



Bella Bella (Martin's Cove) Small Craft Harbour

Fire Line

Specifications

Plans

Equipment Sheets

October 25, 2017

PART 1 GENERAL

1.1.0 GENERAL CONDITIONS

The provisions contained in this Section, together with the Instructions to Tenderers and the General Conditions of the Contract, form an integral part of the Work.

1.1.1 SPECIAL CONDITIONS

The Contractor shall closely coordinate his Work with the site occupants through the owner's representative and other contractors who are working on site to avoid conflicts and ensure efficient installation of all equipment. Special scheduling is required to complete the installation within the allotted time frame.

1.2.0 SCOPE OF WORK

Furnish all permits, materials, labour and miscellaneous equipment necessary for the installation of the new fire line system as specified herein and as shown on Drawings FP-1 to FP- 4 but not limited to, the following:

- a) New float fire lines
- b) Associated piping, fittings, hangers, valves and auxiliary equipment
- c) All cutting, coring, sleeving, reinforcing and making good
- d) Painting and identification of pipe and equipment
- e) Access panels as required
- f) Drains as required
- g) *Obtain Fire Department acceptance*

1.3.0 QUALITY ASSURANCE

1.3.1 QUALIFICATION OF THE CONTRACTOR

The Contractor shall be a qualified installation company whose employees are familiar with the installation of materials as specified. The contractor to have the capabilities to thread and 'cut-groove' SCH 40 steel piping up to and including 4 inch and to fusion weld 3 inch Sclair piping. List of past installations to be submitted with tender.

1.3.2 AUTHORITIES AND AGENCIES

All work is to be installed to the approval or acceptance of the following:

- a) Small Craft Harbours
- b) Local Authorities
- c) Fire Department

1.4.0 SUBMITTALS

1.4.1 AS-BUILT DRAWINGS

Record in red pencil daily as the work proceeds, on one (1) set of white prints, all deviations from the original contract drawings. Record items of importance to future operations and maintenance, and to future alterations and additions, including all access panel and drain locations.

Keep the "As-Built drawings" neat and legible and on site available for review at any time. At completion of all work and after verification by the Contractor of the "as-built" conditions, submit the "As-Built drawings" to the Consultant.

Final payment will not be made until the "As-Built drawings" have been certified as correct and delivered to the Consultant.

1.4.2 PRESSURE TEST CERTIFICATES

Upon completion of all pressure tests and before the substantial completion inspection, submit four (4) completed copies of the "Contractor's Material and Test Certificate" to the Consultant. (Copy of the form included in Appendix 'A')

PART 2 MATERIALS STANDARDS

2.1.0 BILL OF MATERIALS

For reference an estimated Bill of Materials is included in Appendix 'B'. Final Bill of Materials will change with Contractors installation practices.

2.1.1 MATERIALS, EQUIPMENT, VALVES AND DEVICES

All materials, equipment, valves and devices installed and/or furnished under this section shall be new and be listed and/or approved - with the exception of the Sclair piping installed within the float structure - for use in fire protection installations by the following authorities-

- a) Underwriters' Laboratories of Canada; (ULC) or, if not available,
- b) Underwriters' Laboratories Inc.; (UL)
- c) Factory Mutual Engineering Association.

2.1.2 CONTROL VALVES

- .1 Valves for the same application shall be of one manufacture and bearing ULC label, manufacturer's name, valve size and pressure rating. Unless otherwise specified, design for 175 psi working pressure.
- .2 Valves 3" and smaller shall be bronze construction with screwed connections, either O.S. & Y. valves or ball valves

2.1.3 PIPING AND FITTINGS

Galvanized *SCH 40* steel piping and galvanized fittings shall meet the requirements of ASTM A 795 and ANSI B 16 or as indicated. Sclair pipe to be Type D-9.

2.1.4 FIRE DEPARTMENT CONNECTION & HOSE VALVES

Fire department connection shall be 4 x 2 1/2" x 2 1/2" complete with caps and plate marked " Standpipe " in 2" letters.

Hose valves shall be angle type 2 1/2" complete with caps.

All threads to be compatible with the local standard.

The fire department connection and hose valves shall be plain bronze finish.

2.1.5 HANGERS, SEISMIC SWAY-BRACING & PIPING RESTRAINTS

Hangers and seismic sway bracing and piping restraints shall conform to current NFPA No. 13.

2.1.6 ACCESS PANELS

Install access panels as required at control and drain valve locations. Manufactured type and style to suit structural conditions. Size to be as required for intended use (i.e. hand only or full access). Access panels to be painted fire red.

PART 3 EXECUTION

3.1.0 GENERAL

3.1.1 WELDING

Welding of steel pipe and fittings on the wharf and floats is prohibited.

3.1.2 PIPE INSTALLATION

Obtain Consultants approval for method and type of pipe hangers to be used for each construction type prior to commencing the Work. *Victaulic piping connections to be cut-grooved.*

3.1.3 CUTTING, CORING & PATCHING

Cut or core openings in floats as required for installation of the work. Coordinate, schedule and obtain Owner's approval prior to commencement of cutting or coring. In addition to obtaining approval of coring locations, the Contractor shall take precautions during coring to avoid damaging existing services located in floats
Structures to be reinforced where weakened by cutting or coring.

Contractor to make good where existing equipment removed and new one installed. Contractor to keep an accurate record of horizontal and vertical locations of all cores and submit a marked up structural set of prints for as-built purposes.

3.1.4 IDENTIFICATION

Provide control valves and drains with factory produced lamicaid identification tags. All standpipe risers and equipment to be painted fire red.

3.1.5 DRAINS

System and auxiliary drains shall be piped to drainage systems and/or to a point where they are easily accessible and equipped with valve, nipple and cap. Access panels are to be provided where necessary.

A copy of the location and size of all drains and low points on all systems must be submitted with the as-built drawings.

3.1.6 PROTECTION

All exposed and steel pipe, fittings and equipment located in the float structure to be completely wrapped in Denso tape.

3.1.7 CLEANING

Maintain the work in a tidy condition and free from the accumulation of waste products and debris. Material accumulated by cutting and opening up shall be removed as work is performed.

Unless otherwise noted, all equipment demolished or removed and not to be handed over to the Owner shall become the property of the Contractor and removed from the site.

3.1.8 TESTING OF PIPING

Contractor shall hydrostatic pressure test the piping system as required by the Contractors Material & Test Certificate. Prior to pressure test, flush all piping in accordance with NFPA No. 13 to ensure removal of all foreign material and debris within the system. These tests shall involve the local Fire Department and be witnessed by the Owner or his representative.

Any leaks found as a result of this testing shall be repaired by the Contractor.

3.1.9 INSPECTIONS AND TESTS

The Contractor shall provide field labour and equipment to facilitate all inspections, examinations and tests required by the authorities and/or agencies specified under

Section **1.3.2** of the specifications, as necessary, to obtain complete interim and final acceptance of the fire protection system.

The tests required shall be in the presence of representatives of the agencies having jurisdiction.

3.1.10 PLACING IN SERVICE

When the entire fire protection system has been completed to the satisfaction of the Consultant and the Owner, the Contractor shall demonstrate the complete operation and maintenance required to the Fire Department designated personnel and obtain their acceptance.

3.1.11 COMPLETION

Work is required to be completed by March 15, 2018.

1 General

1.1 SECTION INCLUDES

1.1.1 Health and safety considerations required to ensure that PWGSC shows due diligence towards health and safety on construction sites, and meets the requirements laid out in PWGSC/RPB Departmental Policy DP 073 - Occupational Health and Safety - Construction.

1.2 REFERENCES

1.2.1 Canada Labour Code, Part 2, Canada Occupational Safety and Health Regulations

1.2.2 Health Canada/Workplace Hazardous Materials Information System (WHMIS)

1.2.2.1 Material Safety Data Sheets (MSDS).

1.2.3 Province of British Columbia

1.2.3.1 Workers Compensation Act, RSBC 1996 - Updated 2006.

1.2.3.2 Occupational Health and Safety Act, S.N.S. [1996].

1.3 SUBMITTALS

1.3.1 Make submittals in accordance with Section 01 00 10 – General Requirements.

1.3.2 Submit site-specific Health and Safety Plan: Within 7 days after date of Notice to Proceed and prior to commencement of Work. Health and Safety Plan must include:

1.3.2.1 Results of site specific safety hazard assessment.

1.3.2.2 Results of safety and health risk or hazard analysis for site tasks and operation found in work plan.

1.3.2.3 Risk Management and Safety Procedure for possible events including but not limited to storm, fire, and fall.

1.3.3 Submit one copy of Contractor's authorized representative's work site health and safety inspection reports to Departmental Representative weekly.

