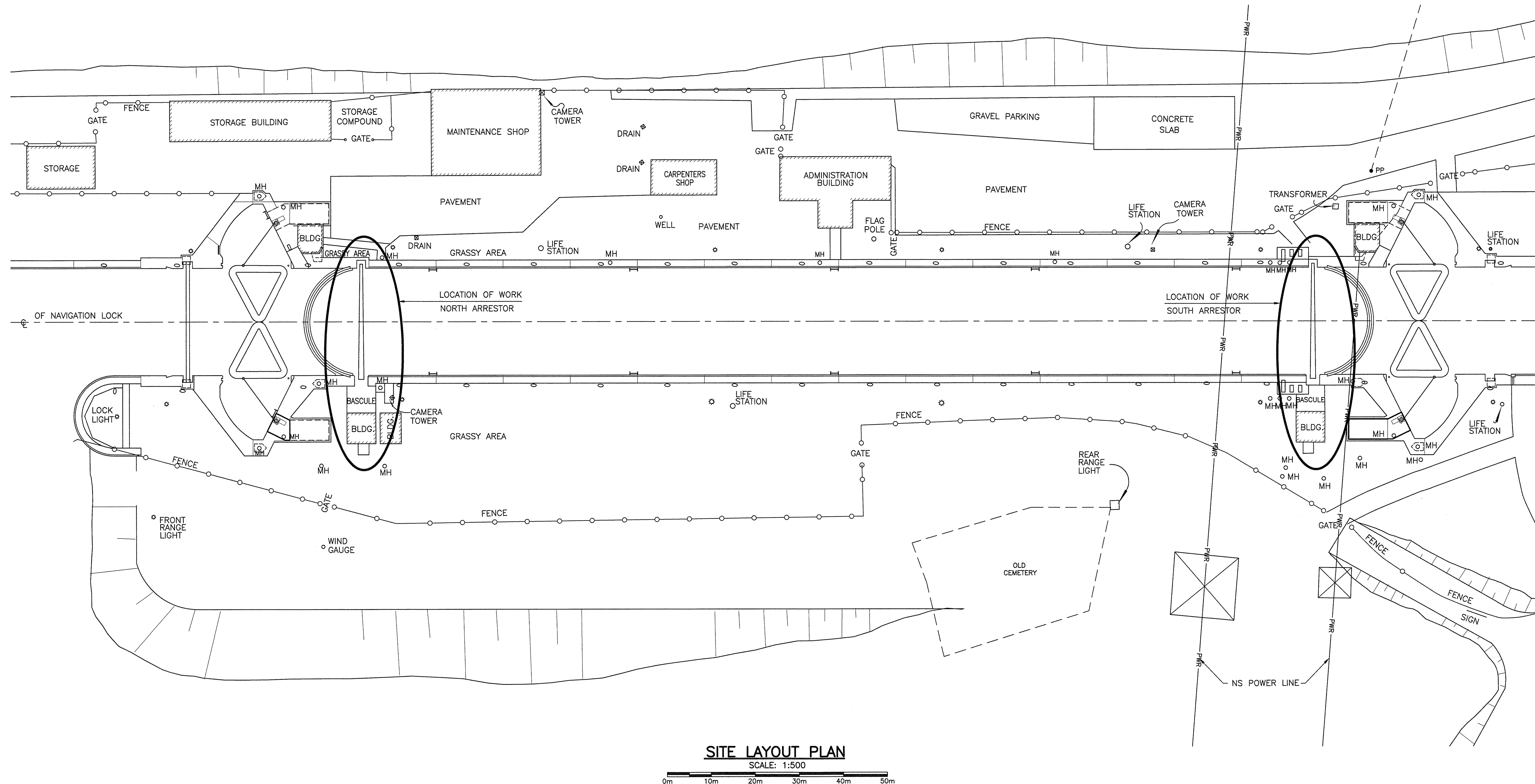


UTM ZONE 18N  
NAD 83  
Easting: 500000  
Northing: 4600000



SITE LAYOUT PLAN

SCALE: 1:500

0m 10m 20m 30m 40m 50m

# GENERAL NOTES

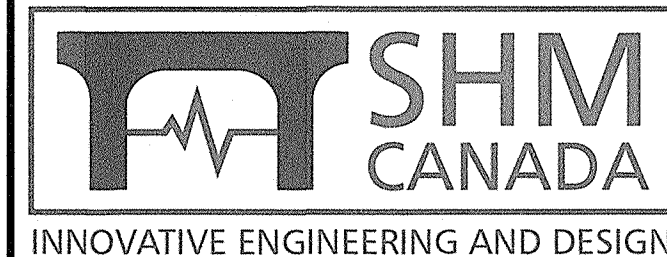
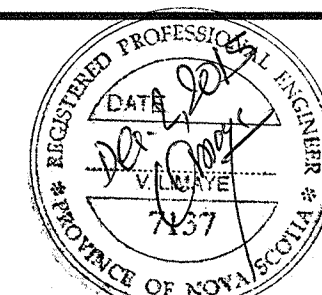
1. THE WORK INVOLVES REPAIRS TO NORTH AND SOUTH SHIP ARRESTORS AND ASSOCIATED COMPONENTS AT CANSO CANAL AND DEMONSTRATING SATISFACTORY FUNCTIONING OF ARRESTORS AS A SYSTEM AFTER COMPLETION OF WORK. DETAILED SCOPE OF WORK IS SHOWN ON DRAWING S2.
2. THE BOOM RAISING/LOWERING MECHANISM IS CURRENTLY IN OPERATIONAL CONDITION AT EACH LOCATION. THE CONTRACTOR SHALL ASCERTAIN ITS FUNCTIONALITY PRIOR TO THE COMMENCEMENT OF REPAIRS IN CLOSE COORDINATION WITH CANSO CANAL PERSONNEL.
3. AT THE COMMENCEMENT OF THE WORK AND PRIOR TO ANY REMOVALS, THE FOLLOWING PROCEDURE SHALL BE CARRIED OUT TO ESTABLISH BENCHMARK OPERATIONAL TIMINGS FOR EACH BOOM. THE BOOM SHALL BE RAISED AND LOWERED IN TEN SUCCESSIVE CYCLES. THE TIME REQUIRED TO COMPLETE EACH UPWARD AND DOWNWARD OPERATION SHALL BE RECORDED SEPARATELY. THE AVERAGE TIME TAKEN TO COMPLETE EACH OPERATION SHALL BE DETERMINED AND CONSIDERED AS THE BENCHMARK OPERATION TIMING. AT THE COMPLETION OF THE WORK CONTRACTOR SHALL DEMONSTRATE THAT ANY CHANGE IN THE OPERATIONAL TIMING IS WITHIN 10% OF THE ORIGINAL TIMING FOR EACH OPERATION. THE CONTRACTOR SHALL INVESTIGATE AND RECTIFY ANY SIGNIFICANT CHANGE IN TIMING THAT EXCEEDS 10% OR PROVIDE JUSTIFICATION FOR SUCH VARIATION SIGNED BY A NOVA SCOTIA REGISTERED PROFESSIONAL ENGINEER.
