

Approved by / Approuvé par: D.SPACEK

Date: MAY 25, 2021

Project No. / N° du projet: 511SSM

Scale / Echelle: VARIES

Sheet No. / N° de la feuille: C1.3

Drawing Set No. / N° de série du dessin: -

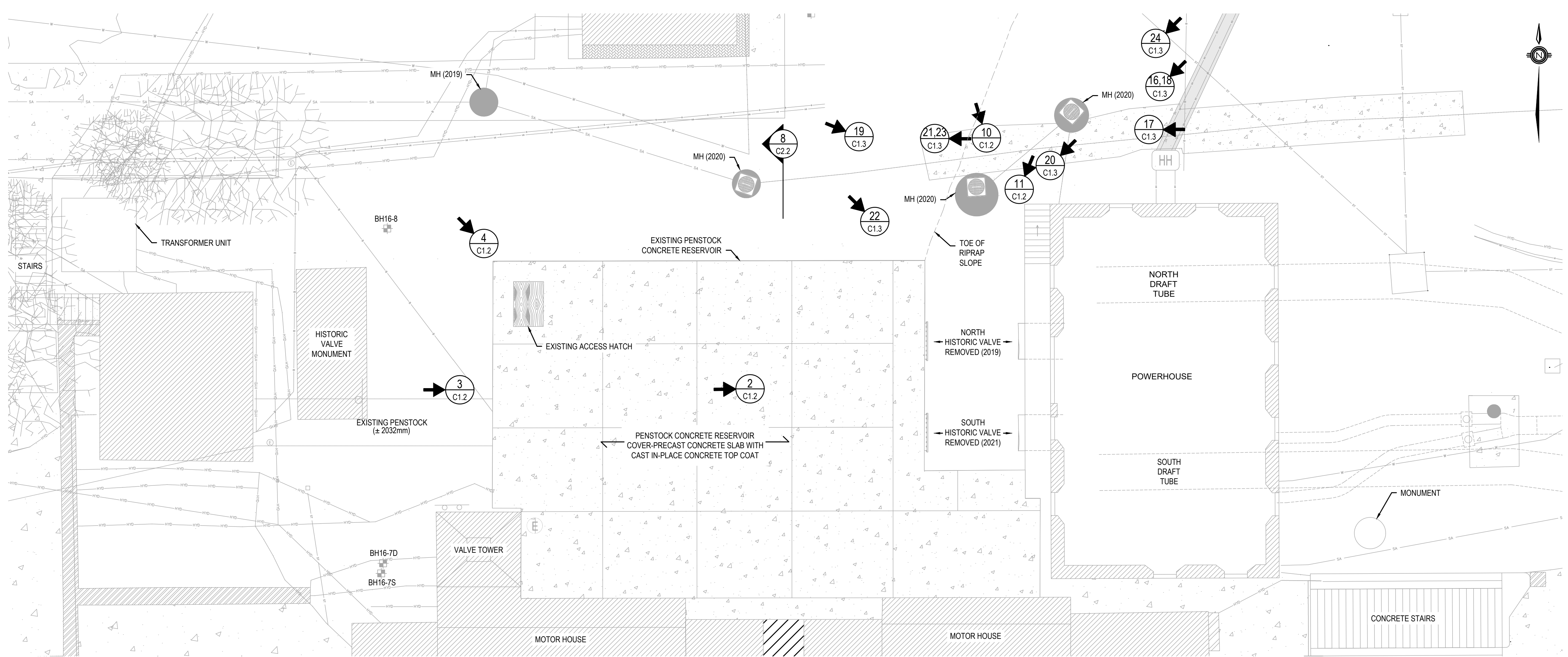
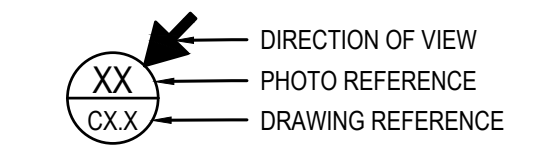


KEY PLAN:

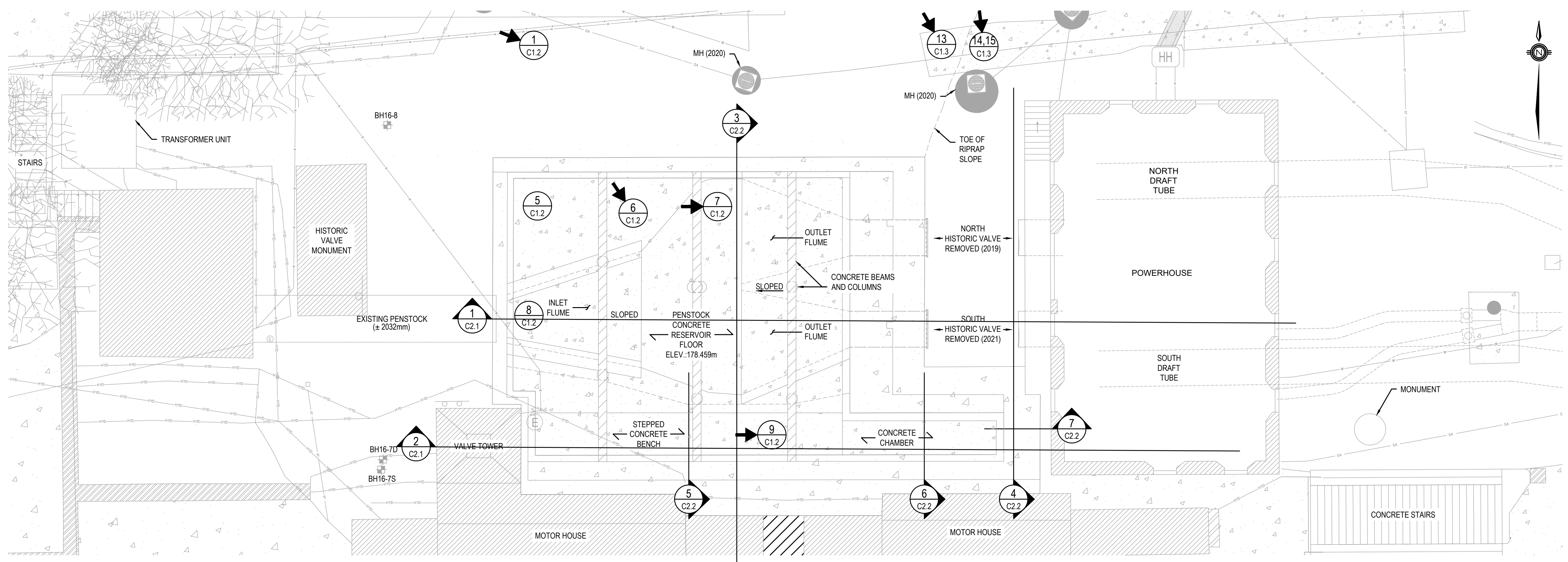


SAULT STE. MARIE, ONTARIO

PHOTO REFERENCE



EXISTING PENSTOCK CONCRETE RESERVOIR COVER PLAN VIEW  
SCALE: 1:100



EXISTING PENSTOCK CONCRETE RESERVOIR INTERIOR PLAN VIEW  
SCALE: 1:100

No.	Date	Description	Drawn by / Dessiné par	Approved / Approuvé
4	16JULY21	ISSUED FOR TENDER	M.CARBONE	D.SPACEK
3	25APR21	99% REVIEW	M.CARBONE	D.SPACEK
2	18MAR21	90% REVIEW	M.CARBONE	D.SPACEK
1	26JUNE20	75% REVIEW	M.CARBONE	D.SPACEK
0	21APR20	66% REVIEW	M.CARBONE	D.SPACEK

Revision / Révision	
A	Detail number / Numéro de détail
B	Sheet number / Numéro de la feuille

Linear dimensions in millimetres / Dimensions linéaires en millimètres

Consultant's Name / Nom de l'expert-conseil: **wsp**

Eng. Stamp / Sceau de l'ingénieur: [Professional Engineer Seal]

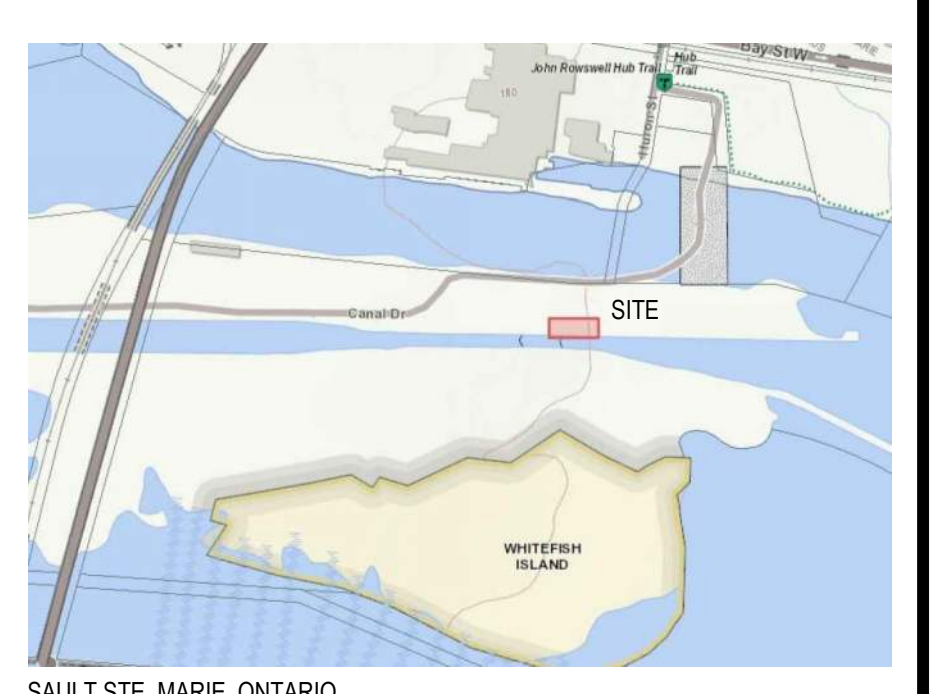
Project title / Titre du projet: **511SSM POWERHOUSE STRUCTURAL STABILIZATION PROJECT**

Drawing title / Titre du dessin: **EXISTING PENSTOCK CONCRETE RESERVOIR COVER AND INTERIOR PLAN VIEW**

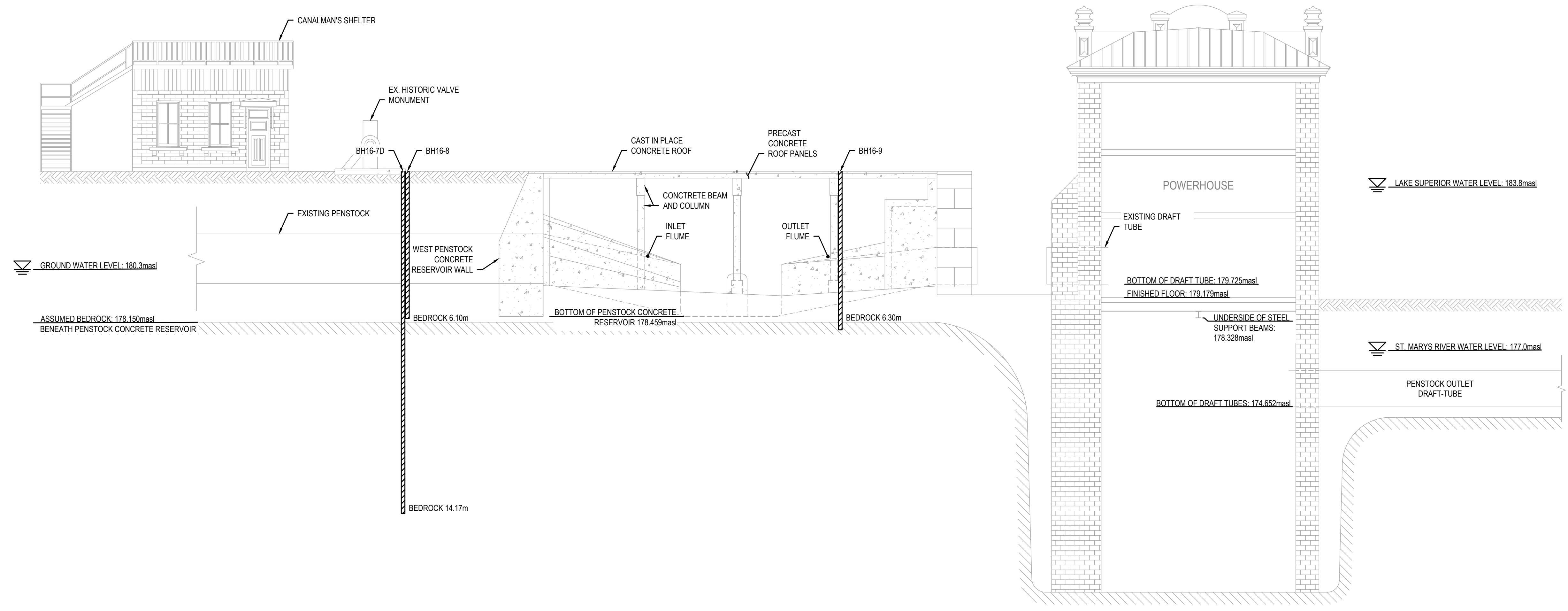
Designed by / Conçeut par: J.DICERBO / D.SPACEK	Date: MAY 25, 2021
Drawn by / Dessiné par: M.CARBONE	Date: MAY 25, 2021
Checked by / Vérifié par: J.DICERBO	Date: MAY 25, 2021
Approved by / Approuvé par: D.SPACEK	Date: MAY 25, 2021
Project No. / N° du projet: 511SSM	Scale / Echelle: 1:100
Drawing Set No. / N° de série du dessin: -	Sheet No. / N° de la feuille: C2.0



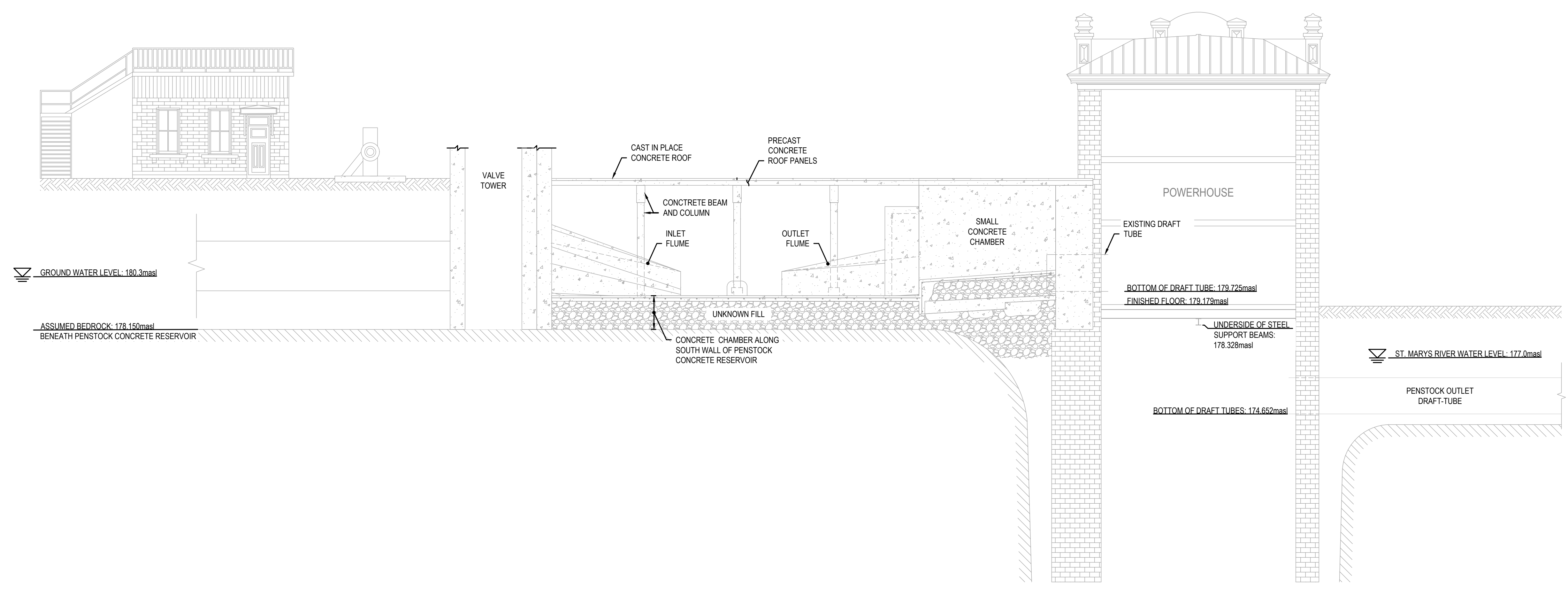
KEY PLAN:



SAULT STE. MARIE, ONTARIO



1 EXISTING PENSTOCK CONCRETE RESERVOIR SECTION  
SCALE: 1:100



2 EXISTING PENSTOCK CONCRETE RESERVOIR SECTION  
SCALE: 1:100

No.	Date	Description	Drawn by / Dessiné par	Approved / Approuvé
4	16JULY21	ISSUED FOR TENDER	M.CARBONE	D.SPACEK
3	25APR21	99% REVIEW	M.CARBONE	D.SPACEK
2	18MAR21	90% REVIEW	M.CARBONE	D.SPACEK
1	26JUNE20	75% REVIEW	M.CARBONE	D.SPACEK
0	21APR20	66% REVIEW	M.CARBONE	D.SPACEK

Revision / Révision	
A	Detail number / Numéro de détail
B	Sheet number / Numéro de la feuille

Linear dimensions / Dimensions linéaires in millimetres / en millimètres
--

Consultant's Name / Nom de l'expert-consultant: **wsp**

Eng. Stamp / Sceau de l'ingénieur:

Project Title / Titre du projet: **511SSM POWERHOUSE STRUCTURAL STABILIZATION PROJECT**

Drawing Title / Titre du dessin: **EXISTING PENSTOCK CONCRETE RESERVOIR AND VALVE CHAMBER CROSS-SECTIONS**

Designed by / Conçue par: J.DICERBO / D.SPACEK	Date: MAY 25, 2021
Drawn by / Dessiné par: M.CARBONE	Date: MAY 25, 2021
Checked by / Vérifié par: J.DICERBO	Date: MAY 25, 2021
Approved by / Approuvé par: D.SPACEK	Date: MAY 25, 2021

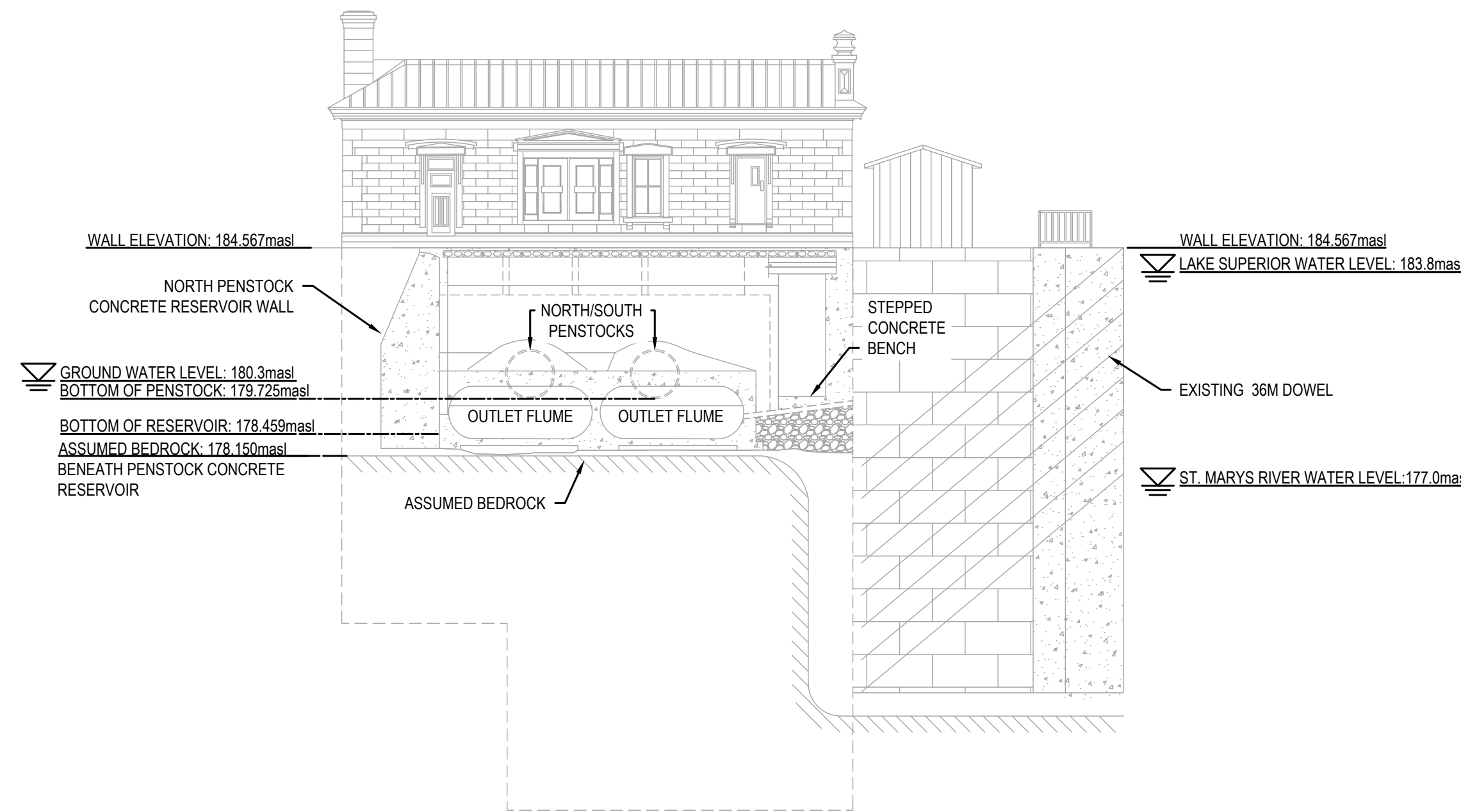
Project No. / N° du projet: 511SSM	Scale / Échelle: AS NOTED	Sheet No. / N° de la feuille: C2.1
Drawing Set No. / N° de série du dessin: -		



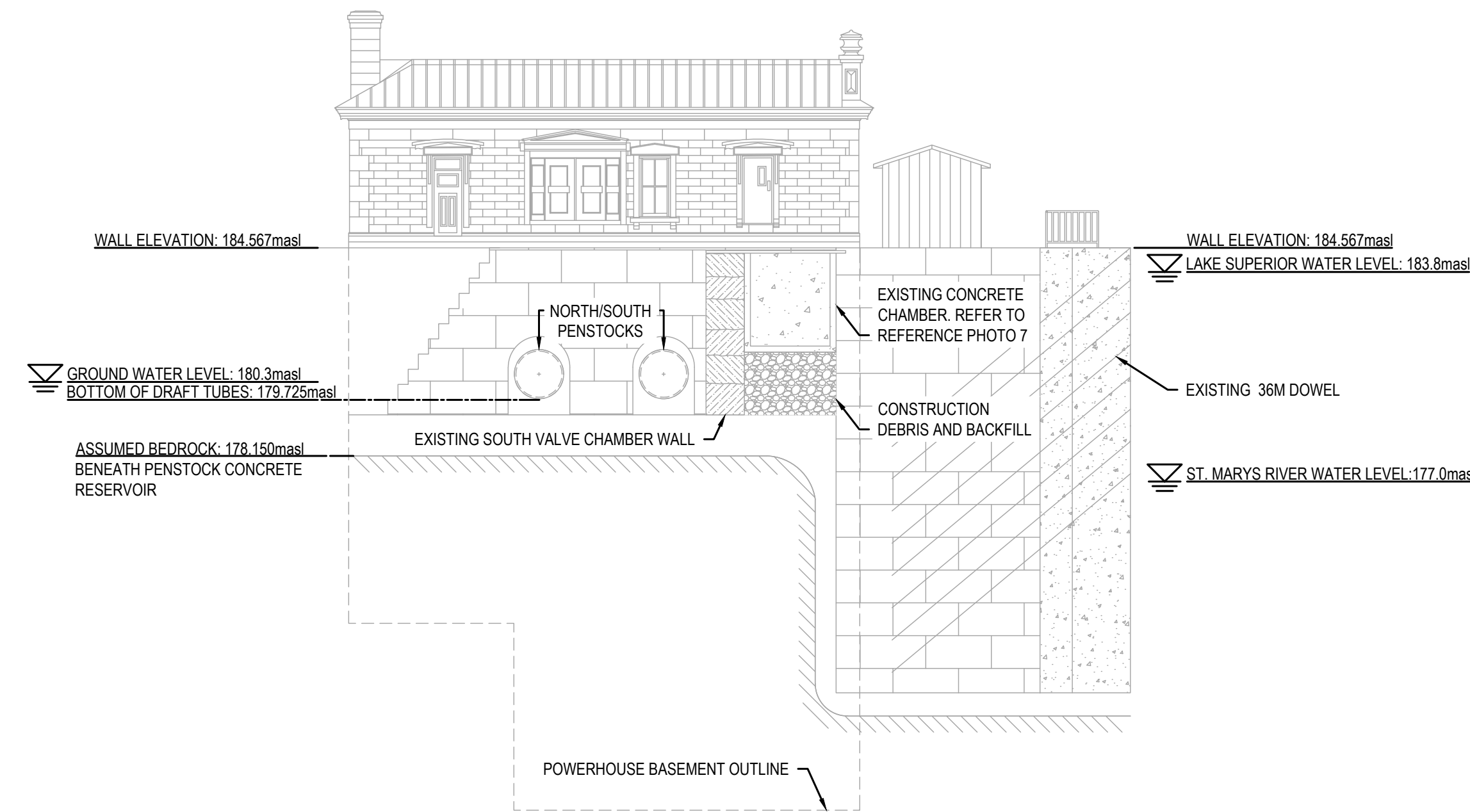
KEY PLAN:



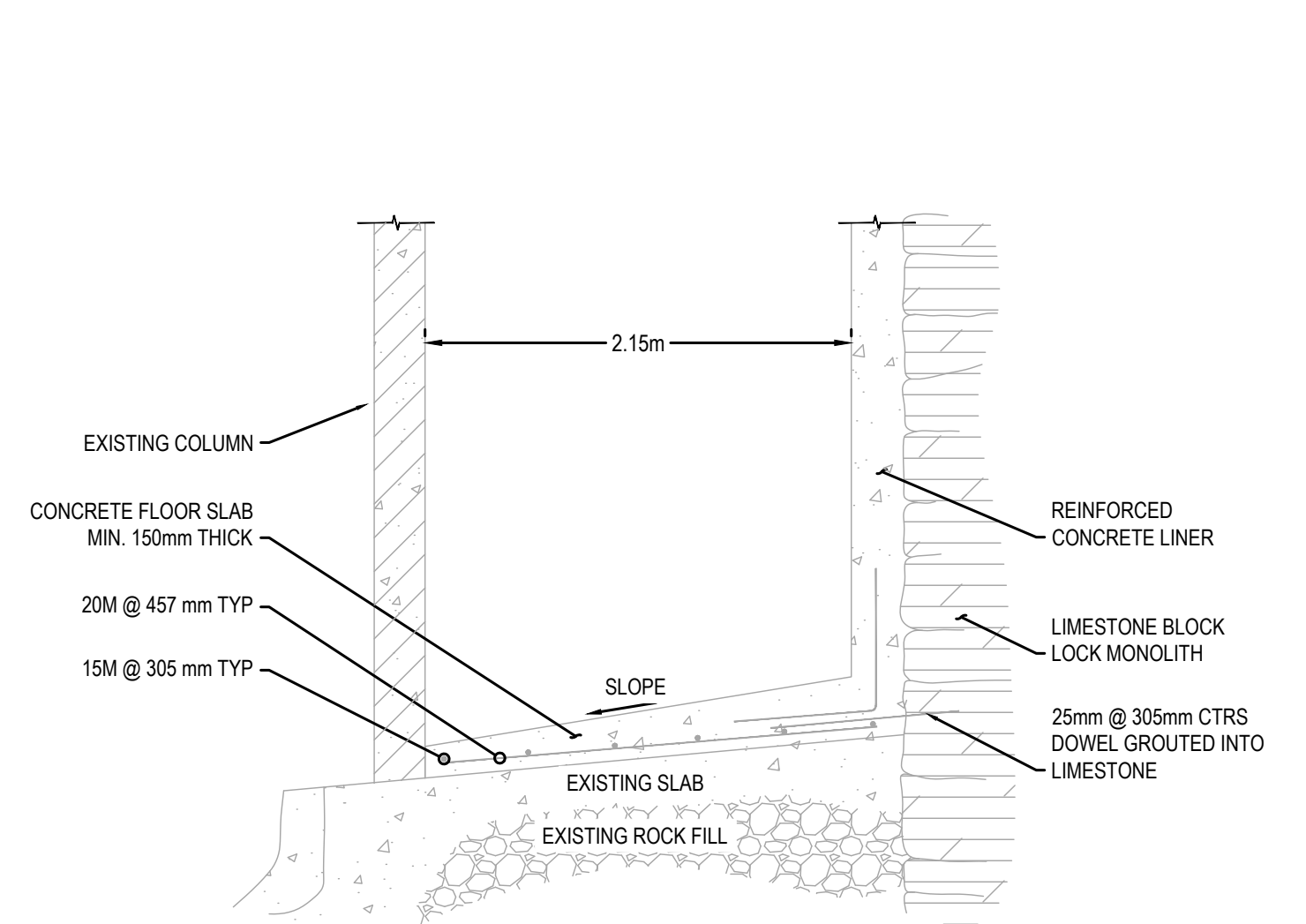
SAULT STE. MARIE, ONTARIO



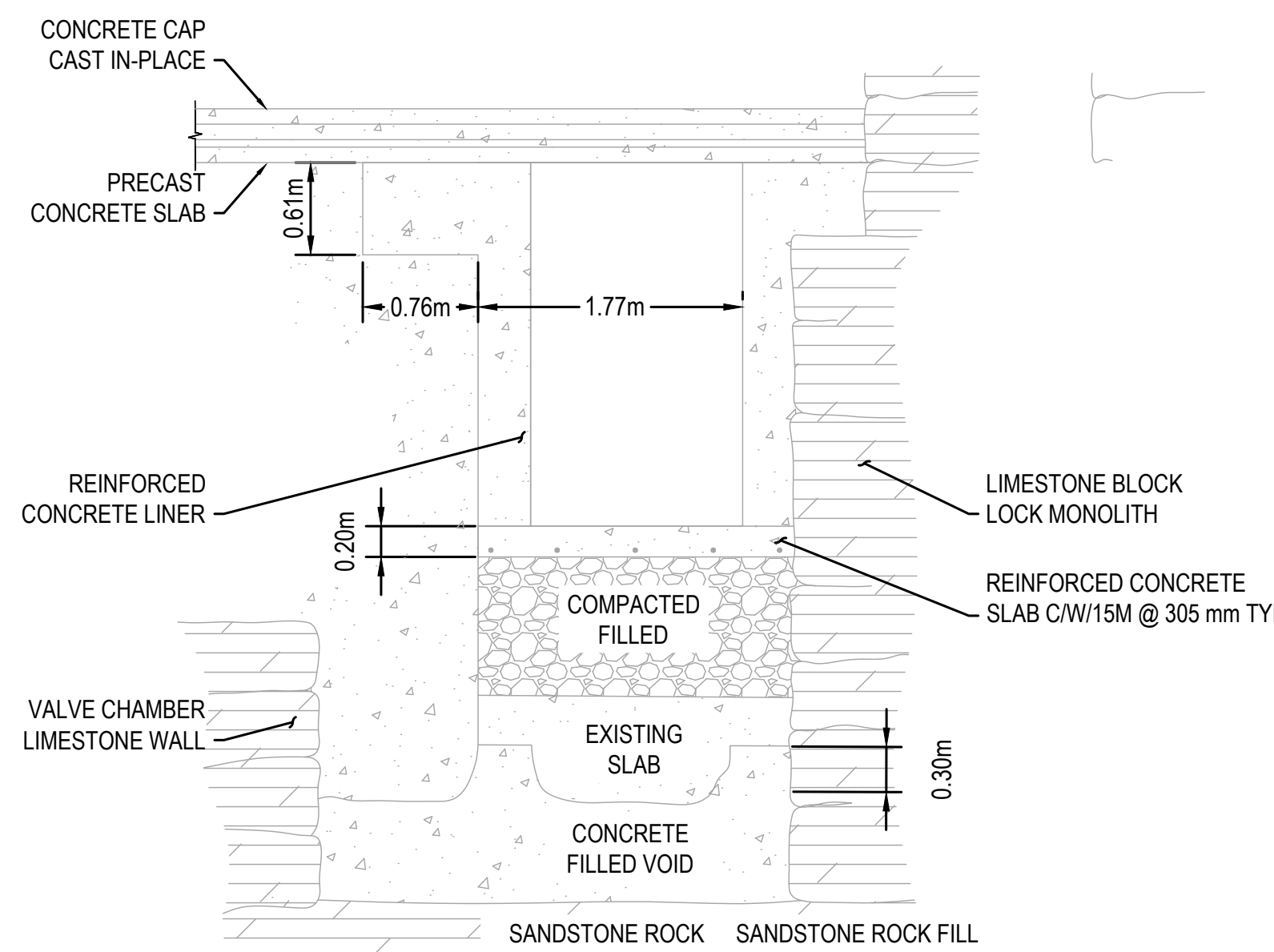
3 EXISTING PENSTOCK CONCRETE RESERVOIR SECTION  
SCALE: 1:150



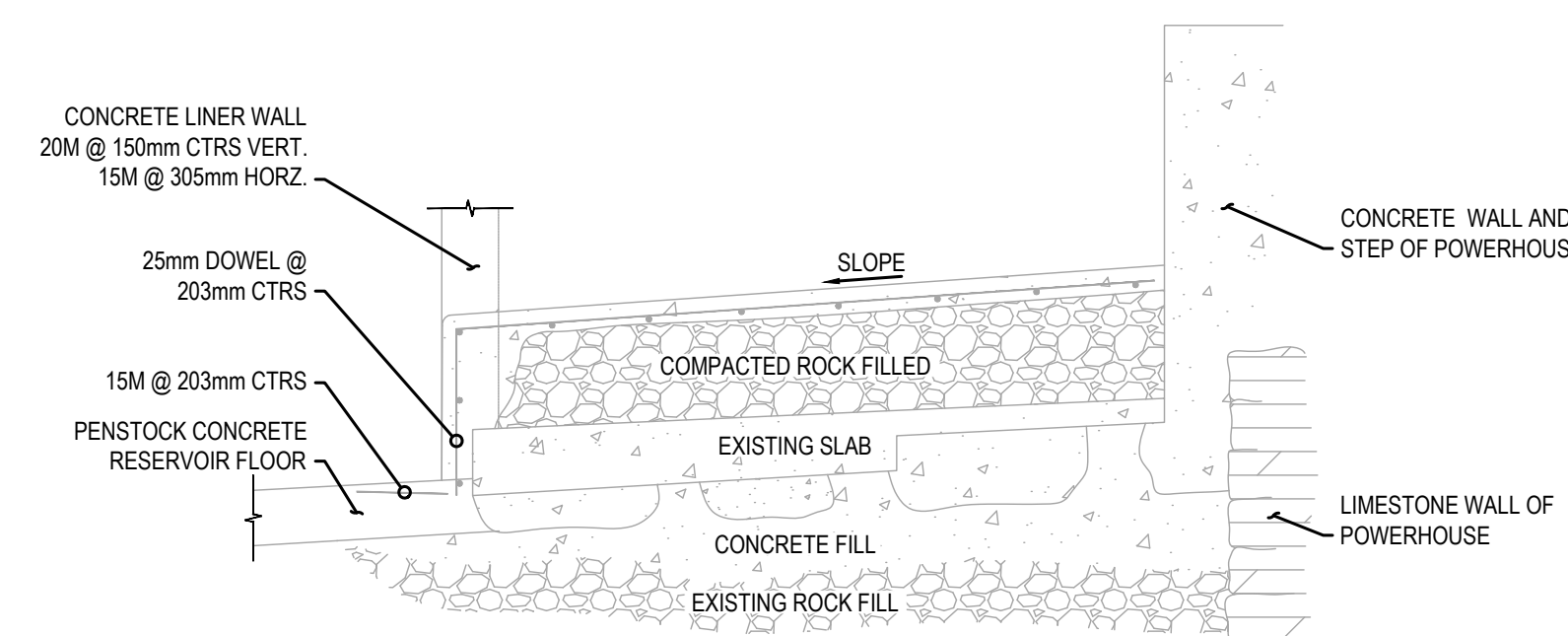
4 EXISTING PENSTOCK CONCRETE RESERVOIR SECTION  
SCALE: 1:150



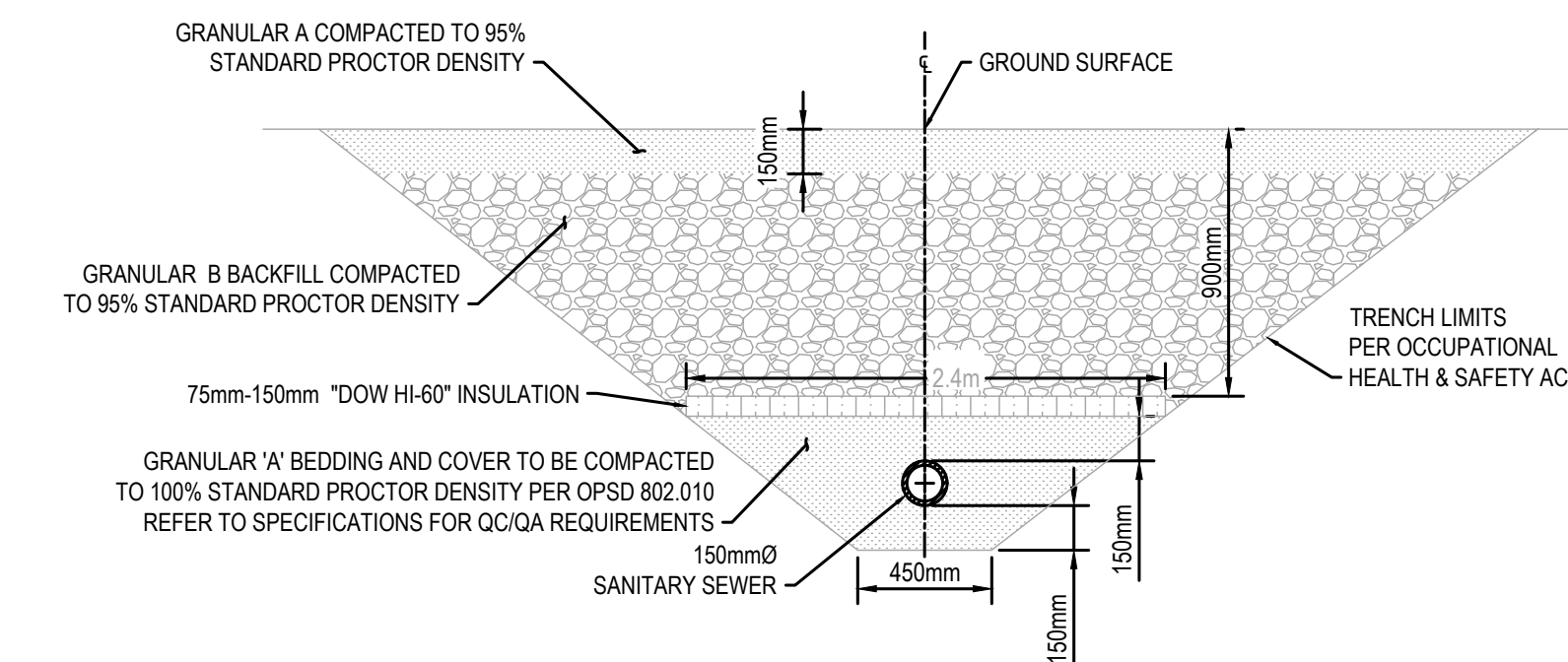
5 EXISTING PENSTOCK CONCRETE RESERVOIR SOUTH WALL SECTION  
SCALE: 1:40



6 EXISTING PENSTOCK CONCRETE RESERVOIR SOUTH WALL SECTION  
SCALE: 1:40



7 EXISTING PENSTOCK CONCRETE RESERVOIR EAST WALL SECTION  
SCALE: 1:40



8 EXISTING SANITARY TRENCH DETAIL BY OTHERS (2020)  
SCALE: 1:25

No.	Date	Description	Drawn by Dessiné par	Approved Approuvé
4	16JULY21	ISSUED FOR TENDER	M.CARBONE	D.SPACEK
3	25APR21	99% REVIEW	M.CARBONE	D.SPACEK
2	18MAR21	90% REVIEW	M.CARBONE	D.SPACEK
1	26JUNE20	75% REVIEW	M.CARBONE	D.SPACEK
0	21APR20	66% REVIEW	M.CARBONE	D.SPACEK

Revision / Révision	
A	Detail number / Numéro de détail
B	Sheet number / Numéro de la feuille

Consultant's Name / Nom de l'expert-conseil: **wsp**

Eng. Stamp / Sceau de l'ingénieur: **D. M. SPACEK**, July 16, 2021

1348 ROSEMOUNT AVENUE, CORNWALL, ONTARIO CANADA, K6G 3E5  
TEL: 613-933-9602 | FAX: 705-638-4335 | WWW.WSP.COM  
WSP-SP201-15-001-001 (WSP# 151-00185-14)

Project title / Titre du projet: **511SSM POWERHOUSE STRUCTURAL STABILIZATION PROJECT**

Drawing title / Titre du dessin: **EXISTING PENSTOCK CONCRETE RESERVOIR AND VALVE CHAMBER CROSS-SECTIONS**

Designed by / Conçue par: J.DICERBO / D.SPACEK	Date: MAY 25, 2021
Drawn by / Dessiné par: M.CARBONE	Date: MAY 25, 2021
Checked by / Vérifié par: J.DICERBO	Date: MAY 25, 2021
Approved by / Approuvé par: D.SPACEK	Date: MAY 25, 2021
Project No. / N° du projet: 511SSM	Scale / Échelle: AS NOTED
Drawing Set No. / N° de série du dessin: C2.2	



KEY PLAN:



SAULL STE. MARIE, ONTARIO

- NOTES:
- 1) CONTRACTOR SHALL PROACTIVELY PROTECT EXISTING AND RECENT TRENCH WORKS SO AS TO PREVENT ANY AND ALL POTENTIAL FOR DAMAGE.
  - 2) CO-ORDINATE AND CARRY OUT ALL REQUIRED UTILITY LOCATES BEFORE ANY WORK.
  - 3) WORK WITH WSP AND PCA TO ENSURE AS MUCH INFORMATION IS FOUND IN THE FIELD IN ACTUAL LOCATES.
  - 4) EVACUATE USING HYDROVAC TO EXPOSE ALL EXISTING UTILITIES IN THE AREA OF WORK.
  - 5) PROVIDE EXISTING UTILITIES AND STRUCTURES THE REQUIRED SUPPORT TO ENSURE SAFE WORKING CONDITIONS DURING EXCAVATION.
  - 6) NOT CAUSE ANY DAMAGE TO EXISTING UTILITIES AND STRUCTURES. MAKE GOOD ALL DAMAGES INFLICTED ON EXISTING UTILITIES AND STRUCTURES.
  - 7)

\*\* CONTRACTOR TO ASSUME SANDSTONE BLOCK EXTENDS THE ENTIRE LENGTH OF WEST POWERHOUSE WALL AND TAKE INTO CONSIDERATION STEPS NECESSARY TO ISOLATE POWERHOUSE FROM DEMOLITION/EXCAVATION WORKS OF EXISTING VALVE CHAMBER/PENSTOCK CONCRETE RESERVOIR WALLS AND FLOOR.

