INTERIM REPORT

# CONSTRUCTION SUMMARY (AS-BUILT) REPORT FOR RANKIN INLET ITIVIA SITE FUEL STORAGE AND CONTAINMENT FACILITIES – COMMISSIONING AND OPERATION OF TANK #2 MELIADINE PROJECT, NUNAVUT

PRESENTED TO

**Agnico Eagle Mines Ltd.**

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# EXECUTIVE SUMMARY

Tetra Tech was retained by Agnico Eagle Mines Limited (Agnico Eagle) to prepare a construction summary (as-built) report for the Rankin Inlet Itivia Site Fuel Storage and Containment Facilities at the Meliadine Gold Project, Nunavut. Tetra Tech and WSP Canada Inc. previously prepared the construction drawings and specifications as well as the design report for the Fuel Storage and Containment Facilities for the Project (AEM No 6515-E-132-004-132-REP-003). The facilities includes two (2) main fuel storage tanks located at Rankin Inlet Itivia site and four (4) fuel storage tanks located at the Meliadine site.

This interim as-built report summarizes the work executed at Rankin Inlet Itivia Site Fuel Storage and Containment Facilities where the field erected fuel storage Tank #2 (13.5 ML) was completed and commissioned and Tank #1 (20 ML) was started. Completion and commissioning will be done in 2018 as initially planned in the design report.

Tetra Tech was not involved in the construction of the Fuel Farm Facilities. The information presented in this report was provided by Agnico Eagle.

The construction monitoring and quality assurance was managed by Agnico Eagle.

## APPENDICES

# 1.0 INTRODUCTION

Agnico Eagle Mines Ltd. (Agnico Eagle) retained the services of Tetra Tech and WSP Canada Inc. to carry out the planning and design works associated with the surface infrastructures for the project, which includes the fuel storage and containment facilities at the Rankin Inlet Itivia site and Meliadine site. These components are part of the Meliadine Project, a gold mine located approximately 25 km north from Rankin Inlet, and 80 km southwest from Chesterfield Inlet in the Kivalliq Region of Nunavut.

Tetra Tech and WSP Canada Inc. previously prepared the design report and drawings for construction related to the Fuel Storage and Containment Facilities for the Project.

Tetra Tech was retained by Agnico Eagle to prepare a construction summary (as-built) report for the Rankin Inlet Itivia Site Fuel Storage and Containment Facilities as well as the Rankin Itivia Culvert.

The Rankin Inlet Itivia site is located in Rankin Inlet, on the shore of Melvin Bay (part of Hudson Bay), and around a UTM (NAD83, Zone 15) coordinate of 546,070E and 6,963,760N.

As required by the Water Licence A (No. 2AM-MEL1631), this report summarizes the construction work of the Rankin Inlet Itivia Site Fuel Storage and Containment Facilities. However, this is an interim report that summarizes the construction work of the secondary containment for the fuel farm, pumping station and ancillaries, and field erection and commissioning of Tank #2 at the Rankin Inlet Itivia site. The completion of the field erection work and commissioning for Tank #1 will be finalized in 2018. Included in this report is:

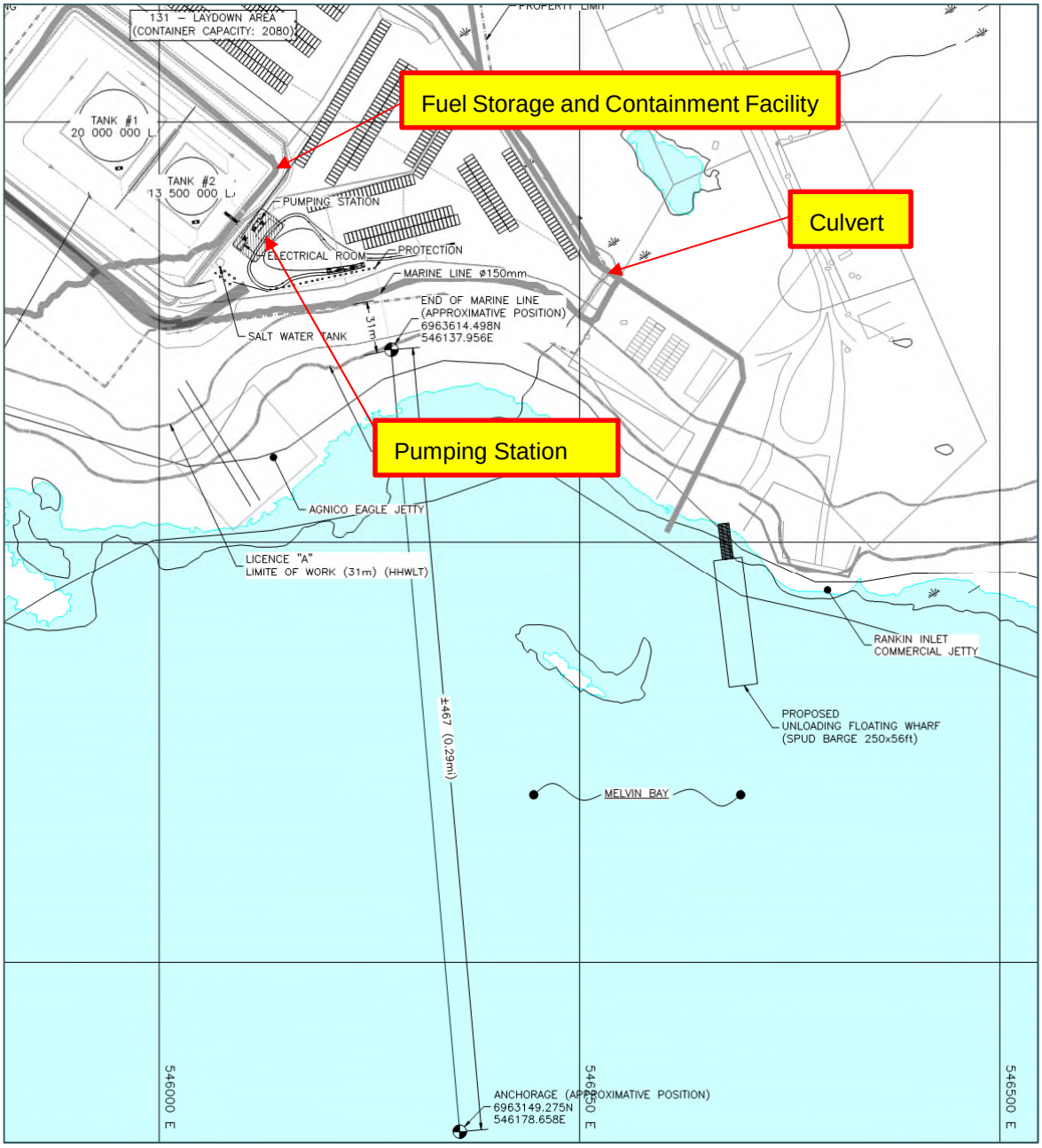
- A summary of the characteristics of the Rankin Inlet Itivia Site Fuel Storage and Containment Facilities;
- Documentation on field decisions that deviate from original plans and non-conformance / corrective action reports;
- As-built drawings;
- Survey drawings conducted during and after the construction of the Rankin Inlet Itivia Site Fuel Storage and Containment Facilities and Rankin Inlet Itivia Culvert;
- Photographs of the Rankin Inlet Itivia Site Fuel Storage and Containment Facilities and Rankin Itivia Culvert;
- Inspection Reports for the Inspection Test Plan (ITP), and Handover Package of Tank #2;
- Inspection Reports and Quality Control Documents for the Offsite and Onsite Fabrication and the Fuel Modules;
- Inspection Reports for the Tank Farm Area Final Wall, Blasting Operations, Quality Control for Geomembrane Installation;
- Particle Size Summary of 30 mm minus and 20 mm minus material;

# 2.0 SUMMARY OF THE CONSTRUCTION

## 2.1 Site Location Plan

The figure below presents the site location plan for the Rankin Inlet Itivia Site Fuel Storage and Containment Facilities, pumping station, and Rankin Inlet Itivia Culvert. Tank #2 (13.5 ML) was erected, commissioned, and is now operating while Tank #1 (20 ML) will be completed in 2018. The Rankin Itivia Culvert was installed at the southwestern portion of the laydown area where the laydown connects with the existing road.

**Figure 2.1: Rankin Inlet Itivia Site Location Plan**



## 2.2 Construction Schedule

Construction activities at the Rankin Inlet Itivia Site Fuel Storage and Containment Facilities were conducted between March and October 2017. As shown in Picture 1 (below) taken during the construction period, both tanks were being erected but only Tank #2 was completed for service as planned. Picture 2 (below) shows the containers for the pumping and electrical stations. Construction was completed according to the milestone dates shown in Table 2.1.

**Picture 1: Construction of Rankin Inlet Itivia Site Fuel Storage and Containment Facilities**
(Tank #1 is in the foreground and Tank #2 is in the background)

**Picture 2: Pumping and Electrical Station Containers**

**Table 2.1: Rankin Inlet Itivia Site Construction Milestone Dates**

| Item | Date |
|---|---|
| Site Preparation | April 25th to May 2nd |
| Drill/Blast | April 27th to June 6th |
| Excavation | May 1st to June 25th |
| Rock Face Scaling | June 19th to 22nd |
| Overburden Pushback and Protection Berm | July 15th to August 1st |
| Under Liner Material Placement | June 10th to September 26th |
| Containment Berm | June 24th to September 26th |
| Liner System Installation | July 14th to October 6th |
| Tank Erection | July 29th to September 8th |
| Overliner Material Placement | July 16th to October 9th |
| Marine Pipeline Installation | August 17th to October 14th |
| Miscellaneous Steel Elements to Pumping Station | September 2nd to October 14th |
| Rankin Inlet Facility Testing | September 2nd to October 14th |
| Commissioning of Tank #2 | October 17th |
| Piping Interrelated to Pumping Station | September 16th to October 21st |
| Electrical Construction | September 16th to October 21st |
| System Operational for Tank #2 | October 21st |

## 2.3 As-built Drawings and Photographs

As-built drawings are presented in Appendix A.

Survey drawings conducted during and after the construction of the Rankin Inlet Itivia Site Fuel Storage and Containment Facilities and Rankin Itivia Culvert can be found in Appendixes B and C, respectively.

Photographs of the Rankin Inlet Itivia Site Fuel Storage and Containment Facilities and Rankin Inlet Itivia Culvert during construction are shown in Appendixes D and E, respectively.

# 3.0 CODES AND STANDARDS

## 3.1 Compliance for Field Erected Fuel Tanks

The system for Tank #2 complies with codes and standards related to the project (Federal, Territorial, Municipal, NBCC, NFCC, CEC, CSA, NFPA, and API) as well as the directives of the authorities having jurisdiction over the project, including specific codes such as R-125-95 NWT, Mine Health and Safety Act, and RRMWT 1990, C F-12 Fire Prevention Regulations. See Table 3.1 below.

**Table 3.1: Rankin Inlet Itivia Site Field Erected Fuel Tanks As-built**

| Fuel Farm Description | Rankin Inlet Itivia Site Field Erected Fuel Tanks | |
|---|---|---|
| | Tank #1 | Tank #2 |
| Comply with CCME | - | Yes |
| Equipped with Overfill Protection | - | Yes |
| Underground Piping Double Wall | - | No* |
| Underground Piping Installed to Collect Leak into an Accessible Sump | - | Yes |
| Connections for Filling/Emptying Storage Tanks Kept Close | - | Yes |
| Material | G40.21M-260WT | G40.21M-260WT |
| Product | Diesel | Diesel |
| Volume | 20 ML | 13.5 ML |
| Diameter | 43.00 m | 35.10 m |
| Height | 14 m | 14 m |

* A portion of the marine pipeline (single wall) intended to be aboveground was temporarily buried and the covering material had frozen. An appropriate remedial measure will be taken to remove the covering material as soon as the material is thawed in spring 2018 and there will be no risk to damage the pipe while excavating.

## 3.2 Compliance for Secondary Containment

The secondary containment for aboverground storage tanks complies to NFCC standards. The base and walls of the containment basin were constructed to withstand a full hydrostaric head and has a permeability of $1_E^{-13}$ cm/s while the required permeability is $1_E^{-6}$ cm/s. The tanks are located entirely within the diked area, with an impermeable membrane covered with a non-combustible material.

**Table 3.2: Rankin Inlet Itivia Site Secondary Containment As-built**

| Parameters | Description | | Compliance |
|---|---|---|---|
| Enclosed Tanks | Tank #1 | Tank #2 | - |
| Volume | 20 ML | 13.5 ML | - |
| Containment Requirement (for Tank #2 only) | 14.850 ML | | Yes |
| Containment Requirement (for both tanks) | 22.000 ML | | No* |
| Actual Containment Capacity | 21.868 ML | | - |
| Base and Wall Membrane to Withstand Hydrostatic Head | HDPE | | Yes |
| Permeability ($1_E^{-6}$ cm/s min.) | $1_E^{-13}$ cm/s | | Yes |
| Tanks Located Entirely Within the Diked Area | - | | Yes |

* See explanation in the paragraph below

As shown in Table 3.2 (above), the current total capacity of the Rankin Inlet Itivia Site Fuel Farm containment is 21 868 $m^3$ which is sufficient to operate Tank #2 (a minimum containment capacity of 14 850 $m^3$ is required for Tank #2). However, the dike containment volume required for both tanks to be in service (Tank #1 and Tank #2) is 22 000 $m^3$ which indicates that an additional 132 $m^3$ is required to meet the minimum capacity requirements. The changes in the geometry (as shown in section 5.1) compounded into a current volume capacity of 21 868 $m^3$ calculated from the floor base to the crests of perimeter dike, which is 1 821 $m^3$ lower than the designed capacity of 23 700 $m^3$. A remodeling of the fill over the liner on the fuel farm floor to reach the volumetric capacity of 22 000 $m^3$ is required prior to the completion and commissioning of Tank #1, planned mid-year 2018.

# 4.0 FIELD DECISIONS FOR THE FIELD ERECTED FUEL TANK #2 AND SURROUNDING FACILITIES (STRUCTURAL, MECHANICAL, AND ELECTRICAL)

## 4.1 Documentation on Field Decisions that Deviate from Original Plans

This section documents variations from original design which were approved by the designer and/or the field engineer on site for the field erected fuel tank and piping systems. The designed intent of the structure was not compromised with the changes to the original design.

A construction summary was prepared for the structural, and the mechanical and electrical systems see Appendix F and G, respectively.

The construction work led to slight variations from the original design in the structural, mechanical, and electrical aspects of Tank #2 of the Rankin Fuel Farm.

### 4.1.1 Structural

- The handrails were changed to steel angle of 55 mm x 55 mm x 6 mm instead of a pipe handrail, approved by the designer.
- As per the designer, all manholes will be painted with Thermarust paint to prevent rust damage. Painting for both tanks will be done in summer 2018.

### 4.1.2 Mechanical

- The inspection test for leaks in Tank #2 changed to a liquid penetrating test, as approved by the designer. Additional equipment including a 12” pressure vacuum, shell brackets, and vents were installed.
- Vent valves were installed at the top of the dike section in the pipeline for Tank #2.
- The outer housing material was substituted for NEMA 4x Aluminum or Stainless Steel rather than the specified 3R to prevent any rust damage. This change was approved by the designer.
- An OPW loading arm replaced the Emco loading arm and was approved by the designer due to the time constraints of the delivery.
- Two odor control scrubbers with a vent were installed, approved by the designer.
- Tripods were replaced by cement blocks underneath the pump and electrical stations, approved by the designer.
- Structural framing was added to the pumping station to reinforce the structure beneath the motor and pump. This addition was approved by the designer.
- The diesel marine line double walled section does not conform as per Federal regulations. Monitoring gauge and ball valves must be accessible and the double wall pipe section must be visible on both ends. All corrective actions will be done in summer 2018.
- The flexible connection scrubber ducting does not respect the piping and instrumentation diagram. At the entrance of the scrubber, only one (1) flexible ducting should be installed while at the ground level of the drop tank point, flexible ducting is missing. All corrective action will be corrected in summer 2018.

### 4.1.3 Electrical

- The installation of Rankin Inlet’s main electrical entry and the buried cable and electrical pole were added and approved by the designer.
- Cabletray and its supports were required to be installed on instrumentation and lighting cables, approved by the engineer.
- One switch per VSD was installed per pump. The 600 V power junction boxes were removed, approved by the designer and control cables were installed between cabinets and the VSD.

- Four (4) additional unit heaters were added and four (4) ¾ hp engines to the filter containers. A 45 kVA transformer and a 120/208 V panel with 42 circuits replaced the 30 kVA transformer and the 120/208 V panel with 30 circuits, approved by the designer.
- Additional exterior lighting and fixtures were installed upon approval by the field engineer. One emergency lighting fixture and one 120 V receptacle in each operator room.
- A 4-20 mA was added to the PLC Motorized valves instead of an RTD card, approved by the designer.
- A temperature sensor was installed on Tank #2, approved by the designer.
- Grounding and bonding connections were added to the buried grid for all metallic equipment, as approved by the designer.

## 4.2 Maintenance, Inspection, Construction Monitoring, and Inspection Reports

The construction monitoring was managed by Agnico Eagle. Several activities were conducted during construction to ensure the quality of the work. Here is a description of the reports prepared to summarize the quality control, monitoring, and/or inspections performed during the construction of key activities.

- Inspection Test Plan dated October 29th, 2017 prepared by MTKSL, see Appendix H.
- Handover Package of Tank #2 dated October 30th, 2017 prepared by Inukshuk Construction Limited, see Appendix I. Testing was done throughout the erection of Tank #2 and the installation of the mechanical and electrical systems. See Table 4.1 for a summary of the inspections.
- Rankin Inlet Offsite and Onsite Fabrication Quality Control Documents dated June 6th, 2017 prepared by Nuqsana Promec Mining, see Appendix J. Quality control was done throughout the construction and fabrication the project, including but not limited to, the catwalk, piping, and mechanical fixtures.
- Fuel Module Quality Control Documents dated November 27th, 2017 prepared by Nuqsana Promec Mining, see Appendix K. Documentation for inspection and test plan for mechanical, piping, and also red line are included in this document.

During the first filling process of Tank #2, two (2) minor fuel leaks were observed. The first leak occurred on October 17th, fuel seeped out from the pressure test port on the fueling nozzle neck reinforcement plate. The second leak occurred on October 18th, with minor weeping between the manhole welding joint and the tank reinforcement plate. Both of these leaks were promptly reported to the installation contractor who repaired the leaks with temporary welding from the tank exterior. Regular visual inspections were made thereafter to ensure no further leaks occurred.

Two (2) Non-Compliance Reports were then completed to cover these defects, see Appendix L. At the time of writing this interim report the permanent corrective measures had not yet been finalized by the contractor. The permanent repairs will take place in the Spring of 2018 at which time Tank #2 will have to be emptied such that permanent repairs can take place from within the interior of the tank.

**Table 4.1: Tank #2 As-built Inspections**

| Description | Test Method | Result |
|---|---|---|
| Floor Welding | Visual | Acceptable |
| Floor Welding | Vacuum Box | Acceptable |
| Shell to Floor Welding | Visual | Acceptable |
| Shell to Bottom Welding | Visual | Acceptable |
| Tank #2 Roundness | Visual | Acceptable |
| 1st Horizontal Banding | Measure | Acceptable |
| 2nd Horizontal Banding | Measure | Acceptable |
| 3rd Horizontal Banding | Measure | Acceptable |
| 4th Horizontal Banding | Measure | Acceptable |
| SR1 Vertical | Measure | Acceptable |
| SR2 Vertical | Measure | Acceptable |
| SR3 Vertical | Measure | Acceptable |
| SR4 Vertical | Measure | Acceptable |
| SR5 Vertical | Measure | Acceptable |
| Tank Shell Plumbness | Measure | Acceptable |
| 1st Horizontal and Vertical Leaks | Visual | Acceptable |
| 2nd Horizontal and Vertical Leaks | Visual | Acceptable |
| 3rd Horizontal and Vertical Leaks | Visual | Acceptable |
| 4th Horizontal and 4th and 5th Vertical Leaks | Visual | Acceptable |
| Compression Ring Welding | Visual | Acceptable |
| Tank #2 Roof Welding | Visual | Acceptable |
| Roof Columns Plumbness | Measure | Acceptable |
| Roof Structure Welding and Bolting | Visual | Acceptable |
| Tank Shell Plumbness | Measure | Acceptable |
| Shell Nozzle Welding | Visual | Acceptable |
| Nozzle Repad Leaks | Air Test | Acceptable |
| Shell Manway Welding | Visual | Acceptable |
| Tank #2 Shell Plumbness | Measure | Acceptable |
| Manway Leaks | Visual | Acceptable |
| Internal Column Repads and Pipe Support Welding | Visual | Acceptable |
| External Brackets and Cable Tray Welding | Visual | Acceptable |
| Roof Painter Post Welding | Visual | Acceptable |
| Staircase Support Bracket and Repad Welding | Visual | Acceptable |
| Stairs and Platforms Welding | Visual | Acceptable |

# 5.0 FIELD DECISIONS FOR THE SECONDARY CONTAINMENT FACILITY

## 5.1 Documentation on Field Decisions that Deviate from Original Plans

This section documents variations from original design which were approved by the designer and/or the field engineer on site for the field erected fuel tank and piping systems. The designed intent of the structure was not compromised with the changes to the original design.

A construction summary was prepared for the Rankin Inlet Itivia Site Fuel Storage and Containment Facilities see Appendix M.

The construction work led to slight variations from the original design in the geometry of the Rankin Fuel Farm. The Rankin Inlet Itivia Site Fuel Storage Containment Facilities and Rankin Inlet Itivia Culvert geometry and characteristics were adjusted to site conditions. Table 5.1 presents the changes between the proposed and final works.

- The rock slope excavation is 1V:0.1H instead of the original 1V:0.75H. It was approved by the geotechnical engineer.

### 5.1.1 Tank Foundation As-built

- A slope of 1V:120H was required under the tanks, sloping from the center of the tank to the edge of the tank foundation pad.
- The average side slope of dike and pad foundation slope remained the same at 1V:2H.
- The dimensions of the Tank #1 and Tank #2 pad foundations remained the same at 45.4 m x 45.4 m and 37.5 m x 37.5 m, respectively.

### 5.1.2 Dike and Secondary Containment

- Within the northeast corner and extending along the east wall the bedrock elevation was found to be below 9.45 m or non-existent at the designed floor elevation. The blast was drilled to bedrock or the designed floor in this area, 4 m back from the designed highwall to allow additional berm structure to be constructed.
- The dimensions of the dike CL to CL are greater by 1.6 m length and 2.6 m width.
- The average top width of the dike crest is 1.4 m which is an increase of 0.4 m from the original 1 m design.
- The containment height was reduced by 0.08 m to a height of 1.57 m.
- The depth of fill placed over the liner was increased by 0.08 m to a depth of 0.38 m.
- The average height of the dike crest remained at 1.8 m.
- A detail for the sump area was provided by the designer.
- The rip-rap was removed from the ditch, approved by the designer. The geometry of the ditch was changed due to constructability issues and approved by the field engineer. The overall water management of the containment facility was unaffected, sloping toward the sump area where the clean water will be pumped out of the fuel farm.

Several particle size analyses were conducted for the 30 mm minus material to be used for the tank foundation and liner system. It was approved by the field engineer and the results and summary can be found in Appendix N.

**Table 5.1: Rankin Inlet Itivia Site Fuel Storage and Containment Facilities Geometry and Characteristics**

| Item | Proposed | | Actual | | Difference |
|---|---|---|---|---|---|
| | Tank #1 | Tank #2 | Tank #1 | Tank #2 | |
| Secondary Containment Permeability (max.) | $1E^{-6}$ cm/s | | $1E^{-13}$ cm/s | | - $10E^{-7}$ cm/s |
| Dike: length, width (CL to CL) (avg.) | 154 m x 104.3 m | | 155.6 m x 106.9 m | | + 1.6 m / + 2.6 m |
| Dike Height (avg.) | 1.8 m | | 1.8 m | | - |
| Containment Height (avg.) | 1.65 m | | 1.57 m | | - 0.08 m |
| Dike Flat Top Width (avg.) | 1.0 m | | 1.4 m | | + 0.4 m |
| Dike Embankment Slope (avg.) | 1V:2H | | 1V:2H | | - |
| Impervious Area | 16 050 $m^2$ | | 17 051 $m^2$ | | + 1 001 $m^2$ |
| Tank Foundation Pad (avg.) | 45.4 m x 45.4 m | 37.5 m x 37.5 m | 45.4 m x 45.4 m | 37.5 m x 37.5 m | - |
| Tank Foundation Thickness (min.) | 900 mm | 900 mm | 950 mm | 1.02 m | + 50 mm / + 102 mm |
| Tank Foundation Shoulder (min.) | 1.2 m | 1.2 m | 1.2 m | 1.2 m | - |
| Tank Foundation Pad Embankment Slope (avg.) | 1V:2H | 1V:2H | 1V:2H | 1V:2H | - |
| Tank Foundation Pad Slope (avg.) | 1V:120H | 1V:120H | 1V:120H | 1V:120H | - |
| Tank Foundation Pad Thickness, Above Surrounding Ground (m) | 0.4 | 0.4 | 0.4 | 0.4 | - |
| Depth of Liner Under Fill (avg.) | 0.3 m | | 0.38 m | | + 0.08 m |
| Containment Capacity (for Tank #2 only) | 14 850 $m^3$ | | 21 686 $m^3$ | | + 6 836 $m^3$ |
| Containment Capacity (both tanks) | 22 000 $m^3$ | | 21 868 $m^3$ | | - 132 $m^3$ |

### 5.1.3 Distance Restrictions As-built

The minimum clearances that were required or recommended were met and are listed on Table 5.2 below:

**Table 5.2: Distances Restrictions**

| Item | Minimum Required | Tank #1 | Tank #2 |
|---|---|---|---|
| Distance Between Tanks | ¼ ( D1 + D2) = 19.5 m<br>D1=43 m, D2=35.1 m | 19.56 m | |
| Distance Between Tank and Toe of the Dike | 1.50 m | 15.42 m | 12.43 m |
| Distance Between Tank and CL of the Dike | ½ ( Height of Tank) = 7.0 m<br>Height = 14 m | 27.91 m | 19.33 m |
| Distance Between Property Limit (that can be built upon) and Tank | Tanks with 3 000 001 gallons or more: 175 ft. = 53.34 m | 54.20 m | 64.26 m |
| Distance Between Property Limit and Exterior Toe of the Dike | 3.0 m | 4.27 m | |
| Distance Between Tank and Public Roads | 60 ft. = 18.3 m | 115 m | 166.30 m |
| Distance Between Fuel Farm and High Water Line of Melvin Bay | 31.0 m | 37.76 m | |

## 5.2 Commissioning, Inspection, Construction Monitoring, and Inspection Reports

The construction monitoring was managed by Agnico Eagle. Several activities were conducted during construction to ensure the quality of the work. Here is a description of the reports prepared to summarize the quality control, monitoring, and/or inspections performed during the construction of key activities.

- Visit Reports for Final Wall Inspection dated June 21st and 29th, 2017 prepared by Vanessa Smith, see Appendix O. A visual inspection was conducted and a fault was discovered in the rock which may reduce the long term stability of the wall, but overall the condition of the rock was good.
- Blasting Operation, Survey and Monitoring dated October 6th, 2017 prepared by Explotech Engineering Ltd, see Appendix P. A pre-blast and post-blast inspection were done including vibration monitoring during blasting. No notable changes were observed related to the blasting or construction operations in the surrounding buildings and facilities.
- Quality Control Final Report prepared by Texel Geosol for Nuna Kivalliq Earthworks Inc, see Appendix Q. Testing, both non-destructive and destructive, was performed to ensure the quality of the installation of the geosynthetic materials, including welding. Texel Geosol certified that all materials were installed according to the project plans and specifications.
- Inspection Test Plan dated October 29th, 2017 prepared by MTKSL, see Appendix H.

# 6.0 FIELD DECISIONS FOR THE RANKIN INLET ITIVIA CULVERT

## 6.1 Documentation on Field Decisions that Deviate from Original Plans

Particle size analyses were conducted for the 20 mm minus material to be used for the culvert bedding. It was approved by the field engineer and the results and summary can be found in Appendix R.

- The culvert dimensions were maintained at a diameter of 900 mm and length of 30 m.
- The culvert slope was decreased on site to a slope of 1.33% to follow the natural ground slope, and is still adequate to carry the water flow.
- The rip-rap around the Rankin Itivia Culvert will be installed at a later date.

**Table 6.1: Rankin Itivia Culvert Geometry and Characteristics**

| Culvert Description | Proposed | Actual | Difference |
|---|---|---|---|
| Length | 30 m | 30 m | - |
| Diameter | 900 mm | 900 mm | - |
| Slope | 3.61% | 1.33% | - 2.28% |
| Number of pipes | 2 | 2 | - |

Temporary culverts were replaced by final culverts in November 2017 as indicated in the Construction Summary of Rankin Itivia Culvert, see Appendix S.

# 7.0 EARTH WORKS

A shortage of granular material led to slight changes in the materials:

- The original material specified for the Rankin Inlet Itivia Site Fuel Storage Containment Facility was 200 mm minus granular material and was replaced with Class A Borrow Pit or 600 mm minus granular fill graded to a particle size of ≤ 200 mm.
- The fill thickness of the 30 mm minus granular fill over and under the liner system was changed to 300 mm and 200 mm respectively, approved by the designer. This change was to allow the heavy equipment required for construction to access the site. This change did not affect the total material quantities.
- A 100 mm layer of sand between the geotextile and geomembrane replaced the 30 mm minus in the Tank #1 containment area, minus the tank pedestal. This was due to construction constraints and to avoid potentially damaging the liner system during tank erection. The substitution was approved by the designer.

The as-built material quantities for the Rankin Inlet Fuel Storage Containment Facilities and the Rankin Inlet Itivia Culvert are presented in Table 7.1 below.

### Table 7.1: As-built Material Quantities

| Item | Proposed | Actual | Difference |
|---|---|---|---|
| Sand | 180 | 1 744 $m^3$ | + 1 564 $m^3$ |
| 30 mm minus | 10 590 $m^3$ | 7 073 $m^3$ | - 3 517 $m^3$ |
| 50 mm minus | 5 900 $m^3$ | 3 425 $m^3$ | - 2 475 $m^3$ |
| Borrow Pit CL-A or Granular Fill (Graded to < 200 mm) | 7 670 $m^3$ | 4 510 $m^3$ | - 3 160 $m^3$ |
| Borrow Pit CL-A or Granular Fill (600 mm minus) | 7 160 $m^3$ | 12 440 $m^3$ | + 5 280 $m^3$ |
| Rip-rap (50 mm to 300 mm) | 30 $m^3$ | - | - 30 $m^3$ |
| **Total of fill** | **25 630 $m^3$** | **25 767 $m^3$** | **+ 137 $m^3$** |
| 540 g/$m^2$ Non-woven geotextile | 33 600 $m^2$ | 34 102 $m^2$ | + 502 $m^2$ |
| HDPE Geomembrane | 16 800 $m^2$ | 17 051 $m^2$ | + 251 $m^2$ |
| Length Culvert, 2 CSP Ø 900 mm, 2.0 mm thick | 30 m | 30 m | - |
| Excavation of Overburden | 18 480 $m^3$ | 43 445 $m^3$ | + 24 965 $m^3$ |
| Drill and Blast Excavation of Bedrock | 68 400 $m^3$ | 78 500 $m^3$ | + 10 100 $m^3$ |

## 8.0 LIMITATIONS OF REPORT

This report and its contents are intended for the sole use of Agnico Eagle Mines Ltd. and their agents. Tetra Tech does not accept any responsibility for the accuracy of any of the data, the analysis, or the recommendations contained or referenced in the report when the report is used or relied upon by any Party other than Agnico Eagle Mines Ltd., or for any Project other than the proposed development at the subject site. Any such unauthorized use of this report is at the sole risk of the user. Use of this report is subject to the terms and conditions stated in Tetra Tech's Services Agreement.

## 9.0 CLOSURE

We trust this report meets your present requirements. If you have any questions or comments, please contact the undersigned.

Respectfully submitted,
Tetra Tech

PERMIT TO PRACTICE
TETRA TECH CANADA INC.
O/A TETRA TECH
Signature
Date 2018-03-08
PERMIT NUMBER: P 1029
NT/NU Association of Professional Engineers and Geoscientists

REGISTERED PROFESSIONAL ENGINEER
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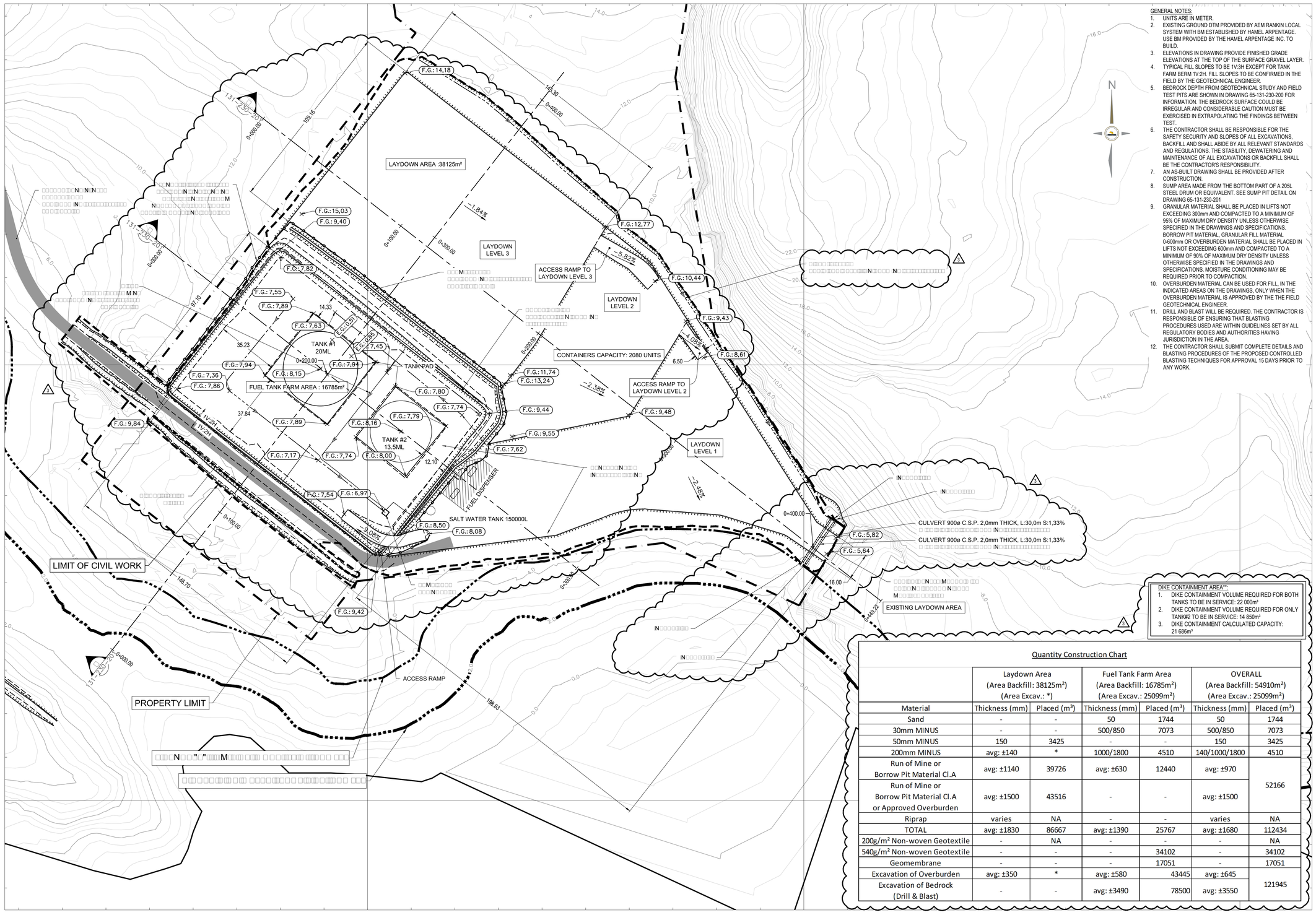
Josee.Alarie@tetratech.com
2018-03-08

# APPENDIX A

## As-built Drawings of Rankin Inlet Itivia Site Fuel Storage and Containment Facilities

NO. DESSIN DRAWING NO. 65-131-230-200TO202_R3

FORMAT ARCHD




GENERAL NOTES:

1. UNITS ARE IN METER.
2. EXISTING GROUND DTM PROVIDED BY AEM RANKIN LOCAL SYSTEM WITH BM ESTABLISHED BY HAMEL ARPENTAGE. USE BM PROVIDED BY THE HAMEL ARPENTAGE INC. TO BUILD.
3. ELEVATIONS IN DRAWING PROVIDE FINISHED GRADE ELEVATIONS AT THE TOP OF THE SURFACE GRAVEL LAYER.
4. TYPICAL FILL SLOPES TO BE 1V:3H EXCEPT FOR TANK FARM BERM 1V:2H. FILL SLOPES TO BE CONFIRMED IN THE FIELD BY THE GEOTECHNICAL ENGINEER.
5. BEDROCK DEPTH FROM GEOTECHNICAL STUDY AND FIELD TEST PITS ARE SHOWN IN DRAWING 65-131-230-200 FOR INFORMATION. THE BEDROCK SURFACE COULD BE IRREGULAR AND CONSIDERABLE CAUTION MUST BE EXERCISED IN EXTRAPOLATING THE FINDINGS BETWEEN TEST.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY SECURITY AND SLOPES OF ALL EXCAVATIONS, BACKFILL AND SHALL ABIDE BY ALL RELEVANT STANDARDS AND REGULATIONS. THE STABILITY, DEWATERING AND MAINTENANCE OF ALL EXCAVATIONS OR BACKFILL SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
7. AN AS-BUILT DRAWING SHALL BE PROVIDED AFTER CONSTRUCTION.
8. SUMP AREA MADE FROM THE BOTTOM PART OF A 205L STEEL DRUM OR EQUIVALENT. SEE SUMP PIT DETAIL ON DRAWING 65-131-230-201
9. GRANULAR MATERIAL SHALL BE PLACED IN LIFTS NOT EXCEEDING 300mm AND COMPACTED TO A MINIMUM OF 95% OF MAXIMUM DRY DENSITY UNLESS OTHERWISE SPECIFIED IN THE DRAWINGS AND SPECIFICATIONS. BORROW PIT MATERIAL, GRANULAR FILL MATERIAL 0-600mm OR OVERBURDEN MATERIAL SHALL BE PLACED IN LIFTS NOT EXCEEDING 600mm AND COMPACTED TO A MINIMUM OF 90% OF MAXIMUM DRY DENSITY UNLESS OTHERWISE SPECIFIED IN THE DRAWINGS AND SPECIFICATIONS. MOISTURE CONDITIONING MAY BE REQUIRED PRIOR TO COMPACTION.
10. OVERBURDEN MATERIAL CAN BE USED FOR FILL, IN THE INDICATED AREAS ON THE DRAWINGS, ONLY WHEN THE OVERBURDEN MATERIAL IS APPROVED BY THE THE FIELD GEOTECHNICAL ENGINEER.
11. DRILL AND BLAST WILL BE REQUIRED. THE CONTRACTOR IS RESPONSIBLE OF ENSURING THAT BLASTING PROCEDURES USED ARE WITHIN GUIDELINES SET BY ALL REGULATORY BODIES AND AUTHORITIES HAVING JURISDICTION IN THE AREA.
12. THE CONTRACTOR SHALL SUBMIT COMPLETE DETAILS AND BLASTING PROCEDURES OF THE PROPOSED CONTROLLED BLASTING TECHNIQUES FOR APPROVAL 15 DAYS PRIOR TO ANY WORK.