1.3.4 Submit copies of reports or directions issued by Federal, Provincial and Territorial health and safety inspectors.

1.3.5 Submit copies of incident and accident reports.

1.3.6 Submit WHMIS MSDS - Material Safety Data Sheets if requested.

1.3.7 Departmental Representative may review Contractor's site-specific Health and Safety Plan and provide comments to Contractor within 5 days after receipt of plan. Revise plan as appropriate

and resubmit plan to Departmental Representative within 5 days after receipt of comments from Departmental Representative.

1.3.8 Departmental Representative's review of Contractor's final Health and Safety plan should not be construed as approval and does not reduce the Contractor's overall responsibility for construction Health and Safety.

1.3.9 Medical Surveillance: where prescribed by legislation, regulation or safety program, submit certification of medical surveillance for site personnel prior to commencement of Work, and submit additional certifications for any new site personnel to Departmental Representative.

1.3.10 On-site Contingency and Emergency Response Plan: address standard operating procedures to be implemented during emergency situations.

1.4 FILING OF NOTICE

1.4.1 File Notice of Project with Provincial authorities prior to beginning of Work.

1.5 SAFETY ASSESSMENT

1.5.1 Perform site specific safety hazard assessment related to project.

1.6 MEETINGS

1.6.1 Schedule and administer Health and Safety meeting prior to commencement of Work.

1.7 PROJECT/SITE CONDITIONS

1.7.1 Work at site will involve contact with:

1.7.1.1 Harbour Manager.

1.7.1.2 Departmental Representative.

1.8 GENERAL REQUIREMENTS

1.8.1 Develop written site-specific Health and Safety Plan based on hazard assessment prior to beginning site Work and continue to implement, maintain, and enforce plan until final demobilization from site. Health and Safety Plan must address project specifications.

1.8.2 Departmental Representative may respond in writing, where deficiencies or concerns are noted and may request re-submission with correction of deficiencies or concerns.

1.9 RESPONSIBILITY

1.9.1 Be responsible for health and safety of persons on site, safety of property on site and for protection of persons adjacent to site and environment to extent that they may be affected by conduct of Work.

- 1.9.2 Comply with and enforce compliance by employees with safety requirements of Contract Documents, applicable federal, provincial, territorial and local statutes, regulations, and ordinances, and with site-specific Health and Safety Plan.

1.10 COMPLIANCE REQUIREMENTS

- 1.10.1 Comply with Workers Compensation Act, B.C.
- 1.10.2 Comply with Occupational Health and Safety Regulations.
- 1.10.3 Comply with Canada Labour Code, Canada Occupational Safety and Health Regulations.

1.11 UNFORSEEN HAZARDS

- 1.11.1 When unforeseen or peculiar safety-related factor, hazard, or condition occur during performance of Work, follow procedures in place for Employee's Right to Refuse Work in accordance with Acts
-

and Regulations of Province having jurisdiction and advise Departmental Representative verbally and in writing.

1.12 HEALTH AND SAFETY CO-ORDINATOR

1.12.1 Employ and assign to Work, competent and authorized representative as Health and Safety Co-ordinator. Health and Safety Co-ordinator must:

1.12.1.1 Have site-related working experience specific to activities associated with dredging and material transportation.

1.12.1.2 Have working knowledge of occupational safety and health regulations.

1.12.1.3 Be responsible for completing Contractor's Health and Safety Training Sessions and ensuring that personnel not successfully completing required training are not permitted to enter site to perform Work.

1.12.1.4 Be responsible for implementing, enforcing daily and monitoring site-specific Contractor's Health and Safety Plan.

1.12.1.5 Be on site during execution of Work.

1.13 POSTING OF DOCUMENTS

1.13.1 Ensure applicable items, articles, notices and orders are posted in conspicuous location on site in accordance with Acts and Regulations of Province having jurisdiction, and in consultation with Departmental Representative.

1.14 CORRECTION OF NON-COMPLIANCE

1.14.1 Immediately address health and safety non-compliance issues identified by authority having jurisdiction or by Departmental Representative.

1.14.2 Provide Departmental Representative with written report of action taken to correct non-compliance of health and safety issues identified.

1.14.3 Departmental Representative may stop Work if non-compliance of health and safety regulations is not corrected.

1.15 WORK STOPPAGE

1.15.1 Give precedence to safety and health of public and site personnel and protection of environment over cost and schedule considerations for Work.