\*\*\*EXCAVATE DESIGNATED AREA TO A MIN. ELEVATION OF 179.00 masl WITH THE EXCEPTION OF THE HYDRO GENERATION CAST-IN-PLACE CONCRETE FOUNDATION WHICH MUST REST ON BEDROCK.

No.	Date	Description	Drawn by / Dessiné par	Approved / Approuvé
4	16JULY21	ISSUED FOR TENDER	M.CARBONE	D.SPACEK
3	25APR21	99% REVIEW	M.CARBONE	D.SPACEK
2	18MAR21	90% REVIEW	M.CARBONE	D.SPACEK
1	26JUNE20	75% REVIEW	M.CARBONE	D.SPACEK
0	21APR20	66% REVIEW	M.CARBONE	D.SPACEK

Revision / Revision

A	B	Detail number / Numéro de détail	A / B

Linear dimensions in millimetres / Dimensions linéaires en millimètres

Consultant's Name / Nom de l'expert-conseil: **wsp**

Eng. Stamp / Sceau de l'ingénieur: **D. M. SPACEK**, July 16, 2021

1348 ROSEROUNT AVENUE, CORNWALL, ONTARIO CANADA, K6J 3E5  
TEL: 613-933-9821 | FAX: 705-638-4335 | WWW.WSP.COM  
WSP-SP201-15-001-001 (WSP# 151-00185-14)

Project title / Titre du projet

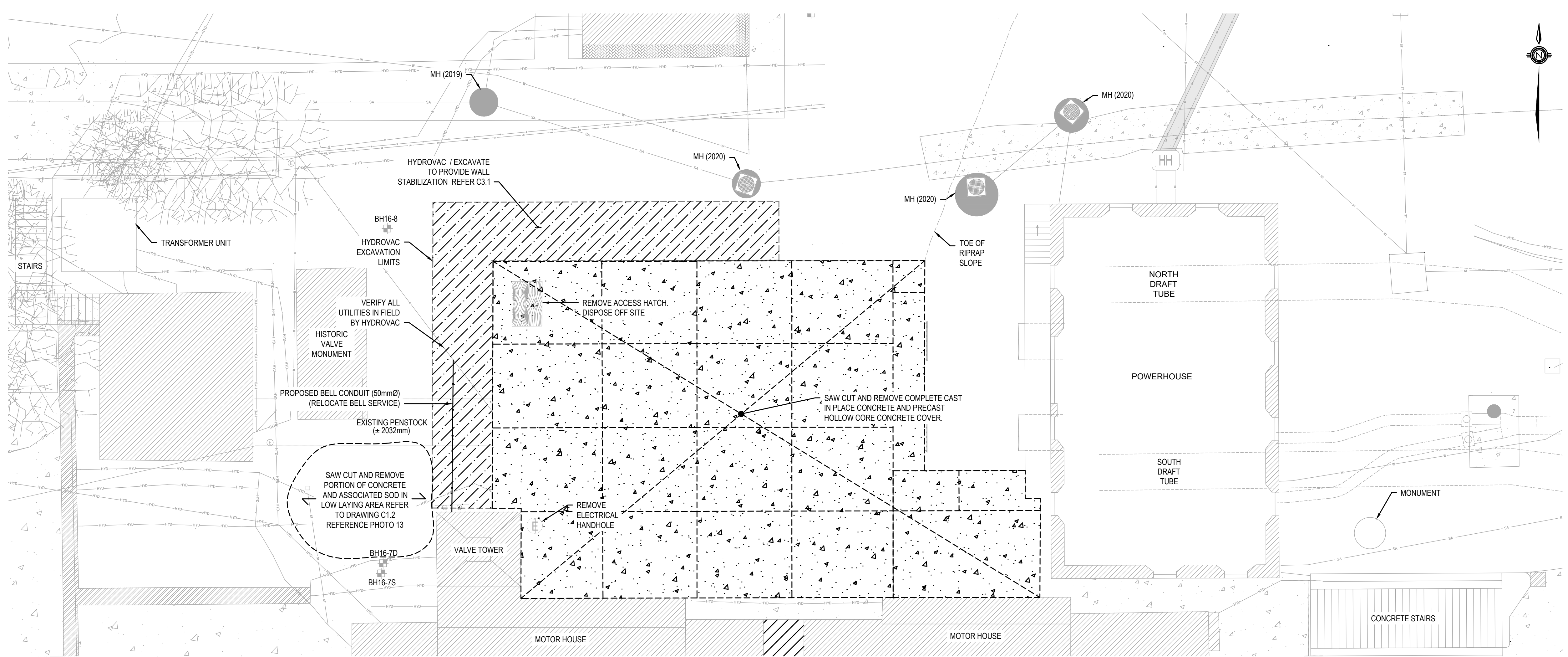
511SSM  
POWERHOUSE STRUCTURAL STABILIZATION PROJECT

Drawing title / Titre du dessin

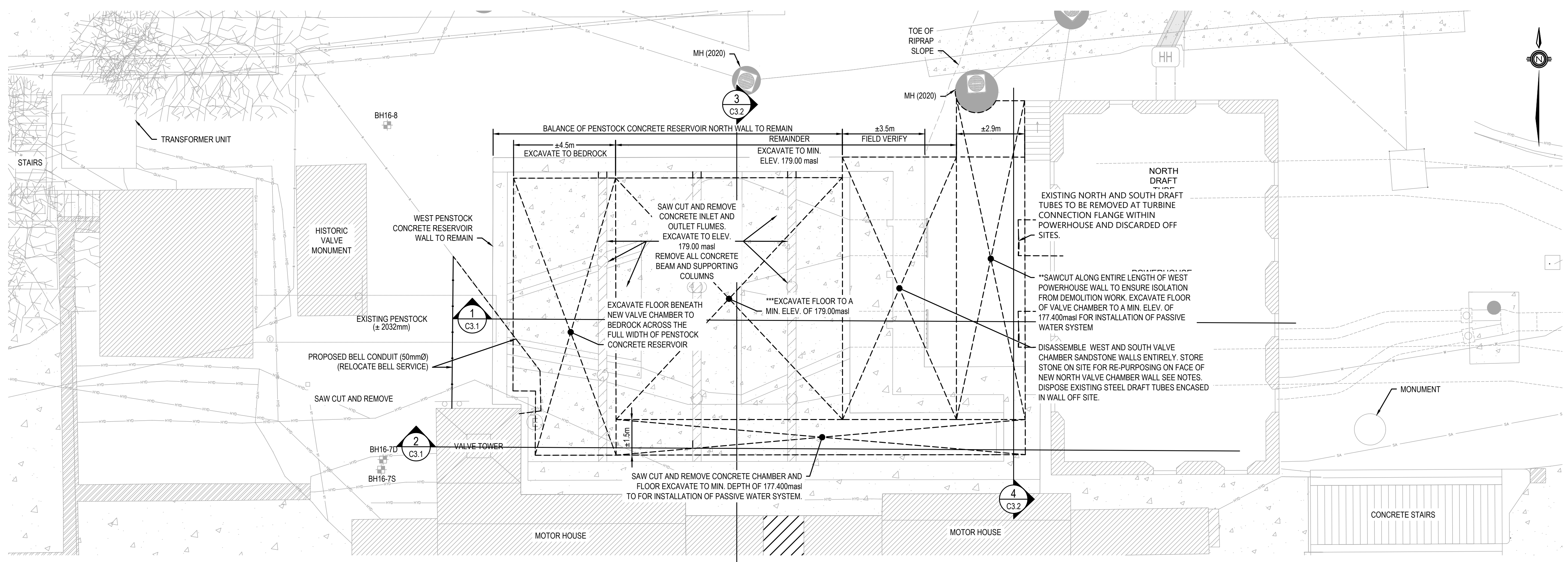
PENSTOCK CONCRETE RESERVOIR COVER AND INTERIOR PLAN VIEW REMOVALS

Designed by / Conçeut par: J.DICERBO / D.SPACEK	Date: MAY 25, 2021
Drawn by / Dessiné par: M.CARBONE	Date: MAY 25, 2021
Checked by / Vérifié par: J.DICERBO	Date: MAY 25, 2021
Approved by / Approuvé par: D.SPACEK	Date: MAY 25, 2021

Project No. / N° du projet: 511SSM	Scale / Echelle: 1:100	Sheet No. / N° de la feuille: C3.0
Drawing Set No. / N° de série du dessin: -		

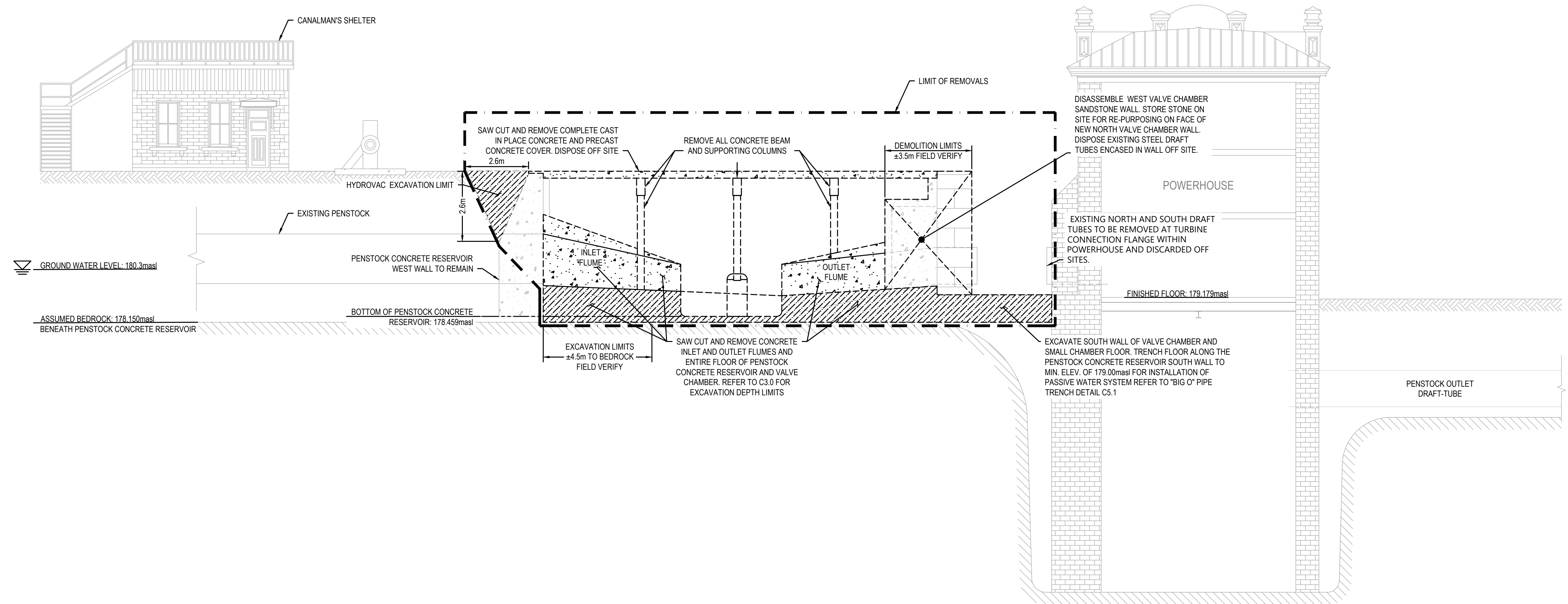
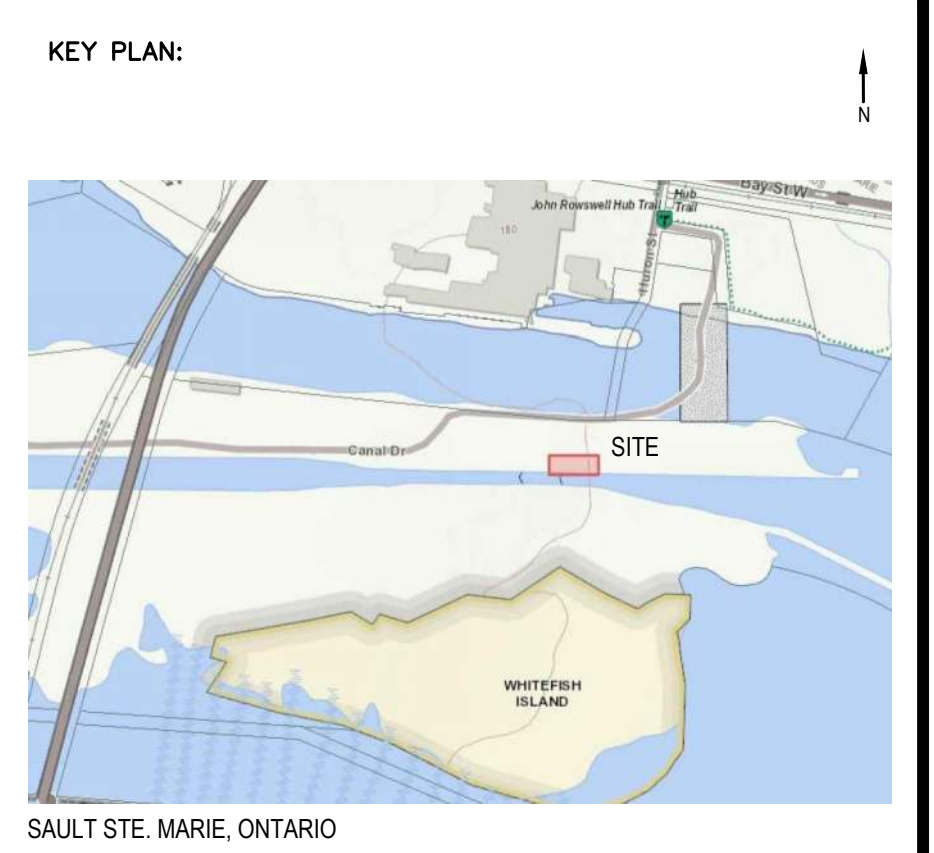


REMOVALS PENSTOCK CONCRETE RESERVOIR COVER PLAN VIEW  
SCALE: 1:100

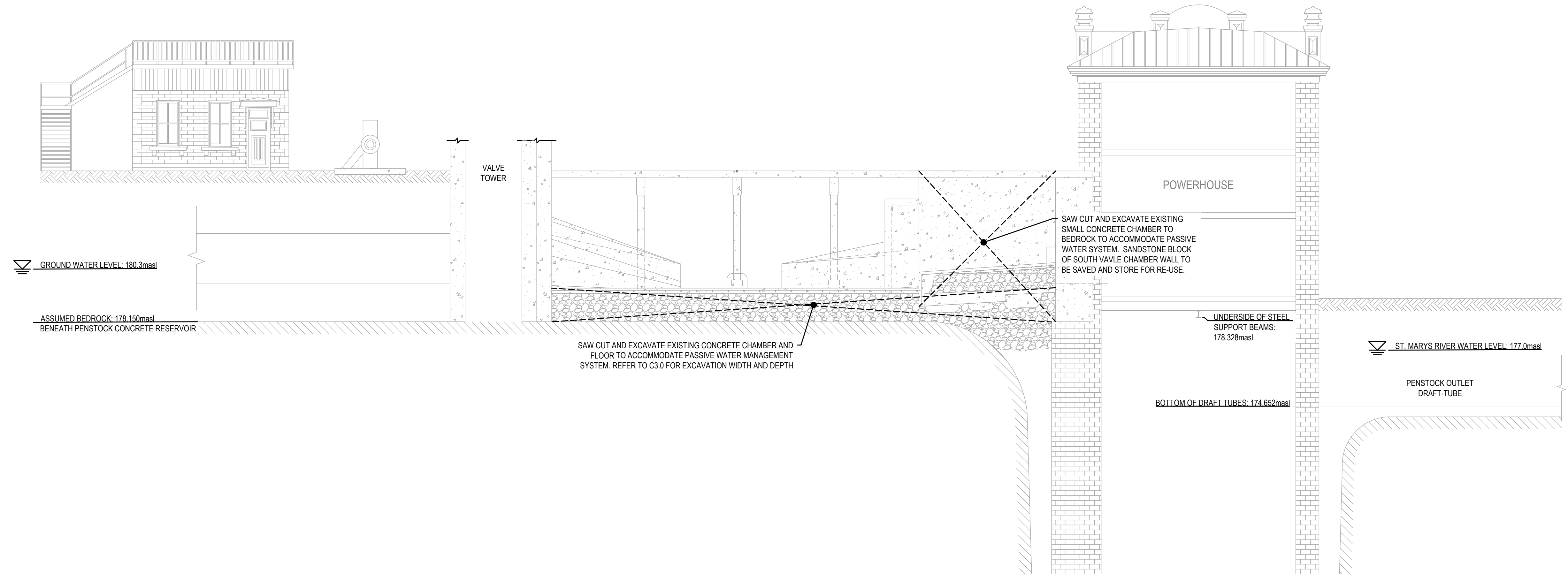


REMOVALS PENSTOCK CONCRETE RESERVOIR INTERIOR PLAN VIEW  
SCALE: 1:100





1 REMOVALS PENSTOCK CONCRETE RESERVOIR SECTION  
SCALE: 1:100



2 REMOVALS PENSTOCK CONCRETE RESERVOIR SECTION  
SCALE: 1:100

No.	Date	Description	Drawn by / Dessiné par	Approved / Approuvé
4	16JULY21	ISSUED FOR TENDER	M.CARBONE	D.SPACEK
3	25APR21	99% REVIEW	M.CARBONE	D.SPACEK
2	18MAR21	90% REVIEW	M.CARBONE	D.SPACEK
1	26JUNE20	75% REVIEW	M.CARBONE	D.SPACEK
0	21APR20	66% REVIEW	M.CARBONE	D.SPACEK

Revision / Révision	
A	Detail number / Numéro de détail
B	Sheet number / Numéro de la feuille
Linear dimensions in millimetres / Dimensions linéaires en millimètres	

Consultant's Name / Nom de l'expert-consultant: **wsp**

1348 ROSEROUNT AVENUE  
CORNWALL, ONTARIO CANADA, K6J 3E5  
TEL: 613-933-9601 | FAX: 705-638-4035 | WWW.WSP.COM  
WSP-SP201-15-001-001 (WSP# 151-00185-14)

Eng. Stamp / Sceau de l'ingénieur: D. M. SPACEK, July 16, 2021

Project title / Titre du projet: 511SSM POWERHOUSE STRUCTURAL STABILIZATION PROJECT

Drawing title / Titre du dessin: PENSTOCK CONCRETE RESERVOIR AND VALVE CHAMBER CROSS-SECTIONS REMOVALS

Designed by / Concept par: J.DICERBO / D.SPACEK	Date: MAY 25, 2021
Drawn by / Dessiné par: M.CARBONE	Date: MAY 25, 2021
Checked by / Vérifié par: J.DICERBO	Date: MAY 25, 2021
Approved by / Approuvé par: D.SPACEK	Date: MAY 25, 2021

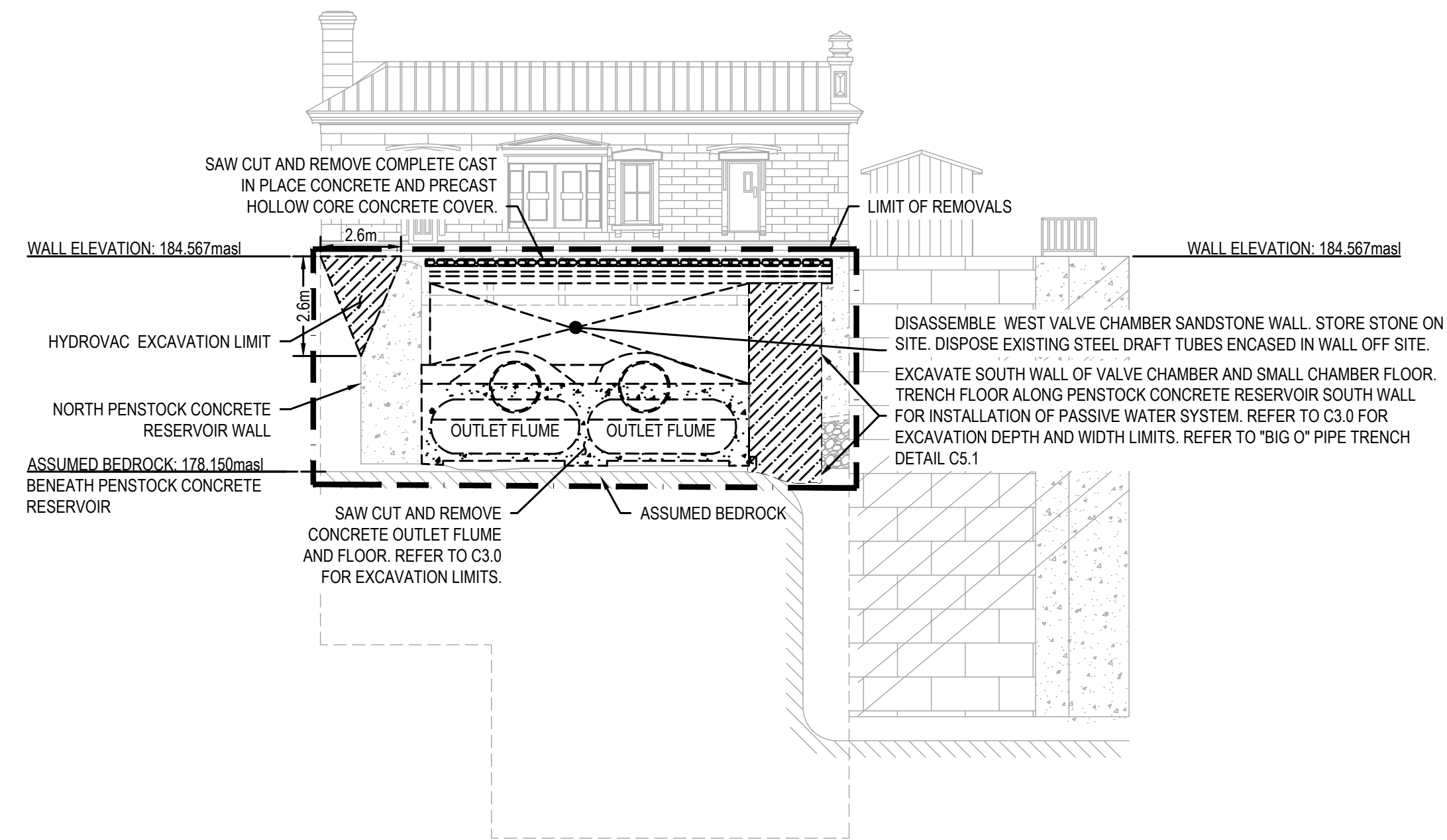
Project No. / N° du projet: 511SSM	Scale / Echelle: AS NOTED	Sheet No. / N° de la feuille: C3.1
Drawing Set No. / N° de série du dessin: -		



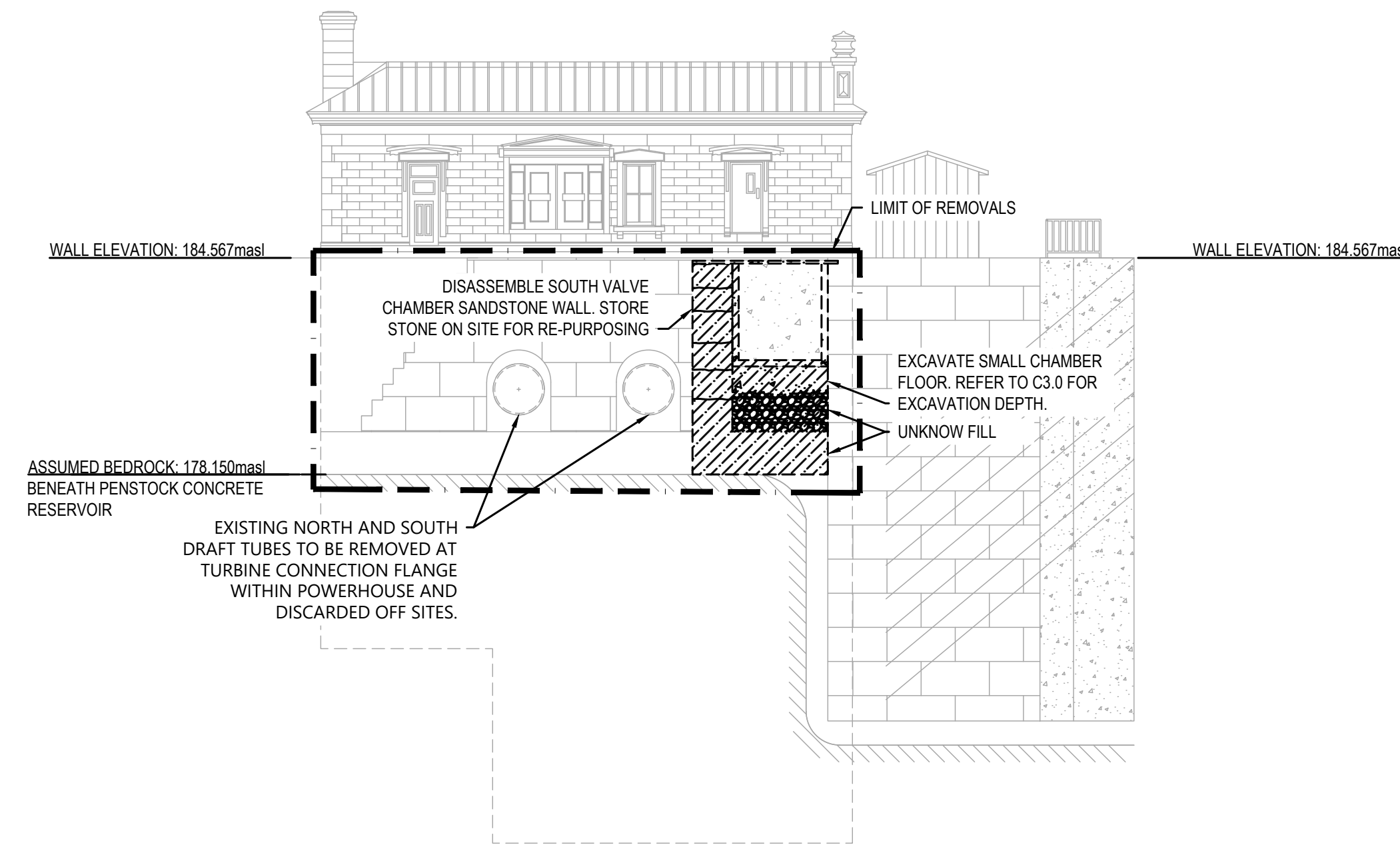
KEY PLAN:



SAULT STE. MARIE, ONTARIO



3 REMOVALS PENSTOCK CONCRETE RESERVOIR SECTION  
SCALE: 1:150



4 REMOVALS PENSTOCK CONCRETE RESERVOIR SECTION  
SCALE: 1:150

No.	Date	Description	Drawn by Dessiné par	Approved Approuvé
4	16JULY21	ISSUED FOR TENDER	M.CARBONE	D.SPACEK
3	25APR21	99% REVIEW	M.CARBONE	D.SPACEK
2	18MAR21	90% REVIEW	M.CARBONE	D.SPACEK
1	26JUNE20	75% REVIEW	M.CARBONE	D.SPACEK
0	21APR20	66% REVIEW	M.CARBONE	D.SPACEK

Revision / Révision

A	Detail number Sheet number	A Numéro de détail B Numéro de la feuille
B		

Linear dimensions in millimetres / Dimensions linéaires en millimètres

Consultant's Name Nom de l'expert-conseil   1348 ROSEMOUNT AVENUE CORNWALL ONTARIO CANADA K6G 3E5 TEL: 613-933-8602   FAX: 705-638-4335   WWW.WSP.COM WSP-SP201-15-001-001 (WSP# 151-00185-14)	Eng. Stamp Sceau de l'ingénieur  
---	--

Project title/Titre du projet  
  
511SSM  
POWERHOUSE STRUCTURAL  
STABILIZATION PROJECT

Drawing title/Titre du dessin  
  
PENSTOCK CONCRETE RESERVOIR  
AND VALVE CHAMBER  
CROSS-SECTIONS REMOVALS

Designed by/Conçu par J.DICERBO / D.SPACEK	Date MAY 25, 2021
Drawn by/Dessiné par M.CARBONE	Date MAY 25, 2021
Checked by/Vérifié par J.DICERBO	Date MAY 25, 2021
Approved by/Approuvé par D.SPACEK	Date MAY 25, 2021

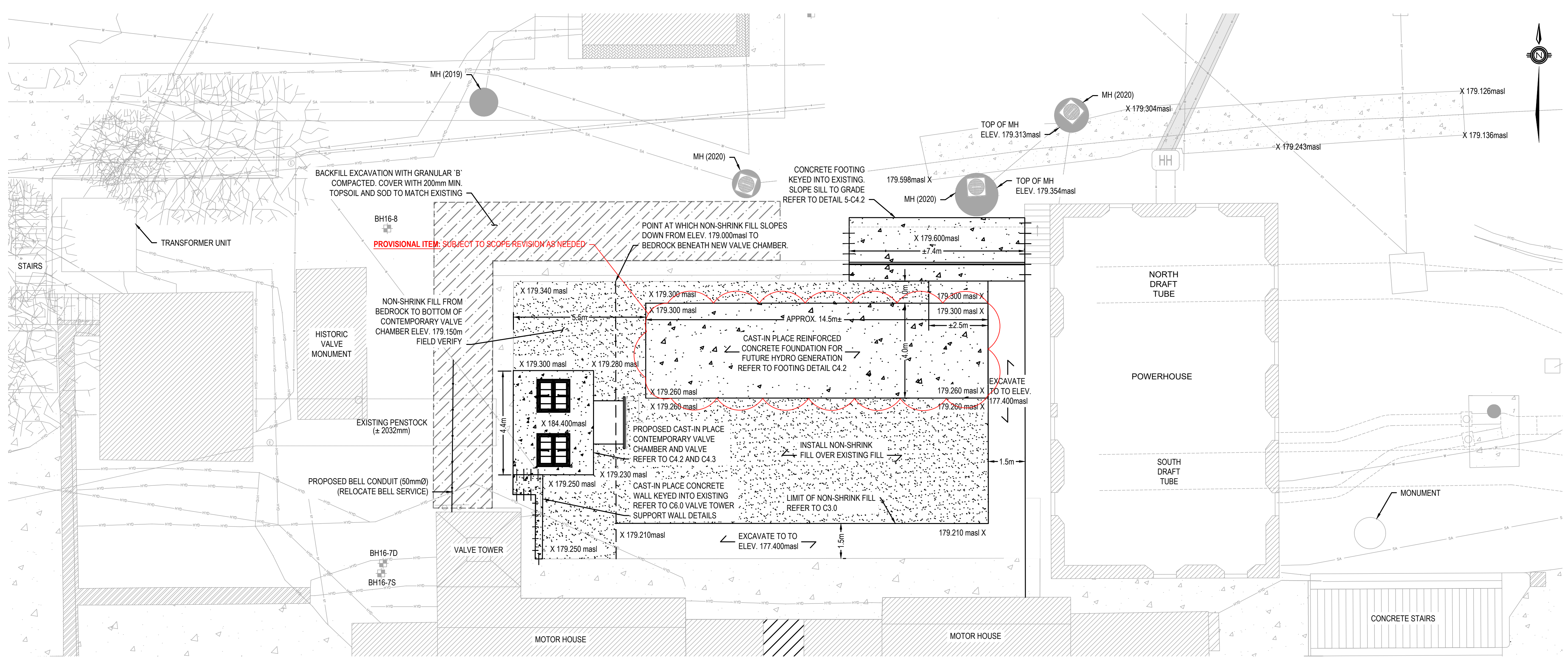
Project No./N° du projet 511SSM	Scale/Echelle AS NOTED	Sheet No./N° de la feuille C3.2
Drawing Set No./N° de série du dessin -		



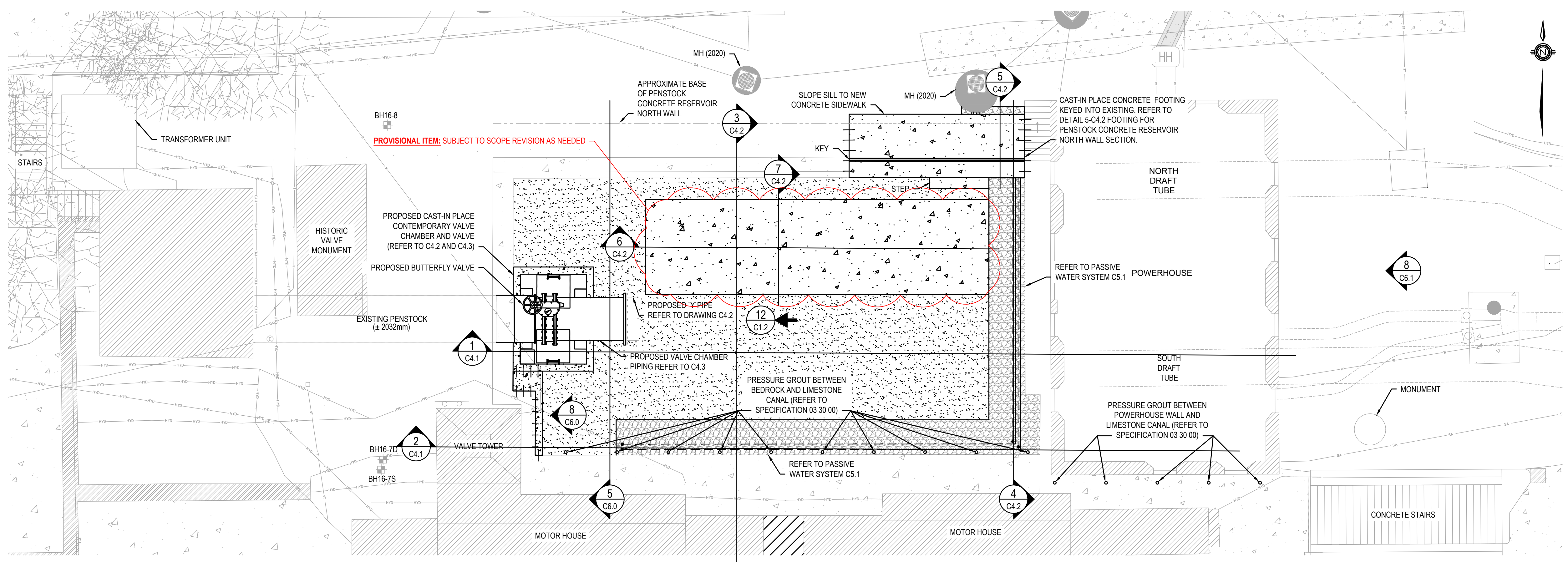
KEY PLAN:



SAULL STE. MARIE, ONTARIO



**PROPOSED PENSTOCK CONCRETE RESERVOIR FLOOR SLAB PLAN VIEW**  
SCALE: 1:100



**PROPOSED PENSTOCK CONCRETE RESERVOIR INTERIOR PLAN VIEW**  
SCALE: 1:100

No.	Date	Description	Drawn by / Dessiné par	Approved / Approuvé
4	16JULY21	ISSUED FOR TENDER	M.CARBONE	D.SPACEK
3	25APR21	99% REVIEW	M.CARBONE	D.SPACEK
2	18MAR21	90% REVIEW	M.CARBONE	D.SPACEK
1	26JUNE20	75% REVIEW	M.CARBONE	D.SPACEK
0	21APR20	66% REVIEW	M.CARBONE	D.SPACEK

Revision / Révision	
A	Detail number / Numéro de détail
B	Sheet number / Numéro de la feuille
Linear dimensions in millimetres / Dimensions linéaires en millimètres	

Consultant's Name / Nom de l'expert-conseil: **wsp**

Eng. Stamp / Sceau de l'ingénieur:

Project title / Titre du projet: **511SSM POWERHOUSE STRUCTURAL STABILIZATION PROJECT**

Drawing title / Titre du dessin: **PROPOSED PENSTOCK CONCRETE RESERVOIR INTERIOR FLOOR/ FOOTINGS/FOUNDATIONS PLAN VIEW**

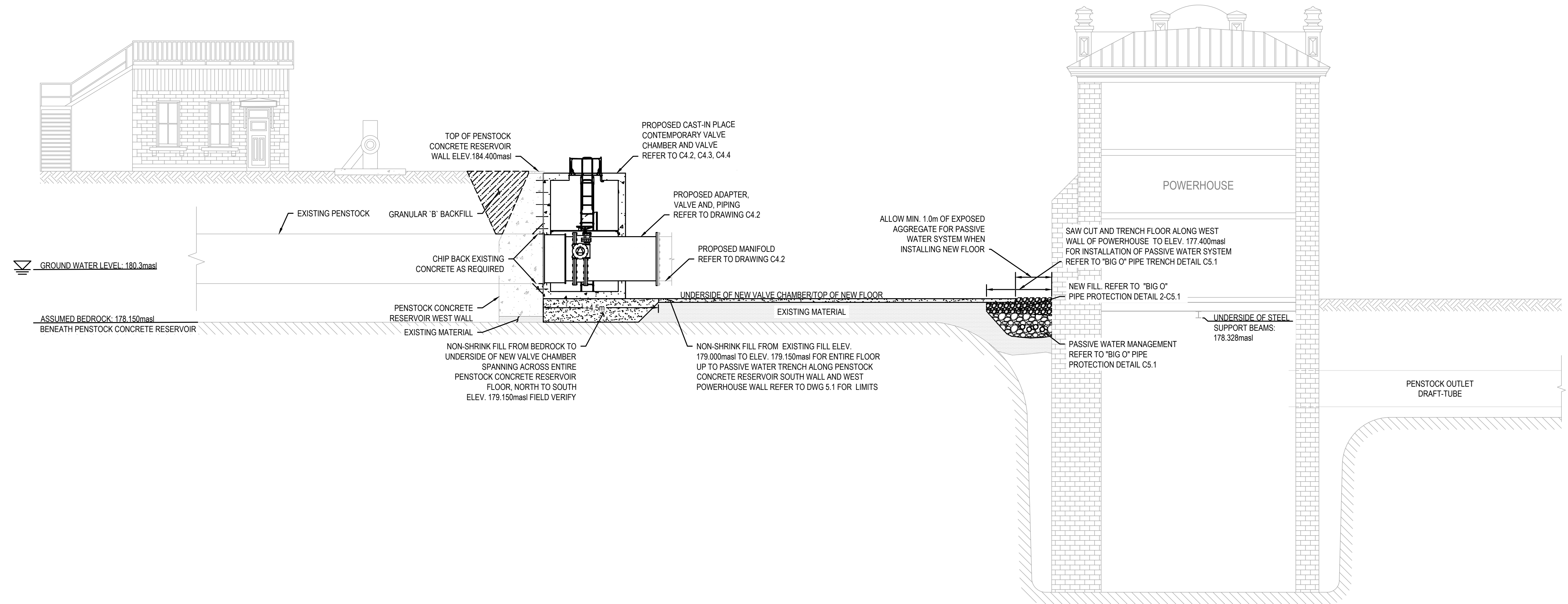
Designed by / Conçeut par: J.DICERBO / D.SPACEK	Date: MAY 25, 2021
Drawn by / Dessiné par: M.CARBONE	Date: MAY 25, 2021
Checked by / Vérifié par: J.DICERBO	Date: MAY 25, 2021
Approved by / Approuvé par: D.SPACEK	Date: MAY 25, 2021
Project No./N° du projet: 511SSM	Scale/Echelle: 1:100
Drawing Set No./N° de série du dessin: -	Sheet No./N° de la feuille: C4.0



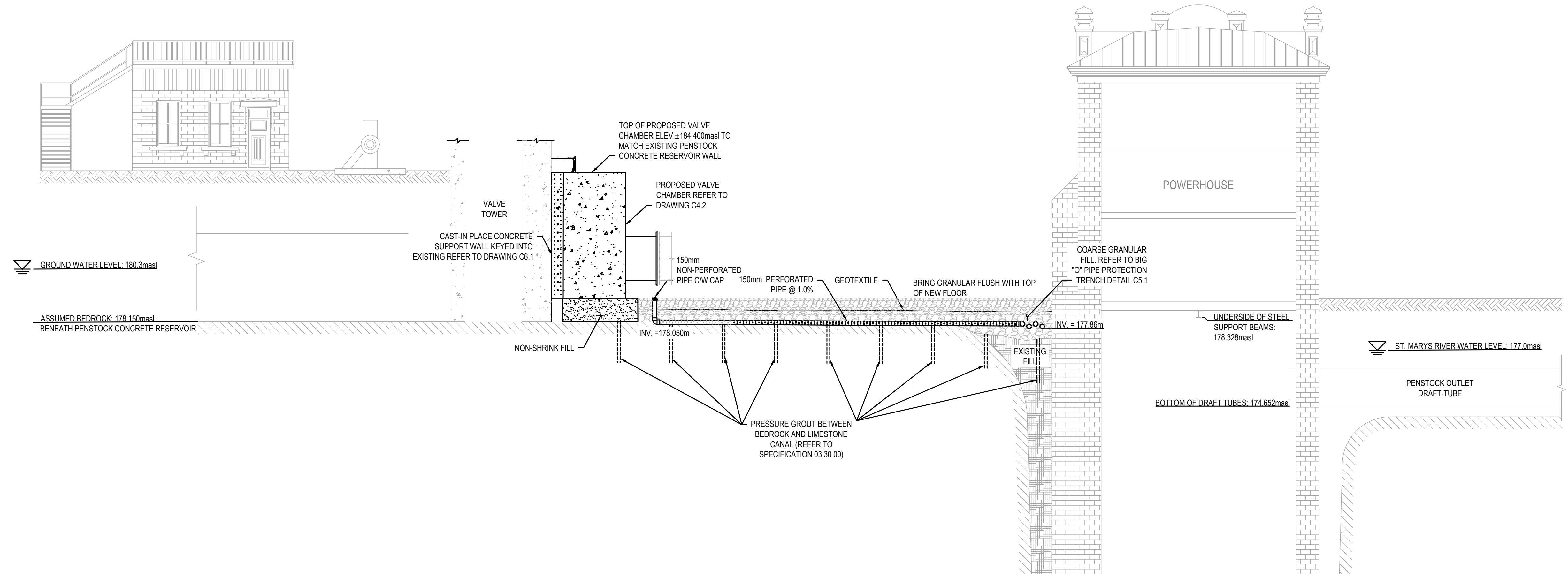
KEY PLAN:



SAULT STE. MARIE, ONTARIO



1 PROPOSED SECTION  
C4.0 SCALE: 1:100



2 PROPOSED SECTION  
C4.0 SCALE: 1:100

No.	Date	Description	Drawn by / Dessiné par	Approved / Approuvé
4	16JULY21	ISSUED FOR TENDER	M.CARBONE	D.SPACEK
3	25APR21	99% REVIEW	M.CARBONE	D.SPACEK
2	18MAR21	90% REVIEW	M.CARBONE	D.SPACEK
1	26JUNE20	75% REVIEW	M.CARBONE	D.SPACEK
0	21APR20	66% REVIEW	M.CARBONE	D.SPACEK

Revision / Révision	
A	Detail number / Numéro de détail
B	Sheet number / Numéro de la feuille
Linear dimensions in millimetres / Dimensions linéaires en millimètres	

Consultant's Name / Nom de l'expert-conseil: **wsp**

Eng. Stamp / Sceau de l'ingénieur: **D. M. SPACEK**

1348 ROSAMOUNT AVENUE  
CORNWALL, ONTARIO CANADA, K6J 3E5  
TEL: 613-933-9821 | FAX: 705-638-4335 | WWW.WSP.COM  
WSP-SP201-15-001-001 (WSP# 151-00185-14)

Project title / Titre du projet: **511SSM POWERHOUSE STRUCTURAL STABILIZATION PROJECT**

Drawing title / Titre du dessin: **PROPOSED PENSTOCK CONCRETE RESERVOIR CROSS-SECTIONS**

Designed by / Concept par: J.DICERBO / D.SPACEK	Date: MAY 25, 2021
Drawn by / Dessiné par: M.CARBONE	Date: MAY 25, 2021
Checked by / Vérifié par: J.DICERBO	Date: MAY 25, 2021
Approved by / Approuvé par: D.SPACEK	Date: MAY 25, 2021

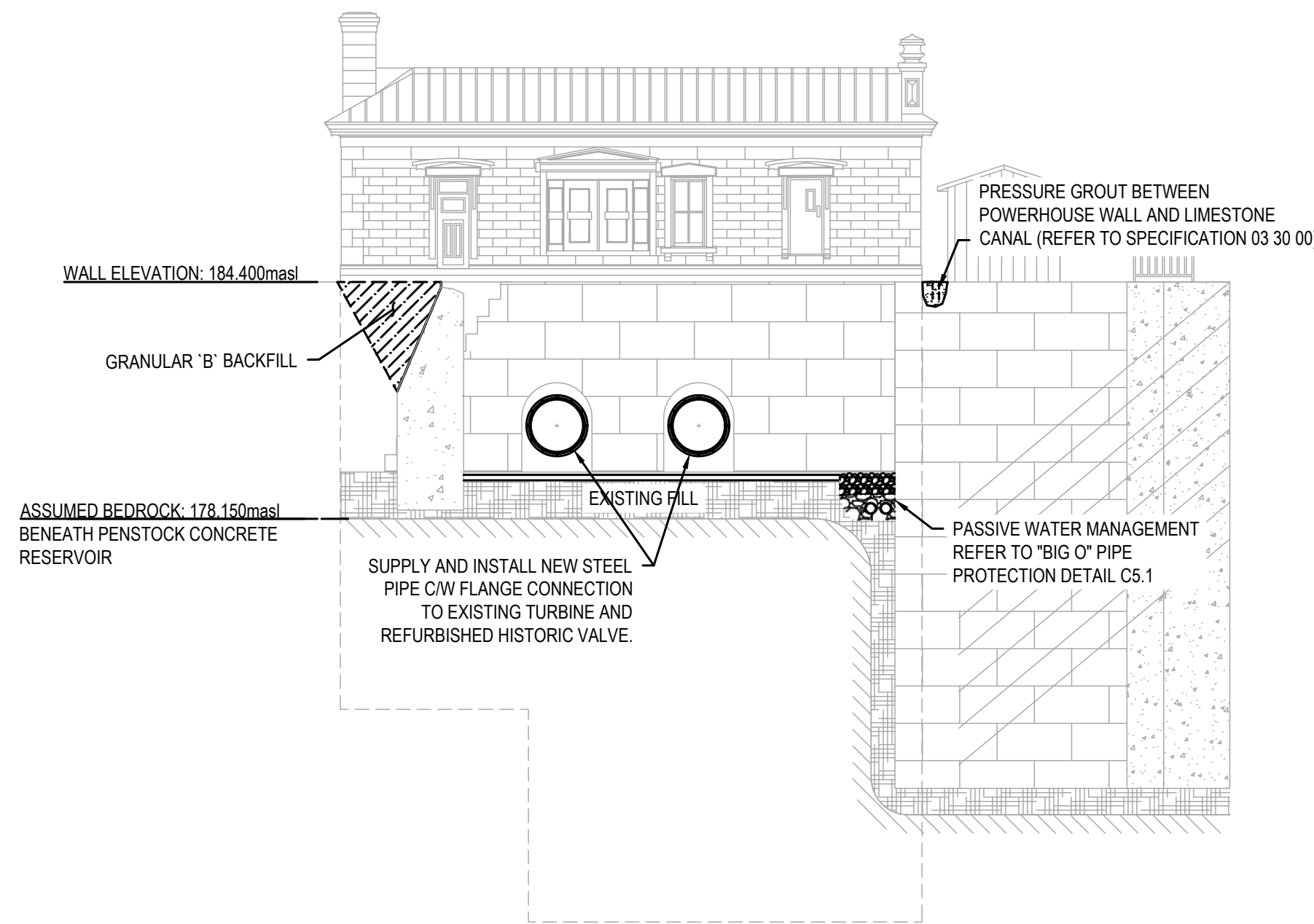
Project No. / N° du projet: 511SSM	Scale / Echelle: AS NOTED	Sheet No. / N° de la feuille: C4.1
Drawing Set No. / N° de série du dessin: -		



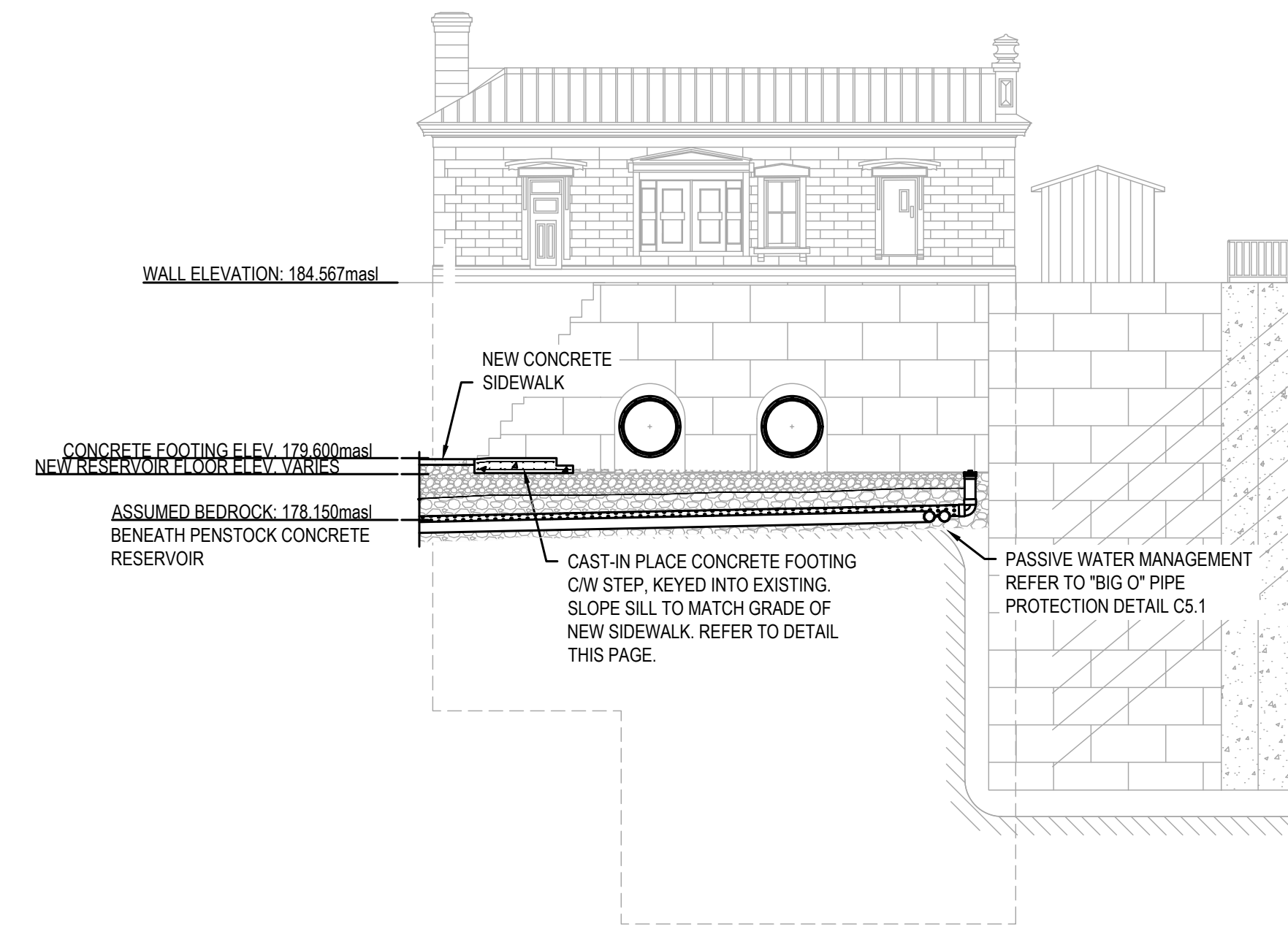
KEY PLAN:



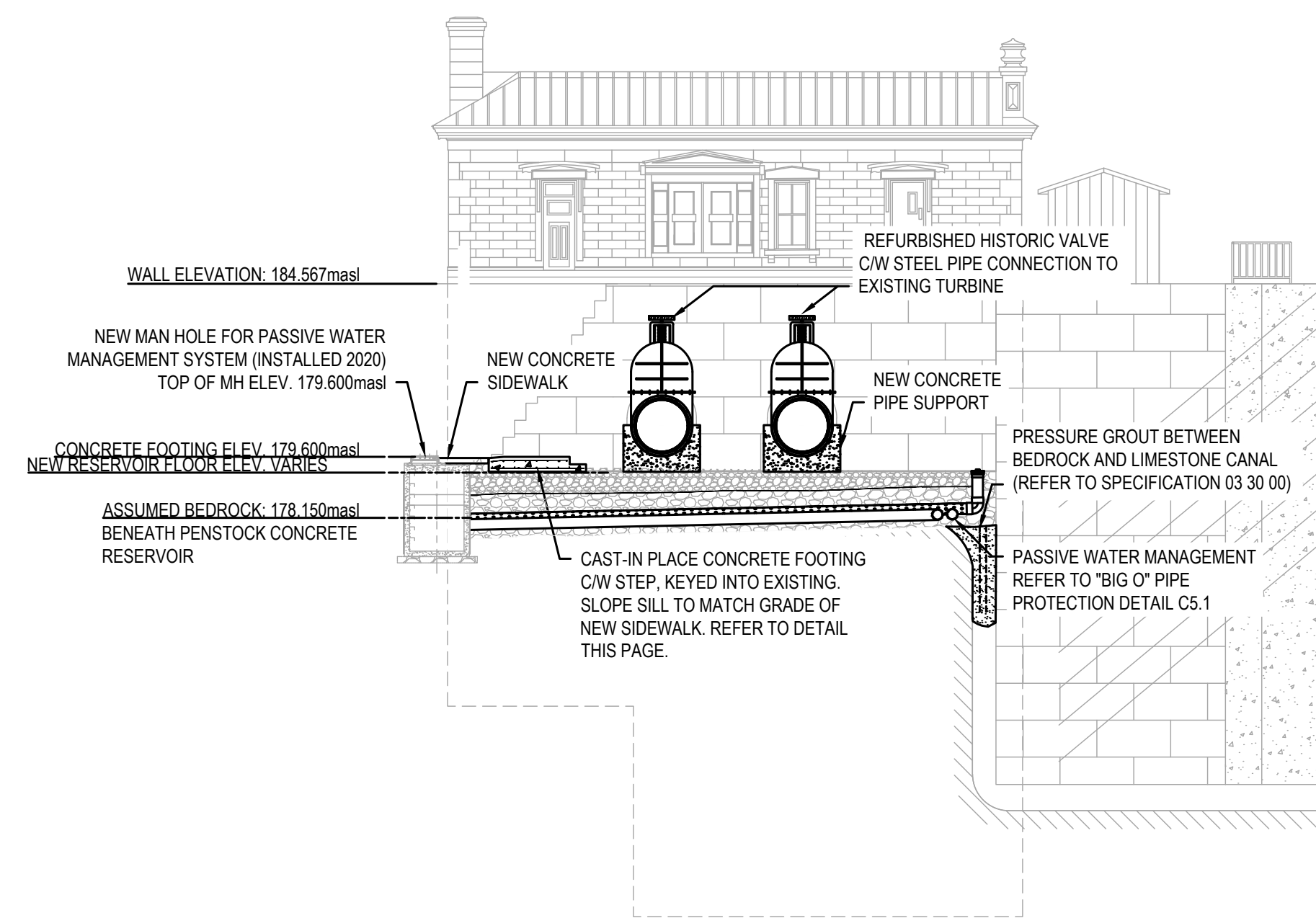
SAULT STE. MARIE, ONTARIO



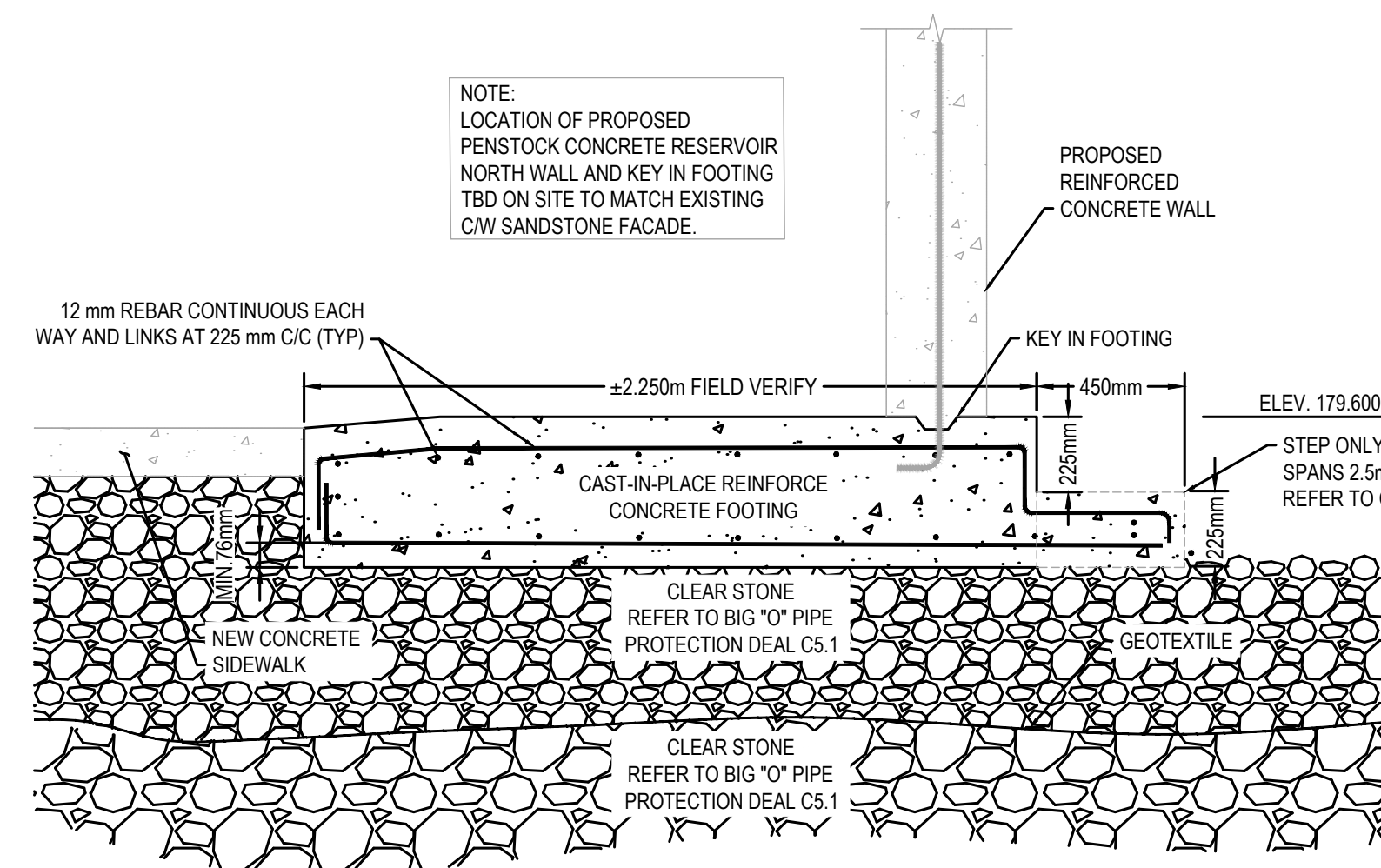
3 PROPOSED PENSTOCK CONCRETE RESERVOIR SECTION  
SCALE: 1:150



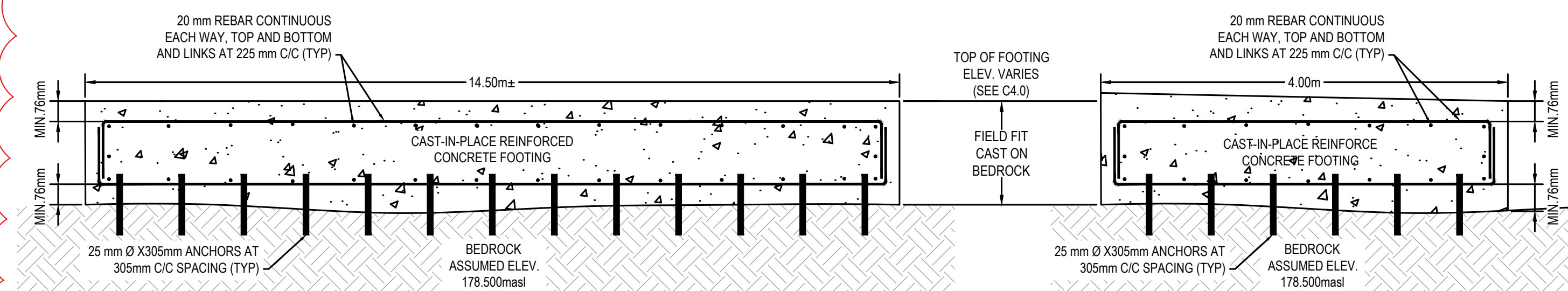
4 PROPOSED PENSTOCK CONCRETE RESERVOIR SECTION  
SCALE: 1:150



8 PROPOSED PENSTOCK CONCRETE RESERVOIR SECTION  
SCALE: 1:150



5 FOOTING FOR PENSTOCK CONCRETE RESERVOIR NORTH WALL SECTION  
SCALE: 1:20



6 SECTION  
SCALE: NTS

7 SECTION  
SCALE: NTS

CAST-IN-PLACE CONCRETE FOUNDATION FOR FUTURE HYDRO GENERATION PROJECT  
SCALE: NTS

PROVISIONAL ITEM: SUBJECT TO SCOPE REVISION AS NEEDED

No.	Date	Description	Drawn by Dessiné par	Approved Approuvé
4	16JULY21	ISSUED FOR TENDER	M.CARBONE	D.SPACEK
3	25APR21	99% REVIEW	M.CARBONE	D.SPACEK
2	18MAR21	90% REVIEW	M.CARBONE	D.SPACEK
1	26JUNE20	75% REVIEW	M.CARBONE	D.SPACEK
0	21APR20	66% REVIEW	M.CARBONE	D.SPACEK

Revision / Révision	
A	Detail number / Numéro de détail
B	Sheet number / Numéro de la feuille
Linear dimensions in millimetres / Dimensions linéaires en millimètres	

Consultant's Name / Nom de l'expert-conseil: **wsp**

Eng. Stamp / Sceau de l'ingénieur: **D. M. SPACEK**, July 16, 2021

Project title / Titre du projet: **511SSM POWERHOUSE STRUCTURAL STABILIZATION PROJECT**

Drawing title / Titre du dessin: **PROPOSED PENSTOCK CONCRETE RESERVOIR CROSS-SECTIONS FOOTING/FOUNDATION SECTIONS**

Designed by / Conçeut par: J.DICERBO / D.SPACEK	Date: MAY 25, 2021
Drawn by / Dessiné par: M.CARBONE	Date: MAY 25, 2021
Checked by / Vérifié par: J.DICERBO	Date: MAY 25, 2021
Approved by / Approuvé par: D.SPACEK	Date: MAY 25, 2021
Project No. / N° du projet: 511SSM	Scale / Echelle: AS NOTED
Drawing Set No. / N° de série du dessin: -	Sheet No. / N° de la feuille: C4.2



KEY PLAN:



SAULL STE. MARIE, ONTARIO

ASSEMBLY SEQUENCE:

- BOLT ADAPTER PLATE TO EXISTING PIPE MATCH DRILL THROUGH ADAPTER PLATE. EXISTING PIPE & TEMPORARILY BOLT SO ADAPTER PLATE MATCHES CURVATURE OF EXISTING PIPE.
- TACK WELD PLATES TOGETHER.
- WELD ADAPTER PLATES TO ADAPTER RING.
- UNBOLT & REMOVE FOR FINAL SEAL WELD OF ADAPTER PLATES.
- RE-INSTALL WELDMENT WITH GASKET & BOLT TO EXISTING PIPE.

No.	Date	Description	Drawn by / Dessiné par	Approved / Approuvé
4	16JULY21	ISSUED FOR TENDER	M.CARBONE	D.SPACEK
3	25APR21	99% REVIEW	M.CARBONE	D.SPACEK
2	18MAR21	90% REVIEW	M.CARBONE	D.SPACEK
1	26JUNE20	75% REVIEW	M.CARBONE	D.SPACEK
0	21APR20	66% REVIEW	M.CARBONE	D.SPACEK

Revision / Revision

A	B	Detail number / Numéro de détail	A	B
		Sheet number / Numéro de la feuille		

Linear dimensions in millimetres / Dimensions linéaires en millimètres

Consultant's Name / Nom de l'expert-consultant: **wsp**

Eng. Stamp / Sceau de l'ingénieur: **D. M. SPACEK**, July 16, 2021

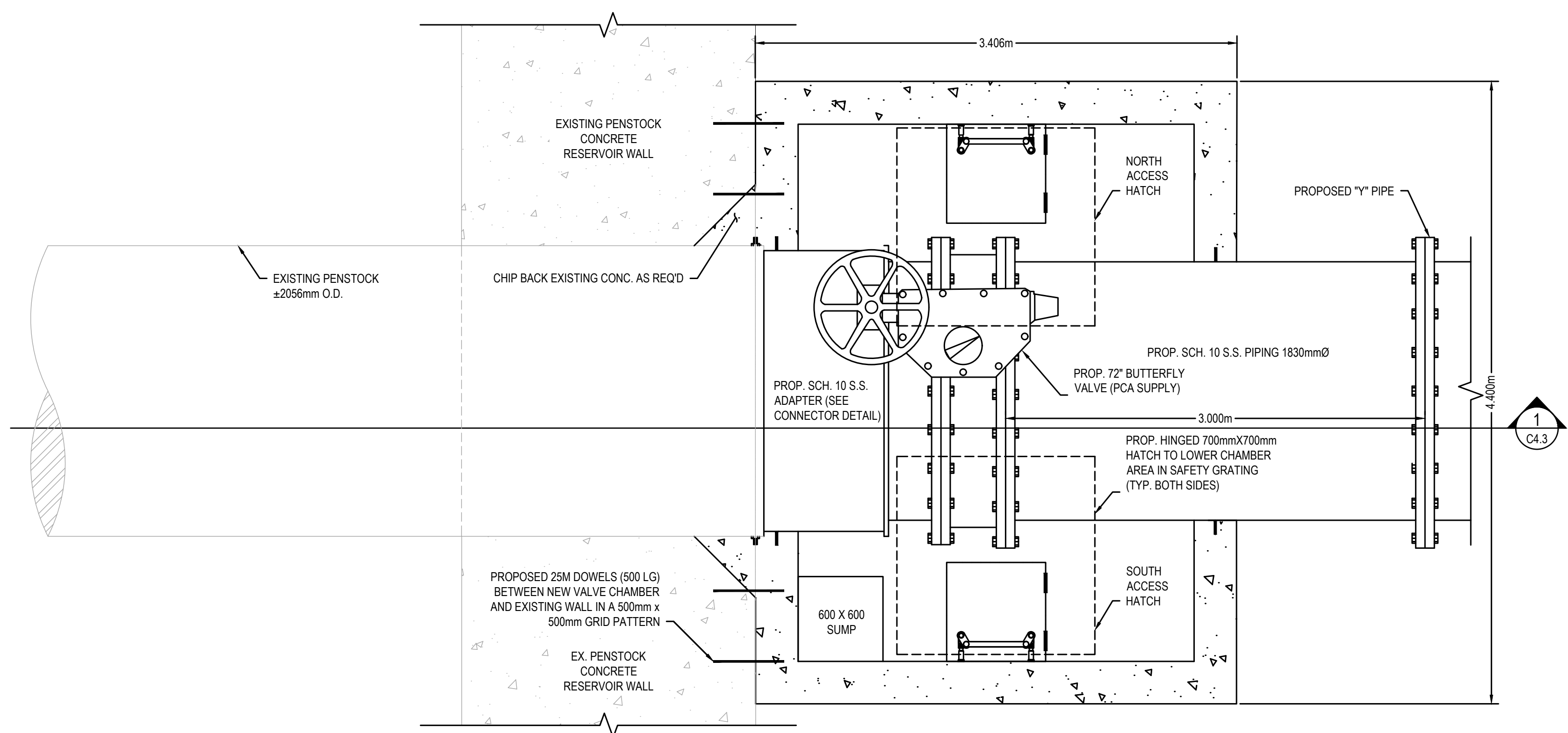
Project title / Titre du projet

511SSM POWERHOUSE STRUCTURAL STABILIZATION PROJECT

Drawing title / Titre du dessin

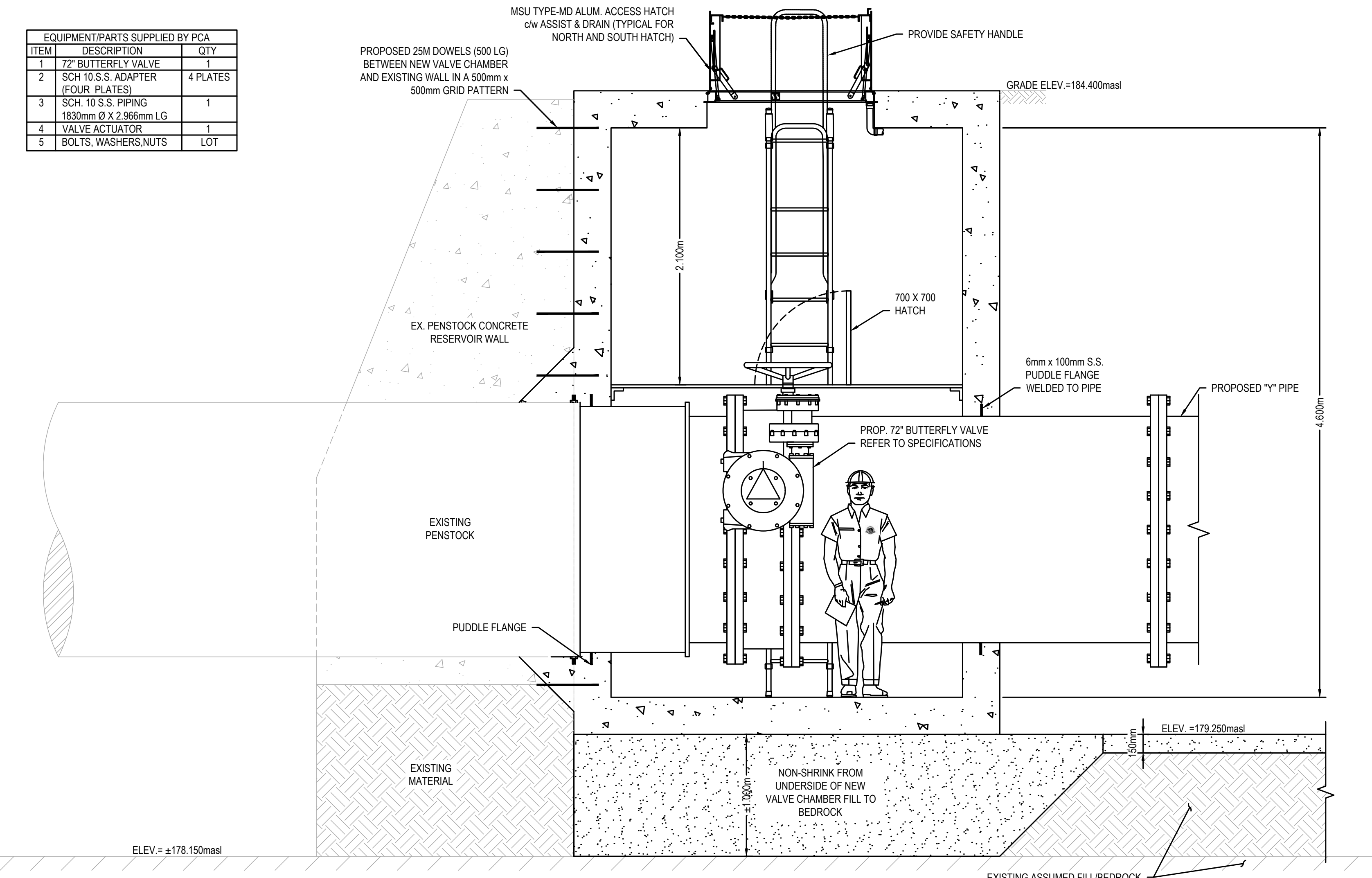
PROPOSED CONTEMPORARY VALVE CHAMBER SECTIONS/DETAILS