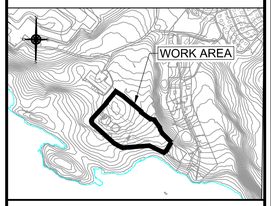
DIKE CONTAINMENT AREA**:

1. DIKE CONTAINMENT VOLUME REQUIRED FOR BOTH TANKS TO BE IN SERVICE: 22 000m³
2. DIKE CONTAINMENT VOLUME REQUIRED FOR ONLY TANK#2 TO BE IN SERVICE: 14 850m³
3. DIKE CONTAINMENT CALCULATED CAPACITY: 21 686m³

Quantity Construction Chart

| | Laydown Area (Area Backfill: 38125m²) (Area Excav.: *) | | Fuel Tank Farm Area (Area Backfill: 16785m²) (Area Excav.: 25099m²) | | OVERALL (Area Backfill: 54910m²) (Area Excav.: 25099m²) | |
|---|---|---|---|---|---|---|
| Material | Thickness (mm) | Placed (m³) | Thickness (mm) | Placed (m³) | Thickness (mm) | Placed (m³) |
| Sand | - | - | 50 | 1744 | 50 | 1744 |
| 30mm MINUS | - | - | 500/850 | 7073 | 500/850 | 7073 |
| 50mm MINUS | 150 | 3425 | - | - | 150 | 3425 |
| 200mm MINUS | avg: ±140 | * | 1000/1800 | 4510 | 140/1000/1800 | 4510 |
| Run of Mine or Borrow Pit Material Cl.A | avg: ±1140 | 39726 | avg: ±630 | 12440 | avg: ±970 | 52166 |
| Run of Mine or Borrow Pit Material Cl.A or Approved Overburden | avg: ±1500 | 43516 | - | - | avg: ±1500 | |
| Riprap | varies | NA | - | - | varies | NA |
| TOTAL | avg: ±1830 | 86667 | avg: ±1390 | 25767 | avg: ±1680 | 112434 |
| 200g/m² Non-woven Geotextile | - | NA | - | - | - | NA |
| 540g/m² Non-woven Geotextile | - | - | - | 34102 | - | 34102 |
| Geomembrane | - | - | - | 17051 | - | 17051 |
| Excavation of Overburden | avg: ±350 | * | avg: ±580 | 43445 | avg: ±645 | 121945 |
| Excavation of Bedrock (Drill & Blast) | - | - | avg: ±3490 | 78500 | avg: ±3550 | |

PLAN CLÉ
KEY PLAN




TETRA TECH

NOTES GÉNÉRALES / GENERAL NOTES

* THE FENCE, DITCH, AND THEIR RESPECTIVE MATERIAL QUANTITIES WILL BE INSTALLED AFTER THE AS-BUILT DRAWINGS ARE ISSUED.

** AS OF THE ISSUANCE OF THE AS-BUILT DRAWING ONLY TANK #2 WILL BE IN SERVICE IN 2017 AND UNTIL THE REQUIRED CAPACITY IS MET FOR BOTH TANKS.

N AS BUILT
AGNICO EAGLE DATE : 2017-12-22



DESSINS EN RÉFÉRENCE / REFERENCE DRAWINGS

| TITRE / TITLE | # DWG |
|---|---|
| - | - |
| - | - |
| - | - |
| - | - |
| - | - |
| - | - |

AGNICO EAGLE

| REV. | DATE | DESCRIPTION | PAR/BY | APP. | CLIENT |
|---|---|---|---|---|---|
| 3 | 2017-12-22 | ISSUED AS-BUILT | C.M. | J.A. | |
| 2 | 2017-10-13 | ISSUED AS-BUILT | C.M. | J.A. | |
| 1 | 2017-04-12 | ISSUED FOR CONSTRUCTION | P.H. | J.A. | |
| 0 | 2017-03-28 | ISSUED FOR CONSTRUCTION | P.H. | J.A. | |

REVISIONS

TITRE / TITLE
AGNICO-EAGLE - MELIADINE DIVISION
000-SITE PREP
230-GENERAL EARTH WORKS
RANKIN FUEL TANK FARM AND LAYDOWN AREA
FINISHED GRADE ELEVATION

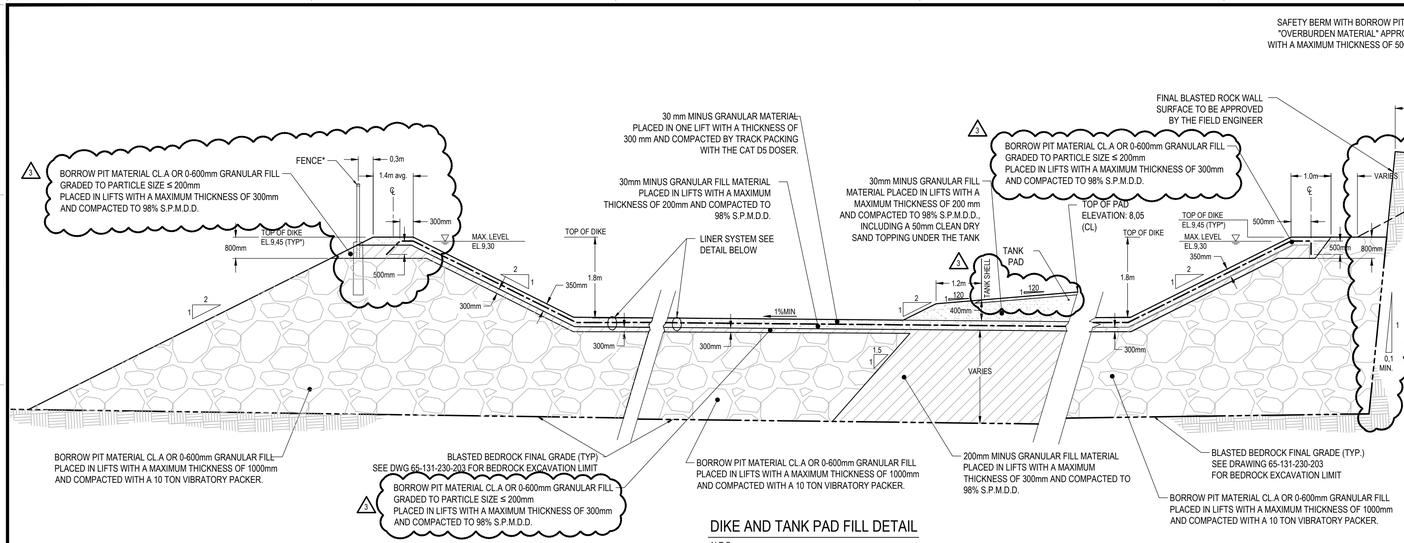
| | | |
|---|---|---|
| DESSINÉ PAR DRAWN BY | PATRICK HAMEL | DATE 2017-03-03 |
| VERIFIÉ PAR CHECKED BY | MÉLANIE YIP WOON SUN | 2017-03-03 |
| APPROUVÉ PAR APPROVED BY | JOSÉE ALARIE | 2017-03-03 |
| ÉCHELLE SCALE | 1:1000 | DATE 2015-07-16 |
| NO. DESSIN DRAWING NO. | 65-131-230-200 | |
| NO. PROJET PROJECT NO. | 6515/28920 | REVISION 3 |
| | | FEUILLE / SHT 1 / 1 |

AE-CART-ARCH D

P:\28920\DESSIN\CIV-INFRA\DESSINS DE TRAVAIL\AUTOCAD\65-131-230-200to202_R3.dwg

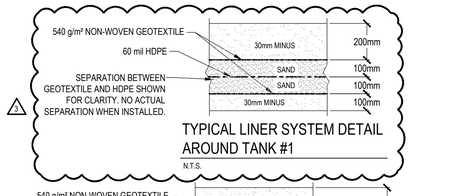
NO. DESSIN DRAWING NO. 65-131-230-200TO202_R3

FORMAT ARCHD



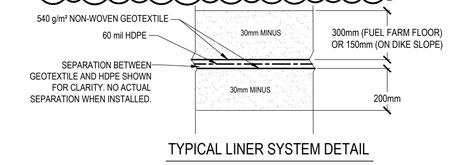

## DIKE AND TANK PAD FILL DETAIL

N.T.S.




## TYPICAL LINER SYSTEM DETAIL AROUND TANK #1

N.T.S.




## TYPICAL LINER SYSTEM DETAIL

N.T.S.

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5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY SECURITY AND SLOPES OF ALL EXCAVATIONS, BACKFILL AND SHALL ABIDE BY ALL RELEVANT STANDARDS AND REGULATIONS. THE STABILITY, DEWATERING AND MAINTENANCE OF ALL EXCAVATIONS OR BACKFILL SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
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8. GRANULAR MATERIAL SHALL BE PLACED IN LIFTS NOT EXCEEDING 300mm AND COMPACTED TO A MINIMUM OF 95% OF MAXIMUM DRY DENSITY (STANDARD PROCTOR) UNLESS OTHERWISE SPECIFIED IN THE DRAWINGS AND SPECIFICATIONS. BORROW PIT MATERIAL, GRANULAR FILL MATERIAL 0-600mm OR OVERBURDEN MATERIAL SHALL BE PLACED IN LIFTS NOT EXCEEDING 600mm AND COMPACTED TO A MINIMUM OF 90% OF MAXIMUM DRY DENSITY (STANDARD PROCTOR) UNLESS OTHERWISE SPECIFIED IN THE DRAWINGS AND SPECIFICATIONS. MOISTURE CONDITIONING MAY BE REQUIRED PRIOR TO COMPACTION.
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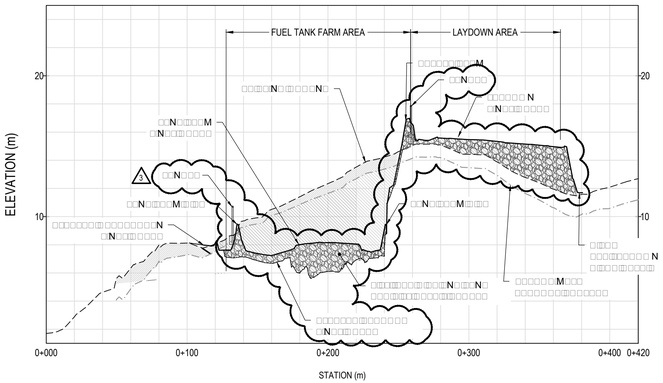
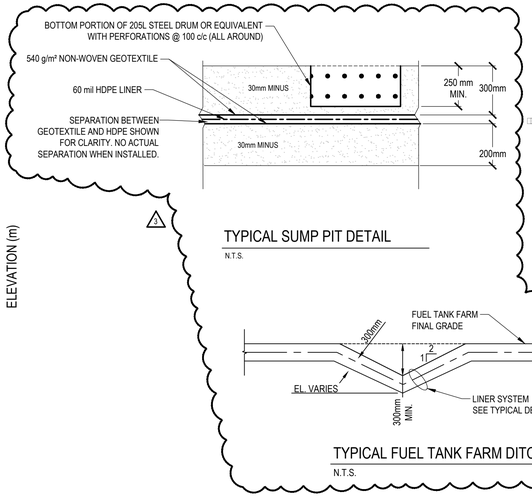
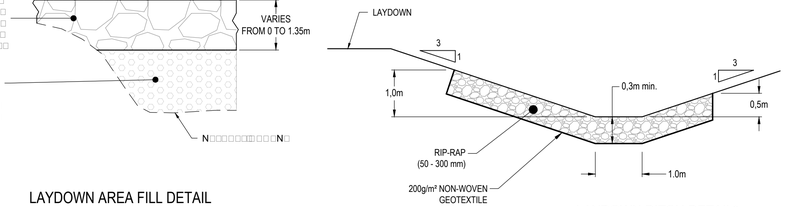



## CROSS-SECTION A



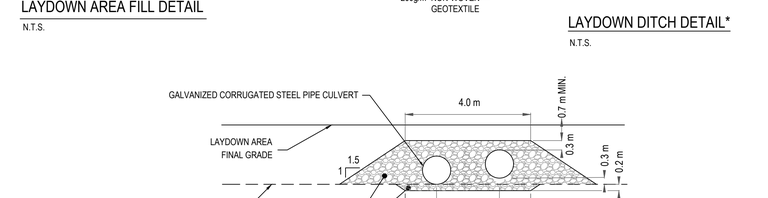

## TYPICAL SUMP PIT DETAIL

N.T.S.



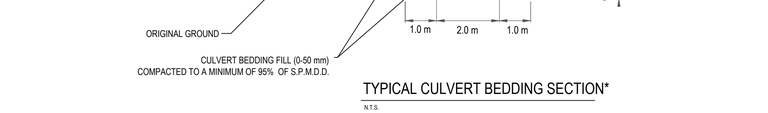

## LAYDOWN DITCH DETAIL*

N.T.S.



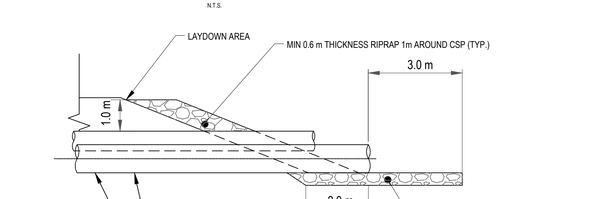

## LAYDOWN AREA FILL DETAIL

N.T.S.



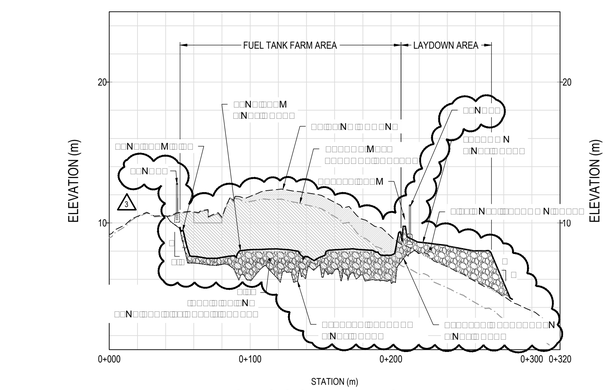

## TYPICAL FUEL TANK FARM DITCH DETAIL

N.T.S.

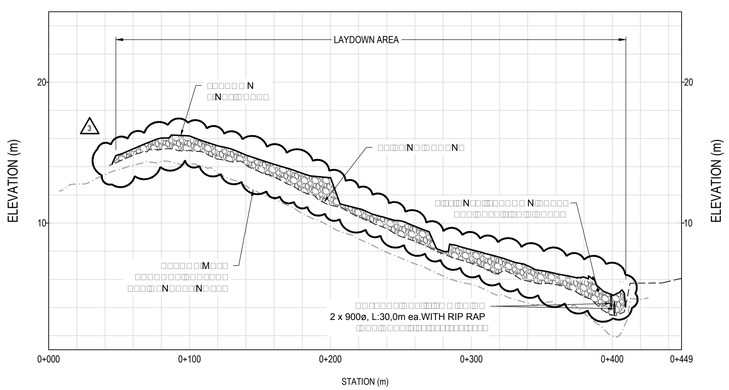



## TYPICAL CULVERT BEDDING SECTION*

N.T.S.




## CROSS-SECTION B



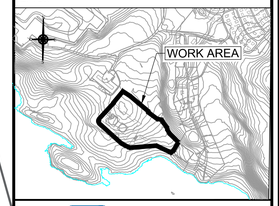

## CROSS-SECTION C




## DOUBLE CULVERT CROSS SECTION *

N.T.S.

PLAN CLÉ
KEY PLAN




AS BUILT
AGNICO EAGLE
DATE : 2017-12-22

TETRA TECH

NOTES GÉNÉRALES / GENERAL NOTES



DESSINS EN RÉFÉRENCE / REFERENCE DRAWINGS

| TITRE / TITLE | # DWG |
|---|---|
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| -- | -- |
| -- | -- |
| -- | -- |
| -- | -- |
| -- | -- |

AGNICO EAGLE

| REV. | DATE | DESCRIPTION | PAR/BY | APP. | CLIENT |
|---|---|---|---|---|---|
| 3 | 2017-12-22 | ISSUED AS-BUILT | C.M. | J.A. | |
| 2 | 2017-10-13 | ISSUED AS-BUILT | C.M. | J.A. | |
| 1 | 2017-04-12 | ISSUED FOR CONSTRUCTION | P.H. | J.A. | |
| 0 | 2017-03-28 | ISSUED FOR CONSTRUCTION | P.H. | J.A. | |
| H | 2017-02-24 | ISSUED FOR TENDER | JG.M. | J.A. | |
| G | 2017-02-20 | ISSUED FOR COMMENTS | P.H. | J.A. | |

REVISIONS

TITRE / TITLE
AGNICO-EAGLE - MÉLIADINE DIVISION
000-SITE PREP
230-GENERAL EARTH WORKS
RANKIN FUEL TANK FARM AND LAYDOWN AREA
CROSS-SECTIONS AND DETAILS

| | | |
|---|---|---|
| DESSINÉ PAR DRAWN BY | PATRICK HAMEL | DATE 2017-03-28 |
| VERIFIÉ PAR CHECKED BY | MÉLANIE YIP WOON SUN | 2017-03-28 |
| APPROUVÉ PAR APPROVED BY | JOSÉE ALARIE | 2017-03-28 |
| ÉCHELLE SCALE | H 1:2000, V 1:200 | DATE 2015-07-16 |

NO. DESSIN DRAWING NO. 65-131-230-201

| NO. PROJET PROJECT NO. | REVISION | FEUILLE / SHT |
|---|---|---|
| 6515/28920 | 3 | 1 / 1 |

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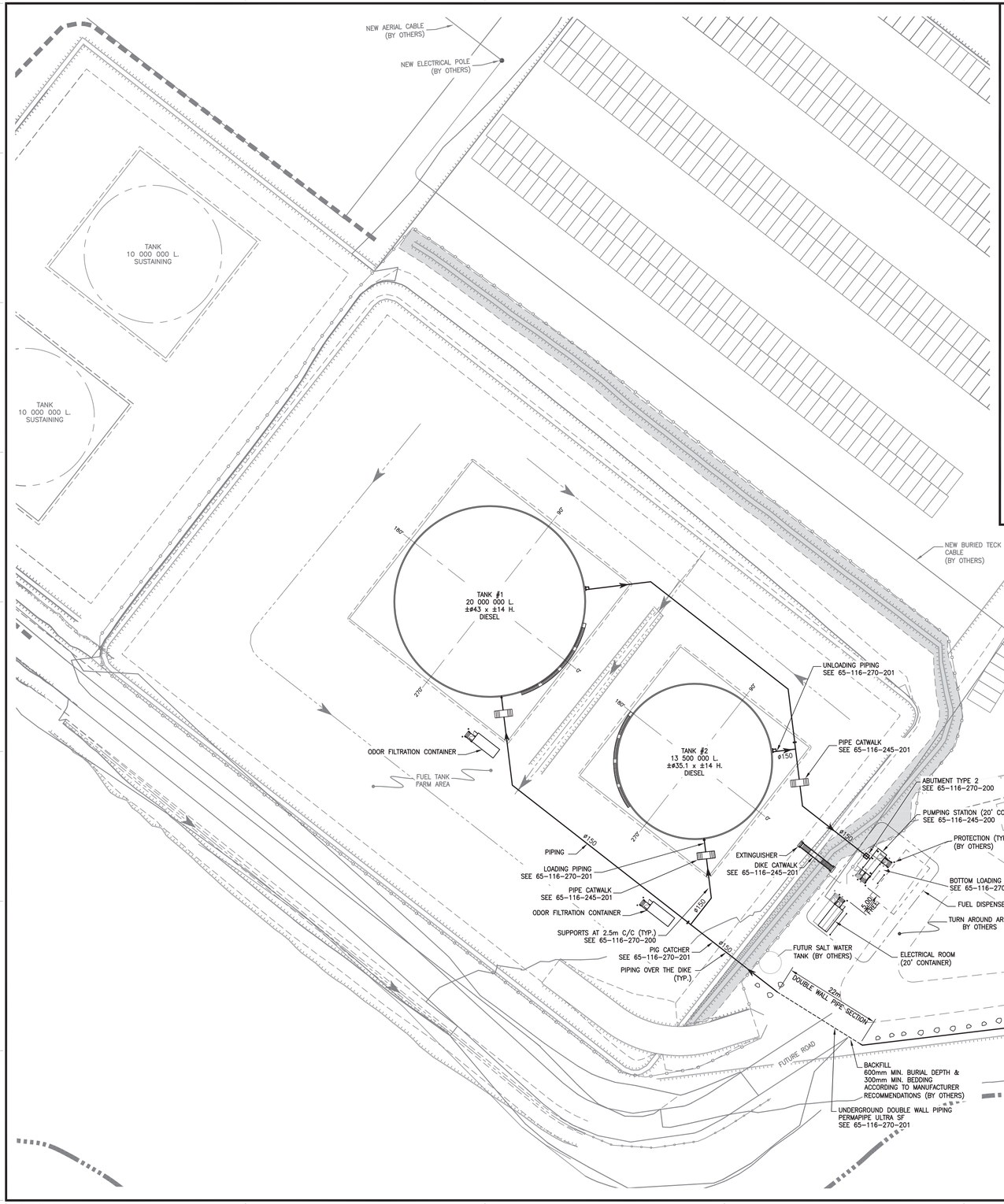
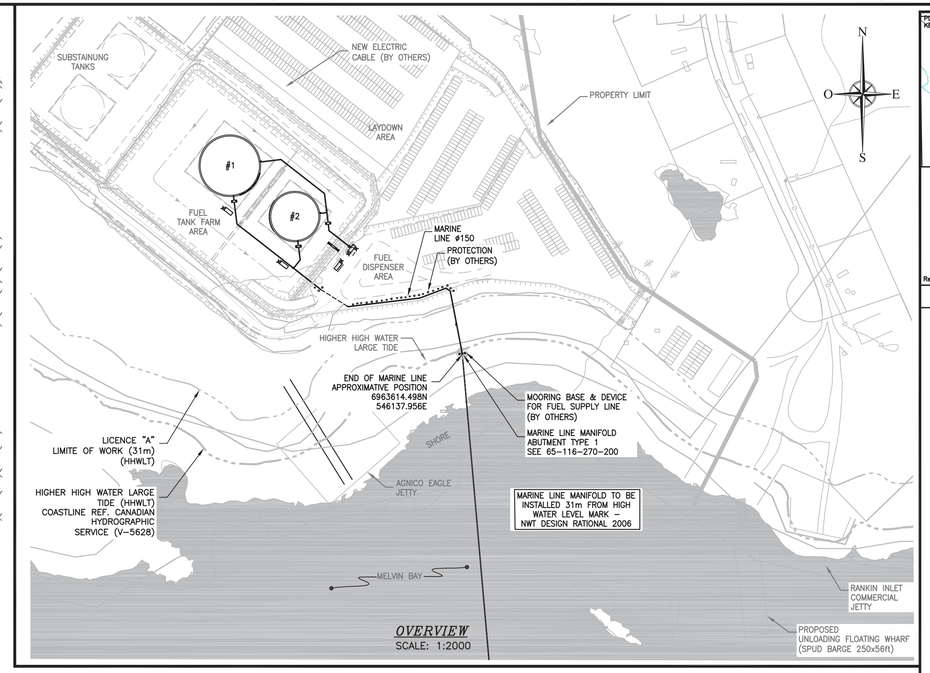
P:\28920\DESSIN\CIV-INFRA\DESSINS DE TRAVAIL\AUTOCAD\65-131-230-200to202_R3.dwg

NO. DESSIN
DRAWING NO. 65-116-210-200

FORMAT ARCHD

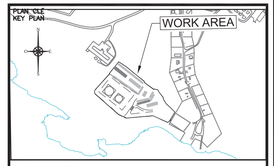


*OVERVIEW*
SCALE: 1:2000

POUR CONSTRUCTION
FOR CONSTRUCTION
AGNICO EAGLE
DATE : 2017-05-31

PLAN DE LOCALISATION
KEY PLAN




WSP
1075, 3e AVENUE EST
VAL-D'OR (QUÉBEC) CANADA J9P 0J7
TÉL. : 819 825-4274 | TÉLÉC. : 819 824-1514 | WWW.WSPGROUP.COM
Ref. 151-06440-40

## NOTES GÉNÉRALES / GENERAL NOTES

1. TANK DIMENSIONS ADJUSTED ACCORDING TO INFORMATION PROVIDED BY CONTRACTOR
2. REPLACE DRAWING : 65-103-210-200



## DESSINS EN RÉFÉRENCE / REFERENCE DRAWINGS

| TITRE / TITLE | # DWG |
|---|---|
| | |
| | |
| | |
| | |
| | |
| | |

AGNICO EAGLE

| REV. | DATE | DESCRIPTION | PAR/BY | APP. | CLIENT |
|---|---|---|---|---|---|
| 0 | 2017-05-31 | ISSUED FOR CONSTRUCTION | J.M. | D.T. | |

REVISIONS

TITRE / TITLE
AGNICO EAGLE – MEL IADINE DIVISION
116 – FUEL TANK FARM
210 – GENERAL ARRANGEMENT
FUEL DISTRIBUTION
PLAN VIEWS

| | | |
|---|---|---|
| DESSINÉ PAR / DRAWN BY | G. CORNUT | DATE 2017-05-29 |
| VERIFIÉ PAR / CHECKED BY | J. MORLIÈRE, tech. | 2017-05-29 |
| APPROUVÉ PAR / APPROVED BY | D. THIBODEAU, P. Eng. | 2017-05-29 |

| ÉCHELLE / SCALE | DATE |
|---|---|
| INDICATED | 2017-05-29 |

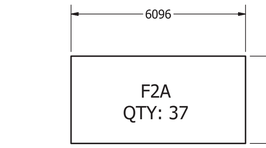
NO. DESSIN / DRAWING NO. 65-116-210-200

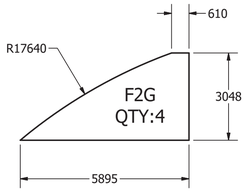
| NO. PROJET / PROJECT NO. | REVISION | FEUILLE / SHT |
|---|---|---|
| 6515 | 0 | 1 / 1 |

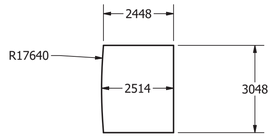
AE-CART-ARCH D

\\CAMTL1DAT01\projets\2015\1\151-06440-40\Genie Nordique\Dao\65-116-210-200_R0.dwg-2013-02-19 14:03:29

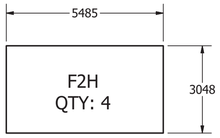
FILE NO. 65-116-210-**200_R0.dwg**

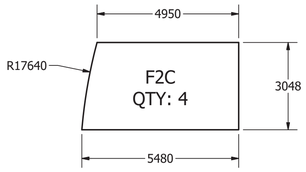


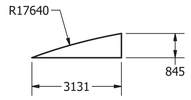



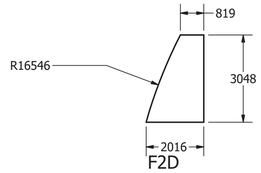

F2B
QTY: 2



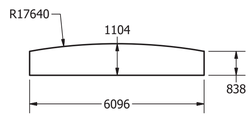



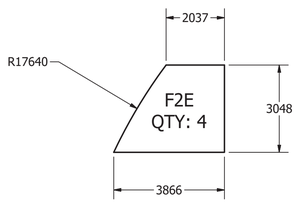

F2I
QTY: 4

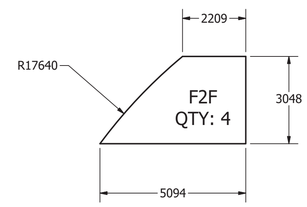


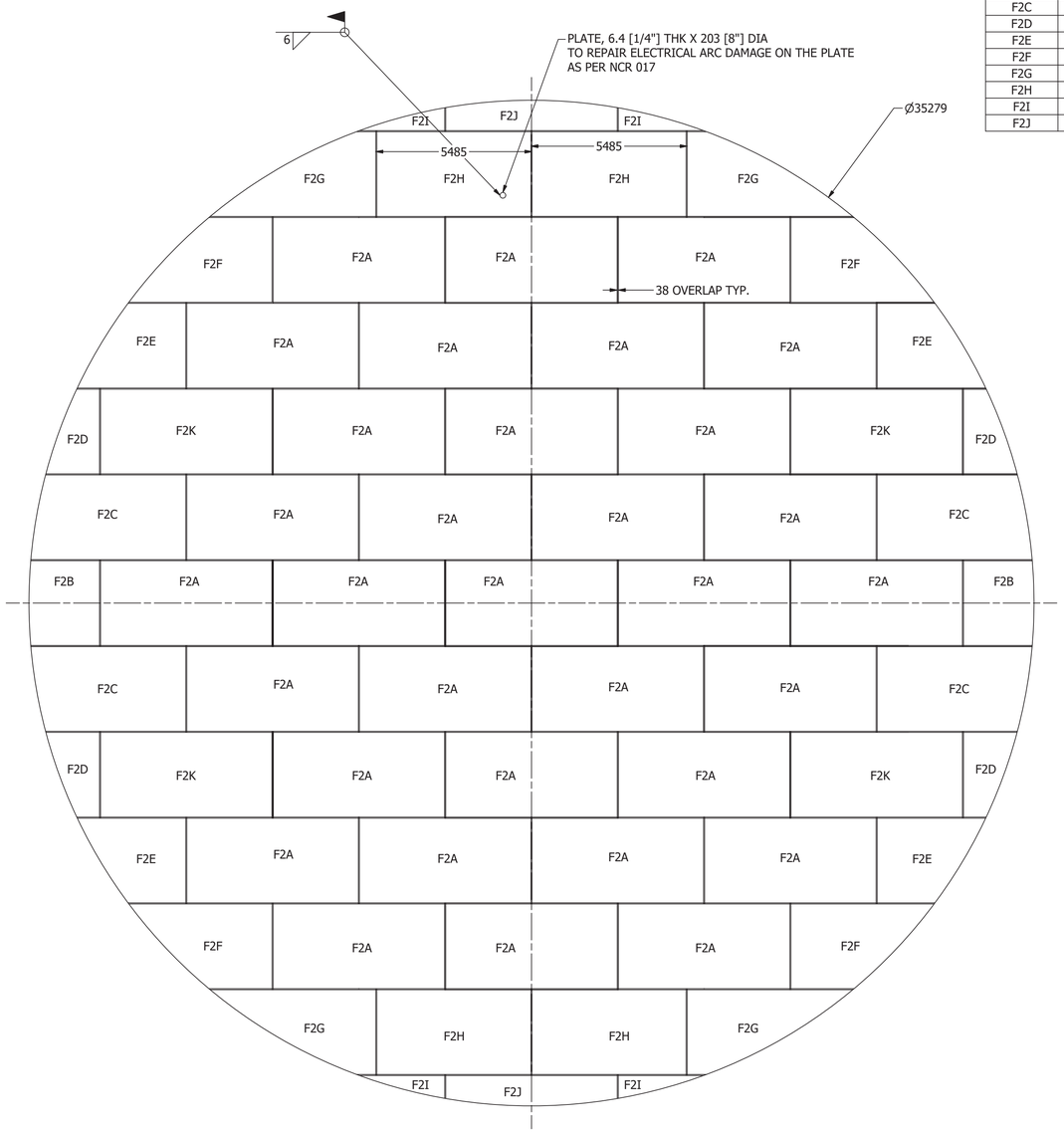

F2D
QTY: 4




F2J
QTY: 2




TANK 2 (13.5ML) FLOOR LAYOUT
SCALE 1 / 100

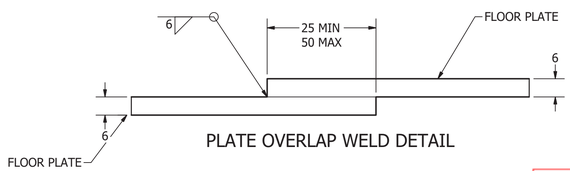



PLATE OVERLAP WELD DETAIL

| PARTS LIST | | | |
|---|---|---|---|
| ITEM | QTY | DESCRIPTION | MATERIAL |
| F2A | 37 | PL 6.35 X 3048 X 6096 | G40.21M-260WT |
| F2B | 2 | PL 6.35 X 3048 X 2514 | G40.21M-260WT |
| F2C | 4 | PL 6.35 X 3048 X 5480 | G40.21M-260WT |
| F2D | 4 | PL 6.35 X 3048 X 1931 | G40.21M-260WT |
| F2E | 4 | PL 6.35 X 3048 X3866 | G40.21M-260WT |
| F2F | 4 | PL 6.35 X 3048 X 5094 | G40.21M-260WT |
| F2G | 4 | PL 6.35 X 3048 X 5895 | G40.21M-260WT |
| F2H | 4 | PL 6.35 X 3048 X 5485 | G40.21M-260WT |
| F2I | 4 | PL 6.35 X 3131 X 845 | G40.21M-260WT |
| F2J | 2 | PL 6.35 X 838 X 6096 | G40.21M-260WT |

AS-BUILT
BY Inukshuk Construction Ltd. DATE 2017/10/02


Permit Number: P471

| REVISION HISTORY | | |
|---|---|---|
| REV | DESCRIPTION | DATE |
| 2 | INCORPORATE FIELD MODIFICATION | 9/27/2017 |

| | | |
|---|---|---|
| DRAWN | JACOB SAUNDERS | 1/10/2017 |
| CHECKED | MARC LOSIER | 3/14/2017 |
| QA | | |
| MFG | | |
| APPROVED | | |

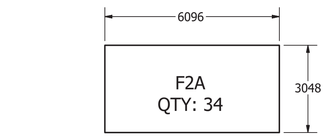
TK #2 (13.5ML) - FLOOR LAYOUT

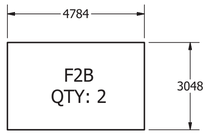
TITLE
MELIADINE FIELD ERECTED TANKS - TANK #2 (13.5ML) FLOOR AND ROOF LAYOUT

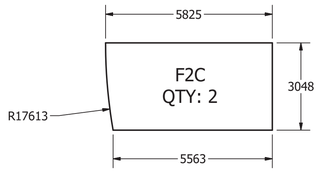
| SIZE | DWG NO | REV |
|---|---|---|
| A1 | 295-M2 | 2 |

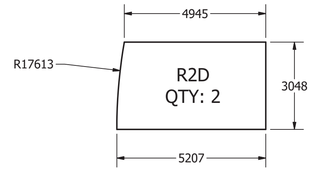
SCALE 1 / 100 SHEET 1 OF 2

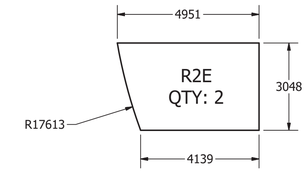
| PARTS LIST | | | |
|---|---|---|---|
| ITEM | QTY | DESCRIPTION | MATERIAL |
| R2A | 34 | PL 6.35 X 3048 X 6096 | G40.21M-260WT |
| R2B | 2 | PL 6.35 X 3048 X 4784 | G40.21M-260WT |
| R2C | 2 | PL 6.35 X 3048 X 5825 | G40.21M-260WT |
| R2D | 2 | PL 6.35 X 3048 X 5825 | G40.21M-260WT |
| R2E | 2 | PL 6.35 X 3048 X 4951 | G40.21M-260WT |
| R2F | 2 | PL 6.35 X 3048 X 5569 | G40.21M-260WT |
| R2G | 2 | PL 6.35 X 3048 X 4771 | G40.21M-260WT |
| R2H | 2 | PL 6.35 X 3048 X 4153 | G40.21M-260WT |
| R2I | 2 | PL 6.35 X 3048 X 4039 | G40.21M-260WT |
| R2J | 2 | PL 6.35 X 3048 X 3345 | G40.21M-260WT |
| R2K | 2 | PL 6.35 X 1066 x 1085 | G40.21M-260WT |
| R2L | 2 | PL 6.35 X 1659 x 1779 | G40.21M-260WT |
| R2M | 2 | PL 6.35 X 3048 X 6096 | G40.21M-260WT |
| R2N | 2 | PL 6.35 X 3048 x 4784 | G40.21M-260WT |
| R2O | 2 | PL 6.35 X 2833 x 1398 | G40.21M-260WT |
| R2P | 2 | PL 6.35 X 3451 x 1624 | G40.21M-260WT |
| R2Q | 2 | PL 6.35 X 2580 x 6096 | G40.21M-260WT |
| R2R | 2 | PL 6.35 X 2579 x 6096 | G40.21M-260WT |

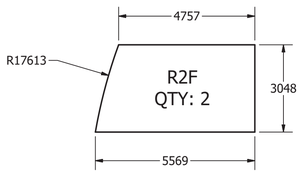


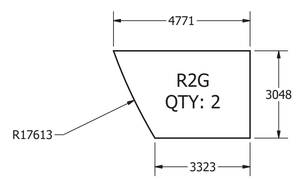



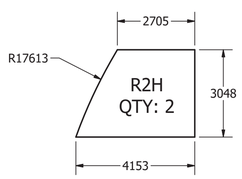



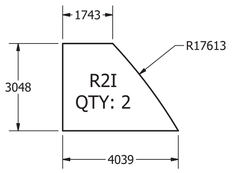



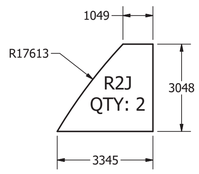



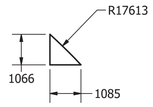



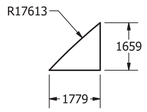



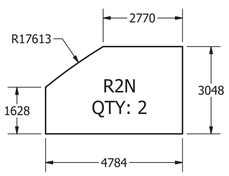



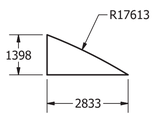



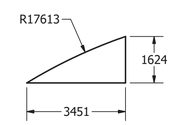



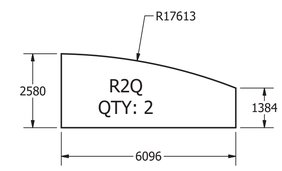


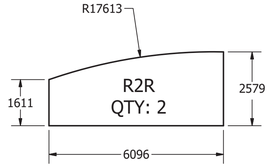


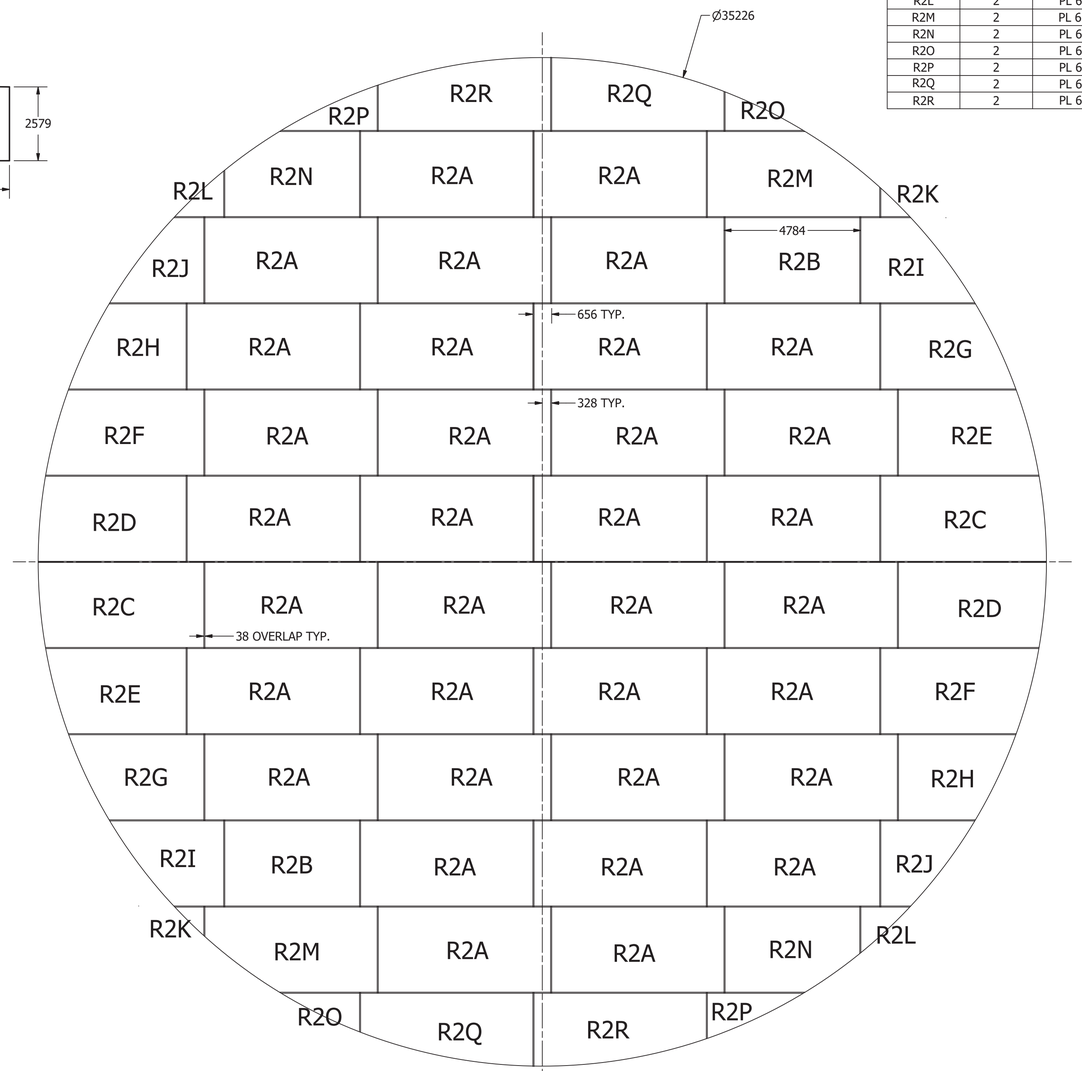



TANK 2 (13.5ML) ROOF LAYOUT
SCALE 1 / 100

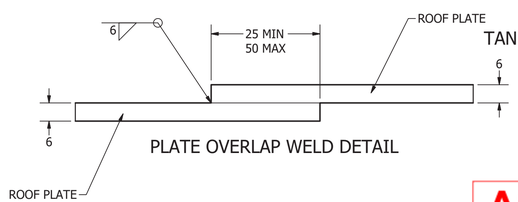



PLATE OVERLAP WELD DETAIL

**AS-BUILT**
BY Inukshuk Construction Ltd. DATE 2017/10/02

PROFESSIONAL ENGINEER
BROWN
LICENSEE
NT/NU
30-Sep-2017
Permit Number: P471

| REVISION HISTORY | | |
|---|---|---|
| REV | DESCRIPTION | DATE |
| 2 | INCORPORATE FIELD MODIFICATION | 9/27/2017 |

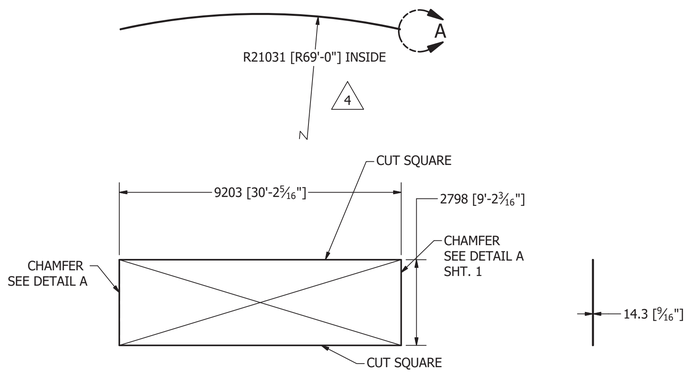
| | | |
|---|---|---|
| DRAWN | JACOB SAUNDERS | 1/10/2017 |
| CHECKED | MARC LOSIER | 3/14/2017 |
| QA | | |
| MFG | | |
| APPROVED | | |

