TEST #1 "GENERAL TESTING"

Retro-Plate Testing

ASTM C779 -	Up to 400% increase in abrasion resistance.
ASTM C805 -	21% increase in impact strength.
ASTM G23-81 -	No adverse effect to ultraviolet light and water spray.
ASTM 1028 -	Co-efficient of friction – all levels of finish exceed OSHA and ADA recommendations.
Breathability -	Avoids costly vapor migration problems.
Environmentally - Friendly	An odorless, non-flammable, non-toxic, and completely “Green” system.
Reflectivity -	30% increase in reflectivity.

TEST #2 "COEFFICIENT OF FRICTION"

Coefficient of Friction Concrete Test

For the RetroPlate System

ADVANCED FLOOR PRODUCTS

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Kenneth R. Fisher

March 1, 1999

1. Introduction

1.1 Kenneth R. Fisher is a Safety Consultant for Nu-Safe Floor Solutions and many well known corporations nationwide. As author of numerous articles concerning various approaches to floor safety, he has researched and documented certain claims made 'in' and 'out' of the floor industry regarding floor safety.

2. Background

2.1 Slipping, tripping and falling accidents remain the most common cause of personal injury in the workplace and in public settings. Any system that will reduce the number of accidents will be a significant benefit to an employer in terms of both employee welfare and cost.

2.2 Most slipping accidents occur as a result of a surface becoming wet. While many floors provide an adequate amount of grip when dry, most floors and floor finishes fail to provide an adequate static co-efficient of friction (SCOF) when they become contaminated by liquids.

2.2 Highly polished concrete surfaces have a tendency to become slippery as a result of the polishing process employed when finishing the floor surface. The abrasiveness of natural concrete is normally diminished when grinding and high speed buffing is performed. Therefore, it would be a logical assumption that the SCOF would be lower as the concrete is honed to a higher degree of gloss. This was not the case, in a general sense, with the RetroPlate system employed by Advanced Floor Products.

3. Instruction Received:

3.1 Kenneth Fisher was requested by Advanced Floor Products to conduct several static co-efficient of friction (SCOF) tests on a RetroPlate treated concrete floor surface at a distribution facility. The tests would be performed under the direction of Advanced Floor Products personnel.

3.2 Several SCOF tests would be performed at various stages of the process in the dock area of the facility. The parameters of the SCOF tests were to include dry and wet conditions of the concrete surface as various levels were reached. The process performed by personnel from Advanced Floor Products and the assigned levels of polishing was determined by such personnel. I was instructed to perform SCOF tests on the areas polished only after the area was cleaned and rinsed to remove any contaminants produced from the polishing process.

3.3 The results were to be provided in a written report that would show if the polishing performed would enhance or detract from the SCOF on the floor surface when subjected to both wet and dry conditions.

Summary of Conclusions:

3.4 The SCOF tests performed for dry conditions for all levels of grinding and polishing exceeded OSHA & ADA recommendations for dry, hard surfaces. The ASTM 1028 method was used to determine the benchmark for the SCOF on the test surfaces. The Sellmier Slip Tester from Germany was used to measure the SCOF.