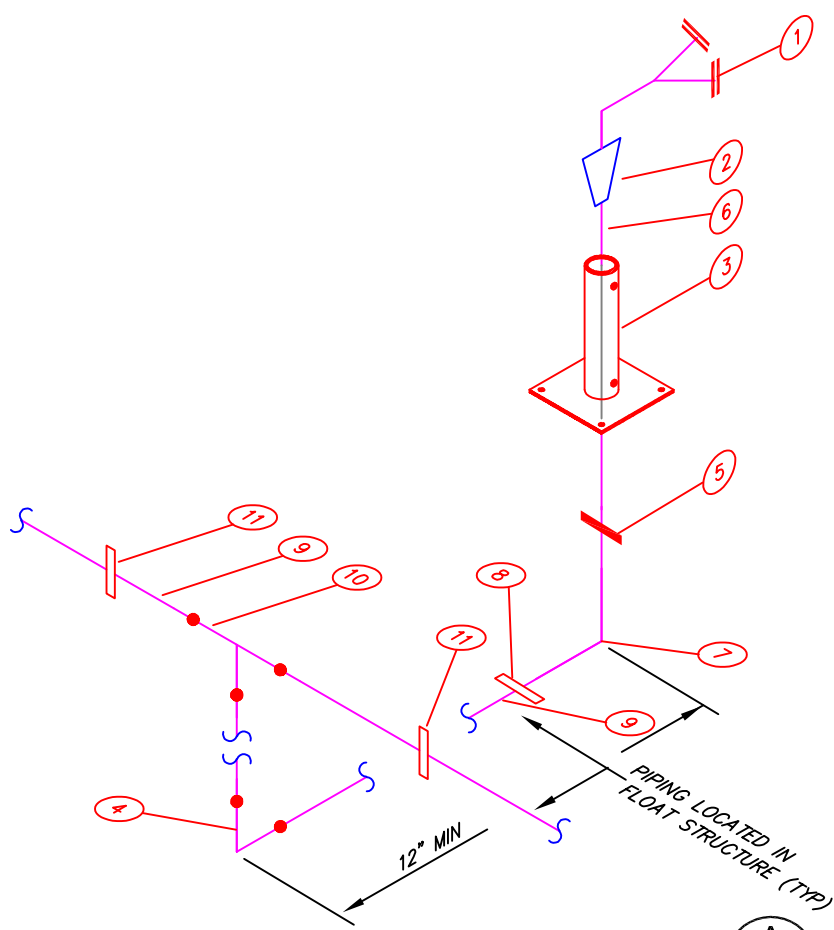
END OF SECTION

GENERAL NOTES

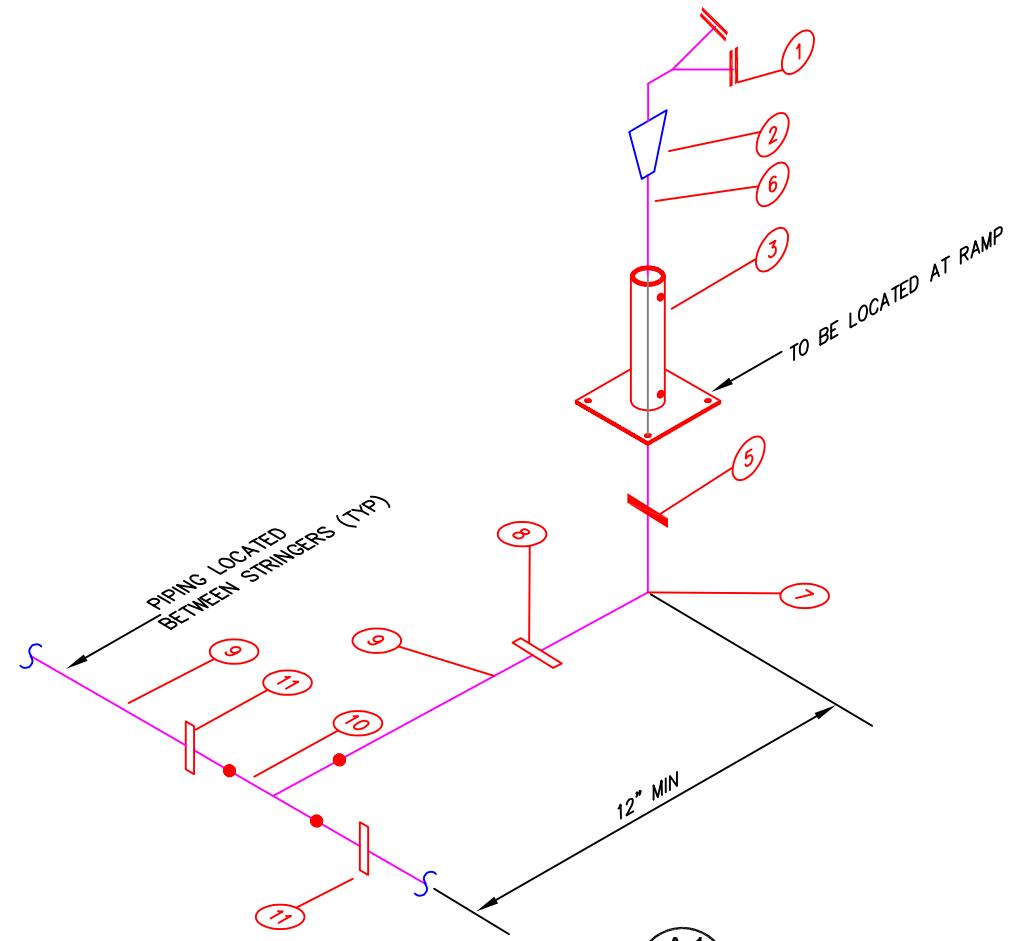
THE LAYER OF INFORMATION SUPERIMPOSED ON THE BACKGROUND DRAWINGS (PREPARED BY OTHERS) WAS PREPARED BY JENSEN HUGHES CONSULTING CANADA LTD. TO ILLUSTRATE GENERAL CODE COMPLIANCE FOR THIS PROJECT. THE PROFESSIONAL SEAL AFFIXED TO THIS DRAWING DOES NOT CONSTITUTE AN APPROVAL OF DESIGN SERVICES RENDERED BY OTHERS. SEALED FOR CODE COMPLIANCE INFORMATION ONLY.

NOTES:

1.



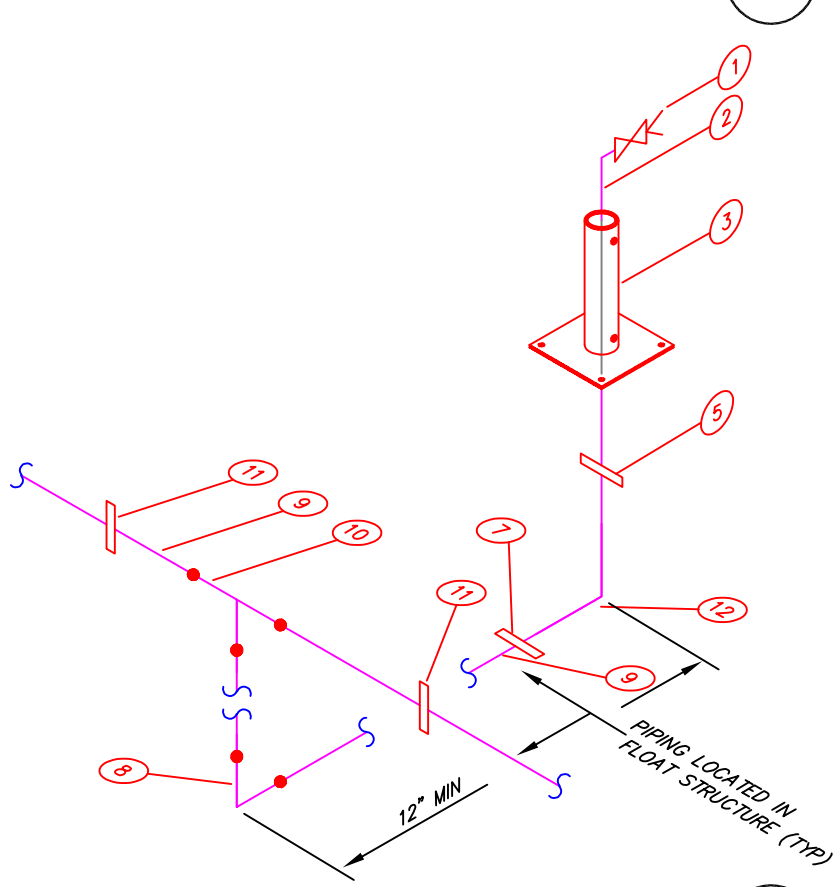
DETAIL A SCALE: NTS **A**
 FLOAT FIRE DEPARTMENT CONNECTION



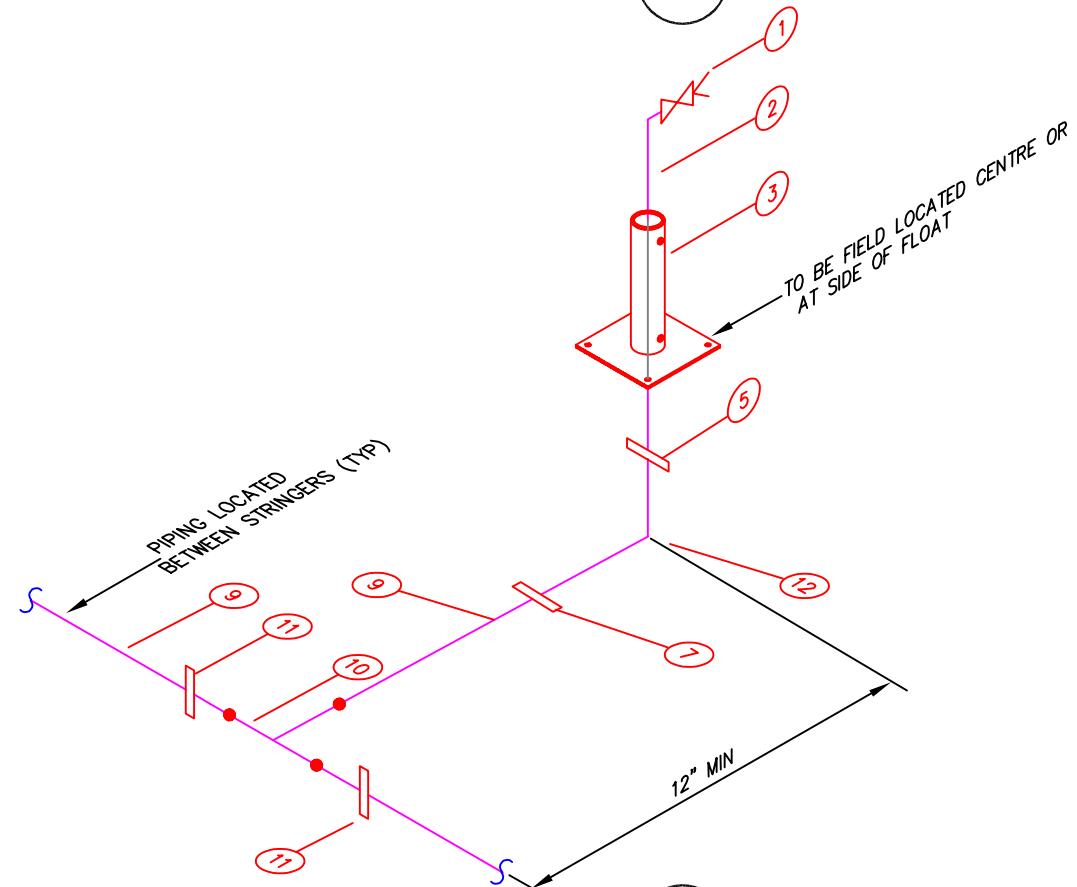
DETAIL A1 SCALE: NTS **A1**
 FLOAT FIRE DEPARTMENT CONNECTION

LEGEND (DETAIL "A & A1")

1. 4 x 2 1/2" x 2 1/2" FIRE DEPARTMENT CONNECTION C/W CAPS
2. 4" x 3" GALVANIZED HEX BUSHING
3. PIPE STAND C/W 3/8" x 12" x 12" GALVANIZED STEEL PLATE
4. 3" SCLAIR ELBOW
5. 3" GALVANIZED GROOVED COUPLING
6. 3" DIA. SCH. 40 GALVANIZED PIPE
7. 3" GALVANIZED 90° GROOVED ELBOW
8. 3" GALVANIZED SCLAIR x GROOVED COUPLING
9. 3" SCLAIR PIPE (D-9 TYP)
10. 3" SCLAIR TEE
11. 3" GALVANIZED SCLAIR COUPLING FOR END PIECE USE 3" GALVANIZED SCLAIR x GROOVED COUPLING C/W 3" GALVANIZED GROOVED PLUG