4. AFTER THE COMPLETION OF THE WORK AND PRIOR TO THE INSTALLATION OF CABLE CLAMPS AND SUSPENSION BRACKETS, THE CONTRACTOR SHALL DEMONSTRATE TO THE DEPARTMENT REPRESENTATIVE SATISFACTORY PERFORMANCE OF EACH SHIP ARRESTOR THROUGH APPLICATION OF LATERAL FORCE AS SHOWN IN DRAWING NO. S2 (DRAWING NO. 28) AND S7 (10-467). THE CONTRACTOR MAY TEMPORARILY ADJUST THE BRAKING FORCE ON THE WINDING DRUMS FOR TESTING PURPOSE. AT THE COMPLETION OF WORK EACH BRAKE SHOE WILL BE ADJUSTED TO THE FORCE INDICATED ON THE DRAWINGS.
5. THE STEEL WIRE ROPE SHALL BE SUITABLE FOR LATERAL LOADING CONDITIONS CONFORMING TO ISO/DIS 16839 STEEL WIRE ROPES - DETERMINATION OF THE COMPLIANCE CHARACTERISTICS OF STEEL WIRE ROPES SUBJECTED TO LATERAL LOAD, OR EQUIVALENT CSA STANDARD.
6. THE ROPE SHALL HAVE A NOMINAL DIAMETER OF 44mm (1 3/4") WITH A BREAKING STRENGTH OF 127,000 kg (280,000 lb.).
7. THE LENGTH OF EACH ROPE SEGMENT SHALL BE APPROXIMATELY 190.5m (625') AS INDICATED ON DRAWING S7 (10-467).
8. THE STEEL WIRE ROPES SHALL BE SUPPLIED IN PRE-CUT LENGTHS AND TERMINATED WITH PRE-INSTALLED SOCKET AT ONE END AND THE OTHER END PREPARED FOR ATTACHMENT TO THE RETARDING DRUM. THE SIZE OF THE SOCKETS SHALL MATCH THE EXISTING.
9. SCHEMATIC DETAILS OF CABLE INSTALLATION SHOWN ON DRAWING NO. S17 (10-477) ARE FOR THE GUIDANCE OF THE CONTRACTOR. CONTRACTOR SHALL SUBMIT CABLE INSTALLATION AND TESTING PROCEDURES SIGNED BY A REGISTERED PROFESSIONAL ENGINEER.
10. IMMEDIATELY AFTER THE REMOVAL OF EXISTING STEEL WIRE ROPES THE CONTRACTOR SHALL CLEAN THE WIRE ROPE DUCT BETWEEN THE BASCULE RECESS AND BOLLARD C, AND INSTALL AND MAINTAIN CLOSE-FITTING TEMPORARY PLASTIC CAPS AT BOTH ENDS. SUITABLE PRECAUTIONS SHALL BE TAKEN TO PREVENT ENTRY OF SEA WATER AND DEBRIS DURING THE INSTALLATION OF NEW CABLES AND THE TESTING OF ARRESTORS.