Designed by / Conçue par: J.DICERBO / D.SPACEK	Date: MAY 25, 2021
Drawn by / Dessiné par: M.CARBONE	Date: MAY 25, 2021
Checked by / Vérifié par: J.DICERBO	Date: MAY 25, 2021
Approved by / Approuvé par: D.SPACEK	Date: MAY 25, 2021
Project No. / N° du projet: 511SSM	Scale / Echelle: AS NOTED
Drawing Set No. / N° de série du dessin: -	Sheet No. / N° de la feuille: C4.3

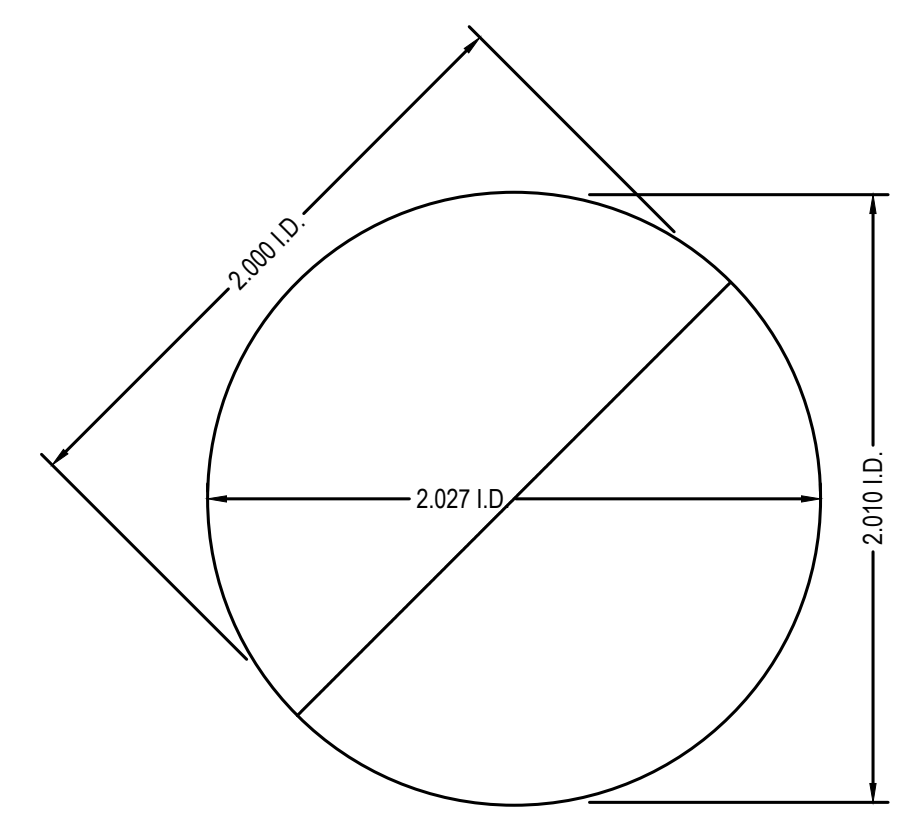


VALVE AND CHAMBER PLAN VIEW  
SCALE: 1:25

ITEM	DESCRIPTION	QTY
1	72" BUTTERFLY VALVE	1
2	SCH 10 S.S. ADAPTER (FOUR PLATES)	4 PLATES
3	SCH. 10 S.S. PIPING 1830mm Ø X 2.966mm LG	1
4	VALVE ACTUATOR	1
5	BOLTS, WASHERS, NUTS	LOT

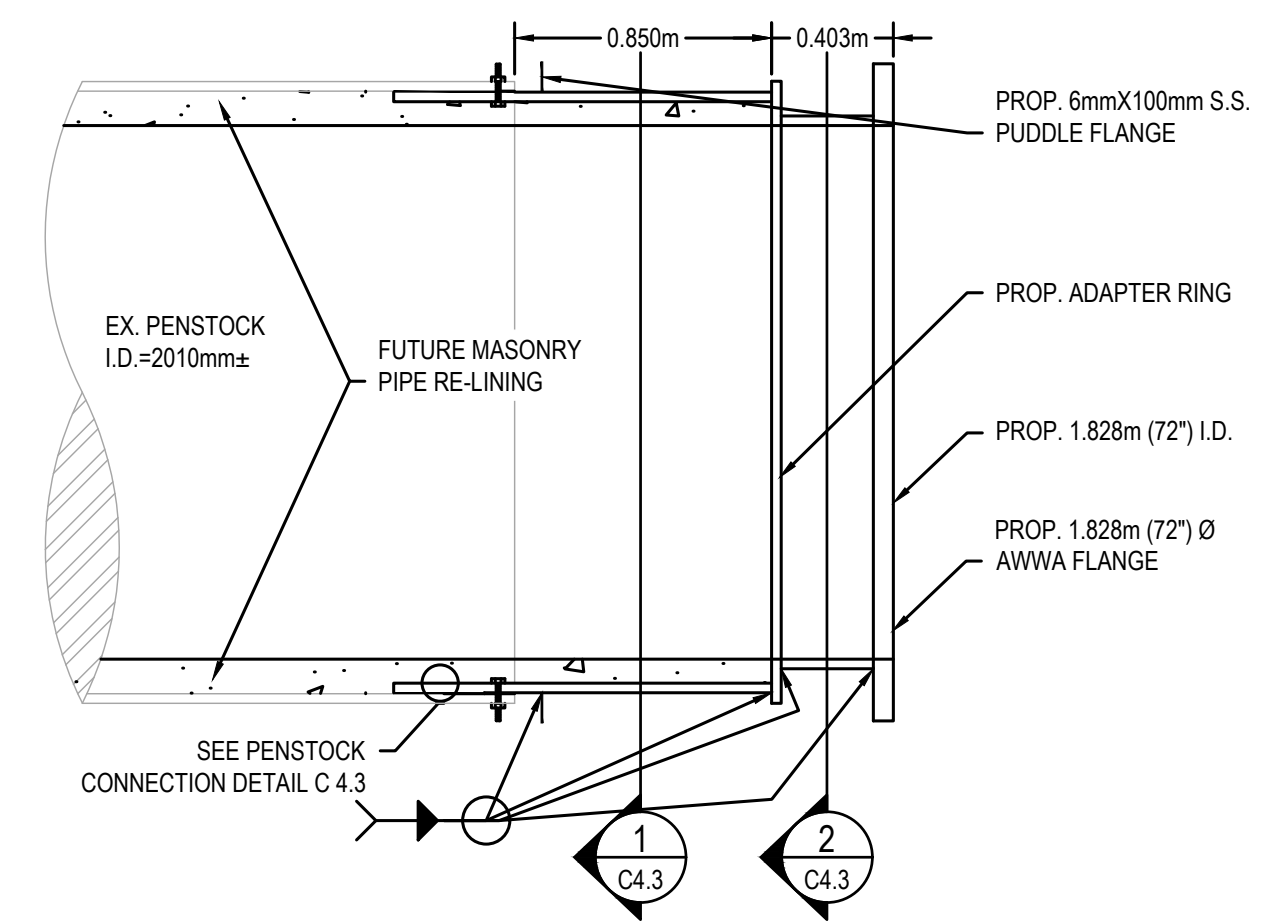


VALVE AND CHAMBER SECTION  
SCALE: 1:25

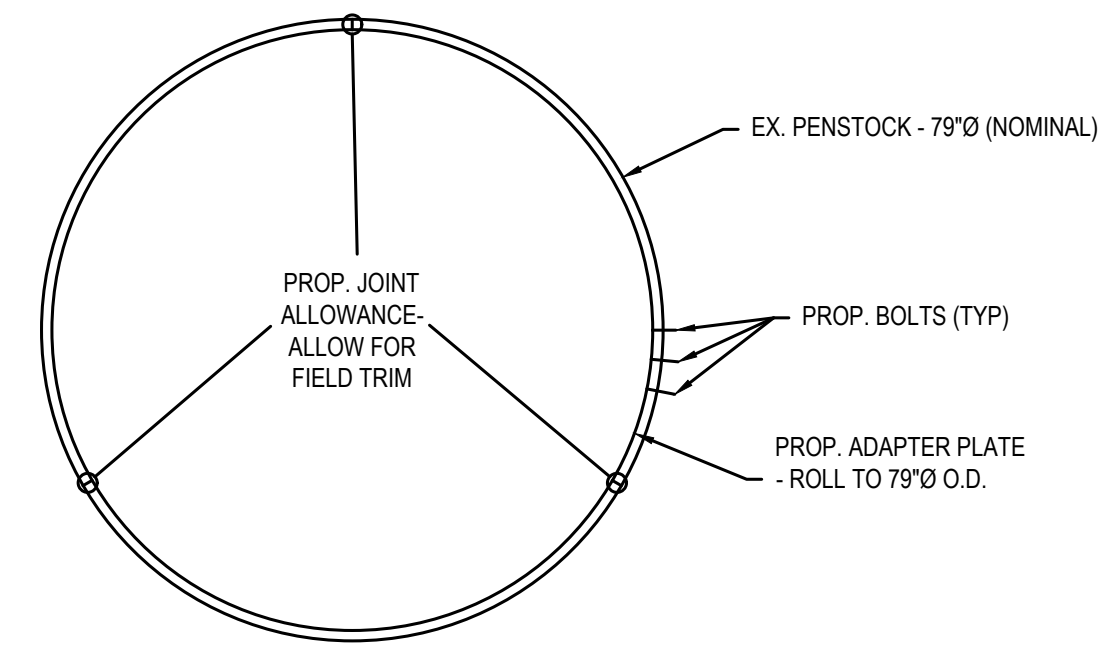


NOTE: TO BE FIELD MEASURED PRIOR TO FABRICATION OF ANY FITTINGS TO ENSURE PROPER FIT.

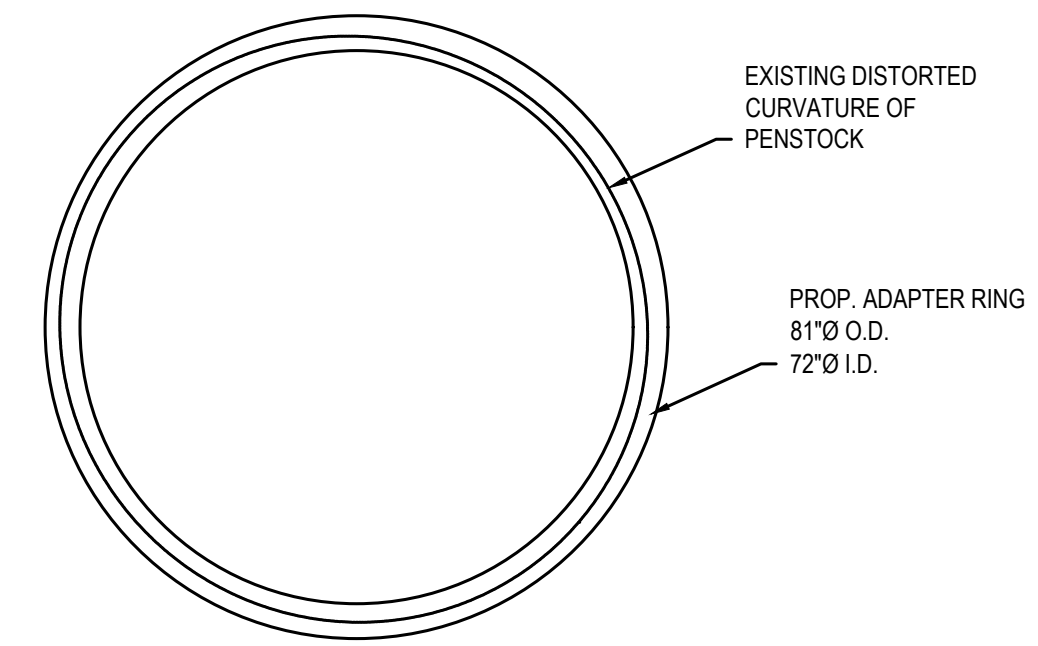
EXISTING PENSTOCK ELEVATION (APPROX. DIMENSIONS)  
SCALE: 1:25



PENSTOCK ADAPTER PLAN VIEW  
SCALE: 1:25



PIPE CONNECTION SECTION (1 OF 2)  
SCALE: 1:25



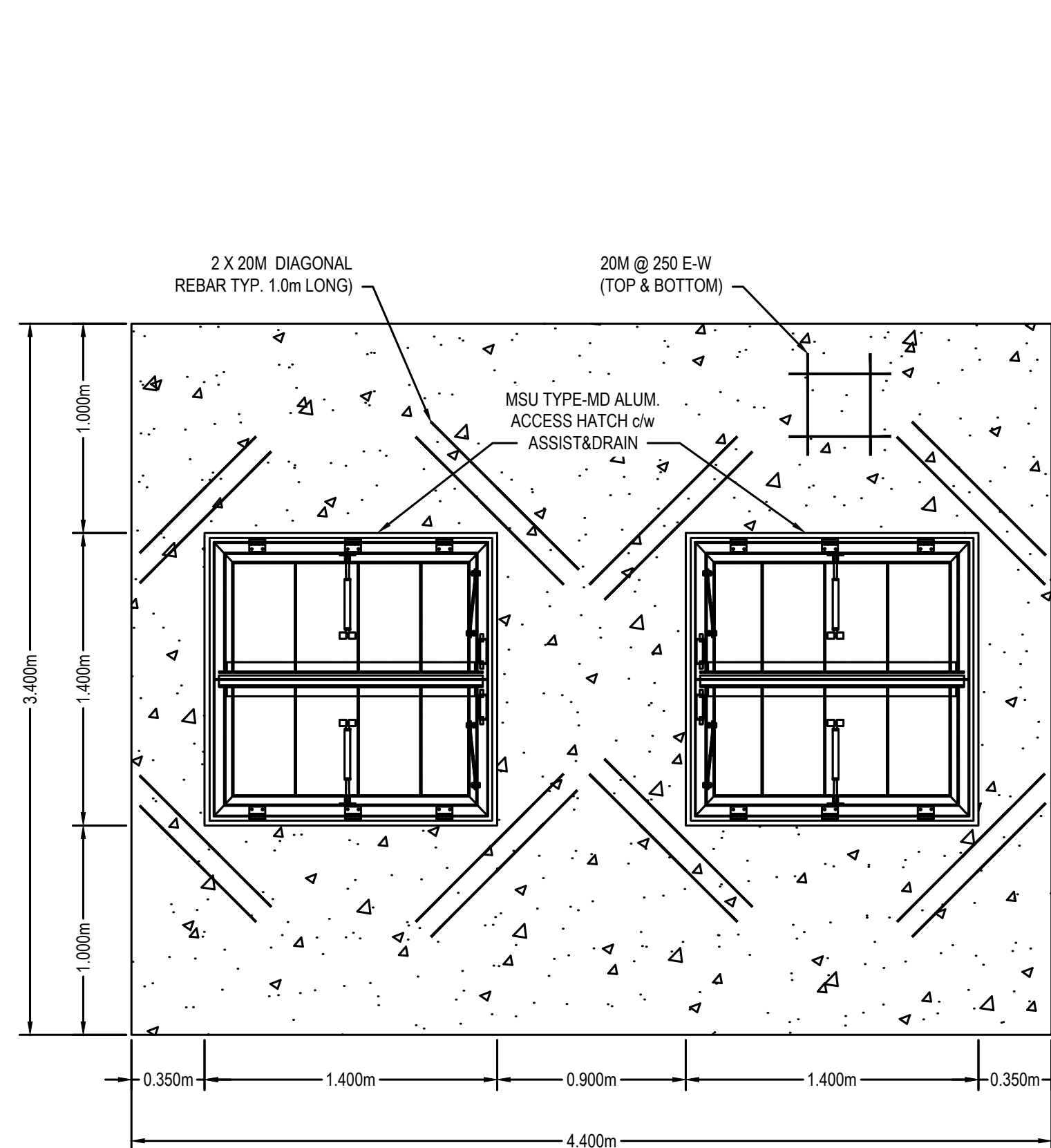
PIPE CONNECTION SECTION (2 OF 2)  
SCALE: 1:25



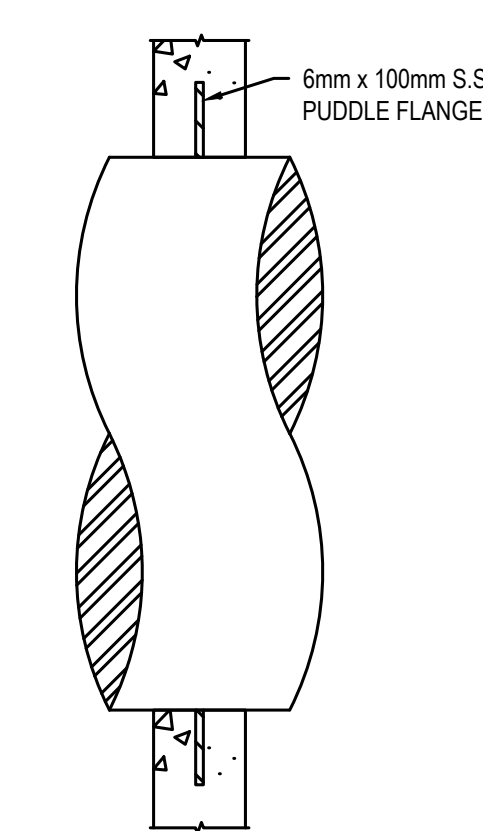
KEY PLAN:



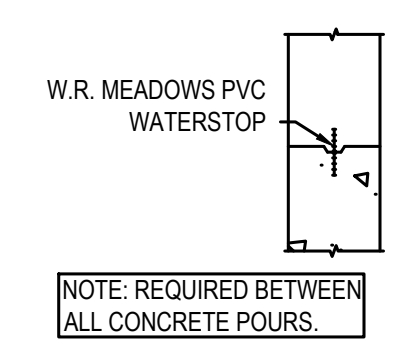
SAULT STE. MARIE, ONTARIO



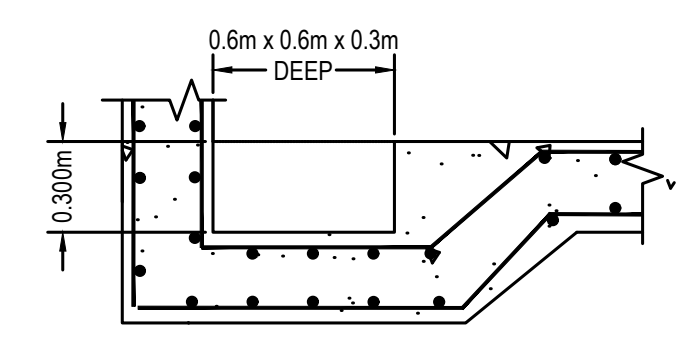
VALVE CHAMBER PLAN (TOP)  
SCALE: 1:25



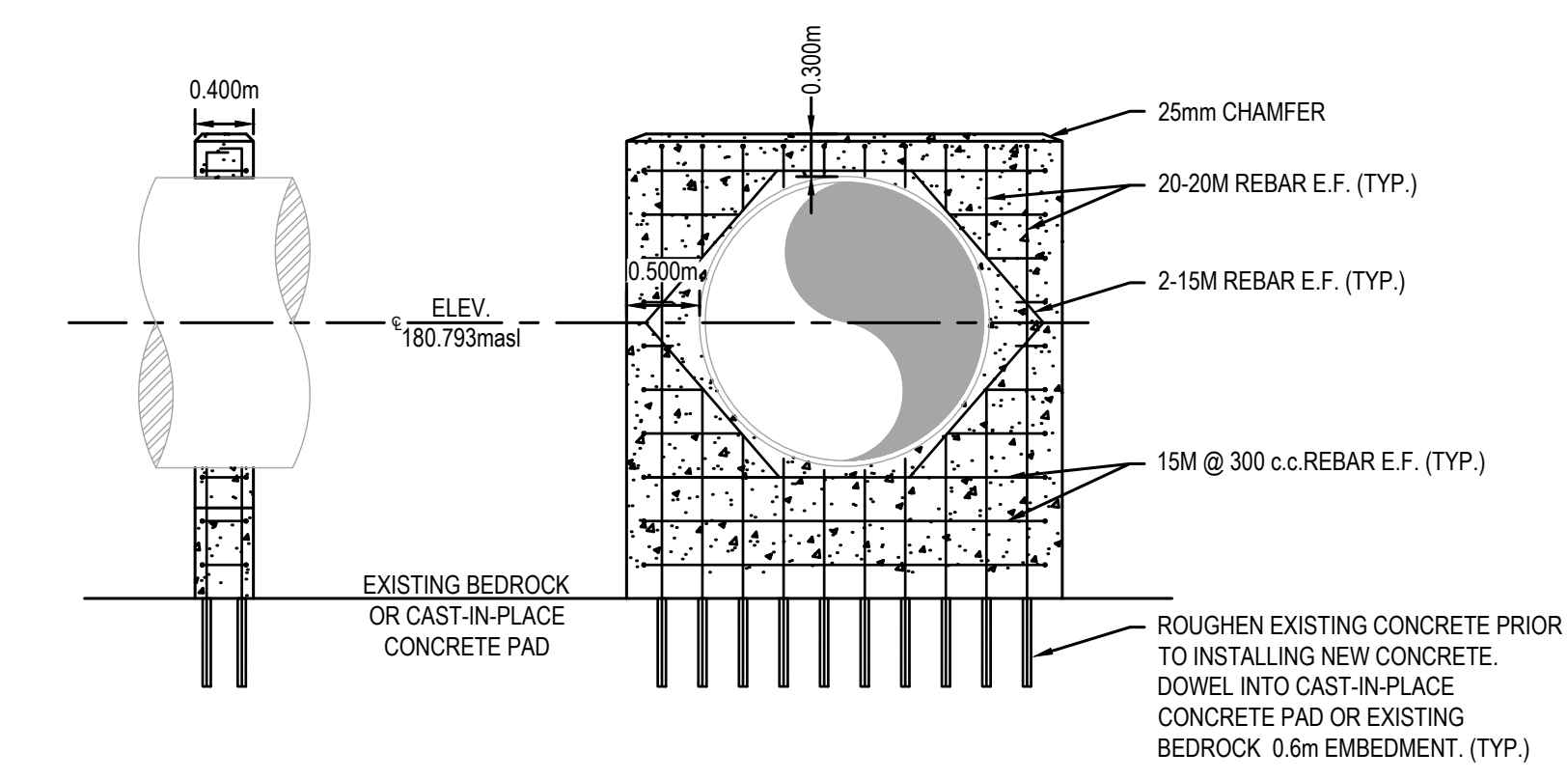
PUDDLE FLANGE DETAIL  
SCALE: 1:25



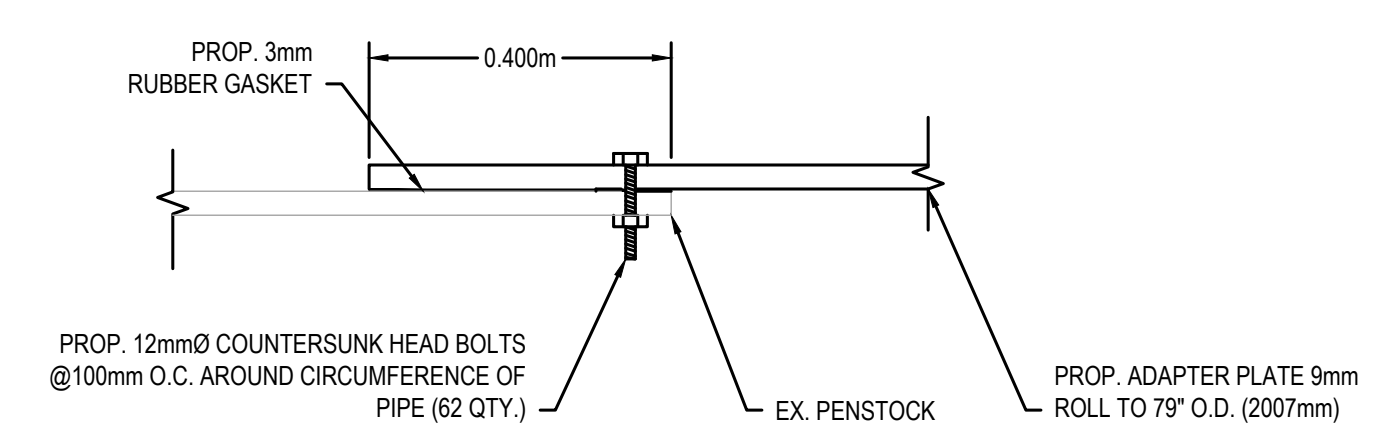
PVC WATERSTOP DETAIL  
SCALE: 1:25



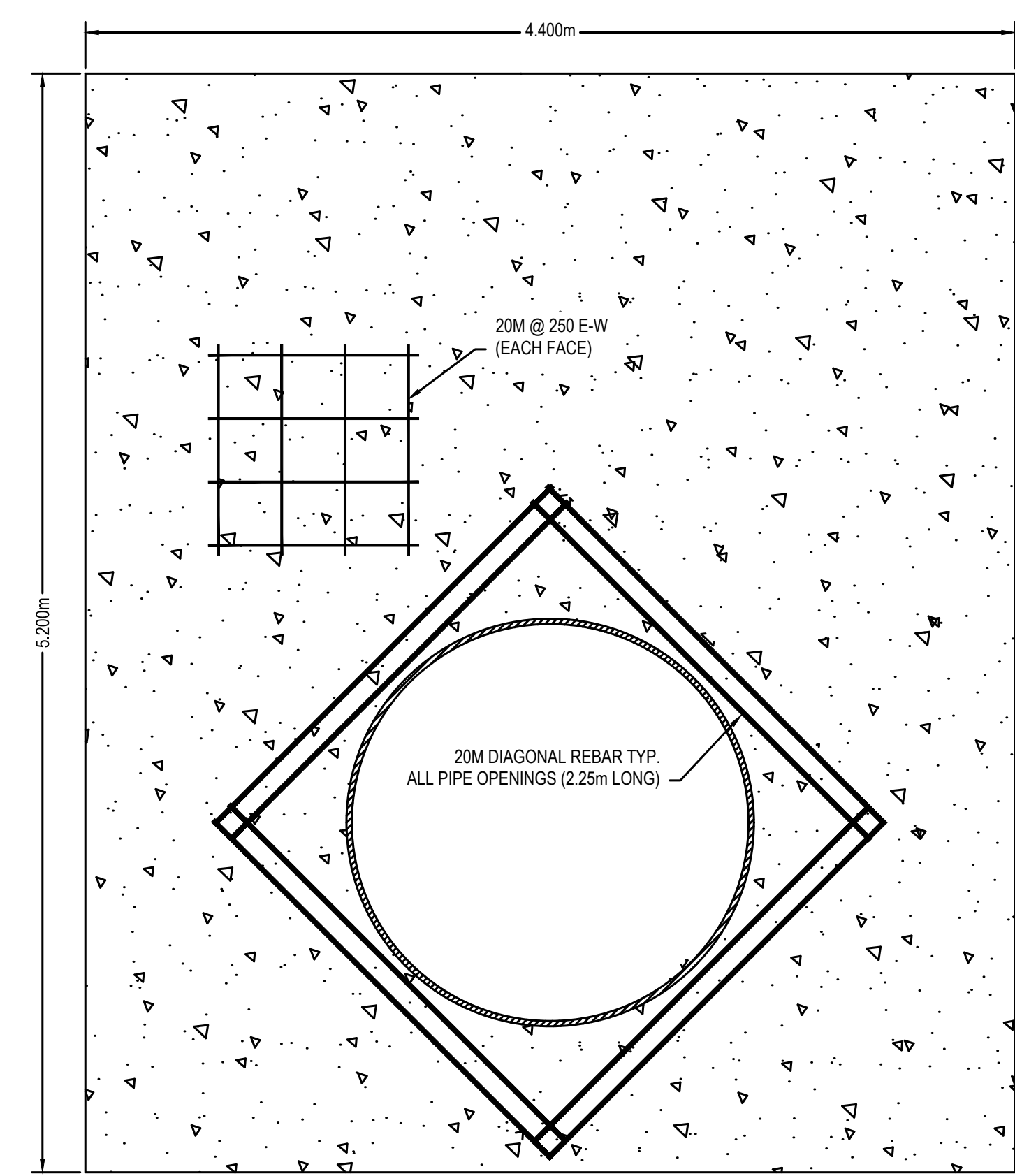
SUMP DETAIL  
SCALE: 1:25



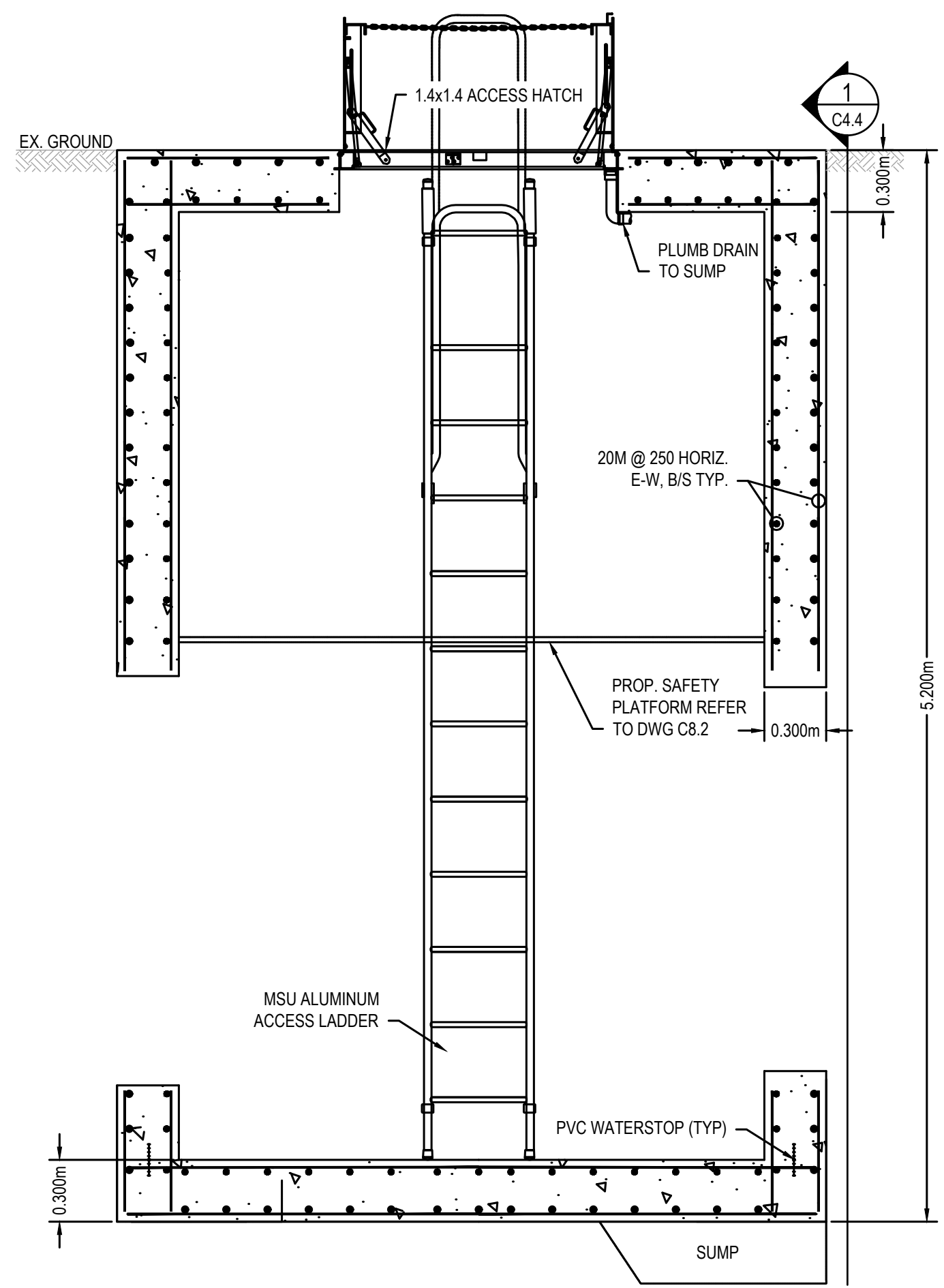
PIPE SUPPORT DETAIL  
SCALE: 1:50



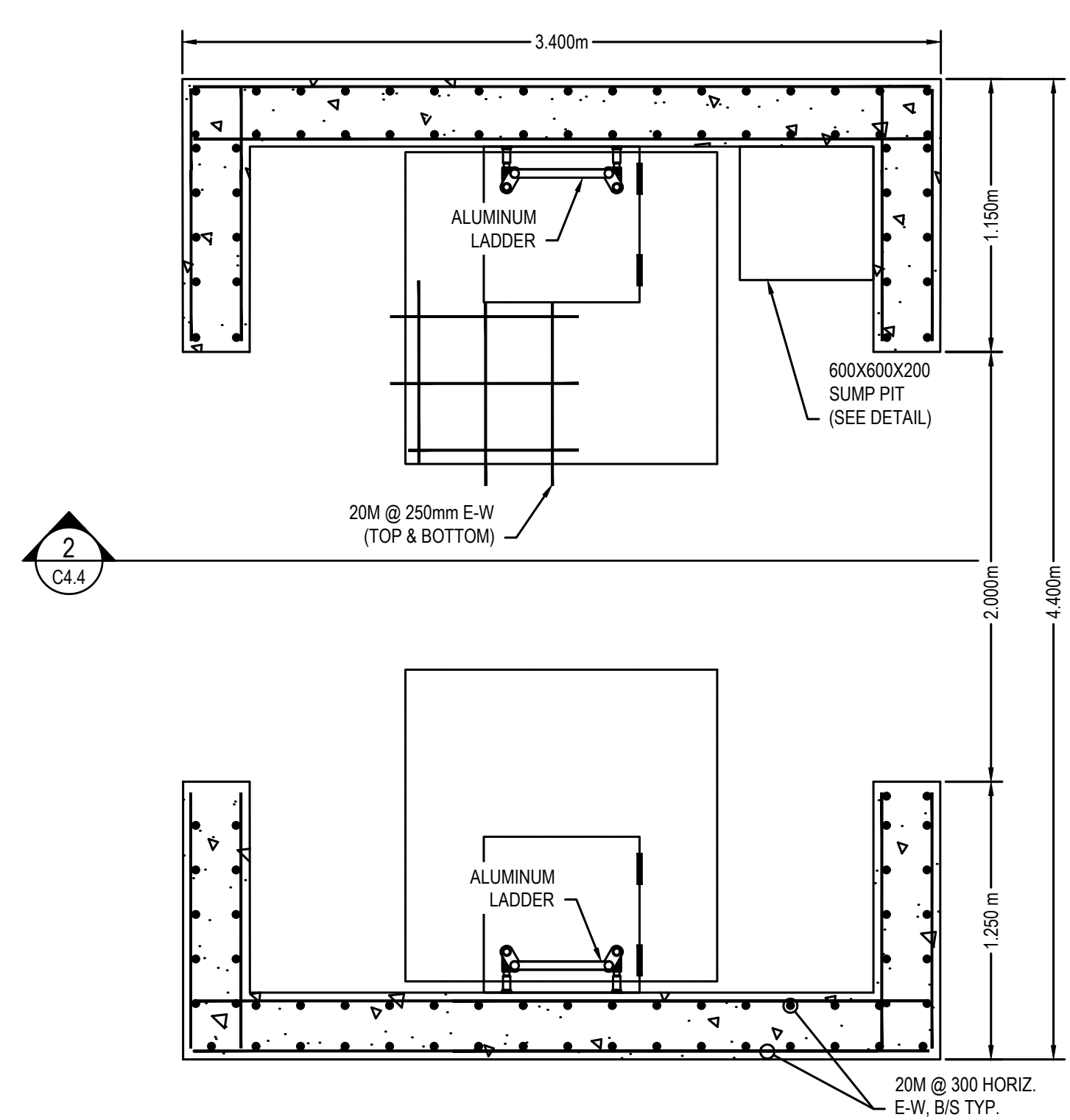
PENSTOCK CONNECTION DETAIL (AT BOTTOM)  
SCALE: 1:10



VALVE CHAMBER ELEVATION  
SCALE: 1:25



VALVE CHAMBER SECTION  
SCALE: 1:25



VALVE CHAMBER PLAN (MID-HEIGHT)  
SCALE: 1:25

No.	Date	Description	Drawn by / Dessiné par	Approved / Approuvé
4	16JULY21	ISSUED FOR TENDER	M.CARBONE	D.SPACEK
3	25APR21	99% REVIEW	M.CARBONE	D.SPACEK
2	18MAR21	90% REVIEW	M.CARBONE	D.SPACEK
1	26JUNE20	75% REVIEW	M.CARBONE	D.SPACEK
0	21APR20	66% REVIEW	M.CARBONE	D.SPACEK

Revision / Revision	
A	Detail number / A Numéro de détail
B	Sheet number / B Numéro de la feuille
Linear dimensions in millimetres / Dimensions linéaires en millimètres	

Consultant's Name / Nom de l'expert-conseil: **wsp**

Eng. Stamp / Sceau de l'ingénieur: **D. M. SPACEK**, July 16, 2021

Project title / Titre du projet: **511SSM POWERHOUSE STRUCTURAL STABILIZATION PROJECT**

Drawing title / Titre du dessin: **PROPOSED CONTEMPORARY VALVE CHAMBER SECTIONS/DETAILS**