DETAIL B SCALE: NTS **B**
 FLOAT FIRE DEPARTMENT CONNECTION



DETAIL B1 SCALE: NTS **B1**
 HOSE VALVE CONNECTION

LEGEND (DETAIL "B & B1")

1. 2 1/2" HOSE VALVE C/W CAPS
2. 2 1/2" DIA GALVANIZED SCH40 PIPE (NPT x GROOVE)
3. PIPE STAND C/W 3/8" x 12" x 12" GALVANIZED STEEL PLATE
4. --
5. 3" x 2 1/2" GALVANIZED GROOVED COUPLING
6. --
7. 3" GALVANIZED SCLAIR x GROOVED COUPLING
8. 3" SCLAIR ELBOW
9. 3" SCLAIR PIPE (D-9 TYP)
10. 3" SCLAIR TEE
11. 3" GALVANIZED SCLAIR COUPLING FOR END PIECE USE 3" GALVANIZED SCLAIR x GROOVED COUPLING C/W 3" GALVANIZED GROOVED PLUG
12. 3" GALVANIZED GROOVED ELBOW



CLIENT
 SMALL CRAFT HARBOURS
 SUITE# 200-401 BURRARD ST
 VANCOUVER, BC, V6C 3S4

PROJECT
 BELLA BELLA
 SMALL CRAFT HARBOUR FLOATS

DRAWING
 FIRE LINE DRAWING

PROFESSIONAL ENGINEERS SEAL

REVISION DISCIPLINE
 FIRE LINE

DRAWING NO.
FP3 OF 4

PERMIT NO.
 DRAWN BY: JL
 REVIEWED BY: CC
 ORIGINAL DRAWING DATE: 11-SEPT-2017

PAPER: 11x17
 SCALE: AS NOTED
 FILE NO.: DV173203

Appendix “A”

Contractor's Material and Test Certificate for **A**boveground Piping

PROCEDURE

Upon completion of work, inspection and tests shall be made by the contractor's representative and witnessed by an owner's representative. All defects shall be corrected and system left in service before contractor's personnel finally leave the job.

A certificate shall be filled out and signed by both representatives. Copies shall be prepared for approving authorities, owners, and contractor. It is understood the owner's representative's signature in no way prejudices any claim against contractor for faulty material, poor workmanship, or failure to comply with approving authority's requirements or local ordinances.

| | |
|---------------|------|
| PROPERTY NAME | DATE |
|---------------|------|

PROPERTY ADDRESS

| | | | |
|-------|---|------------------------------|-----------------------------|
| PLANS | ACCEPTED BY APPROVING AUTHORITIES (NAMES) | | |
| | ADDRESS | | |
| | INSTALLATION CONFORMS TO ACCEPTED PLANS | <input type="checkbox"/> YES | <input type="checkbox"/> NO |
| | EQUIPMENT USED IS APPROVED IF NO, EXPLAIN DEVIATIONS | <input type="checkbox"/> YES | <input type="checkbox"/> NO |

| | | | | |
|--------------|---|--|------------------------------|-----------------------------|
| INSTRUCTIONS | HAS PERSON IN CHARGE OF FIRE EQUIPMENT BEEN INSTRUCTED AS TO LOCATION OF CONTROL VALVES AND CARE AND MAINTENANCE OF THIS NEW EQUIPMENT? IF NO, EXPLAIN | | <input type="checkbox"/> YES | <input type="checkbox"/> NO |
| | HAVE COPIES OF THE FOLLOWING BEEN LEFT ON THE PREMISES? | | <input type="checkbox"/> YES | <input type="checkbox"/> NO |
| | 1. SYSTEM COMPONENTS INSTRUCTIONS | | <input type="checkbox"/> YES | <input type="checkbox"/> NO |
| | 2. CARE AND MAINTENANCE INSTRUCTIONS | | <input type="checkbox"/> YES | <input type="checkbox"/> NO |
| | 3. NFPA 25 | | <input type="checkbox"/> YES | <input type="checkbox"/> NO |

LOCATION OF SYSTEM: SUPPLIES BUILDINGS

| SPRINKLERS | MAKE | MODEL | YEAR OF MANUFACTURE | ORIFICE SIZE | QUANTITY | TEMPERATURE RATING |
|------------|------|-------|---------------------|--------------|----------|--------------------|
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

PIPE AND FITTINGS
 Type of Pipe _____
 Type of Fittings _____

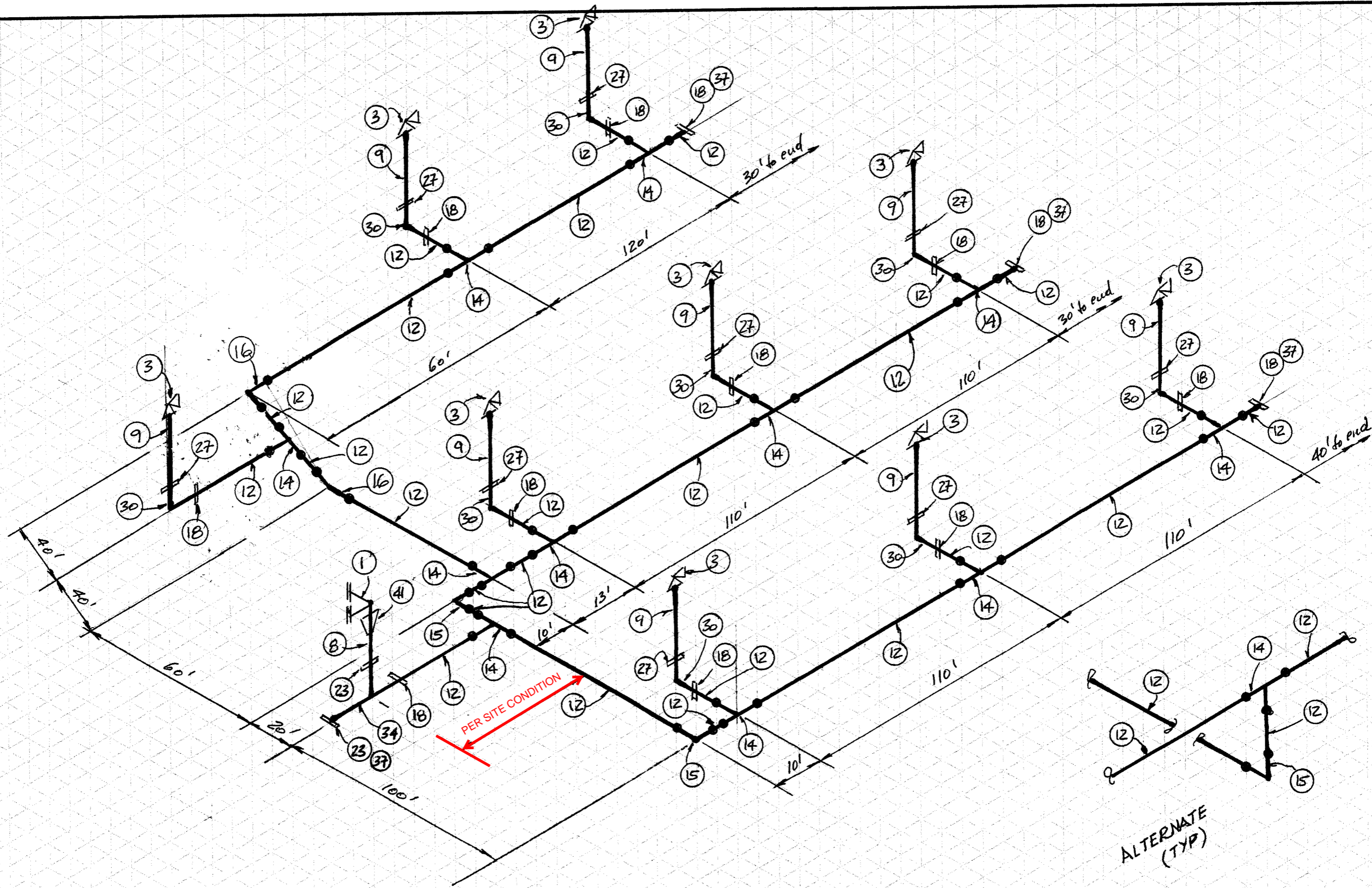
| ALARM VALVE OR FLOW INDICATOR | ALARM DEVICE | | | MAXIMUM TIME TO OPERATE THROUGH TEST CONNECTION | |
|-------------------------------|--------------|------|-------|---|-----|
| | TYPE | MAKE | MODEL | MIN | SEC |
| | | | | | |
| | | | | | |