11. REPAIRS AND REFURBISHMENT OF ALL SHEAVE ASSEMBLIES, AND REDUCTION GEARBOX AT NORTH BASCULE UNIT SHALL BE CARRIED OUT IN A CLIMATE CONTROLLED ENVIRONMENT.
12. BOOM AND SHEAVE ASSEMBLIES SHALL BE SHOP ASSEMBLED AND CHECKED FOR FIT PRIOR TO APPLICATION OF PROTECTIVE COATING.
13. ENCLOSURES FOR LATCH MECHANISM SHALL BE SHOP FABRICATED AND PAINTED IN A CLIMATE CONTROLLED ENVIRONMENT.
14. INSPECTION OF ALL WELDS SHALL BE PERFORMED BY A QUALIFIED WELDING INSPECTOR OR A NOVA SCOTIA REGISTERED PROFESSIONAL ENGINEER AND A SIGNED REPORT SUBMITTED TO DEPARTMENTAL REPRESENTATIVE PRIOR TO INSTALLATION.
15. ALL PAINTING AND COATING SHALL BE CARRIED OUT STRICTLY IN ACCORDANCE TO MANUFACTURER'S INSTRUCTIONS AND IN A CLIMATE CONTROLLED ENVIRONMENT WITH THE EXCEPTION OF EMBEDDED AND PERMANENTLY UNITS OR COMPONENTS.
16. FOR ALL METALLIC COMPONENTS, INCLUDING GALVANIZED STEEL COMPONENTS, COATING SHALL BE EPOXY BASED, TWO-COMPONENT, MICROBially-INDUCED-CORROSION RESISTANT COATING SYSTEM.
17. CONTRACTOR SHALL DISCONNECT AND REMOVE BOOM LIGHTS AND ASSOCIATED CABLE WORK PRESENTLY INSTALLED ON THE BOOM.
18. INSTALL NEW EASY-MAINTENANCE BOOM LIGHTS AND NEW NO. 12/3 TECK CABLES WITH NECESSARY FITTINGS AND DEMONSTRATE SATISFACTORY OPERATION.
19. THE WORK SHALL BE CARRIED OUT WHILE THE CANAL IS OPERATIONAL, THE CONTRACTOR SHALL CLOSELY COORDINATE HIS OPERATIONS WITH CANSO CANAL AUTHORITY TO AVOID ANY DISRUPTIONS TO VESSEL TRAFFIC THROUGH THE CANAL. THE CONTRACTOR SHALL PROVIDE A CRANE OF SUFFICIENT BOOM LENGTH AND LOAD CAPACITY TO TEMPORARILY RAISE SHEAVE UNIT AND ATTACHED CABLES AT BOLLARD A AT EACH ARRESTOR TO FACILITATE PASSAGE OF VESSELS THROUGH THE CANAL WITHOUT ANY HINDRANCE.
20. AS THE SCOPE OF WORK INCLUDES REPLACEMENT OF SEVERAL KEY COMPONENTS, THE CONTRACTOR SHALL TAKE NECESSARY MEASUREMENTS OF SUCH COMPONENTS WHEREVER NEEDED PRIOR TO THEIR OFF-SITE DISPOSAL. A COPY OF THE MEASUREMENTS WILL BE PROVIDED TO THE DEPARTMENT REPRESENTATIVE. THE DRAWINGS SHALL NOT BE SCALED FOR DIMENSIONS.
21. DRAWINGS S2 THROUGH S17, INCORPORATE CANSO CANAL RECORD DRAWINGS DWG. NO. 28, DRAWINGS 10-464 THROUGH 10-477, AND PARTIAL INFORMATION/DETAILS FROM DWG 38 AND DWG. 39.
22. ALL REQUIRED EQUIPMENT REMOVAL AND REINSTALLATION SHALL BE PERFORMED BY A QUALIFIED MACHINIST.