# TK 2 (13.5ML) - ROOF LAYOUT

TITLE
MELIADINE FIELD ERECTED TANKS - TANK #2 (13.5ML) FLOOR AND ROOF LAYOUT

| SIZE | | DWG NO | REV |
|---|---|---|---|
| A1 | | 295-M2 | 2 |

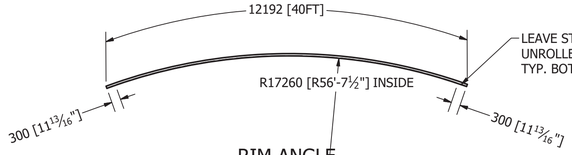
SCALE 1 / 100 SHEET 2 OF 2



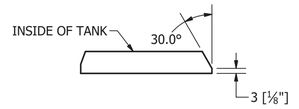




DEVELOP VIEW
COURSE NO. 1 (BOTTOM) 14.3mm THK (9/16")
CUT FROM PLATE 2874mm x 9269mm
QTY: 12
MARK 7201

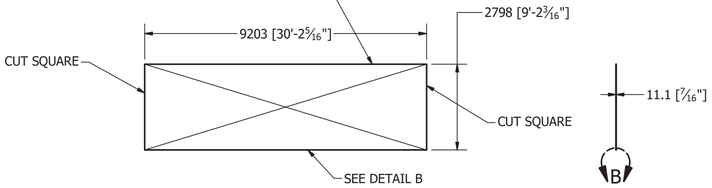



RIM ANGLE
76.2 X 76.2 X 9.5 x 12192 LONG
(3" X 3" X 3/8" x 40')
STEEL CSA G40.21M 350W
ROLLED TOE OUT
QTY: 10
MARK 7204




DETAIL A
COURSE NO. 1 VERT. PREP.
TYP. BOTH ENDS
SCALE 1 / 2

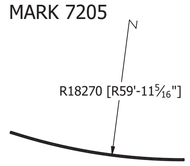

ROOF TOP HANDRAIL ANGLE
50.8 X 50.8 X 6.4 (2" X 2" X 1/4")
STEEL CSA G40.21M 350W
ROLLED TOE OUT
QTY: 10
MARK 7205





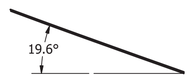


DEVELOP VIEW
COURSE NO. 2 - 11.1mm THK (7/16")
CUT FROM PLATE 2874mm x 9269mm
QTY: 12
MARK 7202



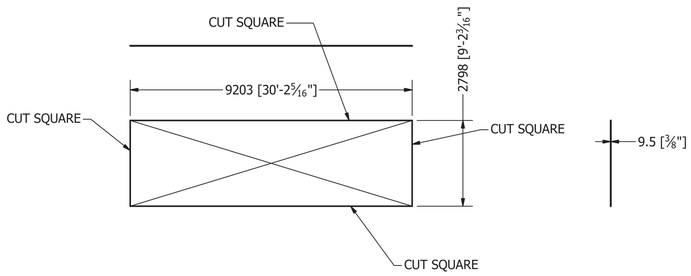

TOP VIEW

FRONT VIEW




SIDE VIEW

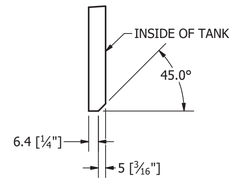
STAIRWAY HANDRAIL ANGLE
50.8 X 50.8 X 6.4 X 6096MM
(2" X 2" X 1/4" X 20' LONG)
STEEL CSA G40.21M 350W
QTY: 5
MARK 7206







DEVELOP VIEW
COURSE NO. 3,4, & 5 - 9.5mm THK (3/8")
CUT FROM PLATE 2874mm x 9269mm
QTY: 36
MARK 7203




DETAIL B
COURSE NO. 2
BOTTOM EDGE PREP.
SCALE 1 / 2

NOTES:

ONLY COURSE NO. 1 SHELL PLATES REQUIRE SHOP ROLLING FOR TANK NO.2

SHELL PLATES TO BE CHECKED CORNER TO CORNER FOR SQUARENESS

STEEL PLATES: 38WT SUPPLIED BY MEL
STEEL SHAPES: 350W SUPPLIED BY FORMATECH

AS-BUILT
BY Inukshuk Construction Ltd. DATE 2017/10/02

| REVISION HISTORY | | | |
|---|---|---|---|
| ZONE | REV | DESCRIPTION | DATE |
| 2D, 2F, 10B, 10D, 10G | 3 | DETAIL A & B MODIFIED, COURSE NO. 2 VERT EDGE PREP. REM., COURSE NO. 3, 4, 5 HOR. EDGE PREP. REM. | 2/14/2017 |
| 10H | 4 | COURSE NO. 1 RAD. CHANGED | 2/14/2017 |

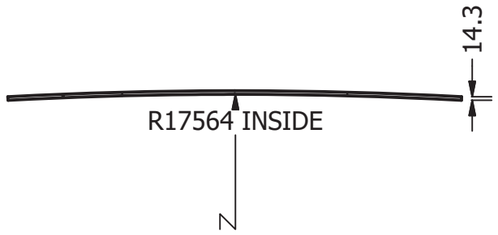
| | | |
|---|---|---|
| DRAWN | Marc Losier | 2/2/2017 |
| CHECKED | Jacob Saunders | 2/2/2017 |
| QA | | |
| MFG | | |
| APPROVED | | |

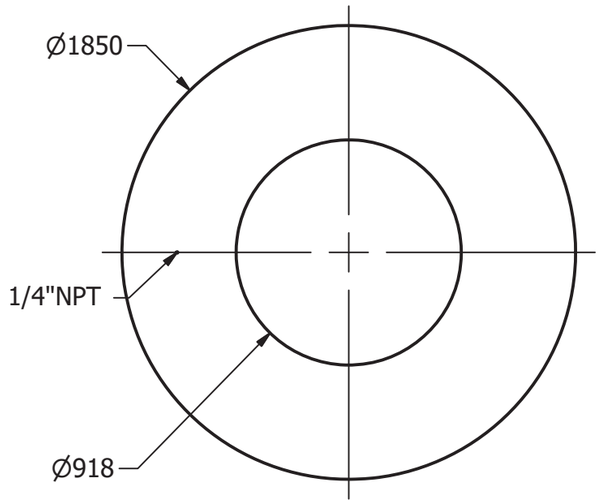
TANK NO. 2 - 13,500 CUM

TITLE
MELIADINE FIELD ERECTED TANKS - SHELL PLATES AND ANGLES ROLLING DETAILS

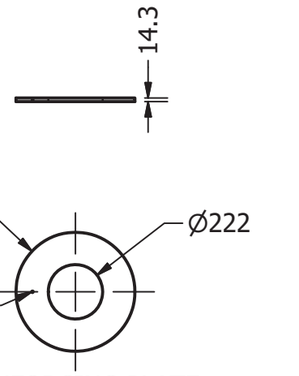
| SIZE | | DWG NO | REV |
|---|---|---|---|
| A1 | | 295-M7 | 4 |
| SCALE | | SHEET 2 OF 6 | |

NWT PROFESSIONAL ENGINEERS
JACOB BROWN
LICENSEE
30-Sep-2017
Permit Number: P471

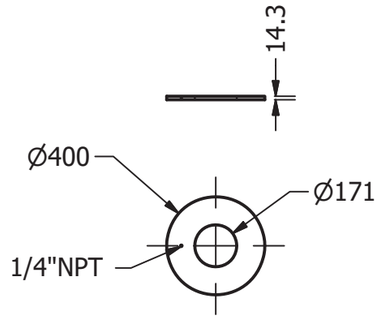


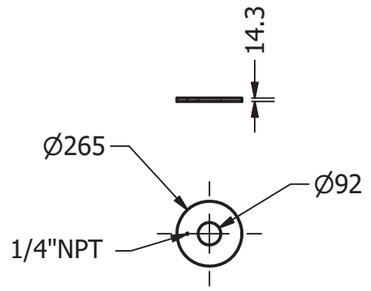

REINFORCING PLATE
SHELL MANHOLE 900MM (36")
TANK NO. 2 - 13.5ML
MARK: 8201
QTY: 4




REINFORCING PLATE
SHELL NOZZLE LOADING 200MM (8")
TANK NO. 2 - 13.5ML
MARK: 8202
QTY: 1




REINFORCING PLATE
SHELL NOZZLE UNLOADING 150MM (6")
TANK NO. 2 - 13.5ML
MARK: 8203
QTY: 3




REINFORCING PLATE
SHELL WATER DRAW OFF 75MM (3")
TANK NO. 2 - 13.5ML
MARK: 8204
QTY: 6

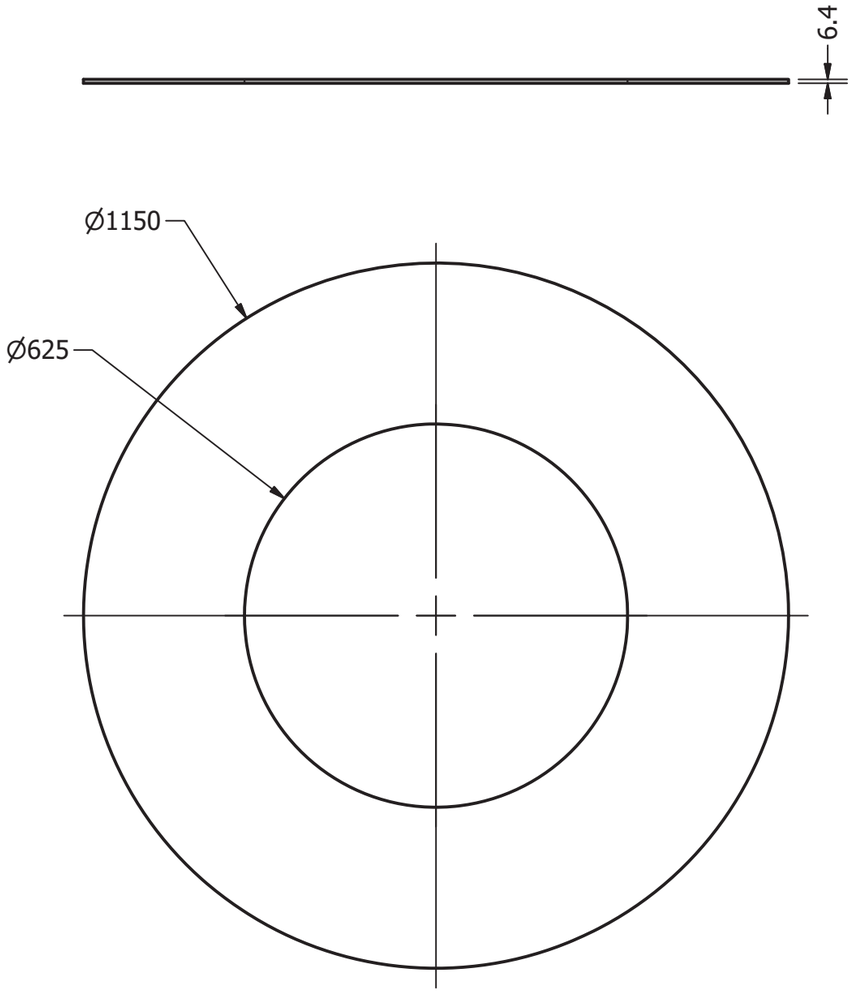
MATERIAL:
STEEL CSA G40.21-38WT
NORMALIZED
TRANSVERSE CHARPY: TCVN 13FT/LBS@-45F
LONGITUDINAL CHARPY: LCVN 15FT/LBS@-45F

AS-BUILT
BY Inukshuk Construction Ltd. DATE 2017/10/02

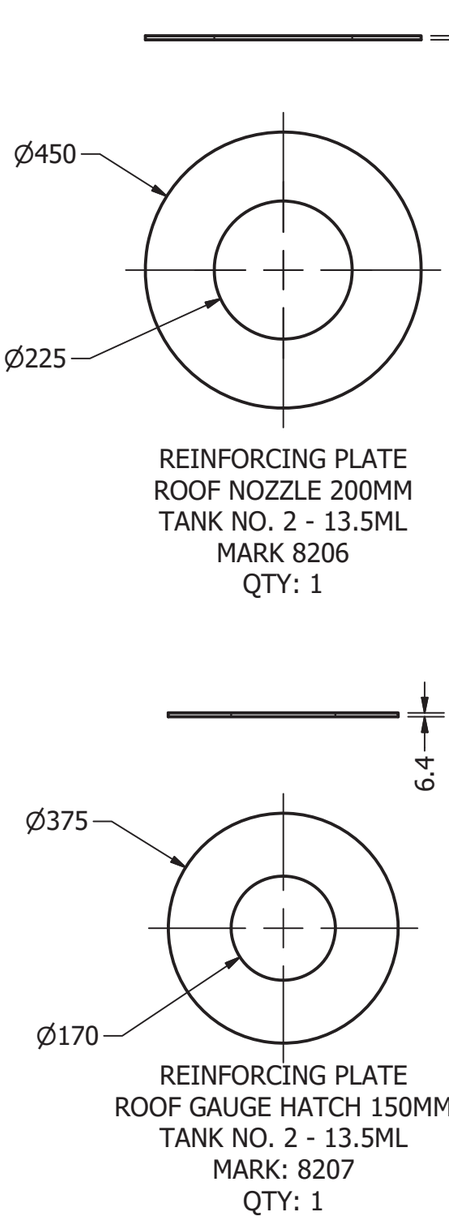
REGISTERED PROFESSIONAL ENGINEER
R.G. BROWN
LICENSEE
NT/NU
30-Sep-2017

Permit Number: P471

| | | |
|---|---|---|
| DRAWN Jacob Saunders | 2/2/2017 | TANK NO. 2 (13.5ML) SHELL |
| CHECKED Marc Losier | 3/16/2017 | TITLE: REINFORCING PLATE DETAILS |
| QA | | |
| MFG | | |
| APPROVED | | |
| | | SIZE A3 · DWG NO 295-M8 · REV 4 |
| | | SCALE 1/25 · SHEET 3 OF 12 |

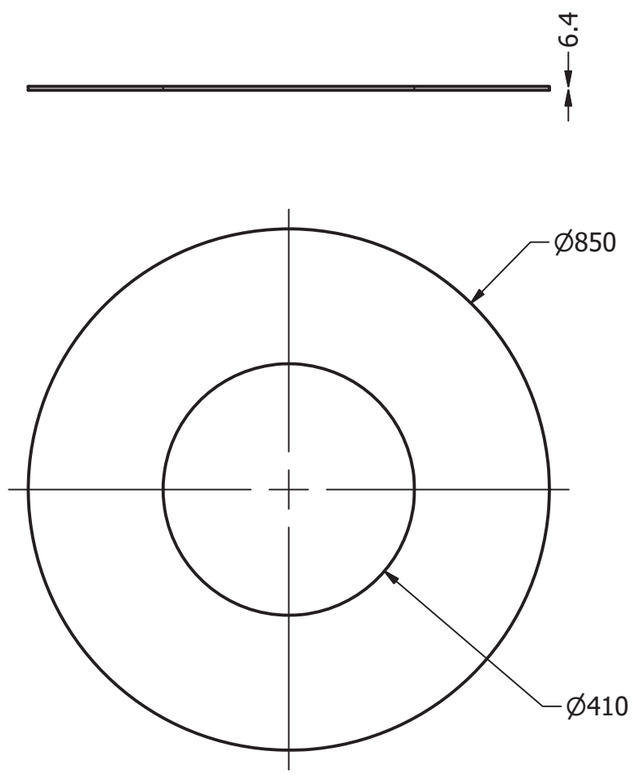



REINFORCING PLATE
ROOF MANHOLE 600MM
TANK NO. 2 - 13.5ML
MARK: 8205
QTY: 4




REINFORCING PLATE
ROOF NOZZLE 200MM
TANK NO. 2 - 13.5ML
MARK 8206
QTY: 1

REINFORCING PLATE
ROOF GAUGE HATCH 150MM
TANK NO. 2 - 13.5ML
MARK: 8207
QTY: 1




REINFORCING PLATE
ROOF VENT 400MM
TANK NO. 2 - 13.5ML
MARK: 8208
QTY: 1


**Permit Number: P471**

AS-BUILT
BY Inukshuk Construction Ltd. DATE 2017/10/02

MATERIAL:
STEEL CSA G40.21-38WT
NORMALIZED
TRANSVERSE CHARPY: TCVN 13FT/LBS@-45F
LONGITUDINAL CHARPY: LCVN 15FT/LBS@-45F

| | | |
|---|---|---|
| DRAWN | Jacob Saunders | 2/2/2017 |
| CHECKED | Marc Losier | 3/16/2017 |
| QA | | |
| MFG | | |
| APPROVED | | |

# TANK NO. 2 (13.5ML) ROOF

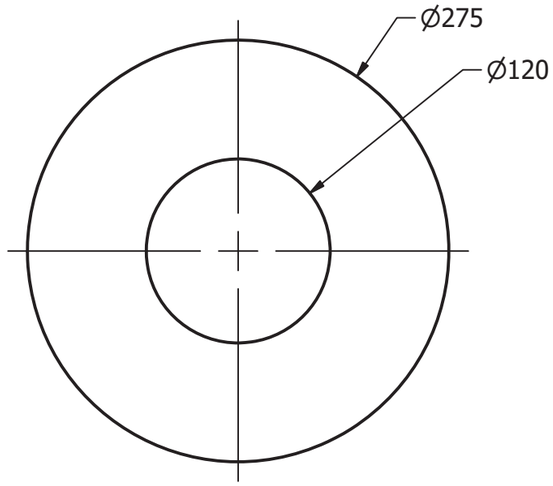
TITLE

## REINFORCING PLATE DETAILS

| SIZE | DWG NO | REV |
|---|---|---|
| A3 | 295-M8 | 4 |

SCALE 1 / 10

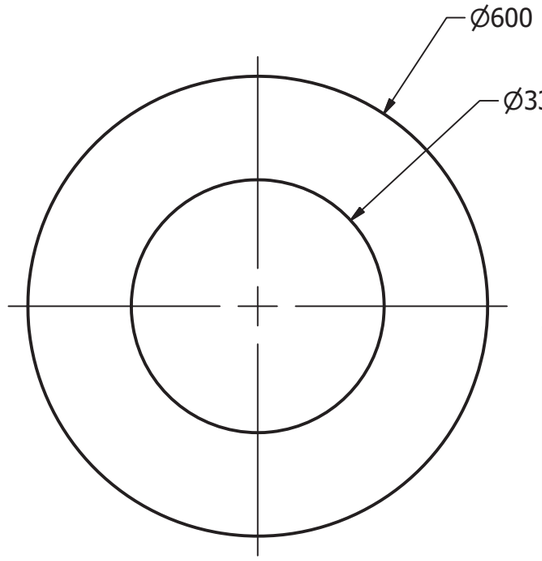
SHEET 4 OF 12




| M81201 QTY | |
|---|---|
| Tank No. | QTY |
| 1 | 1 |
| 2 | 1 |
| 3 | 1 |
| 4 | 1 |
| 5 | 1 |
| 6 | 1 |
| TOTAL | 6 |


REINFORCING PLATE
100NS ROOF NOZZLE
QTY: 6
1 PER TANK
MARK 81201
SCALE 1/4

MATERIAL:
STEEL CSA G40.21-300W




| M81202 QTY | |
|---|---|
| Tank No. | QTY |
| 1 | 2 |
| 2 | 1 |
| 3 | 0 |
| 4 | 0 |
| 5 | 0 |
| 6 | 0 |
| TOTAL | 10 |


REINFORCING PLATE
300NS ROOF NOZZLE FOR PV VENT
QTY: 10
MARK 81202
SCALE 1/8

AS-BUILT
BY Inukshuk Construction Ltd. DATE 2017/10/02

PROFESSIONAL ENGINEER
K.G. BROWN
LICENSEE
NT/NU
30-Sep-2017
Permit Number: P471

| REVISION HISTORY | | |
|---|---|---|
| REV | DESCRIPTION | DATE |
| 4 | THIS SHEET ADDED | 7/7/2017 |

| | | |
|---|---|---|
| DRAWN | Jacob Saunders | 2/2/2017 |
| CHECKED | Marc Losier | 3/16/2017 |
| QA | | |
| MFG | | |
| APPROVED | | |

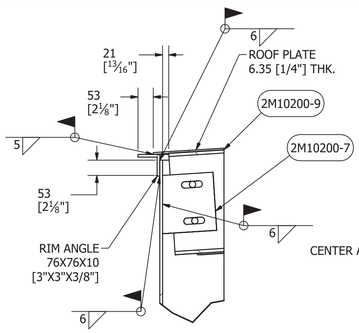
REINFORCING PAD FOR ECN-001

TITLE
REINFORCING PLATE DETAILS

| SIZE | | DWG NO | REV |
|---|---|---|---|
| A3 | | 295-M8 | 4 |

SCALE 1/4 SHEET 13 OF 13

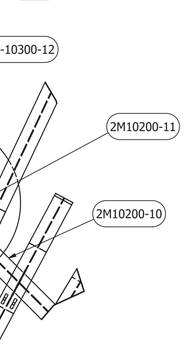
| PARTS LIST | | | | |
|---|---|---|---|---|
| ITEM | ITEM QTY | DESCRIPTION | MATERIAL | MASS |
| 2M10300-6 | 1 | CENTER COLUMN - SEE SHT 3 | | 2804.467 kg |
| 2M10200-7 | 64 | SHELL CLIP - SEE SHT 2 | G40.21M-300W | 2.553 kg |
| 2M10200-8 | 32 | INNER RAFTER - SEE SHT 2 | G40.21M-350W | 1021.718 lbmass |
| 2M10200-9 | 64 | OUTER RAFTER - SEE SHT 2 | G40.21M-350W | 1021.776 lbmass |
| 2M10200-10 | 8 | INTERMEDIATE GIRDER - SEE SHT 2 | | 551.240 kg |
| 2M10200-11 | 8 | INTERMEDIATE GIRDER TOP CONNECTION PLATE - SEE SHT 2 | G40.21M-300W | 12.051 kg |
| 2M-10300-12 | 8 | INTERMEDIATE COLUMN - SEE SHT 3 | | 1421.921 kg |
| 2M-10300-15 | 4 | FB50X50X6 [FB2"X2"X1/4"] X 1575 [5'-2"] LG | G40.21M-300W | 8.792 lbmass |
| 2M-10300-16 | 4 | FB50X50X6 [FB2"X2"X1/4"] X 2184 [7'-2"] LG | G40.21M-300W | 12.195 lbmass |




SECTION A-A
SCALE 1/10



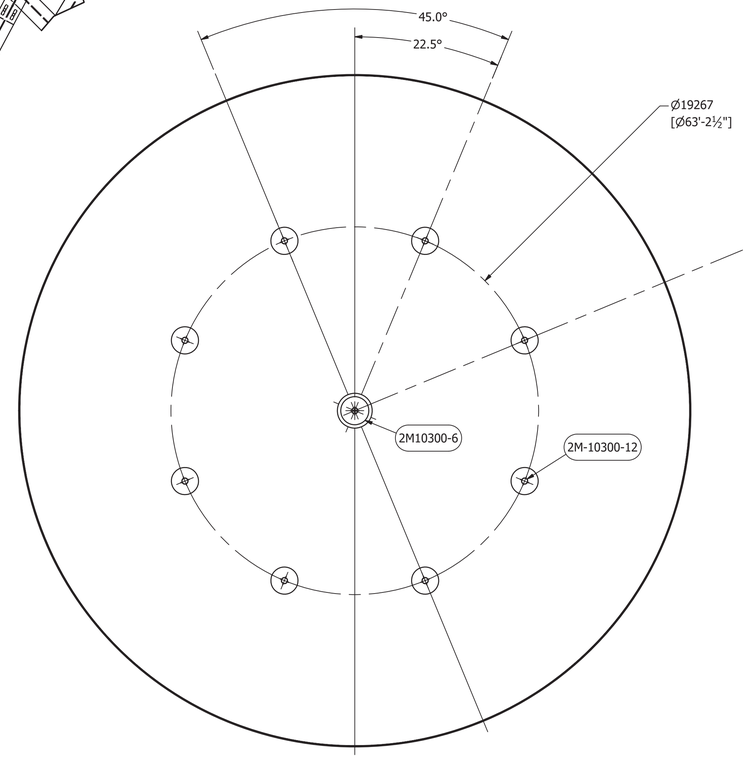

ORIENTATION
SCALE 1/150



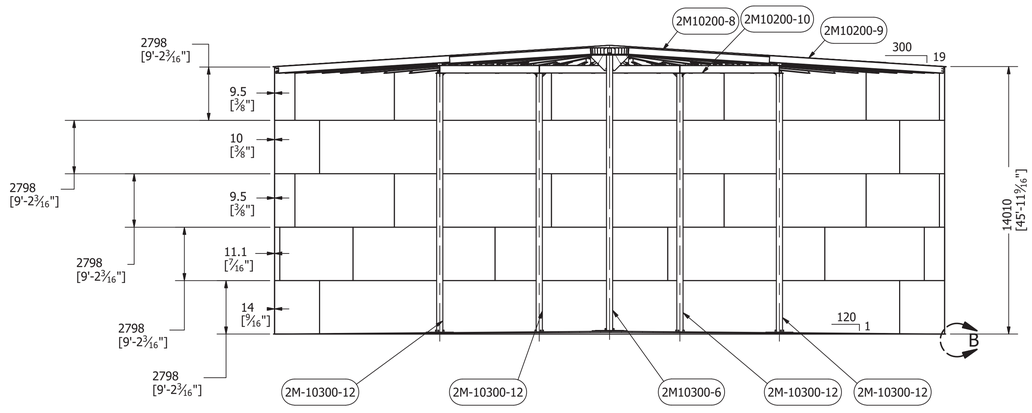

DETAIL A
SCALE 1/25




DETAIL B
SCALE 1/5




COLUMNS LAYOUT DETAIL
SCALE 1/150




SECTION B-B
SCALE 1/150

NOTES:
ALL DIMENSIONS ARE IN MILLIMETRE UNLESS OTHERWISE NOTED

AS-BUILT
BY Inukshuk Construction Ltd. DATE 2017/10/02

30-Sep-2017
Permit Number: P471

| REVISION HISTORY | | | |
|---|---|---|---|
| ZONE | REV | DESCRIPTION | DATE |
| F11, G10, G7, C8, D6 | 2 | RAFTER BRACING ADDED, DETAIL B ADDED, WELDING DETAIL ADDED IN SECITON A-A | 3/31/2017 |
| | 7 | INCORPORATE FIELD MODIFICATION | 9/27/2017 |

| | | |
|---|---|---|
| DRAWN | MARC LOSIER | 3/9/2017 |
| CHECKED | | |
| QA | | |
| MFG | | |
| APPROVED | | |

RAFTER AND COLUMN LAYOUT

TITLE
AGNICO EAGLE - MELIADINE GOLD MINE - TK #2 - 13,500CUM 35.1M DIA X 14M H

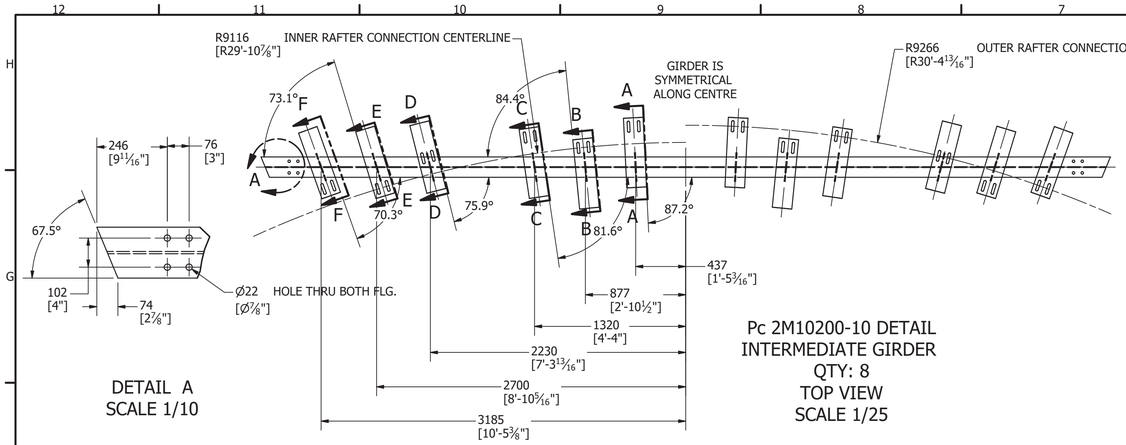
| SIZE | DWG NO | REV |
|---|---|---|
| A1 | 295-M10 | 7 |

SCALE

SHEET 1 OF 7

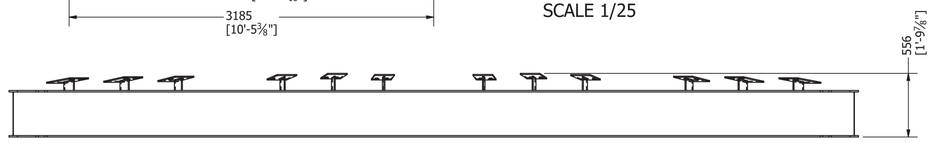
| BILL OF MATERIAL - INTERMEDIATE GIRDER ASSEMBLY | | | | |
|---|---|---|---|---|
| MARK | ITEM QTY | DESCRIPTION | MATERIAL | MASS |
| 2M10201 | 1 | W410X60 [W16"X40#] X 7420 [24'- 4 1/8"] | G40.21M-350W | 437.619 kg |
| 2M10202 | 2 | 10 [3/8"] THK X 127 [5"] WD X 250 [9 7/8"] | G40.21M-300W | 2.230 kg |
| 2M10203 | 2 | 10 [3/8"] THK X 125 [4 7/8"] WD X 250 [9 7/8"] | G40.21M-300W | 2.192 kg |
| 2M10204 | 2 | 10 [3/8"] THK X 121 [4 3/4"] WD X 250 [9 7/8"] | G40.21M-300W | 2.113 kg |
| 2M10205 | 2 | 10 [3/8"] THK X 110 [4 3/8"] WD X 250 [9 7/8"] | G40.21M-300W | 1.904 kg |
| 2M10206 | 2 | 10 [3/8"] THK X 101 [4"] WD X 250 [9 7/8"] | G40.21M-300W | 1.748 kg |
| 2M10207 | 2 | 10 [3/8"] THK X 92 [3 5/8"] WD X 250 [9 7/8"] | G40.21M-300W | 1.576 kg |
| 2M10208 | 10 | 10 [3/8"] THK X 171 [6 3/4"] WD X 610 [2'-0"] | G40.21M-300W | 7.508 kg |
| 2M10209 | 2 | 10 [3/8"] THK X 171 [6 3/4"] WD X 610 [2'-0"] | G40.21M-300W | 7.508 kg |

BILLING FOR ONE GIRDER ASSEMBLY SHOWN
TOTAL EIGHT GIRDER ASSEMBLIES REQUIRED

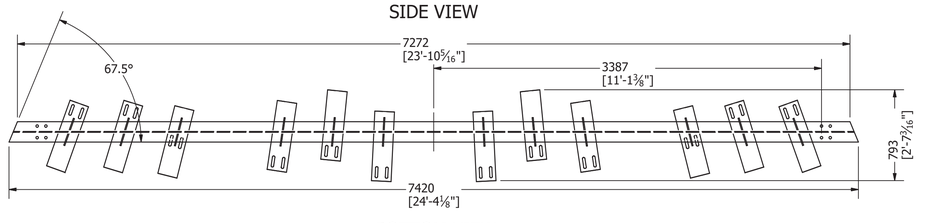



DETAIL A
SCALE 1/10

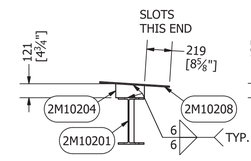
Pc 2M10200-10 DETAIL
INTERMEDIATE GIRDER
QTY: 8
TOP VIEW
SCALE 1/25



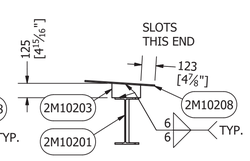

SIDE VIEW



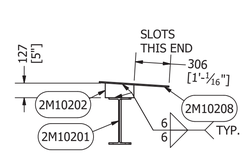

BOTTOM VIEW



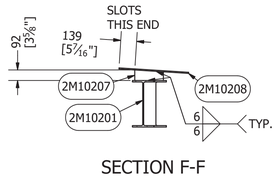

SECTION C-C
SCALE 1/25



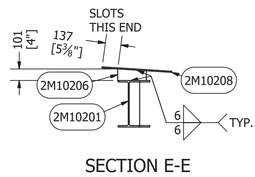

SECTION B-B
SCALE 1/25



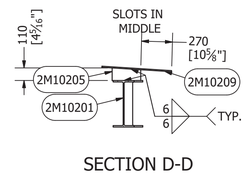

SECTION A-A
SCALE 1/25



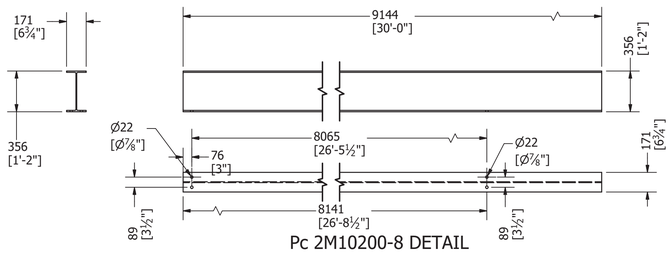

SECTION F-F
SCALE 1/25



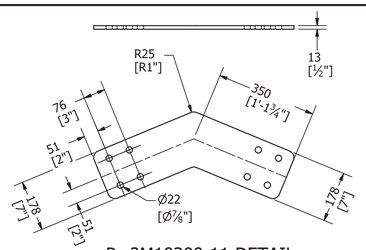

SECTION E-E
SCALE 1/25



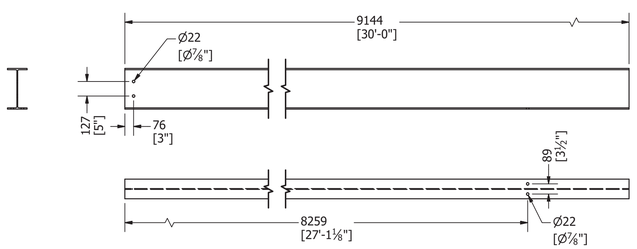

SECTION D-D
SCALE 1/25



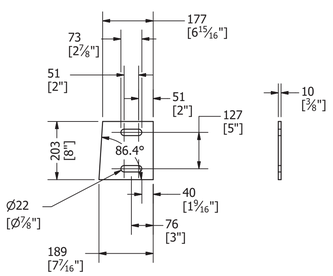

Pc 2M10200-8 DETAIL
INNER RAFTER
SCALE 1/25




Pc 2M10200-11 DETAIL
INTERMEDIATE GIRDER BEAM
TOP CONNECTION PLATE
SCALE 1/10

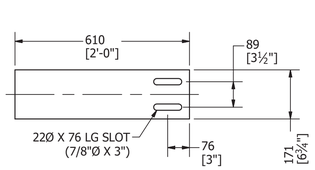



Pc 2M10200-9 DETAIL
OUTER RAFTER
SCALE 1/25

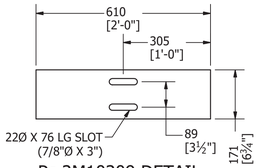



Pc 2M10200-7 DETAIL
SHELL CLIP
SCALE 1/10

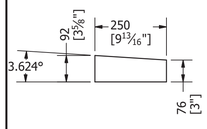
| BILL OF MATERIAL | | | | |
|---|---|---|---|---|
| ITEM | ITEM QTY | DESCRIPTION | MATERIAL | MASS |
| 2M10200-7 | 64 | 10 [3/8"] THK X 189 [7 1/2"] WD X 203 [8"] LG | G40.21M-300W | 2.553 kg |
| 2M10200-8 | 32 | W360X51 [W14"X34#] 9144 [30'-0"] | G40.21M-350W | 1021.718 lbmass |
| 2M10200-9 | 64 | W360X51 [W14"X34#] 9144 [30'-0"] | G40.21M-350W | 1021.776 lbmass |
| 2M10200-11 | 8 | 13 [1/2"] THK X 357 [1'-2"] WD X 573 [1'-10 1/2"] LG | G40.21M-300W | 12.051 kg |



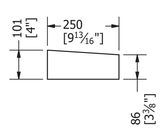

Pc 2M10208 DETAIL
SCALE 1/10



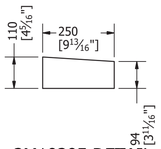

Pc 2M10209 DETAIL
SCALE 1/10



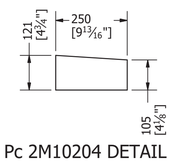

Pc 2M10207 DETAIL
SCALE 1/10



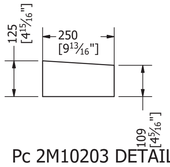

Pc 2M10206 DETAIL
SCALE 1/10



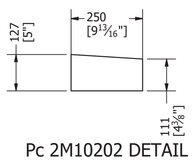

Pc 2M10205 DETAIL
SCALE 1/10




Pc 2M10204 DETAIL
SCALE 1/10




Pc 2M10203 DETAIL
SCALE 1/10




Pc 2M10202 DETAIL
SCALE 1/10

AS-BUILT
BY Inukshuk Construction Ltd. DATE 2017/10/02

PROFESSIONAL ENGINEER BROWN LICENSEE NT/NU
30-Sep-2017
Permit Number: P471

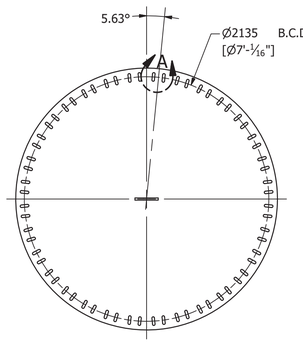
NOTE:
ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE NOTED

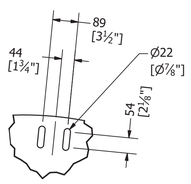
| | | |
|---|---|---|
| DRAWN MARC LOSIER | 3/9/2017 | INTERMEDIATE GIRDER AND RAFTER DETAIL |
| CHECKED | | TITLE |
| QA | | AGNICO EAGLE - MELIADINE GOLD MINE - TK #2 - 13,500CUM 35.1M DIA X 14M H |
| MFG | | |
| APPROVED | | |
| | | SIZE A1 / DWG NO 295-M10 / REV 7 |
| | | SCALE / SHEET 2 OF 7 |

| BILL OF MATERIAL - CENTER COLUMN | | | | |
|---|---|---|---|---|
| MARK | ITEM QTY | DESCRIPTION | MATERIAL | MASS |
| 2M10301 | 1 | 25 [1"] THK X 2286 [7'-6"] DIA | G40.21M-300W | 798.104 kg |
| 2M10302 | 1 | 13 [1/2"] THK X 1473 [4'-10"] DIA. | G40.21M-300W | 169.937 kg |
| 2M10303 | 8 | 10 [3/8"] x 750 [2'-5 1/2"] WD x 750 [2'-5 1/2"] LG | G40.21M-300W | 30.566 kg |
| 2M10304 | 4 | 6 [1/4"] THK X 76 [3"] X 102 [4"] | G40.21M-300W | 0.851 lbmass |
| 2M10305 | 1 | 25 [1"] THK X 1828 [6'-0"] DIA. | G40.21M-300W | 523.752 kg |
| 2M10306 | 1 | HSS 324 [12 3/4"] O.D. X 9.5 [3/8"] WALL x 14426 [47'-3 15/16"] LG | G40.21M-350W CLASS H | 2348.230 lbmass |
| 2M10307 | 1 | 19 [3/4"] THK X 89 [3 1/2"] WD X 203 [8"] LG | G40.21M-300W | 1.461 kg |