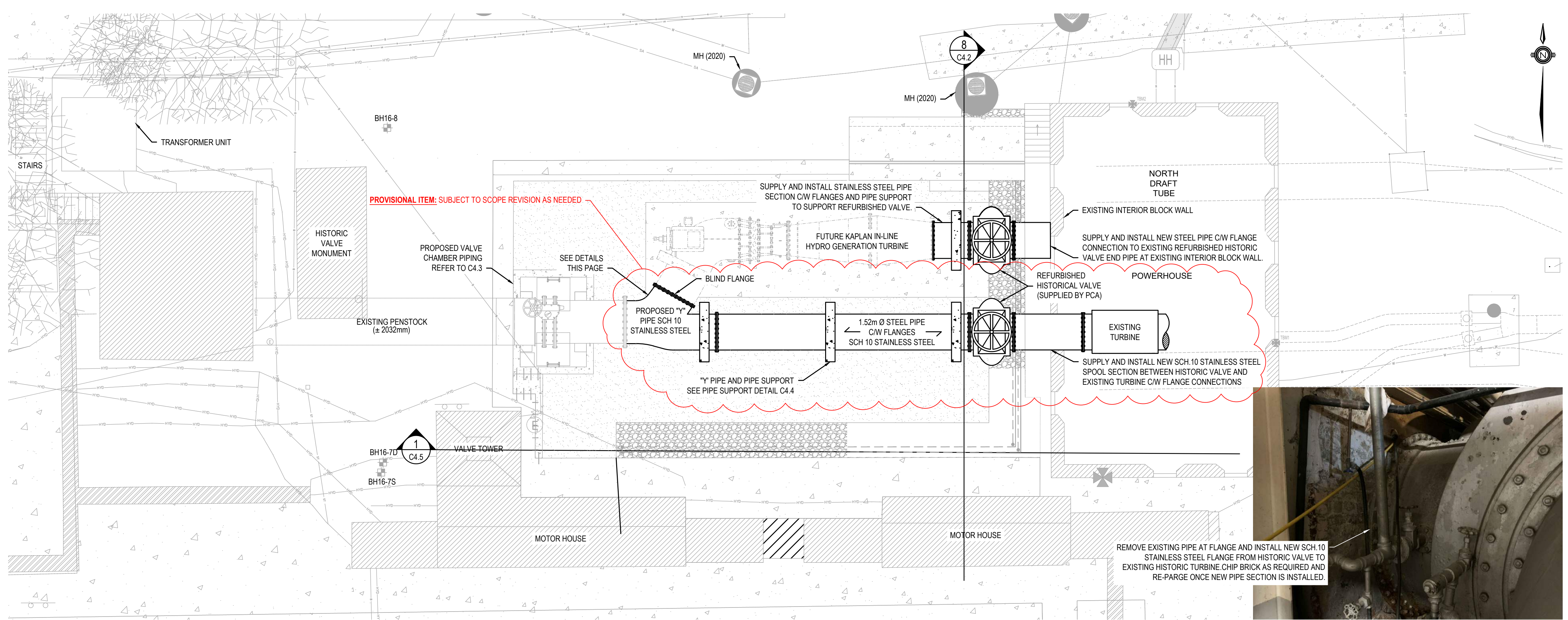
Designed by / Conçeut par: J.DICERBO / D.SPACEK	Date: MAY 25, 2021
Drawn by / Dessiné par: M.CARBONE	Date: MAY 25, 2021
Checked by / Vérifié par: J.DICERBO	Date: MAY 25, 2021
Approved by / Approuvé par: D.SPACEK	Date: MAY 25, 2021
Project No. / N° du projet: 511SSM	Scale / Échelle: AS NOTED
Drawing Set No. / N° de série du dessin: -	Sheet No. / N° de la feuille: C4.4



KEY PLAN:

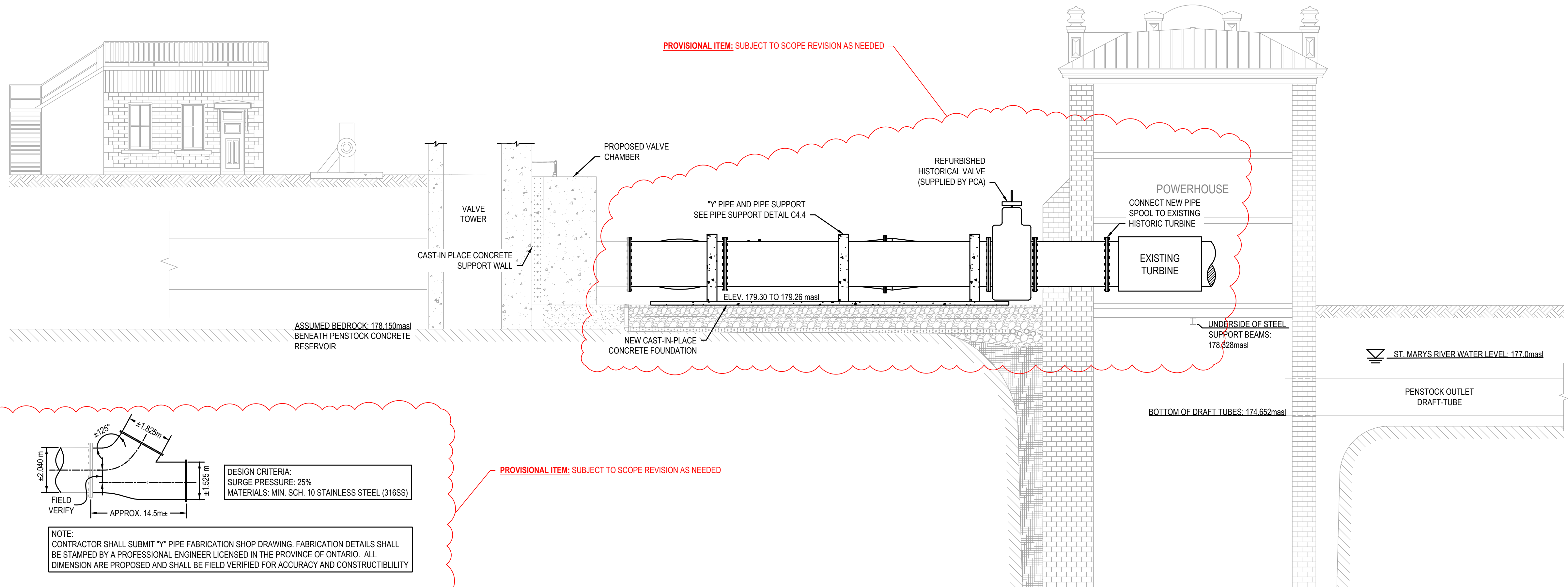
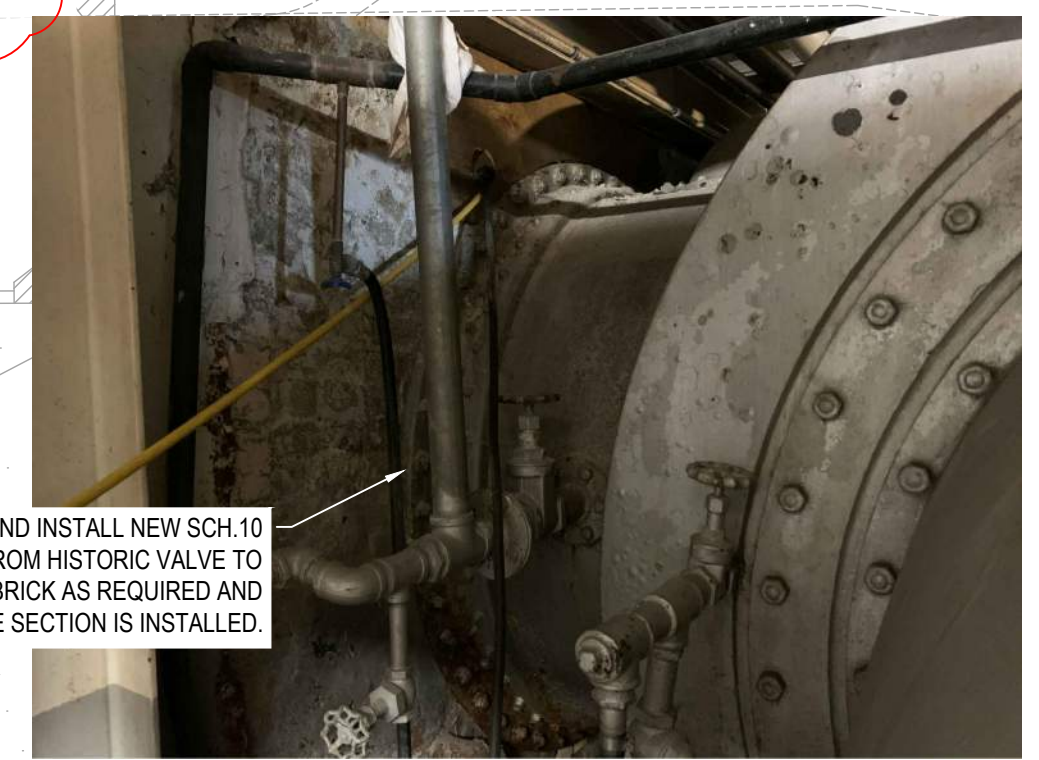


SAULT STE. MARIE, ONTARIO

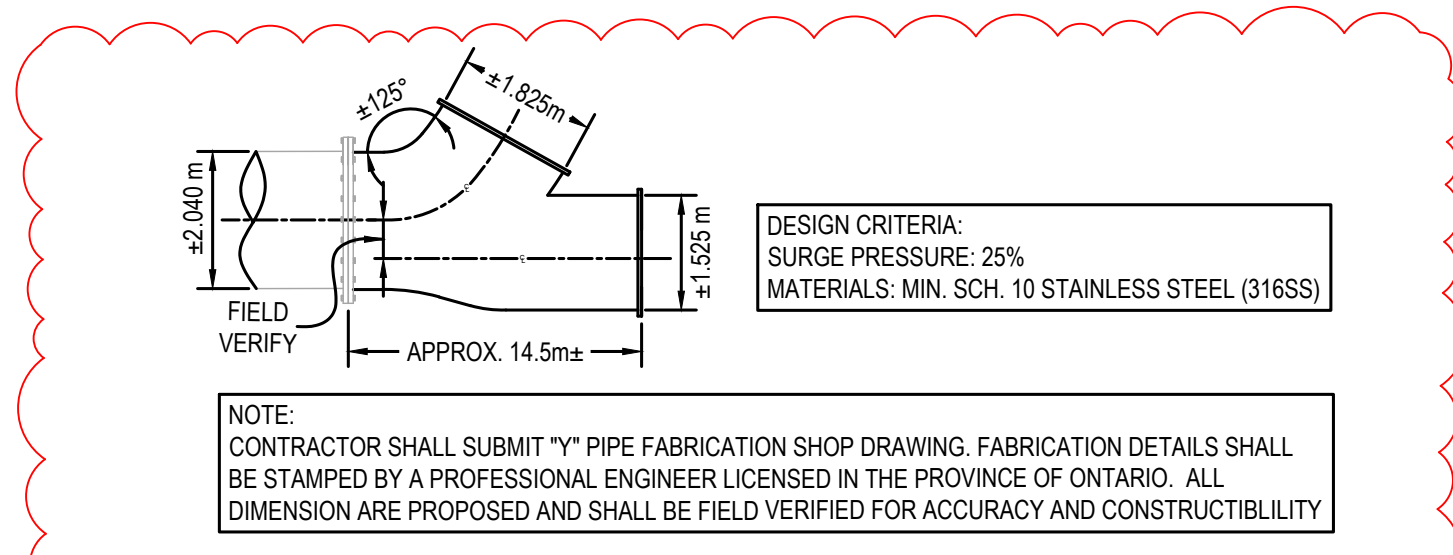


PROPOSED MANIFOLD AND FUTURE HYDRD GENERATION TURBINE  
SCALE: 1:100

EXISTING HISTORIC TURBINE REFERENCE PHOTO  
SCALE: NTS



PROPOSED PENSTOCK CONCRETE RESERVOIR SECTION  
SCALE: 1:100



PROPOSED "Y" PIPE DETAILS  
SCALE: 1:100

No.	Date	Description	Drawn by / Dessiné par	Approved / Approuvé
4	16JULY21	ISSUED FOR TENDER	M.CARBONE	D.SPACEK
3	25APR21	99% REVIEW	M.CARBONE	D.SPACEK
2	18MAR21	90% REVIEW	M.CARBONE	D.SPACEK
1	26JUNE20	75% REVIEW	M.CARBONE	D.SPACEK
0	21APR20	66% REVIEW	M.CARBONE	D.SPACEK

Revision / Révision	
A	Detail number / Numéro de détail
B	Sheet number / Numéro de la feuille

Linear dimensions in millimetres / Dimensions linéaires en millimètres

Consultant's Name / Nom de l'expert-consultant: **wsp**

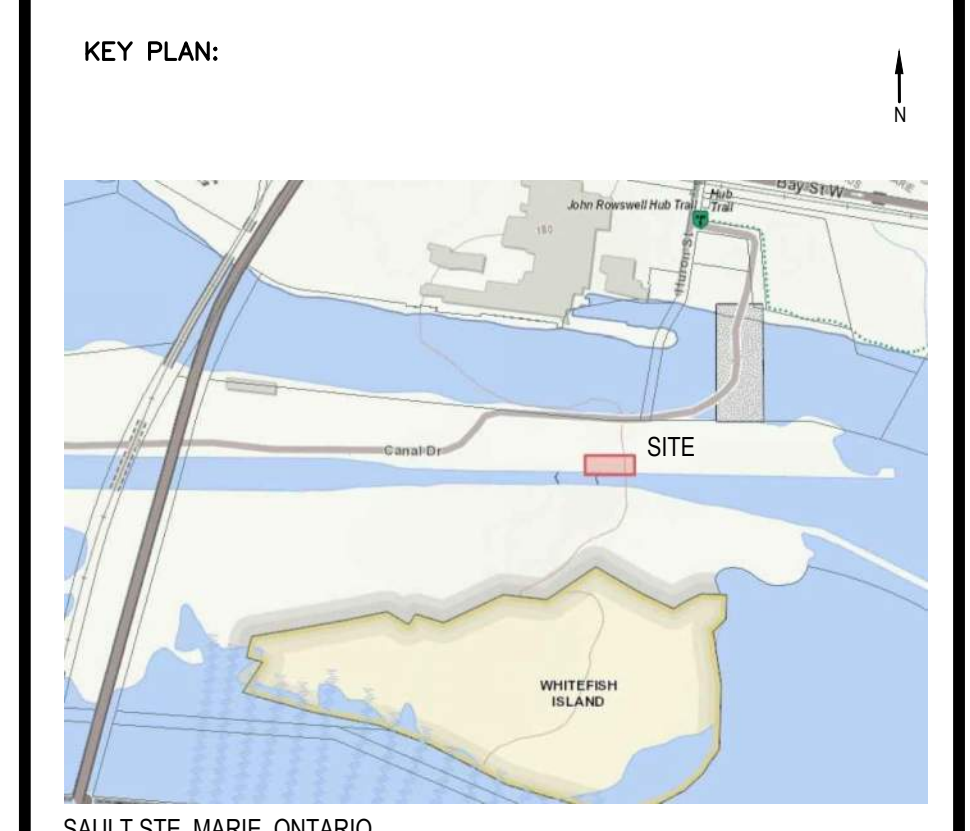
Eng. Stamp / Sceau de l'ingénieur: **D. M. SPACEK**, July 16, 2021

Project title / Titre du projet: **511SSM POWERHOUSE STRUCTURAL STABILIZATION PROJECT**

Drawing title / Titre du dessin: **PROPOSED HYDRO GENERATION TURBINE (NIC) REFERENCE ONLY**

Designed by / Conçeut par: J.DICERBO / D.SPACEK	Date: MAY 25, 2021
Drawn by / Dessiné par: M.CARBONE	Date: MAY 25, 2021
Checked by / Vérifié par: J.DICERBO	Date: MAY 25, 2021
Approved by / Approuvé par: D.SPACEK	Date: MAY 25, 2021
Project No. / N° du projet: 511SSM	Scale / Echelle: AS NOTED
Drawing Set No. / N° de série du dessin: -	Sheet No. / N° de la feuille: C4.5





SAULT STE. MARIE, ONTARIO

- NOTES:**
- CONTRACTOR SHALL:
- 1) PROACTIVELY PROTECT EXISTING AND RECENT TRENCH WORKS SO AS TO PREVENT ANY AND ALL POTENTIAL FOR DAMAGE.
  - 2) COMPLETE THEIR OWN LOCATES IN DETAIL BEFORE ANY WORK.
  - 3) WORK WITH WSP AND PCA TO ENSURE AS MUCH INFORMATION IS FOUND IN THE FIELD IN ACTUAL LOCATES.
  - 4) INVESTIGATE USING HYDROVAC TO FIND THE TRENCH ENCASUREMENTS AND/OR THE CONDUITS AND/OR THE SERVICES TO BE LOCATED.
  - 5) EXCAVATIONS SHALL BE CAREFULLY IMPLEMENTED SO AS TO PROVIDE THE NECESSARY MEANS TO SUPPORT THE EXISTING SERVICES IN ADVANCE OF THE ACTUAL FULL LENGTH EXCAVATIONS.
  - 6) NO DAMAGE TO EXISTING SERVICES WILL BE ACCEPTED.

No.	Date	Description	Drawn by / Dessiné par	Approved / Approuvé
4	16JULY21	ISSUED FOR TENDER	M.CARBONE	D.SPACEK
3	25APR21	99% REVIEW	M.CARBONE	D.SPACEK
2	18MAR21	90% REVIEW	M.CARBONE	D.SPACEK
1	26JUNE20	75% REVIEW	M.CARBONE	D.SPACEK
0	21APR20	66% REVIEW	M.CARBONE	D.SPACEK

Revision / Revision	
A	Detail number / A Numéro de détail
B	Sheet number / B Numéro de la feuille

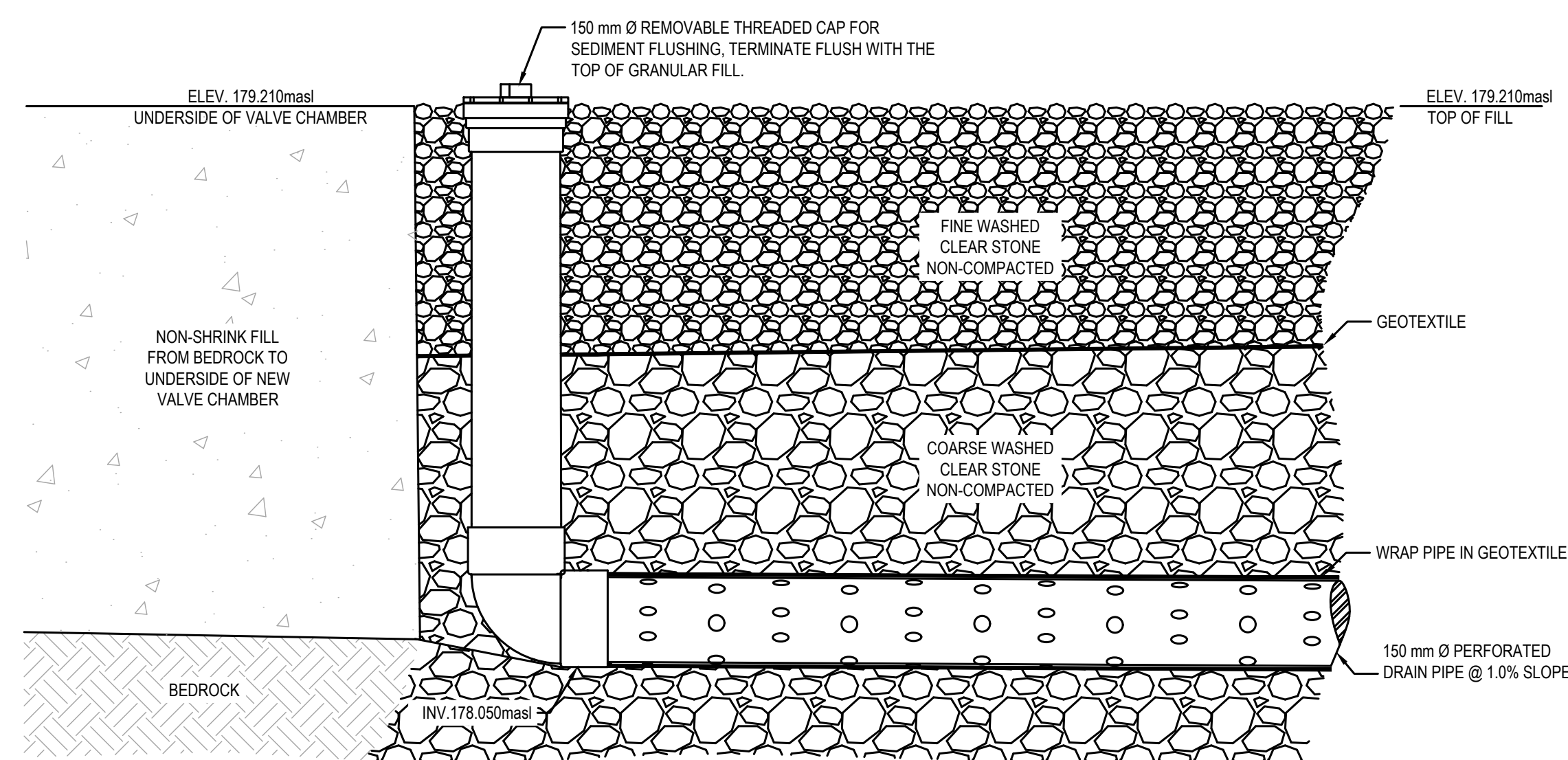
Consultant's Name / Nom de l'expert-conseil: **wsp**

Eng. Stamp / Sceau de l'ingénieur: **D. M. SPACEK**, July 16, 2021

Project title / Titre du projet: **511SSM POWERHOUSE STRUCTURAL STABILIZATION PROJECT**

Drawing title / Titre du dessin: **TEMPORARY DEWATERING AND TREATMENT LAYOUT**

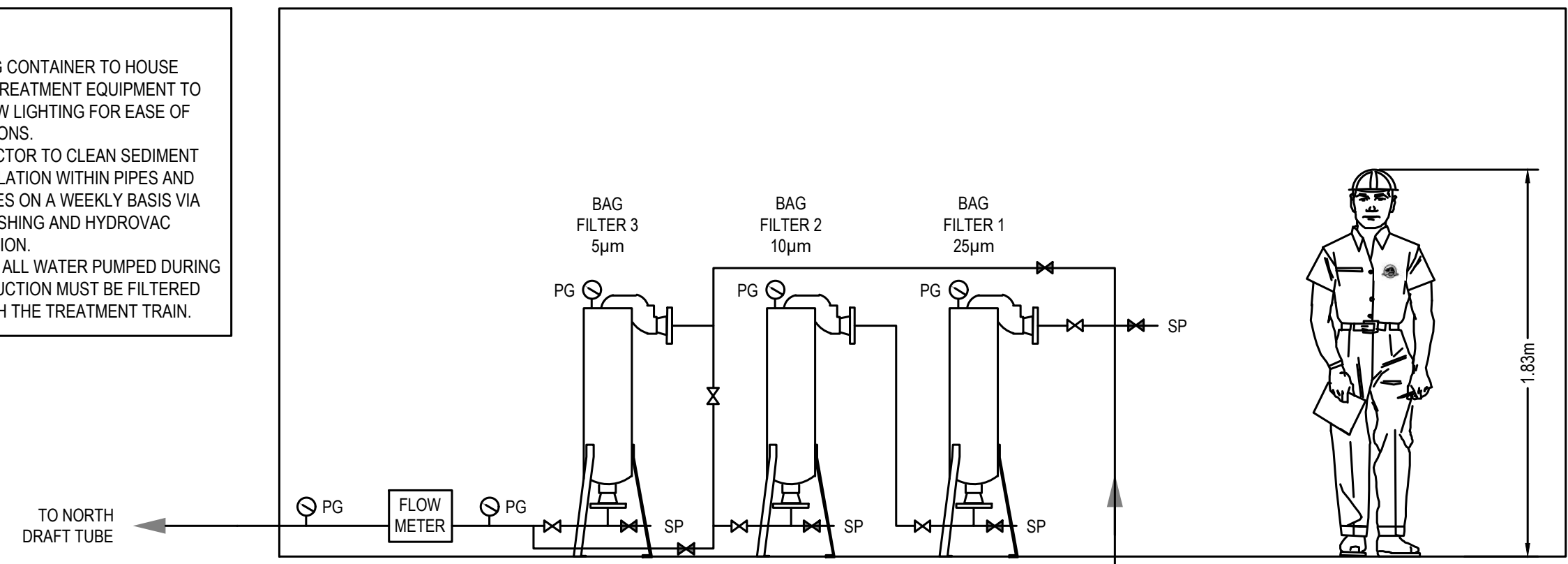
Designed by / Conçue par: J.DICERBO / D.SPACEK	Date: MAY 25, 2021
Drawn by / Dessiné par: M.CARBONE	Date: MAY 25, 2021
Checked by / Vérifié par: J.DICERBO	Date: MAY 25, 2021
Approved by / Approuvé par: D.SPACEK	Date: MAY 25, 2021
Project No. / N° du projet: 511SSM	Scale / Echelle: AS NOTED
Sheet No. / N° de la feuille: C5.0	
Drawing Set No. / N° de série du dessin: -	



PIPE TERMINATION DETAIL  
SCALE: 1:10

- NOTES:**
1. SHIPPING CONTAINER TO HOUSE WATER TREATMENT EQUIPMENT TO COME CW LIGHTING FOR EASE OF OPERATIONS.
  2. CONTRACTOR TO CLEAN SEDIMENT ACCUMULATION WITHIN PIPES AND MANHOLES ON A WEEKLY BASIS VIA PIPE FLUSHING AND HYDROVAC COLLECTION.
  3. ANY AND ALL WATER PUMPED DURING CONSTRUCTION MUST BE FILTERED THROUGH THE TREATMENT TRAIN.

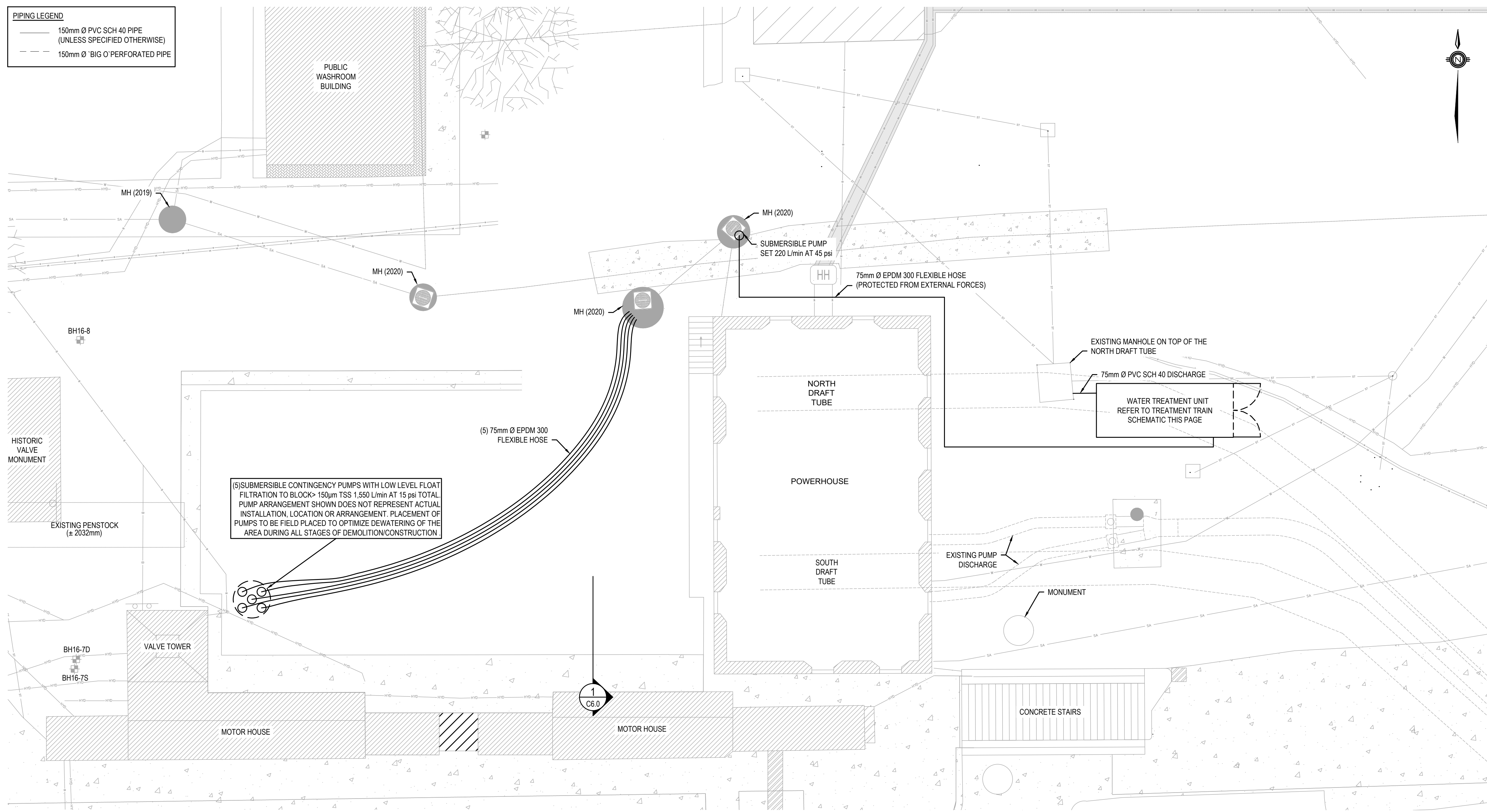
NOTE: FILTER HOUSINGS AND FILTER BAGS WILL BE SUPPLIED BY PCA. CONTRACTOR TO PROVIDE ALL NECESSARY ENCLOSURE, PIPING, FLOW METER, VALVES AND GAUGES AS SHOWN.



TREATMENT TRAIN SCHEMATIC  
SCALE: 1:25

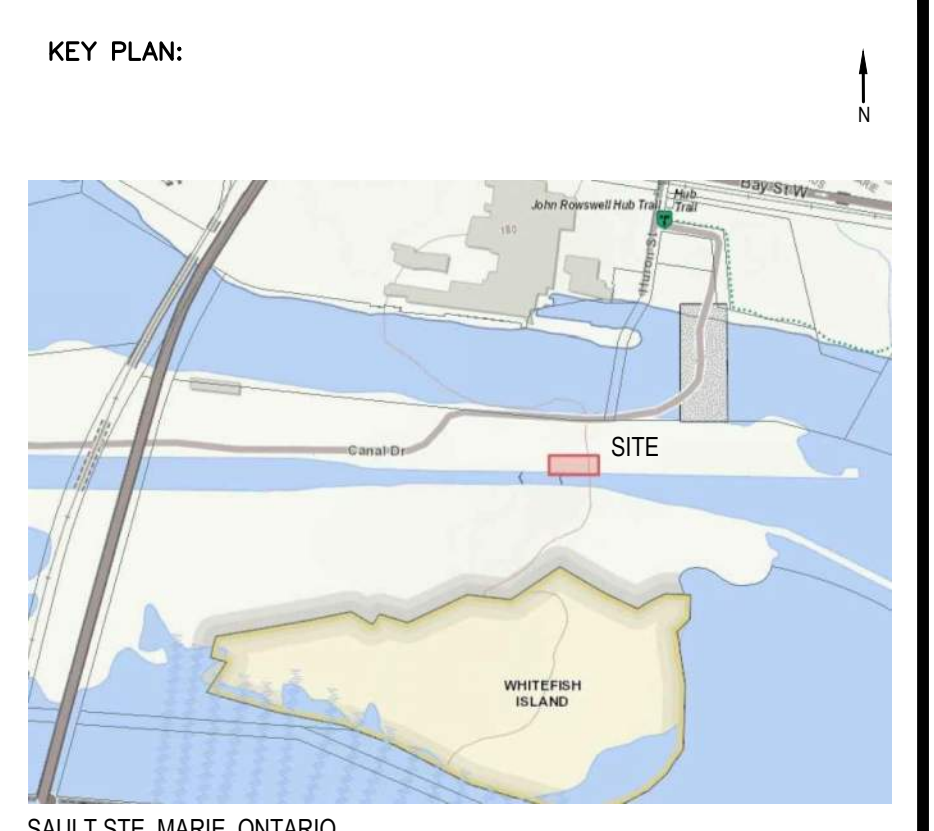
**PIPING LEGEND**

- 150mm Ø PVC SCH 40 PIPE (UNLESS SPECIFIED OTHERWISE)
- 150mm Ø 'BIG O' PERFORATED PIPE



TEMPORARY DEWATERING AND TREATMENT PLAN  
SCALE: 1:50





SAULT STE. MARIE, ONTARIO

- NOTES:
- CONTRACTOR SHALL:
- 1) PROACTIVELY PROTECT EXISTING AND RECENT TRENCH WORKS SO AS TO PREVENT ANY AND ALL POTENTIAL FOR DAMAGE.
  - 2) COMPLETE THEIR OWN LOCATES IN DETAIL BEFORE ANY WORK.
  - 3) WORK WITH WSP AND PCA TO ENSURE AS MUCH INFORMATION IS FOUND IN THE FIELD IN ACTUAL LOCATES.
  - 4) INVESTIGATE USING HYDROVAC TO FIND THE TRENCH ENCASUREMENTS AND/OR THE CONDUITS AND/OR THE SERVICES TO BE LOCATED.
  - 5) EXCAVATIONS SHALL BE CAREFULLY IMPLEMENTED SO AS TO PROVIDE THE NECESSARY MEANS TO SUPPORT THE EXISTING SERVICES IN ADVANCE OF THE ACTUAL FULL LENGTH EXCAVATIONS. NO DAMAGE TO EXISTING SERVICES WILL BE ACCEPTED.
  - 6) NO DAMAGE TO EXISTING SERVICES WILL BE ACCEPTED.

No.	Date	Description	Drawn by / Dessiné par	Approved / Approuvé
4	16JULY21	ISSUED FOR TENDER	M.CARBONE	D.SPACEK
3	25APR21	99% REVIEW	M.CARBONE	D.SPACEK
2	18MAR21	90% REVIEW	M.CARBONE	D.SPACEK
1	26JUNE20	75% REVIEW	M.CARBONE	D.SPACEK
0	21APR20	66% REVIEW	M.CARBONE	D.SPACEK

Revision / Révision	
A	Detail number / Numéro de détail
B	Sheet number / Numéro de la feuille
Linear dimensions in millimetres / Dimensions linéaires en millimètres	

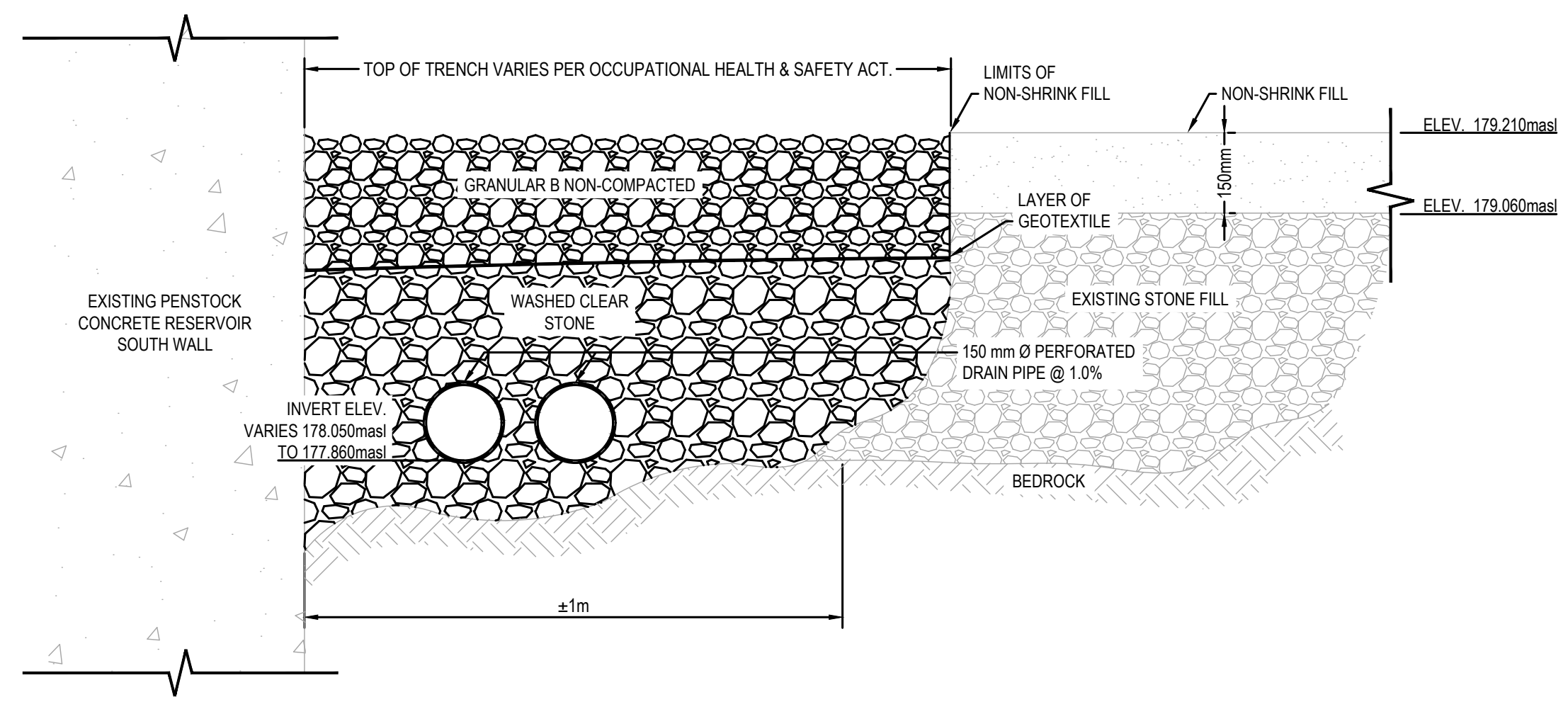
Consultant's Name / Nom de l'expert-conseil: **wsp**

Eng. Stamp / Sceau de l'ingénieur:

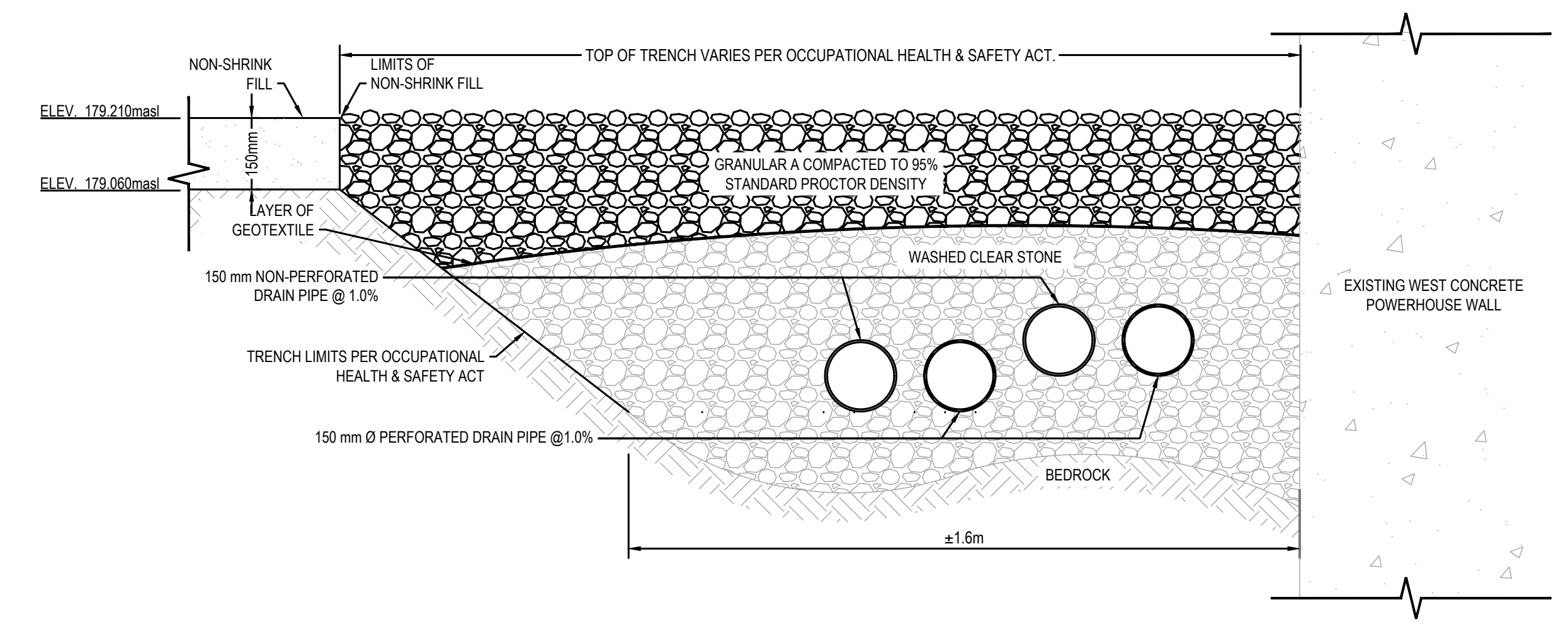
Project title / Titre du projet: **511SSM POWERHOUSE STRUCTURAL STABILIZATION PROJECT**