NOTE:  
THIS DRAWING SET INCORPORATES IMAGES OF ORIGINAL RECORD DRAWINGS. ANY DRAWING NUMBERS REFERENCED THEREIN, THAT DO NOT CORRESPOND TO DESIGN DRAWING NUMBERS S1 THROUGH S47, REFER TO THE ORIGINAL RECORD DRAWINGS.

FOR EASY REFERENCE, THE ORIGINAL RECORD DRAWING NUMBERS AND THEIR CORRESPONDING DESIGN DRAWING NUMBERS ARE SHOWN IN TABLE 1.

TABLE 1	
ORIGINAL RECORD DRAWING NUMBER	CORRESPONDING DESIGN DRAWING NUMBER
DWG. NO. 28	S2
DWG. NO. 38	S3
DWG. NO. 39	S4
10-464	S4
10-465	S5
10-466	S6
10-467	S7
10-468	S8
10-469	S9
10-470	S10
10-471	S11
10-472	S12
10-473	S13
10-474	S14
10-475	S15
10-476	S16
10-477	S17
5-C-006	S24
5-C-007	S25
5-C-008	S26
5-C-009	S27
5-C-010	S28
5-C-013	S29
5-S-001	S30
5-S-002	S31
5-S-003	S32
5-S-004	S33
5-S-005	S34
5-S-006	S35
5-S-007	S36
5-S-008	S37
5-S-009	S38
5-S-010	S39
5-S-011	S40
5-S-012	S41
5-S-013	S42
5-S-014	S43
5-S-015	S44
5-S-016	S45
5-S-017	S46
5-S-018	S47



0	ISSUED FOR TENDER	11/06/2015
revisions		date

project  
**BUILDING ENVELOPE  
IMPROVEMENT PROJECT  
CANSO CANAL  
PORT HASTINGS  
INVERNESS COUNTY, N.S.**

drawing  
**SITE LAYOUT PLAN AND  
GENERAL NOTES  
(SHIP ARRESTORS)**

designed V.L. conçu  
date SEP. 2015  
drawn M.Z. dessiné  
date DEC. 2, 2015  
approved approuvé  
date  
Tender Submission  
PWGSC Project Manager Administrateur de projets TPSGC  
project number no. du projet  
**R.076938.001**  
drawing no. no. du dessin  
**S1**