| DRY PIPE OPERATING TEST | DRY VALVE | | | | Q. O. D. | | | | |
|-------------------------|---|-------|----------------|--------------|-------------------------|---|-----|-------------------------|----|
| | MAKE | MODEL | SERIAL NO. | MAKE | MODEL | SERIAL NO. | | | |
| | TIME TO TRIP THROUGH TEST CONNECTION ¹ | | WATER PRESSURE | AIR PRESSURE | TRIP POINT AIR PRESSURE | TIME WATER REACHED TEST OUTLET ¹ | | ALARM OPERATED PROPERLY | |
| | MIN | SEC | PSI | PSI | PSI | MIN | SEC | YES | NO |
| Without Q.O.D. | | | | | | | | | |
| With Q.O.D. | | | | | | | | | |
| IF NO, EXPLAIN | | | | | | | | | |

| | | | | | | | | |
|--|--|--|---|--|---|--|--|------------|
| DELUGE AND PREACTION VALVES | OPERATION <input type="checkbox"/> PNEUMATIC <input type="checkbox"/> ELECTRIC <input type="checkbox"/> HYDRAULIC | | | | | | | |
| | PIPING SUPERVISED <input type="checkbox"/> YES <input type="checkbox"/> NO | | | | DETECTING MEDIA SUPERVISED <input type="checkbox"/> YES <input type="checkbox"/> NO | | | |
| | DOES VALVE OPERATE FROM THE MANUAL TRIP, REMOTE, OR BOTH CONTROL STATIONS <input type="checkbox"/> YES <input type="checkbox"/> NO | | | | | | | |
| | IS THERE AN ACCESSIBLE FACILITY IN EACH CIRCUIT FOR TESTING <input type="checkbox"/> YES <input type="checkbox"/> NO | | | | | IF NO, EXPLAIN | | |
| | MAKE | MODEL | DOES EACH CIRCUIT OPERATE SUPERVISION LOSS ALARM? | | DOES EACH CIRCUIT OPERATE VALVE RELEASE? | | MAXIMUM TIME TO OPERATE RELEASE | |
| | | YES | NO | YES | NO | MIN | SEC | |
| PRESSURE REDUCING VALVE TEST | LOCATION & FLOOR | MAKE & MODEL | SETTING | STATIC PRESSURE | | RESIDUAL PRESSURE (FLOWING) | | FLOW RATE |
| | | | | INLET (PSI) | OUTLET (PSI) | INLET (PSI) | OUTLET (PSI) | FLOW (GPM) |
| TEST DESCRIPTION | <p>HYDROSTATIC: Hydrostatic tests shall be made at not less than 200 psi (13.6 bars) for 2 hours or 50 psi (3.4 bars) above static pressure in excess of 150 psi (10.2 bars) for 2 hours. Differential dry-pipe valve clappers shall be left open during the test to prevent damage. All aboveground piping leakage shall be stopped.</p> <p>PNEUMATIC: Establish 40 psi (2.7 bars) air pressure and measure drop, which shall not exceed 1½ psi (0.1 bars) in 24 hours. Test pressure tanks at normal water level and air pressure and measure air pressure drop, which shall not exceed 1½ psi (0.1 bars) in 24 hours.</p> | | | | | | | |
| TESTS | ALL PIPING HYDROSTATICALLY TESTED AT ____ PSI (____ BARS) FOR ____ HRS | | | | | | IF NO, STATE REASON | |
| | DRY PIPING PNEUMATICALLY TESTED <input type="checkbox"/> YES <input type="checkbox"/> NO | | | | | | | |
| | EQUIPMENT OPERATES PROPERLY <input type="checkbox"/> YES <input type="checkbox"/> NO | | | | | | | |
| | DO YOU CERTIFY AS THE SPRINKLER CONTRACTOR THAT ADDITIVES AND CORROSIVE CHEMICALS, SODIUM SILICATE OR DERIVATIVES OF SODIUM SILICATE, BRINE, OR OTHER CORROSIVE CHEMICALS WERE NOT USED FOR TESTING SYSTEMS OR STOPPING LEAKS? <input type="checkbox"/> YES <input type="checkbox"/> NO | | | | | | | |
| | DRAIN TEST | READING OF GAUGE LOCATED NEAR WATER SUPPLY TEST CONNECTION: ____ PSI (____ BARS) | | | RESIDUAL PRESSURE WITH VALVE IN TEST CONNECTION OPEN WIDE: ____ PSI (____ BARS) | | | |
| UNDERGROUND MAINS AND LEAD IN CONNECTIONS TO SYSTEM RISERS FLUSHED BEFORE CONNECTION MADE TO SPRINKLER PIPING | | | | | | | | |
| VERIFIED BY COPY OF THE U FORM NO. 85B | | | | <input type="checkbox"/> YES <input type="checkbox"/> NO | | OTHER EXPLAIN | | |
| FLUSHED BY INSTALLER OF UNDERGROUND SPRINKLER PIPING | | | | <input type="checkbox"/> YES <input type="checkbox"/> NO | | | | |
| IF POWDER-DRIVEN FASTENERS ARE USED IN CONCRETE, HAS REPRESENTATIVE SAMPLE TESTING BEEN SATISFACTORILY COMPLETED? | | | | <input type="checkbox"/> YES <input type="checkbox"/> NO | | IF NO, EXPLAIN | | |
| BLANK TESTING GASKETS | NUMBER USED | | LOCATIONS | | | | NUMBER REMOVED | |
| WELDING | WELDED PIPING <input type="checkbox"/> YES <input type="checkbox"/> NO | | | | | | | |
| | IF YES... | | | | | | | |
| | DO YOU CERTIFY AS THE SPRINKLER CONTRACTOR THAT WELDING PROCEDURES COMPLY WITH THE REQUIREMENTS OF AT LEAST AWS D10.9, LEVEL AR-3? | | | | | | <input type="checkbox"/> YES <input type="checkbox"/> NO | |
| | DO YOU CERTIFY THAT THE WELDING WAS PERFORMED BY WELDERS QUALIFIED IN COMPLIANCE WITH THE REQUIREMENTS OF AT LEAST AWS D10.9, LEVEL AR-3? | | | | | | <input type="checkbox"/> YES <input type="checkbox"/> NO | |
| DO YOU CERTIFY THAT WELDING WAS CARRIED OUT IN COMPLIANCE WITH A DOCUMENTED QUALITY CONTROL PROCEDURE TO ENSURE THAT ALL DISCS ARE RETRIEVED, THAT OPENINGS IN PIPING ARE SMOOTH, THAT SLAG AND OTHER WELDING RESIDUE ARE REMOVED, AND THAT THE INTERNAL DIAMETERS OF PIPING ARE NOT PENETRATED? | | | | | | <input type="checkbox"/> YES <input type="checkbox"/> NO | | |
| CUTOUTS (DISCS) | DO YOU CERTIFY THAT YOU HAVE A CONTROL FEATURE TO ENSURE THAT ALL CUTOUTS (DISCS) ARE RETRIEVED? | | | | | | <input type="checkbox"/> YES <input type="checkbox"/> NO | |

| | | | |
|----------------------------------|--|----------------|------|
| HYDRAULIC DATA NAMEPLATE | NAMEPLATE PROVIDED <input type="checkbox"/> YES <input type="checkbox"/> NO | IF NO, EXPLAIN | |
| REMARKS | DATE LEFT IN SERVICE WITH ALL CONTROL VALVES OPEN | | |
| SIGNATURES | NAME OF SPRINKLER CONTRACTOR | | |
| | TESTS WITNESSED BY | | |
| | FOR PROPERTY OWNER (SIGNED) | TITLE | DATE |
| | FOR SPRINKLER CONTRACTOR (SIGNED) | TITLE | DATE |
| ADDITIONAL EXPLANATION AND NOTES | | | |

Appendix “B”



SEAL:

PROJECT: BELLA BELLA SCH

DRAWN: JL

AREA: FIRE LINE - FLOATS

REVIEWED: CC

DATE OCTOBER 20, 2017

APPROVED: CC

Fire Protection System

Project: Bella Bella SCH Fire line

Title: Float Specifications

Page 6 of 8

| Item No. | Units | Description | Shipped | Back Ordered |
|----------|---------|--|---------|--------------|
| 1 | 1 | 4" x 2½" x 2½" Fire Dept Connection c/w Caps | | |
| 2 | 0 | 4" x 2½" x 2½" Hydrant c/w 2 - 2½" Hose Valves | | |
| 3 | 9 | 2½" Angle Hose Valve Fem NPT x male HT c/w & Caps | | |
| 4 | 8 | 1" Brass Ball Valve fem NPT | | |
| 5 | 0 | 3" Brass Ball Valve NPT | | |
| 6 | | | | |
| 7 | 0 ft | 4" galv. Sch 40 Pipe | | |
| 8 | 10 ft | 3" galv. Sch 40 Pipe | | |
| 9 | 80 ft | 2½" galv. Sch 40 Pipe | | |
| 10 | 20 ft | 1" galv. Sch 40 Pipe | | |
| 11 | 0 | 4" Sclair Pipe D-9 | | |
| 12 | 1100 ft | 3" Sclair Pipe D-9 | | |
| 13 | 0 | 4" x 3"Sclair Reducer fuse conn. | | |
| 14 | 12 | 3" Sclair Tee fuse conn. | | |
| 15 | 12 | 3" Sclair Elbow 90 deg fuse conn. | | |
| 16 | 2 | 3" Sclair Elbow 45 deg fuse conn. | | |
| 17 | 16 | 3" Sclair Coupling, Victaulic Style # 995, galv. | | |
| 18 | 14 | 3" Sclair x groove Coupling Victaulic Style # 997, galv. | | |
| 19 | 6 | 3" x 1" NPT galv. Sclair Outlet Coupling | | |
| 20 | 0 | 4" Sclair Tee fuse conn | | |
| 21 | 0 | 4" Sclair Coupling, Victaulic Style # 995 | | |
| 22 | 0 | 4" galv. grooved Coupling flexible | | |
| 23 | 3 | 3" galv. grooved Coupling flexible | | |
| 24 | 0 | 2½" galv. grooved Coupling flexible | | |
| 25 | | | | |
| 26 | 0 | 4" x 2½" galv. grooved Reducing Coupling | | |
| 27 | 10 | 3" x 2½" galv. grooved Reducing Coupling | | |
| 28 | | | | |
| 29 | 0 | 4" galv. grooved Elbow 90 deg | | |
| 30 | 10 | 3" galv. grooved Elbow 90 deg | | |
| 31 | 0 | 2½" galv. grooved Elbow 90 deg | | |
| 32 | | | | |
| 33 | 0 | 4" galv. grooved Tee | | |
| 34 | 1 | 3" galv. grooved Tee | | |

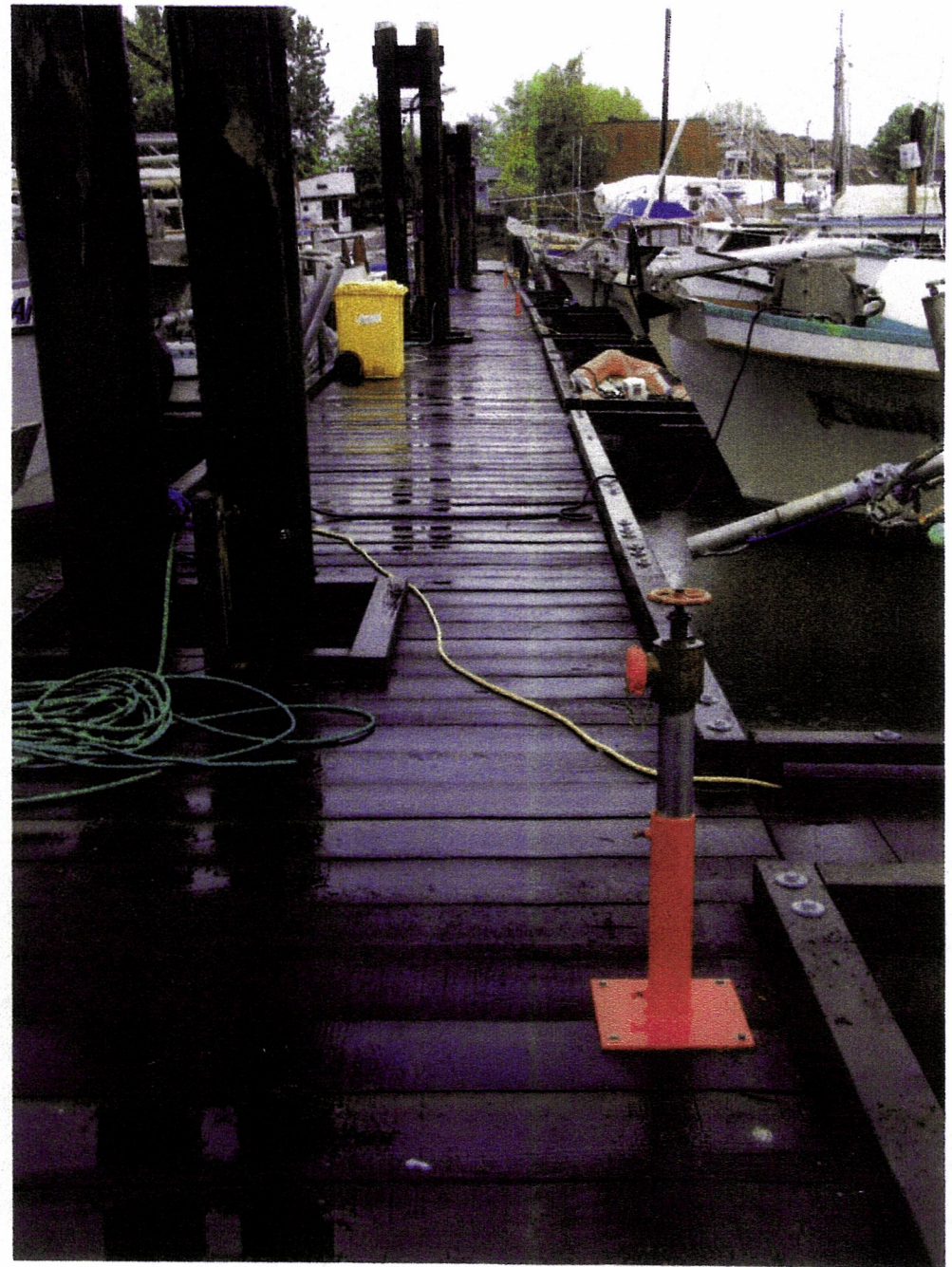
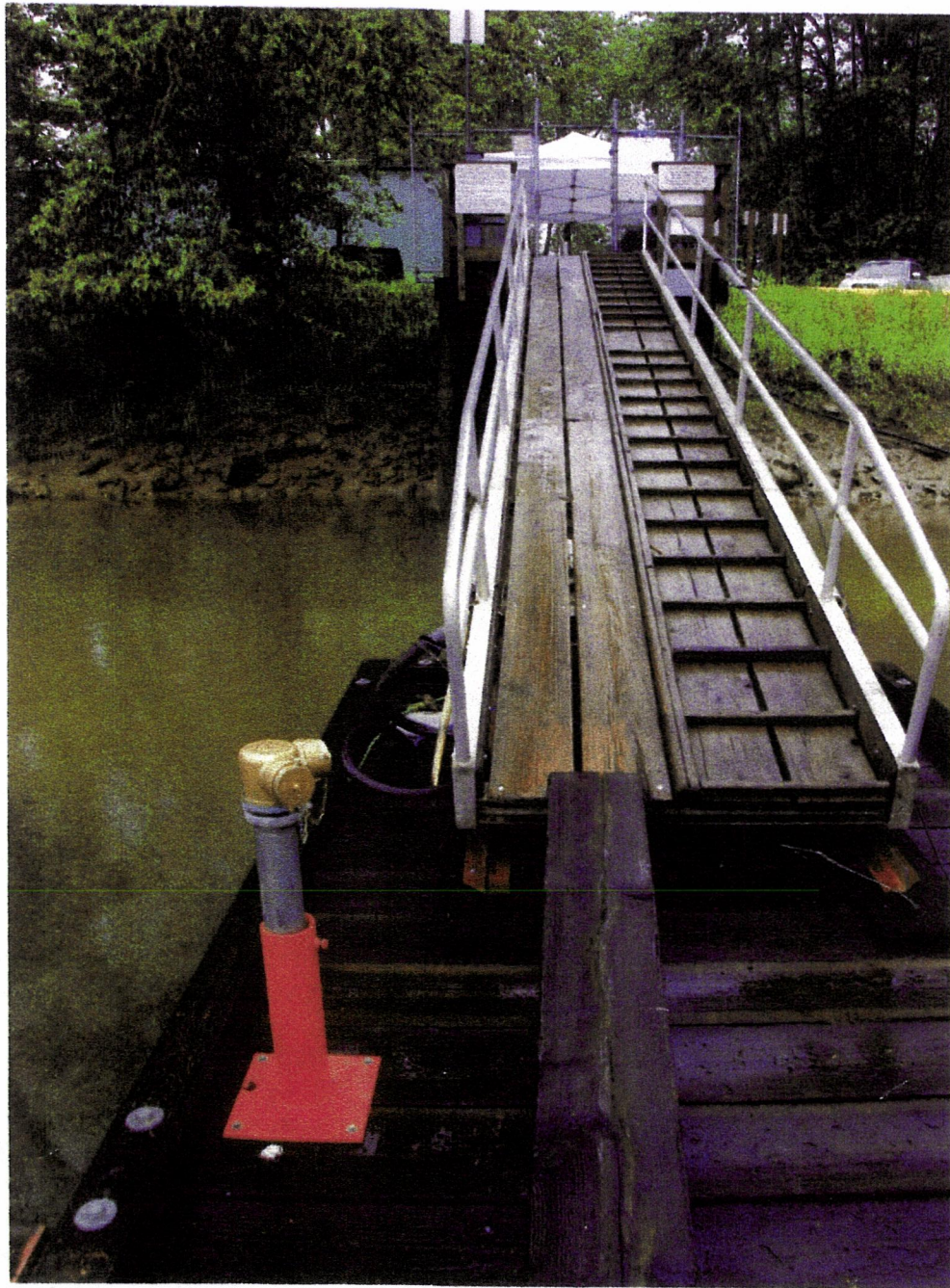
Fire Protection System