Drawing title / Titre du dessin: **PASSIVE WATER SYSTEM LAYOUT**

Designed by / Conçeut par: J.DICERBO / D.SPACEK	Date: MAY 25, 2021
Drawn by / Dessiné par: M.CARBONE	Date: MAY 25, 2021
Checked by / Vérifié par: J.DICERBO	Date: MAY 25, 2021
Approved by / Approuvé par: D.SPACEK	Date: MAY 25, 2021
Project No. / N° du projet: 511SSM	Scale / Echelle: AS NOTED
Sheet No. / N° de la feuille: C5.1	
Drawing Set No. / N° de série du dessin: -	



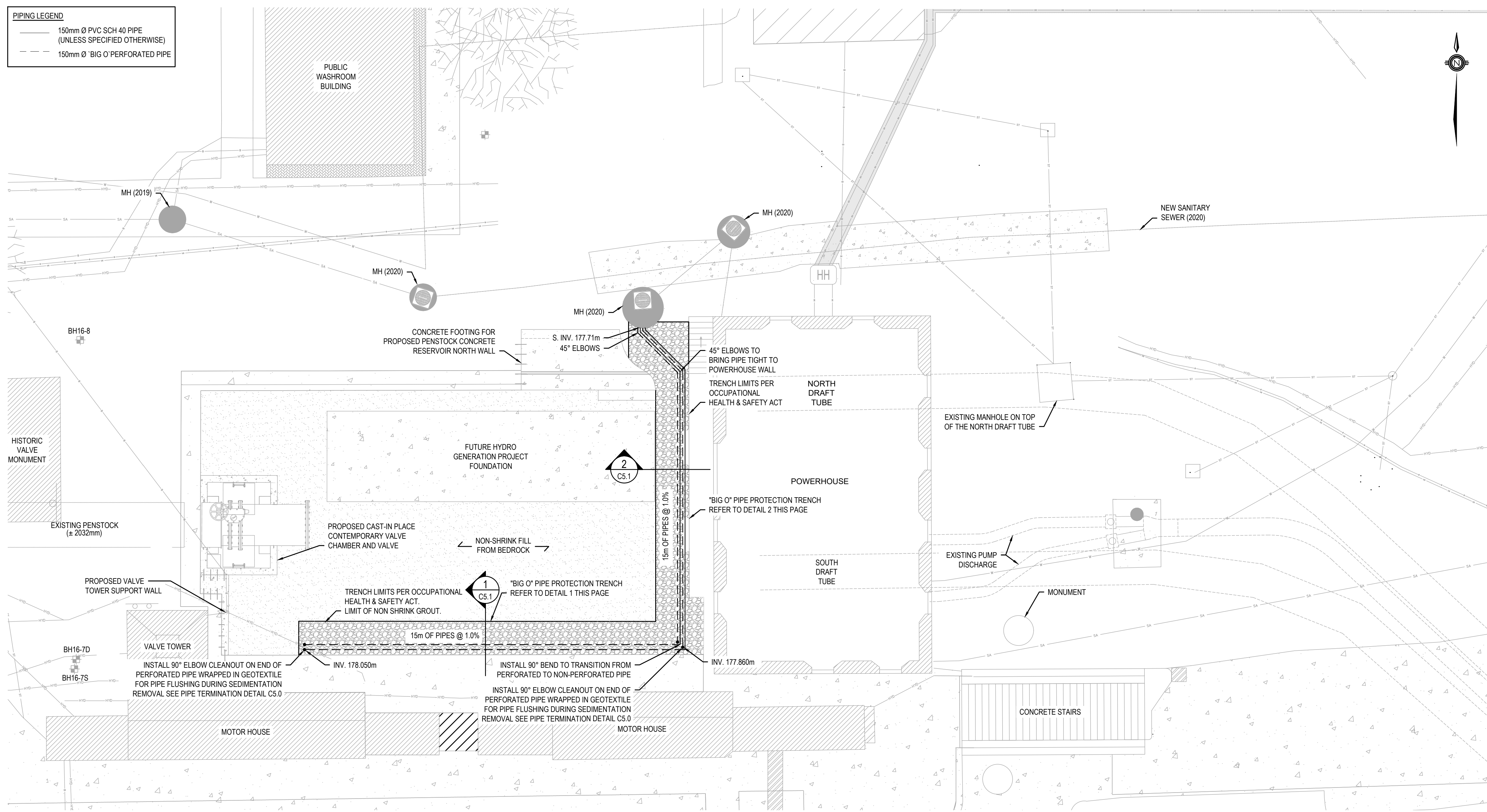
1 "BIG O" PIPE PROTECTION TRENCH DETAIL  
SCALE: 1:10



2 "BIG O" PIPE PROTECTION TRENCH DETAIL  
SCALE: 1:10

PIPING LEGEND

- 150mm Ø PVC SCH 40 PIPE (UNLESS SPECIFIED OTHERWISE)
- 150mm Ø 'BIG O' PERFORATED PIPE



PASSIVE WATER SYSTEM PLAN  
SCALE: 1:50



KEY PLAN:



SAULL STE. MARIE, ONTARIO

No.	Date	Description	Drawn by / Dessiné par	Approved / Approuvé
4	16JULY21	ISSUED FOR TENDER	M.CARBONE	D.SPACEK
3	25APR21	99% REVIEW	M.CARBONE	D.SPACEK
2	18MAR21	90% REVIEW	M.CARBONE	D.SPACEK
1	26JUNE20	75% REVIEW	M.CARBONE	D.SPACEK
0	21APR20	66% REVIEW	M.CARBONE	D.SPACEK

Revision / Révision	
A	B
Detail number / Numéro de détail	A
Sheet number / Numéro de la feuille	B
Linear dimensions in millimetres / Dimensions linéaires en millimètres	

Consultant's Name / Nom de l'expert-consultant: **wsp**

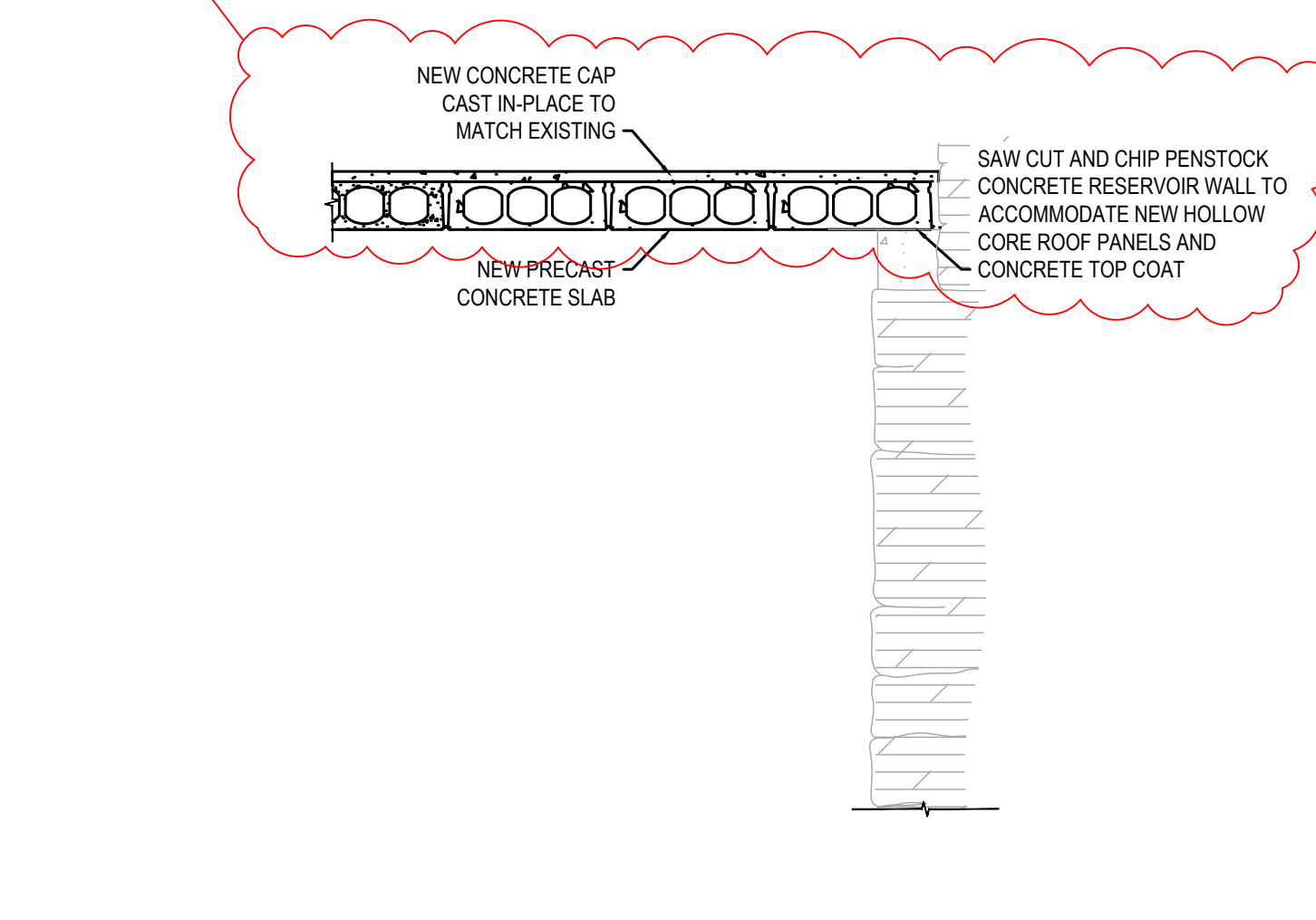
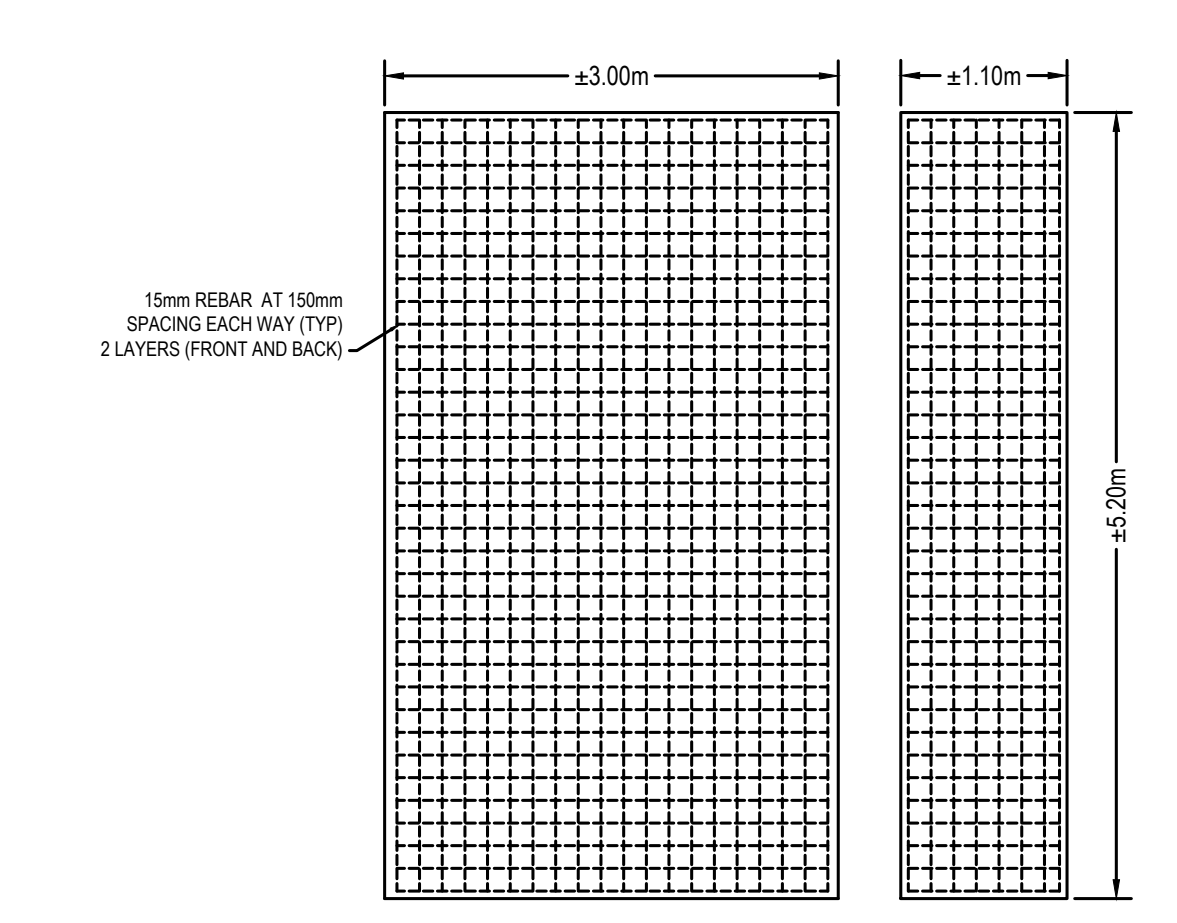
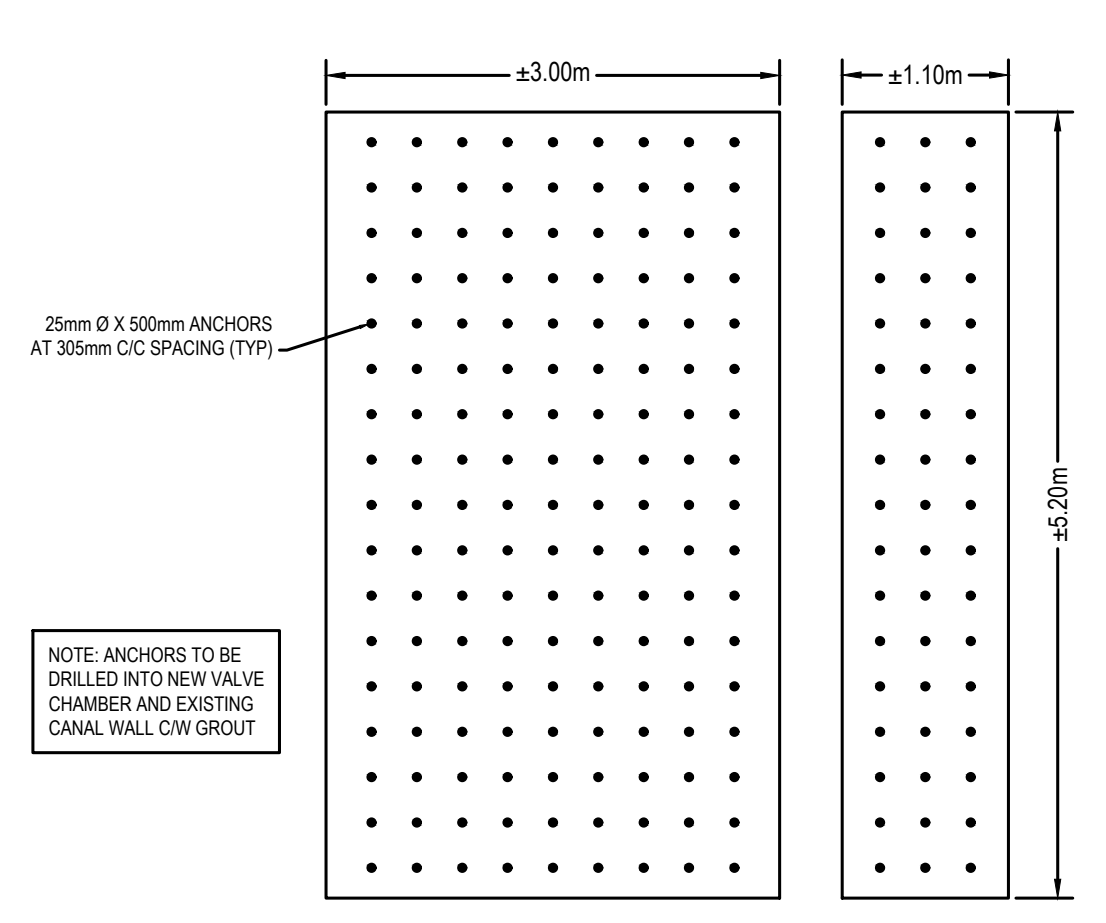
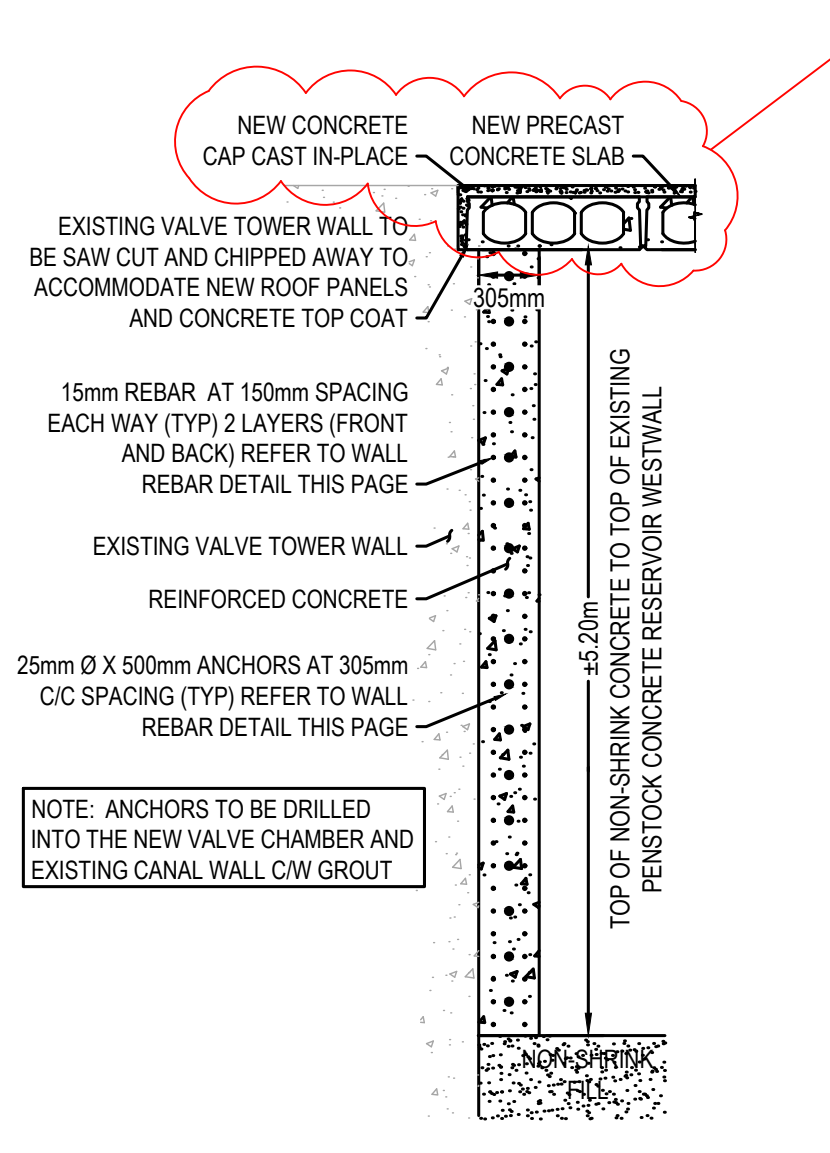
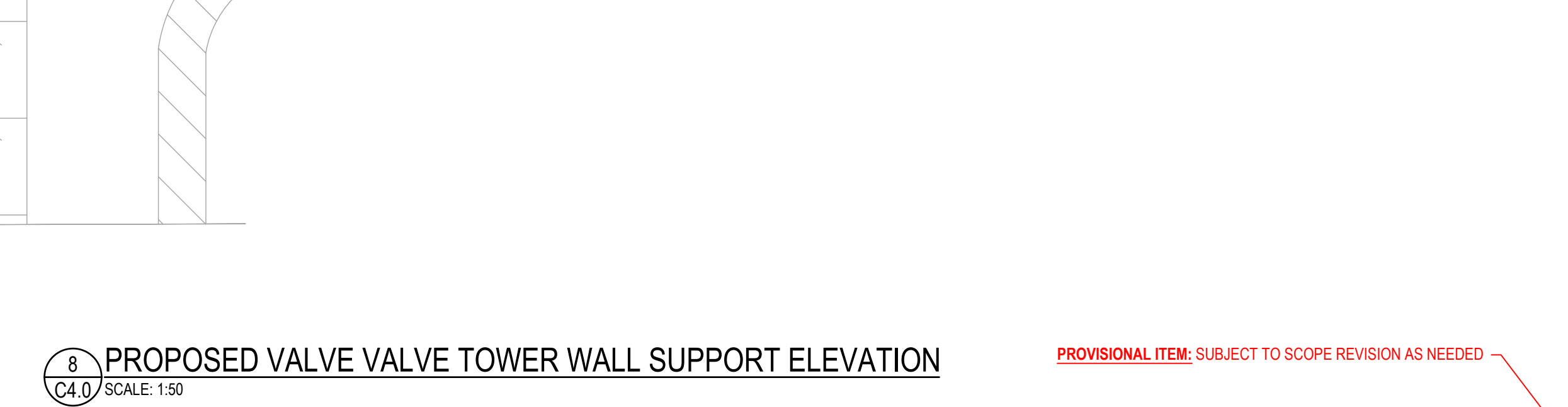
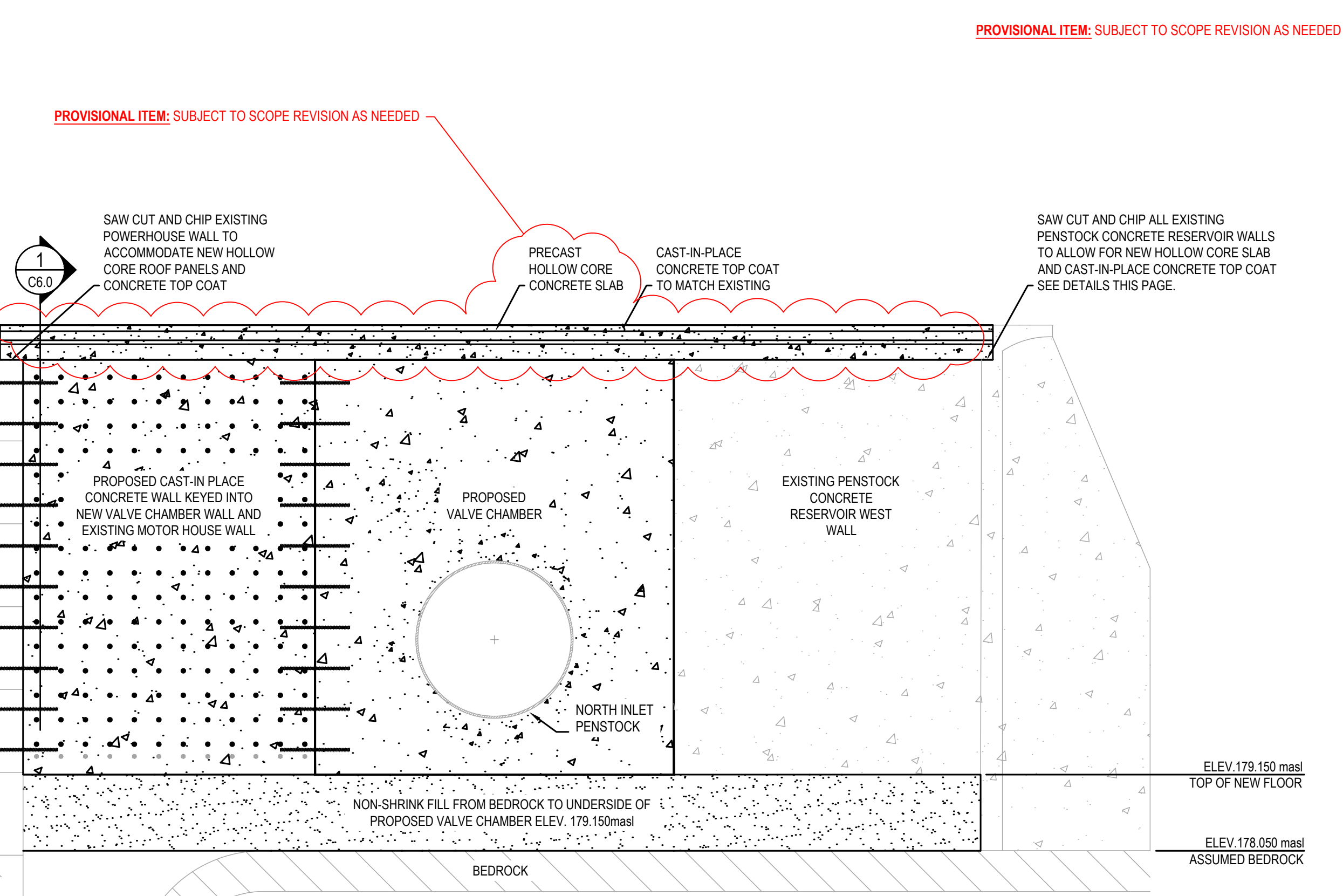
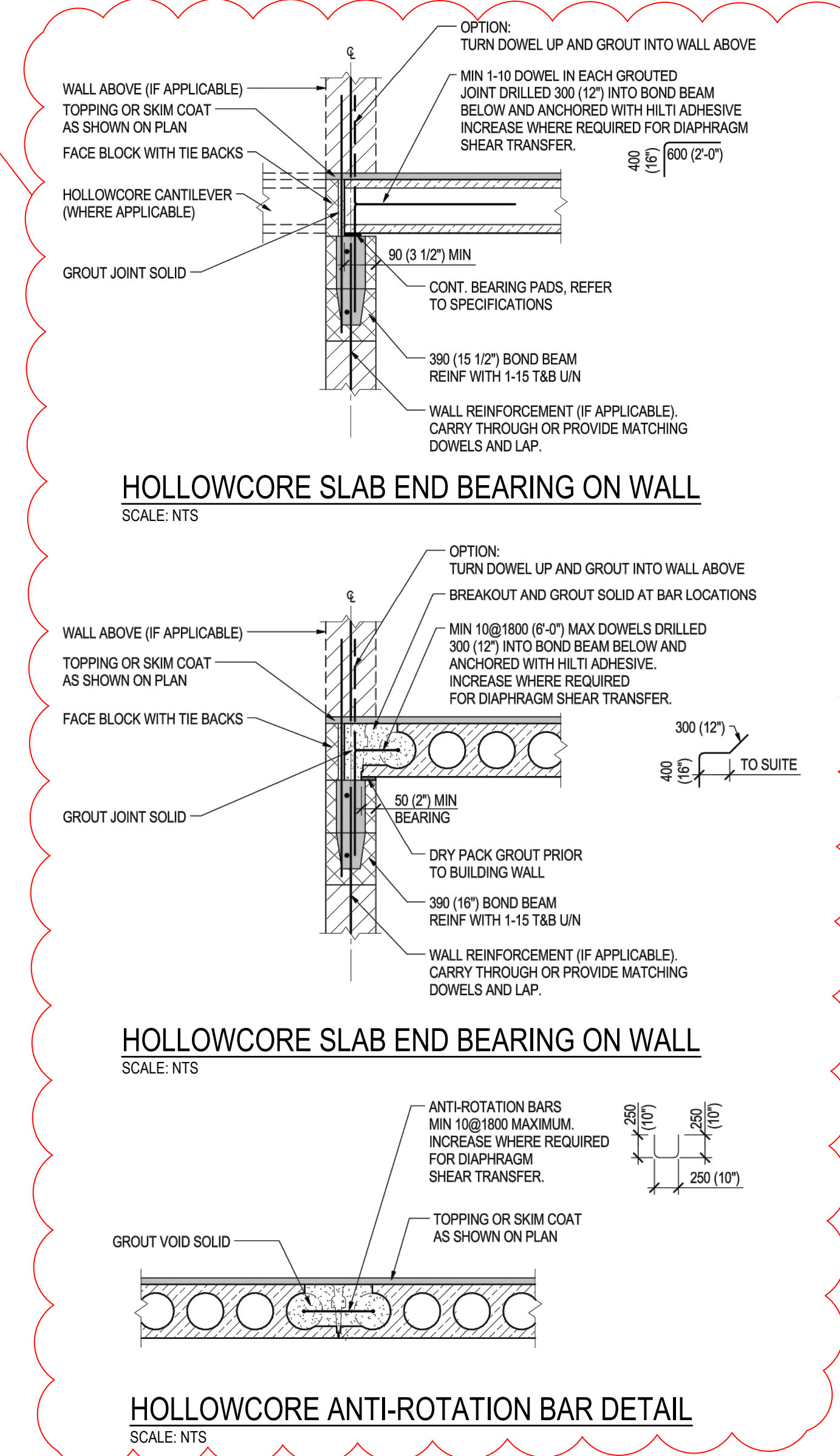
Eng. Stamp / Sceau de l'ingénieur: **D. M. SPACEK**, July 16, 2021

1348 ROSAMOUNT AVENUE, CORNWALL, ONTARIO CANADA, K6J 3E5  
TEL: 613-933-9821 | FAX: 755-638-0335 | WWW.WSP.COM  
WSP-SP201-15-001-001 (WSP# 151-00185-14)

Project title / Titre du projet: **511SSM POWERHOUSE STRUCTURAL STABILIZATION PROJECT**

Drawing title / Titre du dessin: **PROPOSED VALVE TOWER SUPPORT WALL ELEVATIONS AND DETAILS**

Designed by / Conçue par: J.DICERBO / D.SPACEK	Date: MAY 25, 2021
Drawn by / Dessiné par: M.CARBONE	Date: MAY 25, 2021
Checked by / Vérifié par: J.DICERBO	Date: MAY 25, 2021
Approved by / Approuvé par: D.SPACEK	Date: MAY 25, 2021
Project No. / N° du projet: 511SSM	Scale / Echelle: AS NOTED
Drawing Set No. / N° de série du dessin: C6.0	



VALVE TOWER WALL SUPPORT ANCHORS DETAIL  
SCALE: 1:50

VALVE TOWER WALL SUPPORT REBAR DETAIL  
SCALE: 1:50

PROPOSED PENSTOCK CONCRETE RESERVOIR SOUTH WALL SECTION  
SCALE: 1:40

PROPOSED VALVE TOWER WALL SUPPORT SECTION  
SCALE: 1:50

PROPOSED VALVE TOWER WALL SUPPORT ELEVATION  
SCALE: 1:50

HOLLOWCORE ANTI-ROTATION BAR DETAIL  
SCALE: NTS

HOLLOWCORE SLAB END BEARING ON WALL  
SCALE: NTS

HOLLOWCORE SLAB END BEARING ON WALL  
SCALE: NTS

PROVISIONAL ITEM: SUBJECT TO SCOPE REVISION AS NEEDED

PROVISIONAL ITEM: SUBJECT TO SCOPE REVISION AS NEEDED

PROVISIONAL ITEM: SUBJECT TO SCOPE REVISION AS NEEDED

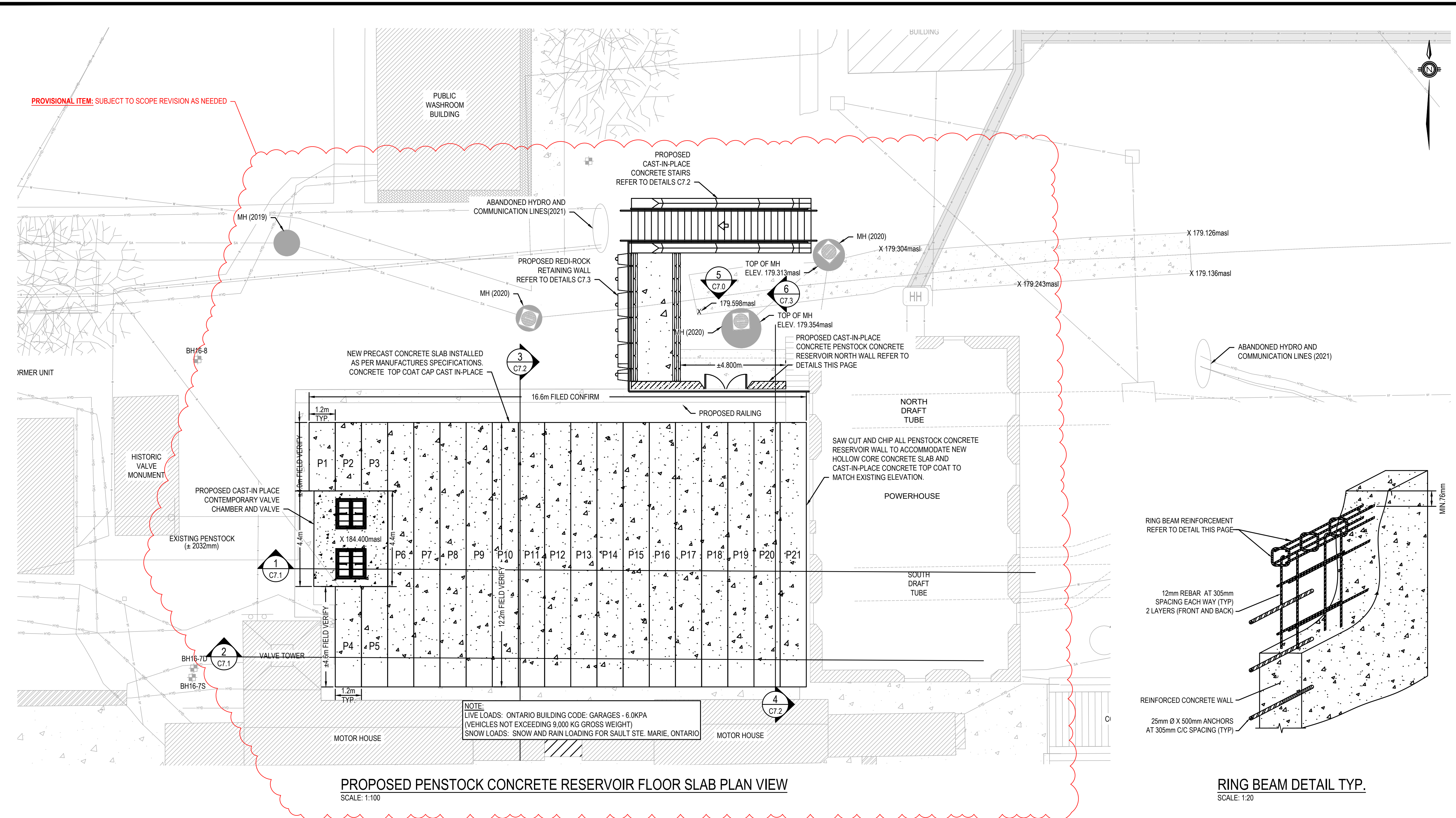
PROVISIONAL ITEM: SUBJECT TO SCOPE REVISION AS NEEDED



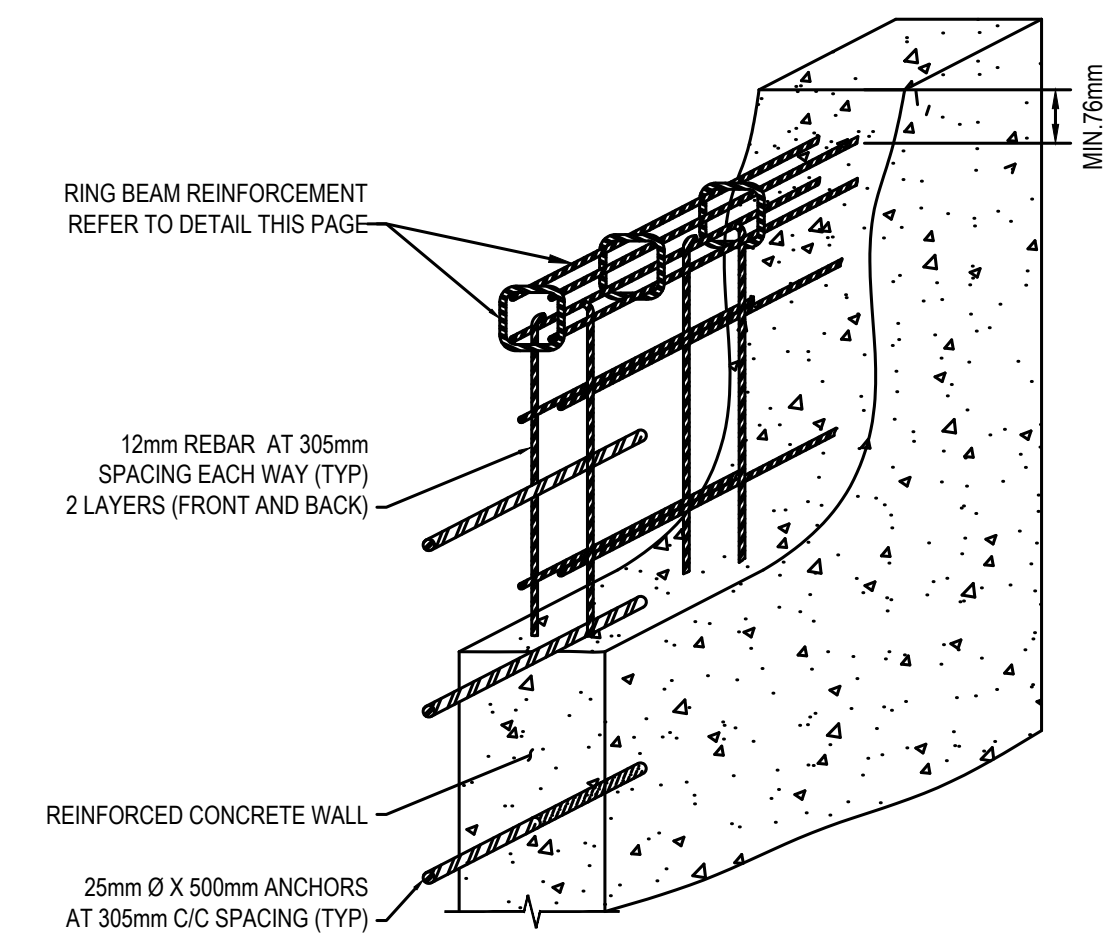
KEY PLAN:



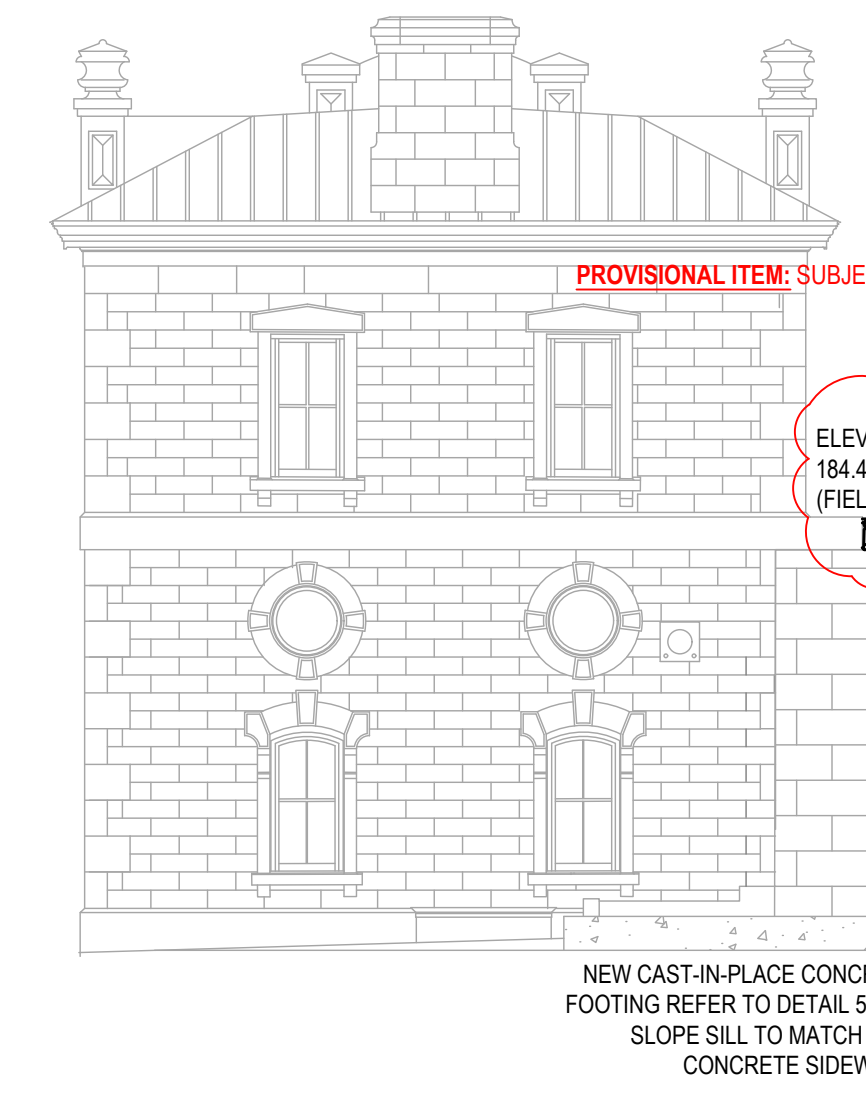
SAULT STE. MARIE, ONTARIO



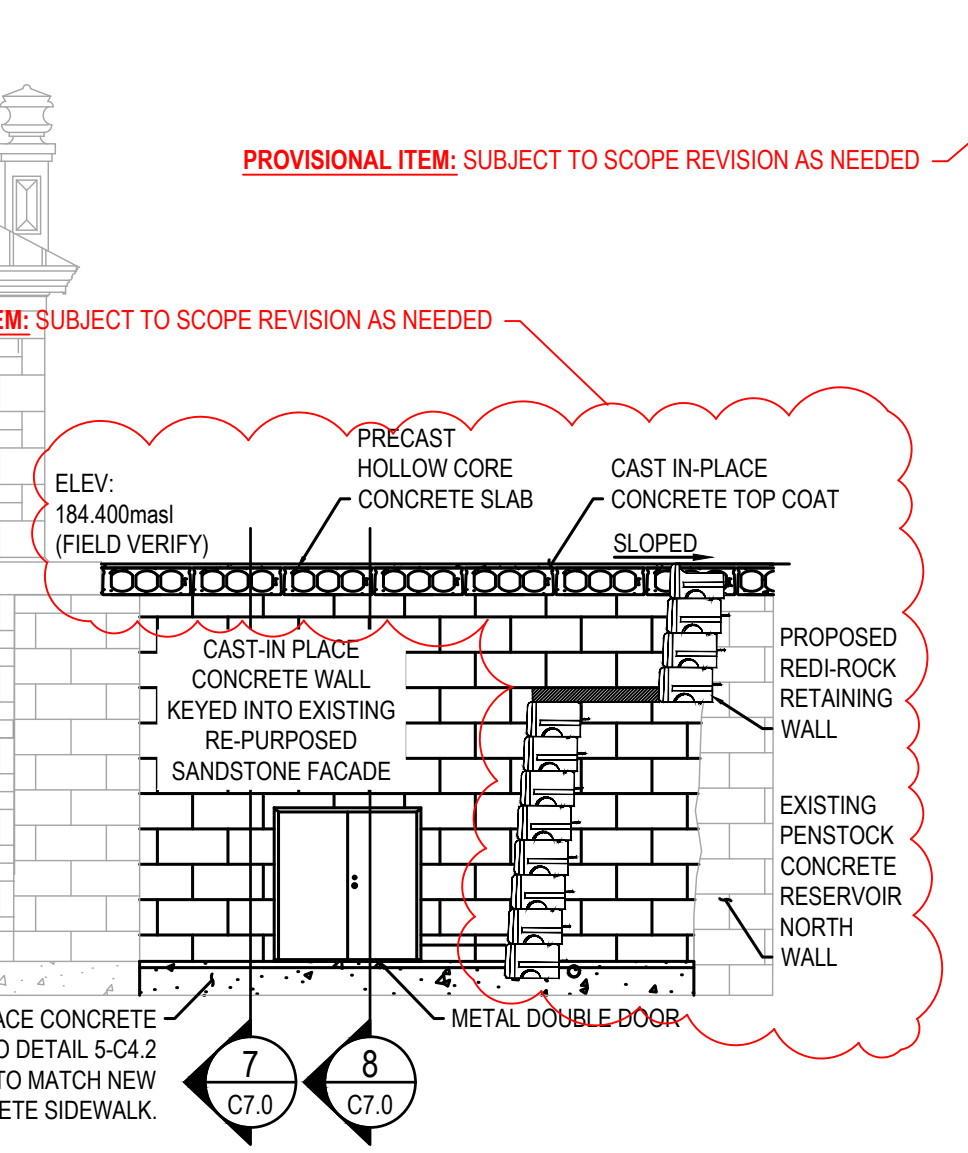
**PROPOSED PENSTOCK CONCRETE RESERVOIR FLOOR SLAB PLAN VIEW**  
SCALE: 1:100



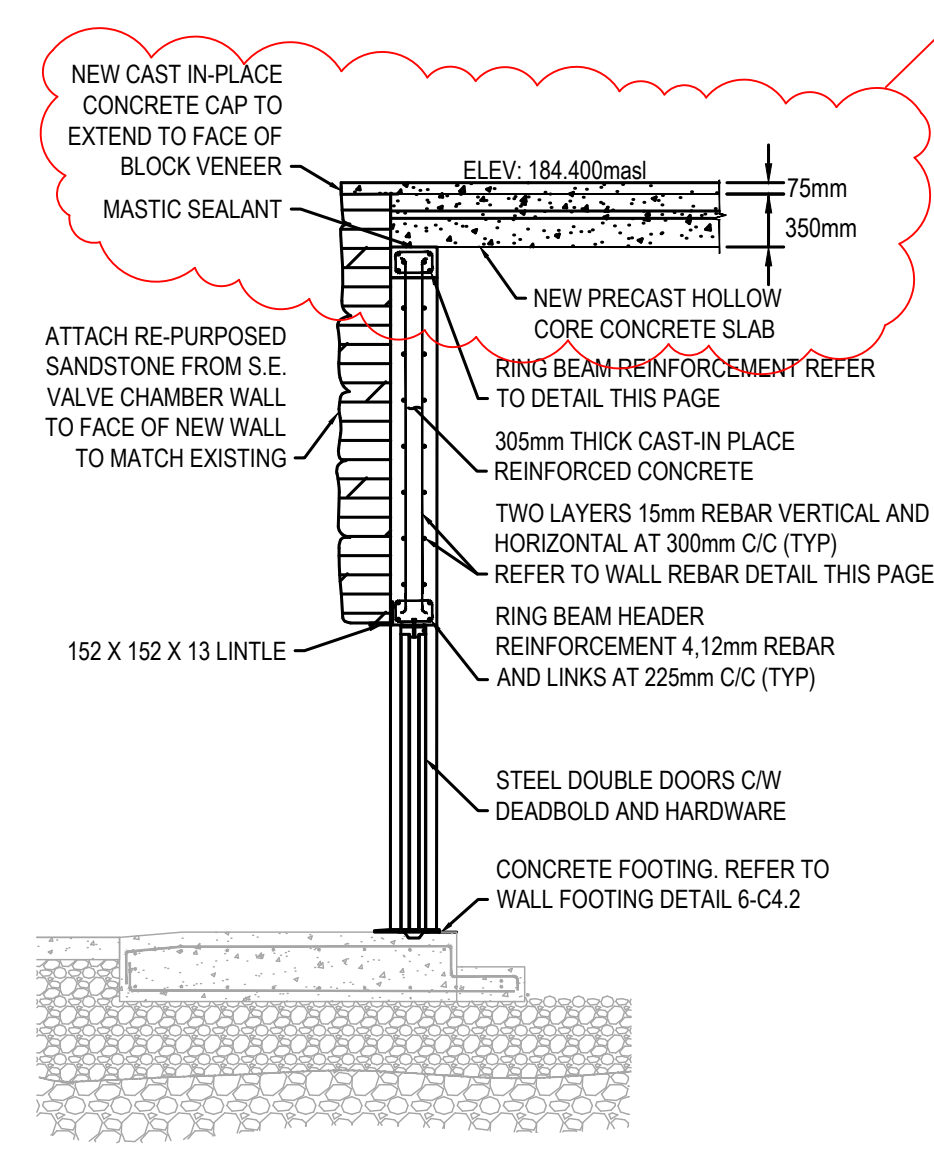
**RING BEAM DETAIL TYP.**  
SCALE: 1:20



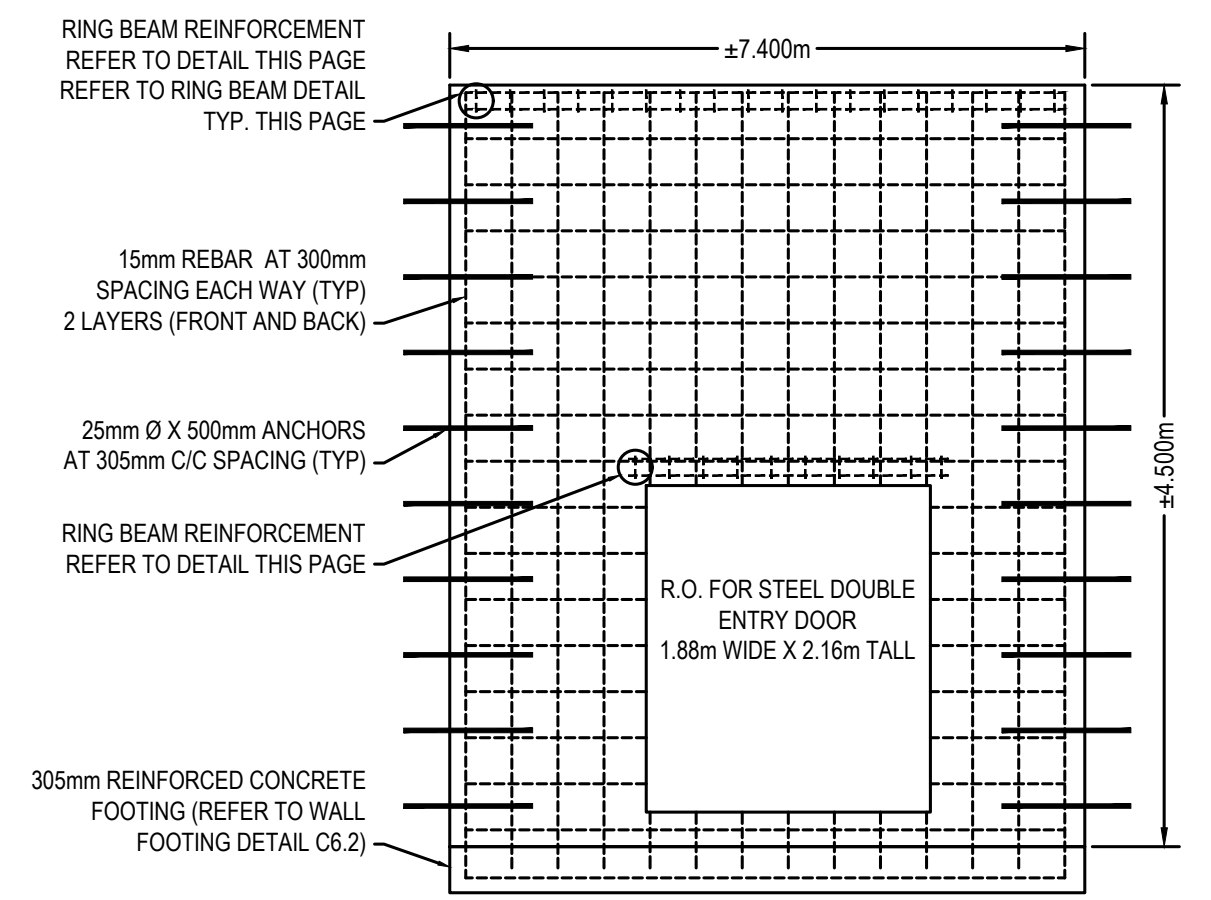
**5 NORTH RESERVOIR WALL ELEVATION**  
SCALE: 1:100



**7 NORTH RESERVOIR WALL SECTION**  
SCALE: 1:50



**8 NORTH RESERVOIR WALL SECTION**  
SCALE: 1:50



**NORTH RESERVOIR WALL REBAR DETAIL**  
SCALE: 1:50

No.	Date	Description	Drawn by / Dessiné par	Approved / Approuvé
4	16JULY21	ISSUED FOR TENDER	M.CARBONE	D.SPACEK
3	25APR21	99% REVIEW	M.CARBONE	D.SPACEK
2	18MAR21	90% REVIEW	M.CARBONE	D.SPACEK
1	26JUNE20	75% REVIEW	M.CARBONE	D.SPACEK
0	21APR20	66% REVIEW	M.CARBONE	D.SPACEK

Revision / Révision	
A	Detail number / Numéro de détail
B	Sheet number / Numéro de la feuille

Linear dimensions in millimetres / Dimensions linéaires en millimètres	
--	--

Consultant's Name / Nom de l'expert-conseil: **wsp**

Eng. Stamp / Sceau de l'ingénieur: [Professional Engineer Seal]

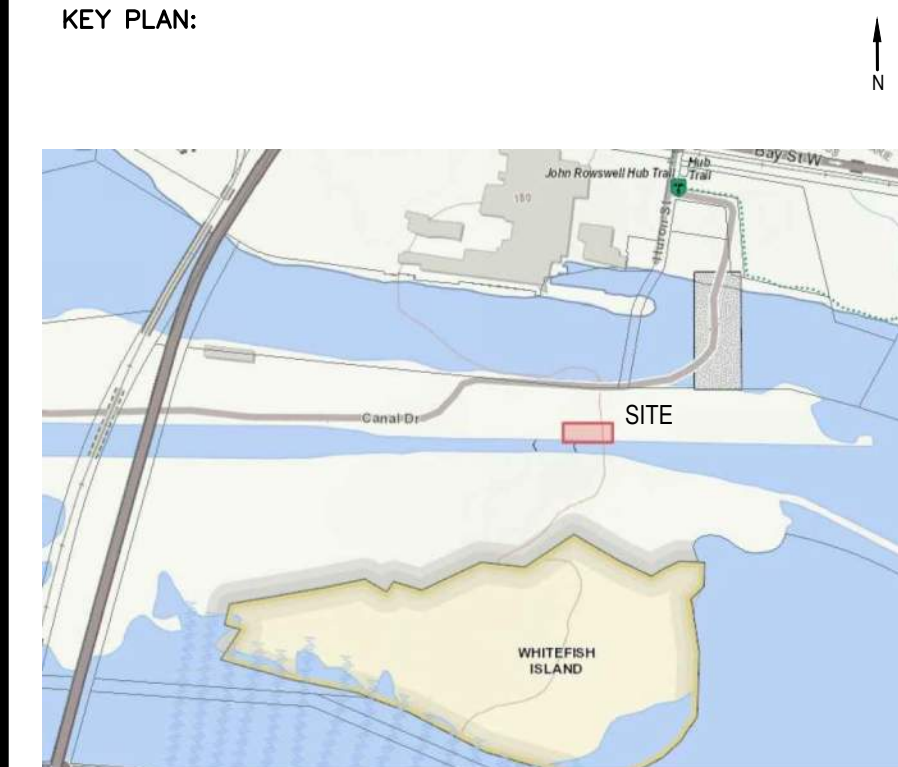
Project title / Titre du projet: **511SSM POWERHOUSE STRUCTURAL STABILIZATION PROJECT**

Drawing title / Titre du dessin: **PROPOSED PENSTOCK CONCRETE RESERVOIR COVER PLAN VIEW AND NORTH WALL ELEVATION/SECTIONS/DETAILS**

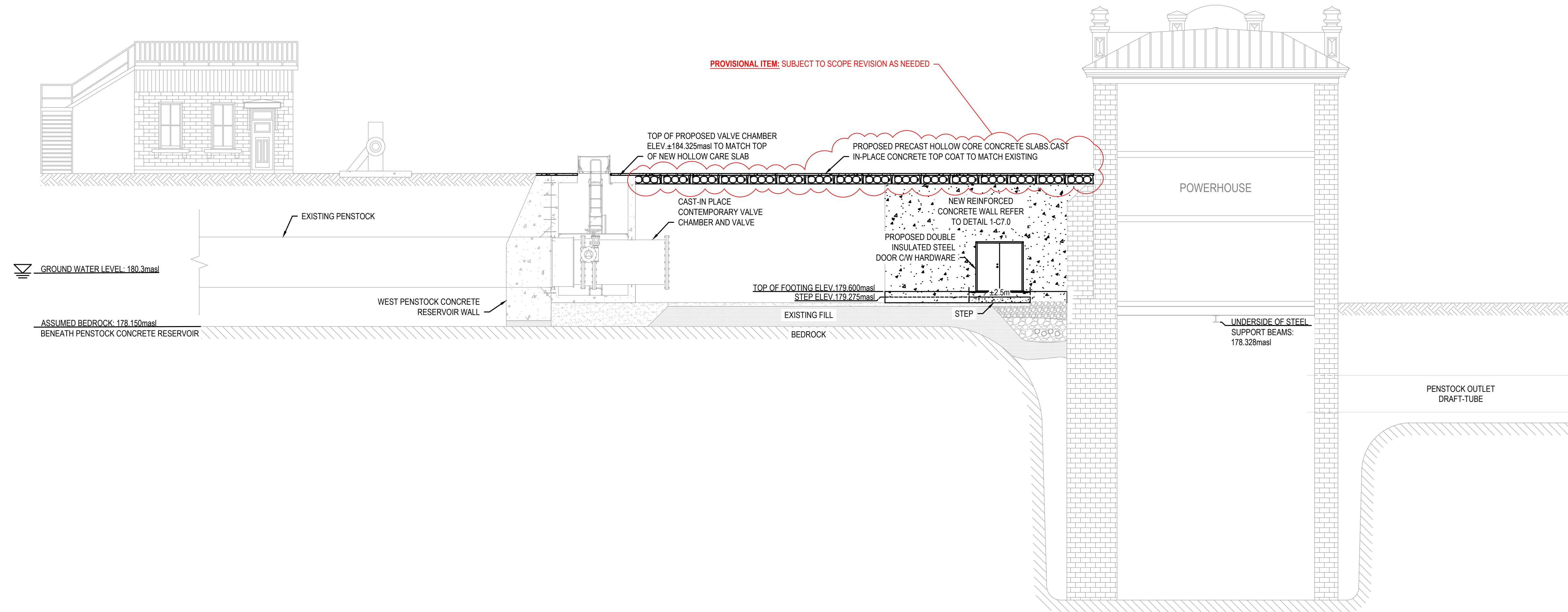
Designed by / Conçue par: J.DICERBO / D.SPACEK	Date: MAY 25, 2021
Drawn by / Dessiné par: M.CARBONE	Date: MAY 25, 2021
Checked by / Vérifié par: J.DICERBO	Date: MAY 25, 2021
Approved by / Approuvé par: D.SPACEK	Date: MAY 25, 2021
Project No. / N° du projet: 511SSM	Scale / Echelle: 1:100
Drawing Set No. / N° de série du dessin: -	Sheet No. / N° de la feuille: C7.0



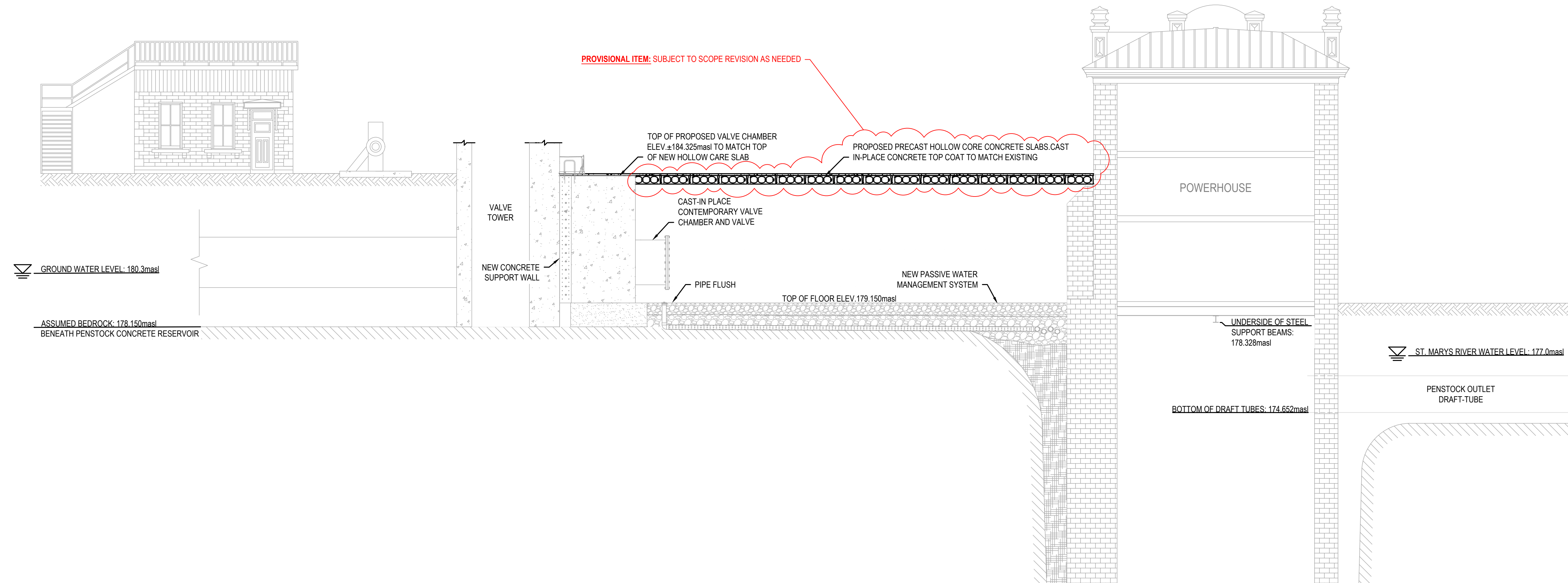
KEY PLAN:



SAULT STE. MARIE, ONTARIO



1 PROPOSED PENSTOCK CONCRETE RESERVOIR SECTION  
SCALE: 1:100



2 PROPOSED PENSTOCK CONCRETE RESERVOIR SECTION  
SCALE: 1:100

No.	Date	Description	Drawn by / Dessiné par	Approved / Approuvé
4	16JULY21	ISSUED FOR TENDER	M.CARBONE	D.SPACEK
3	25APR21	99% REVIEW	M.CARBONE	D.SPACEK
2	18MAR21	90% REVIEW	M.CARBONE	D.SPACEK
1	26JUNE20	75% REVIEW	M.CARBONE	D.SPACEK
0	21APR20	66% REVIEW	M.CARBONE	D.SPACEK

Revision / Révision	
A	Detail number / Numéro de détail
B	Sheet number / Numéro de la feuille

Consultant's Name / Nom de l'expert-conseil: **wsp**

Eng. Stamp / Sceau de l'ingénieur: **D. M. SPACEK**

1348 ROSEMOUNT AVENUE  
CORNWALL, ONTARIO CANADA K6J 3E5  
TEL: 613-933-9802 | FAX: 705-638-4035 | WWW.WSP.COM  
WSP-SP201-15-001-001 (WSP# 151 00185-14)

Project title / Titre du projet: **511SSM POWERHOUSE STRUCTURAL STABILIZATION PROJECT**

Drawing title / Titre du dessin: **PROPOSED PENSTOCK CONCRETE RESERVOIR CROSS-SECTIONS**

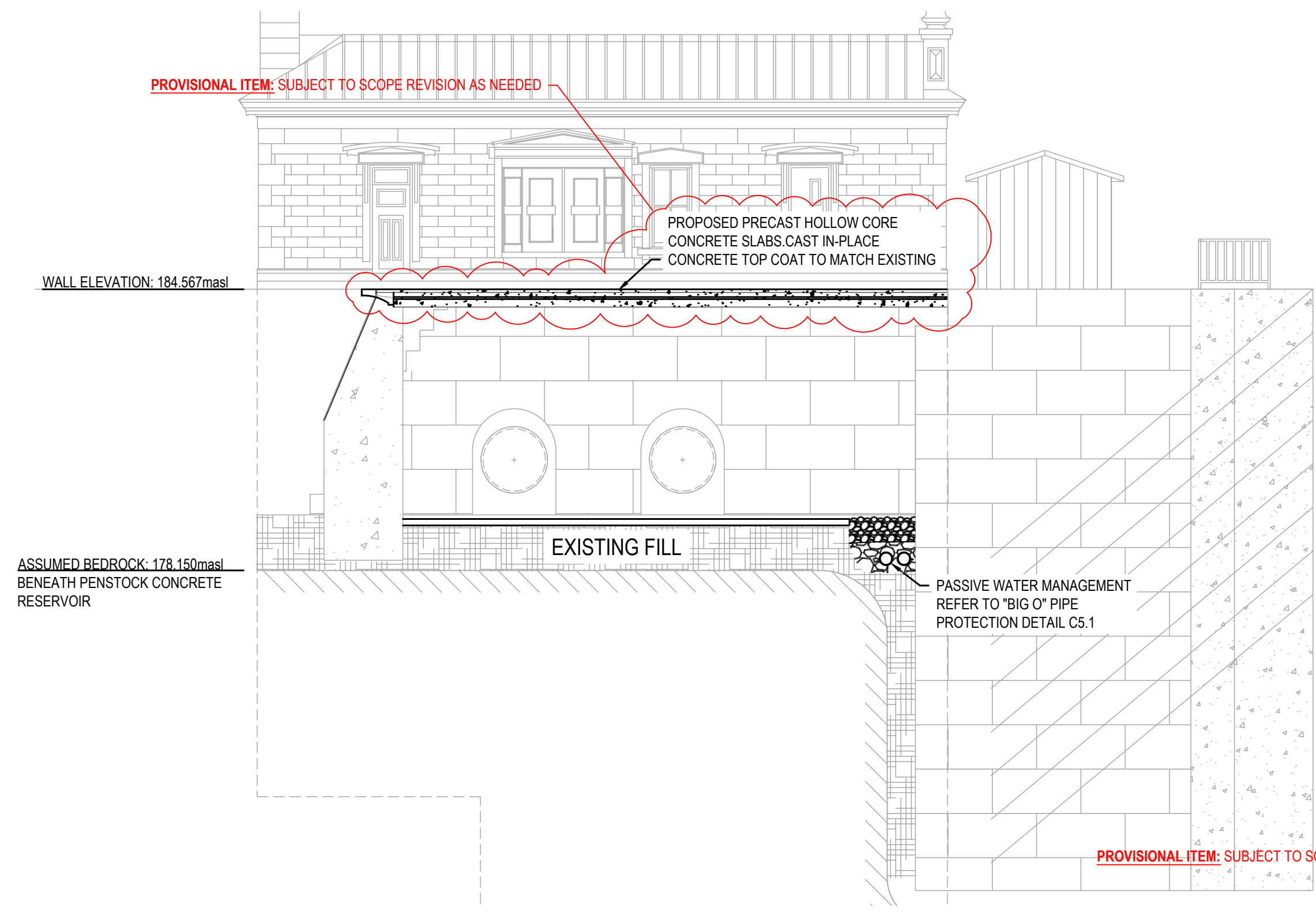
Designed by / Conçue par: J.DICERBO / D.SPACEK	Date: MAY 25, 2021
Drawn by / Dessiné par: M.CARBONE	Date: MAY 25, 2021
Checked by / Vérifié par: J.DICERBO	Date: MAY 25, 2021
Approved by / Approuvé par: D.SPACEK	Date: MAY 25, 2021
Project No. / N° du projet: 511SSM	Scale / Echelle: 1:100
Drawing Set No. / N° de série du dessin: -	Sheet No. / N° de la feuille: C7.1



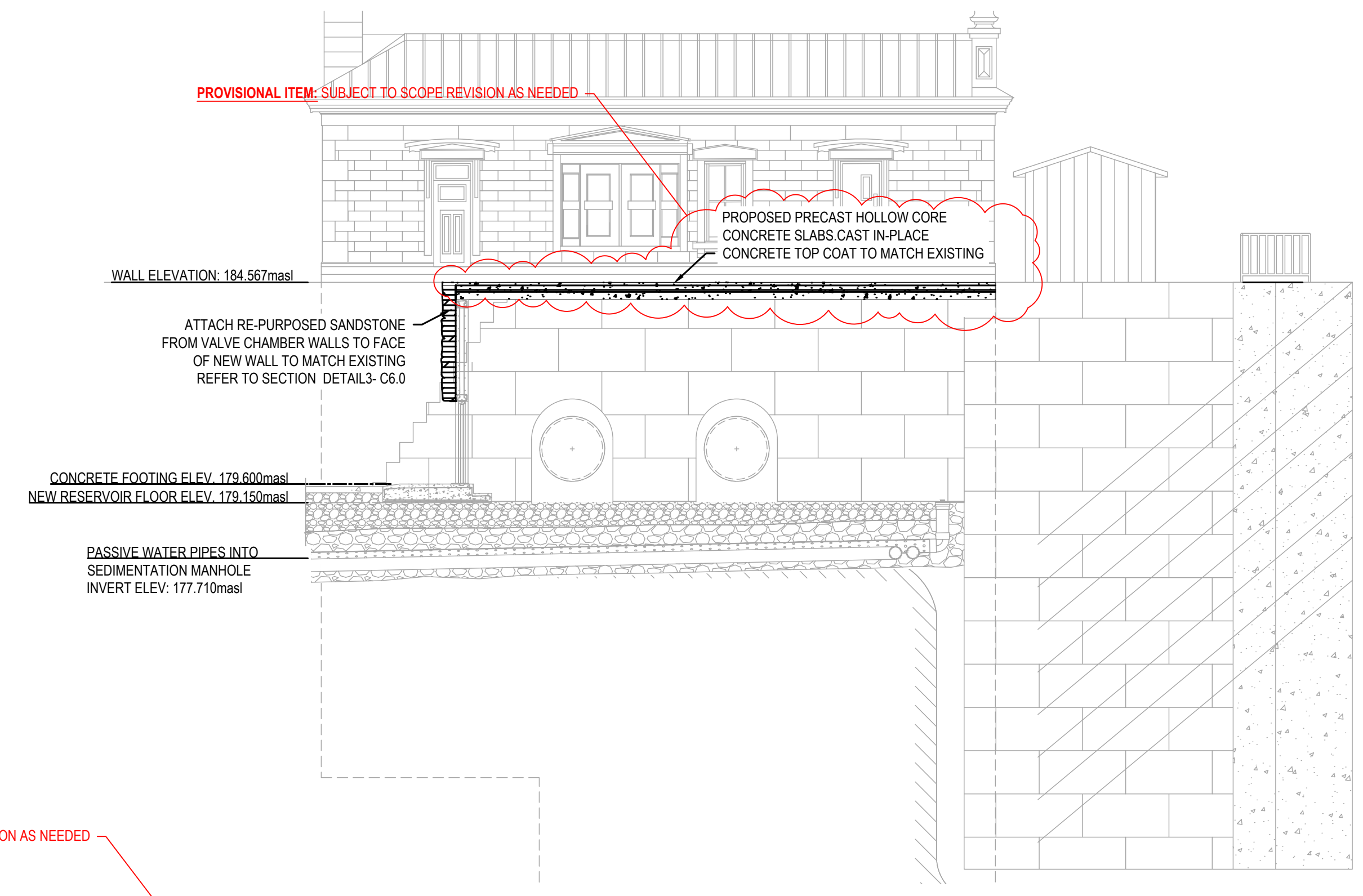
KEY PLAN:



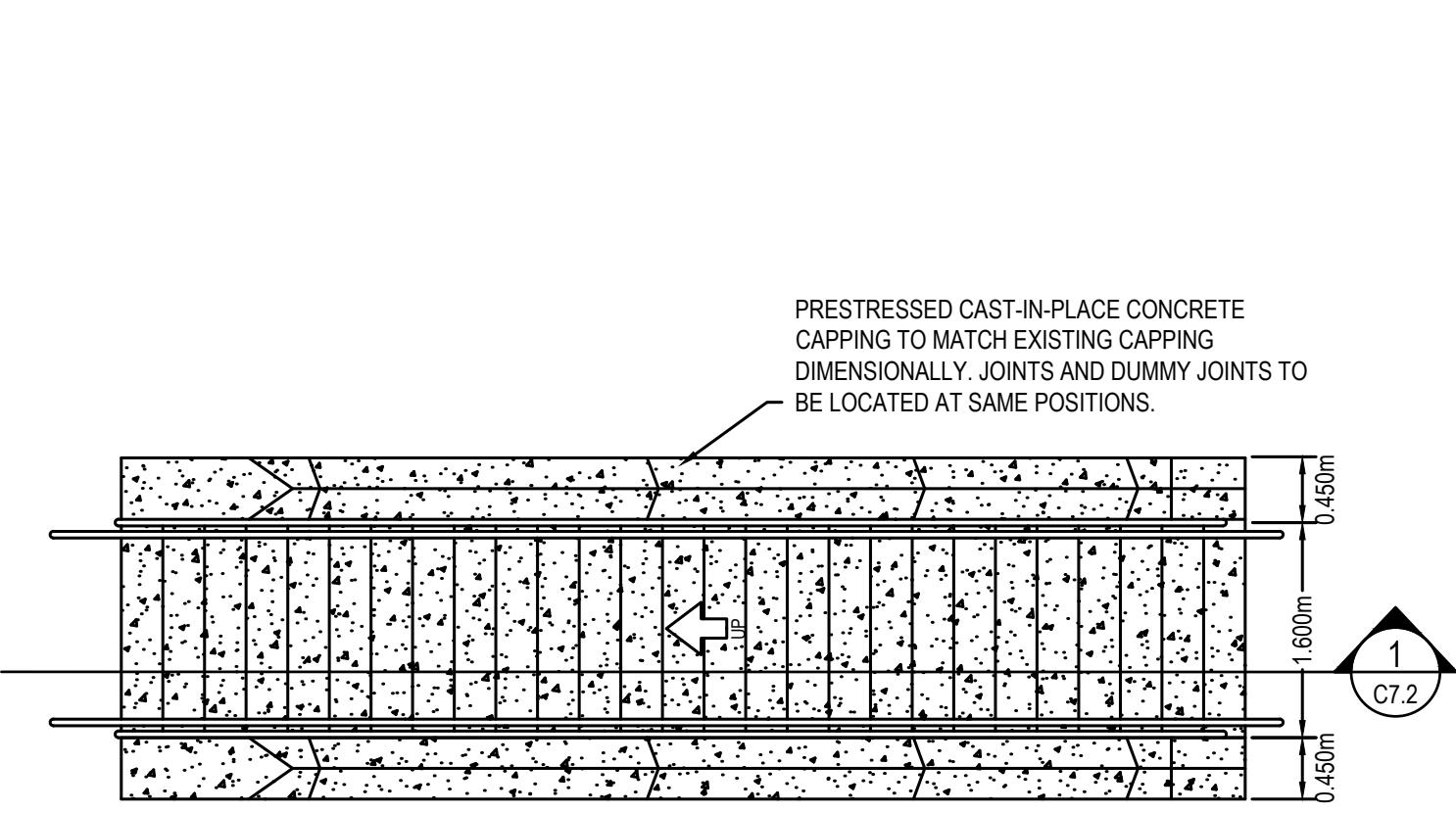
SAULL STE. MARIE, ONTARIO



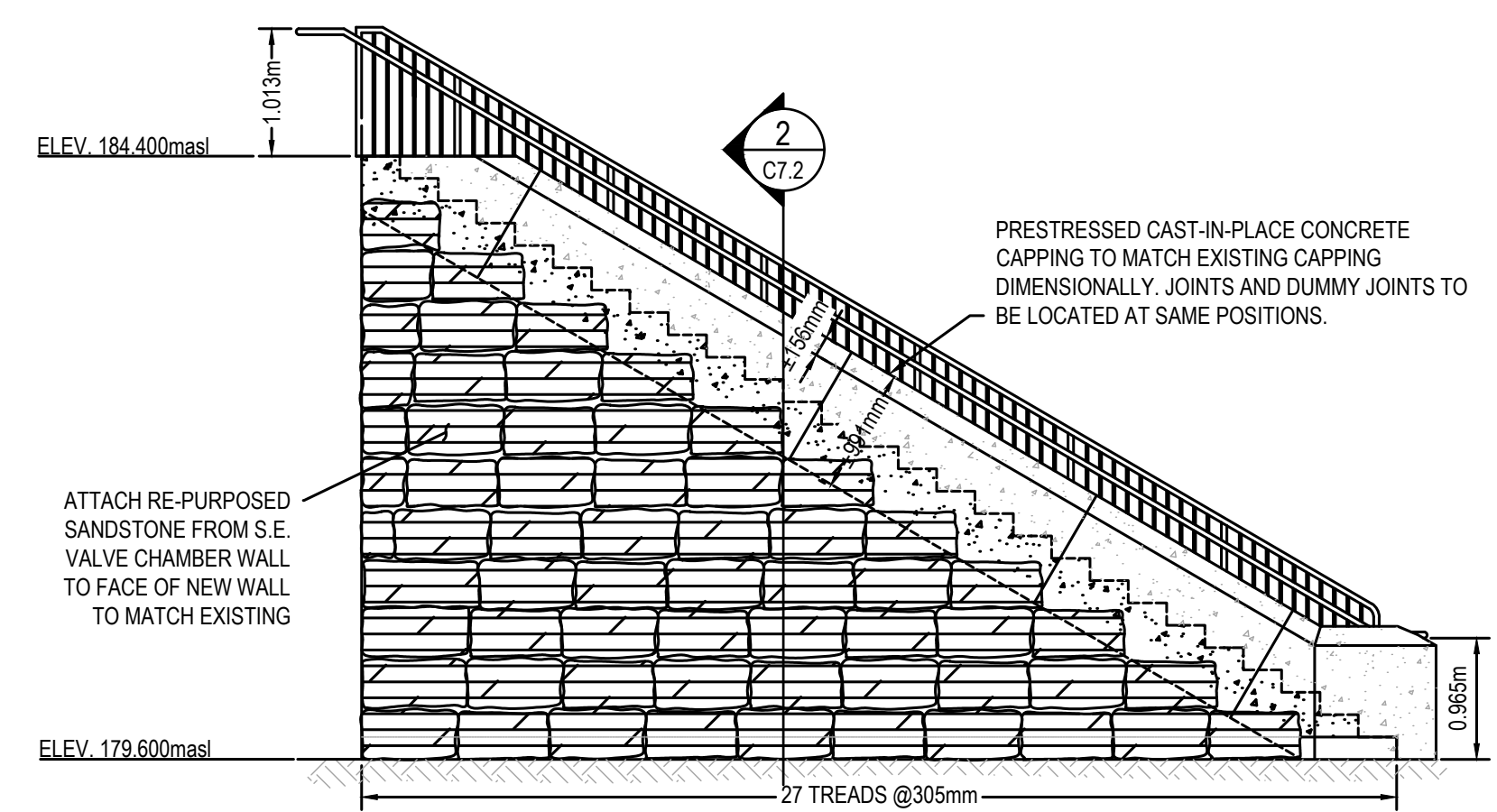
3 PROPOSED PENSTOCK CONCRETE RESERVOIR SECTION  
SCALE: 1:100