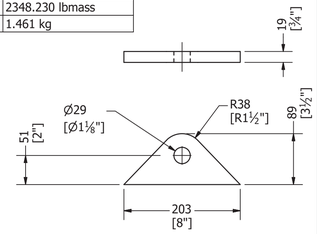
| PARTS LIST | | | | |
|---|---|---|---|---|
| ITEM | ITEM QTY | DESCRIPTION | MATERIAL | MASS |
| 2M10321 | 1 | 13 [1/2"] THK x 407 [1'-4"] WD x 696 [2'-3 3/8"] LG | G40.21M-300W | 17.744 kg |
| 2M10322 | 1 | HSS324 [12 3/4"] O.D. X 10 [3/8"] WALL x 13557 [44'-5 3/4"] LG | G40.21M-350W CLASS H | 2215.665 lbmass |
| 2M10323 | 1 | 32 [1 1/4"] THK X 1422 [4'-8"] DIA. | G40.21M-300W | 396.047 kg |
| 2M10324 | 4 | 6 [1/4"] THK X 76 [3"] WD X 102 [4"] LG | G40.21M-300W | 0.851 lbmass |
| 2M10325 | 2 | 6 [1/4"] THK X 164 [6 1/2"] WD X 164 [6 1/2"] LG | G40.21M-300W | 0.789 kg |

BILLING FOR ONE INTERMEDIATE COLUMN ASSEMBLY SHOWN
TOTAL EIGHT INTERMEDIATE COLUMN ASSEMBLIES REQUIRED

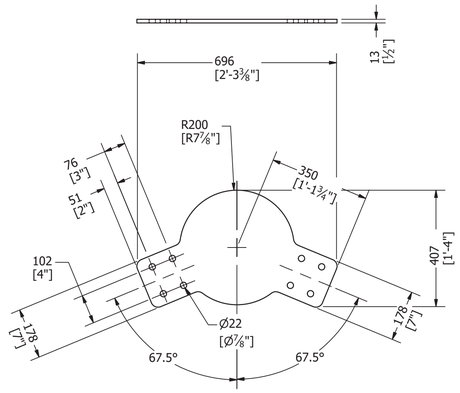


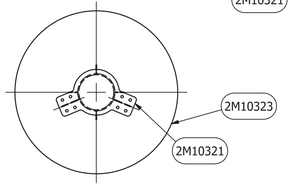

DETAIL A
TYPICAL (32) LOCATIONS EQ. SPACED
SCALE 1/10

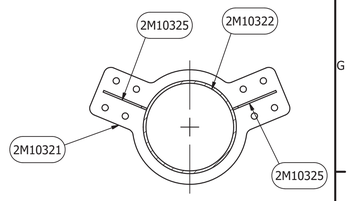



2M10307
SCALE 1/5

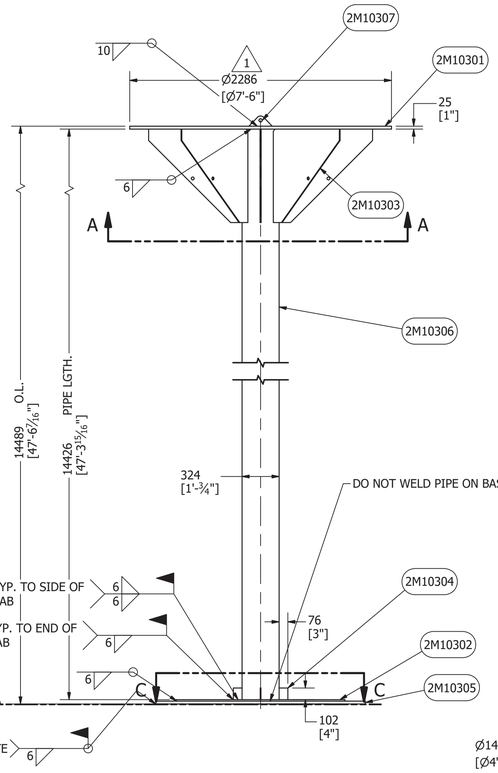



Pc 2M10321 DETAIL
INTERMEDIATE COLUMN CAP PLATE
SCALE 1/10

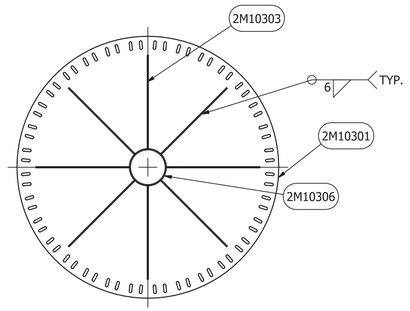


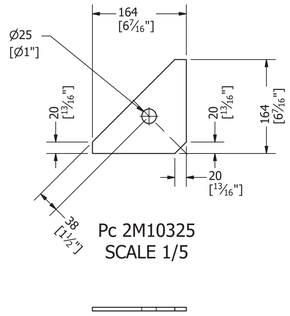

SECTION B-B
SCALE 1/10



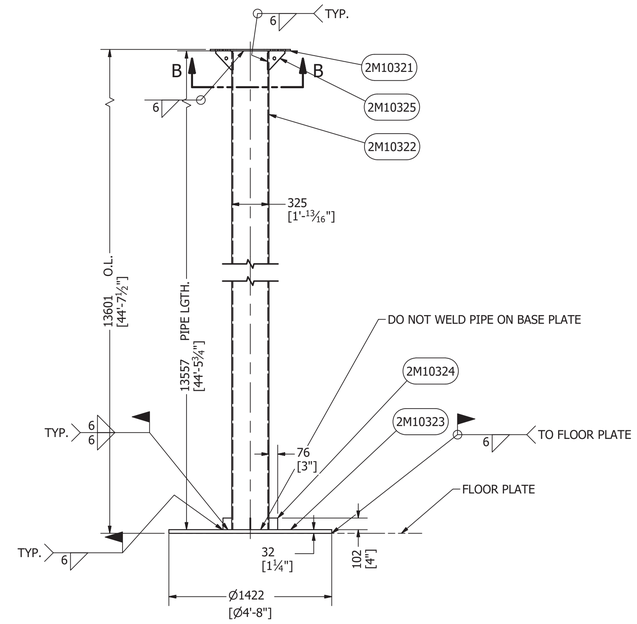

Pc 2M10300-6 DETAIL
CENTER COLUMN
SCALE 1/25



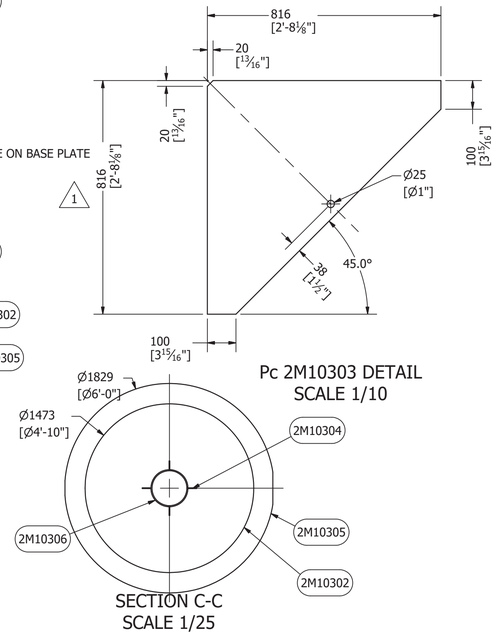

SECTION A-A
SCALE 1/25




Pc 2M10325
SCALE 1/5




Pc 2M10300-12
INTERMEDIATE COLUMN
QTY: 8
SCALE 1/25




Pc 2M10303 DETAIL
SCALE 1/10

SECTION C-C
SCALE 1/25

AS-BUILT
BY Inukshuk Construction Ltd. DATE 2017/10/02

PROFESSIONAL ENGINEERS
KEVIN BROWN
LICENSEE
NT/NU
30-Sep-2017
Permit Number: P471

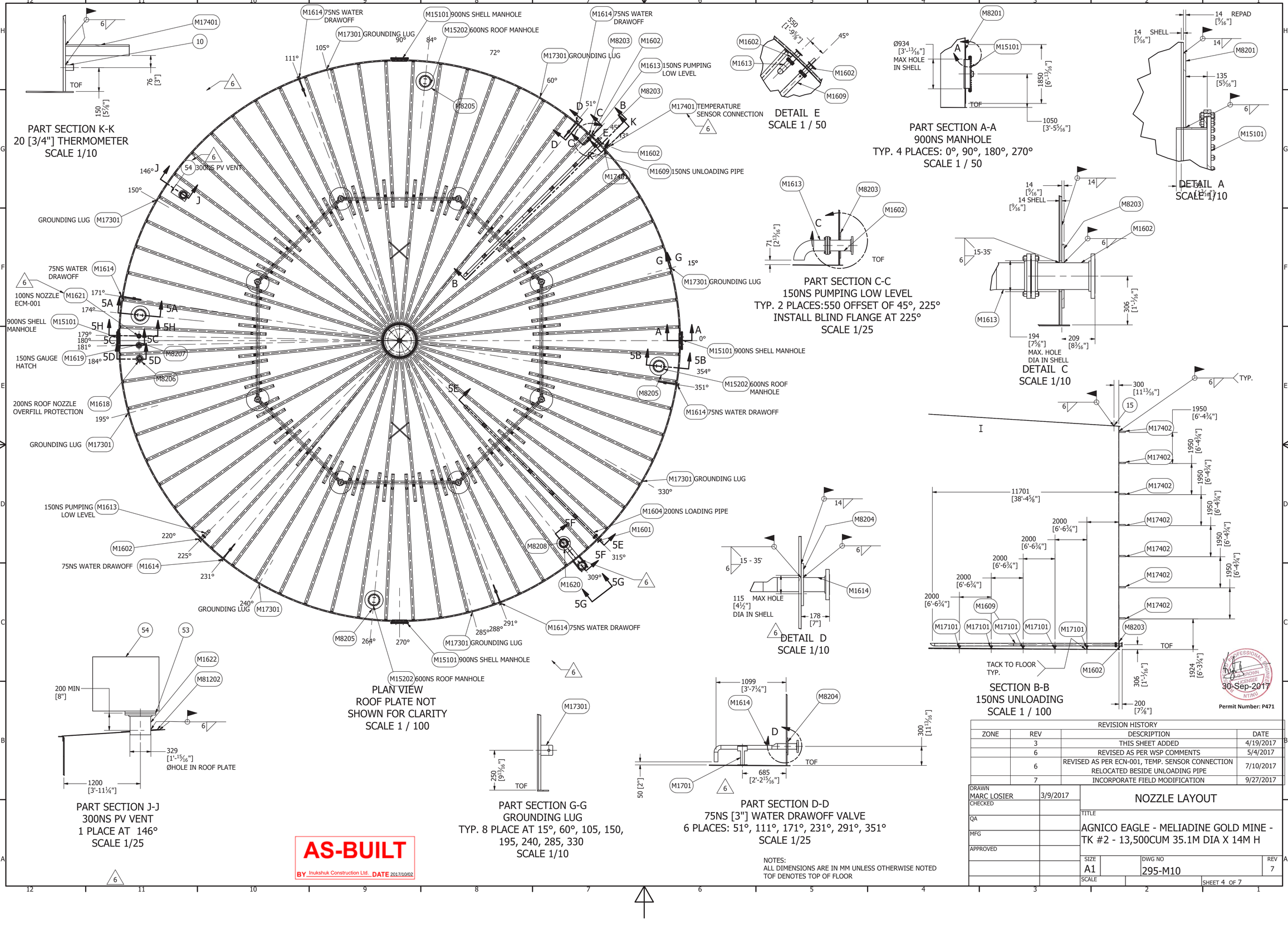
NOTE:
ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE NOTED

| REVISION HISTORY | | | |
|---|---|---|---|
| ZONE | REV | DESCRIPTION | DATE |
| 3H, 10H | 1 | CENTER COLUMN PIPE AND INTERMEDIATE COLUMN PIPE LGTH. CHG. TO SUITE SLOPE 1/120, INTERMEDIATE COLUMN PIPE CHG. FROM 10.75"X1/2"WALL TO 12.75"X 3/8" | 3/13/2017 |

| | | | |
|---|---|---|---|
| DRAWN | MARC LOSIER | 3/9/2017 | CENTER AND INTERMEDIATE COLUMN DETAILS |
| CHECKED | | | |
| QA | | | TITLE |
| MFG | | | AGNICO EAGLE - MELIADINE GOLD MINE - TK #2 - 13,500CUM 35.1M DIA X 14M H |
| APPROVED | | | |

| SIZE | DWG NO | REV |
|---|---|---|
| A1 | 295-M10 | 7 |

SCALE | SHEET 3 OF 7




| REVISION HISTORY | | | |
|---|---|---|---|
| ZONE | REV | DESCRIPTION | DATE |
| | 3 | THIS SHEET ADDED | 4/19/2017 |
| | 6 | REVISED AS PER WSP COMMENTS | 5/4/2017 |
| | 6 | REVISED AS PER ECN-001, TEMP. SENSOR CONNECTION RELOCATED BESIDE UNLOADING PIPE | 7/10/2017 |
| | 7 | INCORPORATE FIELD MODIFICATION | 9/27/2017 |

| | | |
|---|---|---|
| DRAWN | MARC LOSIER | 3/9/2017 |
| CHECKED | | |
| QA | | |
| MFG | | |
| APPROVED | | |

NOZZLE LAYOUT

TITLE: AGNICO EAGLE - MELIADINE GOLD MINE - TK #2 - 13,500CUM 35.1M DIA X 14M H

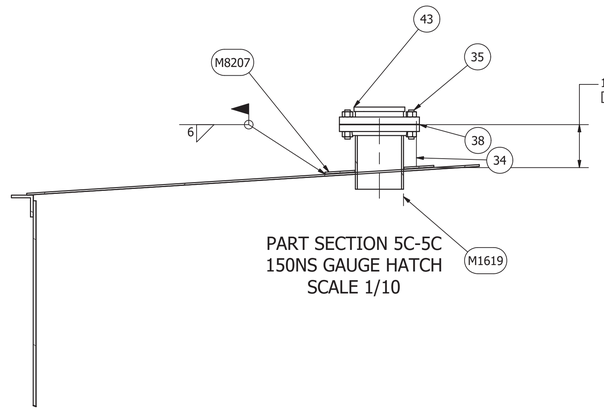
| SIZE | DWG NO | REV |
|---|---|---|
| A1 | 295-M10 | 7 |

SCALE

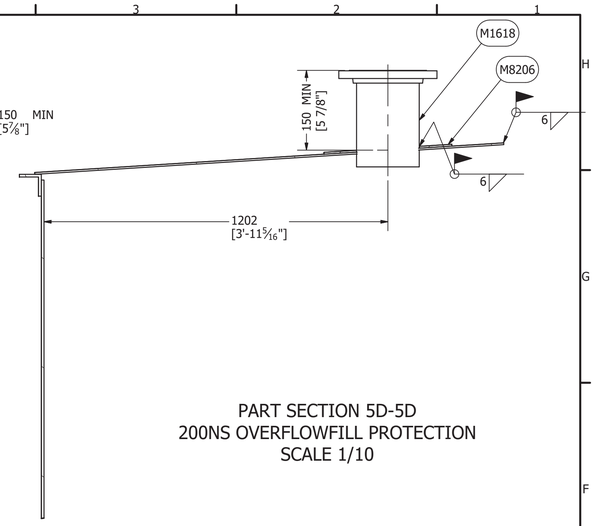
SHEET 4 OF 7

PARTS LIST FOR NOZZLE LAYOUT SHT 4

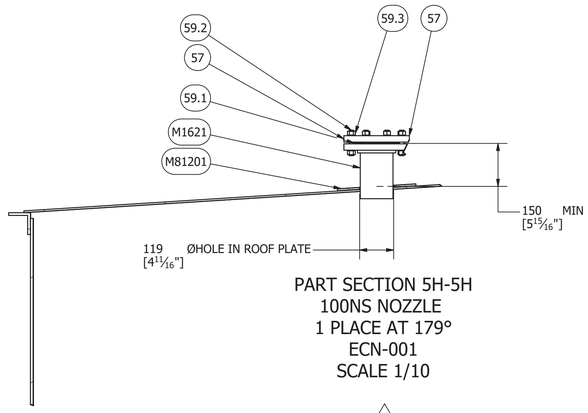
| ITEM | ITEM QTY | DESCRIPTION | FAB. DRG. NO. | MATERIAL |
|---|---|---|---|---|
| 10 | 1 | 20NS [3/4"] NPT COUPLING, 3000#, (TEMPERATURE SENSOR) | | ASTM A350 LF2 |
| 15 | 2 | COUPLING, 3000#, THREADED, 1"NPT PRV LINE CONNECTION | | ASTM A350 LF2 |
| 31 | 1 | 400NS GASKET RUBBER 1.6 [1/16"] THK. | | DURLON 8500 |
| 33 | 3 | 150NS [6"] X 3.2 [1/8"]THK GASKET | | DURLON 8500 |
| 34 | 66 | 3/4" UNC HEAVY HEX NUT | | A194 GR4 |
| 35 | 25 | 3/4"UNC X 4" LG STUD, L7 | | A320 L7 |
| 37 | 8 | 3/4"UNC X 4 3/4" LG STUD L7 | | A320 L7 |
| 38 | 1 | 150NS [6"] X 1.6 [1/16"] THK GASKET RUBBER 150# | | Rubber |
| 43 | 1 | 150NS GAUGE HATCH, SHANG AND JURS MODEL NO. 95010-02-00 | | ALUMINUM |
| 44 | 16 | 1"UNC X 5 3/4" LG STUD L7 | | A320 I7 |
| 45 | 32 | 1" UNC HEAVY HEX NUT | | A194 GR4 |
| 48 | 2 | 75NS [3"] PIPE, A53, 76 [3"] LG | | Steel |
| 49 | 1 | C150X12 X 914 [36"] LG | | 350W |
| 50 | 1 | 400NS [16"] UBOLT | | Steel |
| 51 | 4 | 5/8" UNC HEAVY HEX NUT | | Steel, Mild |
| 53 | 1 | 300NS [12"] GASKET, 150#, RING, 1.6 [1/16"] THK. | | DURLON 8500 |
| 54 | 1 | 300NS [12"] PV Vent, SET PRESSURE = 0.48 KPAG = 1.00 oz/sqin, SET VACUUM = 0.22 KPA = 0.5 oz/sqin | | ENARDO 950 |
| 57 | 1 | 100NS [4"] BLIND FLANGE, 150# | | A320 LF2 |
| 59 | 1 | 100NS [4"] JOINT MATERIAL COMPRISING: | | |
| 59.1 | 1 | 100NS [4"] GASKET, RING, 150#, 1.6 [1/16"] | | DURLON 8500 |
| 59.2 | 8 | 5/8"UNC X 3 1/2" LG, STUD | | L7 |
| 59.3 | 16 | 5/8" UNC NUT | | A194 GR.4 |
| M1601 | 1 | 200NS [8"] DOUBLE FLANGE SHELL NOZZLE | M16 | |
| M1602 | 3 | 150NS [6"] DOUBLE FLANGE SHELL NOZZLE | M16 | |
| M1604 | 1 | 200NS [8"] X 11.7M [38'- 4 5/8"] LG LOADING PIPE | M16 | |
| M1609 | 1 | 150NS [6"] X 11.7M [38'- 4 5/8"] LG UNLOADING PIPE | M16 | |
| M1613 | 2 | 150NS [6"] PUMPING LOW LEVEL | M16 | |
| M1614 | 6 | 75NS [3"] WATER DRAWOFF NOZZLE | M16 | |
| M1615 | 1 | 100NS [4"] PAINTERS SCAFFOLD CABLE SUPPORT | M16 | |
| M1616 | 1 | 400NS ROOF NOZZLE | M16 | |
| M1618 | 1 | 200NS [6"] ROOF NOZZLE FOR OVERFILL PROTECTION | M16 | |
| M1619 | 1 | 150NS [6"] ROOF NOZZLE FOR GAUGE HATCH | M16 | |
| M1620 | 1 | 400NS [16"] ROOF VENT | M16 | |
| M1621 | 1 | 100NS [4"] ROOF NOZZLE | | |
| M1622 | 1 | 300NS [12"] ROOF NOZZLE | M16 | |
| M8201 | 4 | 900NS [36"] REINFORCING PAD | M8 | |
| M8202 | 1 | 200NS [8"] SHELL NOZZLE REINFORCING PAD | M8 | |
| M8203 | 3 | 150NS [6"] SHELL NOZZLE REINFORCING PAD | M8 | |
| M8204 | 6 | 75NS [3"] SHELL WATER DRAWING NOZZLE REINFORCING PAD | M8 | |
| M8205 | 4 | 600NS [24"] ROOF MANHOLE REINFORCING PLATE | M8 | |
| M8206 | 1 | 200NS [8"] ROOF NOZZLE REINFORCING PLATE | M8 | |
| M8207 | 1 | 150NS [6"] ROOF NOZZLE REINFORCING PLATE | M8 | |
| M8208 | 1 | 400NS [16"] REINFORCING PAD | M8 | Steel |
| M15101 | 4 | 900NS [36"] SHELL MANHOLE | M15 | |
| M15202 | 4 | 600NS [24"] ROOF MANHOLE | M15 | |
| M17101 | 16 | PIPE SUPPORT TYPE 1 | M17 | |
| M17301 | 8 | GROUNDING LUG 76X65X6 [3"X2 1/2"X1/4"] | M17 | Stainless Steel, Austenitic |
| M17401 | 1 | L100X100X6 [L4"X4"X1/4"] 400 [15 3/4"] LG (TEMPERATURE SENSOR) | M17 | G40.21M 350W |
| M17402 | 14 | L75X75X6 [L3"X3"X1/4"] 400 [15 3/4"] BRACKET FOR PIPING OR ELECTRICAL CONDUIT | M17 | G40.21M 350W |
| M81201 | 1 | 100NS ROOF NOZZLE REINFORIING PAD | M8 | Steel, Mild |
| M81202 | 1 | 300 NS ROOF NOZZLE REINFORCING PAD | M8 | Steel, Mild |
| M17501L | 1 | PIPE SUPPORT 400NS VENT LEFT | M17 | |
| M17501R | 1 | PIPE SUPPORT 400NS VENT RIGHT | M17 | |



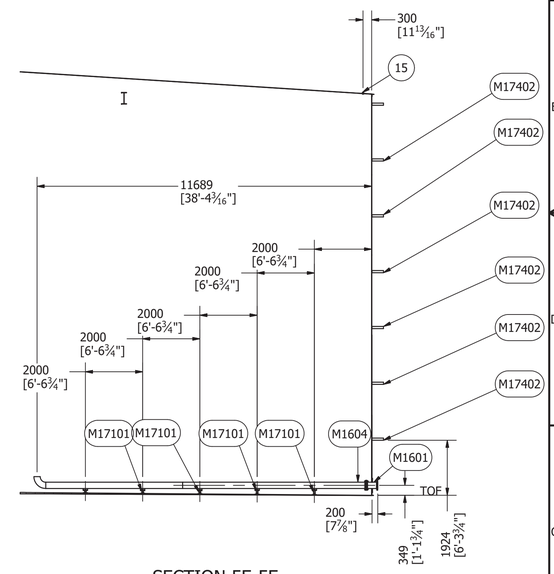

PART SECTION 5C-5C
150NS GAUGE HATCH
SCALE 1/10



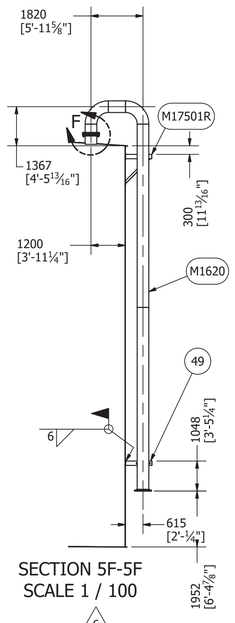

PART SECTION 5D-5D
200NS OVERFLOWFILL PROTECTION
SCALE 1/10



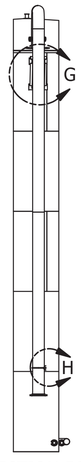

PART SECTION 5H-5H
100NS NOZZLE
1 PLACE AT 179°
ECN-001
SCALE 1/10



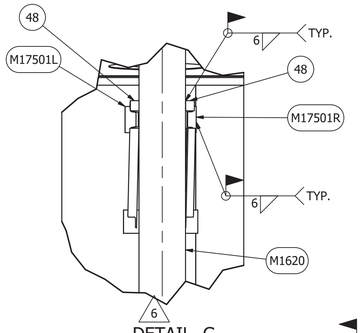

SECTION 5E-5E
200NS LOADING
SCALE 1 / 100



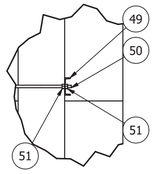

SECTION 5F-5F
SCALE 1 / 100



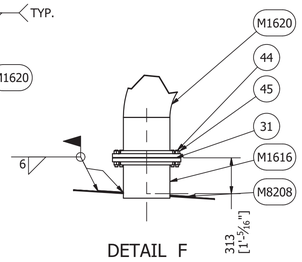

SECTION 5G-5G
SCALE 1 / 100



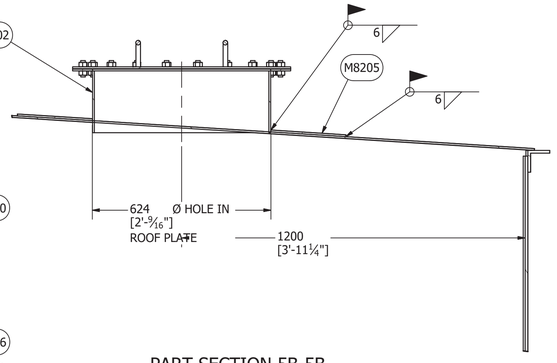

DETAIL G
SCALE 1/25




DETAIL H
SCALE 1/25




DETAIL F
SCALE 1/25




PART SECTION 5B-5B
600NS [24"} ROOF MANHOLE
4 PLACES AT 84°, 174°, 264°, 354°
SCALE 1/10

NOTE:
ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE NOTED

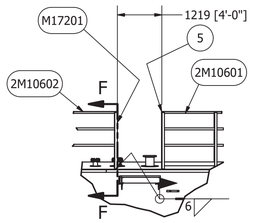
| REVISION HISTORY | | | |
|---|---|---|---|
| ZONE | REV | DESCRIPTION | DATE |
| | 3 | THIS SHEET ADDED | 4/20/2017 |
| | 4 | DIST ROOF MANHOLE FROM SHELL CHG FROM 1553 TO 1700 | |
| | 6 | REVISED AS PER WSP COMMENTS | 5/4/2017 |
| | 6 | MODIFIED AS PER ECN-001 | 7/9/2017 |

AS-BUILT
BY Inukshuk Construction Ltd. DATE 2017/10/02

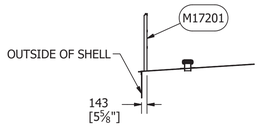
PROFESSIONAL ENGINEER BROWN CHRISTOPHER NTNU 30-Sep-2017

Permit Number: P471

| | | | |
|---|---|---|---|
| DRAWN | MARC LOSIER | 3/9/2017 | NOZZLES LAYOUT PARTS LIST |
| CHECKED | | | TITLE |
| QA | | | AGNICO EAGLE - MELIADINE GOLD MINE - TK #2 - 13,500CUM 35.1M DIA X 14M H |
| MFG | | | |
| APPROVED | | | |
| | | | SIZE A1 \| DWG NO 295-M10 \| REV 7 |
| | | | SCALE \| SHEET 5 OF 7 |

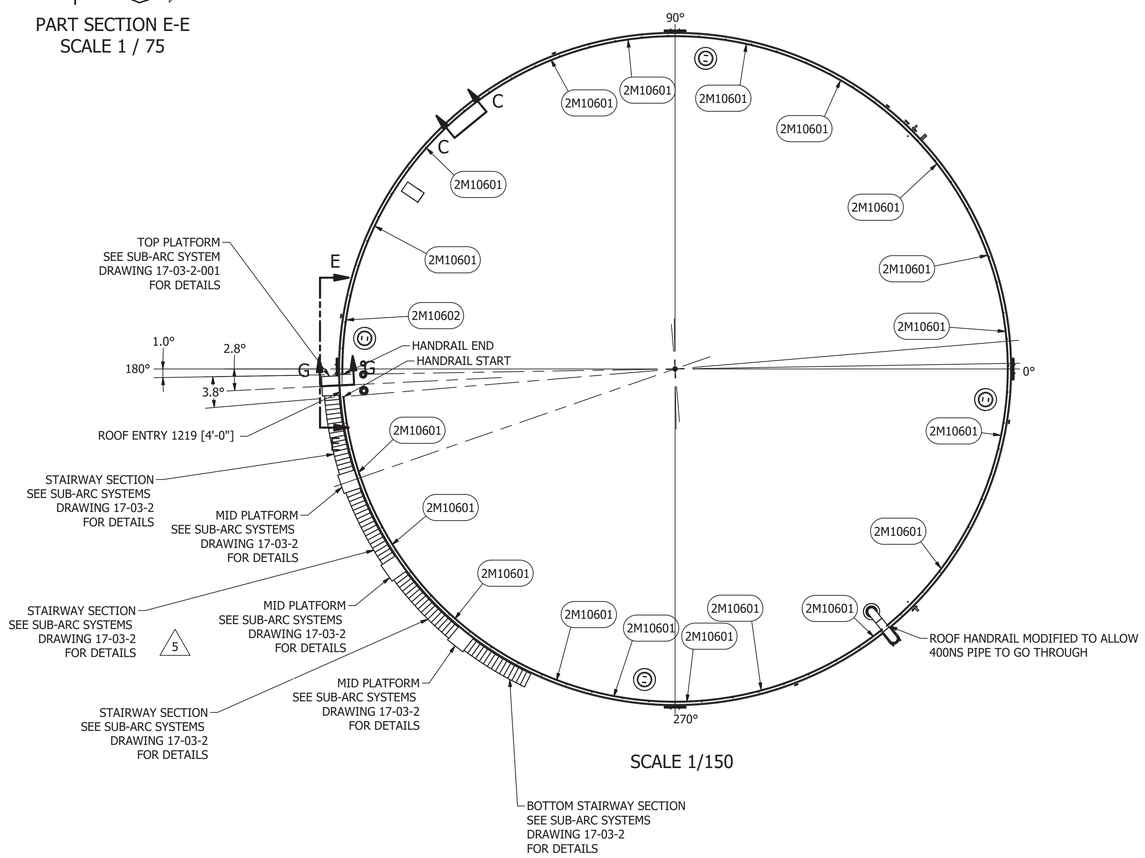



PART SECTION E-E
SCALE 1 / 75



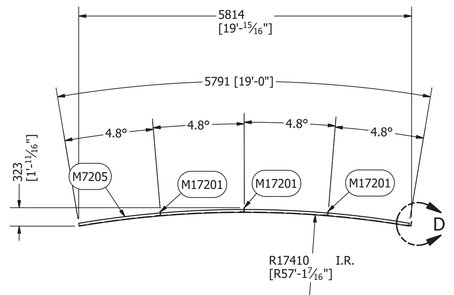

SECTION F-F
SCALE 1 / 75

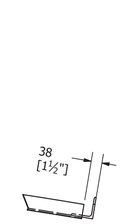
| PARTS LIST | | | |
|---|---|---|---|
| ITEM | ITEM QTY | PART NUMBER | DESCRIPTION |
| 2M10601 | 18 | T2 Roof Top Handrail Section | PREFABRICATED ROOF TOP HANDRAIL SECITON SEE DETAIL |
| 2M10602 | 1 | T2 Roof Top Handrail Section (3) | PREFABRICATED ROOF TOP HANDRAIL SECITON SEE DETAIL Pc 1M10601 TRIM AT SITE |
| M17201 | 1 | AISC - L 3 x 3 x 1/4 - 58.228346 | Angle Steel |
| 5 | 1 | AISC - L 2 x 2 x 1/4 - 1.5 | Angle Steel |
| 6 | 1 | TK 2 Platforms and Stairways | |



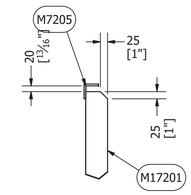

SCALE 1/150

| PARTS LIST | | | | | | |
|---|---|---|---|---|---|---|
| ITEM | ITEM QTY | CUT (MM) | DESCRIPTION | PRE-FAB DRG # | MATERIAL | MASS |
| M17201 | 4 | 1479 | L76X76X6 [3"X3"X1/4"] X 1474 [58 1/4"] | M17 | G40X21M 350W | 23.905 lbmass |
| M7205 | 1 | 5791 | L50X50X6[L2"X2"X6] ROOF HANDRAIL ROLLED ANGLE | M7 | G40.21M 300W | 27.480 kg |
| 3 | 2 | 5791 | FB50X6 [ FB2"X1/4"] X 5791[19'] LG | | G40.21M 300W | 14.646 kg |
| 4 | 1 | 5791 | FB100X5 [4"X3/16"] x 5791 [19']LG | | G40.21M 300W | 22.029 kg |

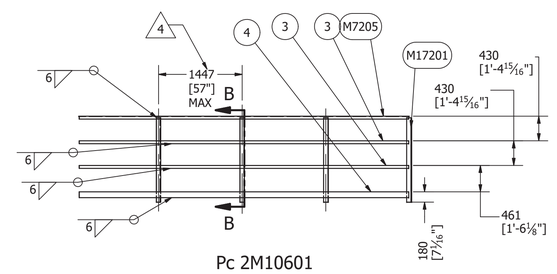


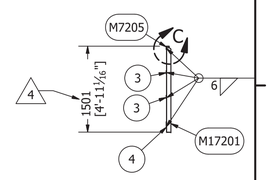

DETAIL D
SCALE 1/10




DETAIL C
SCALE 1/10

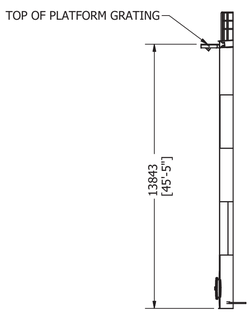



Pc 2M10601
PREFABRICATED ROOF TOP HANDRAIL SECTION
QTY: 19
SCALE 1/50




SECTION B-B
SCALE 1/50

FINISH:
SSPC SURFACE PREPERATION FOR PAINTING: SP6 COMMERCIAL SANDBLASTING
ONE COAT OF POLYVAL 390




SECTION G-G
SCALE 1/150
5

NOTE:
ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE NOTED

| REVISION HISTORY | | | |
|---|---|---|---|
| ZONE | REV | DESCRIPTION | DATE |
| | 3 | THIS SHEET ADDED | 4/20/2017 |
| 4D, 2D | 4 | MAX. DIST. BTW POST ADDED, HEIGHT SECTION B-B CHG TO 1501 | 5/2/2017 |
| 11F, 10A | 5 | PLATORMS AND STAIRWAY ADDED | 6/28/2017 |

AS-BUILT
BY Inukshuk Construction Ltd. DATE 2017/10/02


30-Sep-2017
Permit Number: P471

| | | | |
|---|---|---|---|
| DRAWN | MARC LOSIER | 3/9/2017 | |
| CHECKED | | | |
| QA | | | |
| MFG | | | |
| APPROVED | | | |

ROOF TOP HANDRAIL LAYOUT

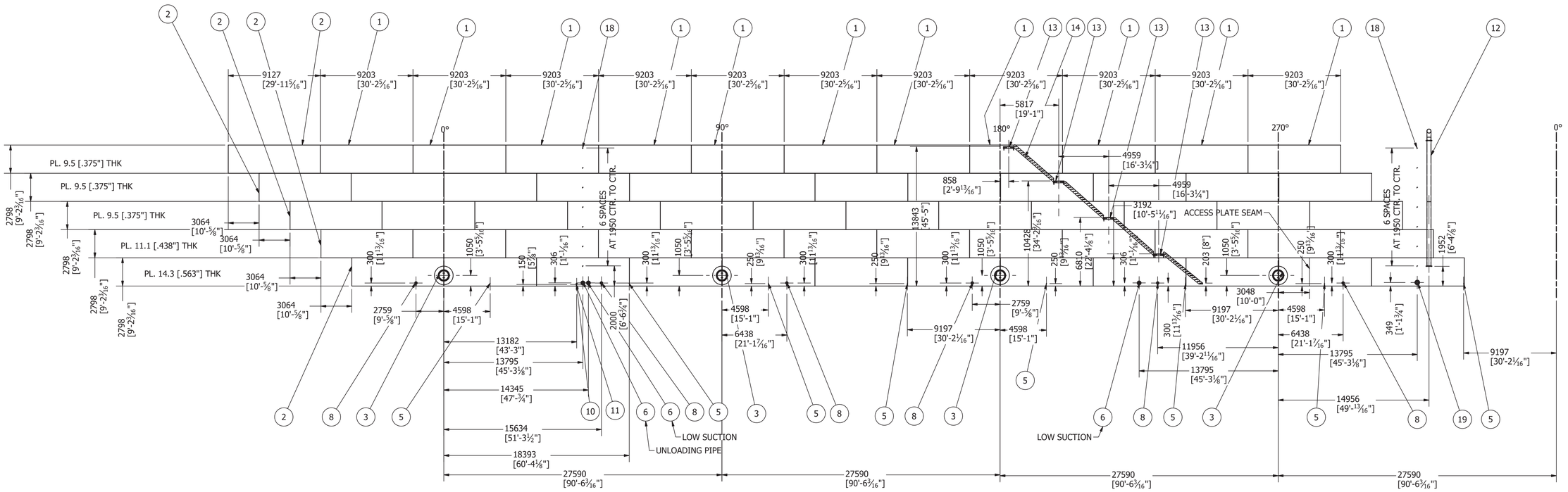
TITLE
AGNICO EAGLE - MELIADINE GOLD MINE - TK #2 - 13,500CUM 35.1M DIA X 14M H

| SIZE | | DWG NO | REV |
|---|---|---|---|
| A1 | | 295-M10 | 7 |

SCALE

SHEET 6 OF 7

| PARTS LIST | | |
|---|---|---|
| ITEM | ITEM QTY | PART NUMBER |
| 1 | 55 | SHELL PLATE 2798 X 9203 THICKNESS |
| 2 | 5 | SHELL PLATE LAST ON COURSE 2798 X 9127 (TRIM AT SITE) |
| 3 | 4 | 900ns SHELL MANHOLE |
| 5 | 8 | Grounding Lug |
| 6 | 3 | 150NS SHELL NOZZLE |
| 8 | 6 | 75NS WATER DRAWOFF |
| 10 | 1 | 20NS THERMOMETER CONNECTION |
| 11 | 1 | AISC - L 4 x 4 x 1/4 - 15.748031 TEMPERATURE CONNECTION PROTECTION |
| 12 | 1 | 400NS VENT |
| 13 | 4 | PLATFORM |
| 14 | 115 | STEPS |
| 18 | 14 | AISC - L 3 x 3 x 1/4 - 15.748031 PRV PIPE SUPPORT |
| 19 | 1 | 200NS SHELL NOZZLE - FIX LOADING PIPE |




SHELL DEVELOPED VIEW
SCALE 1/200

AS-BUILT
BY Inukshuk Construction Ltd. DATE 2017/10/02

30-Sep-2017
Permit Number: P471

| REVISION HISTORY | | |
|---|---|---|
| REV | DESCRIPTION | DATE |
| 6 | THIS SHEET ADDED | 7/12/2017 |
| 7 | INCORPORATE FIELD MODIFICATION | 9/27/2017 |

| | | |
|---|---|---|
| DRAWN | MARC LOSIER | 3/9/2017 |
| CHECKED | | |
| QA | | |
| MFG | | |
| APPROVED | | |

# DEVELOP VIEW

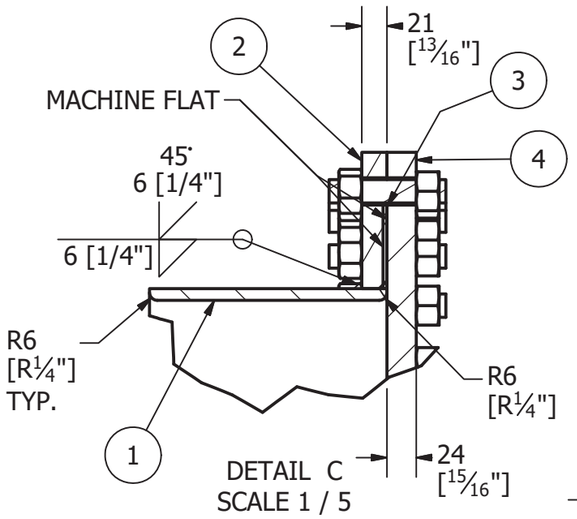
TITLE
AGNICO EAGLE - MELIADINE GOLD MINE - TK #2 - 13,500CUM 35.1M DIA X 14M H