Project: Bella Bella SCH Fire line

Title: Float Specifications

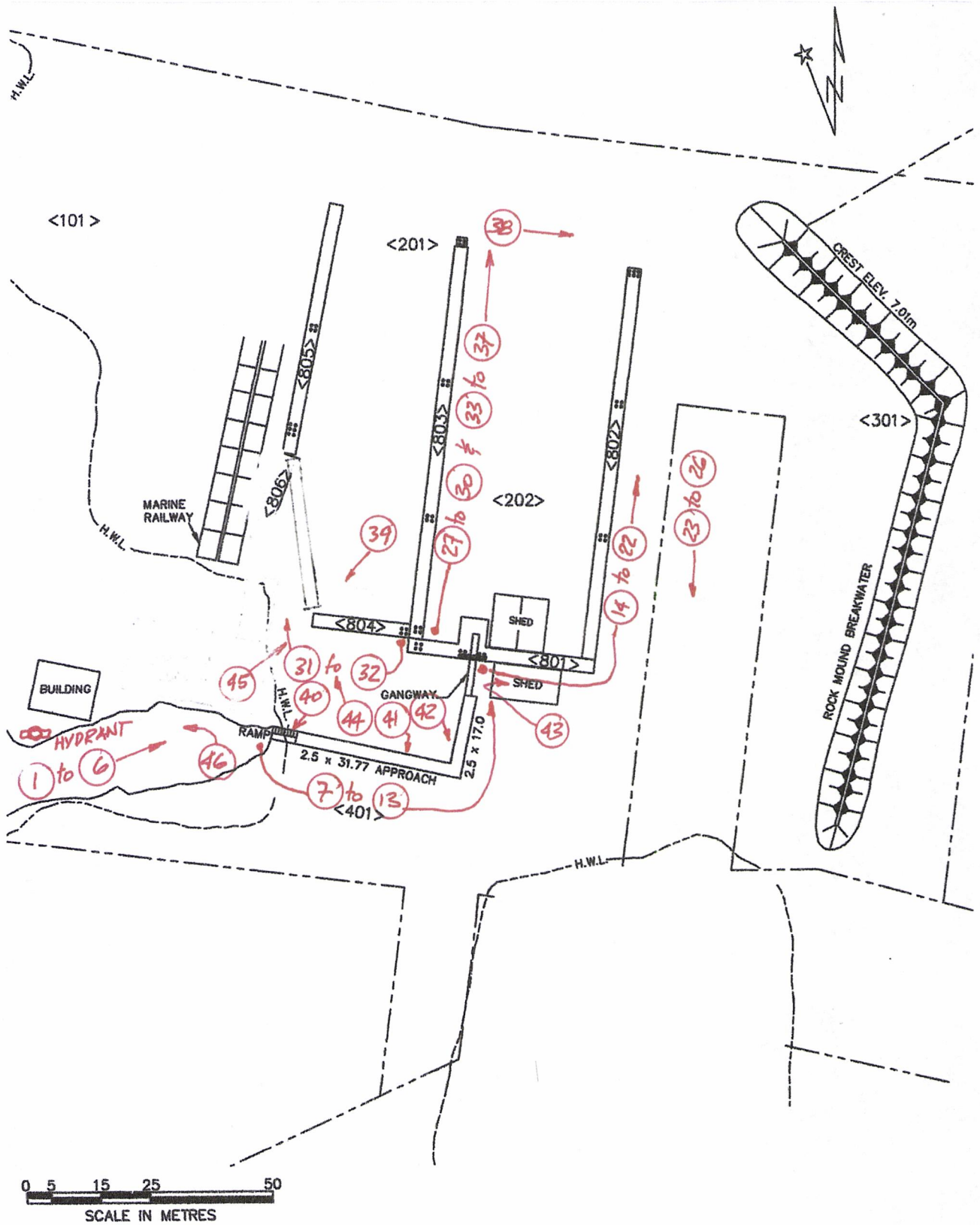
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| Item No. | Units | Description | Shipped | Back Ordered |
|----------|--------|--|---------|--------------|
| 35 | | | | |
| 36 | 0 | 4" galv. grooved Cap | | |
| 37 | 5 | 3" galv. grooved Cap | | |
| 38 | 0 | 3" x 2½" galv. grooved Reducer | | |
| 39 | 0 | 3" x 1" galv. grooved Outlet Coupling | | |
| 40 | 0 | 4" x 1"galv. grooved Outlet Coupling | | |
| 41 | 1 | 4" NPT x 3" NPT galv. Hex Bushing | | |
| 42 | | | | |
| 43 | 0 | 3" Sclair Flange Stub End | | |
| 44 | | | | |
| 45 | 120 ft | Galv. Tolco Tolstrut #B12 | | |
| 46 | 40 | 4" galv. Tolco Tolstrut Pipe Clamp | | |
| 47 | 20 | 2½" galv. Tolco Tolstrut Pipe Clamp | | |
| 48 | 40 | 4" galv. 2 Hole Pipe Clamp | | |
| 49 | 0 | 2½" galv. 2 Hole Pipe Clamp | | |
| 50 | 60 ft | 3/8" galv. Hanger Rod | | |
| 51 | 12 | Galv. Side Beam Bracket 3/8" rod | | |
| 52 | 12 | 4" galv. HD Hanger Ring | | |
| 53 | | | | |
| 54 | 60 | 3/8" x 6" galv. Coach Screw | | |
| 55 | 10 | 3/8" galv. Rod Coupling | | |
| 56 | 100 | 3/8" galv. Hex Nut | | |
| 57 | 60 | 3/8" x 2½" galv. Lag Bolt | | |
| 58 | 0 | 3/8" x 1½" galv. Hex Bolt | | |
| 59 | 0 | 1" galv. straight Sway Brace Fitting | | |
| 60 | 20 | 4" galv. standard Pipe Clamp | | |
| 61 | 0 | 2½" galv. standard pipe Clamp | | |
| 62 | | | | |
| 63 | 1 | 4" galv. Riser Support, see attached picture | | |
| 64 | 9 | 2½"galv. Riser Support, see attached picture | | |
| 65 | 0 | Cellar Nozzle Retainers | | |
| 66 | 0 | Deck Hatches | | |
| 67 | 8 | Drain & Control Valve Access Hatches | | |
| 68 | bulk | Denso Tape | | |



TYP. STANDPIPE SUPPORTS

Appendix “C”