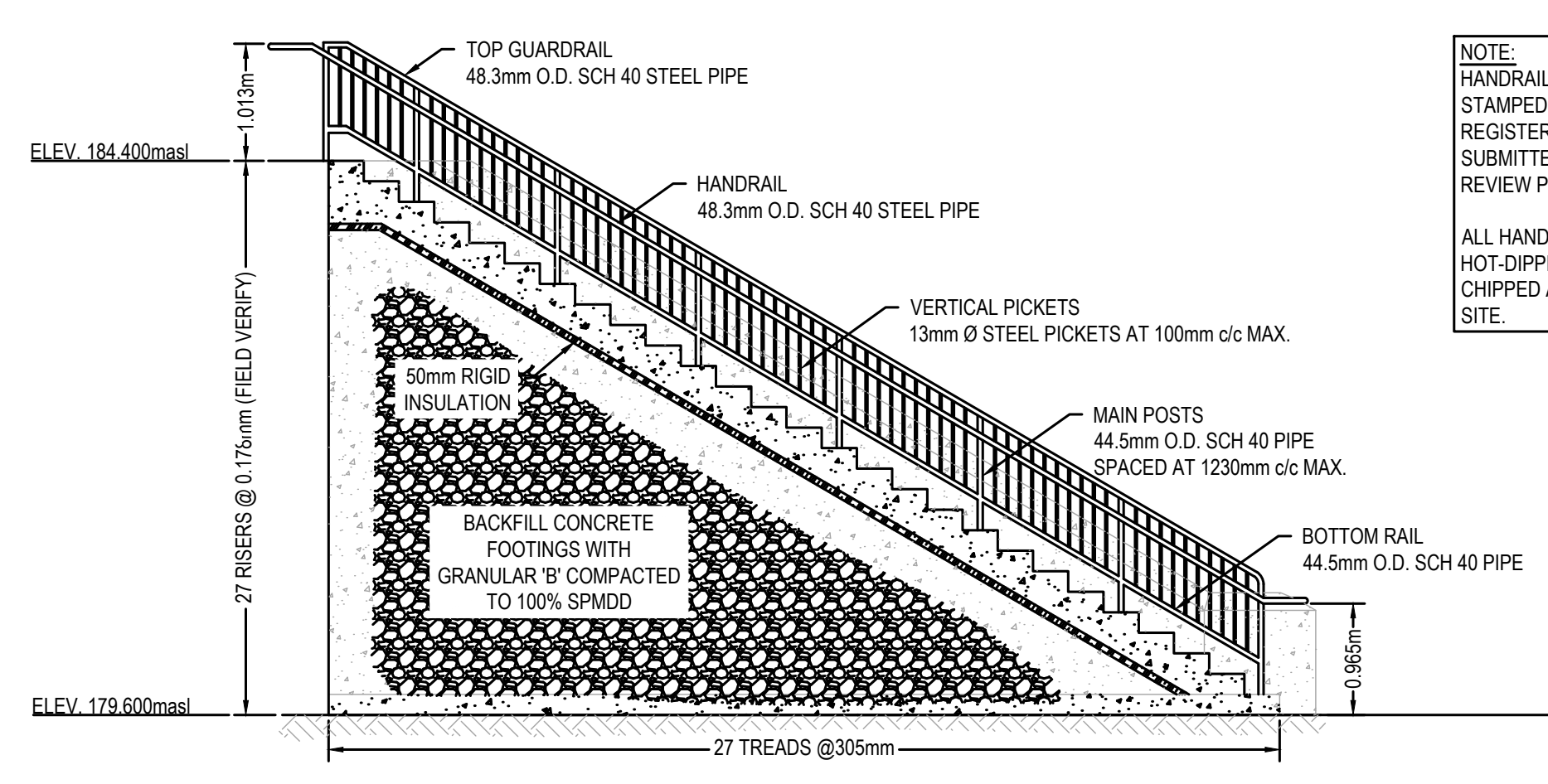
4 PROPOSED PENSTOCK CONCRETE RESERVOIR SECTION  
SCALE: 1:100



PROPOSED CAST-IN-PLACE CONCRETE STAIRS PLAN VIEW  
SCALE: 1:50



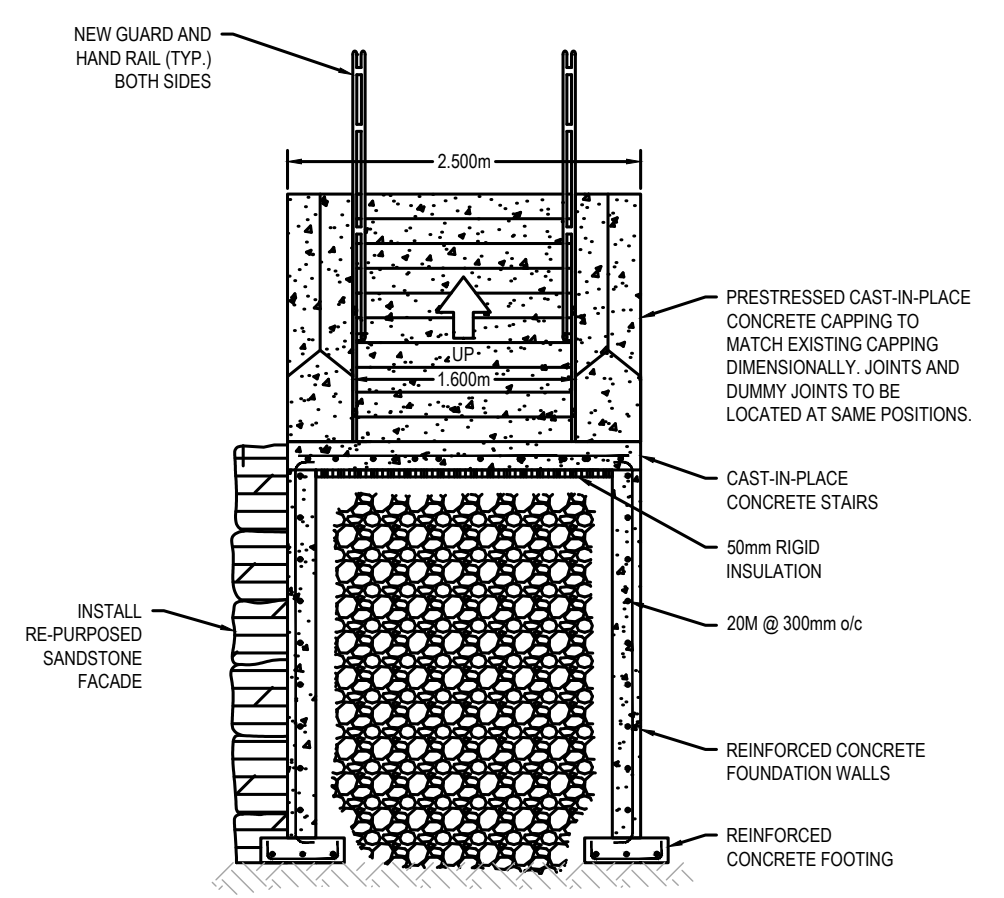
PROPOSED CAST-IN-PLACE CONCRETE STAIRS ELEVATION  
SCALE: 1:50



1 PROPOSED CAST-IN-PLACE CONCRETE STAIRS SECTION  
SCALE: 1:150

NOTE:  
HANDRAILS TO BE PREFABRICATED STEEL SHOP DRAWINGS STAMPED AND SIGNED BY A PROFESSIONAL ENGINEER REGISTERED TO THE PROVINCE OF ONTARIO ARE TO BE SUBMITTED TO THE DEPARTMENTAL REPRESENTATIVE FOR REVIEW PRIOR TO FABRICATION.

ALL HANDRAIL AND GUARDRAIL COMPONENTS TO BE HOT-DIPPED GALVANIZED AFTER FABRICATION. DAMAGED OR CHIPPED AREAS TO RECEIVE 2 COATS COLD GALVANIZING ON SITE.



2 PROPOSED CAST-IN-PLACE CONCRETE STAIRS SECTION  
SCALE: 1:150

No.	Date	Description	Drawn by / Dessiné par	Approved / Approuvé
4	16JULY21	ISSUED FOR TENDER	M.CARBONE	D.SPACEK
3	25APR21	99% REVIEW	M.CARBONE	D.SPACEK
2	18MAR21	90% REVIEW	M.CARBONE	D.SPACEK
1	26JUNE20	75% REVIEW	M.CARBONE	D.SPACEK
0	21APR20	66% REVIEW	M.CARBONE	D.SPACEK

Revision / Révision	
A	Detail number / Numéro de détail
B	Sheet number / Numéro de la feuille

Linear dimensions in millimetres / Dimensions linéaires en millimètres

Consultant's Name / Nom de l'expert-consultant: **wsp**

1348 ROSEMOUNT AVENUE, CORNWALL, ONTARIO CANADA, K6J 5E5  
TEL: 613-933-9821 | FAX: 705-638-0335 | WWW.WSP.COM  
WSP-SP201-15-001-001 (WSP# 151-00185-14)

Eng. Stamp / Sceau de l'ingénieur: D. M. SPACEK, July 16, 2021

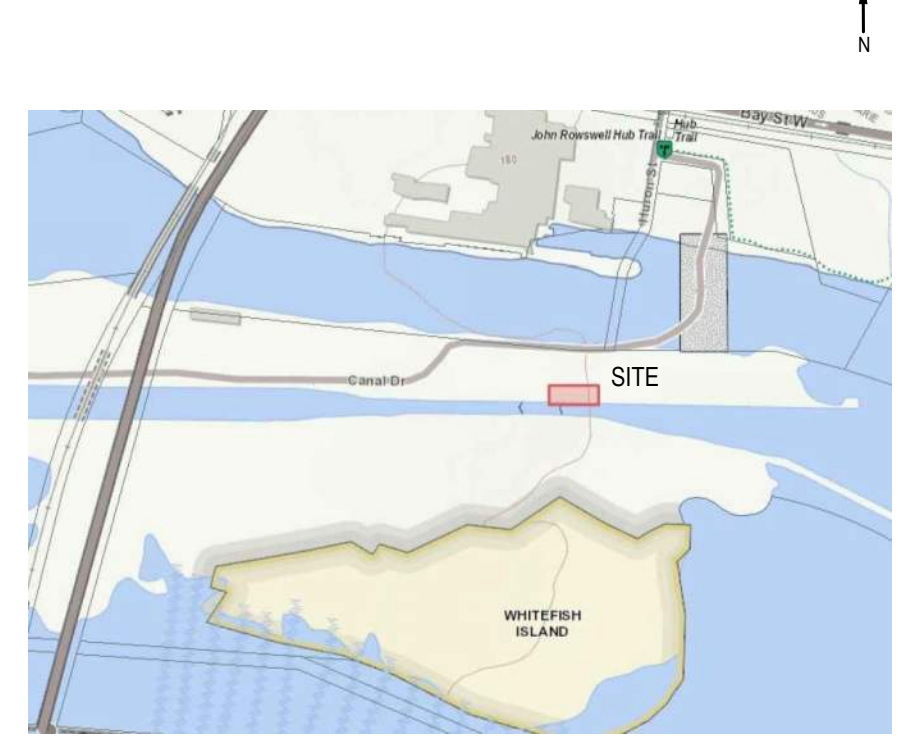
Project title / Titre du projet: 511SSM POWERHOUSE STRUCTURAL STABILIZATION PROJECT

Drawing title / Titre du dessin: PROPOSED PENSTOCK CONCRETE RESERVOIR CROSS-SECTIONS AND STAIR ELEVATION/SECTION

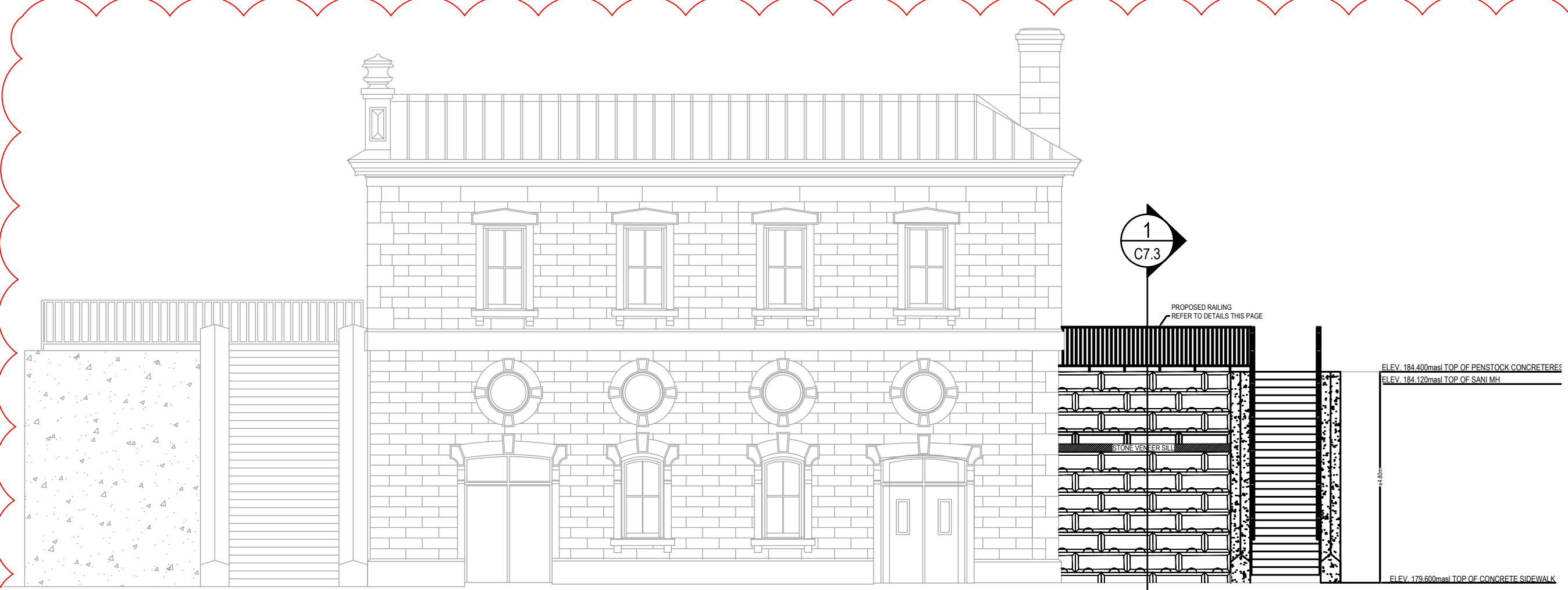
Designed by / Conçeut par: J.DICERBO / D.SPACEK	Date: MAY 25, 2021
Drawn by / Dessiné par: M.CARBONE	Date: MAY 25, 2021
Checked by / Vérifié par: J.DICERBO	Date: MAY 25, 2021
Approved by / Approuvé par: D.SPACEK	Date: MAY 25, 2021
Project No. / N° du projet: 511SSM	Scale / Echelle: 1:100
Drawing Set No. / N° de série du dessin: -	Sheet No. / N° de la feuille: C7.2



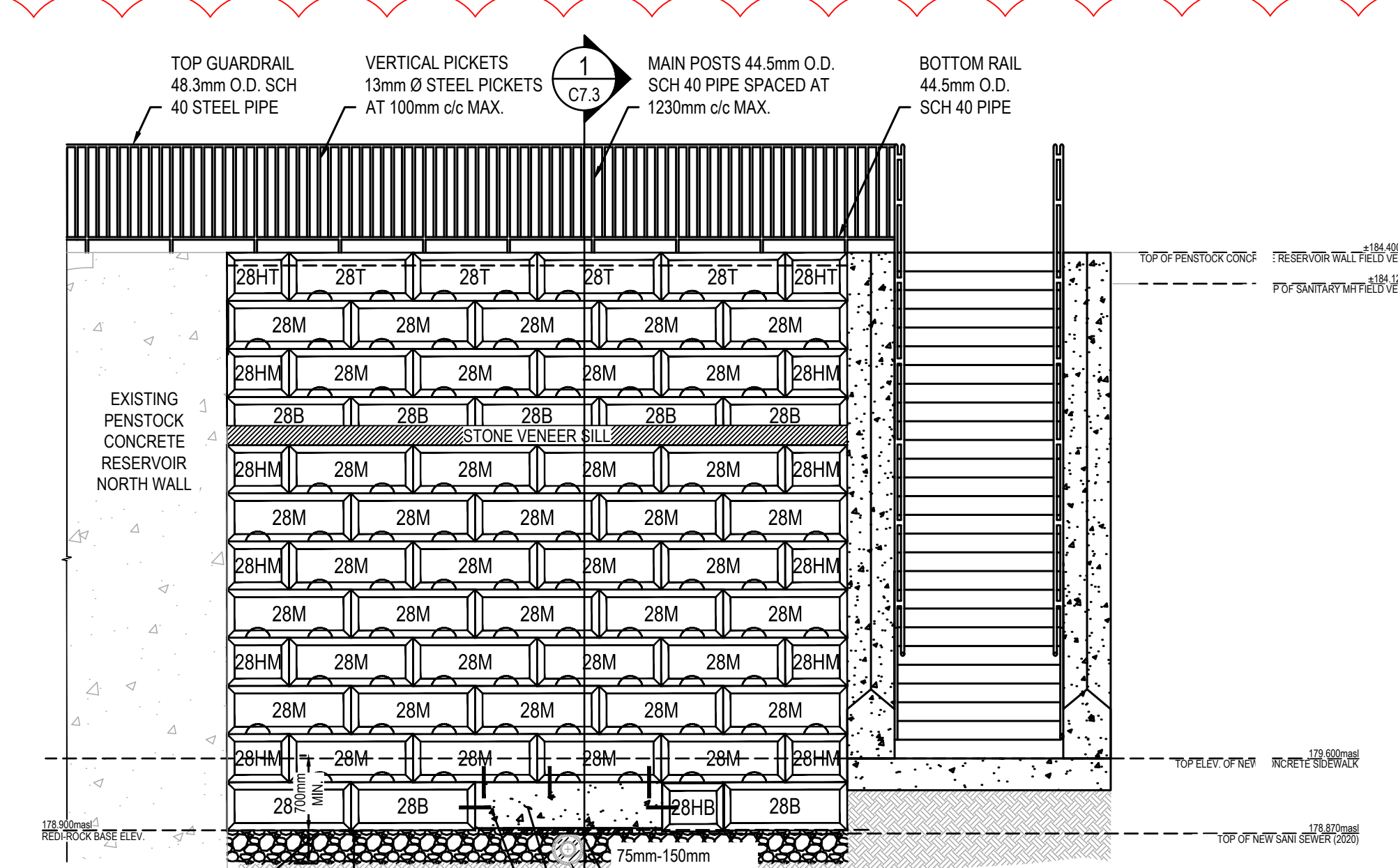
KEY PLAN:



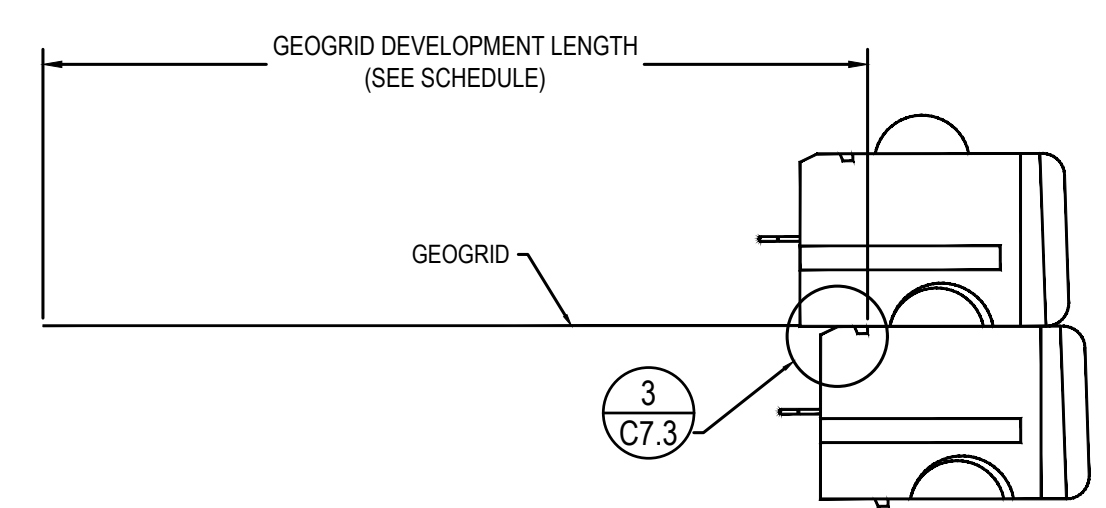
SAULL STE. MARIE, ONTARIO



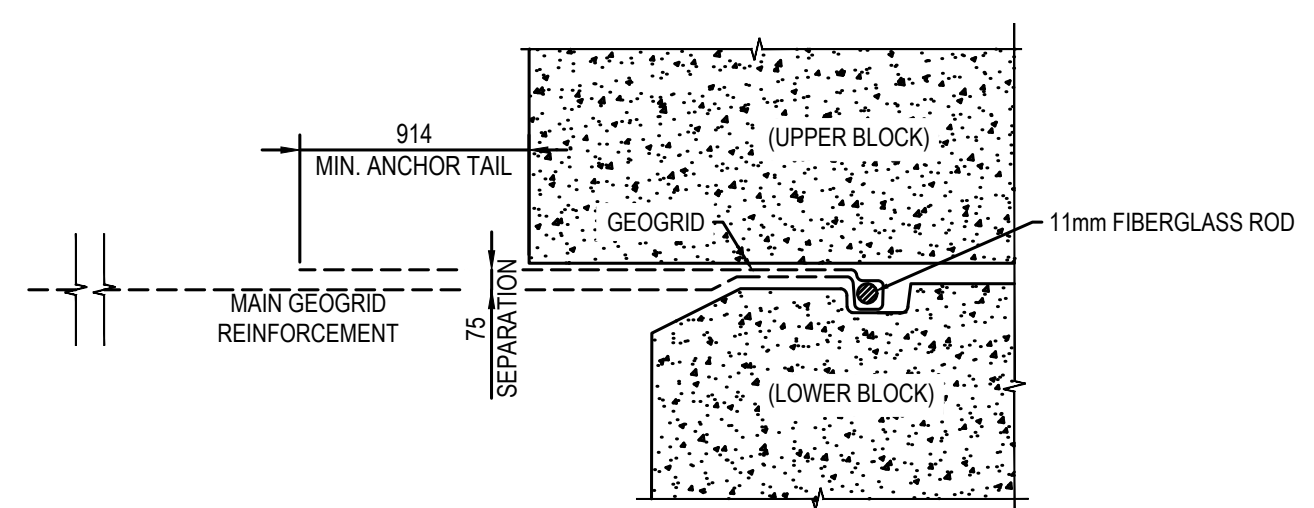
6 PROPOSED RETAINING WALL ELEVATION 1  
C7.0 SCALE: 1:50



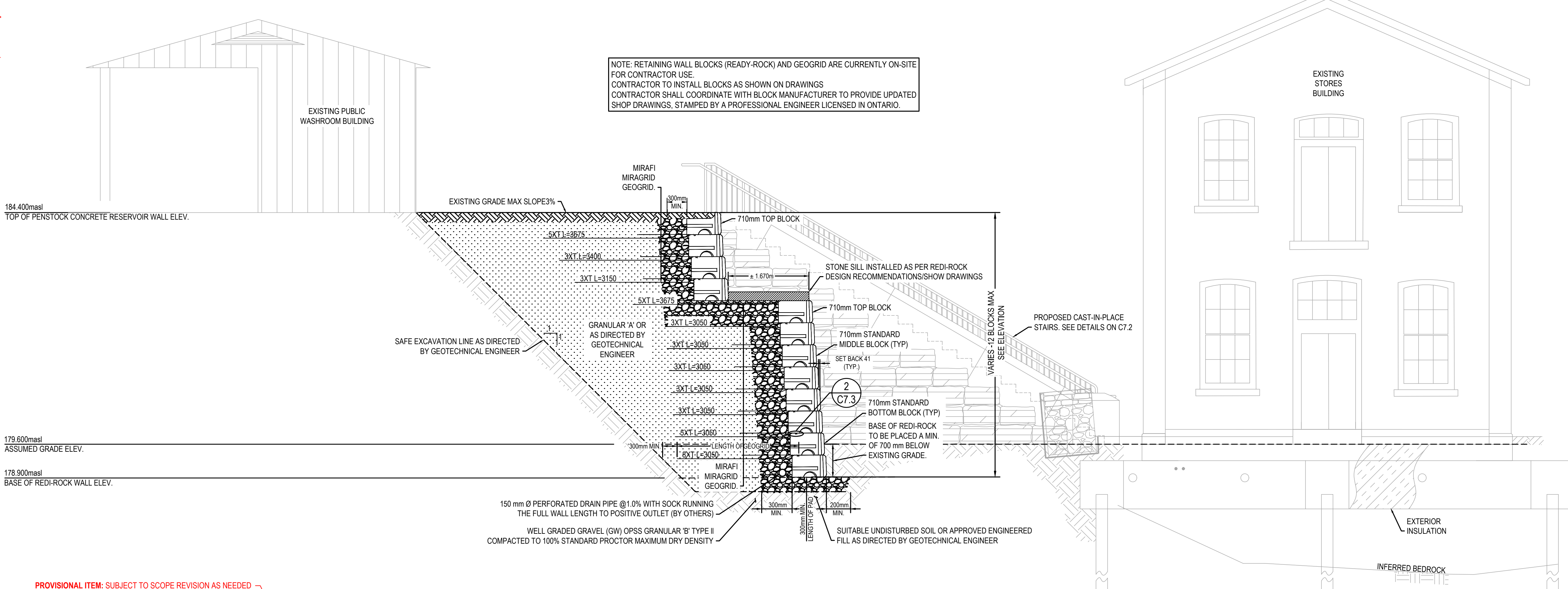
6 PROPOSED RETAINING WALL ELEVATION 2  
C7.0 SCALE: 1:50



2 MECHANICAL GEOGRID CONNECTOR  
C7.3 SCALE: 1:20



3 GEOGRID CONNECTION TYPE 1A DETAIL  
C7.3 SCALE: NTS



1 PROPOSED RETAINING WALL SECTION  
C7.3 SCALE: 1:50

No.	Date	Description	Drawn by Dessiné par	Approved Approuvé
4	16JULY21	ISSUED FOR TENDER	M.CARBONE	D.SPACEK
3	25APR21	99% REVIEW	M.CARBONE	D.SPACEK
2	18MAR21	90% REVIEW	M.CARBONE	D.SPACEK
1	26JUNE20	75% REVIEW	M.CARBONE	D.SPACEK
0	21APR20	66% REVIEW	M.CARBONE	D.SPACEK

Revision / Révision	
A	Detail number / A Numéro de détail
B	Sheet number / B Numéro de la feuille

Linear dimensions in millimetres / Dimensions linéaires en millimètres

Consultant's Name / Nom de l'expert-consultant: **wsp**

Eng. Stamp / Sceau de l'ingénieur: **D. M. SPACEK**, July 16, 2021

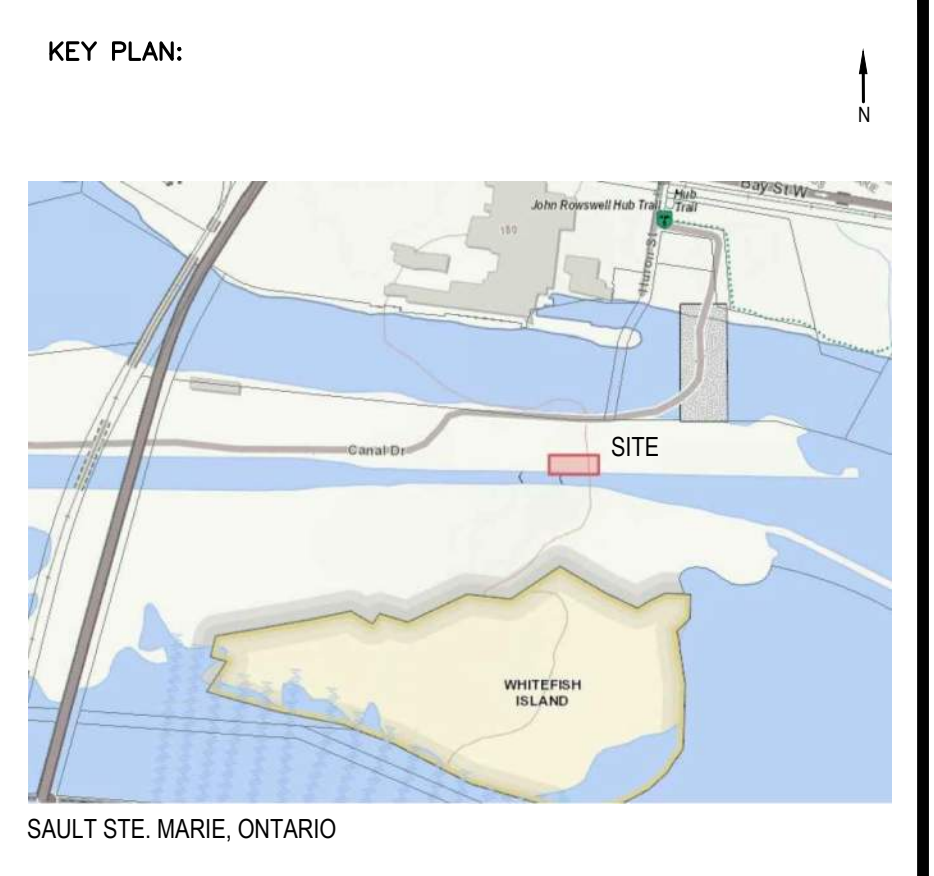
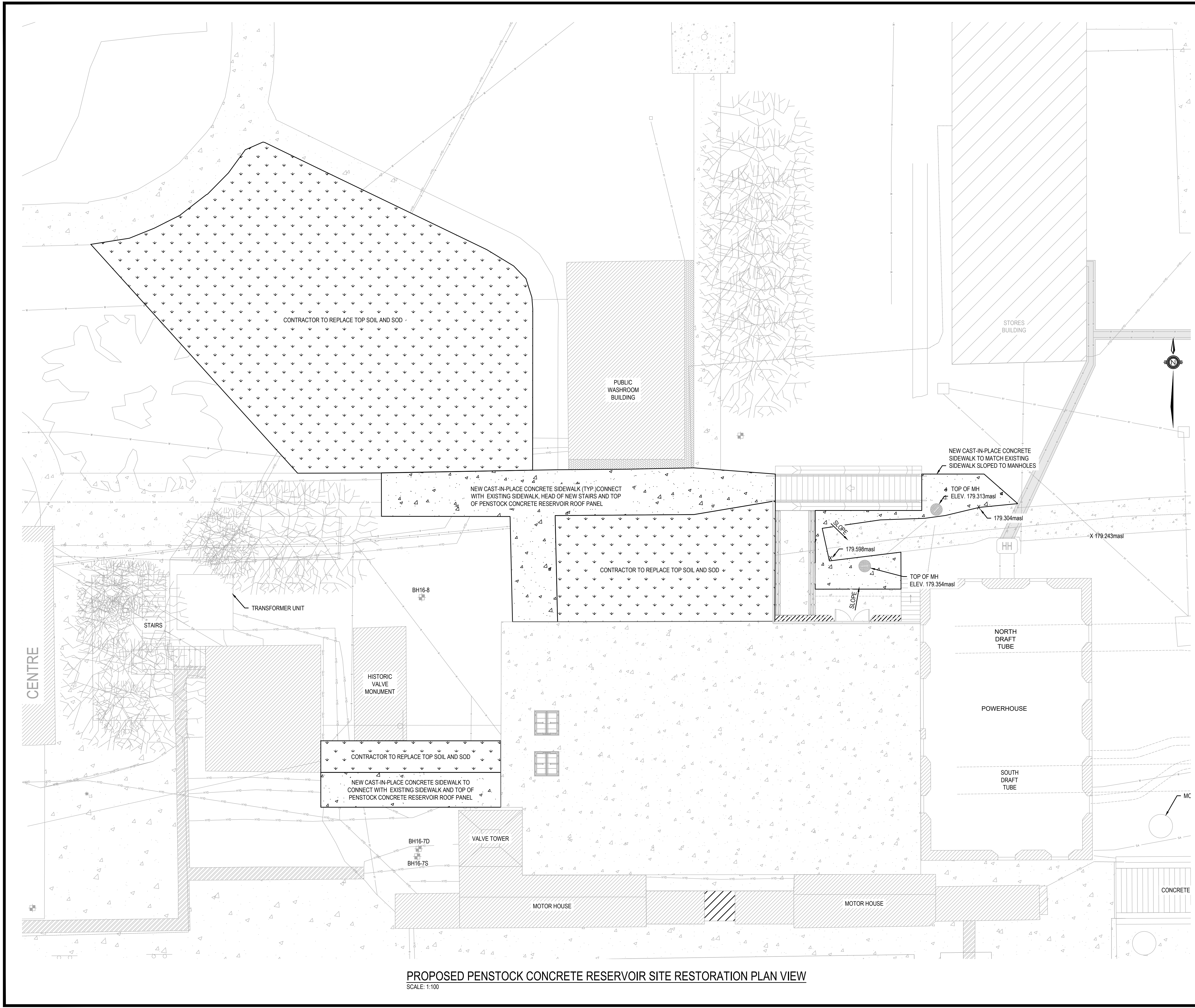
Project title / Titre du projet: **511SSM POWERHOUSE STRUCTURAL STABILIZATION PROJECT**

Drawing title / Titre du dessin: **PROPOSED REDI-ROCK WALL ELEVATIONS/SECTIONS/DETAILS**

Designed by / Conçue par: J.DICERBO / D.SPACEK	Date: MAY 25, 2021
Drawn by / Dessiné par: M.CARBONE	Date: MAY 25, 2021
Checked by / Vérifié par: J.DICERBO	Date: MAY 25, 2021
Approved by / Approuvé par: D.SPACEK	Date: MAY 25, 2021
Project No. / N° du projet: 511SSM	Scale / Echelle: AS NOTED
Drawing Set No. / N° de série du dessin: C7.3	

PROVISIONAL ITEM: SUBJECT TO SCOPE REVISION AS NEEDED





No.	Date	Description	Drawn by / Dessiné par	Approved / Approuvé
4	16JULY21	ISSUED FOR TENDER	M.CARBONE	D.SPACEK
3	25APR21	99% REVIEW	M.CARBONE	D.SPACEK
2	18MAR21	90% REVIEW	M.CARBONE	D.SPACEK
1	26JUNE20	75% REVIEW	M.CARBONE	D.SPACEK
0	21APR20	66% REVIEW	M.CARBONE	D.SPACEK

Revision / Révision	
A	Detail number / Numéro de détail
B	Sheet number / Numéro de la feuille
Linear dimensions in millimetres / Dimensions linéaires en millimètres	

Consultant's Name / Nom de l'expert-conseil: **wsp**  
 1348 ROSEMOUNT AVENUE, CORNWALL, ONTARIO CANADA, K6J 3E5  
 TEL: 613-933-9821 | FAX: 705-638-4335 | WWW.WSP.COM | WSP-SP201-15-001-001 (WSP# 151 00185-14)  
 Eng. Stamp / Sceau de l'ingénieur: 

Project title / Titre du projet: **511SSM POWERHOUSE STRUCTURAL STABILIZATION PROJECT**  
 Drawing title / Titre du dessin: **PROPOSED PENSTOCK CONCRETE RESERVOIR SITE RESTORATION PLAN VIEW**

Designed by / Conçeut par: J.DICERBO / D.SPACEK	Date: MAY 25, 2021
Drawn by / Dessiné par: M.CARBONE	Date: MAY 25, 2021
Checked by / Vérifié par: J.DICERBO	Date: MAY 25, 2021
Approved by / Approuvé par: D.SPACEK	Date: MAY 25, 2021
Project No. / N° du projet: 511SSM	Scale / Echelle: 1:100
Drawing Set No. / N° de série du dessin: -	Sheet No. / N° de la feuille: C7.4

**PROPOSED PENSTOCK CONCRETE RESERVOIR SITE RESTORATION PLAN VIEW**  
 SCALE: 1:100