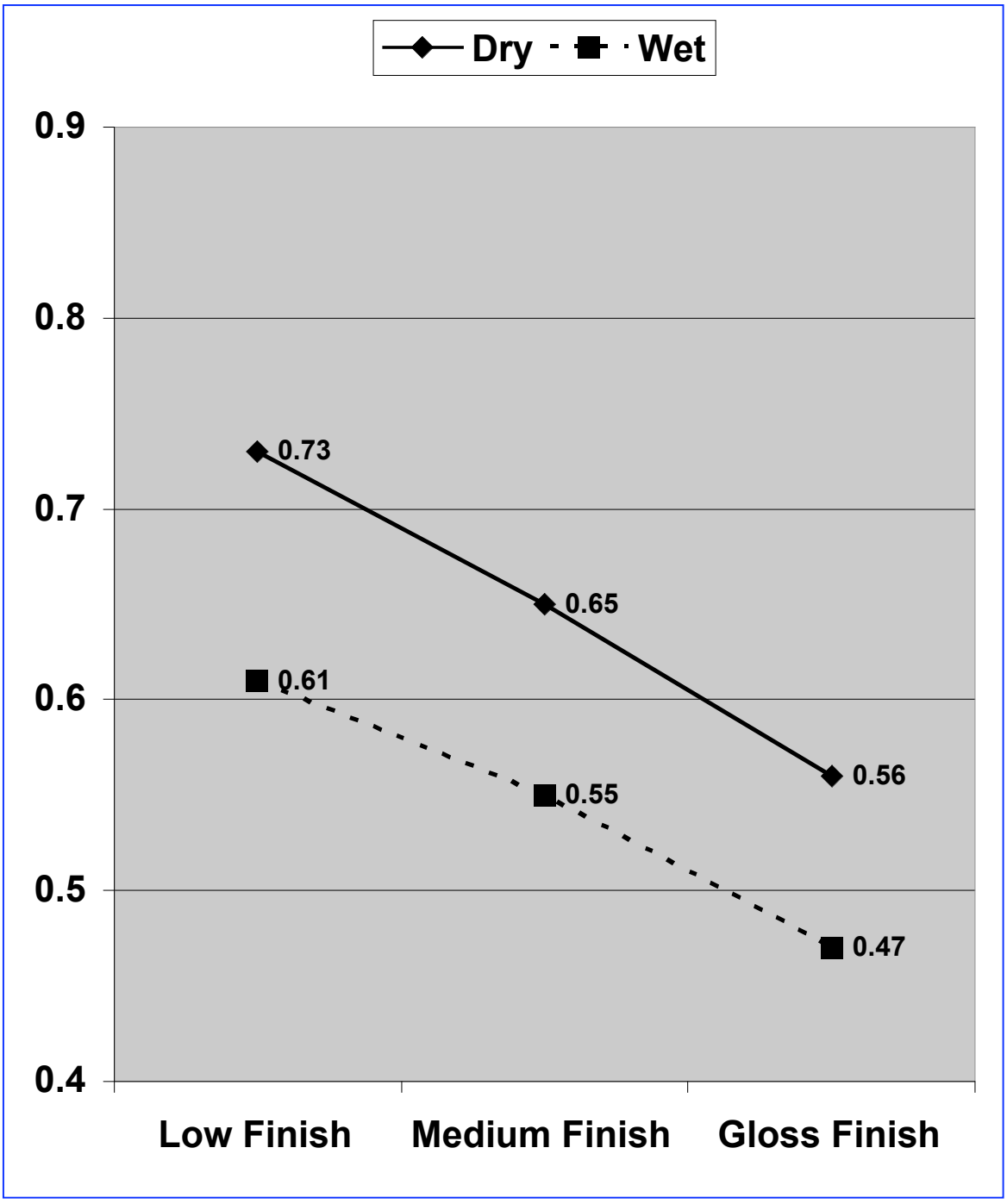
3.5 The SCOF tests performed for wet surfaces for all levels of grinding and polishing exceeded both OSHA & ADA recommendations for wet, hard surfaces. ASTM 1028 does not outline SCOF tests for wet conditions. These tests were performed using ISO testing procedures that are currently accepted worldwide. The Sellmier Slip Tester was used to measure the SCOF.

4. Equipment Used to Perform SCOF Tests

4.1 The static co-efficient of friction measurements were taken with a recognized floor tester that is setting new standards for independent floor testing. This machine is the Sellmier Slip Tester. Made in Germany, the Sellmier is self propelled and is not prone to interpretations by the user. It was designed to be used with leather, rubber, and neolite shoe pad samples.