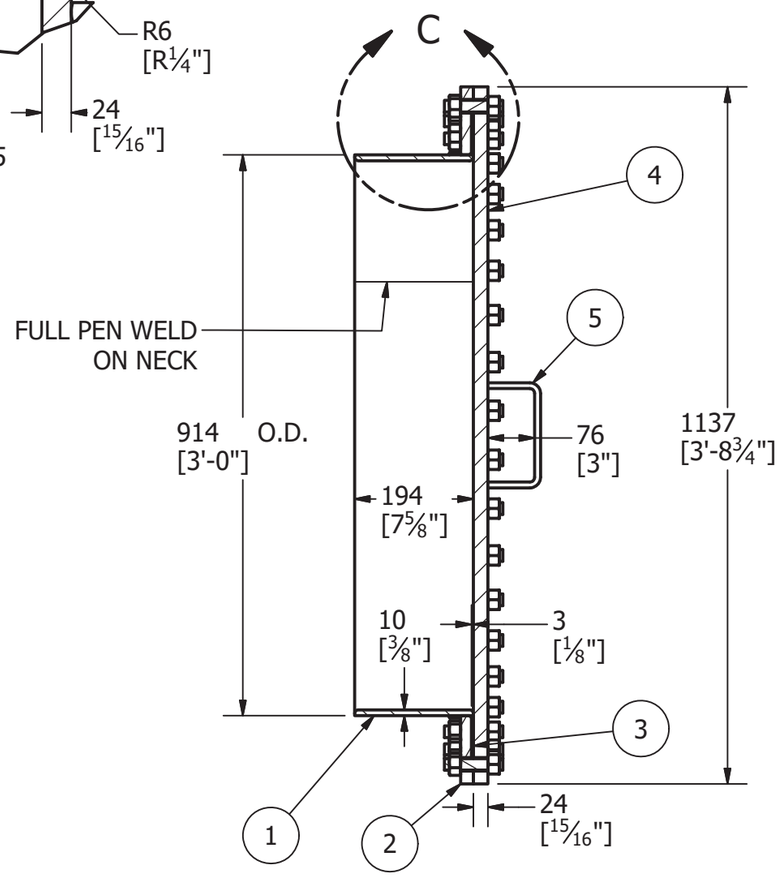
| SIZE | DWG NO | REV |
|---|---|---|
| A1 | 295-M10 | 7 |

SCALE

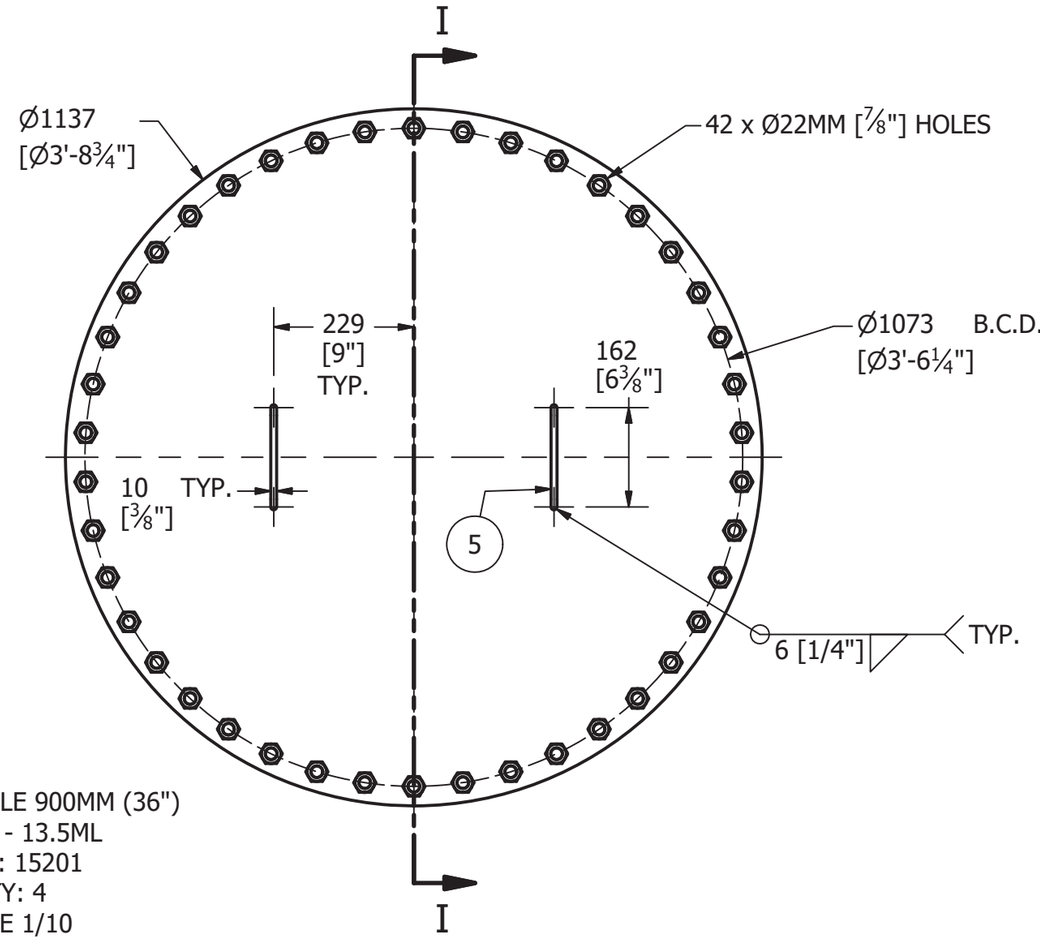
SHEET 7 OF 7

| PARTS LIST | | | | | |
|---|---|---|---|---|---|
| ITEM | ITEM QTY | PART NUMBER | DESCRIPTION | MATERIAL | MASS |
| 1 | 1 | T1-2-4 SHELL NECK | 10 [3/8"] THK X 194 [7 5/8"] WD. X 2842 [9'-3 7/8"] LONG | G40.21M - 350WT CAT. 4 | 40.783 kg |
| 2 | 1 | T1-2-4 SHELL BOLTING FLANGE | 22 [7/8"] THK X 1137 [3'-8 3/4"] O.D. X 914 [3'-0"] I.D. | G40.21M - 350WT CAT. 4 | 54.904 kg |
| 3 | 1 | T1-2-4 SHELL GASKET | 3 [1/8"] THK X 1051 [3'-5 3/8"] O.D. X 914 [3'-0"] I.D. | DURLON 8500 | 0.622 kg |
| 4 | 1 | T1-2-4 SHELL COVER PLATE | 25 [1"] THK X 1137 [3'-8 3/4"] O.D. | G40.21M - 350WT CAT. 4 | 186.633 kg |
| 5 | 2 | T1-2-4 SHELL HANDLE ROD | 10 [3/8"] THK X 314 [12 3/8"] LONG | MILD STEEL | 0.175 kg |
| 6 | 42 | STUDS | STUD, 3/4" X 95 [3 3/4"] LG. NC | A320 L7 | 0.213 kg |
| 7 | 84 | NUTS | NUT, HEX HEAVY, 3/4" NC | A194A GR4 | 0.096 kg |




SECTION I-I
SCALE 1/10




SHELL MANHOLE 900MM (36")
TANK 2 - 13.5ML
MARK: 15201
QTY: 4
SCALE 1/10

**AS-BUILT**

BY Inukshuk Construction Ltd. DATE 2017/10/02

REGISTERED PROFESSIONAL ENGINEER
G.G. BROWN
LICENSEE
NT/NU
30-Sep-2017

**Permit Number: P471**

ALTERNATE MATERIAL: ALL 350WT STEEL MAY BE SUBSTITUTED WITH 260WT IF EASIER TO SOURCE

| | | |
|---|---|---|
| DRAWN | Jacob Saunders | 3/22/2017 |
| CHECKED | Marc Losier | 3/27/2017 |
| QA | | |
| MFG | | |
| APPROVED | | |

# T2 (13.5ML) SHELL MANHOLE

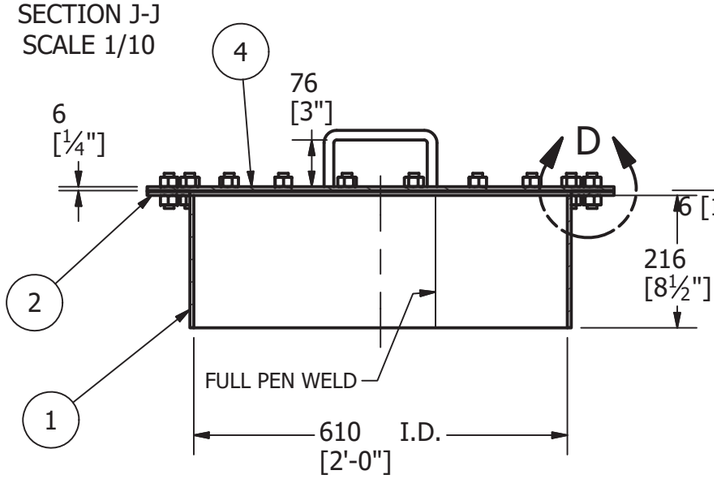
TITLE

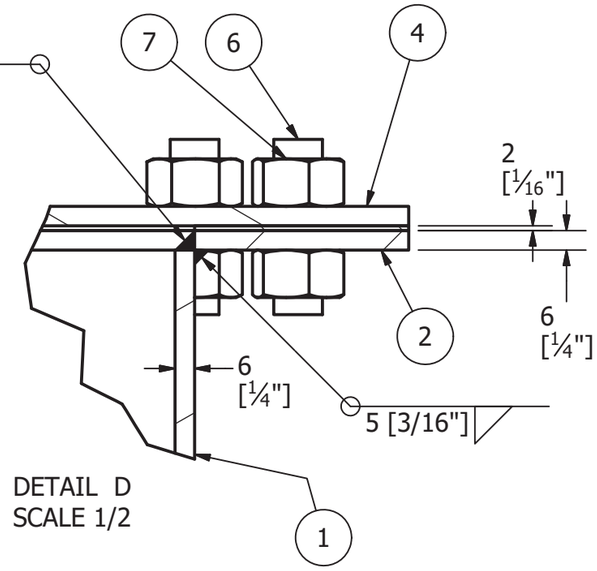
MELIADINE FIELD ERECTED TANK - MANHOLES

| SIZE | | DWG NO | REV |
|---|---|---|---|
| A3 | | 295-M15 | 3 |
| SCALE | | | SHEET 3 OF 12 |

| PARTS LIST | | | | | |
|---|---|---|---|---|---|
| ITEM | ITEM QTY | PART NUMBER | DESCRIPTION | MATERIAL | MASS |
| 1 | 1 | ROOF NECK | 6 [1/4"] THK X 216 [8 1/2"] WD X 1935 [6' - 4 3/16"] LG | G40.21M 300W | 20.825 kg |
| 2 | 1 | ROOF BOLTING FLANGE | 6 [1/4"] THK X 762 [2'-6"] O.D. X 622 [2'-1/2"] I.D. | G40.21M 300W | 7.287 kg |
| 4 | 1 | ROOF COVER PLATE | 6 [1/4"] THK X 762 [2'-6"] DIA | G40.21M 300W | 22.448 kg |
| 5 | 2 | ROOF HANDLE ROD | 16 [5/8"] DIA X 314 [12 3/8"] LG. | Steel, MILD | 0.506 kg |
| 6 | 20 | STUDS | STUD, 5/8" X 57 [2 1/4"] LG. NC | A320 L7 | 0.089 kg |
| 7 | 40 | NUTS | NUT, HEX HEAVY, 5/8" | A194A GR4 | 0.059 kg |
| 8 | 1 | 295-P1 Gasket 24in (600mm) | | Rubber | 0.216 kg |

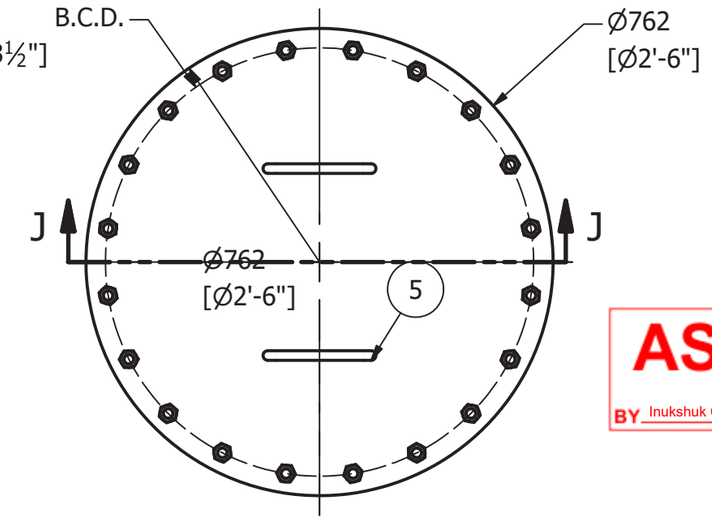
SECTION J-J
SCALE 1/10




DETAIL D
SCALE 1/2

3




ROOF MANHOLE 600MM (24")
TANK 2 - 13.5ML
MARK: 15202
QTY: 4
SCALE 1/10

AS-BUILT
BY Inukshuk Construction Ltd. DATE 2017/10/02

30-Sep-2017

Permit Number: P471

ALTERNATE MATERIAL: ALL 350WT STEEL MAY BE SUBSTITUTED WITH 260WT IF EASIER TO SOURCE

| REVISION HISTORY | | | |
|---|---|---|---|
| ZONE | REV | DESCRIPTION | DATE |
| | 2 | EMERGENCY VENT/MANHOLE DETAIL ADDED | 4/13/2017 |
| | 3 | EMERGENCY VENT/MANHOLE DETAIL REMOVED | 7/9/2017 |

| | | |
|---|---|---|
| DRAWN | Jacob Saunders | 3/22/2017 |
| CHECKED | Marc Losier | 3/27/2017 |
| QA | | |
| MFG | | |
| APPROVED | | |

# T2 (13.5ML) ROOF MANHOLE

TITLE

MELIADINE FIELD ERECTED TANK - MANHOLES

| SIZE | | DWG NO | REV |
|---|---|---|---|
| A3 | | 295-M15 | 3 |

SCALE

SHEET 4 OF 12

SHOP DRAWING
DATA SHEET

*Affixing this stamp confirms that an administrative approval and/or a verification of compliance with shop drawings or specifications was made, but does not entail the liability of the author of the work or its owner with regards to this shop drawing or data sheet, for which the contractor is the sole responsible.*

☑ Reviewed ☐ Reviewed as noted
☐ Rejected ☐ Filed for records

*The contractor, supplier and/or sub-contractor is responsible for: comfirming and coordinating all quantities and dimensions; selecting fabrication processes and techniques of construction; coordinating his or her work with that of all other trades and performing all work in a safe and satisfactory manner.*

By: J. morliere Date: 2017/07/14

Project #: 151-06440-40

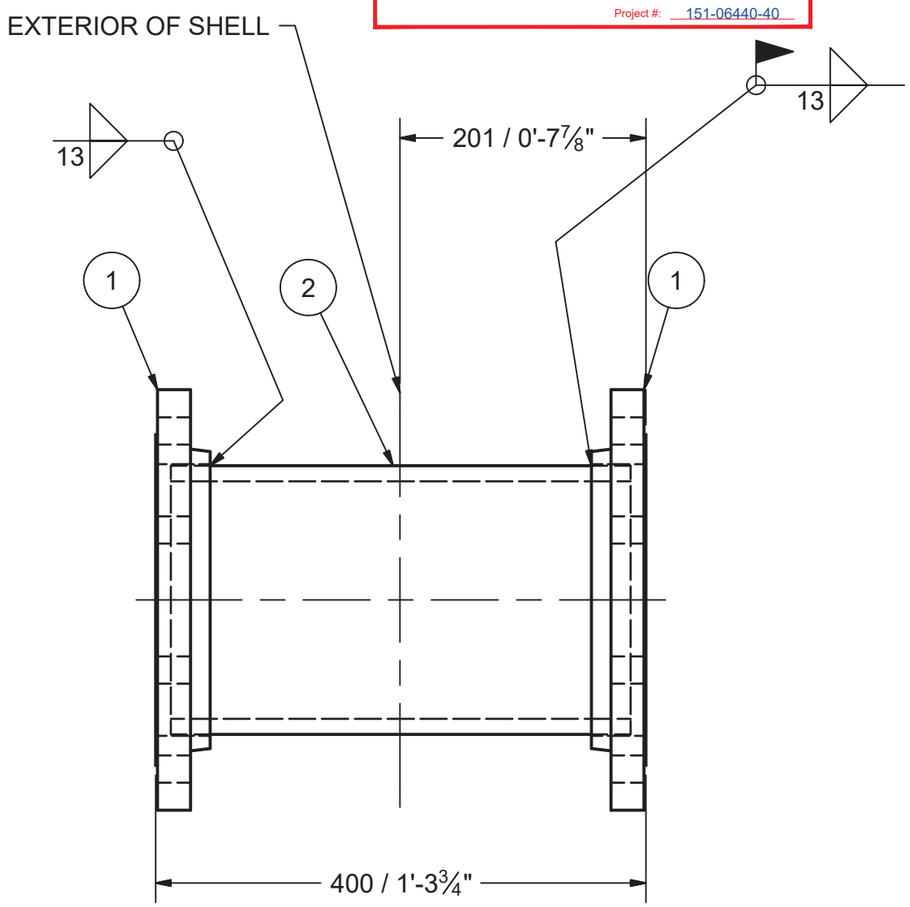
| Parts List | | | | |
|---|---|---|---|---|
| ITEM | ITEM QTY | CUT (MM) | PART NUMBER | MATERIAL |
| 1 | 2 | | ASME B16.5 Flange Slip-On Welding - Class 150 8 | A350 LF2 |
| 2 | 1 | 375 | Pipe 8 - Schedule 80 - 14.76378 | A333 GR. 6 |

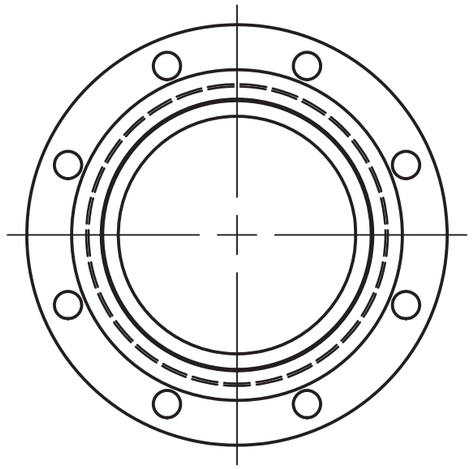
# Ø200 NS DOUBLE FLANGE SHELL LOADING
# MARK: M1601
# QTY: 2

WEIGHT/SPOOL: 48.2KG

| M1601 QTY | |
|---|---|
| Tank No. | QTY |
| 1 | 1 |
| 2 | 1 |
| 3 | 0 |
| 4 | 0 |
| 5 | 0 |
| 6 | 0 |
| TOTAL | 2 |

NOTES:
1. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE NOTED
2. FINISH: SANDBLAST TO SSP-6



**AS-BUILT**

BY Inukshuk Construction Ltd. DATE 2017/10/02

REGISTERED PROFESSIONAL ENGINEER K.G. BROWN LICENSEE NT/NU
16-Jul-2017

**Permit Number: P471**

| REVISION HISTORY | | |
|---|---|---|
| REV | DESCRIPTION | DATE |
| 3 | ALL SHEETS REVISED AS PER ENGINEER COMMENTS | 5/1/2017 |

| | | | |
|---|---|---|---|
| DRAWN Jacob Saunders | 4/13/2017 | AEM Meliadine Fuel Storage Tanks | |
| CHECKED | | TITLE M1601 - 200NS DOUBLE FLG. SHELL | |
| QA | | | |
| MFG | | | |
| APPROVED | | | |
| | | SIZE A3 | DWG NO 295-M16 / REV 3 |
| | | SCALE | SHEET 1 OF 22 |

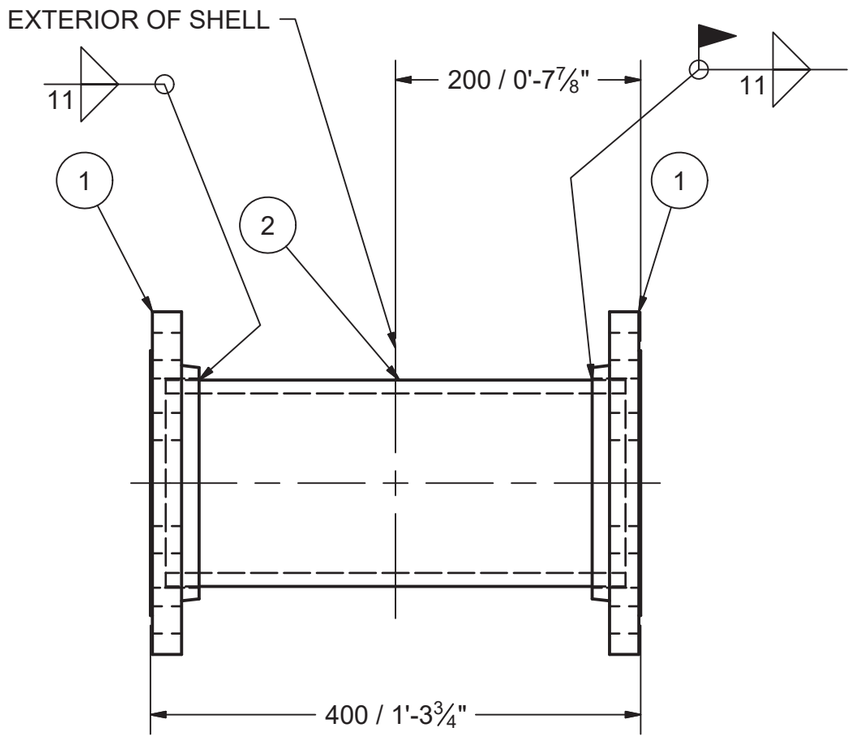
| Parts List | | | | |
|---|---|---|---|---|
| ITEM | ITEM QTY | CUT (MM) | PART NUMBER | MATERIAL |
| 1 | 2 | | ASME B16.5 Flange Slip-On Welding - Class 150 6 | A350 LF2 |
| 2 | 1 | 375 | Pipe 6 - Schedule 80 - 14.76378 | A333 GR. 6 |

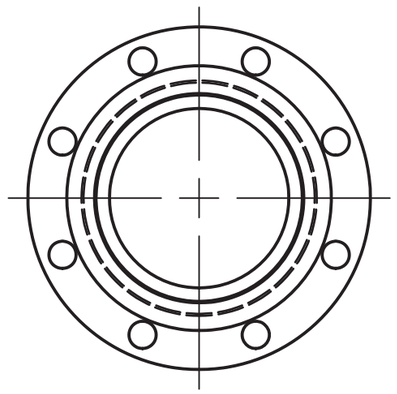
# Ø150 NS DOUBLE FLANGE SHELL LOADING/UNLOADING
# MARK: M1602
# QTY: 26

WEIGHT/SPOOL: 30.8KG

| M1602 QTY | |
|---|---|
| Tank No. | QTY |
| 1 | 3 |
| 2 | 3 |
| 3 | 5 |
| 4 | 5 |
| 5 | 5 |
| 6 | 5 |
| TOTAL | 26 |

NOTES:
1. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE NOTED
2. FINISH: SANDBLAST TO SSP-6



**AS-BUILT**
BY Inukshuk Construction Ltd. DATE 2017/10/02

APEGGN PROFESSIONAL ENGINEER
K.G. BROWN
LICENSEE
NT/NU
16-Jul-2017

**Permit Number: P471**

| | | | | |
|---|---|---|---|---|
| DRAWN Jacob Saunders | 4/13/2017 | AEM Meliadine Fuel Storage Tanks | | |
| CHECKED | | TITLE M1602 - 150NS DOUBLE FLG. SHELL | | |
| QA | | | | |
| MFG | | | | |
| APPROVED | | SIZE A3 | DWG NO 295-M16 | REV 3 |
| | | SCALE | SHEET 2 OF 22 | |

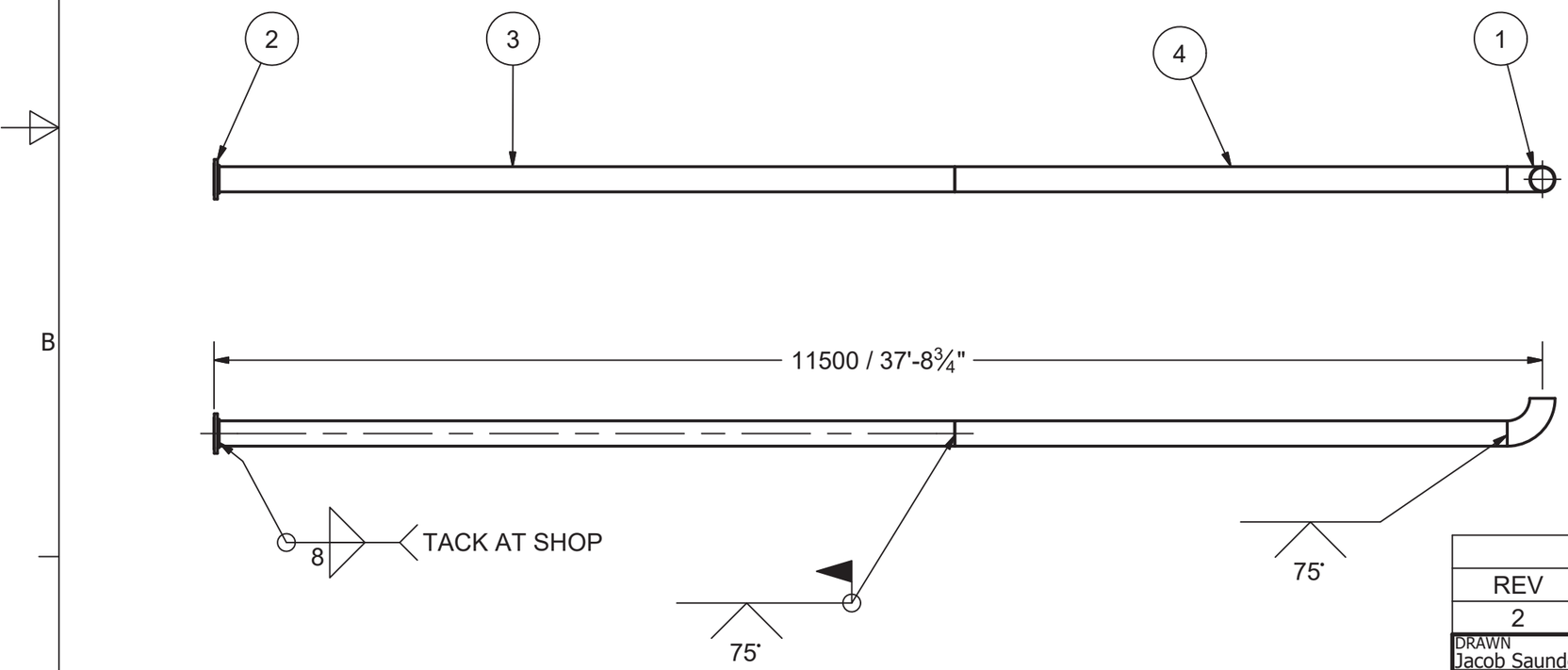
# Ø200 NS FIXED PIPE LOADING
# TANK 2 (13.5ML)
# MARK: M1604
# QTY: 1

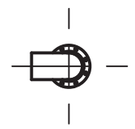
WEIGHT/SPOOL: 508.5KG

| Parts List | | | | |
|---|---|---|---|---|
| ITEM | ITEM QTY | CUT (MM) | PART NUMBER | MATERIAL |
| 1 | 1 | | ASME B16.9 Long Radius 90 Deg Elbow (Inch) 8 x 0.322 SCH40 | A420 WPL6 |
| 2 | 1 | | ASME B16.5 Flange Slip-On Welding - Class 150 8 | A350 LF2 |
| 3 | 1 | 6401 | Pipe 8 - Schedule 40 - 440.28 | A333 GR. 6 |
| 4 | 1 | 4782 | ASTM A 53/A 53M Pipe 8 - Schedule 40 - 188.27764 | Steel |

| M1604 QTY | |
|---|---|
| Tank No. | QTY |
| 1 | 0 |
| 2 | 1 |
| 3 | 0 |
| 4 | 0 |
| 5 | 0 |
| 6 | 0 |
| TOTAL | 1 |

NOTES:
1. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE NOTED
2. FINISH: BARE



AS-BUILT

BY Inukshuk Construction Ltd. DATE 2017/10/02


Permit Number: P471

| REVISION HISTORY | | |
|---|---|---|
| REV | DESCRIPTION | DATE |
| 2 | NOTE 2 CHANGED, PIPE BROKEN IN SECTIONS | 5/11/2017 |

| | | |
|---|---|---|
| DRAWN Jacob Saunders | 4/13/2017 | AEM Meliadine Fuel Storage Tanks |
| CHECKED | | TITLE: M1604 - 200NS FIXED PIPE LOADING |
| QA | | |
| MFG | | |
| APPROVED | | |

| SIZE | | DWG NO | REV |
|---|---|---|---|
| A3 | | 295-M16 | 3 |

SCALE

SHEET 4 OF 22

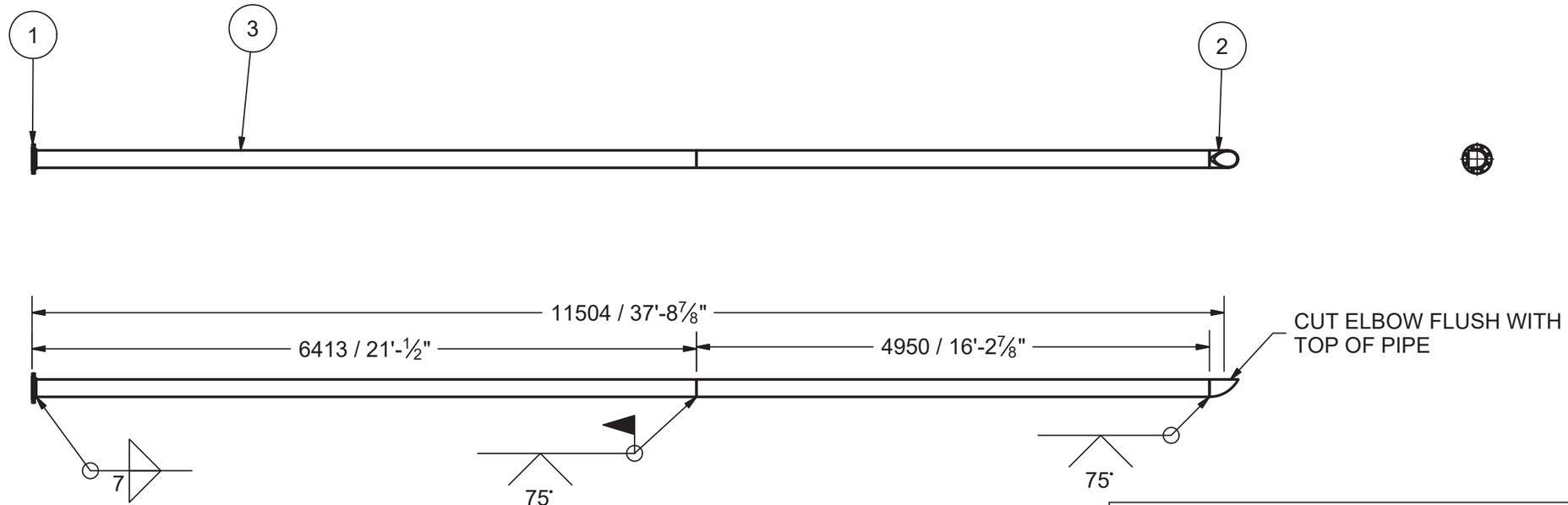
| Parts List | | | | |
|---|---|---|---|---|
| ITEM | ITEM QTY | CUT (MM) | PART NUMBER | MATERIAL |
| 1 | 1 | | ASME B16.5 Flange Slip-On Welding - Class 150 6 | A350 LF2 |
| 2 | 1 | | ASME B16.9 Long Radius 90 Deg Elbow (Inch) 6 x 0.28 SCH40 | A420 WPL6 |
| 3 | 1 | 6401 | Pipe 6 - Schedule 40 - 446.88977 | A333 GR. 6 |
| 4 | 1 | 4950 | Pipe 6 - Schedule 40 - 194.88976 | A333 GR. 6 |

# Ø150 NS FIXED PIPE UNLOADING
# TANK 2 (13.5ML)
# MARK: M1609
# QTY: 1

WEIGHT/SPOOL: 326.1KG

| M1609 QTY | |
|---|---|
| Tank No. | QTY |
| 1 | 0 |
| 2 | 1 |
| 3 | 0 |
| 4 | 0 |
| 5 | 0 |
| 6 | 0 |
| TOTAL | 1 |

NOTES:
1. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE NOTED
2. FINISH: BARE




AS-BUILT
BY Inukshuk Construction Ltd. DATE 2017/10/02

ASTRID PROFESSIONAL ENGINEERS K.G. BROWN LICENSEE NT/NU
16-Jul-2017

Permit Number: P471

| REVISION HISTORY | | |
|---|---|---|
| REV | DESCRIPTION | DATE |
| 2 | NOTE 2 CHANGED, PIPE BROKEN IN SECTIONS | 5/11/2017 |

| | | |
|---|---|---|
| DRAWN Jacob Saunders | 4/13/2017 | AEM Meliadine Fuel Storage Tanks |
| CHECKED | | |
| QA | | TITLE |
| MFG | | M1609 - 150NS FIXED PIPE UNLOADING |
| APPROVED | | |
| | | SIZE A3 / DWG NO 295-M16 / REV 3 |
| | | SCALE / SHEET 9 OF 22 |

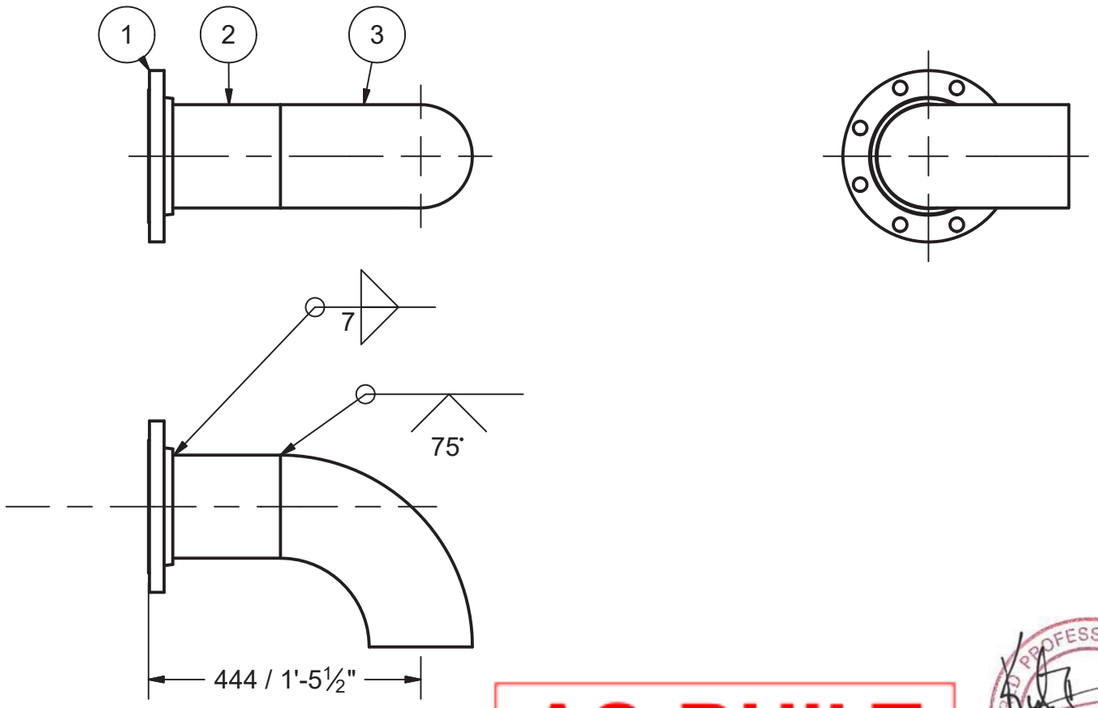
| Parts List | | | | |
|---|---|---|---|---|
| ITEM | ITEM QTY | CUT (MM) | PART NUMBER | MATERIAL |
| 1 | 1 | | ASME B16.5 Flange Slip-On Welding - Class 150 6 | A350 LF2 |
| 2 | 1 | 203 | Pipe 6 - Schedule 40 - 8 | A333 GR. 6 |
| 3 | 1 | | ASME B16.9 Long Radius 90 Deg Elbow - 6 SCH40 | A420 WPL6 |

# Ø150 NS PIPING LOW LEVEL
# MARK: M1613
# QTY: 16

WEIGHT/SPOOL: 23.3KG

| M1613 QTY | |
|---|---|
| Tank No. | QTY |
| 1 | 2 |
| 2 | 2 |
| 3 | 3 |
| 4 | 3 |
| 5 | 3 |
| 6 | 3 |
| TOTAL | 16 |

NOTES:
1. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE NOTED
2. FINISH: BARE




AS-BUILT
BY Inukshuk Construction Ltd. DATE 2017/10/02

REGISTERED PROFESSIONAL ENGINEER
J.G. BROWN
LICENSEE
NT/NU
16-Jul-2017
Permit Number: P471

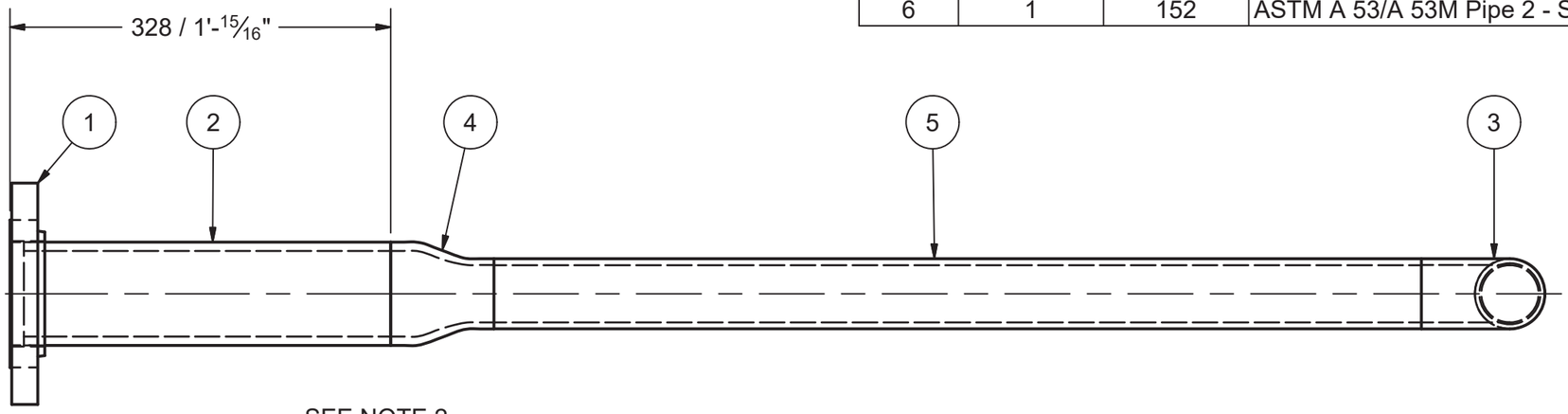
| REVISION HISTORY | | |
|---|---|---|
| REV | DESCRIPTION | DATE |
| 2 | NOTE 2 CHANGED | 5/11/2017 |

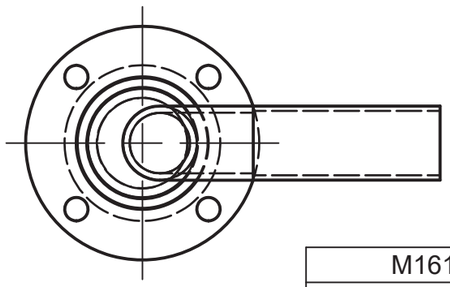
| | | | |
|---|---|---|---|
| DRAWN Jacob Saunders | 4/13/2017 | AEM Meliadine Fuel Storage Tanks | |
| CHECKED | | | |
| QA | | TITLE | |
| MFG | | M1613 - 150NS PIPING LOW LEVEL | |
| APPROVED | | | |
| | | SIZE A3 | DWG NO 295-M16 / REV 3 |
| | | SCALE | SHEET 13 OF 22 |