Picture Orientation

Bella Bella

February 11th, 2015

BEFORE HARBOUR UPGRADE



HYDRANT

#2



#4



#1



#3



#6



#8



#5



#7



#10



#12



#9



#11



#14



#16



#13



#15



#18



#20



#17



#19



#22



#24



#21



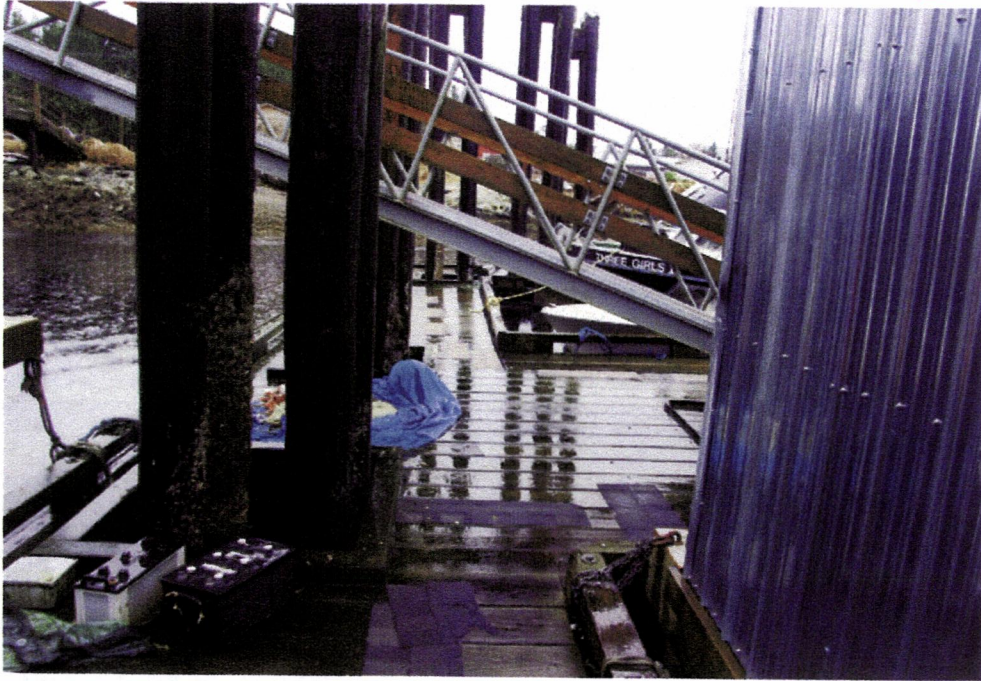
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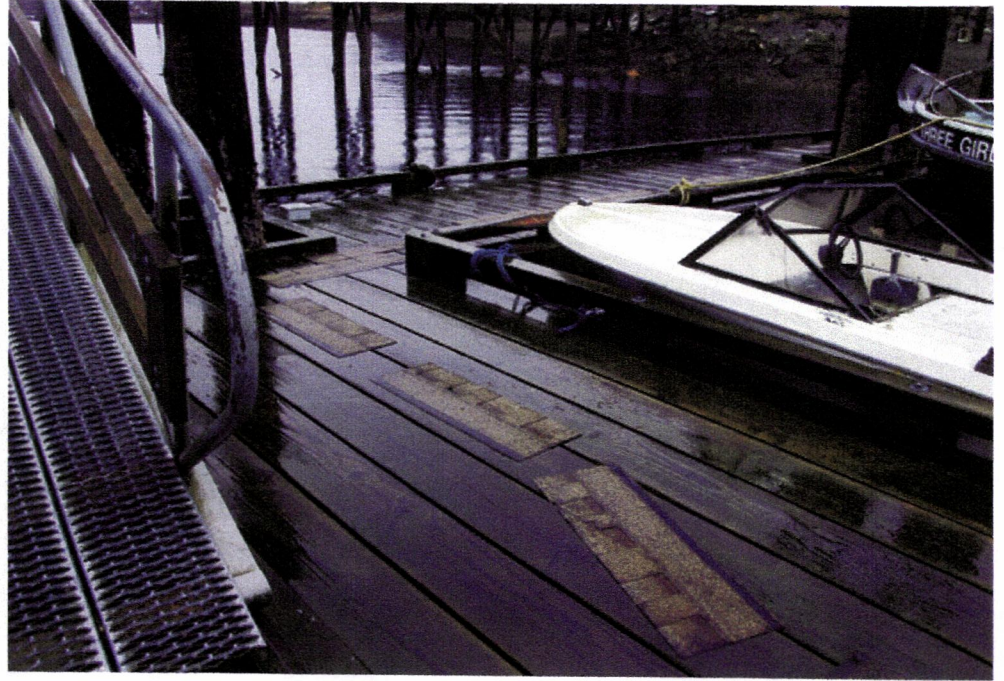
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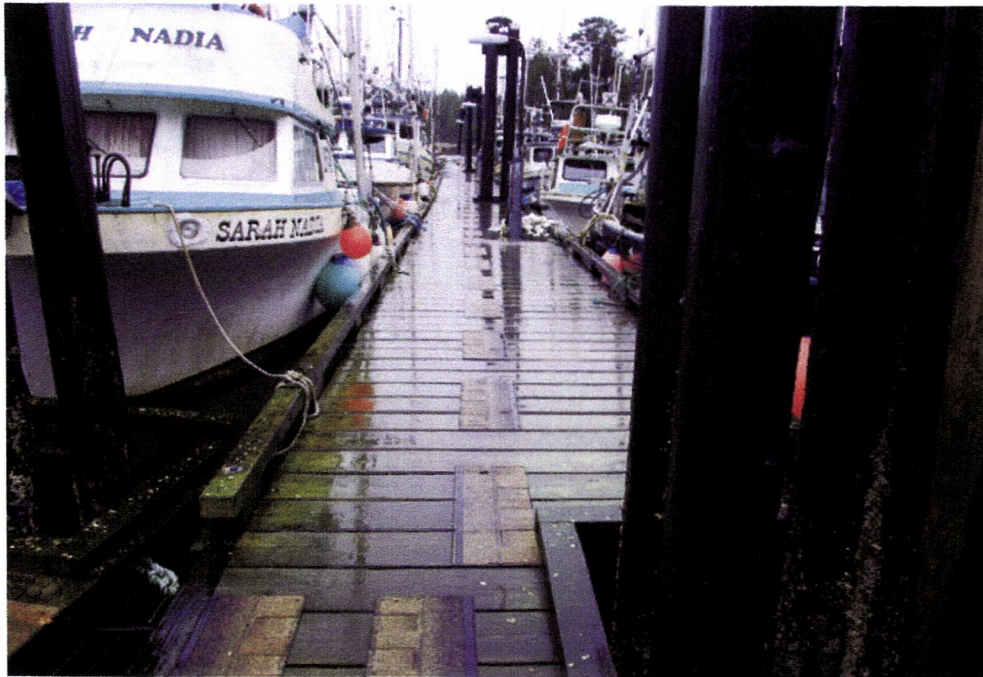
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#27



#30



#32



#29



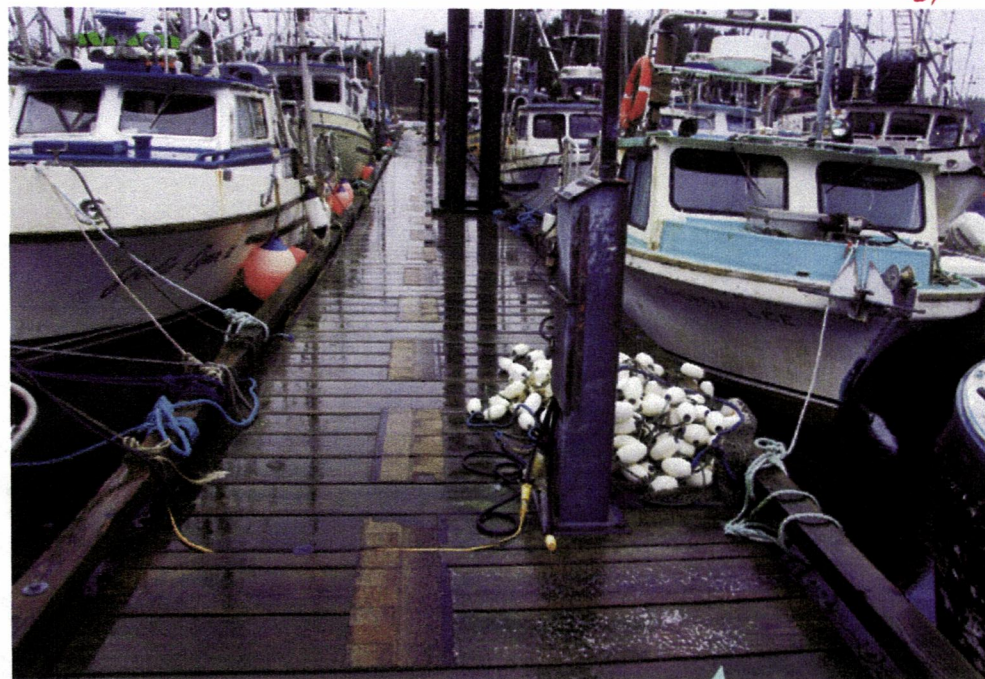
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#34



#36



#33



#35



#38



#40



#37



#39



#42



#44



#41



#43



#46



#45



#48