LEATHER

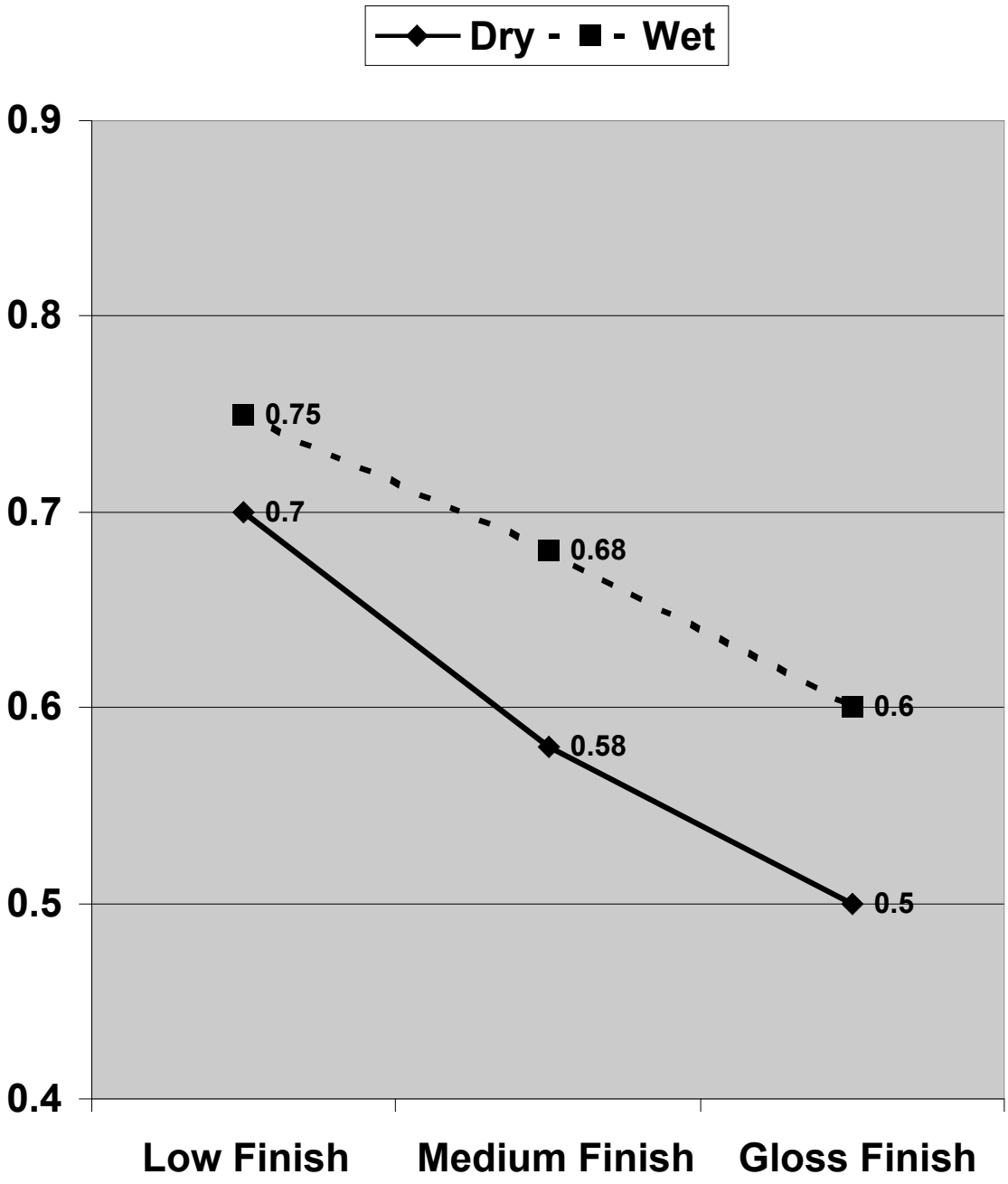
Static Co-Efficient of Friction Test (SCOF)
On RetroPlate Treated Concrete



*NOTE – According to the ADA, OSHA and ASTM guidelines, the generally accepted Safe Zone is between 0.9 and 0.5