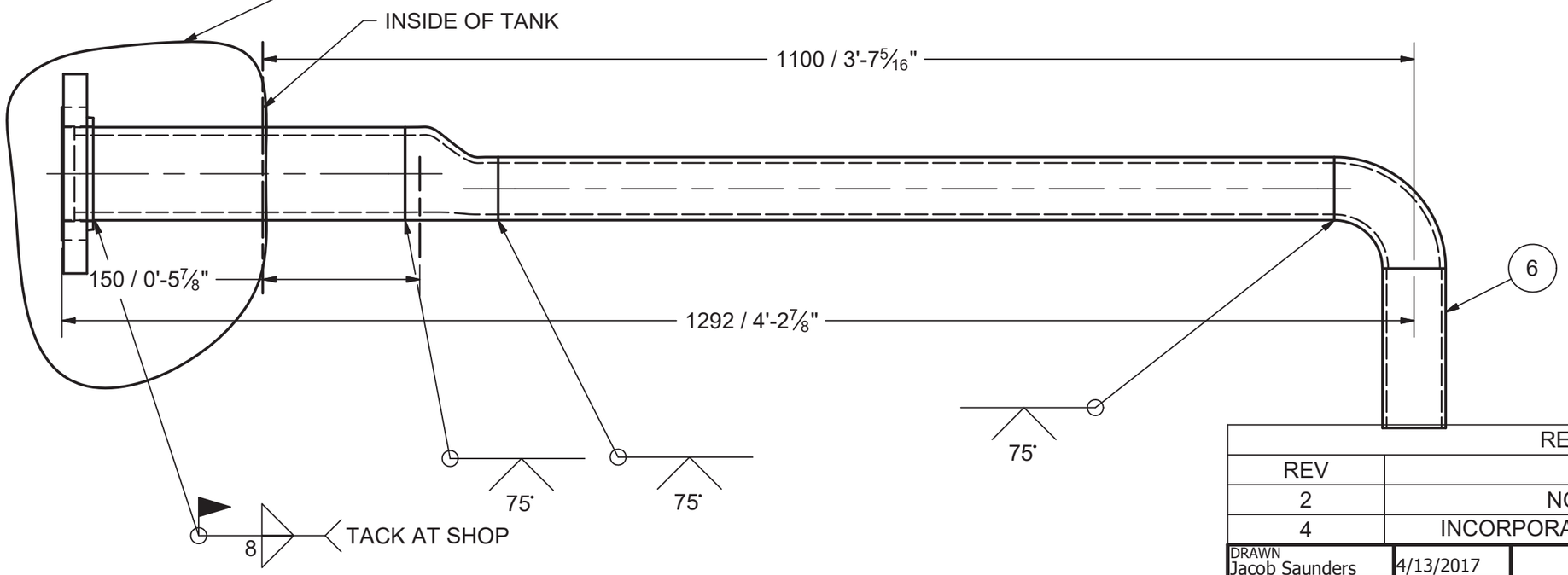
# Ø75 NS WATER DRAW OFF
# MARK: M1614
# QTY: 32

WEIGHT/SPOOL: 16.6KG

| Parts List | | | | |
|---|---|---|---|---|
| ITEM | ITEM QTY | CUT (MM) | PART NUMBER | MATERIAL |
| 1 | 1 | | ASME B16.5 Flange Slip-On Welding - Class 150 3 | A350 LF2 |
| 2 | 1 | 316 | Pipe 3 - Schedule 80 - 12.440945 | A333 GR. 6 |
| 3 | 1 | | ASME B16.9 Long Radius 90 Deg Elbow (Inch) 2 x 0.218 SCH80 | A420 |
| 4 | 1 | | ASME B16.9 Eccentric Reducer 3 x 2 - Schedule 80 | A420 |
| 5 | 1 | 799 | Pipe 2 - Schedule 80 - 31.456693 | A333 GR. 6 |
| 6 | 1 | 152 | ASTM A 53/A 53M Pipe 2 - Schedule 40 - 6 | Steel |






| M1614 QTY | |
|---|---|
| Tank No. | QTY |
| 1 | 6 |
| 2 | 6 |
| 3 | 6 |
| 4 | 6 |
| 5 | 4 |
| 6 | 4 |
| TOTAL | 32 |

REGISTERED PROFESSIONAL ENGINEER
L.G. BROWN
LICENSEE
NT/NU
30-Sep-2017

**Permit Number: P471**

**AS-BUILT**
BY Inukshuk Construction Ltd. DATE 2017/10/02

| REVISION HISTORY | | |
|---|---|---|
| REV | DESCRIPTION | DATE |
| 2 | NOTE 2 CHANGED | 5/11/2017 |
| 4 | INCORPORATE FIELD MODIFICATION | 9/27/2017 |

NOTES:
1. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE NOTED
2. FINISH: SANDBLAST TO SSP-6 AREA THAT WOULD BE LOCATED OUTSIDE THE TANK AS INDICATED.

| | | |
|---|---|---|
| DRAWN Jacob Saunders | 4/13/2017 | AEM Meliadine Fuel Storage Tanks |
| CHECKED | | TITLE: M1614 - 75NS WATER DRAW OFF |
| QA | | |
| MFG | | |
| APPROVED | | |

SIZE A3 | DWG NO 295-M16 | REV 4

SCALE | SHEET 14 OF 22

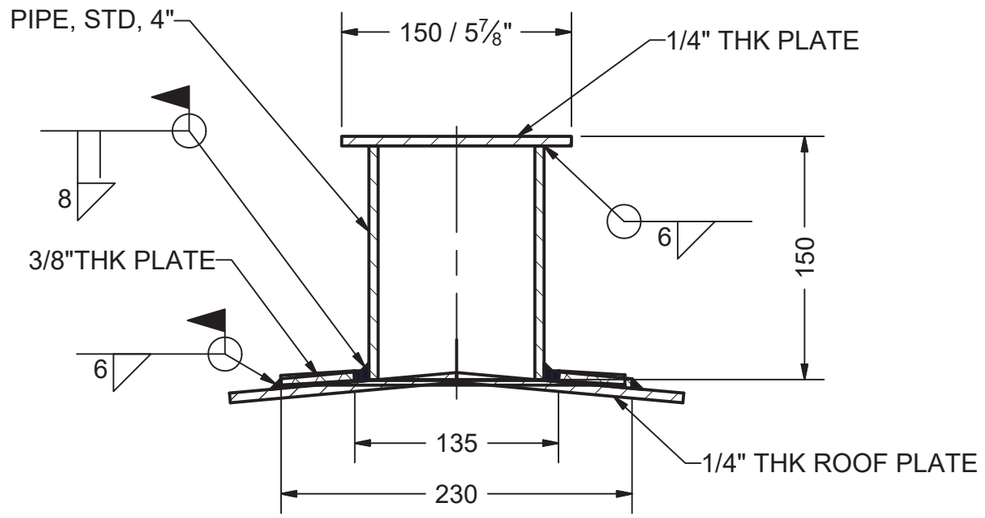
| Parts List | | | | | |
|---|---|---|---|---|---|
| ITEM | ITEM QTY | CUT (MM) | PART NUMBER | DESCRIPTION | MATERIAL |
| 1 | 1 | | Plate, 1/4" Thick x 152 Dia | Steel, Mild | G40.21M 300W |
| 2 | 1 | 152 | PIPE SCH40 ANSI - 4 x .237 - 6 | Pipe | A53 |
| 3 | 1 | | Painters Post Reinforcing Plate | Plate, Mild Steel, 3/8" thk x 133 I.D. x 229 O.D. | G40.21M 300W |

# Ø100 NS PAINTERS SCAFFOLD CABLE SUPPORT
# MARK: M1615
# QTY: 6

WEIGHT/SPOOL: 3.4KG

| M1615 QTY | |
|---|---|
| Tank No. | QTY |
| 1 | 1 |
| 2 | 1 |
| 3 | 1 |
| 4 | 1 |
| 5 | 1 |
| 6 | 1 |
| TOTAL | 6 |

NOTES:
1. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE NOTED
2. FINISH: SANDBLAST TO SSP-6




**AS-BUILT**
BY Inukshuk Construction Ltd. DATE 2017/10/02

REGISTERED PROFESSIONAL ENGINEER
K.S. BROWN
LICENSEE
NT/NU
16-Jul-2017
Permit Number: P471


MOSHER ENGINEERING LIMITED
-GRAVEL CRUSHING
-EARTHWORK
-PROCESS PIPE WELDING
-INDUSTRIAL CONTRACTING

1358 QUEEN ST
HALIFAX, NS
B3J 2H5
PH: (902) 429-0272
FAX: (902) 429-7762


| | | |
|---|---|---|
| DRAWN | Jacob Saunders | 4/13/2017 |
| CHECKED | | |
| QA | | |
| MFG | | |
| APPROVED | | |

AEM Meliadine Fuel Storage Tanks

TITLE

M1615 - PAINTERS SCAFFOLD CABLE SUPPORT

| SIZE | DWG NO | REV |
|---|---|---|
| A3 | 295-M16 | 3 |

SCALE

SHEET 15 OF 22

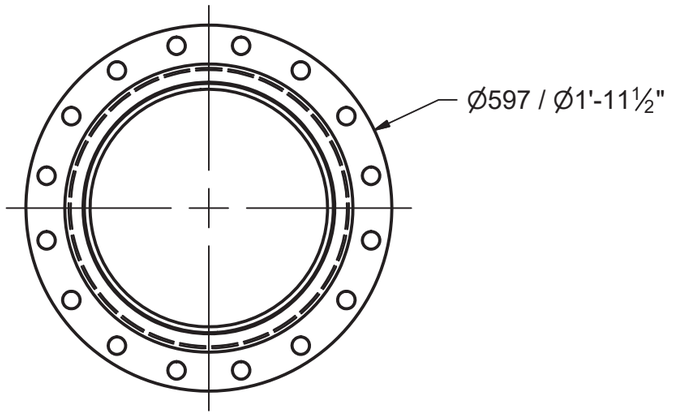
| Parts List | | | | |
|---|---|---|---|---|
| ITEM | ITEM QTY | CUT (MM) | PART NUMBER | MATERIAL |
| 1 | 1 | | ASME B16.5 Flange Slip-On Welding - Class 150 16 | A350 LF2 |
| 2 | 1 | 330 | Pipe 16 - Schedule 30, 3/8" wall - 13"LG | A106 |

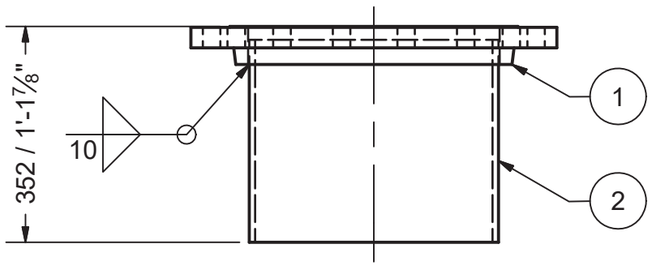
# Ø400 NS ROOF NOZZLE
# MARK: M1616
# QTY: 6

WEIGHT/SPOOL: 83.5KG

| M1616 QTY | |
|---|---|
| Tank No. | QTY |
| 1 | 1 |
| 2 | 1 |
| 3 | 1 |
| 4 | 1 |
| 5 | 1 |
| 6 | 1 |
| TOTAL | 6 |

NOTES:
1. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE NOTED
2. FINISH: SANDBLAST TO SSP-6




AS-BUILT
BY Inukshuk Construction Ltd. DATE 2017/10/02

PRESSED PROFESSIONAL ENGINEER
G. BROWN
LICENSEE
NT/NU
16-Jul-2017
Permit Number: P471

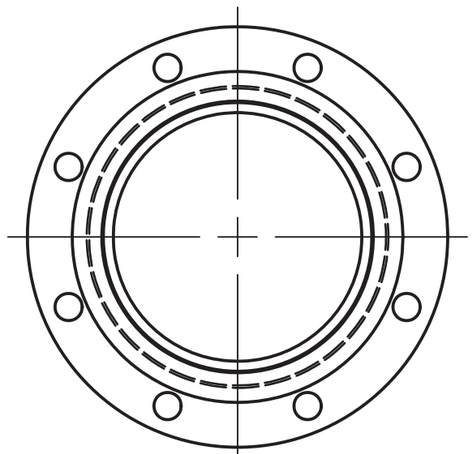
| | | |
|---|---|---|
| DRAWN Jacob Saunders | 4/13/2017 | AEM Meliadine Fuel Storage Tanks |
| CHECKED | | TITLE: M1616 - Ø400 NS ROOF NOZZLE |
| QA | | |
| MFG | | |
| APPROVED | | |

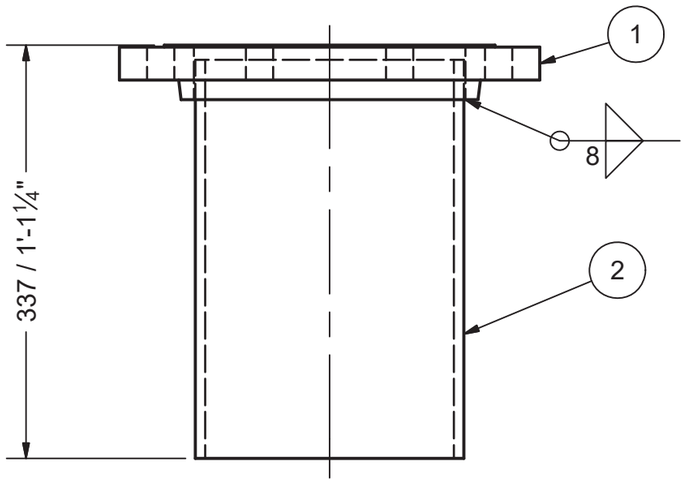
SIZE A3 | DWG NO 295-M16 | REV 3
SCALE
SHEET 16 OF 22

| Parts List | | | | |
|---|---|---|---|---|
| ITEM | ITEM QTY | CUT (MM) | PART NUMBER | MATERIAL |
| 1 | 1 | | ASME B16.5 Flange Slip-On Welding - Class 150 8 | A350 LF2 |
| 2 | 1 | 325 | Pipe 8 - Schedule 40 - 12.795276 | A333 GR. 6 |

# Ø200 NS ROOF NOZZLE FOR OVERFILL PROT.
# MARK: M1618
# QTY: 6

WEIGHT/SPOOL: 25.8KG






NOTES:
1. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE NOTED
2. FINISH: SANDBLAST TO SSP-6

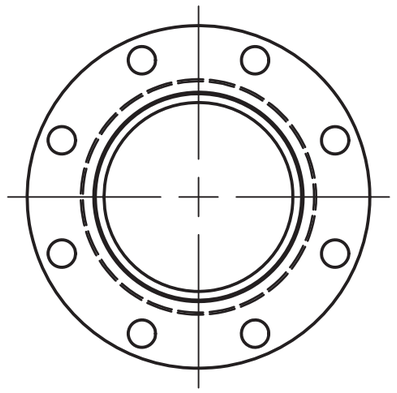
| M1618 QTY | |
|---|---|
| Tank No. | QTY |
| 1 | 1 |
| 2 | 1 |
| 3 | 1 |
| 4 | 1 |
| 5 | 1 |
| 6 | 1 |
| TOTAL | 6 |

AS-BUILT
BY Inukshuk Construction Ltd. DATE 2017/10/02

REGISTERED PROFESSIONAL ENGINEER K.G. BROWN LICENSEE NT/NU
16-Jul-2017
Permit Number: P471

| | | |
|---|---|---|
| DRAWN Jacob Saunders | 4/13/2017 | AEM Meliadine Fuel Storage Tanks |
| CHECKED | | TITLE M1618 - 200NS ROOF NOZZLE FOR OVERFILL PROT. |
| QA | | |
| MFG | | |
| APPROVED | | SIZE A3 / DWG NO 295-M16 / REV 3 |
| | | SCALE / SHEET 18 OF 22 |

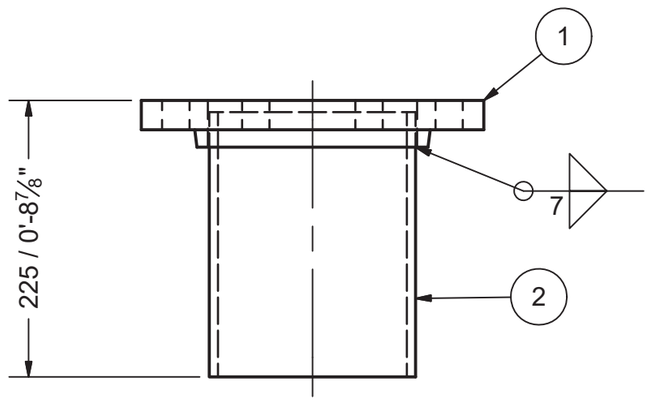
| Parts List | | | | |
|---|---|---|---|---|
| ITEM | ITEM QTY | CUT (MM) | PART NUMBER | MATERIAL |
| 1 | 1 | | Flange 6in Flat Face, Slip On 150#, A105 | A350 LF2 |
| 2 | 1 | 216 | PIPE ANSI - 6 x .280" WALL SCH40 | A333 GR. 6 |



# Ø150 NS ROOF NOZZLE FOR GAUGE HATCH
# MARK: M1619
# QTY: 6

WEIGHT/SPOOL: 13.3KG

NOTES:
1. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE NOTED
2. FINISH: SANDBLAST TO SSP-6




| M1619 QTY | |
|---|---|
| Tank No. | QTY |
| 1 | 1 |
| 2 | 1 |
| 3 | 1 |
| 4 | 1 |
| 5 | 1 |
| 6 | 1 |
| TOTAL | 6 |

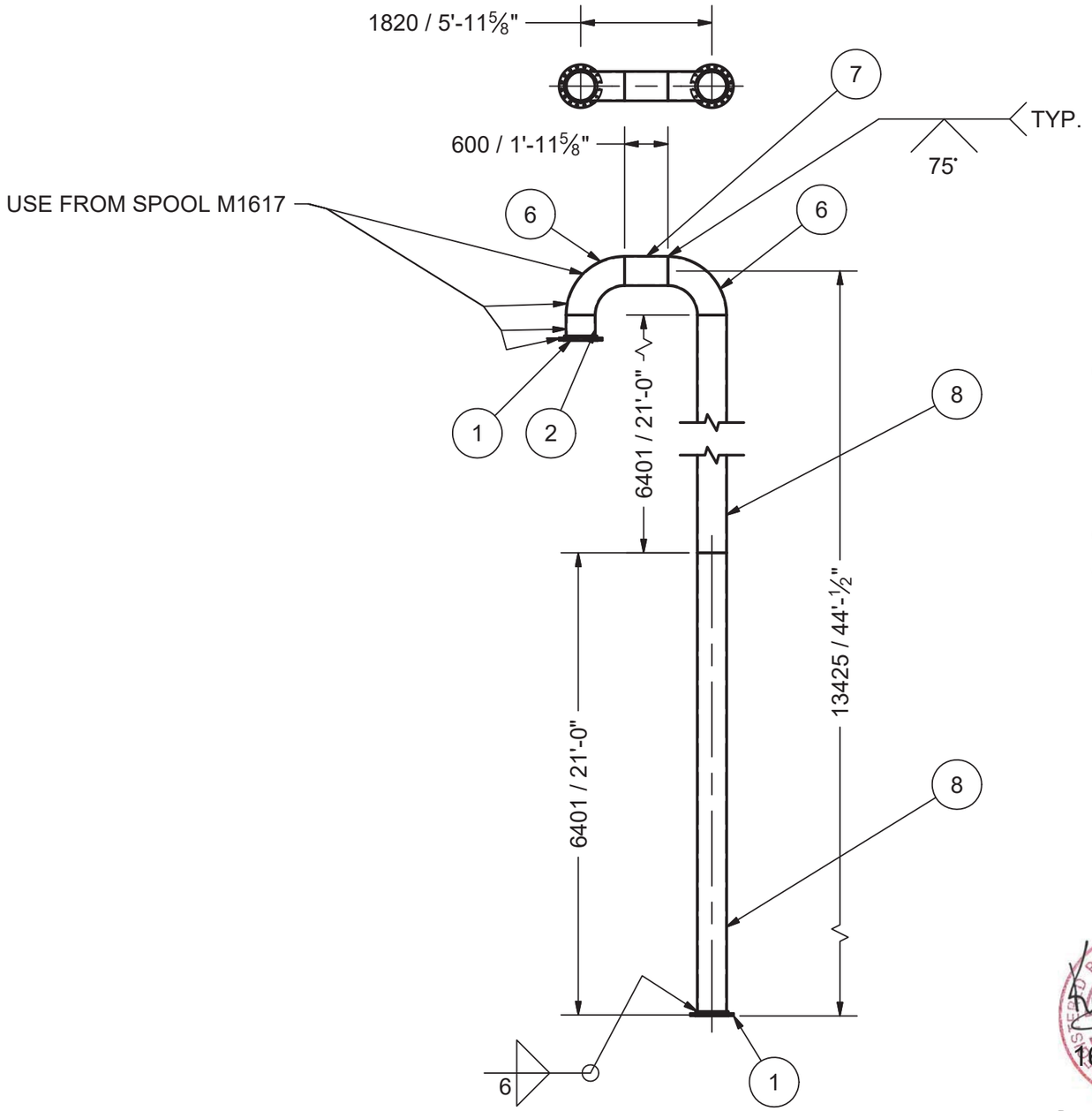
AS-BUILT
BY Inukshuk Construction Ltd. DATE 2017/10/02

R.J.S. BROWN LICENSEE NT/NU PROFESSIONAL ENGINEER
16-Jul-2017
Permit Number: P471

| | | |
|---|---|---|
| DRAWN Jacob Saunders | 4/13/2017 | AEM Meliadine Fuel Storage Tanks |
| CHECKED | | TITLE M1619 - 150 NS ROOF NOZZLE FOR GAUGE HATCH |
| QA | | |
| MFG | | |
| APPROVED | | |
| | | SIZE A3 / DWG NO 295-M16 / REV 3 |
| | | SCALE / SHEET 19 OF 22 |

| Parts List | | | | |
|---|---|---|---|---|
| ITEM | ITEM QTY | CUT (MM) | PART NUMBER | MATERIAL |
| 1 | 2 | | ASME B16.5 Flange Slip-On Welding - Class 150 16 | A350 LF2 |
| 2 | 1 | 330 | Pipe 16 - Schedule 10 - 13 | A106 |
| 6 | 2 | | ASME B16.9 Long Radius 90 Deg Elbow (Metric) 16 x 9.5 | A234 |
| 7 | 1 | 600 | Pipe 16 - Schedule 10 - 23.622047 | A106 |
| 8 | 2 | 6401 | Pipe 16 - Schedule 10 - 252 | A106 |

| M1620 QTY | |
|---|---|
| Tank No. | QTY |
| 1 | 1 |
| 2 | 1 |
| 3 | 0 |
| 4 | 0 |
| 5 | 0 |
| 6 | 0 |
| TOTAL | 2 |




# Ø400 NS VENT (RETURN BEND) FOR TANK NO. 1 & 2 AS PER ECN NO. 1

MARK: M1620

QTY: 2

WEIGHT/SPOOL: 1134KG

**AS-BUILT**

BY Inukshuk Construction Ltd. DATE 2017/10/02

| REVISION HISTORY | | |
|---|---|---|
| REV | DESCRIPTION | DATE |
| 3 | THIS SHEET ADDED | 7/7/2017 |

REGISTERED PROFESSIONAL ENGINEER J.G. BROWN LICENSEE NT/NU

16-Jul-2017

**Permit Number: P471**

| | | |
|---|---|---|
| DRAWN Jacob Saunders | 4/13/2017 | AEM Meliadine Fuel Storage Tanks |
| CHECKED | | |
| QA | | TITLE M1620 - 400 NS VENT TANK NO. 1 & 2 |
| MFG | | |
| APPROVED | | |
| SIZE A3 | DWG NO 295-M16 | REV 3 |
| SCALE | SHEET 20 OF 22 | |

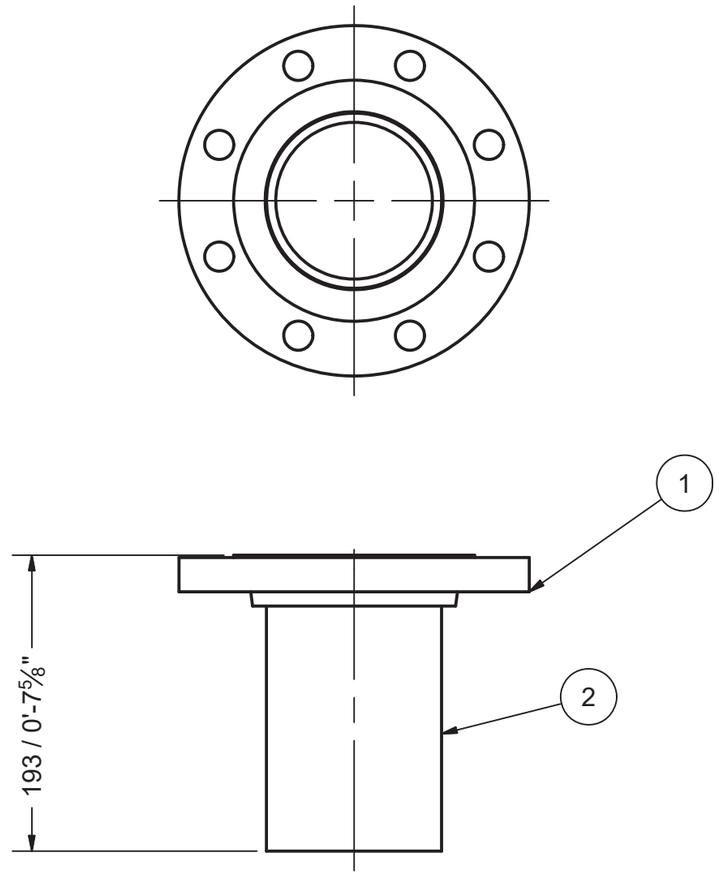
Parts List

| ITEM | ITEM QTY | CUT (MM) | PART NUMBER | DESCRIPTION | STOCK NUMBER | MATERIAL |
|---|---|---|---|---|---|---|
| 1 | 1 | | ASME B16.5 Flange Slip-On Welding - Class 150 4 | FLANGE, R.F., SLIP ON, 150#, 100NS [4"] | | A350 LF2 |
| 2 | 1 | 184 | ASTM A 53/A 53M Pipe 4 - Schedule 40 - 7.2440945 | PIPE, STD, 100NS [4"] | ASTM A 53/A 53M Pipe 4 - Schedule 40 | A53 |

# Ø100 NS ROOF NOZZLE
# AS PER ECN NO. 1

## MARK: M1621
## QTY: 6
WEIGHT/SPOOL: 9 KG

| M1621 QTY | |
|---|---|
| Tank No. | QTY |
| 1 | 1 |
| 2 | 1 |
| 3 | 1 |
| 4 | 1 |
| 5 | 1 |
| 6 | 1 |
| TOTAL | 6 |




AS-BUILT
BY Inukshuk Construction Ltd. DATE 2017/10/02

ASSOCIATE PROFESSIONAL ENGINEER
J.D. BROWN
LICENSEE
NT/NU
16-Jul-2017

Permit Number: P471

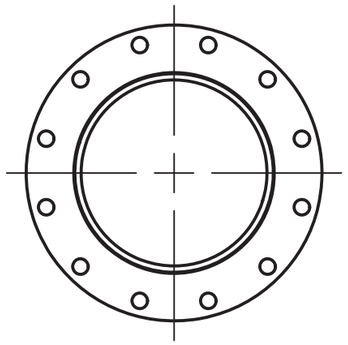
| REVISION HISTORY | | |
|---|---|---|
| REV | DESCRIPTION | DATE |
| 3 | THIS SHEET ADDED AS PER ECN-001 | 7/7/2017 |

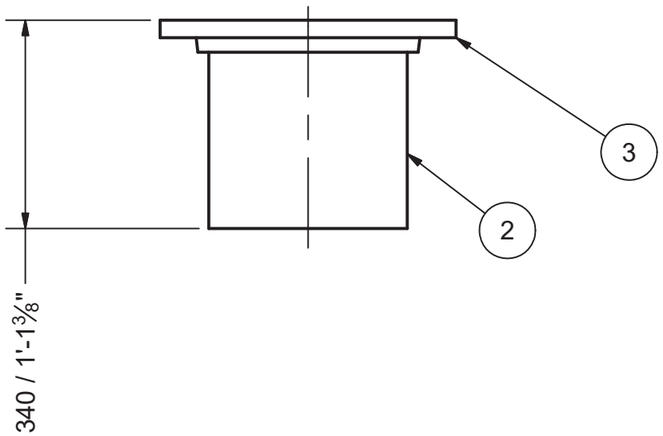
| | | |
|---|---|---|
| DRAWN Jacob Saunders | 4/13/2017 | AEM Meliadine Fuel Storage Tanks |
| CHECKED | | |
| QA | | TITLE M1621 - 100NS ROOF NOZZLE |
| MFG | | |
| APPROVED | | |
| | | SIZE A3 / DWG NO 295-M16 / REV 3 |
| | | SCALE / SHEET 21 OF 22 |

| Parts List | | | | |
|---|---|---|---|---|
| ITEM | ITEM QTY | CUT (MM) | PART NUMBER | MATERIAL |
| 2 | 1 | 330 | ASTM A 53/A 53M Pipe 12 - Schedule 40 - 12.992126 | A53 |
| 3 | 1 | | ASME B16.5 Flange Slip-On Welding - Class 150 12 Flate Face | A106 |

# Ø300 NS ROOF NOZZLE
# FOR PRESSURE VACUUM VENT
# AS PER ECN NO. 1

## MARK: M1622
## QTY: 3
WEIGHT/SPOOL: 51 KG






| M1622 QTY | |
|---|---|
| Tank No. | QTY |
| 1 | 2 |
| 2 | 1 |
| 3 | 0 |
| 4 | 0 |
| 5 | 0 |
| 6 | 0 |
| TOTAL | 3 |

AS-BUILT
BY Inukshuk Construction Ltd. DATE 2017/10/02


Permit Number: P471

| REVISION HISTORY | | |
|---|---|---|
| REV | DESCRIPTION | DATE |
| 3 | THIS SHEET ADDED AS PER ECN-001 | 7/7/2017 |

| | | |
|---|---|---|
| DRAWN Jacob Saunders | 4/13/2017 | AEM Meliadine Fuel Storage Tanks |
| CHECKED | | |
| QA | | TITLE M1622 - 300NS ROOF NOZZLE |
| MFG | | |
| APPROVED | | SIZE A3 \| DWG NO 295-M16 \| REV 3 |
| | | SCALE \| SHEET 22 OF 22 |

| Parts List | | | | |
|---|---|---|---|---|
| ITEM | ITEM QTY | CUT (MM) | DESCRIPTION | MATERIAL |
| 1 | 1 | 152 | L100X100X10 [4"X4"X3/8"] | G40.21M 350W |
| 2 | 1 | 152 | FB150X6 [6"X1/4"] | G40.21M 300W |
| 3 | 1 | 305 | 50NS [2"] PIPE SCH. 40 | A53 ERW |

wsp

SHOP DRAWING
DATA SHEET

*Affixing this stamp confirms that an administrative approval and/or a verification of compliance with shop drawings or specifications was made, but does not entail the liability of the author of the work or its owner with regards to this shop drawing or data sheet, for which the contractor is the sole responsible.*

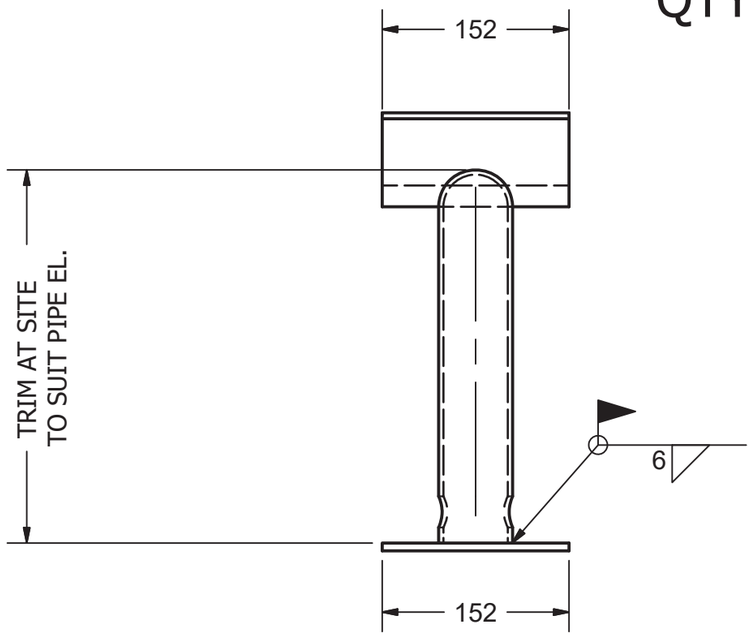
☑ Reviewed ☐ Reviewed as noted
☐ Rejected ☐ Filed for records

*The contractor, supplier and/or sub-contractor is responsible for: comfirming and coordinating all quantities and dimensions; selecting fabrication processes and techniques of construction; coordinating his or her work with that of all other trades and performing all work in a safe and satisfactory manner.*

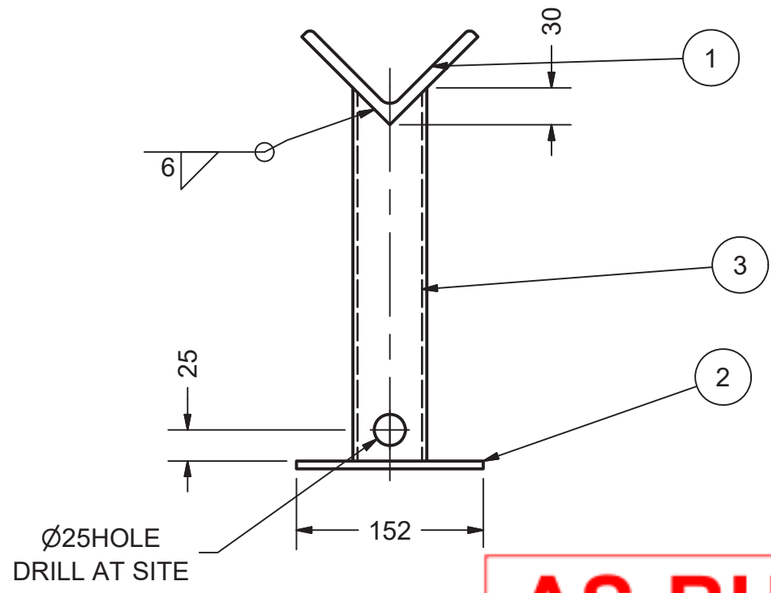
By: J. morliere Date: 2017/07/14

Project #: 151-06440-40

# PIPE SUPPORT TYPE 1
# MARK: M17101
# QTY: 72




PIPE SUPPORT
SCALE 1/5



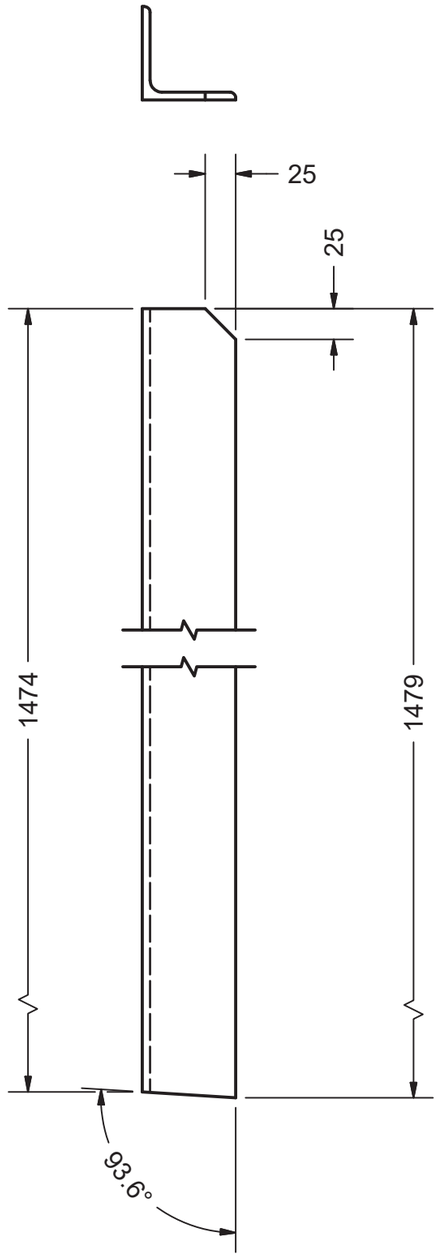

| QTY PER TANK | |
|---|---|
| Tank No. | QTY |
| 1 | 20 |
| 2 | 16 |
| 3 | 12 |
| 4 | 12 |
| 5 | 6 |
| 6 | 6 |
| TOTAL | 72 |

**AS-BUILT**
BY Inukshuk Construction Ltd. DATE 2017/10/02

ASSOCIATION OF PROFESSIONAL ENGINEERS G.G. BROWN LICENSEE NT/NU
16-Jul-2017
**Permit Number: P471**

NOTE:
ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE NOTED

| | | | |
|---|---|---|---|
| DRAWN Jacob Saunders | 4/13/2017 | PIPE SUPPORT | |
| CHECKED | | TITLE MISC. SUPPORTS AND BRACKETS | |
| QA | | | |
| MFG | | | |
| APPROVED | | SIZE A3 | DWG NO 295-M17 / REV 2 |
| | | SCALE | SHEET 1 OF 5 |




| QTY PER TANK | |
|---|---|
| Tank No. | QTY |
| 1 | 93 |
| 2 | 77 |
| 3 | 41 |
| 4 | 53 |
| 5 | 21 |
| 6 | 21 |
| TOTAL | 306 |

ROOF HANDRAIL POST
MARK M17201
QTY: 310
L76x76X6 [L3"X3"X1/4"] G40.21M 350W
SCALE 1/5

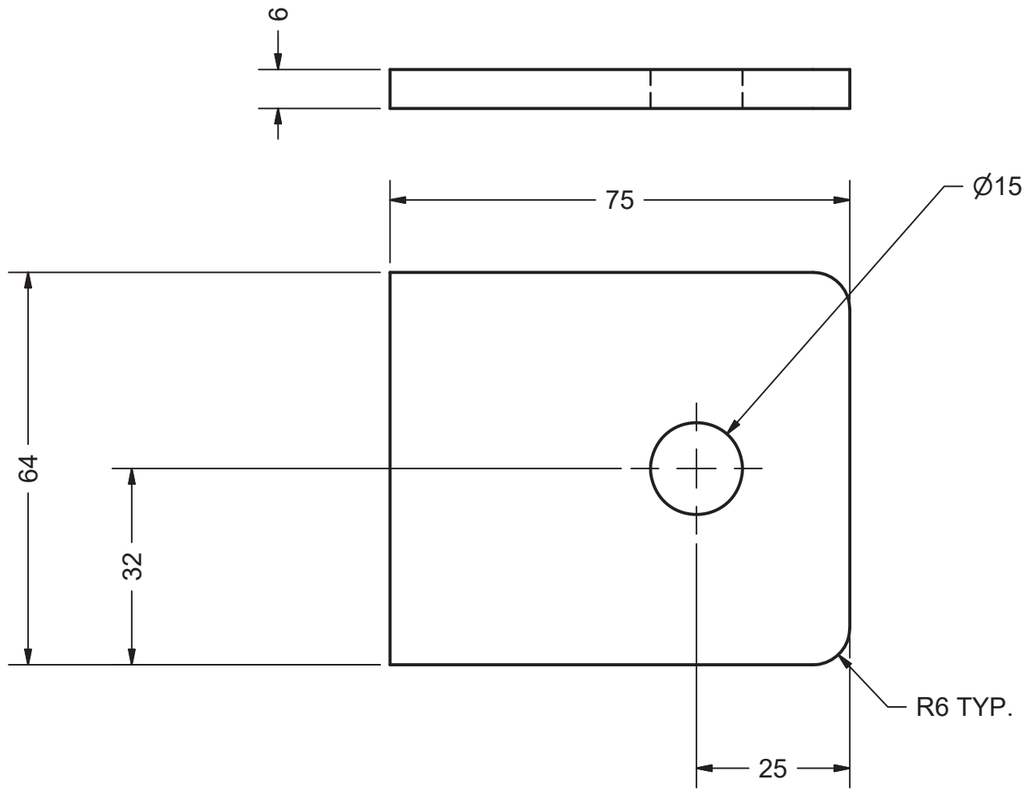
1

AS-BUILT
BY Inukshuk Construction Ltd. DATE 2017/10/02


Permit Number: P471

| REVISION HISTORY | | |
|---|---|---|
| REV | DESCRIPTION | DATE |
| 1 | ANGLE SIZE CHG TO 76X76X6 (3"X3"X1/4") | 4/27/2017 |

| | | |
|---|---|---|
| DRAWN Jacob Saunders | 4/13/2017 | ROOF TOP HANDRAIL POST |
| CHECKED | | |
| QA | | TITLE |
| MFG | | MISC. SUPPORTS AND BRACKETS |
| APPROVED | | |
| | | SIZE A3 / DWG NO 295-M17 / REV 2 |
| | | SCALE / SHEET 2 OF 5 |




| QTY PER TANK | |
|---|---|
| Tank No. | QTY |
| 1 | 8 |
| 2 | 8 |
| 3 | 6 |
| 4 | 6 |
| 5 | 4 |
| 6 | 4 |
| TOTAL | 36 |

