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July 2, 2013

Mr. Richard Knowland, Senior Planner
Department of Planning and Development
City of Portland
389 Congress Street
Portland, ME 04101

**Subject: The Inn at Diamond Cove, LLC
Diamond Cove, Great Diamond Island
Flow Testing of the Water System Improvements and
Compliance with Condition 3 of the Site Plan Approval**

Dear Mr. Knowland:

The Inn at Diamond Cove Site Plan and Subdivision Approval included requirements for the implementation of water system improvements designed to increase the available fire flow and residual pressure. The extent of water system improvements were designed to deliver 590 gpm at 20 psi residual pressure at the new fire hydrant (H15) closest to the Inn.

Recently, the water system improvements associated with Work Areas 1 and 2 were completed by R.E. Coleman and the new hydrant (H15) closest to the Inn was installed by Phoenix Management. As a result, on June 24, 2013 our office performed several hydrant flow tests throughout the facility that were witnessed by Lieutenant Wallace of the Portland Fire Department. The results of the recent hydrant flow tests are summarized below:

➤ **Test 1 – New Hydrant H15**

The purpose of this flow test was to document conformance with the site plan condition of approval to meet or exceed the 590 gpm flow rate at 20 psi residual pressure.

- Prior Condition – Based upon the previous hydrant flow testing performed during February and March of 2012, the existing water system was capable of delivering approximately 400 gallons per minute (gpm) with 20 psi residual pressure to this area of the site.
- Current Condition – As a result of the recent water system improvements, the hydrant flow test performed on June 24th documented that the water supply system is capable of delivering 650 gpm at 20 psi residual pressure, which meets and exceeds the 590 gpm flow rate that was the basis of conditional site plan approval.

➤ **Test 2 – Hydrant H17**

The purpose of this flow test was to document water system flow improvements at a second hydrant within the parade ground area. This test was not a requirement of the site plan approval, but provided further documentation of the increased water supply and pressure as a result of the water system improvements.

TEST #1

TEST #1

Hydrant Flow Test Report

Location DIAMOND COVE HOMEOWNERS ASSOCIATION Date JUNE 24, 2013

Test made by JOSEPH LAVERRIERE, P.E. Time 10:30 AM

Representative of FAY, SPOFFORD & THORNDIKE (FORMERLY DEWCA-HOFFMAN)

Witness LT. BEN WALLACE - PORTLAND FIRE DEPARTMENT

State purpose of test HYDRANT FLOW TEST TO VERIFY CONDITION OF

APPROVAL ASSOCIATED WITH THE INN AT DIAMOND COVE

Consumption rate during test APPROX. 600 GALLONS

If pumps affect test, indicate pumps operating N/A

Flow hydrants: A₁ A₂ A₃ A₄

Size nozzle 2 1/2" (NEW HYDRANT HIS)

Pitot reading _____

Discharge coefficient _____ Total GPM _____

GPM 604

Static B 81 psi Residual B 27.5 (MEASURED @ H16) psi

Projected results @20 psi Residual 650 gpm; or @ _____ psi Residual _____ gpm

Remarks: _____

SEE ATTACHED PLAN FOR HYDRANT TEST LOCATIONS

Location map: Show line sizes and distance to next cross-connected line. Show valves and hydrant branch size. Indicate north. Show flowing hydrants - Label A₁, A₂, A₃, A₄. Show location of static and residual - Label B.