NEOLITE

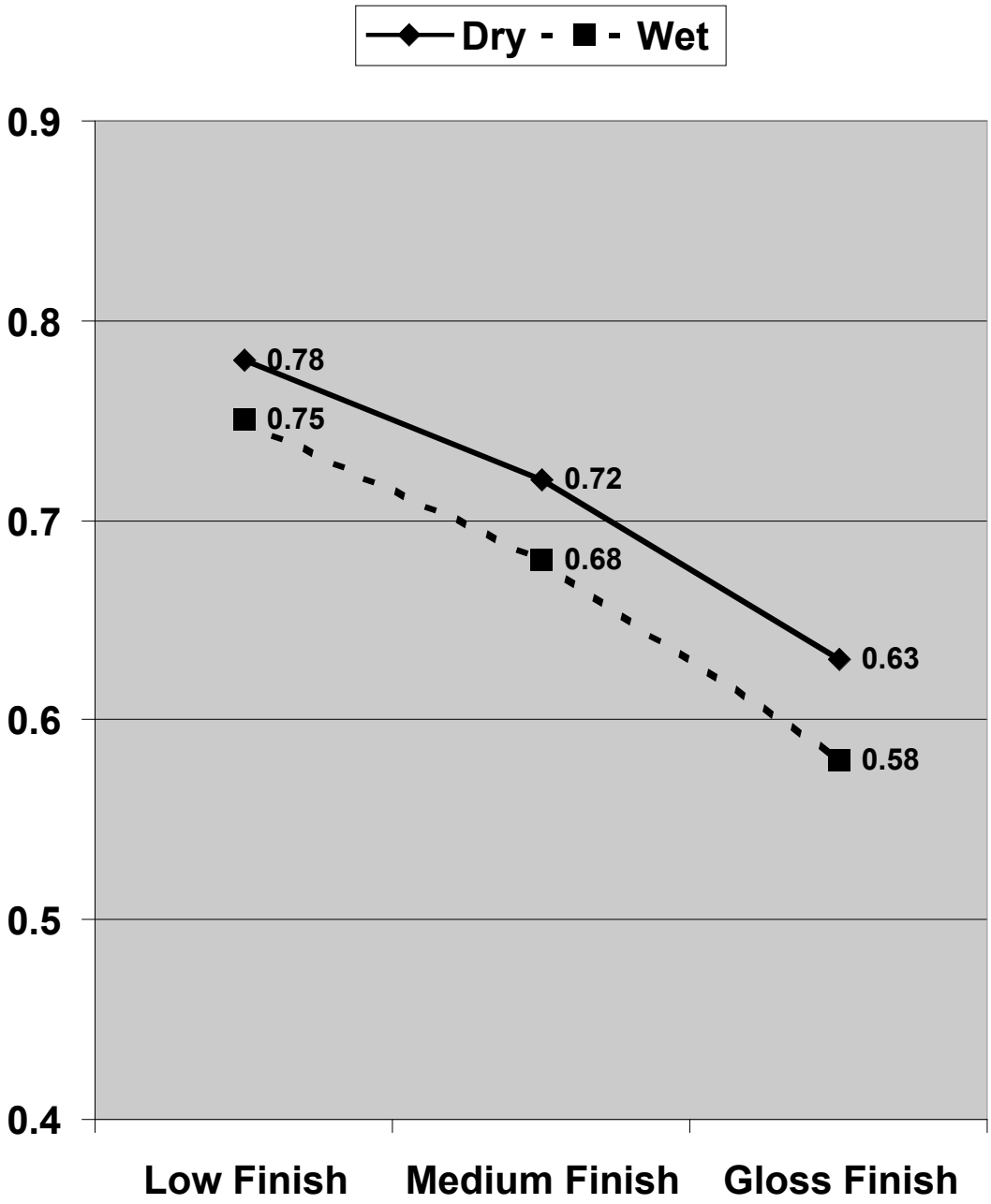
Static Co-Efficient of Friction Test (SCOF)
On RetroPlate Treated Concrete



*NOTE – According to the ADA, OSHA and ASTM guidelines, the generally accepted Safe Zone is between 0.9 and 0.5

RUBBER

Static Co-Efficient of Friction Test (SCOF)
On RetroPlate Treated Concrete



*NOTE – According to the ADA,OSHA and ASTM guidelines, the generally accepted Safe Zone is between 0.9 and 0.5

TEST #3 "ABRASION & IMPACT STRENGTH TESTING"

McKINNEY AND COMPANY

September 28, 1999

Mr. Vernon Talbot
Advanced Floor Products
PO BOX 50533
Provo UT 84065

RE: RetroPlate Evaluation
Lowe's Store, Chapel Hill Boulevard
Chapel Hill, North Carolina
McKinney Project No.: 99483

Dear Mr. Talbot,

At your request and authorization McKinney and Company conducted in-place testing of selected locations at the indicated Lowe's facility. The test methods used were *ASTM C 779* "Standard Test Method for Abrasion Resistance of Horizontal Concrete Surfaces", *Procedure C* and *ASTM C805* "Standard Test Method for Rebound Number of Hardened Concrete". We understand the purpose for these tests were to evaluate the relative effects of the **RetroPlate** on concrete in an actual field situation.

We were informed that the test project was selected because of an extreme "dusting" problem resulting from difficulties encountered during finishing of the concrete slab on grade. We understand that the store has been in service for approximately one year.

FIELD TESTING

ATEM C779 provides simulated abrasion conditions that can be used to evaluate effects on curing or finishing of concrete. It may also be used for quality acceptance of products and surface exposed to wear. This method is not intended to provide a quantitative measurement of length of service. In the subject evaluation the test was used to determine the relative improvement if any to the concrete surface after the application of the **RetroPlate**.

Three locations were tested on the concrete slab; two were in the as constructed condition and one was after the application of the **RetroPlate**. Three individual tests were taken at each location. The specific results of the these tests are enclosed and are summarized below:

Location	Description	Wear Depth in.	Time, Sec.
Isle 10	Resurfaced Area	0.113	1000
Isle 37	As Constructed Condition	0.117	200
Isle 41	As Constructed Condition	0.111	250

ASTM C 805 is a test method that may be used to assess in-place uniformity of concrete; to delineate regions of poor quality and estimate in-place strength development. In this evaluation the rebound devise was used in combination with the abrasion tests to determine consistency of the concrete at each test location. Two rebound tests were conducted at each location and the averages of the tests are listed below.