GROUNDING LUG
MARK M17301
QTY: 36
FB 75X6 [3"X1/4"]
STAINLESS STEEL 316
SCALE 1 : 1

**AS-BUILT**
BY Inukshuk Construction Ltd. DATE 2017/10/02

REGISTERED PROFESSIONAL ENGINEER
J.C. BROWN
LICENSEE
NT/NU
16-Jul-2017
**Permit Number: P471**

| | | | |
|---|---|---|---|
| DRAWN Jacob Saunders | 4/13/2017 | GROUNDING LUG | |
| CHECKED | | | |
| QA | | TITLE | |
| MFG | | MISC. SUPPORTS AND BRACKETS | |
| APPROVED | | | |
| | | SIZE A3 | DWG NO 295-M17 / REV 2 |
| | | SCALE | SHEET 3 OF 5 |

| CUT LIST | | | | | UNIT QTY PER TANK | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| MARK | QTY | CUT MM | DESCRIPTION | MATERIAL | TK #1 | TK #2 | TK #3 | TK #4 | TK #5 | TK #6 |
| M17401 | 6 | 400 | L100X100X6 [L4"X4"X1/4"] TEMPERATOR SENSOR | G40.21M 350W | 1 | 1 | 1 | 1 | 1 | 1 |
| M17402 | 45 | 400 | L75X75X6 [L3"X3"X1/4"] PIPING & ELECTRICAL BRACKET | G40.21M 350W | 14 | 14 | 6 | 7 | 2 | 2 |

AS-BUILT

BY Inukshuk Construction Ltd. DATE 2017/10/02

ASSOCIATION OF PROFESSIONAL ENGINEERS K.C. BROWN LICENSEE NT/NU

16-Jul-2017

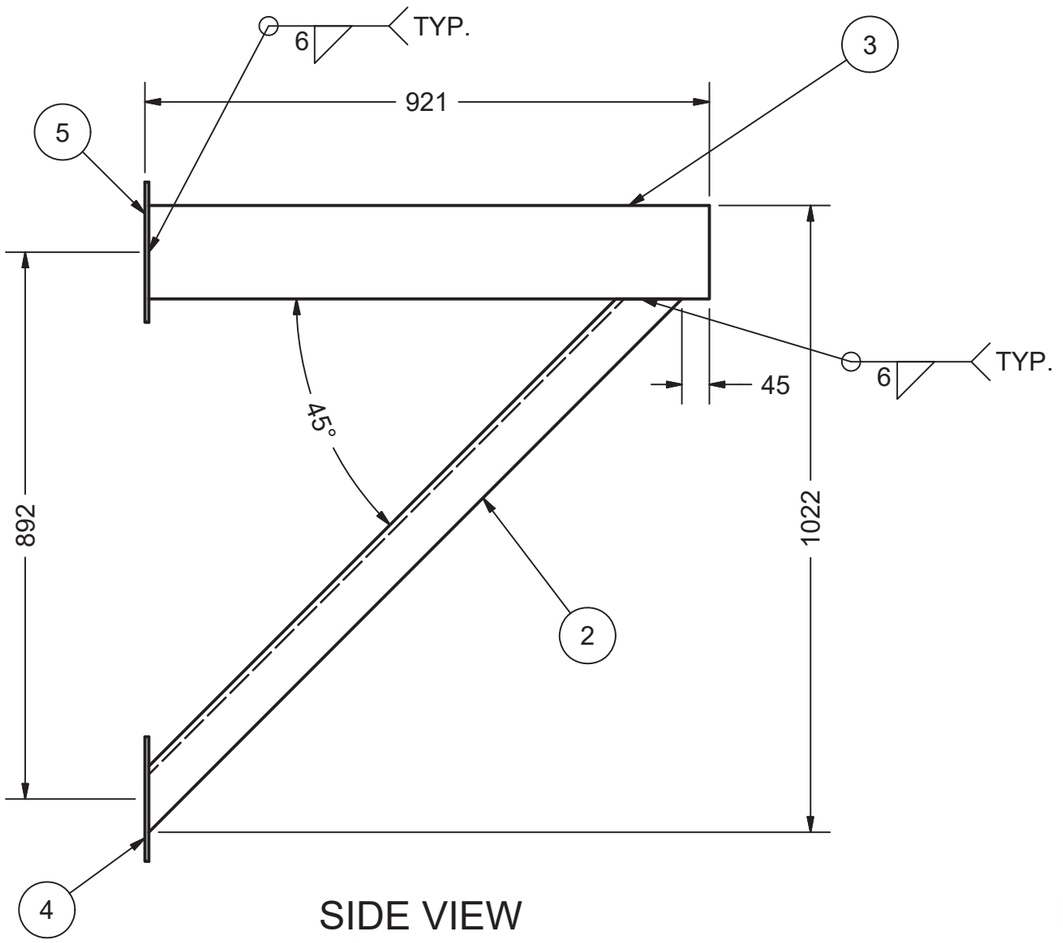
Permit Number: P471

| | | | |
|---|---|---|---|
| DRAWN Jacob Saunders | 4/13/2017 | MISC BRACKETS | |
| CHECKED | | | |
| QA | | TITLE | |
| MFG | | MISC. SUPPORTS AND BRACKETS | |
| APPROVED | | | |
| | | SIZE A3 | DWG NO 295-M17 / REV 2 |
| | | SCALE | SHEET 4 OF 5 |

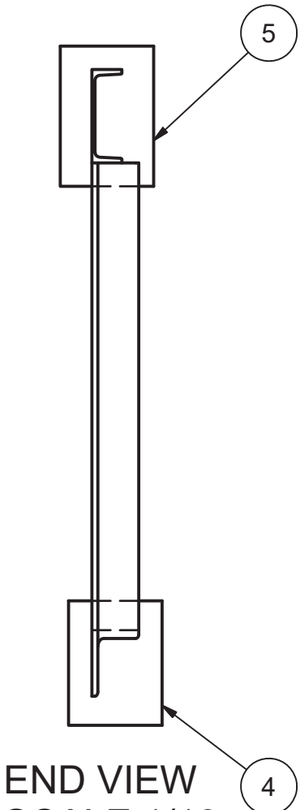
Parts List

| ITEM | ITEM QTY | CUT (MM) | PART NUMBER | DESCRIPTION | STOCK NUMBER | MATERIAL |
|---|---|---|---|---|---|---|
| 2 | 1 | 1230 | AISC - L 3 x 3 x 3/8 - 48.426 | Angle Steel | L 3 x 3 x 3/8 | G40.21 350w |
| 3 | 1 | 914 | AISC - C 6 x 8.2 - 36 | U-Shape | C 6 x 8.2 | G40.21 350w |
| 4 | 1 | 203 | AISC - 6x1/4 - 8 | Flat Bar Steel | 6x1/4 | G40.21 350w |
| 5 | 1 | 229 | AISC - 6x1/4 - 9 | Flat Bar Steel | 6x1/4 | G40.21 350w |

TOP VIEW
SCALE 1/10




SIDE VIEW
SCALE 1/10




END VIEW
SCALE 1/10

# PIPE SUPPORT FOR 400NS
# VENT SUPPORT FOR TANK NO. 1 & 2
# MARK: M17501
# QTY: 4
# 2 AS SHOWN
# 2 MIRROR

FINISH: SHOP SANDBLAST

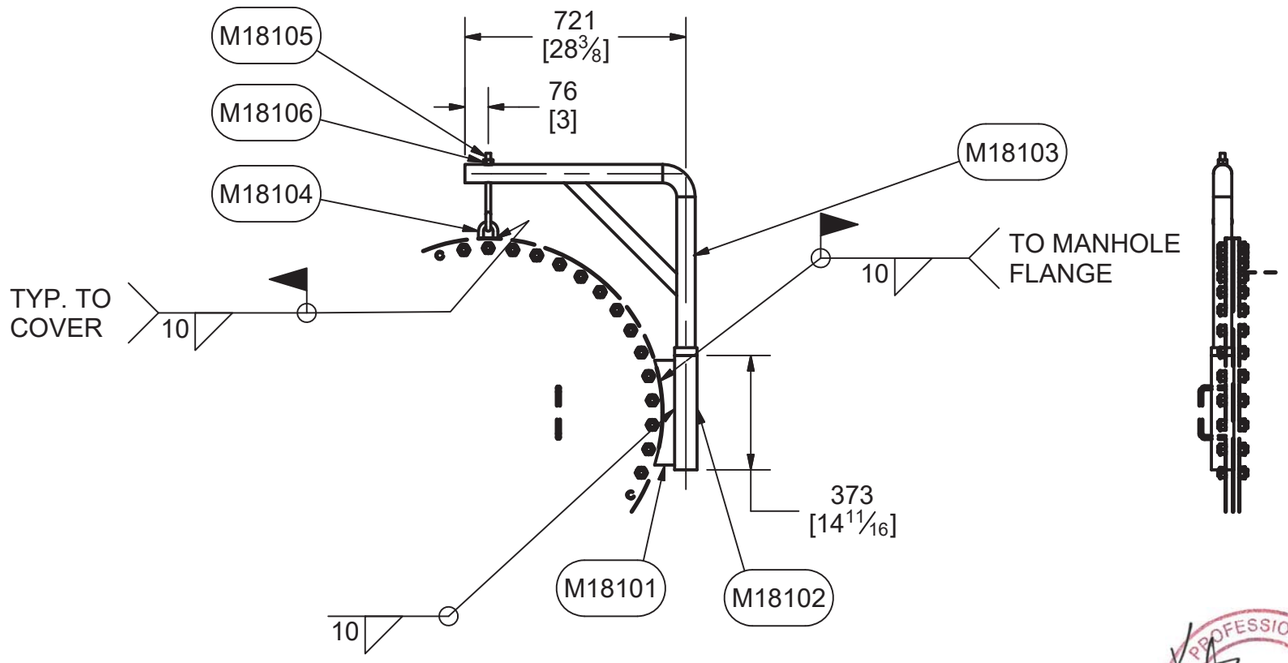
**AS-BUILT**
BY Inukshuk Construction Ltd. DATE 2017/10/02


**Permit Number: P471**

| REVISION HISTORY | | |
|---|---|---|
| REV | DESCRIPTION | DATE |
| 2 | THIS SHEET ADDED | 7/7/2017 |

| | | |
|---|---|---|
| DRAWN Jacob Saunders | 4/13/2017 | |
| CHECKED | | |
| QA | | TITLE: MISC. SUPPORTS AND BRACKETS |
| MFG | | |
| APPROVED | | |
| SIZE A3 | DWG NO 295-M17 | REV 2 |
| SCALE | | SHEET 5 OF 5 |

| PARTS LIST FOR ONE (1) ASSY, SIXTEEN (16) REQUIRED | | | | |
|---|---|---|---|---|
| ITEM | ITEM QTY | CUT (MM) | DESCRIPTION | MATERIAL |
| M18101 | 1 | 341 | 5/8"THK X 66 WIDE PLATE, SEE DETAIL | G40.21M 300W |
| M18102 | 1 | 373 | 2 1/2" STD PIPE | A53 |
| M18103 | 1 | | DAVIT ARM, SEE DETAIL | |
| M18104 | 1 | 198 | 16 [5/8"] DIA LG SEE DETAIL | Steel |
| M18105 | 1 | | EYE-BOLT 5/8"DIA X 12" LG CROSBY G291 | FORGED STEEL |
| M18106 | 2 | | 5/8"-11UNC Hex Nuts (Inch Series) Heavy Hex Nut | A194 GR4 |
| | | | | |

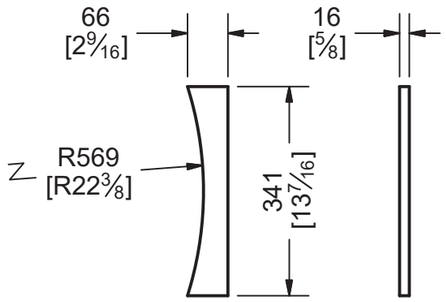



DAVIT ASSEMBLY
QTY: 16
SCALE 1/20

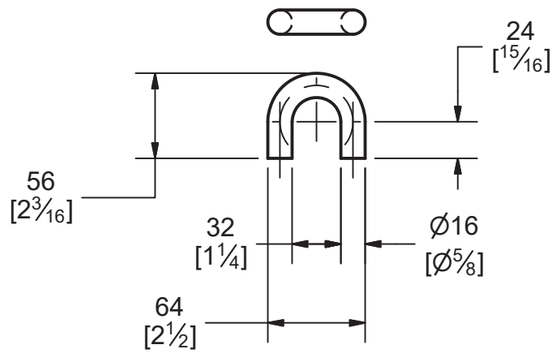
AS-BUILT
BY Inukshuk Construction Ltd. DATE 2017/10/02

REGISTERED PROFESSIONAL ENGINEER
G. G. BROWN
LICENSEE
NT/NU
04-May-2017

Permit Number: P471

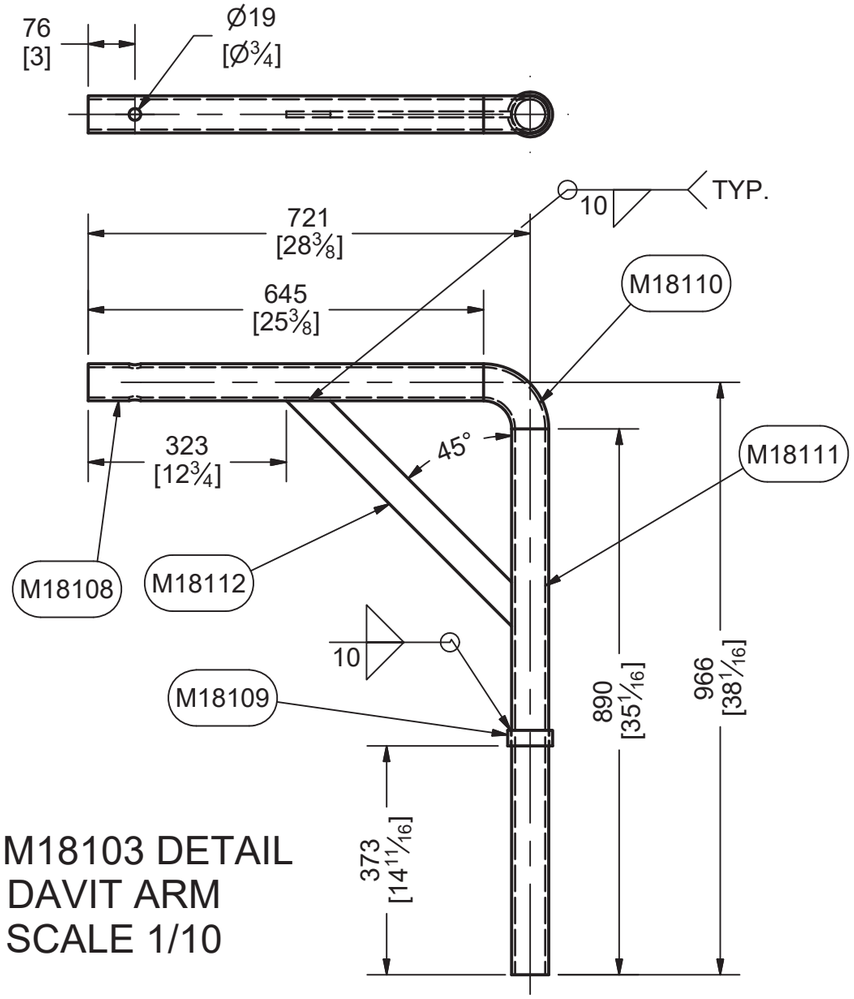



Pc M18101 DETAIL
SCALE 1/10




Pc M18104 DETAIL
SCALE 1/4

| PARTS LIST FOR ONE (1) DAVIT ARM, SIXTEEN (16) REQ'D | | | | |
|---|---|---|---|---|
| ITEM | ITEM QTY | CUT (MM) | DESCRIPTION | MATERIAL |
| M18108 | 1 | 645 | 2"NS XXH PIPE | A53 |
| M18109 | 1 | 25 | 2 1/2"NS STD PIPE | A53 |
| M18110 | 1 | | 2"NS XXH ELBOW BW 90DEG L.R. | A234 |
| M18111 | 1 | 890 | 2"NS XXH PIPE | A53 |
| M18112 | 1 | 520 | FB10X50 [3/8"X2"] | G40.21M 300W |



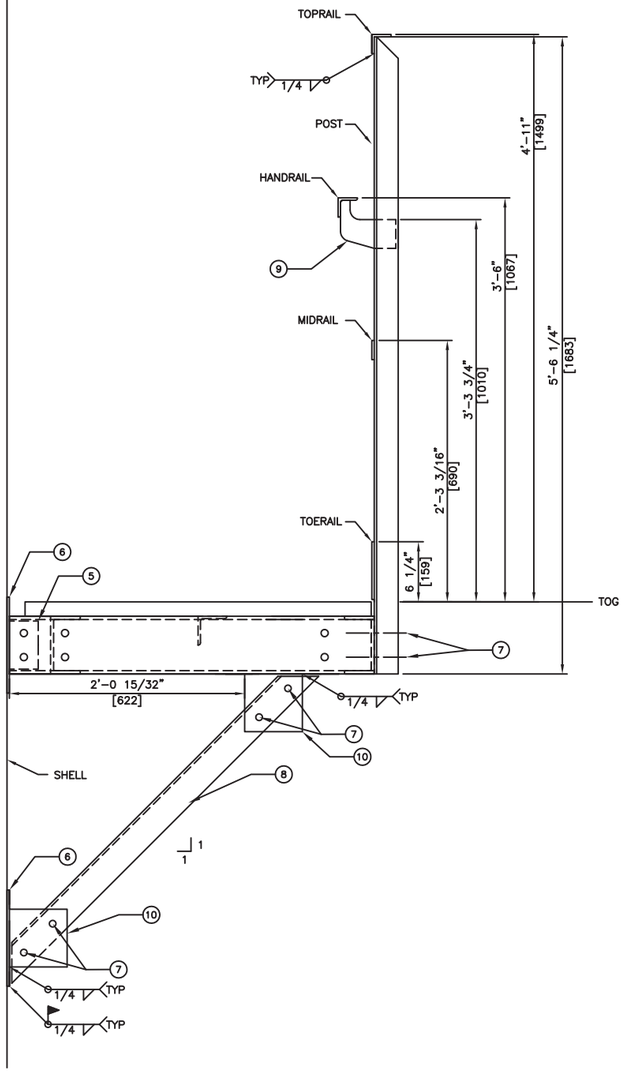

Pc. M18103 DETAIL
DAVIT ARM
SCALE 1/10

| | | | |
|---|---|---|---|
| DRAWN MARC LOSIER | 4/13/2017 | 900MM [36"] NS FOR TK1, 2, 3, 4 | |
| CHECKED | | | |
| QA | | TITLE | |
| MFG | | MANHOLE COVER DAVIT | |
| APPROVED | | | |
| | | SIZE A3 | DWG NO 295-M18 / REV |
| | | SCALE | SHEET 1 OF 1 |

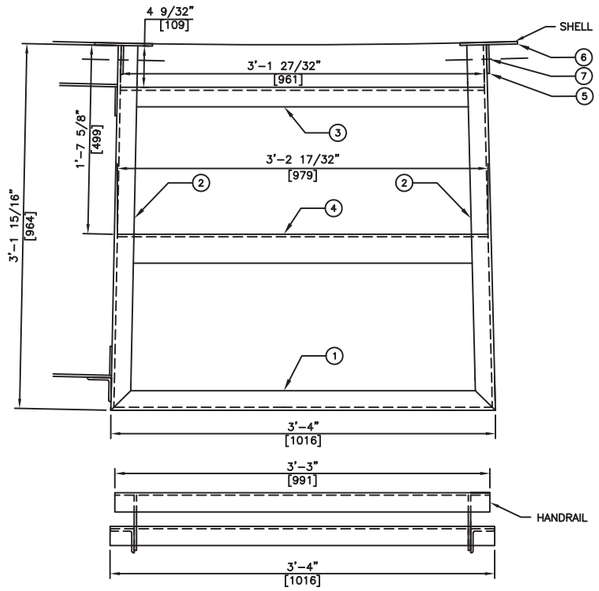
## BILL OF MATERIALS

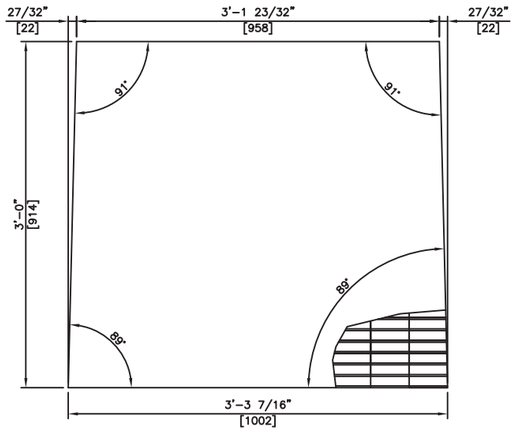
| MARK | QTY. | DESCRIPTION | MATERIAL | MTR | WT #'s |
|---|---|---|---|---|---|
| 1 | 1 | C6⓪10.5# x 3'-4" LG (CBE) | G40.21-300W | C | – |
| 2 | 2 | C6⓪10.5# x 3'-1 15/16" LG (COE/POE) | G40.21-300W | C | – |
| 3 | 1 | C6⓪10.5# x 3'-1 27/32" LG (CBE) | G40.21-300W | C | – |
| 4 | 1 | 3/8" x 3" x 3" ANGLE x 3'-2 17/32" LG (CBE) | G40.21-300W | C | – |
| 5 | 2 | 3/8" THK x 3" x 5" | G40.21-260W | C | – |
| 6 | 4 | 1/4" THK x 6" x 10" c/w 2" RADIUS CORNERS | G40.21-260W | C | – |
| 7 | 16 | 5/8"⓪ x 1 3/4" LG HEX HD BOLT c/w (1) NUT & | A325 GALV | C | – |
| | | LOCK WASHER AND (2) FLAT WASHERS | | | |
| 8 | 2 | 3/8" x 3" x 3" ANGLE x 3'-9 1/8" LG (CBE) | G40.21-300W | C | – |
| 9 | 2 | 1/4" THK x 5" x 5 3/4" SEE DETAIL | G40.21-260W | C | – |
| 10 | 4 | 1/4" THK x 6" x 6" | G40.21-260W | C | – |

BILLING FOR ONE TANK SHOWN, THREE (3) REQUIRED

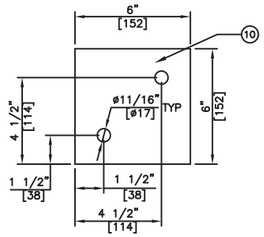


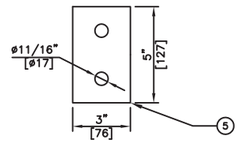

PLATFORM ELEVATION DETAIL

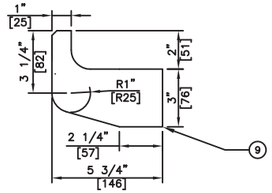


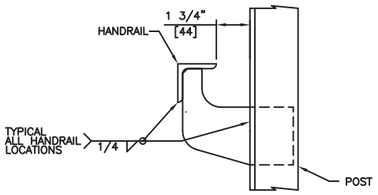



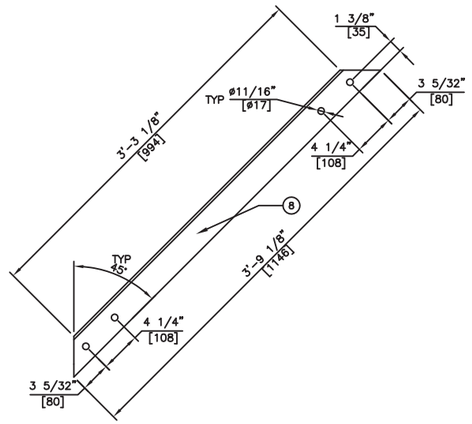

GRATING DETAIL




TYPICAL HANDRAIL/POST DETAIL

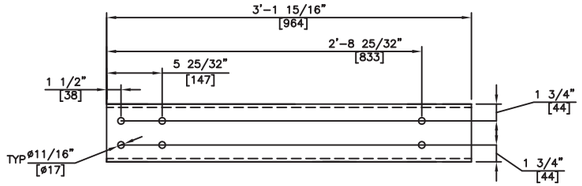
### TYPICAL HANDRAIL DETAIL

TOPRAIL – 1/4" x 2" x 2" ANGLE
HANDRAIL – 1/4" x 2" x 2" ANGLE
MIDRAIL – 1/4" x 2" FLATBAR
TOERAIL – 1/4" x 6" FLATBAR
POST – 1/4" x 2 1/2" x 2 1/2" ANGLE
GRATING – 19-W-4 1 1/2" DEEP x 3/16" GALVANIZED SERRATED BAR GRATING

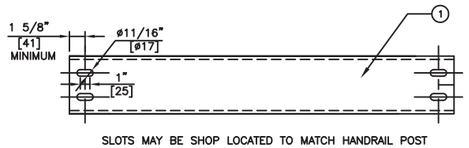
**HANDRAIL LOCATED ON OUTSIDE ONLY – BOLTED TO PLATFORM

**ALL GRATING TO BE SECURED TO PLATFORM FRAME USING SADDLE CLIPS (BOLTED).

PLATFORM IS CAPABLE OF SUPPORTING A MOVING CONCENTRATED LOAD OF 1000LBS, AND HANDRAIL LOAD OF 200LBS IN ANY DIRECTION.




MARK 2 – RIGHT HAND SHOWN
LEFT HAND OPPOSITE




SLOTS MAY BE SHOP LOCATED TO MATCH HANDRAIL POST

**AS-BUILT**
BY Inukshuk Construction Ltd. DATE 2017/10/02

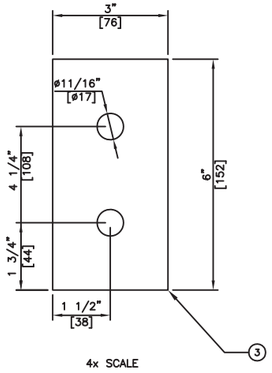
APPROVED PROFESSIONAL ENGINEER K.G. BROWN LICENSEE NT/NU
30-Sep-2017

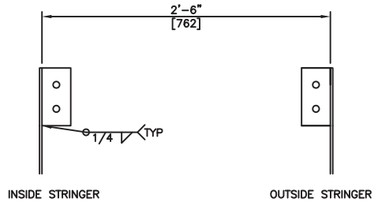
| REV. | DATE | DRWN. | APP'D. | DESCRIPTION |
|---|---|---|---|---|
| 0 | 5-MAY-17 | ME | KB | ISSUED FOR CONSTRUCTION |
| A | 17-APR-17 | ME | KB | ISSUED FOR APPROVAL |

REVISIONS

*SUB-ARC SYSTEMS INC.*

CUSTOMER: AGNICO EAGLE MINES LIMITED – MELIADINE PROJECT
TITLE: MID PLATFORM DETAIL
PROJECT NO.: 6515
LOCATION: RANKIN INLET, NUNAVUT
TANK NO.: TANK TAG: TK #2
SCALE: 3/4" = 1'-0"
W.O.: 17-03
DATE: 17-APR-17
DRWG. No.: 17-03-2-001
Rev.: 0



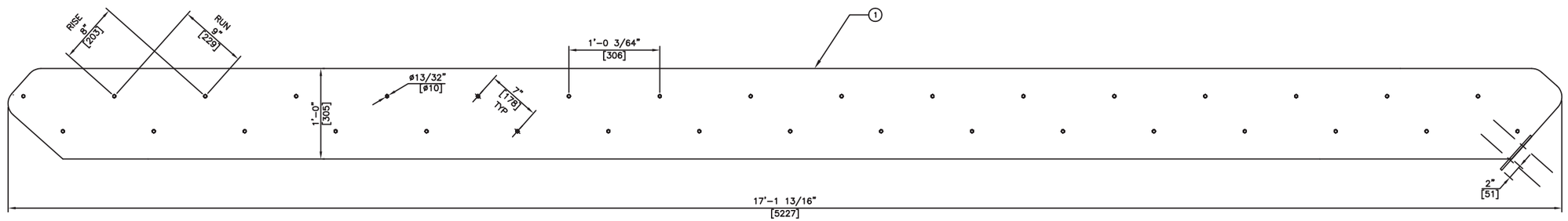




STRINGER CLIP TO PLATFORM

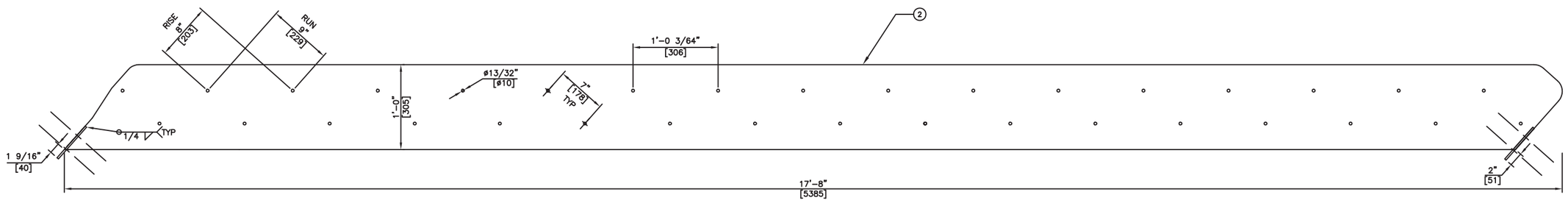
## BILL OF MATERIALS

| MARK | QTY. | DESCRIPTION | MATERIAL | MTR | WT #'s |
|---|---|---|---|---|---|
| 1 | 1 | 1/4" THK x 12" x 17'-1 13/16" LG SEE DETAIL | G40.21-260W | C | – |
| 2 | 3 | 1/4" THK x 12" x 17'-8" LG SEE DETAIL | G40.21-260W | C | – |
| 3 | 14 | 1/4" THK x 3" x 6" | G40.21-260W | C | – |
| 4 | 28 | 5/8"ø x 1 3/4" LG HEX HD BOLT c/w (1) NUT & | A325 GALV | C | – |
| | | LOCK WASHER AND (2) FLAT WASHERS | | | |

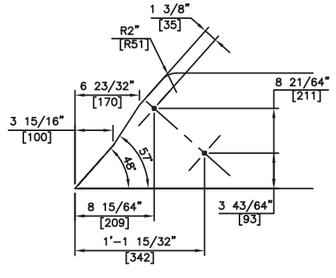
BILLING FOR ONE TANK SHOWN, ONE REQUIRED



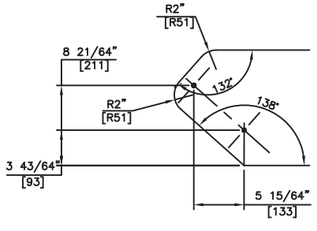

INSIDE BOTTOM STRINGER



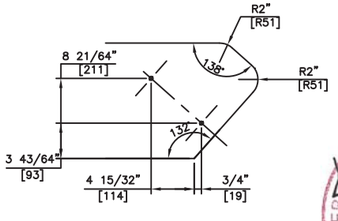

INSIDE STRINGER – THREE SECTIONS REQUIRED




BOTTOM @ PLATFORM




BOTTOM




TOP

**AS-BUILT**

BY Inukshuk Construction Ltd. DATE 2017/10/02

NOTE: MARK 3 IS PLACED SAME SIDE AS STAIR.


| REV. | DATE | DRWN. | APP'D. | DESCRIPTION |
|---|---|---|---|---|
| 0 | 5-MAY-17 | ME | KB | ISSUED FOR CONSTRUCTION |
| A | 17-APR-17 | ME | KB | ISSUED FOR APPROVAL |

REVISIONS

*SUB-ARC SYSTEMS INC.*

CUSTOMER: AGNICO EAGLE MINES LIMITED – MELIADINE PROJECT

TITLE: INSIDE STRINGER DETAIL

PROJECT NO.: 6515

LOCATION: RANKIN INLET, NUNAVUT

TANK NO.: TANK TAG: TK #2

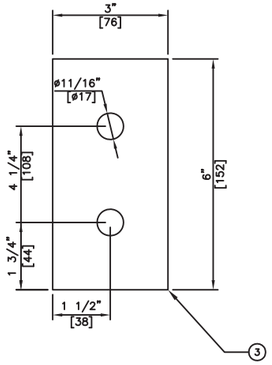
SCALE: 3/4" = 1'-0"

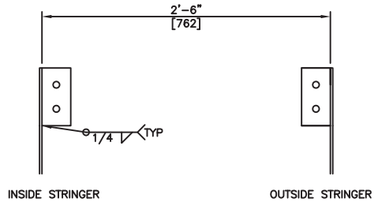
W.O.: 17-03

DRWG. No.: 17-03-2-002

Rev.: 0

DATE: 17-APR-17



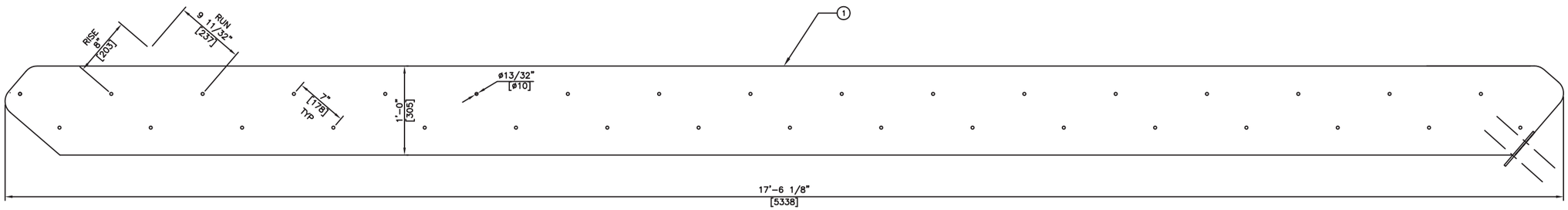




STRINGER CLIP TO PLATFORM

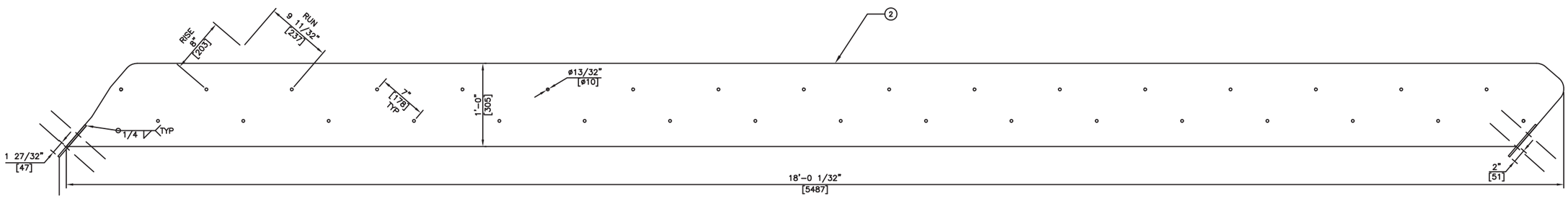
## BILL OF MATERIALS

| MARK | QTY. | DESCRIPTION | MATERIAL | MTR | WT #'s |
|---|---|---|---|---|---|
| 1 | 1 | 1/4" THK x 12" x 17'-5 5/8" LG SEE DETAIL | G40.21-260W | C | – |
| 2 | 3 | 1/4" THK x 12" x 17'-11 17/32" LG SEE DETAIL | G40.21-260W | C | – |
| 3 | 14 | 1/4" THK x 3" x 6" | G40.21-260W | C | – |
| 4 | 28 | 5/8"ø x 1 3/4" LG HEX HD BOLT c/w (1) NUT & | A325 GALV | C | – |
| | | SERRATED BAR GRATING c/w CHECKER PLATE NOSE | | | |
| 5 | 68 | STAIR TREAD 9 3/4" WIDE x 30" LG x 1 1/2" x 3/16" | G40.21-260W | C | – |
| | | SERRATED c/w CHECKER PLATE NOSE | | | |
| 6 | 272 | 3/8"ø x 1 1/2" LG HEX HD BOLT c/w (1) NUT & | A325 GALV | C | – |
| | | LOCK WASHER AND (2) FLAT WASHERS | | | |

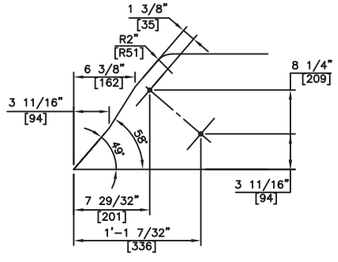
BILLING FOR ONE TANK SHOWN, ONE REQUIRED



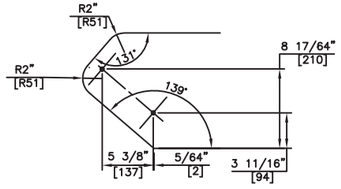

OUTSIDE BOTTOM STRINGER



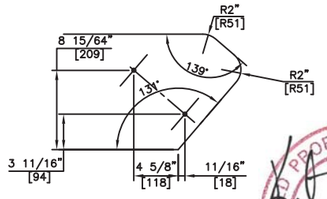

OUTSIDE STRINGER – THREE SECTIONS REQUIRED




BOTTOM @ PLATFORM




BOTTOM




TOP

**AS-BUILT**

BY Inukshuk Construction Ltd. DATE 2017/10/02

NOTE: MARK 3 IS PLACED SAME SIDE AS STAIR.


| REV. | DATE | DRWN. | APP'D. | DESCRIPTION |
|---|---|---|---|---|
| 0 | 5-MAY-17 | ME | KB | ISSUED FOR CONSTRUCTION |
| A | 17-APR-17 | ME | KB | ISSUED FOR APPROVAL |

REVISIONS

SUB-ARC SYSTEMS INC.