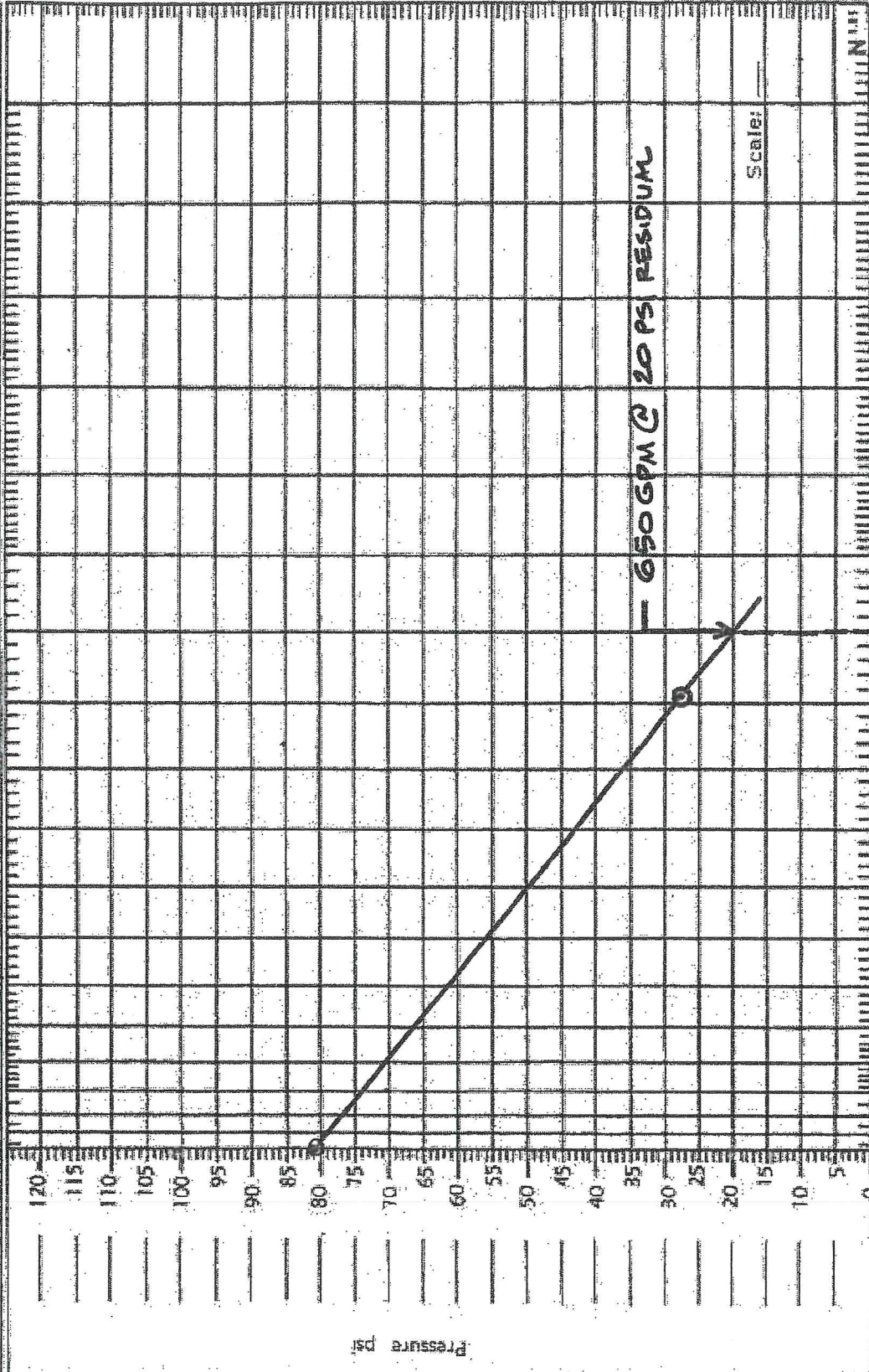
Indicate B Hydrant X Sprinkler _____ Other (identify) _____

FLOW TEST #1

FLOW HYDRANT (NEW HIS)
RESIDUAL HYDRANT HIS

WATER FLOW TEST SUMMARY SHEET

Date: JUNE 24, 2013	Time: 10:30 AM	Cont. No.				
Cont. Name: DIAMOND COVE HOMEOWNERS ASSOCIATION						
Address: NEW HYDRANT HIS						
Hydrant No.	Outlet I.D. inches	Pilot Press. psi	Flow gpm	Residual psi		
1			604	27.5		
2						
3						
Total Flow						
Static Press.:		81	psi	Flow @ 20 psi	650	gpm



Scale A: 100 200 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400 2500 2600 2700 2800 2900 3000 3100 3200 3300 3400 3500 3600 3700 3800 3900 4000

Scale B: 100 200 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400 2500 2600 2700 2800 2900 3000 3100 3200 3300 3400 3500 3600 3700 3800 3900 4000

Scale C: 100 200 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400 2500 2600 2700 2800 2900 3000 3100 3200 3300 3400 3500 3600 3700 3800 3900 4000

Water Flow gpm