Location	Average Rebound Value
Isle 10	51
Isle 37	39
Isle 41	41

COMMENTS

The abrasion tests indicate that the depth of wear is relatively consistent for the in-place concrete. The time period required to reach these wear depths varied significantly between the as constructed conditions and the treated location that suggests the **RetroPlate** improved the hardness of the concrete surface. This is also indicated by the higher rebound values recorded at the treated location. In addition, the treated area had a smoother, cleaner appearance that the untreated sections of the floor slab.

We appreciate the opportunity to be of service on this project. If you have any questions or require additional information, please contact us at your convenience.

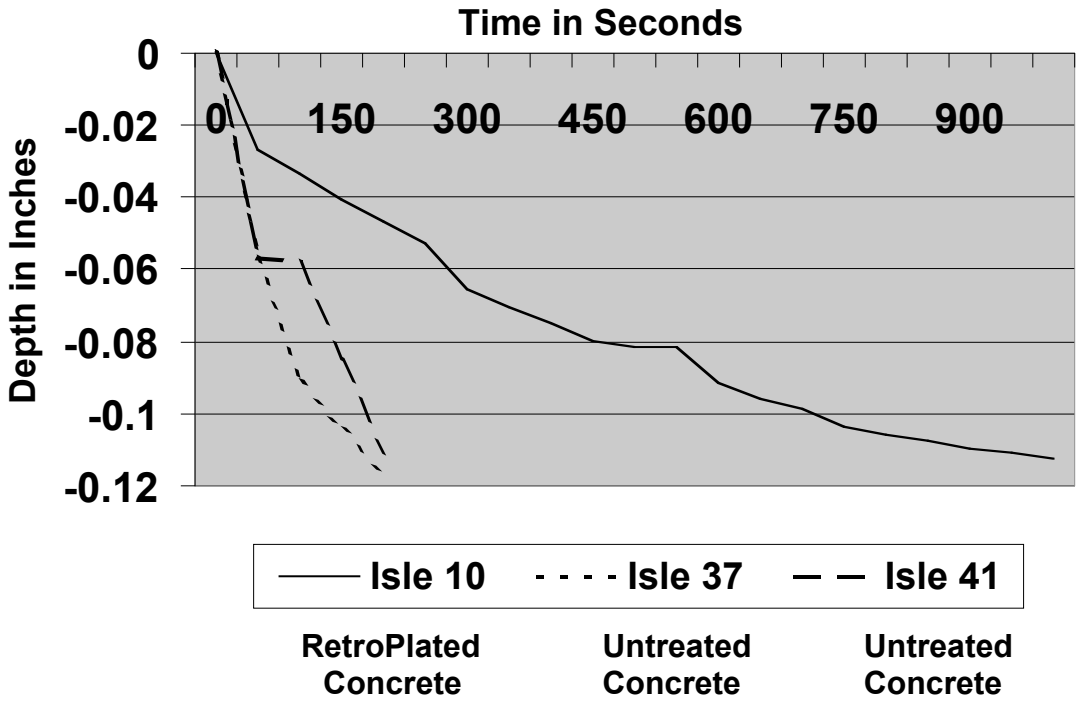
Respectfully,

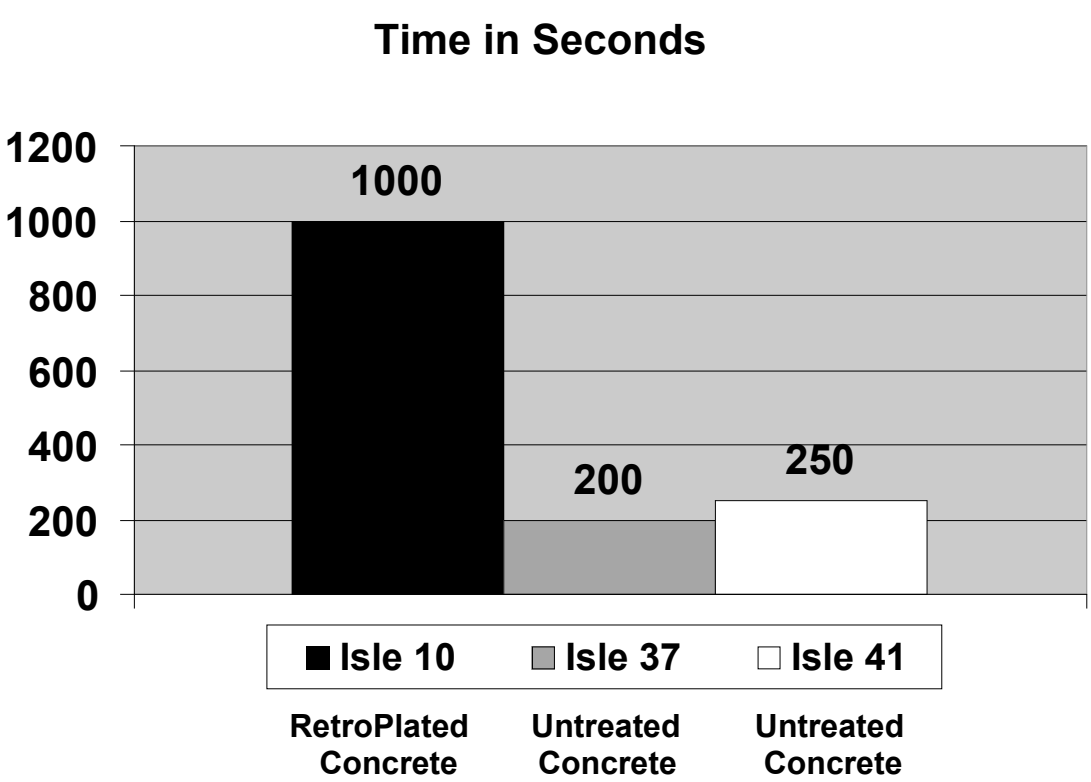
McKinney and Company

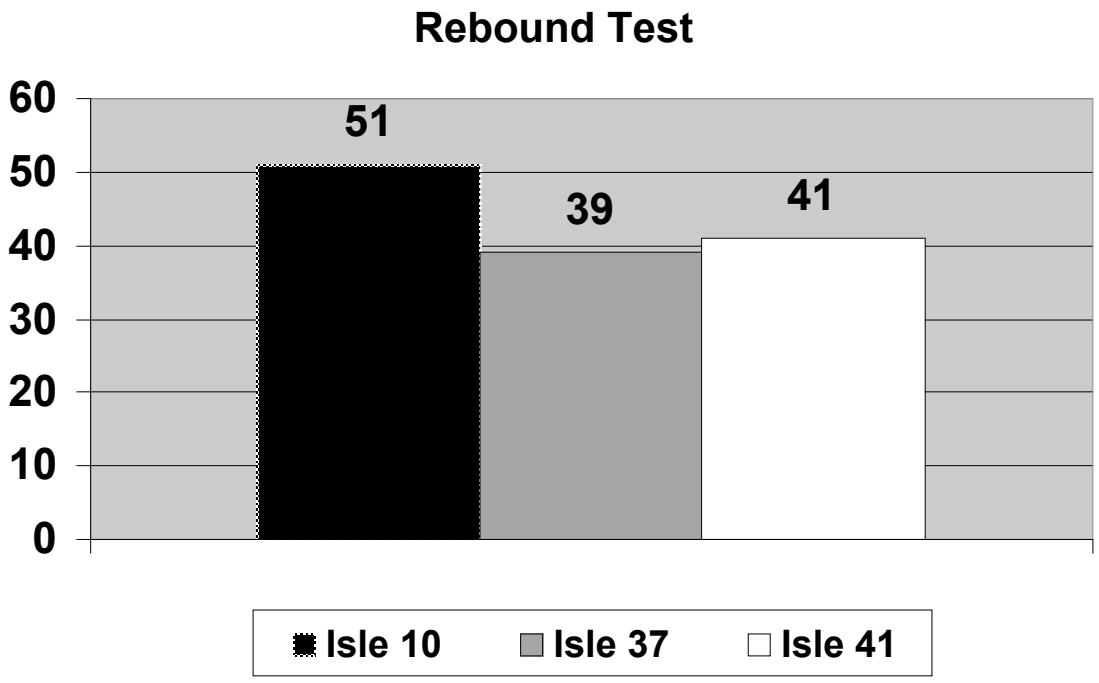
C.F. Starnes
Concrete Services Manager

Attachments: Abrasion Test/Graphs

Abrasion Resistance






Rebound Test
60
50
40
30
20
10
0
51
39
41
Isle 10
Isle 37
Isle 41