CUSTOMER: AGNICO EAGLE MINES LIMITED – MELIADINE PROJECT

TITLE: OUTSIDE STRINGER DETAIL

PROJECT NO.: 6515

LOCATION: RANKIN INLET, NUNAVUT

TANK NO.: TANK TAG: TK #2

SCALE: 3/4" = 1'-0"

W.O.: 17-03

DRWG. No.: 17-03-2-003

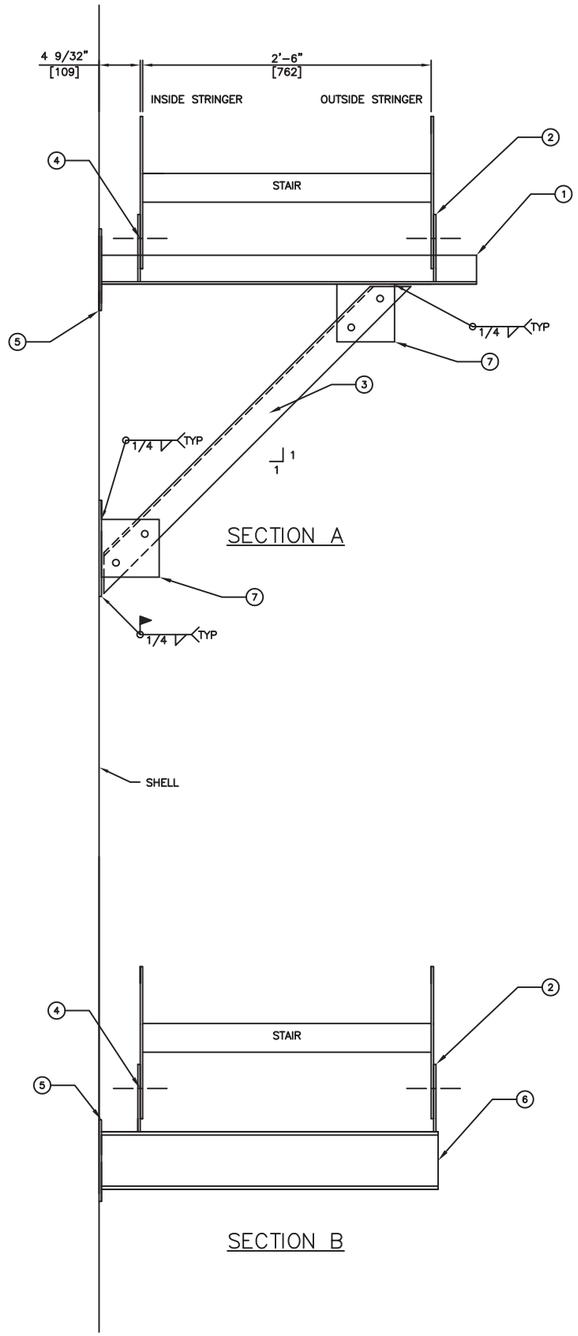
Rev.: 0

DATE: 17-APR-17

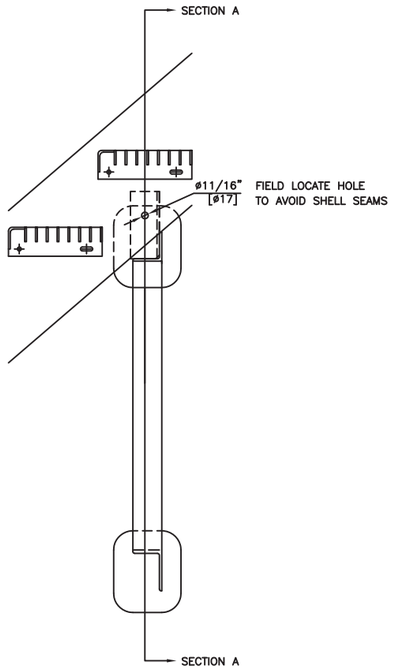
## BILL OF MATERIALS

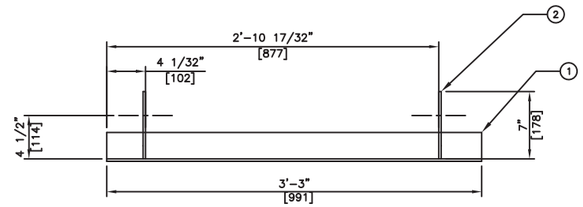
| MARK | QTY. | DESCRIPTION | MATERIAL | MTR | WT #'s |
|---|---|---|---|---|---|
| 1 | 8 | 3/8" x 3" x 3" ANGLE x 3'-3" LG (PBE) | G40.21-300W | C | – |
| 2 | 18 | 1/4" THK x 2 5/8" x 7" LG | G40.21-260W | C | – |
| 3 | 8 | 3/8" x 3" x 3" ANGLE x 3'-9 1/8" LG | G40.21-300W | C | – |
| 4 | 50 | 5/8"ø x 1 3/4" LG HEX HD BOLT c/w (1) NUT & | A325 GALV | C | – |
| | | LOCK WASHER AND (2) FLAT WASHERS | | | |
| 5 | 17 | 1/4" THK x 6" x 10" c/w 2" RADIUS CORNERS | G40.21-260W | C | – |
| 6 | 1 | C6⊕10.5# x 2'-11" LG | G40.21-300W | C | – |
| 7 | 16 | 1/4" THK x 6" x 6" | G40.21-260W | C | – |

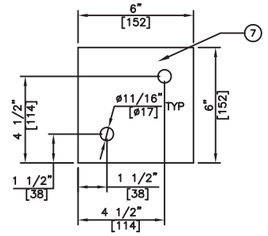
BILLING FOR ONE TANK SHOWN, ONE REQUIRED

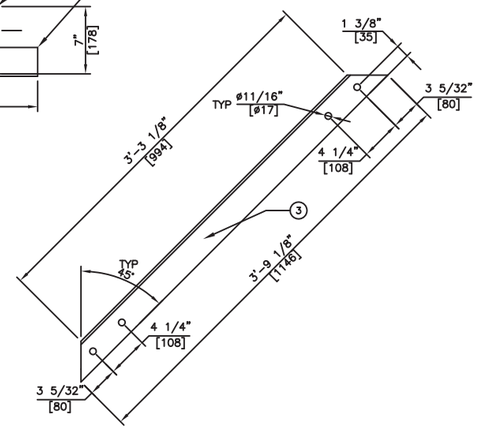



SECTION A



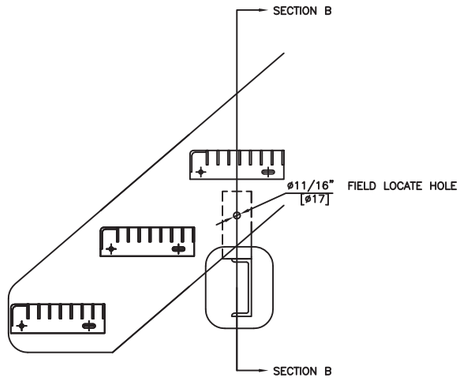



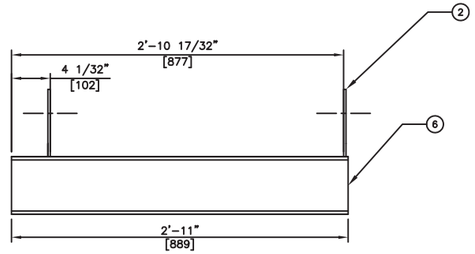







SECTION B




CHANNEL SUPPORT IS FOR BOTTOM OF STAIRS ONLY.

**AS-BUILT**

BY Inukshuk Construction Ltd. DATE 2017/10/02

NOTE: MAXIMUM SUPPORT SPACING IS EVERY 7 STAIRS.

REGISTERED PROFESSIONAL ENGINEER
G. BROWN
LICENSEE
NT/NU
30-Sep-2017

| REV. | DATE | DRWN. | APP'D. | DESCRIPTION |
|---|---|---|---|---|
| 0 | 5-MAY-17 | ME | KB | ISSUED FOR CONSTRUCTION |
| A | 17-APR-17 | ME | KB | ISSUED FOR APPROVAL |

REVISIONS

SUB-ARC SYSTEMS INC.

CUSTOMER: AGNICO EAGLE MINES LIMITED – MELIADINE PROJECT

TITLE: STAIR STRINGER SUPPORTS

PROJECT NO.: 6515

LOCATION: RANKIN INLET, NUNAVUT

TANK NO.: TANK TAG: TK #2

SCALE: 3/4" = 1'-0"

W.O.: 17-03

DATE: 17-APR-17

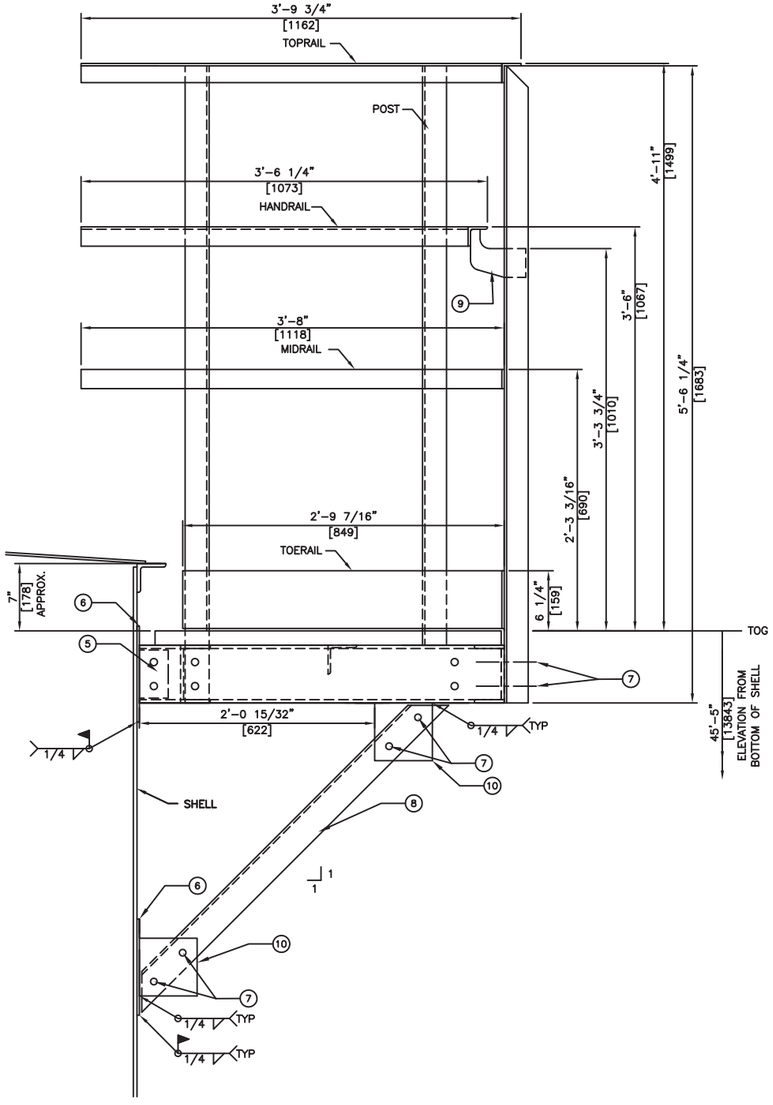
DRWG. No.: 17-03-2-004

Rev.: 0

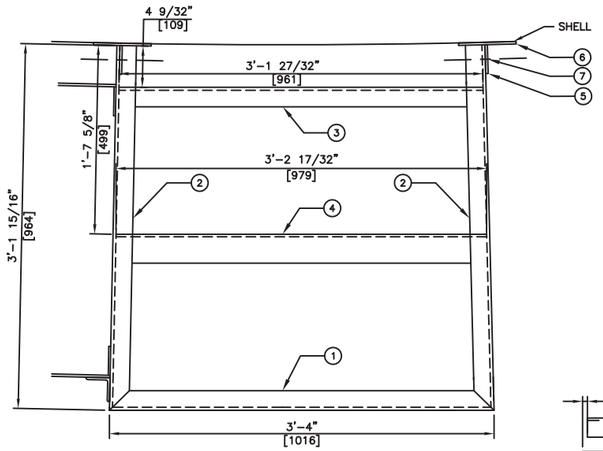
## BILL OF MATERIALS

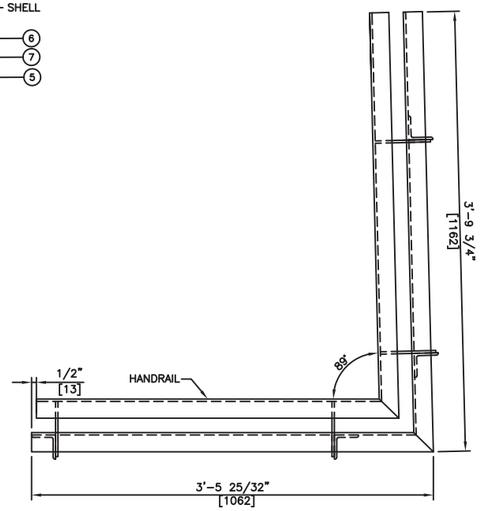
| MARK | QTY. | DESCRIPTION | MATERIAL | MTR | WT #'s |
|---|---|---|---|---|---|
| 1 | 1 | C6ⓐ10.5# x 3'-4" LG (CBE) | G40.21-300W | C | – |
| 2 | 2 | C6ⓐ10.5# x 3'-1 15/16" LG (COE/POE) | G40.21-300W | C | – |
| 3 | 1 | C6ⓐ10.5# x 3'-1 27/32" LG (CBE) | G40.21-300W | C | – |
| 4 | 1 | 3/8" x 3" x 3" ANGLE x 3'-2 17/32" LG (CBE) | G40.21-300W | C | – |
| 5 | 2 | 3/8" THK x 3" x 5" | G40.21-260W | C | – |
| 6 | 4 | 1/4" THK x 6" x 10" c/w 2" RADIUS CORNERS | G40.21-260W | C | – |
| 7 | 20 | 5/8"ø x 1 3/4" LG HEX HD BOLT c/w (1) NUT & LOCK WASHER AND (2) FLAT WASHERS | A325 GALV | C | – |
| 8 | 2 | 3/8" x 3" x 3" ANGLE x 3' – 9 1/8" LG (CBE) | G40.21-300W | C | – |
| 9 | 4 | 1/4" THK x 5" x 5 3/4" SEE DETAIL | G40.21-260W | C | – |

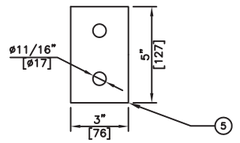
BILLING FOR ONE TANK SHOWN, ONE (1) REQUIRED

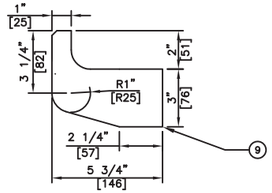


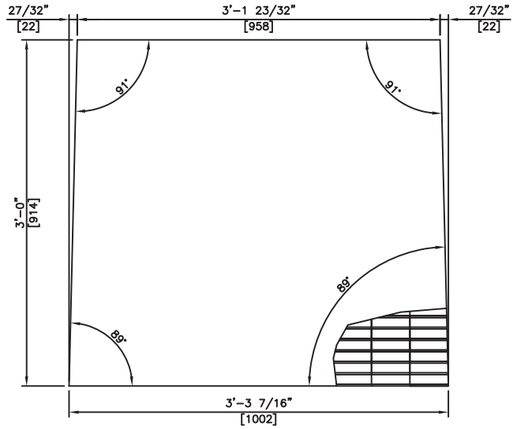

PLATFORM ELEVATION DETAIL



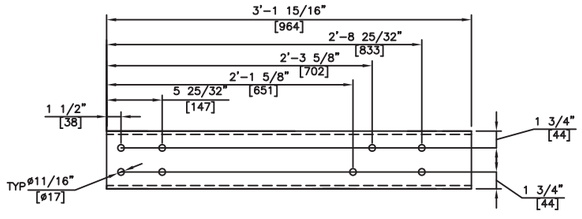



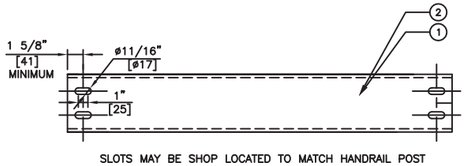



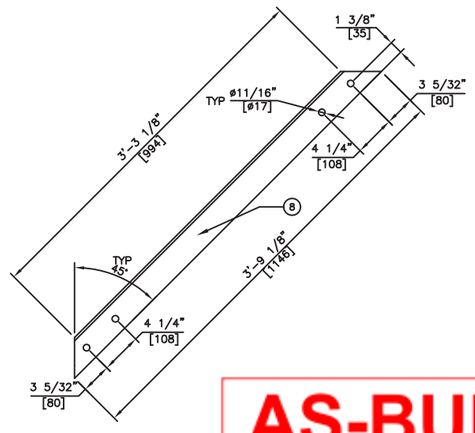

GRATING DETAIL

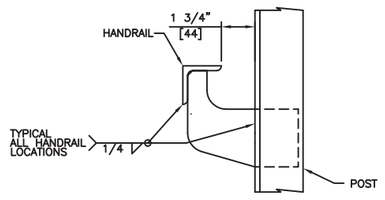



MARK 2 – RIGHT HAND SHOWN
LEFT HAND OPPOSITE




SLOTS MAY BE SHOP LOCATED TO MATCH HANDRAIL POST




## TYPICAL HANDRAIL/POST DETAIL

## TYPICAL HANDRAIL DETAIL

TOPRAIL – 1/4" x 2" x 2" ANGLE
HANDRAIL – 1/4" x 2" x 2" ANGLE
MIDRAIL – 1/4" x 2" FLATBAR
TOERAIL – 1/4" x 6" FLATBAR
POST – 1/4" x 2 1/2" x 2 1/2" ANGLE
GRATING – 19-W-4 1 1/2" DEEP x 3/16" GALVANIZED SERRATED BAR GRATING

**HANDRAIL LOCATED ON OUTSIDE ONLY – BOLTED TO PLATFORM

**ALL GRATING TO BE SECURED TO PLATFORM FRAME USING SADDLE CLIPS (BOLTED).

FIELD TO TRIM HANDRAIL OVER TANK ROOF TO MATE WITH PERIMETER HANDRAIL

PLATFORM IS CAPABLE OF SUPPORTING A MOVING CONCENTRATED LOAD OF 1000LBS, AND HANDRAIL LOAD OF 200LBS IN ANY DIRECTION.

**AS-BUILT**

BY Inukshuk Construction Ltd. DATE 2017/10/02


| REV. | DATE | DRWN. | APP'D. | DESCRIPTION |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| 0 | 5-MAY-17 | ME | KB | ISSUED FOR CONSTRUCTION |
| A | 17-APR-17 | ME | KB | ISSUED FOR APPROVAL |

REVISIONS

SUB-ARC SYSTEMS INC.

CUSTOMER: AGNICO EAGLE MINES LIMITED – MELIADINE PROJECT

TITLE: TOP PLATFORM DETAIL

PROJECT NO.: 6515

LOCATION: RANKIN INLET, NUNAVUT

TANK NO.: TANK TAG: TK #2

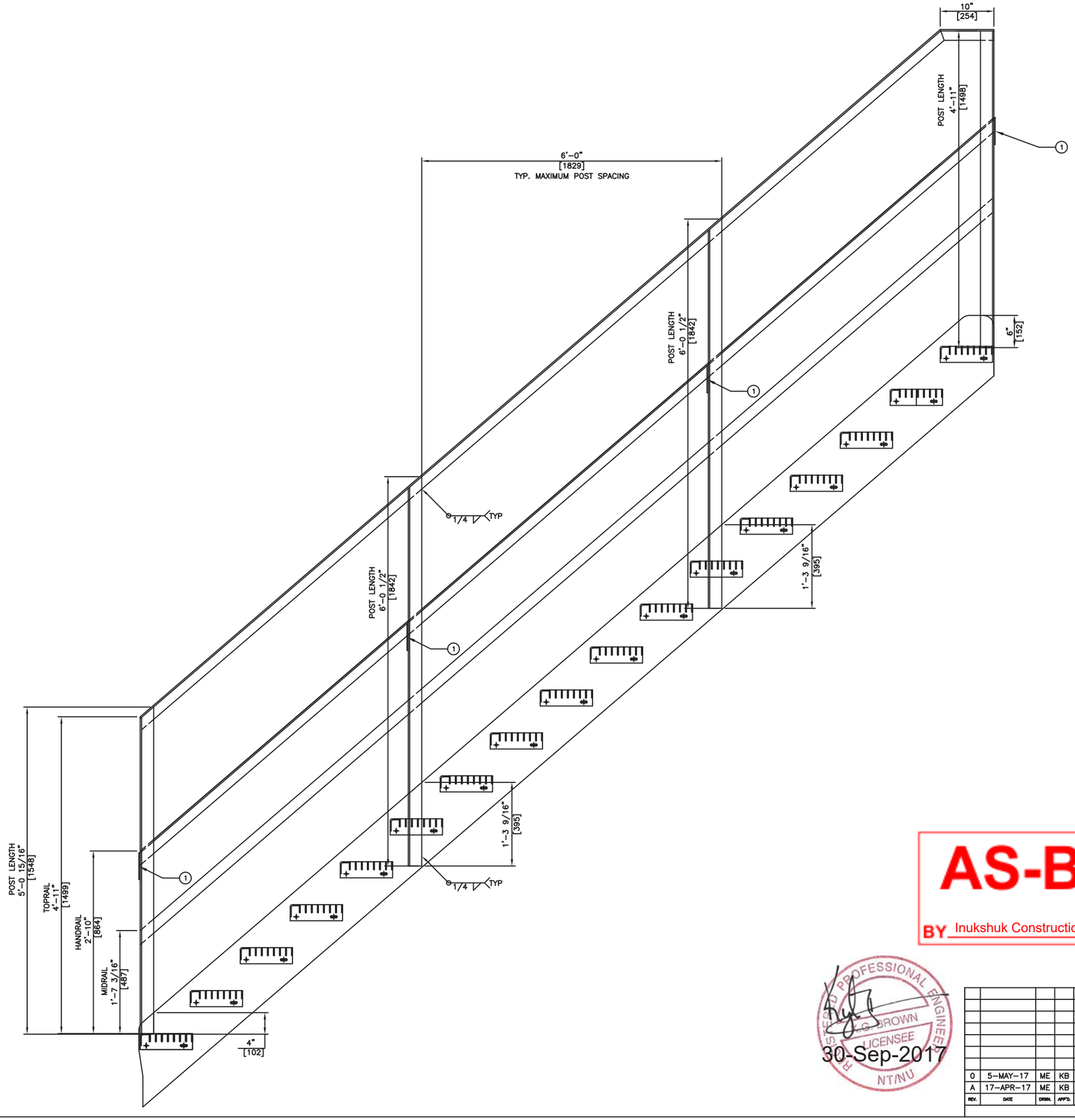
SCALE: 3/4" = 1'-0"

W.O.: 17-03

DRWG. No.: 17-03-2-005

Rev.: 0

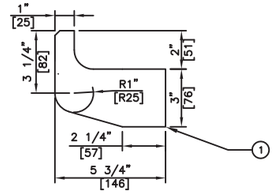
DATE: 17-APR-17

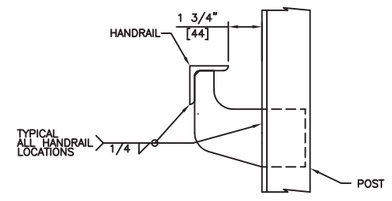



## BILL OF MATERIALS

| MARK | QTY. | DESCRIPTION | MATERIAL | MTR | WT #'s |
|---|---|---|---|---|---|
| 1 | 4 | 1/4" THK x 5" x 5 3/4" SEE DETAIL | G40.21-260W | C | – |

BILLING FOR ONE TANK SHOWN, FOUR (4) REQUIRED




TYPICAL HANDRAIL/POST DETAIL

## TYPICAL HANDRAIL DETAIL

TOPRAIL – 1/4" x 2" x 2" ANGLE
HANDRAIL – 1/4" x 2" x 2" ANGLE
MIDRAIL – 1/4" x 2" FLATBAR

POST – 1/4" x 2 1/2" x 2 1/2" ANGLE
POST SHALL BE SQUARE TO THE STAIR HOLES
1 POST AT EACH END, 2 POSTS EQUAL SPACE ON STRINGER

**HANDRAIL LOCATED ON OUTSIDE ONLY

STAIRS ARE CAPABLE OF SUPPORTING A MOVING CONCENTRATED LOAD OF 1000LBS, AND HANDRAIL LOAD OF 200LBS IN ANY DIRECTION.

**AS-BUILT**

BY Inukshuk Construction Ltd. DATE 2017/10/02

PROFESSIONAL ENGINEER
K.D. BROWN
LICENSEE
NT/NU
30-Sep-2017

| REV. | DATE | DRWN. | APP'D. | DESCRIPTION |
|---|---|---|---|---|
| 0 | 5-MAY-17 | ME | KB | ISSUED FOR CONSTRUCTION |
| A | 17-APR-17 | ME | KB | ISSUED FOR APPROVAL |

REVISIONS

SUB-ARC SYSTEMS INC.

CUSTOMER: AGNICO EAGLE MINES LIMITED – MELIADINE PROJECT

TITLE: STAIR HANDRAIL DETAIL

PROJECT NO.: 6515

LOCATION: RANKIN INLET, NUNAVUT

TANK NO.: TANK TAG: TK #2

SCALE: 3/4" = 1'-0"

W.O.: 17-03

DATE: 17-APR-17

DRWG. No.: 17-03-2-006

Rev.: 0

# APPENDIX B

## Survey Drawings of Rankin Inlet Fuel Storage and Containment Facilities

N

WASTE DUMP

SAND
1 744 M³

0-30 MM
7 073 M³

0-30 MM
LAYDOWN
1 400 M³

0-75 MM
2 025 M³

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| | | | |
|---|---|---|---|
| HAMELARPENTAGE | AGNICO EAGLE | WORK EXECUTION DATE : 2017-10-13 | EMISSION DATE : 2017-10-25 |
| | COORD. SYSTEME: UTM15 NAD83 | AS BUILT RANKIN FUEL FARM | DRAWN BY: R.CLOUATRE |
| | SCALE: 1:2000 | PLAN NO.: 131-RANKIN-FUEL-FARM-QT-171025-01 | APPROVED BY: Hamel arpentage |

N

*EXCAVATION*
*78 500 M³*

| | | | |
|---|---|---|---|
| HAMELARPENTAGE | AGNICO EAGLE | WORK EXECUTION DATE : 2017-10-13 | EMISSION DATE : 2017-10-25 |
| | COORD. SYSTEME: UTM15 NAD83 | AS BUILT EXCAVATION RANKIN FUEL FARM | DRAWN BY: R.CLOUATRE |
| | SCALE: 1:1000 | PLAN NO.: 131-RANKIN-FUEL-FARM-QT-171025-02 | APPROVED BY: Hamel arpentage |

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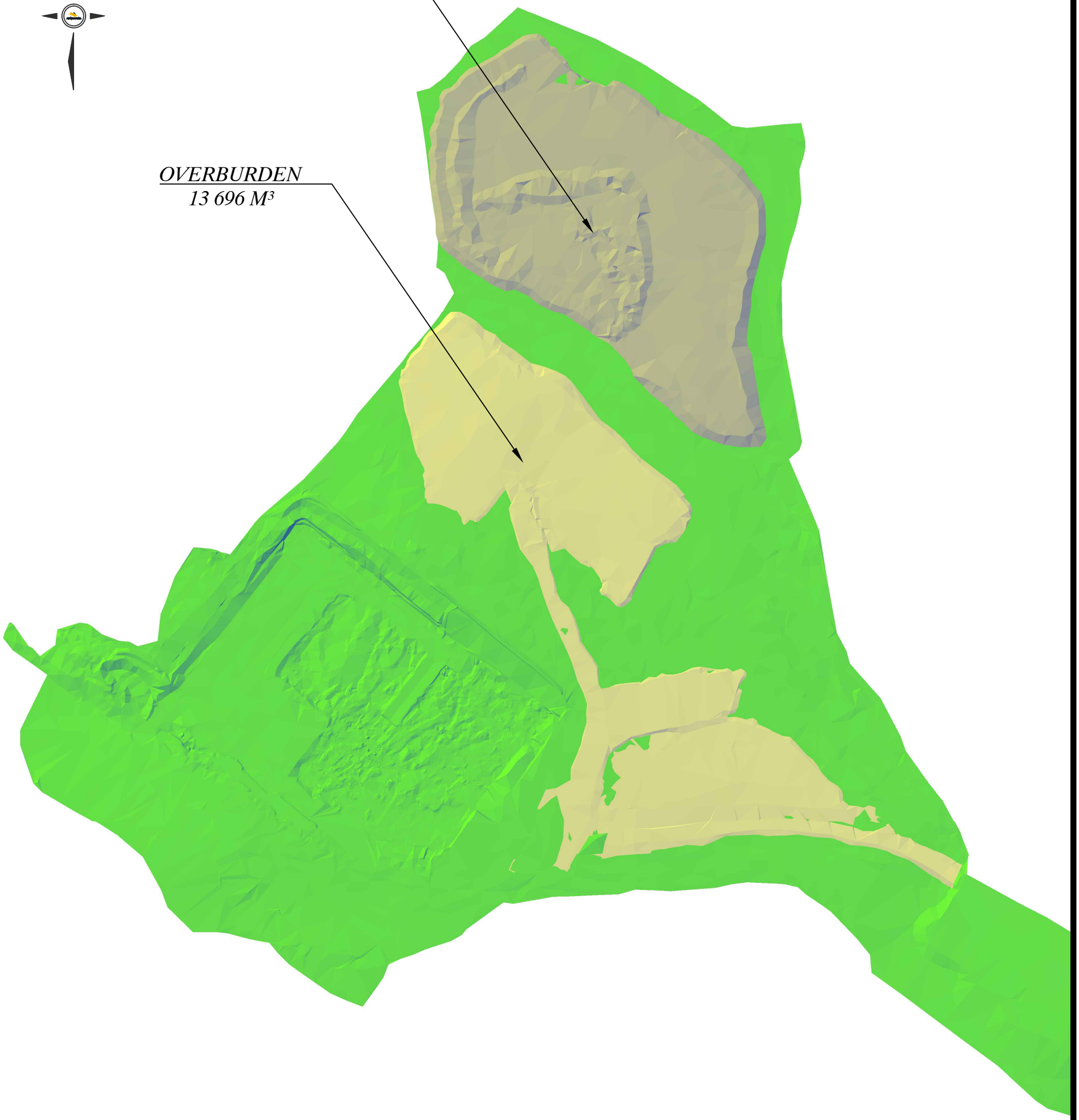
N

*WASTE DUMP*
*29 820 M³*

*OVERBURDEN*
*13 696 M³*



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HAMELARPENTAGE

| | | |
|---|---|---|
| *AGNICO EAGLE* | WORK EXECUTION DATE : *2017-10-13* | EMISSION DATE : *2017-10-25* |
| COORD. SYSTEME: *UTM15 NAD83* | *AS BUILT OVERBURDEN RANKIN FUEL FARM* | DRAWN BY: *R.CLOUATRE* |
| SCALE: *1:2000* | PLAN NO.: *131-RANKIN-FUEL-FARM-QT-171025-03* | APPROVED BY: *Hamel arpentage* |

N

40 % OVERBURDEN
AND 60% ROM
9 343 M³

| | | | |
|---|---|---|---|
| HAMELARPENTAGE | AGNICO EAGLE | WORK EXECUTION DATE : 2017-10-13 | EMISSION DATE : 2017-10-25 |
| | COORD. SYSTEME: UTM15 NAD83 | AS BUILT OB-ROM-MIX RANKIN FUEL FARM | DRAWN BY: R.CLOUATRE |
| | SCALE: 1:2000 | PLAN NO.: 131-RANKIN-FUEL-FARM-QT-171025-04 | APPROVED BY: Hamel arpentage |

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N

*0-600 LAYDOWN*
*30 383 M ³*

*0-600 FUEL FARM*
*8 245 M³*

*0-600 OVER-EXCAVATION*
*4 195 M ³*

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HAMELARPENTAGE

| | | | |
|---|---|---|---|
| *AGNICO EAGLE* | WORK EXECUTION DATE : *2017-10-13* | EMISSION DATE : *2017-10-25* |
| COORD. SYSTEME: *UTM15 NAD83* | *AS BUILT 0-600 MM RANKIN FUEL FARM* | DRAWN BY: *R.CLOUATRE* |
| SCALE: *1:2000* | PLAN NO.: *131-RANKIN-FUEL-FARM-QT-171025-05* | APPROVED BY: *Hamel arpentage* |

N

*0-200 MM*
*4 510 M³*

| | | | |
|---|---|---|---|
| HAMELARPENTAGE | *AGNICO EAGLE* | WORK EXECUTION DATE : *2017-10-13* | EMISSION DATE : *2017-10-25* |
| | COORD. SYSTEME: *UTM15 NAD83* | *AS BUILT 0-200 MM RANKIN FUEL FARM* | DRAWN BY: *R.CLOUATRE* |
| | SCALE: *1:1000* | PLAN NO.: *131-RANKIN-FUEL-FARM-QT-171025-06* | APPROVED BY: *Hamel arpentage* |

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N

*0-30 MM UNDER LINER*
*3 745 M³*

*SUMP*

| | | | |
|---|---|---|---|
| HAMELARPENTAGE | *AGNICO EAGLE* | WORK EXECUTION DATE : *2017-10-13* | EMISSION DATE : *2017-10-25* |
| | COORD. SYSTEME: *UTM15 NAD83* | *AS BUILT RANKIN FUEL FARM* | DRAWN BY: *R.CLOUATRE* |
| | SCALE: *1:1000* | PLAN NO.: *131-RANKIN-FUEL-FARM-QT-171025-07* | APPROVED BY: *Hamel arpentage* |

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N

*SAND UNDER LINER*
*684 M³*

*SUMP*

| | | | |
|---|---|---|---|
| HAMELARPENTAGE | *AGNICO EAGLE* | WORK EXECUTION DATE : *2017-10-13* | EMISSION DATE : *2017-10-25* |
| | COORD. SYSTEME: *UTM15 NAD83* | *A-B SAND UNDER LINER RANKIN FUEL FARM* | DRAWN BY: *R.CLOUATRE* |
| | SCALE: *1:1000* | PLAN NO.: *131-RANKIN-FUEL-FARM-QT-171025-08* | APPROVED BY: *Hamel arpentage* |

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N

*LINER*
*17 051 M²*

*SUMP*
*WITH LINER*

| | | | |
|---|---|---|---|
| HAMELARPENTAGE | *AGNICO EAGLE* | WORK EXECUTION DATE : *2017-10-13* | EMISSION DATE : *2017-10-25* |
| | COORD. SYSTEME: *UTM15 NAD83* | *AS BUILT LINER RANKIN FUEL FARM* | DRAWN BY: *R.CLOUATRE* |
| | SCALE: *1:1000* | PLAN NO.: *131-RANKIN-FUEL-FARM-QT-171025-09* | APPROVED BY: *Hamel arpentage* |

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N

*LINER*
*17 051 M²*

*SAND OVER LINER*
*954 M³*

| | | | |
|---|---|---|---|
| HAMELARPENTAGE | *AGNICO EAGLE* | WORK EXECUTION DATE : *2017-10-13* | EMISSION DATE : *2017-10-25* |
| | COORD. SYSTEME: *UTM15 NAD83* | *A-B SAND OVER LINER RANKIN FUEL FARM* | DRAWN BY: *R.CLOUATRE* |
| | SCALE: *1:1000* | PLAN NO.: *131-RANKIN-FUEL-FARM-QT-171025-10* | APPROVED BY: *Hamel arpentage* |

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| | | | |
|---|---|---|---|
| HAMELARPENTAGE | AGNICO EAGLE | WORK EXECUTION DATE : 2017-10-13 | EMISSION DATE : 2017-10-25 |
| | COORD. SYSTEME: UTM15 NAD83 | A-B 0-30 MM OVER LINER RANKIN FUEL FARM | DRAWN BY: R.CLOUATRE |
| | SCALE: 1:1000 | PLAN NO.: 131-RANKIN-FUEL-FARM-QT-171025-11 | APPROVED BY: Hamel arpentage |

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N

WASTE DUMP

0-75 MM
2 025 M³

SAND ON PADS
106 M³

| | | | |
|---|---|---|---|
| HAMELARPENTAGE | AGNICO EAGLE | WORK EXECUTION DATE : 2017-10-13 | EMISSION DATE : 2017-10-25 |
| | COORD. SYSTEME: UTM15 NAD83 | AS BUILT 0-75 MM RANKIN FUEL FARM | DRAWN BY: R.CLOUATRE |
| | SCALE: 1:2000 | PLAN NO.: 131-RANKIN-FUEL-FARM-QT-171025-12 | APPROVED BY: Hamel arpentage |

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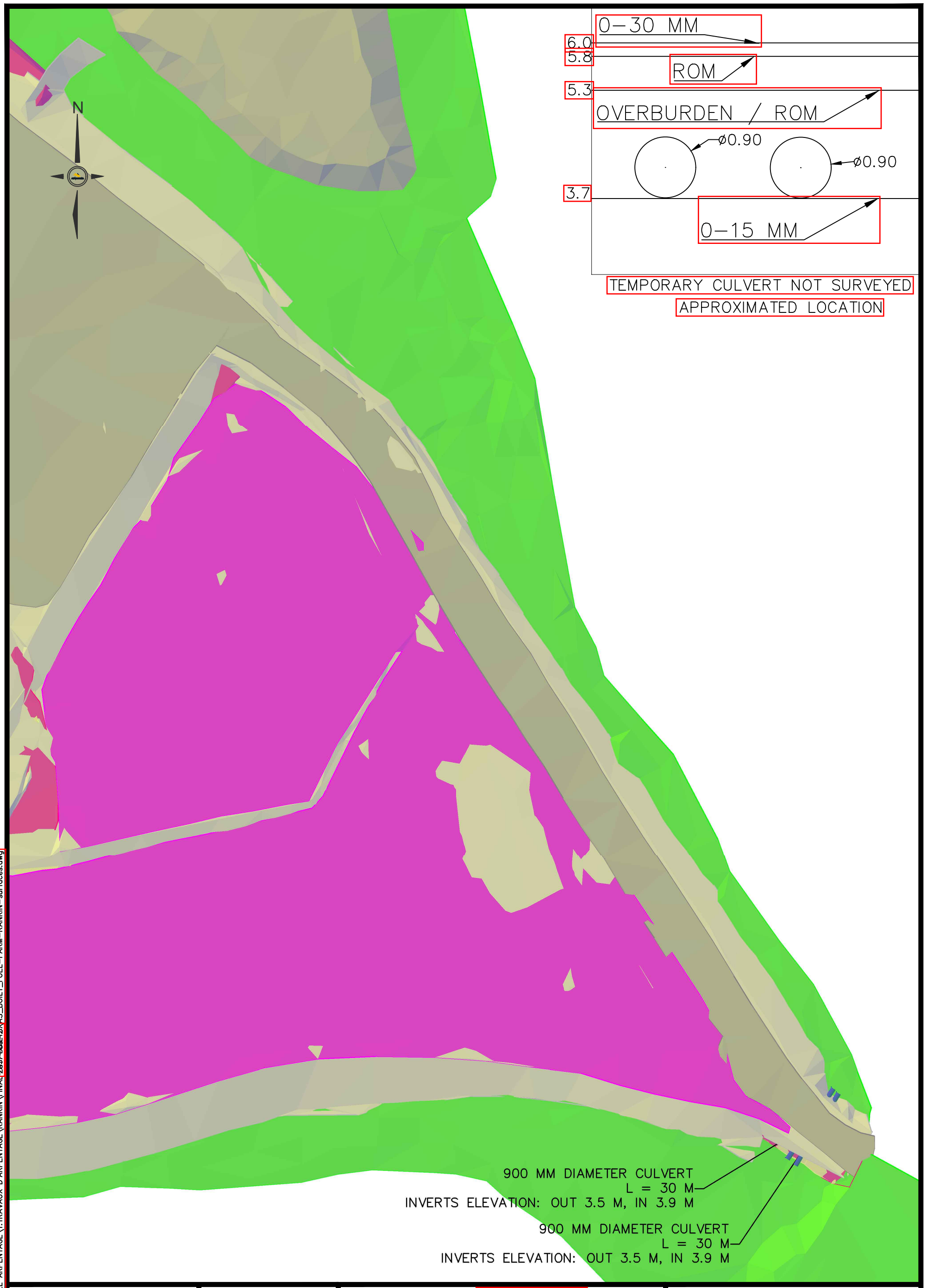
# APPENDIX C

## Survey Drawings of Rankin Itivia Culvert

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HAMELARPENTAGE

| | | | |
|---|---|---|---|
| AGNICO EAGLE | WORK EXECUTION DATE: 2017-10-13 | EMISSION DATE : 2017-12-03 |
| COORD. SYSTEME: UTM15 NAD83 | AS BUILT 900 MM CULVERTS | DRAWN BY: R.CLOUATRE |
| SCALE: 1:750 | PLAN NO.: 131-RANKIN-FUEL-FARM-QT-171203-01 | APPROVED BY: Hamel arpentage |

# APPENDIX D

## Photographs of Rankin Inlet Fuel Storage and Containment Facilities

2017-06-20
Compaction of 200mm MINUS under Tank #2

2017-07-18
Excavation to rock under Tank #2


2017-07-19
Tank #2 foundation

2017-08-06
Tank #2 erection


2017-09-02
Installation of underground double walled pipe


2017-09-10
Sand under liner placement


2017-09-12
Start of liner installation

2017-10-04
Over liner placement

2017-10-29
16" vacuum pipe to Tank #2

2017-10-29
Electrical and pump station containers

# APPENDIX E

## Photographs of Rankin Inlet Itivia Culvert


2017-11-18
Road excavation


2017-11-19
Culvert Placement

2017-11-19
Placement of bedding


2017-11-20
Completed installation

# APPENDIX F

## Construction Summary of Rankin Fuel Tank Farm and Laydown Area Structural

# Construction Summary- Rankin Fuel Tank Farm and Laydown Area

Construction and quality assurance performed by Agnico Eagle Construction

Contractor: Inukshuk Contacting Ltd (ICL)

All survey conducted by ICL

**Design Variations**

The tank 2 was built as per original design alignment (65-116-260-200-R0, 65-116-260-201-R0, 65-116-260-202-R0)

Tank #1 work was started and stop for the winter period. The work will resume in spring 2018

**Field modification**

No field modification was done during the construction of tank #2 and no change has been required on tank #1 at this point

**Site preparations**

Contractor mobilized on site and unloaded plates ready to install outside the tank perimeter and located the tank on the footprint.

**Tank #1 and #2 erection**

First phase of the construction started with the installation of floor plates and welding. Then proceeded with the second phase, installation of the tank rings and welding until design height obtained. Third phase of the construction consisted of erecting the interior structure columns and installation of all the openings at the base of the tank. The fourth and final phase consisted of placing, all the roof plates, assembling the permanent stairs and closing the opening located at south end of the tank for construction access. The construction of the tank #1 started in conjunction with tank #2 with the same process but was temporary discontinued after the 3rd ring

**Equipment use**

| | |
|---|---|
| 765-E Grove all terrain crane | Welding machine |
| 65 ft JLG | 267B skidd steer |
| 45 ft JLG | Automatic welder |

**Remaining work**

The tank #1 is presently completed at 60%. The work stopped mid September 2017 for the winter and will resume spring 2018. Completion of the tank #1 will occur prior to sea lift season.

Non-Conformances

During first fill of Tank No 2, two (2) minor fuel leaks were observed. The first leak occurred on October 17th with fuel seeping out from the pressure test port on the fueling nozzle neck reinforcement plate. The second leak was observed on October 18th as minor weeping between the manhole welding joint

and the tank reinforcement plate. Both leaks were promptly reported to the installation contractor who arrested the leakage with temporary welding repairs from the exterior of the tank.

Regular visual inspections were made thereafter to ensure no further leakage occurred.

Two (2) NCR's were then raised to cover these defects. The NCR's are presented in Appendix L of this report. At the time of writing this interim report the permanent corrective measures had not yet been finalized by the contractor. The permanent repairs will however take place in the Spring of 2018 at which time Tank No 2 will have to be emptied such that repairs can take place from within the interior of the tank.

# APPENDIX G

## Construction Summary of Rankin Inlet Itivia Site Mechanical and Electrical Equipment